DETERMINANTS OF FINANCIAL PERFORMANCE OF GENERAL INSURANCE COMPANIES IN KENYA

BY

PETER GITHIRI KIMANI

17/00526

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING) IN THE SCHOOL OF BUSINESS KCA UNIVERSITY

JULY 2023

DECLARATION

I declare that this study is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

Student Name: Peter Githiri Kimani **Registration number 17/00526**

Sign: ……..… **Date: 04-08-2023**

I do hereby confirm that I have examined the master's Dissertation of

Peter Githiri Kimani

And have approved it for examination.

Signed: …… Date: 10/9/2023

Dr. Rogers Ochenge

ABSTRACT

Stability and good performance of insurance companies is paramount. Kenyan insurance companies have, for the last decade, faced a turbulent business environment. This study evaluated determinants of financial performance for the insurers. It focused on five specific objectives namely: to establish the effect of underwriting risk on financial performance of general insurance companies in Kenya, to evaluate the effect of liquidity on financial performance of general insurance companies in Kenya, to find out the effect of solvency on financial performance of general insurance companies in Kenya, to assess the effect of firm size on financial performance of general insurance companies in Kenya to establish the effect of capital adequacy on financial performance of general insurance companies in Kenya. The basic theory for this study is theory of asymmetrical information while others for specific variables were liquidity preference theory, resource based view and pecking order theory. The study targeted thirty one general underwriters. Data was sourced for a period of seven years from 2014 to 2020. A panel data set was collated from the seven-year observations. Data analysis was done using panel estimation method. The study concluded that the most significant determinants of financial performance of insurance companies in Kenya are underwriting risk and solvency. Underwriting risk had a negative and significant influence on return on assets. Also, solvency was found to better financial performance of insurance companies significantly. Moreover, the study concluded that liquidity and capital adequacy negatively and insignificantly affected financial performance of insurance companies in Kenya. Lastly, firm size positively and insignificantly affected financial performance of insurance companies in Kenya. It is recommended that insurance companies in Kenya need to diversify underwriting business in order to mitigate risks associated with underwriting risk as it hampers financial performance. Also, insurance firms should maintain high solvency ratios as solvency was found to boost financial performance. This study is valuable because it provides empirical evidence that can be used by regulators to form policies that may stabilise the sector. At the same time, it contributes to firm performance literature in Kenya and beyond. The study too is useful to scholars in the field of insurance as it adds to insurance literature from Sub-Saharan Africa.

Key Words: Underwriting Risk, Liquidity, Solvency, Firm Size, Capital Adequacy, Financial Performance and General Insurance

ACKNOWLEDGEMENT

With utmost sincerity I would like to acknowledge all parties that contributed to the success of this study. My first appreciation goes to God for creating me. Secondly, my appreciation goes to Dr. Rogers Ochenge for taking me through this research step by step. Thirdly, I am grateful to KCA University fraternity and in particular all lecturers at the School of Business and Public Management for provision of knowledge and materials that came in handy in this study. Moreover, I am thankful to defense panellist for allowing me to defend this proposal. Last but not least, to my parents, Mr and Mrs Kimani for constant guidance and friend Geofrey for motivating me to undertake this study. To you all, I say thank you.

TABLE OF CONTENTS

DEDICATION

To my parents Mr Gad Gathu Kagia and Mrs Margaret Wanjira Gathu for unwavering kindness.

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

IRA- Insurance Regulatory Authority

RBV- Resource based View theory

SACCO- Savings and credit cooperative

OPERATIONAL DEFINITION OF TERMS

Capital adequacy - strength of capital to cover debts Atuahene et al., (2021).

Financial performance- measure of results of firm activities in financial terms (Alemu & Deyganto, 2019).

Firm size- capacity to make investments Deyganto and Alemu (2019).

Liquidity- capacity to pay short term debts Obi-Nwosu et.al, (2017).

Solvency- ability to pay all debts with existing assets (Morara & Bongani, 2021).

Underwriting risk- This refers to the extent to which premiums cover claims payments (Pathirana & Buddhika, 2021).

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Financial stability of insurance companies is crucial to sustenance of other businesses. Insurers are key players in the development of economies as they enable other businesses to undertake operations without worrying about risks. However, insurers find it difficult to survive due to a dynamic sector that is characterised by rampant changes in both internal and external environments (Platanakis et al., 2019). In this aspect, insurers must acquire resources and integrate such resources in ways that help achieve strategic advantages. Insurers face challenges in investing premiums and other resources as this is controlled by industry regulators. In most jurisdictions, insurance business is strictly regulated as a crisis in the sector has a ripple effect to all sectors in the economy (Nwakoby & Ihediwa, 2018).

Insurance companies are essential in an economy. Insurance companies in Indonesia and Malaysia are instrumental in fostering investments in the countries but face challenges in aligning themselves within their immediate environment in such a way that high capital performance is achieved (Nasution, Adiba, & Abdulrahim, 2019). This indicates that performance of insurers is likely to be influenced by internal factors such as capital and investments. Turkish insurance firms gain competitiveness by focusing on internal operations (Idil, 2016). In Africa, insurance firms' survival is influenced by a wide array of factor. For example, insurers' performance in Ghana are influenced by many factors among them premium growth, capacity to absorb risks, growth in premiums, claims and underwriting risks (Sackey, Manso, Akotey, & Amaoh, 2016).

Moreover, insurance penetration in Africa is low in comparison to the global indices (Abubakar, Haruna, & Sulaiman, 2018). In turn, most local insurance companies are small and cannot take expansive projects. Large firms are prone to less insolvency risks than smaller firms as the latter are not able adapt to changing business environment. Larger firms benefit from economies of scale (Bolarinwa & Obembe, 2017). Insurers in Ethiopia have their performance uniquely influenced by a combination of factors such as competition, market access, loss ratio, reinsurance, expense ratio, capital ownership, size, age, leverage, country's economic growth and asset tangibility (Berhe & Kaur, 2017). Financial soundness of Tunisian insurance companies are influenced risk management, age, size, management expertise, premium, capital structure and solvency (Derbali & Jamel, 2019).

Insurance industry in Kenya is paramount to economic growth. (Sibindi & Morara, 2021; Njoroge, 2014). Performance of insurers in Kenya is also argued to be a function of many factors. The risk exposures for general insurance companies is high due to a variety of reasons. According to Sibindi and Morara (2021) there are several drivers of performance of insurers in Kenya which include firm size, leverage, reinsurance, age and investments. Mwangi and Iraya (2014) noted that insurer's performance in Kenya is influenced by factors such as growth of premiums, investments returns, expense ratio and loss ratio.

Financial performance of insurance companies is seldom understood due to complexities in underwriting business. Most literature indicate that insurers face challenges due to dynamics that are present in the market. For instance, insurers are unable to achieve good performance due to having a mismatch of risks with premium charges. Underwriting returns are unable to meet the operating expenses and therefore relies on investments returns for expansion incomes (Alemu & Deyganto, 2019).

Moreover, insurance sector is regulated in most countries and this indicates that the firms must play by the book due to rules public interests. Hence, insurance companies are restricted by rules of the sector as established.

This study was undertaken in order to establish determinants of financial performance of insurance companies in Kenya because of several folds. Firstly, insurance firms play a crucial role of enabling other businesses to undertake ventures. Risk covering as an aid to trade because it boosts firms' resilience in investing in risky but profitable ventures. Secondly, theoretical literature on firm performance for insurance companies is not critically studied. The study delved on selected factors that were hypothesised to influence firm performance. Insurance sector in Kenya plays a critical role in fostering sustainability of other business. However, the firms face numerous challenges which should be examined in order to provide information to enable policy makers creates effective reforms in the sector. Studying on internal factors of insurers in Kenya is helpful as it improves on the knowledge on what is known about corporate performance.

Entities, regardless of whether are geared for profits or are not-for profit organisation undertake activities in open systems (Orishede, Izims, & Enahoro, 2018). This is because, there are factors that tentatively influence how well goals and visions are achieved. In a broad spectrum, these factors originate either internally within the firms or externally. Factors that are found within the internal business environment are known as micro-level determinants because, they fundamentally vary from organisation to organisation (Rashid & Kemal, 2018). On the contrary, macro-level aspects are found outside the firm but potentially influences firm operations, efficiency in resource utilisation and ultimate sustainability (Burca & Batrinca, 2014).

Micro- factors have focal importance in management as they can be altered to levels that management deems fit. Internal environment is much is easier to deal with given that internal factors can be changed depending on decisions made (Rashid & Kemal, 2018).The internal business environment influences how operations and management is done in an organisation. The factors in this environment are essentially within the control of firms and thus presents strengths and weaknesses that can be managed to improve corporate performance (Abubakar, Haruna, & Sulaiman, 2018). Moreover, the internal environment influences formation of strategies to achieve superior performance. For instance, managers are concerned with maintaining a robust balance of liquidity in order to ensure that they can pay debts as required in contracts. However, excessive liquidity is harmful to firms as it creates an opportunity costs as the funds can be channelled for long term investments which earn interest (Ologbenla, 2018).

There are arguments for micro-factors being key determinants of corporate. According to Santoro *et.al* (2020) micro factors influences a wide range of activities such as clarity of goals, leadership styles, resource allocation and entrepreneurial motivation in the firms and this has an effect on small and medium entreprises performance. For this reason, therefore, firms strive to form a balance for the internal factors in order to establish a favourable position. Moreover, internal factors, if managed appropriately are one of the best mechanisms of achieving competitive advantages (Derbali & Jamel, 2019). This is because internal factors are entirely influenced by management. The factors can be shaped in desired dimensions much easier and less costly as opposed to adapting to external factors.

Insurance companies undertake businesses in a competitive sector that is regulated in the interest of policyholders. All firms are subjected to same industry guidelines (Insurance Regulatory Authority, 2021). At the same time, premium rates are within the thresholds permitted by the laws of the industry. In view of this, insurance firms can only achieve competitiveness and realise good corporate performance if they structure internal affairs in the best ways possible. For example, investments, underwriting procedures, capital reserves and optimum liquidity are platforms for which superior performance can be achieved. Risk management for insurer is a complicated task as poor practices can occasion insolvency. Insurers that achieve good performance focus on streamlining internal affairs so as to improve operational efficiency, diversify to non-premium income and establish adequate reserves that cushions them against bankruptcy in times of financial crises (Abubakar, Haruna, & Sulaiman, 2018). In this study, five determinants were examined which are underwriting risk, liquidity, solvency, firm size and capital adequacy. Underwriting risk denotes chances of losses due to inaccurate market predictions that causes premiums unable to cover claims intimated (Angima & Mwangi, 2017).

1.1.1 Underwriting Risk

Underwriting risk is a major concern for insurers as insurance companies are involved in taking up risks in exchange of premiums. Considering that underwriting risk typically arises from incorrect underwriting processes, it can results into adverse financial losses for insurers. At the same time, underwriting risk directly impacts on financial stability and viabilities of businesses being undertaken by insurers (Nasution, Adiba, & Abdulrahim, 2019). To avert underwriting risk, insurers align activities in a way that premiums collected are sufficient to cover for claims and overheads.

1.1.2 Liquidity

The second predictor variable in this study is liquidity which tests efficiency of assets and other resources in respect to their conversion to money. Liquidity is instrumental in firms that operate in sectors that have uncertain financial claims arising from the day to day operations (Abubakar, Haruna, & Sulaiman, 2018). For example, insurance companies incur claims from risks that materialise from time to time. In absence of liquid assets, insurers may not meet the unexpected expenditure from claims. Thus, liquidity aids in ensuring that financial obligations are met as and when they needed (Songe, 2015). Insurers are therefore likely to face difficulties in servicing claims if most of their assets are illiquid. However, where too much resources are held in cash forms, it is likely that opportunities for revenue is lost. A robust liquidity management is substantial in order to have cash for routine use and sufficient long term investments to earn premium interests. Notably, firms must carefully structure liquidity not to have assets that unable to pay claims as this can hamper reputation. (Tesfaye, 2012)

1.1.3 Solvency

Solvency represents ability of assets to meet long term liabilities (Alemu & Deyganto, 2019). Solvency measures ability of a firm to pay off obligations by disposing the existing assets. Solvency is a key aspect as it has a direct impact on the going concern of firms. Solvency exist where firms finance activities through debts making them to be leveraged. It results into solvency risk that can be hazardous if unfavourable. Unfavourable solvency is a first sign of bankruptcy because, it shows that a business is unable to meet long term debts and remain in business at the same time. Moreover, solvency is used to measure the quality of a balance sheet for companies as a good solvency ratio indicates good financial health and ability to remain as a going concern (McCue, 2016).

Too much leverage limits expansion as most of profits goes towards paying of interest on the debts. In this study, solvency was measured in terms of debts to total assets. Debt-to-total asset ratio evaluates the extent to which assets are acquired through short term and long term loans. Rule of thumb is that a higher solvency is associated with high financial risk and this impairs profits of firms (Nguyen & Vo, 2020).

1.1.4 Firm Size

Firm size is defined as ability to make investments and accelerate growth in order to achieve goals of the organisation (Chongyu, Zhichuan, & Yang, 2018). It is therefore the capacity to invest and undertake operations as it depicts the way firms are able to channel resources for activities that generate value to shareholders. Moreover, firm size is proxied in different parameters such as assets value, sales and equity value in the market. In this study, firm size was measured in terms of firm size because insurance companies use premiums collected to acquire assets. Total assets therefore represents resources that are used for production or offering services. Firm size therefore is typically expected to showcase different implications on firm outputs. Larger firms are hypothesised to have capabilities of making more revenue and thus realise better profits. On the contrary, smaller firms are likely to realise fewer profits due to low levels of operations as they are not able to enjoy economies of scale leading to efficiency and good performance (Alarussi & Alhaderi, 2018).

1.1.5 Financial Performance

Financial performance refers to the measure of results of firm activities in financial terms. Profit-making entities measure outputs in financial aspects in order to examine whether they are achieving their financial goals or not (Alemu & Deyganto, 2019). It is a subjective measure of output as it changes from firm to firm depending on the need of management.

Where resources are expeditiously utilised, firm financial reports are likely to show good positions. In contrast misuse of resources and poor strategies lead to poor firm financial returns (Bawa & Chattha, 2013). There are various reports used to rely financial performance across the board. These are balance sheets, income statements and cash flow statements (Muturi & Omondi, 2013). From these statements, concise financial ratios can be computed to examine corporate performance.

Most entities use combination of measures in order to succinctly get to understand the financial health of entities (Deev & Nino, 2017). In this study, financial soundness of insurers was proxied by return on assets which equates net income on total assets. Insurers' main activity is to cover risks for clients on the promise that compensation is done where risks materialise. Insurers invest in diversified portfolio of assets to earn extra income other than premiums. Large firms are better positioned to create more non-premium income as they have resources to channel to acquisition of assets (Jing, Vickie, & Wang, 2018).

1.1.6 Capital Adequacy

Capital adequacy represents the extent to which equity is able to cover financial risks (Kamil, Hora, Wagner, & Juttner, 2015). It represents the degree to which financial risks are covered by the paid up capital. Thus, capital adequacy measures the ability of firms to meet short term obligations and long term obligations using its capital researches. In regulated sectors, capital adequacy refers to paid up capital and reserves that must be present and available at any specific reporting date (Chrysovalantis, Li, & Fotios, 2015). In essence, capital adequacy enables entities to pay financial obligations in times of turbulence instead of directly going to insolvency.

