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**EFFECT OF CAPITAL ADEQUACY ON FINANCIAL PERFORMANCE
OF GENERAL INSURANCE COMPANIES IN KENYA**


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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF
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DECLARATION

This Research Project is my original work and has not been submitted for any academic credit in any other university.

Signed 

Date..... 9/11/2021

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

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DEDICATION

I dedicate this project to my family and thank God for their well-being in keeping us together during the busy project times.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAR	Capital Adequacy Ratio
ICAG