A firm with a high capital adequacy is therefore capable of making good debts during financial crisis using its capital reserves. On the other hand, a firm with low

capital adequacy is likely to go into insolvency immediately it is unable to clear debts using the revenue generated from its usual business activities. Specifically for an insurer, capital adequacy is proxied by equity to debt ratio. Ideally, a good capital ratio for an insurer means that the firm is able to pay claims without fail for some time even when policy premiums are shrinking. Moreover, sufficient capital enables an insurer to diversify into other non-premium income investments like real estate investments, purchase government securities, and maintain fixed deposits and corporate bonds for interest income. Equally, a strong capital adequacy position protects policyholders' and shareholders' interests (Bawa & Chattha, 2013).

Around the globe, financial performance of insurance companies has not been good. For instance, in the United Kingdom, there has been constant downgrades of insurance companies in respect to stability rating due to existence of challenges in the financial services sector (Sharma, Jadi, & Ward, 2022). Equally, cases of insurers collapsing have been reported due to poor performance. According to OECD (2023) performance of the sector declined in the year 2022 by 4.5 percent. Regionally, the trend of financial performance of insurance companies is equally not favourable. For instance in Ghana, performance of insurance companies dropped by 2.3 percent in 2022 due to a challenging environment (Delloite, 2023). Locally, performance of insurance companies is also impaired by a dynamic financial sector. Kenyan insurance companies have faced a challenging environment with some companies collapsing due to the challenges. For instance, in the year 2021 underwriting results dropped by 2,441 percent, retention ratio was -0.7 percent, shareholders' funds to total assets dropped by 1.9 percent (IRA, 2021).

1.1.7 General Insurance Companies in Kenya

Kenya has a relatively low insurance penetration averaging 2.34 percent in the year 2019 which is a decline from 2.75 percent recorded in 2015 (Faria, 2021). This relatively low penetration is fundamentally attributed to a number of factors such as inability to afford policies due to low income levels among the people, lack of awareness on insurance products and lack of trust in the industry. Considering this aspect, insurance business in Kenya is not as lucrative as it is in other countries. Moreover, information gap on policy availability and poor reception by the market tends to contribute to the low penetration.

General insurers in Kenya are dominantly involved in covering non-life risks as licensed (Insurance Regulatory Authority, 2021). By doing this, general underwriters significantly contribute to economic growth. General risks include fire policies for industries and homes, insurance bonds, motor accidents and engineering risks. Other general risks include theft, political violence and terrorism and occupational safety and health covers. General insurance products are broadly categorised as short term products because most are for a relatively short period of time. The Insurance Regulatory Authority records that insurance sector is characterised by stiff competition as there are forty three insurers competing for a small market (Insurance Regulatory Authority, 2019). In this aspect, firms in this sector must critically implement strategies to ensure that they are able to counter competition and remain in business. Moreover, the sector has cost of doing business and this makes it less profitable when contrasted to other entities in the Kenyan financial sector. Insurance business is a game of risks and financial risks are inherent and imminent in the sector. Moreover, access to capital, unfavourable political environment and fraud hampers performance of individual entities and the sector at large (Oino, Osiemo, & Kuloba, 2012).

1.2 Statement of the Problem

Across the world insurance companies have focal importance in that they cover risks for individuals and businesses. Insurance companies in Kenya are expected to exhibit good financial performance since they are few serving a population of over fifty million people. Insurance penetration in Kenya has continued to rise. Therefore, performance of insurance companies should favourable due to access to a wide market. Whilst this is the case, insurance companies, by virtue of their operations are prone to major risks that unless their management structures internal operations optimally, chances of business failure are high. In Kenya, for instance, in spite of insurance penetration increasing in the last decade, performance of insurance companies has been dismal. In the year 2021 underwriting results dropped by 2,441 percent, retention ratio was -0.7 percent, shareholders' funds to total assets dropped by 1.9 percent (IRA, 2021).

This has seen a number of general insurance entities collapse, among them BlueShield Insurance Company, Standard Assurance Company, Access Insurance Company and Concord Insurance Company. A look at Insurance sector annual report shows that premium growth increased from 2013 up to 2016 but in the financial years 2017 and 2018, premium growth declined by 1.5 % and 1% respectively (Insurance Regulatory Authority, 2019). Moreover, financially, the returns for the sector are on the decline. Overall return on assets for the sector was 16% in 2015 which has since decreased to 4.9 % in 2018 (Insurance Regulatory Authority, 2019). This indicates that there is a problem in the sector.

In theory, internal business environment plays a role in resource integration, research and development and adapting to change. This study interrogated firm level factors (that change from one firm to another) and their role on firm performance.

In so doing, the following factors were assessed: underwriting risk, liquidity, solvency, firm size and capital adequacy. Insurance business is faced by asymmetrical information which makes it difficult to price products. Besides, there is diverse studies on insurance companies. Pathirana and Buddhika (2021) undertook a study among Sri Lankan underwriters and deduced that underwriting risk did not influence firm performance. In constrast, Ullah, Faisal and Zuhra (2016) revealed that underwriting risk inversely influenced firm performance. This contradiction indicates the need for more studies to offer a concesus in terms of congruency on the role of underwriting risk and firm performance. Muturi and Omondi (2013) found out that liquidity of publicly held companies did not boost performance. However, this study presents a different contextual gap as it delves into insurance companies and not listed firms only.

Angima and Mwangi (2017) on the other hand found that underwriting and claims management, both bettered firm returns. However, the study used primary data while the current study employed secondary data only. There is a contradiction in role of firm size on firm results. Njoroge (2014) showed that firm size immensely boosts firm results. In contrast, Deyganto and Alemu (2019) revealed that firm had no role on financial performance of firms. There is need for further studies to offer more information on role of firm size on firm results. In respect to methodology, most studies have focused on aggregated data for all firms, while in this study, a panel data set was collated from selected companies for a period of years. This provided more statistical information. Lastly, results of this study instrumentally contributes to policy making, management practice and to theory of insurance in emerging economies. Insurance Regulatory Authority can use results to make guidelines on how best general insurance companies can structure their internal affairs to enhance firm performance.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective was to assess determinants of financial performance of general insurance companies in Kenya.

1.3.2 Specific Objectives

i. To establish the effect of underwriting risk on financial performance of general insurance companies in Kenya

ii. To evaluate the effect of liquidity on financial performance of general insurance companies in Kenya

iii. To find out the effect of solvency on financial performance of general insurance companies in Kenya

iv. To assess the effect of firm size on financial performance of general insurance companies in Kenya

v. To establish the effect of capital adequacy on financial performance of general insurance companies in Kenya.

1.4 Research Hypotheses

H_o1: Underwriting risk has no statistically significance influence on financial performance of general insurance companies in Kenya

H_o2: Liquidity does not affect financial performance of general insurance companies in Kenya in statistically significance manner.

H_o3: There is no statistically significance relationship between solvency and financial performance of general insurance companies in Kenya

H_o4: Firm size has no statistically significance association with financial performance of general insurance companies in Kenya

H_o5: Capital adequacy has no statistically significance effect on financial performance of general insurance companies in Kenya.

1.5 Significance of the Study

The study envisions to establish the determinants that affect corporate performance in Kenya. It focuses on general insurers has selected five internal factors namely underwriting risk, liquidity, firm size, solvency and capital adequacy. The results assist the following parties either in management practice or in policy making.

1.5.1 Contribution to Management Practice of Insurers in Kenya

The results are beneficial to insurers in Kenya. The findings enable them to get insights on how to control and manage internal affairs in order to boost firm returns. This study is a guide on how to plan and allocate resources to realise a favourable position in which it is possible to better performance. At the same time, management of firms may get to know the exact effect of each of the factors on firm returns and plan in line with the statistical evidence that is presented.

1.5.2 Contribution to Policy Making by Insurance Regulatory Authority

Insurance business in Kenya is regulated by Insurance Regulatory Authority which is a state entity mandated to ensure smooth running of the sector. IRA focuses on making policies that safeguard policyholders and protect the firms. The outcomes of this study, more importantly create a good discussion paper on role of the selected factors on firm performance.

1.5.3 Contribution to Research and Theory

Most literature on determinants of firm returns in insurance sector has focused on cross sectional data. This study is a panel data analysis to add onto the prior studies.

At the same time, of the regulated sectors, only banks have received considerable attention from scholars leaving out insurance sector. Research on internal factors in the insurance sector in Kenya is rarely conclusive due to dynamics in the sector. This study covers only a few aspects and therefore acts as a ground breaking research in this field. In future, researchers and scholars can use the findings to develop research studies and improve on the knowledge about micro factors. This is because most research have endeavoured on external factors and not internal factors which can be good grounds for harnessing capabilities.

1.6 Scope of the Study

This study envisions to assess micro-level determinants of financial performance of general insurance companies in Kenya. Pertaining to content scope, this study has five input variables namely underwriting risk, liquidity, solvency, firm size and capital adequacy. The output variable was financial performance. Pertaining to geographical scope, this study is limited to general insurance firms in Kenya while in terms of time scope, secondary data was collected for a period of seven years, from 2014 to 2020.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section delves on presenting theories that anchor this study, a review of empirical, conceptual framework and ends with a tabular presentation of operationalisation of study variables.

2.2 Theories of the Study

Theories substantiate occurrences by providing reasons why variables act as they do. This study is anchored on four theories; theory of asymmetric information, resource based view theory, pecking order theory and liquidity preference theory.

2.2.1 Theory of Asymmetric Information

This theory was coined by three different scholars who pertinently noted that there is always a discrepancy in information possession between buyers and sellers (Akerlof, 1978; Spence, 1978; Stiglitz & Weiss, 1992). Primarily, this theory is pegged on the tenet that information guides business transaction and more often these is asymmetry in respect to what buyers know about the item they are selling. At the same time, buyers tend to seek more information on products and services before they make buying decision. Moreover, buyers do not have as much information as the sellers do (Annan, 2022;Song, Zeng, & Zhou, 2021). As a result, buyers may end up paying for a higher price than the true market price a product should fetch. This asymmetric information can occasion financial losses and market failures in some markets. Absence of perfect information leads to adverse selection as there is unequal information between parties (Asongu & Nicholas, 2021).

Information asymmetry theory depicts that there exists lopsided information which governs transactions. This therefore creates different value-chains in respect to items being traded in the market. In insurance, the theory further points that this aspect creates moral hazards because one party has beliefs that their actions are safely covered (Ivan, 2019;Sokolovska, 2017). The level of asymmetrical information differs from one industry to another. The large the difference, the higher the discrepancy in pricing of products and services (Hemrit, 2022). Essentially, the ideal situation for a perfect transaction exist where there is perfect symmetry of information where parties have as much information. Both parties must have exact and in good time, the same information pertaining the transaction. Absence of symmetrical information creates disproportional decision making between the parties where one party stands to gain and the other to incur some disadvantages (Sheth & Subramanian, 2020; Rejesus, Juan, Zheng, & Yorobe, 2018).

This theory has both pros and cons. Firstly, on its advantages, the theory is pertinent in provision of framework in which markets operate. For instance, it indicates that information gathering is different across different markets and within groups of individuals (Lyandres & Chod, 2021). It asserts that information availability and accessibility is often unbalanced between individuals and therefore impacting on transactions. In practice, this is the exact situation that characterises economic markets. For example, in an economic decision making environment involving two parties, one party has different information from the other and this distorts congruency in decision making. At the same time, theory of asymmetry of information has practical applications as it is profoundly used in regulations of financial markets. Use of regulations in the financial markets ensure that none of the parties is exploited by the other due to lack of information (Markus, Wolfgang, & Katharina, 2021).

More importantly, it ensures that sellers and buyers are offered a near flat level platform where they can transact without either being at detriment which is caused by variability in information access (Ade & Doddy, 2021). This theory has a few disadvantages which includes its assumption that economic transactions are guided by information access and availability. Whilst this holds for most transactions, there are transactions that do not follow this standard postulate as the parties could have base their pricing mechanisms on some other factors other than information (Morri, Palmieri, & Sironi, 2021). The theory equally makes an assumption that there must be a difference in information ownership may not be true at all times. In some cases, parties have similar information regarding transactions and therefore none is disadvantaged as this theory assumes.

This theory has a limited scope in its application as guiding principle in practice as it can only be used in economic discourses where a purchase and sale decision are to be made (Hosseini, et al., 2018). This may not be useful in situations where purchase decisions are not made. Moreover, this theory does not focus on what guides uninformed investors, buyers or any person making an economic decision. The theory basically assumes that parties must have some extent of information in their possession relevant in making economic decisions. The issue of adverse selection does not necessary takes place in all transactions (Moloi & Marwala, 2020).

Theory of asymmetric information is important in this study. Insurance business is undertaken in asymmetrical information realism. Insurers have less information about risks they are covering. On the other hand, insured have more subtle information about the risks they are transferring to insurers for a premium. Underwriting of risk thus is a perfect example of asymmetric information.

Additionally, insurers constantly seek underwriting business to earn more premiums oblivious of associated increase in risks. Premium charges may not accurately and timely reflect known information. Where too much premiums goes into payment of claims, underwriting risk is high and this can affect insurers' stability. This theory thus aids in understanding how underwriting risk occurs in insurance markets.

2.2.2 Liquidity Preference Theory

This theory is built on the concept of money demand (Keynes, 1936). Liquidity preference theory posits that money is the most liquid asset and for this reason, it is the most preferred asset. At the same time, liquidity theory relates returns and risks for various investments. The model suggests that long term investments are preferred if accompanied with a premium return to compensate for the waiting period (Fernando & Carvalho, 2015). This is because, long term securities have greater risks. It is considered that investors would prefer holding cash if only it could returns in contrast to any other asset. Moreover, cash as asset is legal tender and is most commonly used for trade (Culham, 2020). The theory identifies three motives for holding cash; transaction, precautionary and speculative.

In transaction motive, individuals and firms keep cash for routine expenditure (Pusch, 2017).In this aspect, firms and households allocate cash for use in daily purchases. The level of cash for this motive is dependent on factors like cost of living, budgets and level of operations. The second motive is precautionary motive which relates to retention of additional motive for unexpected financial obligations (Sheila, Jespersen, & Geoff, 2018) .This liquidity is meant to cater for unforeseen expenditure like repairs and maintenance which may not be pre-determined. The last motive is speculative that identifies demand for liquidity to take up investments as and when they are identified in the market (Fernando & Carvalho, 2015).

For instance, firms can retain some cash for purchase of stocks, money market funds and real estate investments when prices are favourable. In practice, liquidity preference theory has wide application due to numerous advantages that characterizes its use in monetary economies. To start with, liquidity preference theory is subtle as it categorizes needs for liquidity, mostly in cash and cash equivalents that guides individuals and corporates. It has wide usage therefore because it is useful in offering theoretical framework for holding cash to cater for the three motives by people and firms (Marc & Reissl, 2019; Bridel, 2021).

In the theory, the motives are ranked in order of preference where it begins with transaction, then precautionary and speculative. This has been widely accepted as a conventional order that explains why holding liquid assets is important for economic units. This theory also appreciates that money demand is influenced by the prevailing interest rates. For instance, where borrowing rates are low, households and firms are able to afford credit and therefore this increases the demand for money. In contrast, where interest rates are high, the demand for money is low. This is practically what happens in the financial markets considering that where price of credit is low, loans uptake is more (Oreiro, Paula, & Machado, 2020). At the same time, this theory indicates that holding assets in illiquid forms attracts more interest income in form of premium. As such, the more easily an asset is converted into cash, the more liquid it is and the more likely it is to earn lower returns. This theory advocates for higher interest rates for those assets or investments that are held for long terms. This is because, in usual circumstances, rational investors prefer having cash or liquid assets. Investments are made to earn income and the longer the period of investments, the higher the rates of returns should be (Heron, 2020).

Liquidity preference theory has been criticized for not considering that interest rates do not influence demand for money in isolation. There are other factors that too can influence demand for money by households and firms in an economy (Ahiakpor, 2018). For example, during periods of political stability, households and firms are likely to demand more money for investments purposes. Moreover, liquidity preference theory tends to rank the motives in a preference order begging with transactions, precautionary and speculative motives. However, in some cases, there are individuals who would retain funds for speculative and not for transactions. The demand for liquidity therefore does not follow the ranking preference provided in this theory.

Keynesians also treat interest rates, particularly from lenders such as banks as super variable in determining liquidity preference. This is not usually the case because, there are economic units do not focus on borrowing costs but rather at the investment opportunities in the market (Cem, 2021; Deleidi, 2020). The theory equally assumes that price of assets does not influence their demand but the rate of returns which makes it more futile to use in assets that do not have clear return rates. The theory is more applicable to financial assets such as bonds and stocks. This narrow view of liquidity preference theory makes it to have limited applications in determining actual desires for money (Eyerci, 2022; Bibow, 2021).

Liquidity preference theory relates well with liquidity variable. Liquidity preference theory suggests that liquidity is key towards maintaining a stable outlook. This study aims at determining whether liquidity of firms affect firm performance. Insurers need liquidity to meet routine expenses such as operational costs and payments of salaries. At the same time, sizable liquidity is retained for payment of claims.

Claims account for the largest share of an insurers expenditure. Equally, insurance firms can retain cash for speculation particularly in stock market as permitted by Insurance Regulatory Authority. This study reported on liquidity's role in firm performance.

2.2.3 Resource Based View Theory

Originally, resource based view theory was developed by Barney (1991) as a strategic theory that offered insights on how firm resources can be expended to achieve superior results but has since been expanded by other scholars (Lonial & Carter, 2015). Resource based View theory posits that performance improves where internal resources are available. RBV focuses on use of internal resources to enhance performance (Mackey & Barney, 2016). RBV categorises resources into various forms such as tangible, intangible in which the former are resources with physical manifestation while the latter are intrinsic resources with capacity to offer competitive advantages. Moreover, RBV assumes that resources are heterogeneous, in that they differ from one firm to firm (Barney , 1991). As such, how well a firm utilises its resources has a bearing on its firm results.

Resource based view identifies that resources are key components of sustained competitive advantages (Lonial & Carter, 2015; Kull, Mena, & Daniel, 2016). Thus, resources enhance firm performance and firm long term stability. RBV is models competitive resources as those that are valuable, rare and costly to imitate. Where a resource exhibits these three characteristics and a firm organises them prudently, chances of achieving good performance are high (Bromiley & Devaki, 2016). Notably, RBV envisions that firm returns can only be increased by dealing with internal resources and not external environment. The argument for this proposition is that internal resources are controllable in contrast to external factors.

RBV advocates for internal realignment of unique resources to enhance firm performance by increasing competitiveness (Nason & Wiklund, 2015; Campbell & Park, 2017). Resource based view has a number of advantages that has made it common over time. The theory has some real life application where companies adopt its principles in planning. The theory identifies that firms should seek to acquire tangible and intangible resources in order to achieve competitive advantages and remain in business and this is considered a robust way of sustaining performance of firms (Hitt, Kai, & Carnes, 2016; Saleh & Safari, 2020). For example, most companies in telecommunication and IT sectors tend to hire personnel that are creative and innovative. Through this mechanisms, companies are able to achieve superior performance. In adopting the postulates of having unique and inimitable resources, firms are equally able to sustain their competitiveness.

Another advantage of resource based view is its applicability in different firms in different sectors of the economy (Helms, Hervani, Sarkis, & Nandi, 2021; O'Brien, Alexander, Sakellarios, & Duarte, 2018). Resource based view can be applied in all firms regardless of the industry as it offers an apt and robust theoretical framework for achieving sustainability to all firms. This theory purposes to offer avenues and paths towards quality improvement in a competitive market. The theory does not assume non-existence of competitors but considers them too in its postulations. The theory also is important as it considers a wide array of resources in its discourse. The theory indicates that even intangible resources such as a reputable brand name, market and product reputations and innovative unique culture are resources that can be exploited to achieve competitiveness. In this case therefore, the theory has a wide coverage (Nagano, 2020; Campbell & Park, 2017).

Resource based view has been criticized for a number of shortcomings. Firstly, the theory narrows down to internal resources that firms have which may overlook some other opportunities originating externally (Wang, Yingjing, & Zhihan, 2022). In this theory, the idea is that, the focus should be on internal resources and not the external environment. In so doing, a firm can miss opportunities in the external environment. Moreover, this theory has a constrained managerial application because it only focuses on internal resources. By overemphasizing on internal resources, the firm may lose market share due to intensive marketing by competitors. Hence, it is more valuable for a firm to consider both internal affairs and external happenings in the market.

In addition, this theory has a rather subjective view of resources and measurement of the resources can be futile. Resource based view theory delves much into identifying resources that can lead to competitiveness, but does not tell how much of these resources should be deployed to activities in order to achieve superior performance (Burvills, Jones-Evans, & Rowlands, 2018; Chen, Giudice, Kassar-El, & Singh, 2019). At the same time, resources such as brand are not easily measurable and their application in management practice may not yield much fruits. Whilst, firms can have resources that are not similar, this does not automatically lead to differences in efficiency in respect to costs and time. Heterogeneity of resources should not be confused with value. In addition, even though tangible and intangible resources are vital in influencing performance and growth of firms, there are other factors too that need to be considered. This theory ought to have considered how strategic planning of these resources tends to affect performance. Lastly, valuable resources can only yield competitive advantage if planned for well because competitive advantage is the end result of efficiency in planning and usage of resources (Kong, Hui, Lau, & Liao, 2019; Omondi, 2019; Bhandari, Ranta, & Salo, 2022).

This theory is relevant in this study because of two folds. Firstly, this theory provides information on resources and how they can be planned for to achieve good performance. Therefore, this theory relates well with firm size which typically defines a firm's capacity to invest as proxied by total assets. Total assets of a firm show its might in respect to investments. Secondly, the theory provides general information on firm performance in respect to resource utilisation. The theory advocates for acquisition of valuable, rare, hard-to-imitate resources in order to achieve sectoral competitiveness. Underwriters in Kenya, operate in a competitive sector with strict controls. Firms invest in various portfolios in order to improve results, remain stable and profitable. This study purposes to relate resources and firm returns.

2.2.4 Pecking Order Theory

Pecking order theory delves on ranking these sources in respect to costs and benefits and can be traced to works of Myers and Majluf (1984) who sought to prioritize capital sources. In corporate financing, there are three sources of capital; internal financing, debt financing and proceeds from issuance of new equity as the last option of raising funds for the firm (Chipeta & McCllend, 2018). In principle, firms prefer and should first use internal funds until such funds are depleted. It is for this reason that firms with a higher capital adequacy ratio are likely to fund investments by ploughing back profits and from debts. Internal sources are ranked first for two folds. Firstly, they do not have bankruptcy costs attached to them as they are not to be repaid. Secondly, internal sources do not have any transaction costs as they are taken within the firms (Vandana, Pramod, & Surendra, 2016; Majluf & Myers, 1984). The second option after exhaustion of internal funds is to get debts. Debts too have costs and benefits. To start with, debts have to be repaid and therefore have bankruptcy costs (Martinez, Scherger, & Guercio, 2019).

Failure to repay debts hampers a firm reputation. Too much debts can harm a firm liquidity and thus render it financially unstable. Notwithstanding, interest on debts offers a tax shield as the interest is treated as an expense (Agyei, Sun, & Abrokwah, 2020). Where debts are exhausted, firms can now issue new equity as last resort by inviting new shareholders to purchase shares. New equity is considered last resort as it brings in new owners leading to ownership dilution (Onatca, Sefika, Erbas, & Gokhan, 2019; Bhama, Jain, & Yadav, 2018).

Pecking order theory has some advantages that improves its practicalities. The theory is validly instrumental in providing information on financing where there is information asymmetry. This theory envisions that internal sources of financing are the best because, owners have full access to information they need to know before making financing decisions. The level of information asymmetry increases from internal funding, through use of debts to issuance of equity (Ruhul, Saleh, & Jarallah, 2019; Sari & Mia, 2018). In this aspect, pecking order theory has practical application and is able to offer pertinent guidance in financing decisions. Moreover, this theory is useful to most firms regardless of industry as financing is a cross-cutting issue that firm owners must deal with. As such, it has wide usage because it is not specific to some sections of the economy.

This theory too offers a valuable proposition that relates costs of financing with information availability. The lack of access to adequate information in credit pricing and issuance of new stocks practically influences financing decisions for most corporates in real life (Scherger, Guercio, & Martinez, 2019; Dissanayake, 2018). For instance, shareholders would rather work with debts instead issuing stocks which could lead to dilution and this can affect efficiency in decision making.

Pecking order theory is also used to gauge on the performance and stability of firms. For instance, if a firm solely uses internal funds to fund its investments, this can be an indication of good performance and where debts are used, this sends signal that management is doing well because they have strong belief that the returns are able to service the debts. Issuance of stocks can suggest dismal performance or overvaluation of shares (Bhama, Jain, & Yadav, 2018).

The major disadvantages of pecking order theory is that it does not consider all potential factors that can affect cost and choice of financing. In this theory, it is superficially argued that cost and information are the only variables influencing financing. This may not be the case (Koresh, Offer, & Rodrigo, 2018). Moreover, the theory works for already existing firms which are profitable. It advocates for use of retained earnings in financing whereas start-up firms may not have these funds. As such, they may even seek strategic investors and new shareholders which means that they rank is not always applied as suggested in pecking order theory. At the same time, this theory does not quantify information that is used in making financing decisions. The theory argues in abstract form that information flow influences costs of financing without providing subtle figures and statistics. Another limitation of this theory is its narrow scope as it only considers three basic financing instruments whereas the modern world has wide arrays of financing options (Chandra, Junaedi, Wijaya, Suharti, & Mimelientesa, 2019). For instance, the issue of private equity and joint ventures is not easily placed in this theory. Lastly, the postulates of this theory are more theoretical and the discussions may be difficult to apply in real life situations where all financing options are available and that the information flow is not a factor of consideration. As such, this theory fails to capture the concept of risk and return tradeoff in its different financing components (Soliman, Allini, Adele, & David, 2018).

Inclusion of pecking order theory in this study is explainable in two folds. Firstly, insurance firms have regulated capital adequacy requirements. Insurance firms are required to achieve a minimum capital requirement before being permitted to trade. This study tested this policy in respect to whether it influence firm performance. Secondly, most insurers rarely go for loans and when they do so, it must be sanctioned by insurance regulatory guidelines. The IRA therefore follows propositions laid down by pecking order theory to require underwriters use internal sources to finance business. The theory thus, relates well with capital adequacy variable.

2.3 Empirical Review

In this study, five factors were examined in respect to their influence on firm performance. This section presents empirical review for the predictors.

2.3.1 Underwriting Risk and Firm Performance

Pathirana and Buddhika (2021) were inspired to learn more about the factors that determine the performance of Sri Lankan insurance firms. Secondary data was employed in this investigation. Descriptive statistics and regression models were used to analyze the acquired data. The study found that underwriting risk had no meaningful association with the profitability of Sri Lankan life insurance companies. The study was done in Asia while the current study was done in Kenya. Moreover, the study did not focus on similar variables as done in this study.

Oyetayo and Abass (2020) reviewed underwriting capacities and firm returns for insurance entities. The goal of this study is to see how joint underwriting variables affected the financial performance of non-insurance companies in Nigeria. This study relied heavily on a sample of 41 annual reports from non-life insurance businesses to gather the information needed for this paper. Underwriting variables were found to have a significant impact on the financial success of insurance businesses.

The study did not use panel regression as this study did. Moreover, the study focused on non-life insurance companies while the current study focused on general underwriters.

Kusi, Alhassan and Sai (2020) sought to examine regulations and firm results. The study focused on insurance companies in Ghana in which regulations were reviewed in terms of their role firm returns. A sample of thirty firms was used and data was processed using panel regression and ordinary least squares models. In both cases, results revealed that regulations bettered underwriting risk. On the other hand, underwriting risk hampered financial performance of firms. The study was done in Ghana while the current study is done in Kenya.

Meher and Zewudu (2020) delved into firm-specific factors and countrywide factors and their effect on financial performance of insurance companies. This study focused on 9 insurers in Ethiopia. OLS models were used to get results. It emerged that underwriting risk was a major constraints towards good performance of insurance entities. Growth of assets also improved firm returns. On the other hand, economic growth and liquidity boosted financial returns of the firms. The study was very simplistic as it utilised OLS while the current study used panel data regression.

Ullah, Faisal and Zuhra (2016) interrogated profitability of insurers in Bangladesh. The goal of this study is to determine the factors that influence the financial performance of non-life insurance companies in Bangladesh. From 2004 to 2014, secondary data from a sample of eight insurance companies was used in this study. For data analysis, the collected data was subjected to Ordinary Least Squares model.

There was a substantial inverse relationship found between underwriting risk and business profitability. The study was done using simple regression while the current

study adopted a different methodology as data analysis was done using panel data regression.

Angima and Mwangi (2017) undertook an investigation into the impact of underwriting risk and claim management techniques on the profitability of general insurance entities in East Africa was carried out. The data obtained was analysed using a linear regression model. The underwriting and claims management techniques utilized by the firms were shown to have a positive and substantial link; however the correlation to the firms' financial position was not significant. The current study had more variables which essentially improved the variability of results.

2.3.2 Liquidity and Firm Performance

Shahi and Agnihotri (2022) delved into role of internal factors such as liqudity, size of firm and tangibility on firm performance. The focus was ten insurance companies in India. A panel data set was collated and results of data analysis were obtained by running a regression analysis. The outcome was that all the variables were beneficial to firm returns as they showed positive roles. The study did not examine include underwriting risk which theoretically dictates insurance business process.

Hongli, Ajorsu and Bakpa (2019) assessed the influence of liquidity and financial leverage on the industrial businesses of the Ghana Stock Exchange was explored. This research looked at annual reports from six publicly traded corporations. Regression and descriptive statistics models were used in the data analysis. According to the findings, liquidity had a positive and significant impact on the financial performance of the companies.

The study had one variable while the current study had several variables which included underwriting risk, solvency, firm size and capital adequacy.

Zainudin, Ahmad and Leong (2018) reviewed financial performance and factors influencing it among insurance companies in Asia. The study used secondary data that was sourced from published accounts for the firms. Regression analysis showed that internal factors affected financial well-being of firms. Further, liquidity was found not to influence firm returns. This was the same case to asset tangibility and growth in premium collection. In contrast, underwriting risk, size and capital adequacy affect firm returns.

Obi-Nwosu et.al, (2017) interrogated impact of liquidity on performance of Nigeria's deposit-taking banks was investigated. Data was collected from a sample of deposit money institutions between the years 2000 and 2015, and then analysed using a regression model. It was discovered that there was no significant link with liquidity in both the long and short run.

Demirgunes (2016) interrogated effect of liquidity on the profitability of the Turkish retail businesses was investigated. The data for this study came from the mentioned retail companies. In this study, the collected data were analysed using the least squares model. The financial performance of the firms and the liquidity technique were found to have a positive and substantial link in the art.

Songe (2015) was motivated to look into the impact of liquidity management on the financial performance of Nairobi County's deposit-taking SACCOs. The financial statements of 27 deposit-taking companies from 2010 to 2014 were utilized as a sample.

Correlation coefficients, descriptive statistics, and regression analysis models were used to analyze the data. The financial performance of the companies was found to have a positive link with liquidity.

Muturi and Omondi (2013) were inspired to investigate the elements that influence the performance of listed companies on Kenya's Nairobi Securities Exchange. This analysis used a sample of 29 publicly listed firms. Financial statements from the chosen companies from 2006 to 2012 were used. The data analysis process in this paper used both descriptive and inferential statistics. There was a substantial and positive correlation between liquidity and the financial success of the companies.

2.3.3 Solvency and Firm Performance

Mohammad, Sulaiman and Adelrahim (2021) delved into role of solvency and liquidity on firm perfirmance. The study was done in Jordan among firms publicly held. A panel data was sourced and regression performed. Outcome of the study was that solvency bettered firm financial results. Also, there was a harmful role of liquidity on firm results. The study reported that it was crucial for firms to consider more solvency than liquidity in order to have best results.

Morara and Bongani (2021) assessed underwriting risk, solvency, and financial performance of Kenyan insurance businesses. The information for analysis was taken from the insurance regulatory authority's yearly reports. In order to analyze the data, correlation and descriptive statistics were used. This research’s outcome was that underwriting risk was on the rise and had a favourable influence on the financial situation of the firms, while solvency also had a good impact.

Palamalai and Britto (2017) delved into firm performance of banks in India. Among the variables examined were solvency, liquidity and mangement efficiency. In this study, secondary data was sourced and structured in a panel form. Results portrayed profits are influenced positively by liqudity and solvency. It evidences that solvency

betters results for firms. Moreover, the study portrayed that efficiency in use of resources is beneficial in firm results.

Bawa and Chattha (2013) assed firm performance of Indian insurers. The goal was to look at the financial positions of Indian life insurers based on a variety of factors. This study relied on secondary data from a group of 18 insurance firms. The data was analysed using a multiple regression model. It was determined that a company's solvency has no bearing on its profitability.

Njuguna (2013) was inspired to do research into the effects of mergers and acquisitions on the profitability of Kenyan petroleum companies. Data was acquired from the companies' annual reports and then applied to a regression model for analysis. The report found that solvency has a positive but minor relationship with the profitability of petroleum companies.

2.3.4 Firm Size and Firm Performance

Lassad (2021) delved into factors influencing financial returns of Saudi insurers. The study had several determinants that were reviewed. These included; size, leverage, underwriting risk, loss ratio, liabilities ratio and liquidity among others. The results were obtained by subjecting a panel data set from twenty insurers to generalised moment methods of analysis. In respect to size, results evidenced that the variable has a significant positive role on financial performnance of Saudi insurers.

Deyganto and Alemu (2019) sought to examine the factors that affect the performance of the insurance companies in Ethiopia. Secondary data was sourced from both published and unpublished financial statements of a sample of 17 insurance firms. Ordinary least square was employed for the analysis of data. It was concluded that company size had no significant impact on the profitability of the insurance companies.

Ngaba and Kibet (2018) reviewed role of firm size on firm returns in Kenya. The goal of this study is to see how the size of a company affects the profitability of Kenyan commercial banks. Financial statements and supervision reports from 42 commercial banks were used to compile the data. The data obtained was analyzed using multiple linear regression models. The article indicates that there is a considerable relationship between the size of a company and its financial performance.

Njoroge (2014) examined the effect of firm size on the financial position of Kenya's insurers in pension service. Secondary data for this study came from a sample of 30 pension systems' financial statements and annual reports. The data collected was analyzed using SPSS version 20 and Microsoft Excel 2010. The size of the company had a positive impact on the financial success of the pension underwriters.

Burca and Batrinca (2014) aimed at analysing the factors that affect the performance of the Romanian insurance market financially. Annual reports and financial statements were obtained from a sample of 41 insurance firms. Pearson correlation coefficient and descriptive statistics models were used for the analysis of data .the size of the company was found to have a positive effect on the financial performance of the companies.

Abiodun (2013) was motivated to examine effects of the size of the firm in relation to the profitability of the manufacturing firms in Nigeria. Between the years 2000 and 2009, data was gathered from the annual reports of a sample of 80 non-financial companies listed on the Nigerian Stock Exchange. Correlation model was used for the analysis of data gathered. Firm size was found to have a positive effect on the performance of the manufacturing companies financially.

2.3.5 Capital Adequacy and Firm Performance

Atuahene et al., (2021) investigated capital adequacy and firm performance. The goal of this research was to find out how bank capital affects bank performance in Ghana. Financial statements from a sample of eight banks listed on the Ghana Stock Exchange between 2008 and 2017 were the main source of data. A panel regression model was used to examine the data collected. According to the study, capital adequacy has a positive impact on bank financial performance.

Ichsan, Suparmin, Yusuf, Ismal, & Sitompul (2021) reviewed determinants of firm performance. The purpose was to investigate Islamic institutions' financial performance during the covid-19 pandemic. From 2011 through 2020, secondary data was extracted from annual financial statements. The data was analyzed using multiple regressions. The capital adequacy ratio was discovered to have a large and favourable impact on bank financial performance.

Kimeu (2020) assessed the impact of capital sufficiency on the financial status of Kenyan commercial banks was investigated in a study. Eleven commercial banks' income statements and financial status were scrutinized. Descriptive and inferential statistical approaches were used to analyze the data. Capital sufficiency and bank financial performance were found to be highly correlated.

Ariwidanta and Wiksuana (2018) reviewed the relationship between credit and liquidity risk and Indonesian bank financial performance. Other variable assessed was capital adequacy. Secondary data from a sample of 26 banks listed on the Indonesia Stock Exchange is used in this article. Path analysis was used to examine the data. The association between bank financial performance and capital adequacy was discovered to be favourable but inconsequential.

Tesfaye (2012) assessed impact of liquidity on Ethiopian banks' financial performance was investigated. From 2000 through 2011, primary data was collected from a sample of eight commercial banks. After that, the data was run through a regression model. The researcher came to the conclusion that capital adequacy had a positive and significant impact on commercial bank profitability.

2.3.6 Determinants of Financial Performance of Insurance Companies

Batool and Sahi (2019) examined determinants financial performance of insurance companies in the United States and United Kingdom. The study reviewed role of firm size, GDP, interest rates, leverage and asset turnover on return on assets and return on equity. Panel regression analysis was done on a data set that was obtained from twenty four insurance firms. Results showed that firm size, leverage and liquidity has positive impact on firm returns of insurance companies in the US while leverage does not foster performance of insurance companies in the United Kingdom.

Janga (2020) examined determinants of financial performance of insurance companies in Nepal. The study evaluated role of leverage, short term debts, long term debts, liquidity and firm size on return on assets and return on equity.

Results of regression analysis showed that firm size and long term investments did not better performance, age and liquidity bettered. The study too found out that growth bettered firm returns.

Zewudu and Meher (2020) focused on evaluating determinants of financial performance of insurance companies in Ethiopia. The study evaluated the role of internal factors and macroeconomic variables on firm returns. Using a data set from nine entities, for a period of nine years, the study adopted panel data regression. The results showed that firm size, economic growth positively affected firm performance.

On the contrary, leverage, liquidity and underwriting risk negatively impacted firm performance. Moreover, growth bettered firm performance.

Kamanda and Sibindi (2021) focused on determinants of financial performance of insurance companies in Kenya. The study focused on all insurance companies in Kenya from which a panel data set was collated. The data was analysed using fixed and random effects model. The results showed that firm size had positive effect on financial performance while age had negative effect on financial performance. Moreover, leveraged firms showed better financial performance which was measured in terms of return on assets and return on equity.

2.4 Conceptual Framework

As illustrated on figure 2.1, this study has five predictors and a single response variable. The predictor variables are underwriting risk, liquidity, solvency, firm size and capital adequacy. The dependent variable is financial performance. In addition, the measures of the variables are shown on the figure. Underwriting risk exist inherently because it is not outright that underwriting premiums covers claims payout. Insurance entails issuance of policy covers for risks and this presents underwriting risks. Hence, underwriting risk is risk that premiums are not able to cover claims paid. Liquidity is a measure of capacity to pay obligations of financial nature within the allowed time. A good liquidity means that financial dues are paid in due time. Liquidity is a good gesture as it improves reputation for firms. Firm size refers to ability to invest and is often proxied by resource endowment. Large firms enjoy economies of scale and therefore can show good returns. Solvency is ability to stay afloat in respect to capacity to pay off all debts. Solvent firms are stable and are expected to be more profitable. Solvency keeps entities in businesses.

The other variable for the study is capital adequacy which refers to owner's contribution to financing of the companies. Capital adequacy represents internal resources that can be used to expand business operations. Hence, capital adequacy is important as it enable firms to operate without costly debts. The response variable for this study is financial performance which is a measure of income generated from activities of firms. Financial performance is essential as it boosts firm sustainability, ability to progress and remain in business. Moreover, financial performance is crucial to shareholders as they expect dividends from their capital which is earned from profits.

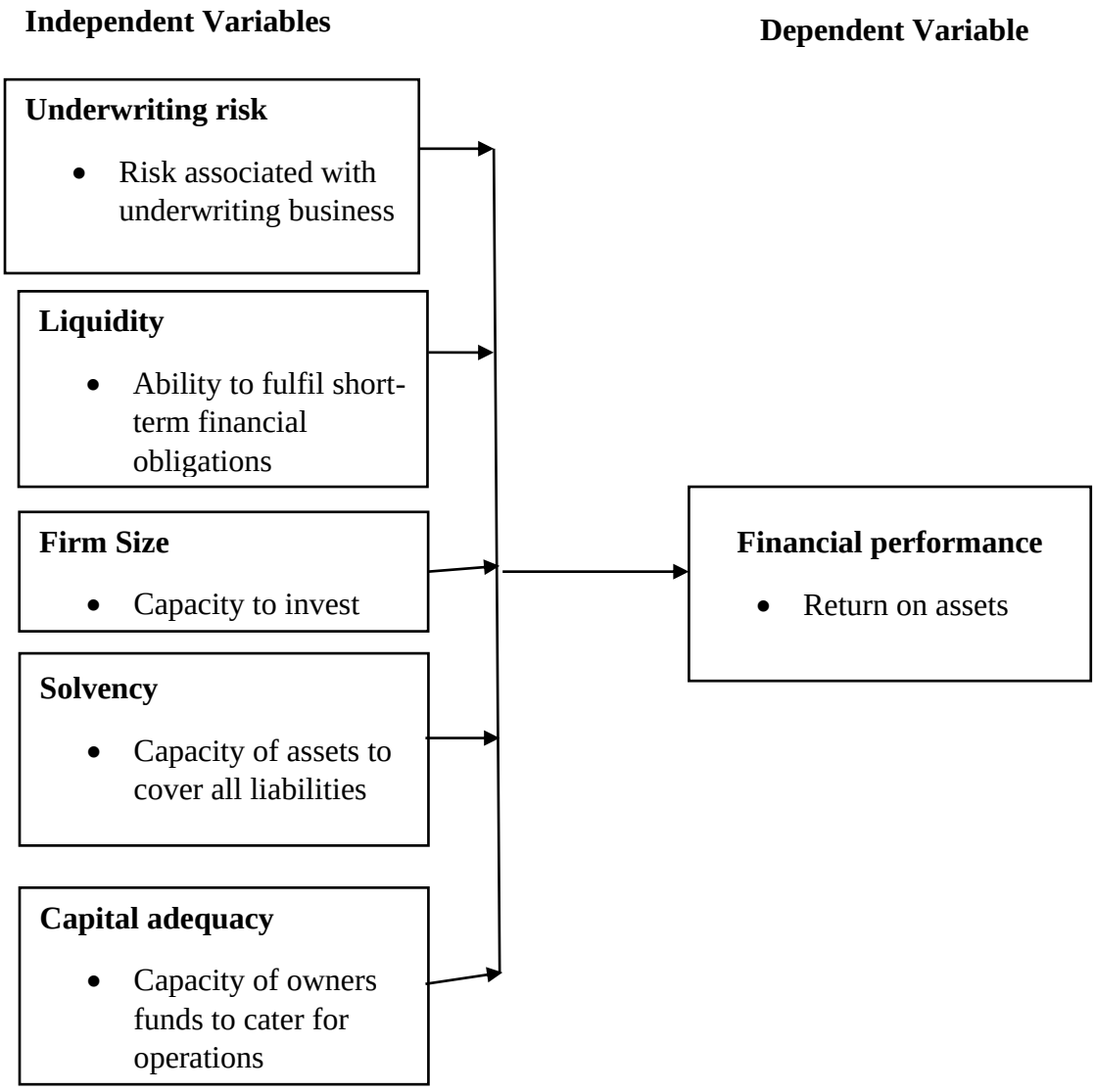


Figure 2: 1 Conceptual Framework

2.5 Operationalization and Measurement of Study Variables

Table 2.1 entails a presentation of variables in respect to how they are operationalised and measured.

Table 2: 1 Operationalization and Measurement of Study Variables

Variable	Variable Type	Definition of Variable	Indicators	Measurement of Variable
Underwriting risk	Independent	This refers extent to which premiums cover claims payments.	Gross written premium Risk diversification	Claims paid in a period divided by Gross written premium
Liquidity	Independent	This refers to capacity to pay short term debts.	Cash reserves Trade receivables	Current ratio= current assets/short term liabilities
Solvency	Independent	This refers availability to pay all debts with existing assets	Profits earned	Total assets divided by Total liabilities
Firm Size	Independent	This refers to capacity to make investments	Resources endowment	Log Total assets=current assets +long term current assets
Capital adequacy	Independent	This is strength of capital to cover debts	Equity	Equity-to-debt ratio
Financial performance	Dependent	This refers to measure of how well firm generates returns.	Financial returns profits	Return on assets= net income divided total assets.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The theme of this section is to present practical procedures and methods that were followed to achieve research goals. This section is organised to cover aspects of research design, target population and sample size. Moreover, this section has instrumentation and data collection procedure explained. At the end is a presentation of data analysis methods and evaluation of goodness of fit for the analysis model that was be used.

3.2 Research Design

Pegging on the research purpose, this study utilised descriptive research design. In essence, a research design puts forth the framework or plan that is used to provide solution to a research problem. A good research design focuses on the need of the research and the type of data to be used. This study utilised descriptive research design because of three folds. Firstly, in descriptive research design, subtle aim is to relate variables in respect to how they influence each other (Burke & Schoonenboom, 2017). This study seeks to categorise and characterise selected determinants in respect to resultant effect on firm financial wellness. Secondly, descriptive research delves on a naturalistic approach as it does not experiment phenomenon. It utilises data, concepts and observations as they are during time of research in unchanged environment. In this study, observations for collating data from general underwriters was collected and collated as it is. Lastly, descriptive research provides comprehensive statistics and research findings that can be used on decision making (Creswell, 2013). For instance, this study used the findings to recommend policies and practices that can be used for apt decision making to enhance firm results.

3.3 Target Population

All individuals that generalisations apply for, forms the target population (Sekaran & Bougie, 2016). Target population has units that are similar and unique to the group. This study targets all general insurance firms in Kenya. General insurers are corporates whose business focus is to cover non-life risks such as fire and allied perils, motor vehicle accidents, construction and engineering among other risk. In Kenya, as per IRA, there were 31 general underwriters that offer general insurance business in Kenya for the period desired for data collection. This study was a census of all 31 general underwriters. A sample contains few units picked from population and is feasible where population is vast. In contrast, current study has few entities and it is practical to get data from all. Therefore, no sampling was done.

Table 3: 1 Target Population

Target population	Frequency
General insurance companies in Kenya	31

3.4 Instrumentation and Data Collection

Secondary data was sourced from financial statements of insurers. Data period was from year 2014 to 2020. This study had purposed to examine selected factors in respect to how they affect firm returns. These factors were underwriting risk, liquidity, solvency, firm size and capital adequacy. Underwriting risk has been conceptualised a risk of premiums not meeting claims payments. It was measured in a ratio scale.

Liquidity depicts firm capability of paying short term financial dues. It was proxied in current ratio. Solvency depicts firm's financial stability in the long run and was proxied in solvency ratio. Solvency ratio is measured in terms of net profit plus depreciation to total liabilities. Firm size was measured in respect to total asset ownership. Capital adequacy depicts sustainability of operations in respect to firm's equity meeting debt obligations. Financial performance was proxied by return on assets. Data collection procedure comprised of mainly two main tasks. Firstly, financial statements for insurers were obtained for the period under investigation. Secondly, measures of variables were computed and collated in Excel. The summarised data set was arranged in a panel data set as observations were for all insurers for different times.

3.5 Data Analysis and Presentation

Simply, data analysis is conversion of raw data into meaningful statistics. In this study, data analysis was undertaken using panel estimation techniques. This method is suitable as it enabled characterisation of variables through testing of hypothesis more efficiently, can provide more variability in outputs and contains more information. For instance, data can be modelled within groups which can significantly minimise estimation biases.

Three techniques were undertaken in data analysis; exploratory, descriptive and regression analysis. In exploratory technique, the dependent variable were subjected to graphical method of evaluating existence of time related fixed effects. This was a critical task as it is the basis of deciding whether to use pooled OLS or go with panel estimation. The second technique entailed computation of summary statistics, like averages, medians to get a glimpse of data behaviour. Moreover, highest scores and lowest scores for each variables were identified to generally describe the data.

Last technique was to perform a regression analysis at 95 % confidence interval. The function relating variables was;

$$\mathbf{Y_{it} = \beta_{0it} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \varepsilon_{it}}$$

In which, component Y is a proxy for the response variable (financial performance), X_1 is underwriting risk, X_2 liquidity, X_3 is solvency, X_4 is firm size and X_5 is capital adequacy. β_0 is financial performance without the predictors, β_1, β_2, β_3, β_4 and β_5 are coefficients of input factors respectively, i is firm identity and t is time. Data analysis was undertaken using STATA software, version 15.

3.6 Diagnostic Testing

Results from regression estimation were evaluated in regard to how well they fit. The tests that were performed; heteroscedasticity tests, residuals correlation, multicollinearity and normality for residuals.

3.6.1 Heteroskedasticity

Existence of differences in variances of residuals result to heteroskedasticity which impairs regression estimates (Arvanitis, 2018). Variances of residuals are intuitively expected to be homoscedastic or have homogeneity. Thus, heteroskedasticity exist where standards errors fail to vary in equal proportion with the predictors. It hampers efficiency and efficacy of estimators. In this study, heteroskedasticity was assessed by running Breusch Pagan test. Rejection rule is; if p-value of the statistic is less than 0.05, null hypothesis for homoscedasticity is rejected revealing heteroskedasticity and in case, residuals fail to achieve homogeneity, use of robust standard corrected errors regression can be considered (Halunga, Orme, & Takashi, 2017).

3.6.2 Serial Correlation

Another classical assumption of regression analysis is absence of serial correlation also known as autocorrelation. Serial correlation is also known as autocorrelation and exist in many forms but primary exist where errors are not independent of each other (Meijer, Ockowski, & Wansbeek, 2021). In this study, autocorrelation was by adopting Wooldridge test that is most preferred for panel data set. This is because, it weighs first order serial correlation which is the most common form of autocorrelation in panel data that exist where residuals exhibit patterns over adjacent time. Residual correlation exist where p-value for Wooldridge is less than 0.05, null hypothesis is rejected leading to conclusion of existence of residual correlation. Similar to heteroskedasticity, use of robust standard corrected errors technique can improve on model estimators.

3.6.3 Multicollinearity

Where predictors in almost linear form relates with each other, the situation is termed as multicollinearity (Melo & Kibria, 2020). It renders predictive powers of input variables less efficient due to high correlation among themselves. Regression analysis is built on assumption that input variables do not linearly influence each other. This study examined this situation by running Variance Inflation Factor. VIF estimates the extent to what predictors are correlated. Where VIF output shows statistics less than 10, then predictors are fit for use in same model.

3.6.4 Normality

Normality for residuals evaluates normal distribution of residuals. Residuals normality is critical in regression as it validates model estimates (Zofia, Joanna, & Wojciech, 2016). Considering that residuals are differences between observed and predicted values for response variable, non-normality of residuals can interfere with results of hypothesis testing.

In this study graphical methods were used in post-estimation testing for normality. However, normality is only applicable for testing of significance and does not impair model estimates.

3.6.5 Panel Model Set Up

A panel data set is subjected to examination on whether pooled OLS is sufficient or panel regression is to be used. This study used the Breusch-Pagan Lagragian Multiplier effect to examine fitness of panel data regression. The LM tests whether there are differences across units. Where the P-value for L-M is less than 0.05, it leads to rejection of null hypothesis concluding that panel analysis is sufficient.

3.6.6 Model Specification

Decision on whether to employ random effects model or fixed effects estimation was made in light of Hausman test result. Fixed effects model is used where there is a time invariant component in the model while in contrast, random effects model is used where it is assumed that there exist time variant components in the model (Baltagi & Liu, 2015). Moreover, fixed effects is used when association between variables is explored and the variables' observations vary over time. On the other hand, random effects estimation is used in the event that residuals are correlated with regressor irrespective if stochastic or not. This is because, variations across study units is uncorrelated and randomly existing.

Hausman test typically weighs errors correlation with regressors. This test basically evaluates or detects existence of endogenous predictors. In this regard, null hypothesis for Hausman test is use of random effects. Hausman statistic with p-value of less than 0.05 indicates significant difference in coefficients not being systematic and thus use of fixed effects is more favourable.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The goal of chapter four is to report on results of data analysis in a condensed format that is substantial in providing answers to the research problem and further conclude on hypotheses. In reporting, this section is arranged in three complementary sections starting with descriptive statistics, exploratory data analysis and regression part. The results were obtained by use of STATA.

4.2 Descriptive Statistics

An analysis of summary statistics was done to establish averages, standard deviations, lowest and maximums for observations that proxied the six variables. The five predictors were underwriting risk, liquidity, solvency, firm size and capital adequacy. The outcome variable was financial performance that was proxied by return on assets. Table 4.1 illustrates results for summary statistics.

Table 4: 1 Summary Statistics

Variables	(1) N	(2) Mean	(3) sd	(4) min	(5) max
ROA	217	0.0482	0.0844	-0.150	0.400
Underwriting_risk	217	1.048	0.971	0.0900	5.760
Solvency	217	2.523	6.262	-14.87	44.73
Liquidity	217	4.209	4.599	0.400	31.75
Capital_adequacy	217	0.445	0.205	0.100	1.280
LogFS	217	15.20	0.733	13.63	16.59
Number of company_id	31	31	31	31	31

Source: Data analysis (2022)

The summary statistics on Table 4.1, shows that average underwriting risk ration that was obtained by dividing claims by premium was 1.04, lowest was 0.09 and highest was 5.76. The statistics show that underwriting risk was low for the general underwriters in Kenya. Underwriting risk is a measure of how well underwriting business is structured in comparison to claims paid in a given time frame. Secondly, mean liquidity was 4.21, highest was 31.75 and the minimum during the period was 0.400. It infers that most underwriter high liquidity. Liquidity maintenance was operationalised in form of current ratio. Considering that underwriters pay claims from proceeds of premium, it infers that the high liquidity is meant to meet this expenditure.

Thirdly, solvency had an overall mean of 2.52, highest was 44.73 and lowest was -14.87. This shows that there was significant differences across the firms. Capital adequacy had an overall of 0.45, highest was 1.28 and lowest was 0.100. This implies that the company did not have sufficient capital to utilise in business. Lastly, mean firm size asset worth Kshs. 5 billion, and smallest had assets worth 830 million. This indicates that there was heterogeneity across sample firms in terms of firm size.

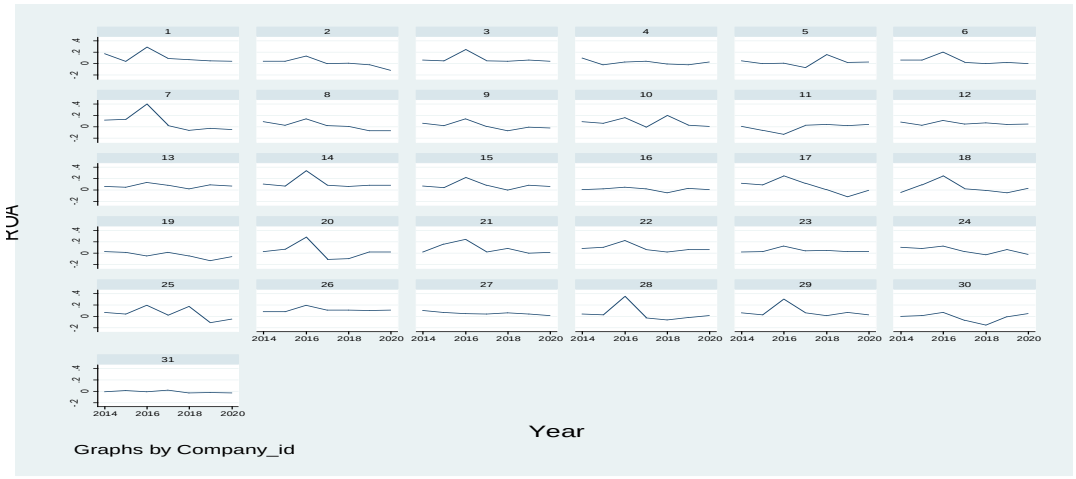
4.3 Exploratory Data Analysis

Simply, exploratory data analysis is instrumental in testing anomalies in data that can inhibit efficacy of model estimates. A panel data set, is subjected to exploratory data analysis for two reasons. Firstly, to examine existence of time related fixed effects and secondly, to offer initial results in model selection. This study delved into graphical methods, whose results are represented on Figure 4.1 and Figure 4.2. On Figure 4.1, the pattern for return on assets for all insurers appears similar and thus negates chances of having outlier problems. This being the case, the observations for the dependent variables for all firms are capable of being modelled in panel data models.

Exploratory analysis for panel helps us to examine the presence of between and within variation. Secondly, figure 4.2 indicates that all firms showed gradual changes in financial performance and that the constant is distributed around the same region which does not indicate existence of time related fixed effects. After confirming this, the data was modelled using panel data analysis in contrast to any other model such as ordinary least squares or pooled OLS.

Figure 4: 1

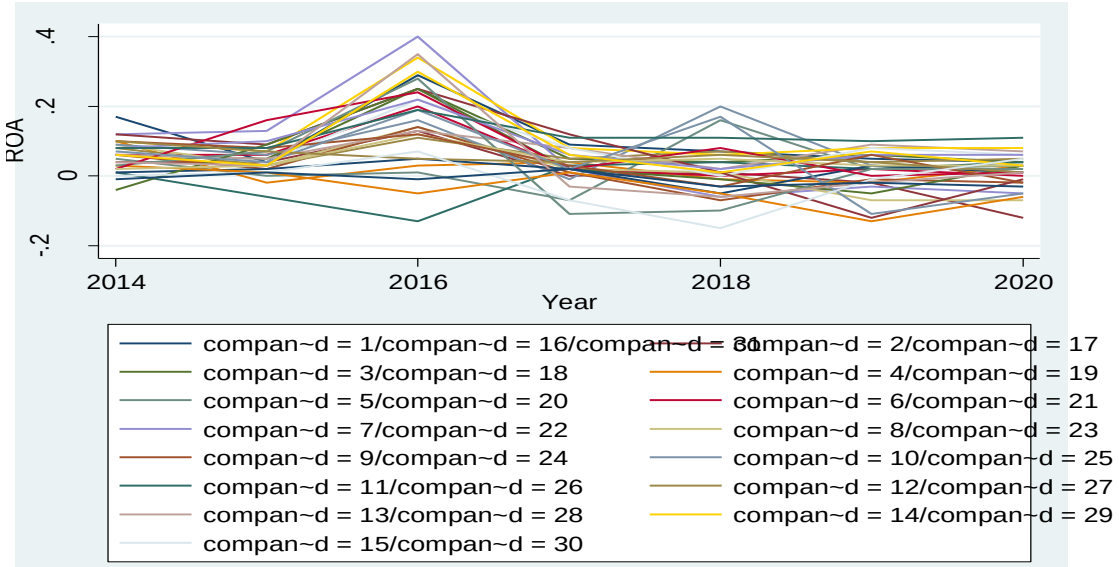
Exploratory Graph



Source: Data analysis (2022)

Figure 4: 2

Exploratory Spaghetti Graph



4.4 Diagnostic Tests

Data was examined for heteroskedasticity, residuals correlation, multicollinearity and normality for residuals. The results are presented in this part.

4.4.1 Heteroskedasticity

Existence of differences in variances of residuals result to heteroskedasticity which impairs regression estimates. In this study, heteroskedasticity was assessed by running Breusch Pagan test. Table 4.2 shows the results of the Breusch Pagan test.

Table 4: 2

Breusch-Pagan test for Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 36.16
Prob > chi2 = 0.0000

Source: Data analysis (2022

The p-value for the Breusch –Pagan/Cook-Weisberg test was 0.0000 which means that heteroskedasticity was present. To deal with this, observations for the response variable were transformed into logs and the results for heteroskedasticity ran again and reported on Table 4.4

Table 4: 3

Breusch-Pagan with LogROA

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of LogROA
chi2(1) = 0.01
Prob > chi2 = 0.9354

Source: Data analysis (2022

Rejection rule is; if p-value of the statistic is less than 0.05, null hypothesis for homoscedasticity is rejected revealing heteroskedasticity and in case, residuals fail to achieve homogeneity. Therefore homoscedasticity was achieved on transforming the response variable into natural logarithms.

4.4.2 Serial Correlation

Residuals correlation is also known as autocorrelation and exist in many forms but primary exist where errors are not independent of each other. In this study, autocorrelation was tested by adopting Wooldridge test that is most preferred for panel data set. The results are indicated on Table 4.4

Table 4: 4

Serial Correlation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 26) = 2.112
Prob > F = 0.1581

Source: Data analysis (2022)

Residual correlation exist where p-value for Wooldridge is less than 0.05, null hypothesis is rejected leading to conclusion of existence of residual correlation. In this case, on transformation of response variable, residual correlation was absent as the P-value as 0.1581 which was more than 0.05. This means that panel regression can be modelled without the need to use robust standard errors methods.

4.4.3 Multicollinearity

Multicollinearity is present where predictors influence each other in linear ways and this inhibits efficacy of estimates. The variable inflation factor (VIF) was used to evaluate extent of collinearity and the results are on Table 4.5

Table 4: 5

Testing for Multicollinearity

Variable	VIF	1/VIF
Solvency	1.123	.891
underwriting risk	1.117	.896
logFS	1.109	.901
capital adequacy	1.101	.908
Liquidity	1.095	.913
Mean VIF	1.109	.

Source: Data analysis (2022)

On regressing LogROA against the predictors and testing for multicollinearity, the mean was 1.109 where solvency, underwriting risk, log firm size, capital adequacy and liquidity had VIFs of 1.123, 1.117, 1.109, 1.101 and 1.095 respectively. In usual circumstance, VIF values that are less than 10 support absence of high correlations among predictors. Thus, all the input variables, namely underwriting risk, liquidity, solvency, capital adequacy and firm size are not linearly correlated and thus are true independent variables.

4.4.4 Normality

Whilst it is not fundamental that normal distribution occurs for variables to validate model estimates, normality of residuals examines appropriateness of statistics used in testing hypotheses. Figure 4.3 shows residuals normality.

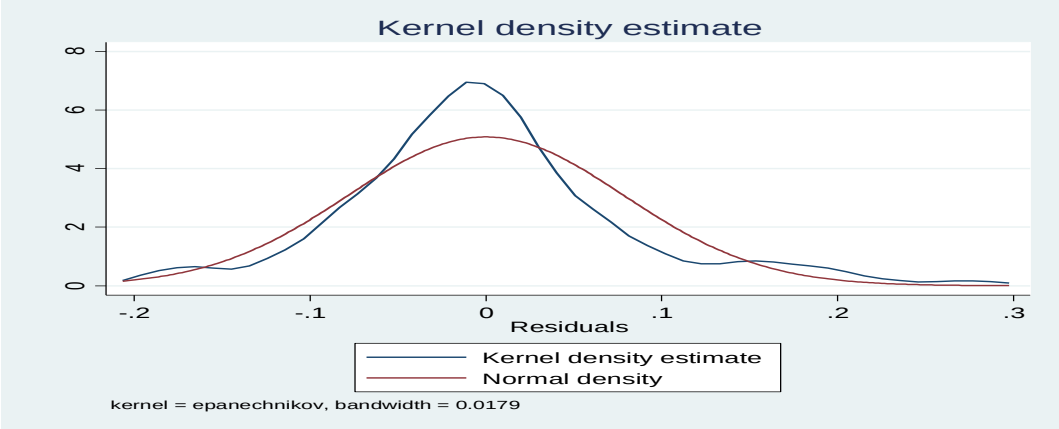


Figure 4: 3

Kernel Density estimate for normality of residuals

As presented on Figure 4.3 is the Kernel density estimate that residuals approximately followed normal distribution. In conclusion, the model estimates formed are unbiased and hypotheses tests are therefore valid.

4.4.5 Panel Data Set up

This study used the Breusch-Pagan Lagragian Multiplier effect to examine fitness of panel data regression. The results are shown on Table 4.6

Table 4: 6

Lagrangian multiplier test

Breusch and Pagan Lagrangian multiplier test for random effects
Test: Var(u) = 0
chibar2(01) = 0.77
Prob > chibar2 = 0.0901

Based on the results on Table 4.6, the P-value for L-M is less than 0.05, which meant that there were differences across unit. It led to rejection of null hypothesis concluding that panel analysis was the fit model in this study.

4.5 Model Specification

Decision on whether to employ random effects model or fixed effects estimation was made in light of Hausman test result. This result was obtained after transformation of the dependent variable to LogROA. The result is presented on Table 4.7

Table 4: 7

Hausman Test Result

Hausman (1978) specification test	
	Coef.
Chi-square test value	5.704
P-value	.336

Source: Data analysis (2022)

The P-value for Hausman is 0.3361 indicates that best model to use is random effects. Hausman statistic with p-value of less than 0.05 indicates significant difference in coefficients not being systematic and thus use of fixed effects is more favourable. Hausman test typically weighs errors correlation with regressors. This test basically evaluates or detects existence of endogenous predictors. In this regard, null hypothesis for Hausman test is use of random effects.

4.6 Model Estimates

This study sought to establish the effect of underwriting risk, liquidity, solvency, capital adequacy and firm size on financial performance of general insurance companies in Kenya. The model estimates were reported using Random Effects model as shown on Table 4.8. The overall R^2 was 13.4 that by inference means that 13.4 % of variations in financial performance of insurance companies in Kenya was due to changes in

underwriting risk, solvency, liquidity, capital adequacy and firm size. Moreover, this indicates that 86.6 % of variations in financial performance of general underwriters is influenced by changes in other variables other than the five considered in this model. Pertaining to model predictive efficacy, the p-value was 0.0002 which shows that the model linking underwriting risk, solvency, liquidity, capital adequacy and firm size on financial performance was significant. Thus, the variabilities in the five variables, are statistically significant in prediction of changes in financial performance of underwriters.

Table 4: 8

Beta Coefficients

LogROA	Coef.	St.Err	t-value	p-value	Sig.
Underwriting_risk	-0.228	0.066	-3.46	0.001	***
Solvency	0.037	0.010	3.60	0.000	***
Liquidity	-0.026	0.016	-1.61	0.109	*
Capital_adequacy	-0.071	0.355	-0.20	0.841	
LogFS	0.056	0.115	0.49	0.627	
_cons	-3.549	1.810	-1.96	0.050	**
Mean dependent var	-2.957	SD dependent var			0.907
Overall r-squared	0.134	Number of obs			166.000
Chi-square	24.110	Prob > chi2			0.000
R-squared within	0.120	R-squared between			0.229

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

$$\mathbf{Y_{it} = -0.228X_{1it} - 0.026\,X_{2it} + 0.037\,X_{3it} + 0.056\,X_{4it} - 0.071\,X_{5it}}$$

Where --0.228 is decrease in ROA in response to an increase in 1 unit underwriting, 0.037 is increase in ROA in response to an increase in 1 unit solvency, -0.026 is decrease in ROA in response to an increase in 1 unit of liquidity, -0.071 is decrease in ROA in response to an increase in 1 unit in capital adequacy. Lastly, 0.056 is increase in financial performance in response to an increase in 1 unit of firm size. In other words, underwriting risk, liquidity and capital adequacy have negative effect on financial

performance of underwriters while solvency and firm size have positive effect on financial performance of general insurance companies in Kenya. Further, it emerged that 13.4 % of variations in financial performance was accounted by changes in the predictors as depicted by the R square of 0.134.

4.7 Hypothesis Testing and Discussion of Findings

Output of data analysis indicated that the model linking underwriting risk, solvency, liquidity, capital adequacy and firm size on financial performance of insurance companies was statistically significant. This study four hypothesis which were stated as follows. H_o1: Underwriting risk has no statistically significance influence on financial performance of general insurance companies in Kenya. The coefficient for underwriting risk was -0.228, p-value was 0.001 that was less than 0.05 and therefore the null hypothesis was rejected. In contrast, it is concluded that underwriting risk has statistically significant effect on financial performance of general insurance companies in Kenya. As per the results, underwriting risk has a negative influence on financial performance.

Underwriting risk is more pronounced where underwriting guidelines are not sound to results to underwriting profits. This lead to incurrence of more claims than premiums earned and hence lowering returns. Underwriting risk is one of the most common underwriting managers have to deal with. This results are in line with the findings of Kusi, Alhassan and Sai (2020) who delved into firm wellness in Ghana and reported that underwriting risk hampered firm performance. Oyetayo and Abass (2020) equally found that underwriting risk was a significant factor in performance of insurance companies in Nigeria. Similarily, Meher and Zewudu (2020) delved in establishing factors influencing firm returns among underwriters in Ethiopia and noted that underwriting risk was a major constraint of performance. All these results point

that underwriting is key consideration that influence firm performance among insurance companies. In absence of structurally sound underwriting guidelines, firm are likely to realise low profits that can significantly influence their performance.

The second hypothesis as H_o2: Liquidity does not affect financial performance of general insurance companies in Kenya in statistically significance manner. Output of RE model yielded a coefficient of -0.026 whose p-value was 0.109 and therefore the null hypothesis could not be rejected. This indicates that liquidity is not a key factor of financial performance for insurers. Moreover, the results shows a negative association between liquidity and financial performance. Liquidity aims at building a buffer of short term assets that can be used to pay short term debts and other financial calls. This holds up funds, mostly cash that could be invested to earn income. It is therefore plausible to expect that firms with higher liquidity exhibit low returns and lower financial performance. In contrast, firms that invest cash into long term projects are likely to earn premium returns to compensate for time value of money. This finding is line with the results of Zainudin, Ahmad and Leong (2018) who reviewed financial performance and factors influencing it among insurance companies in Asia and found out that liquidity did not have significant role on firm performance. Additionally, Demirgunes (2016) interrogated effect of liquidity on the profitability of the Turkish retail businesses was investigated and noted that liquidity did not significantly influence financial returns.

In contrast, Songe (2015) looked into the impact of liquidity management on the financial performance of Nairobi County's deposit-taking SACCOs and noted that liquidity benefitted banks. This contradiction is because, deposit taking entities, mostly financial institutions have need to retain cash for customer withdrawals. In absence of substantial liquidity, banks can suffer reputational risk that impair on firm wellness.

This is not the case for insurers whose main business is to cover risks and cash is only need to meet routine expenses and claims reported. Claims payments are random and therefore a firm may hold cash to mitigate against liquidity risk that may never occur. Insurers collect premiums and channels them to authorised investments such as fixed deposits, government securities, stocks and commercial papers to earn interest. Thus, there is an opportunity cost of not investing the premiums to the platforms authorised.

Thirdly, the hypothesis stated as H_o3: there is no statistically significance relationship between solvency and financial performance of general insurance companies in Kenya was tested. Considering that the p-value for the coefficient (0.037) was 0.000 which was less than 0.05, this null hypothesis was rejected. In turn, the conclusion was that solvency has a positive and significant relationship with financial performance. This is an indication at solvency is an important determinant of financial performance for general underwriters in Kenya.

In practice, solvency depicts ability of total assets to pay off all liabilities. This in essence is a measure of how well firms are cautioned against bankruptcy in the event they plunge into distress. The findings are line with those of Mohammad, Sulaiman and Adelrahim (2021) delved into role of solvency and liquidity on firm perfirmance who reported that solvency significantly boosted firm returns for listed entities in Jordan. Similarly, Morara and Bongani (2021) assessed underwriting risk, solvency, and financial performance of Kenyan insurance businesses and noted that solvency was a major determinant of firm performance.

Additionally, Palamalai and Britto (2017) delved into firm performance of banks in India and reported that solvency boosted firm performance. Ensuing from these results is an inference that solvency is important in improving firm performance.

Solvency measures ability of a firm to pay off obligations by disposing the existing assets. Solvency is a key aspect as it has a direct impact on the going concern of firms.

Solvency exist where firms finance activities through debts making them to be leveraged. It results into solvency risk that can be hazardous if unfavourable. Unfavourable solvency is a first sign of bankruptcy because, it shows that a business is unable to meet long term debts and remain in business at the same time. Moreover, solvency is used to measure the quality of a balance sheet for companies as a good solvency ratio indicates good financial health and ability to remain as a going concern.

The fourth hypothesis was stated as, H_o4: Firm size has no statistically significance association with financial performance of general insurance companies in Kenya. Considering that the p-value was 0.627 which was more than 0.05, the null hypothesis could not be rejected. This indicates that whilst, firm size has a positive effect (coefficient of 0.056) the influence was not statistically significant. It suggests that the size of the firm does not in any way predict its financial results. This results are in partial agreement with those of Lassad (2021) delved into factors influencing financial returns of Saudi insurers who found out that firm size betters firm performance. Morover, the results are in perfect harmony with those of Deyganto and Alemu (2019) who sought to examine the factors that affect the performance of the insurance companies in Ethiopia and reported that company size did not significantly better profitability of insurance companies. However, Ngaba and Kibet (2018) reviewed role of firm size on firm returns in Kenya and reported that larger banks had better performance. Perhaps, this is because, banks deals with acceptance of deposits which in turn are loaned for interest. Insurance companies on the other hand, deal with issuance of policies on need basis and therefore size of the firm may not influence firm results. It is therefore the capacity to invest and undertake operations as it depicts the

way firms are able to channel resources for activities that generate value to shareholders.

Lastly, the H_o5: Capital adequacy has no statistically significance effect on financial performance of general insurance companies in Kenya was not rejected. Given that the p-value for the coefficient was 0.841 which was more than 0.05, then the null hypothesis stood and it was concluded that the negative influence of capital adequacy did not statistically influence firm financial performance. Capital adequacy for insurers examines equity sufficiency in attaining good performance. In Kenya, insurance companies are tightly controlled in terms of funding and investments to uphold the public interests, more particularly policyholders. Pegging on this result, it emerges that capital adequacy does not work out well as it hampers financial performance. This finding is in conflict with the result of Atuahene et al., (2021) who investigated capital adequacy and firm performance and reported that capital adequacy positively and significantly influenced bank returns. This contradiction is because, banks need sufficient capital to safeguard depositors' funds. Nevertheless, Ariwidanta and Wiksuana (2018) reviewed the relationship between credit and liquidity risk and Indonesian bank financial performance noted that role of capital adequacy was inconsequential to wellness of banks.

Capital adequacy represents the degree to which financial risks are covered by the paid up capital. Thus, capital adequacy measures the ability of firms to meet short term obligations and long term obligations using its capital researches. However, overreliance to internal funding limits expansion and this can translate to stunted growth and firm performance as inferred by the findings of this study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This is the final chapter that summarises results pegged in data analysis outputs, briefs on conclusion and has recommendations. Moreover, in this chapter, limitations that were encountered in the study are discussed and lastly, suggestions for further studies are made.

5.2 Summary of Findings

In the study, the major aim was to establish determinants of financial performance of insurance companies in Kenya. The study entailed a panel regression analysis in which random effects model was used to report on influence of underwriting risk, liquidity, solvency, firm size and capital adequacy on financial performance. Data was obtained for a period of seven years, from 2014 to 2020 for 31 yielding 217 observations. All diagnostic tests were successful and it emerged that 13.42 % of variations in financial performance of general insurance companies was accounted for by changes in underwriting risk, liquidity, solvency, firm size and capital adequacy. The model was significant as overall p-value for the RE regression was 0.002.

5.2.1 Underwriting risk and Financial Performance

Pertaining to influence of underwriting risk and financial performance, this study reports that underwriting risk has a negative influence on financial performance. Additionally, influence of underwriting risk on financial performance is statistically significant.

Underwriting risk materialises where underwriters incur losses due to dynamics in underwriting process which is amplified by changes in economic conditions contrary

to forecasts. Underwriting risk basically indicates a deficiency in premiums to cover all insurance claims. Notably, insurance firms assess market conditions in setting premiums for different risks. In case the market factors significantly deviate from forecasts, then underwriting losses are incurred.

5.2.2 Liquidity and Financial Performance

The results showed that liquidity has a negative insignificant influence on financial performance of insurance companies in Kenya. Liquidity is a financial measure that represent assets and resources that can be converted into cash and cash equivalents to meet any demand from maturing liabilities. This mostly infer that a company with higher liquidity shelves some resources from investments and retains them in near cash or assets that are convertible to cash in a short term. One hazard associated with liquidity is that it is prone to opportunity costs as there is foregone revenue from long term investments. Therefore, the results that liquidity does not improve financial performance are plausible.

5.2.3 Solvency and Financial Performance

The study found out that solvency has positive and significant effect on financial performance of insurance companies in Kenya. Solvency expresses capacity of firms to pay debts, suppliers and other financial obligations using existing assets. It is evidenced by a strong balance sheet position in which assets are more than liabilities and debts. Insurance companies with strong balance sheets are likely to have capacity to cover more risks, invest more and realise good performance. Perhaps, it is for this reason, that, in Kenya, solvency remains a closely regulated facet that underwriters must adhere to.

5.2.4 Firm Size and Financial Performance

The study found out that firm size has a positive insignificant influence on financial performance of insurance companies in Kenya. Firm size proxied by assets therefore does not play a major role in determining financial performance of insurers. Whilst insurance companies endeavour in expansion by acquisition of assets, it has emerged that total assets do not sufficiently contribute to overall wellness of companies. Asset ownership by insurance companies remains closely regulated. The firms are not permitted to invest in investments schemes that are risky, due to public interest. Hence, the total assets could increase but returns from those assets not in congruent with the rise in firm size.

5.2.5 Capital Adequacy and Financial Performance

The study found out that capital adequacy has a negative and insignificant influence on financial performance of general insurance companies in Kenya. This means that capital adequacy diminishes returns of insurers because debts are often associated with good corporate governance. Nevertheless, the funding framework for insurance companies is moving towards newer perspectives such as use of debts via deregulation of capital stipulations.

5.3 Conclusions

The study concludes that the most significant determinants of financial performance of insurance companies in Kenya are underwriting risk and solvency. Underwriting risk had a negative and significant influence on return on assets. Solvency betters financial performance of insurance companies significantly. Moreover, the study concludes that liquidity and capital adequacy negatively and insignificantly affects financial performance of insurance companies in Kenya. Lastly, firm size positively and insignificantly affects financial performance of insurance companies in Kenya.

5.4 Recommendations

Results inferred the following recommendations. Firstly, this study recommends adoption of scientific underwriting and product pricing so as to improve financial performance. This is because underwriting risk was found to significantly impair financial performance. Underwriters should critically review revolving insurance landscape in order to enhance underwriting profits. For instance, insurers should diversify and meet changing needs of customers in order to earn more premium. Secondly, insurance companies should undertake apt financial management practices so as to improve solvency. It emerged that solvency improved financial performance significantly. For example, insurers can judiciously uptake credit in order to maintain a favourable solvency level that improves reputational risks. Moreover, insurers can maintain good regularly review value of assets so at to ensure solvency ratios are good.

Thirdly, the study recommends that insurance companies need to structure sound liquidity management policies. A low liquidity should be maintained but sufficient enough to meet the need for cash arising from claims. The study found out that liquidity does not better performance. Firms should review payment cycles and debts in force in order to have an optimum liquidity level. Pertaining to firm size, the study recommends insurance companies to focus on business development in terms of expansions of business lines and not building a large total asset base. This is because firm size was found to impair financial performance of insurance companies. It is further advisable that insurance firms implement growth strategies that lead into revenue generation and not only growth in size.

Lastly, it is recommended that insurance companies diversify funding from owners funds to other sources. This is inferred by the finding that capital adequacy does not better firm performance. Moreover, use of debts offers tax shields that retains profits

which can be used for investments. Thus, a robust capital mix should be established in respect to the balance between costs and benefits and also not to impair cash flows of the firms.

5.5 Limitations of the Study

There are few limitations that emerged during data collection and analysis. Foremost, the data was sourced from Insurance Regulatory Authority industrial report for a period of seven years. This period is short and maybe a longer period can yield different results. Notwithstanding this, the results are sound and model estimates have substantial efficacy. Secondly, use of secondary often has limitation as it can be restated should firms realise that material misstatements had occurred in the financial statements. This may change the results.

5.6 Recommendations for Further Research

This study assessed determinants of financial performance of general insurance companies in Kenya. Results showed that most significant determinants were underwriting risk and solvency. Since this study was done among general insurance companies, a comparative study can be done for life assurance companies. A second study can be done with more input variables such as inflation rates, interest rates and economic growth to establish a more subtle results on determinants of insurers' performance. Lastly, the study used secondary data and it is suggested that another study be done using primary data to compare results.

REFERENCES

Abdulatif, A. A., & Almujamed, H. I. (2017). Joint ventures in the real estate sector: the critical factors to consider for success . *Journal of Global Business Advancement*, 10(1),89-107.

Abiodun, B. Y. (2013). The effect of firm size on firms profitability in Nigeria. *Journal of Economics and Sustainable Development*, 4(5),91-94.

Abubakar, A., Haruna, U., & Sulaiman, I. (2018). Effect of firms characteristics on financial performance of listed insurance companies in Nigeria. *African Journal of History and Archaeology*, 3(1), 1-9.

Ade, M. I., & Doddy, S. (2021). Information asymmetry, ownership structure and cost of equity capital: The formation for open innovation. *Journal of Open Innovation Technology Market and Complexity*, 7(1),48.

Agyei, J., Sun, S., & Abrokwah, E. (2020). Trade-off theory versus pecking order theory: Ghanaian evidence. *Sage Open Journal*, 10(3),44-53.

Ahiakpor, J. W. (2018). On the impossibility of Keynes's Liquidity Trap : Classical monetary analysis helps to explain. *History of Economic Ideas*, 26(1),31-58.

Akerlof, G. (1978). The market for lemons quality uncertainty and the market mechanism. *Uncertainty in Economics*, 235-251.

Alarussi, A. S., & Alhaderi, S. M. (2018). Factors affecting profitability in Malaysia. *Journal of Economic Studies*, 45(3),442-458.

Alemu, A. A., & Deyganto, K. O. (2019). Factors affecting financial performance of insurance companies operating in Hawassa City administration, Ethiopia. *Universal Journal of Accounting and Finance*, 7(1),1-11.

Angima, C. B., & Mwangi, M. (2017). Effects of underwriting and claims ,management on performance of property and casualty insurance companies in East Africa. *European Scientific Journal*, 13(13),358-373.

Annan, F. (2022). Moral hazard in insurance: Theory and evidence from a credit reform in Ghana. *Journal of Public Economics*, 209(1),104633.

Ariwidanta, K. T., & Wiksuana, I. G. (2018). The effect of credit and liquidity risk on bank profitability and capital adequacy ratio as mediation variables in Indonesia. *Russian Journal of Agricultural and Socio-Economic Sciences*, 9(81),165-171.

Arvanitis, S. (2018). A note on stable limit theory for the OLSE with non usual rates and the heteroskedasticity robust Wald test. *Communications in Statistics - Theory and Methods*, 47(1),28-41.

Asongu, S., & Nicholas, O. (2021). Information asymmetry and insurance in Africa. *Journal of African Business*, 22(3),394-410.

Atuahene, S. A., Yusheng, K., Micah, G. B., & Aboagye, A. K. (2021). Impact of capital adequacy on bank's performance :Considering the Basel International regulatory framework for banks. *Etikonomi Journal*, 19(1),45-54.

Bakar, N. A., & Sofian, R. (2018). Evaluation of risk reduction for portfolio in Islamic investment using modern portfolio. *International Journal of Advanced Engineering Research and Science*, 5(11),27-34.

Baltagi, B., & Liu, L. (2015). Random and fixed effects spatial two-stage least squares estimators for the generalized mixed regressive spatial autoregressive panel data mode. *Econometric Reviews* , 35(4), 638-658.

Barney , J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17 (1), 99–120.

Batool, A., & Sahi, A. (2019). Determinants of financial performance of insurance companies of USA and UK during global financial crisis. *International Journal of Accounts*, 7(194),1-9.

Bawa, S. K., & Chattha, S. (2013). Financial performance of life insurers in Indian insurance industry. *Pacific Business Review International*, 6(5),44-52.

Berhe, T. A., & Kaur, J. (2017). Determinants of insurance companies' profitability: Analysis of insurance sector in Ethiopia. *International Journal of Research in Finance & Marketing*, 7(4),124-127.

Bertocco, G., & Kalajzic, A. (2019). On the monetary nature of the interest rate in a Keynes–Schumpeter perspective. *Journal of Post Keynesian Economics*, 42(4),527-553.

Bhama, V., Jain, P., & Yadav, S. (2018). Relationship between the pecking order theory and firm's age: Empirical evidences from India. *IIMB Management Review*, 30(1),104-114.

Bhandari, K. R., Ranta, M., & Salo, J. (2022). The resource-based view, stakeholder capitalism, ESG, and sustainable competitive advantage: The firm's embeddedness into ecology, society, and governance. *Business Strategy and the Environment*, 31(4),1525-1537.

Bibow, J. (2021). Evolving international monetary and financial architecture and the development challenge. In *A liquidity preference theoretical perspective* (p. 15). London: Routledge.

Bolarinwa, S. T., & Obembe, O. B. (2017). Firm size–profitability nexus: an empirical evidence from Nigerian listed financial firms. *Global Business Review*, 20(5),1109-1121.

Brandi, H. S., & Santos, S. F. (2017). Selecting portfolios for composite indexes: application of Modern Portfolio Theory to competitiveness. *Clean Technologies and Environmental Policy*, 19,2443–2453.

Bridel, P. (2021). The part played by general equilibrium in the liquidity preference vs loanable funds episode (1936–1956). *The European Journal of the History of Economic Thought*, 28(5),753-786.

Bromiley, P., & Devaki, R. (2016). Operations management and the resource based view: Another view. *Journal of Operations Management*, 41(1),95-106.

Burca, A. M., & Batrinca, G. (2014). The determinants of financial performance in the Romanian insurance market. *International Journal of Academic Research in Accounting, Finance and Management Practices*, 4(1),299-308.

Burvills, S. M., Jones-Evans, & Rowlands, H. (2018). Reconceptualising the principles of Penrose's (1959) theory and the resource based view of the firm: The generation of a new conceptual framework". *Journal of Small Business and Enterprise Development*, 25(6),930-959.

Campbell, J., & Park, J. (2017). Extending the resource-based view: Effects of strategic orientation toward community on small business performance. *Journal of Retailing and Consumer Services*, 34(1),302-308.

Cem, E. (2021). Theoretical development and the time preference theory. *The Causes and Consequences of Interest Theory*, 31-53.

Chandra, T., Junaedi, A. T., Wijaya, E., Suharti, & Mimelientesa, I. (2019). The effect of capital structure on profitability and stock returns: Empirical analysis of firms listed in Kompas 100. *Journal of Chinese Economic and Foreign Trade Studies*, 12(2),74-89.

Chatzoglou, P., Chatzoudes, D., Sarigiannidis, L., & Theriu, G. (2018). he role of firm-specific factors in the strategy-performance relationship: Revisiting the resource-based view of the firm and the VRIO framework. *Management Research Review*, 41(1),46-73.

Chen, J., Giudice, M., Kassar-El, A., & Singh, S. K. (2019). Environmental ethics,environmental performance, and competitive advantage: Role of environmental training. *Technological Forecasting and Social Change*, 146(1),203-211.

Chipeta, C., & McCllend, D. (2018). In search of conclusive evidence on the trade-off and pecking order theories of capital structure: evidence from the Johannesburg Stock Exchange. *Investment Analysts Journal*, 47(1),15-30.

Chod, J., & Lyandres, E. (2019). A Theory of ICOs: Diversification, Agency, and Information Asymmetry. *Management Science forthcoming*.

Chongyu, D., Zhichuan, L., & Yang, C. (2018). Measuring firm size in empirical corporate finance. *Journal of Banking & Finance*, 86(1),159-176.

Chrysovalantis, G., Li, L., & Fotios, P. (2015). Regulations, profitability, and risk-adjusted returns of European insurers: An empirical investigation. *Journal of Financial Stability*, 18(1),55-77.

Culham, J. (2020). Revisiting the concept of liquidity in liquidity preference. *Cambridge Journal of Economics*, 44(3),491-505.

Deev, O., & Nino, K. (2017). Corporate governance, social responsibility and financial performance of European insurers. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 65(191),1873-1888.

Deleidi, M. (2020). Post-Keynesian endogenous money theory: Horizontalists, structuralists and the paradox of illiquidity. *Metronica: International Review of Economis*, 71(1),156-175.

Delloite. (2023). *2023-africa-insurance-outlook-update-final.pdf.* Johannesburg: Delloite.

Demirgunes, K. (2016). The effect of liquidity on financial performance :Evidence from Turkish retail industry. *International Journal of Economics and Finance*, 8(4),63-79.

Derbali, A., & Jamel, L. (2019). Determinants of the performance of insurance companies in Tunisia. *Risk and Financial Management*, 1(1),1-7.

Deyganto, K. O., & Alemu, A. A. (2019). Factors affecting financial performance of insurance companies operating in Hawassa city administration,Ethiopia. *Universal Journal of Accounting and Finance*, 1-10.

Dissanayake, D. M. (2018). Relevance and the applicability of pecking order theory and trade-off theory in financial decision making; Empirical evidence in the Sri Lankan Companies. *International Journal of Science and Research (IJSR)*, 8(7),273-278.

Elif, A. S. (2016). Factors affecting firm competitiveness: Evidence from an Emerging Market. *International Journal of Financial Studies*, 4(2),9-13.

Emine, O. K. (2015). The effects of firm-specific factors on the profitability of non-life insurance companies in Turkey. *International Journal of Financial Studies*, 3(4), 510-529.

Eyerci, C. (2022). The approach of Islamic economists to the prohibition of interest in the context of Böhm-Bawerk's time preference theory of interest. *International Journal of Islamic and Middle Eastern Finance and Management*, 15(1),18-31.

Faria, J. (2021). *Insurance penetration rate in Kenya 2015-2019.* Kenya: Statistica.

Fernando, J., & Carvalho, C. (2015). *Liquidity Preference and Monetary Economies.* London: Routledge.

Halunga, A., Orme, C., & Takashi, Y. (2017). A heteroskedasticity robust Breusch–Pagan test for Contemporaneous correlation in dynamic panel data models. *Journal of Econometrics*, 198(2),209-230.

Helms, M., Hervani, A., Sarkis, J., & Nandi, S. (2021). Do blockchain and circular economy practices improve post COVID-19 supply chains? A resource-based and resource dependence perspective. *Industrial Management & Data Systems*, 121(2),333-363.

Hemrit, W. (2022). Does insurance demand react to economic policy uncertainty and geopolitical risk? Evidence from Saudi Arabia. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 47(1),460-492.

Heron, E. (2020). Endogenous money, liquidity preference and confidence: for a qualitativetheory of money. *Elgar Online*, 133-151.

Hitt, M., Kai, X., & Carnes, C. (2016). Resource based theory in operations management research. *Journal of Operations Management*, 41(1),77-94.

Hongli, J., Ajorsu, E. S., & Bakpa, E. K. (2019). The effect of liquidity and financial leverage on firm performance:Evidence from listed manufacturing firms on the

Ghana Stock Exchange. *Research Journal of Finance and Accounting*, 10(8),91-100.

Hosseini, M. R., Parn, E. A., Kukah, A. S., Edwards, D. J., Owusu, M., & El-Gohary, H. (2018). An empirical examination of moral hazards and adverse selection on PPP projects: A case study of Ghana. *Journal of Engineering, Design and Technology*, 16(6),910-924.

Ichsan, R. N., Suparmin, S., Yusuf, M., Ismal, R., & Sitompul, S. (2021). Determinants of Sharia banks financial performance during the covid-19 pandemic. *Budapest International Research and Critics Institute Journal*, 4(1),298-309.

Idil, O. K. (2016). Determining factors in financial performance of publicly traded insurance companies at Instanbul stock Exchange. *International Journal of Business and Social Science*, 7(11),169-177.

Insurance Regulatory Authority. (2019). *Insurance industry annual report.* Nairobi: Insurance Regulatory Authority.

Insurance Regulatory Authority. (2021, December 12). *Regulatory Framework*. Retrieved from Insurance regulatory authority website: https://www.ira.go.ke/index.php/regulatory-framework/ia

IRA. (2021). *Industry report.* Nairobi: Insurance Regulatory Authority.

Ivan, M. (2019). Two-sided information asymmetry in the healthcare industry. *International Advances in Economic Research*, 25(1),177-193.

Janga, B. H. (2020). Impact of firm specific factors on financial performance of life insurance companies in Nepal. *Interdisciplinary Journal of Management and Social Sciences* , 1(2),40-52.

Jing, A., Vickie, B., & Wang, T. (2018). The combined effect of enterprise risk management and diversification on property and casualty insurer performance. *Journal of Risk and Insurance*, 85(2),513-543.

Kamanda, M., & Sibindi, A. (2021). Determinants of financial performance of insurance companies: Empirical evidence using Kenyan data. *Journal of Risk Financial Management*, 14(12), 566.

Kamil, J. M., Hora, M., Wagner, S., & Juttner, M. (2015). Managing operational disruptions through capital adequacy and process improvement. *European Journal of Operational Research*, 245(1),320-332.

Kimeu, F. (2020). Capital adequacy and performance of listed commercial banks in Kenya. *Unpublished Journal-Chandaria School of Business*, 1.

Kong, K. H., Hui, R. T., Lau, V. P., & Liao, E. Y. (2019). A resource-based perspective on work–family conflict: meta-analytical findings. *Career Development International*, 24(1),37-73.

Koresh, G., Offer, S., & Rodrigo, Z. (2018). Do ultimate owners follow the pecking order theory? *The Quarterly Review of Economics and Finance*, 67(1),45-50.

Kull, J., Mena, J., & Daniel, K. (2016). A resource-based view of stakeholder marketing. *Journal of Business Research*, 69(12),5553-5560.

Kusi, B. A., Alhassan, A. L., & Sai, R. (2020). Insurance regulations, risk and performance in Ghana. *Journal of Financial Regulation and Compliance*, 28(1),74-96.

Lassad, B. (2021). Determinants of insurance firms' profitability: An empirical study of Saudi insurance market. *The Journal of Asian Finance, Economics and Business*, 8(6),235-243.

Lavoie, M., & Reissi, S. (2019). Further insights on endogenous money and the liquidity preference theory of interest. *Journal of Post Keynesian Economics*, 42(4),503-526.

Lonial, S., & Carter, R. (2015). The impact of organizational orientations on medium and small firm performance: A resource-based perspective. *Journal of Small Business Management*, 53(1),94-113.

Lyandres, E., & Chod, J. (2021). Theory of ICOs: Diversification, agency, and information asymmetry. *Management Science*, 67(10),5969-6627.

Mackey, A., & Barney, J. B. (2016). Text and metatext in the resource-based view. *Human Resource Management Journal*, 26(4),369-378.

Majluf, N. S., & Myers, S. C. (1984). Corporate financing and investment decision: When firms have information that investors do not have? *Journal of Financial Economics*, 13;187-221.

Marc, L., & Reissl, S. (2019). Further insights on endogenous money and the liquidity preference theory of interest. *Journal of Post Keynesian Economics*, 42(4),503-526.

Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance*, 7(1),77-91.

Markus, L., Wolfgang, M., & Katharina, P. (2021). Effects of mixed signals on employer attractiveness: A mixed-method study based on signalling and convention theory. *Human resource Management Journal*, 31(2),392-413.

Martinez, L. B., Scherger, V., & Guercio, M. B. (2019). MEs capital structure: trade-off or pecking order theory: a systematic review. *Journal of Small Business and Enterprise Development*, 26(1),105-132.

McCue, M. (2016). Early experience of financial performance and solvency of Medicaid-focused insurers under ACA expansion. *Medical Care Research and Review*, 74(6),750-762.

Meher, K., & Zewudu, T. (2020). Determinants of firm's internals & macroeconomic factors on financial performance of Ethiopian insurers. *DLSU Business & Economics Review*, 29(2),71-80.

Meijer, E., Ockowski, E., & Wansbeek, T. (2021). How measurement error affects inference in linear regression. *Empirical Economics*, 60(1),131-155.

Melo, P. S., & Kibria, B. M. (2020). On Some Test Statistics for testing the regression coefficients in presence of multicollinearity: A simulation study. *Stats*, 3(1), 40-55.

Mohammad, A., Sulaiman, R., & Adelrahim, A. (2021). Liquidity and solvency management and its impact on financial performance: Empirical evidence from Jordan. *The Journal of Asian Finance, Economics and Business*, 8(5),135-141.

Moloi, T., & Marwala, T. (2020). *Moral hazard in artificial intelligence in economics and finance theories: Advanced information and knowledge processing.* Springer, Cham.

Morara, K., & Bongani, A. (2021). Assessing the solvency,underwriting risk and profitability of the Kenyan insurance sector. *Financial Economics Journal*, 17(5),14-21.

Morri, G., Palmieri, F., & Sironi, E. (2021). Information asymmetry and REITs' excess dividends: US and European market comparison. *Journal of Property Investment & Finance*, 39(6),545-560.

Mutunga, D., & Owino, E. (2017). Moderating role of firm size on the relationship between micro factors and financial performance of manufacturing firms in Kenya. *Stratford Peer Reviewed Journals and Book Publishing*, 1(2),14-27.

Muturi, W., & Omondi, M. M. (2013). Factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. *Research Journal of Finance and Accounting*, 4(15),99-104.

Mwangi, M., & Iraya, C. (2014). Determinants of financial performance of general insurance underwriters in Kenya. *International Journal of Business and Social Science*, 5(13),210-215.

Nagano, H. (2020). The growth of knowledge through the resource-based view. *Management Decision*, 58(1),98-111.

Nanda, S., & Panda, A. K. (2018). The determinants of corporate profitability: an investigation of Indian manufacturing firms. *International Journal of Emerging Markets*, 13(1),66-86.

Nason, R. S., & Wiklund, J. (2015). An assessment of resource-based theorizing on firm growth and suggestions for the future. *Journal of Management*, 44(1),32-60.

Nasution, Z., Adiba, E. M., & Abdulrahim, M. O. (2019). Comparison analysis of risk based capital performance and its effect on Islamic insurance profitability in Indonesia and Malaysia. *Al-Uqud: Journal of Islamic Economics*, 3(2),149-160.

Ngaba, D., & Alex, M. K. (2018). Effect of firm size on financial performance on banks:Case of commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 3(1),175-190.

Nguyen, D. K., & Vo, D. T. (2020). Enterprise risk management and solvency: The case of the listed EU insurers. *Journal of Business Research*, 113(1), 360-369.

Njoroge, E. N. (2014). The effect of frim size on financial performance of pension schemes in Kenya. *Unpublished Journal-University of Nairobi*, 1.

Njuguna, M. S. (2013). The effect of mergers and acquisitions on the financial performance of petroleum firms in Kenya. *Unpublished Journal-University of Nairobi*, 1.

Nwakoby , N. P., & Ihediwa, A. (2018). Effect of diversification on the financial performance of selected firms in Kenya. *International Journal of Advanced Academic Research*, 4(12),1-16.

Obi-Nwosu, V., Okaro, C. S., Ogbonna, K., & Atsanan, A. (2017). Effect of liquidity on performance of deposit money banks. *International Journal of Advanced Engineering and Management Research*, 2(4),1-7.

O'Brien, S., Alexander, N., Sakellarios, A., & Duarte, A. (2018). Strengths, innovation, and opportunities in a burgeoning industry: an exploratory study. *Asia Pacific Journal of Marketing and Logistics*, 30(2),276-296.

OECD. (2023). *Global insurance market trends - preliminary 2022 Data.* Paris: Organisation for Economic Co-operation and Development.

Oino, T., Osiemo, P., & Kuloba, R. (2012). *National survey on enterprises perception of insurance in Kenya.* Nairobi: Insurance Regulatory Authority.

Ologbenla, P. (2018). Impact of liquidity management on the performance of insurance companies in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 1(30),40-45.

Omondi, O. (2019). Copa America: a resource-based theory of football talent. *Team Performance Management*, 25(4),176-191.

Onatca, E., Sefika, N., Erbas, U., & Gokhan, A. (2019). Pecking order theory in determining the capital structure: A panel data analysis of companies in Turkey. *Business and Economists Journal*, 10(3),687-698.

Oreiro, J. L., Paula, L., & Machado, J. (2020). Liquidity preference, capital accumulation and investment financing: Fernando Cardim de Carvalho's contributions to the post-Keynesian paradigm. *Review of Political Economy*, 32(1),121-139.

Orishede, F., Izims, T., & Enahoro, C. (2018). Effect of contingency factors on learning organisations in Nigeria. *International Journal of Ecoomic Perspective*, 12(01),1-19.

Oyetayo, Y., & Abass, O. A. (2020). Underwriting capacity and financial performance on non-life insurance companies in Nigeria. *Academic Journal of Economic Studies*, 2(1),73-80.

Palamalai , S., & Britto, J. (2017). Analysis of financial performance of selected commercial banks in India. *Theoretical Economics Letters*, 7(7), 2134-2151.

Pathirana, A. V., & Buddhika, H. J. (2021). Impact of internal factors towards financial performance of life insurance companies in Sri Lanka. *International Conference on Contemporary Management*, 27.

Platanakis, E., Sakkas, A., & Sutcliffe, C. (2019). Harmful diversification: Evidence from alternative investments. *The British Accounting Review*, 51(1),1-23.

Pusch, T. (2017). The role of uncertainty in the euro crisis – an application of liquidity preference theory. *International Review of Applied Economics*, 31(4),527-548.

Rashid, A., & Kemal, M. U. (2018). Impact of internal (micro) and external (macro) factors on profitability of insurance companies. *Journal of Economic Policy Researches*, 5(1),35-57.

Rejesus, R., Juan, H., Zheng, X., & Yorobe, J. (2018). Advantageous selection in crop insurance: Theory and evidence. *Journal of Agricultural Economics*, 69(3),646-668.

Rezende, F. (2015). Demand for financial assets and monetary policy: a restatement of the liquidity preference theory and the speculative demand for money. *Journal of Post Keynesian Economics*, 38(1),64-92.

Ruhul, S., Saleh, A., & Jarallah, S. (2019). Examining pecking order versus trade-off theories of capital structure: New evidence from Japanese firms. *International Journal of Economics and Finance*, 24(1),204-211.

Sackey, F., Manso, F., Akotey, O., & Amaoh, L. (2016). The financial performance of life Insurance companies in Ghana. *The Journal of Risk Finance*, 14(3),286-302.

Saleh, A. S., & Safari, A. (2020). Key determinants of SMEs' export performance: a resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing*, 35(4),635-654.

Santoro, G., Roberto, Q., Anna, C. P., & Paola, D. B. (2020). The interplay among entrepreneur, employees, and firm level factors in explaining SMEs openness: A qualitative micro-foundational approach. *Technological Forecasting and Social Change*, 151(1),119820.

Sari, Y., & Mia, O. (2018). Pecking order and trade-off theory in capital. *Jurnal Keuangan dan Perbankan*, 22(1),73–82.

Saud, A. T. (2016). Application of signaling theory in management research: Addressing major gaps in theory. *European Management Journal*, 34(4),338-348.

Scherger, V., Guercio, M. B., & Martinez, L. B. (2019). SMEs capital structure: trade-off or pecking order theory: a systematic review. *Journal of Small Business and Enterprise Development*, 26(1),105-132.

Sekaran, U., & Bougie, R. (2016). *Research Methods For Business: A Skill Building Approach.* New York: John Wiley & Sons Publishers.

Shahi, A., & Agnihotri, M. (2022). Impact of liquidity, tangibility and size of a firm on the life insurance companies profitability in India. *Stallion Journal for Multidisciplinary Associated Research Studies*, 1(1),9-15.

Sharma, A., Jadi, D., & Ward, D. (2022). Evaluating financial performance of insurance companies using rating transition matrices. *The Journal of Economic Asymmetries*, 18(1),102.

Sheila, D., Jespersen, J., & Geoff, T. (2018). *The general theory and Keynes for the 21st century.* New York: Edward Elgar Publishing.

Sheth, A., & Subramanian, H. (2020). Blockchain and contract theory: modeling smart contracts using insurance markets. *Managerial Finance*, 46(6),803-814.

Sibindi, A., & Morara, K. (2021). Determinants of financial performance of insurance companies: Empirical evidence using Kenyan Data. *Journal of Risk and Financial Management*, 14(1), 566.

Sokolovska, O. (2017). Trade credit insurance and asymmetric information problem. *Scientific Annals of Economics and Business*, 64(1),123-137.

Soliman, R., Allini, A., Adele, C., & David, M. (2018). Pecking order and market timing theory in emerging markets: The case of Egyptian firms. *Research in International Business and Finance*, 44(1),297-308.

Song, S., Zeng, Y., & Zhou, B. (2021). Information asymmetry, cross-listing, and post-M&A performance. *Journal of Business Research*, 122(1),447-457.

Songe, H. K. (2015). The effect of liquidity management on the financial performance of deposit taking SACCOs in Nairobi county. *Unpublished Journal-University of Nairobi*, 1.

Spence, M. (1978). Job market signalling. *Uncertainty in Economics*, 283-306.

Stiglitz, J. E., & Weiss, A. (1992). Asymmetric information in credit markets and its implications for macro-economics. *Oxford Economic Papers*, 44(1),694-724.

Tesfaye, T. (2012). Determinants of banks liquidity and their impact on financial performance :Empirical study on commercial banks in Ethiopia. *Unpublished Journal-Addis Ababa University*, 1-122.

Ullah, G. W., Faisal, M. N., & Zuhra, S. T. (2016). Factors deteremining profitability of the insurance industry of Bangladesh. *International Finance and Banking*, 3(2),138-147.

Vandana, B., Pramod, K. J., & Surendra, S. Y. (2016). Testing the pecking order theory of deficit and surplus firms: Indian evidence. *International Journal of Managerial Finance*, 12(3),335-350.

Wang, X., Yingjing, S., & Zhihan, G. (2022). Strengthening unique strengths: A qualitative research on platforms. *International Conference on Financial Management, Education and Social Science*, 439-455.

Wani, A. A., & Dar, S. A. (2015). Relationship between financial risk and financial performance: An insight of Indian Insurance Industry. *International Journal of Science and Research*, 4(11), 1424-1433.

Zainudin, R., Ahmad, M., & Leong, E. S. (2018). irm-specific internal determinants of profitability performance: an exploratory study of selected life insurance firms in Asia. *Journal of Asia Business Studies*, 12(4),533-550.

Zewudu, T., & Meher, K. (2020). Determinants of firm's internals & macroeconomic factors on financial performance of Ethiopian insurers. *Business & Economics Review*, 29(2),71-80.

Zofia, H., Joanna, T., & Wojciech, Z. (2016). Shapiro-Wilk test with known mean. *Resvst*, 4(1),89-100.

APPENDICES

Appendix I: Data Sheet

Name of insurance company……

Year	Gross premiums	Gross claims payment	Liquidity (current assets/current liabilities)	Solvency(After tax net profit+ depreciation divided by Total liabilities	Capital adequacy (equity to-debt ratio)	Firm Size (Total assets)	Net profits
2015							
2016							
2017							
2018							
2019							
2020							

Appendix II: Sample

1. Xplico Insurance Company
2. UAP Insurance Company
3. Trident Insurance Company
4. The Monarch Insurance
5. The Kenyan Alliance Insurance
6. Tausi Assurance Company
7. Takaful Insurance of Africa
8. Resolution Insurance Company
9. Pacis Insurance Company
10. Occidental Insurance Company
11. Mayfair Insurance Company
12. Madison General Insurance Company
13. Kenya Orient Insurance
14. Kenindia Assurance Company
15. Jubilee General Insurance
16. Intra-Africa Assurance
17. ICEA Lion General Insurance
18. Heritage Insurance Company
19. Geminia Insurance Company
20. GA Insurance Company
21. First Assurance Company
22. Fidelity Shield Insurance
23. Directline Assurance Company
24. Corporate Insurance Company
25. CIC General Insurance Company
26. Britam General Insurance
27. APA Insurance Company
28. AIG Insurance Company
29. African Merchant Assurance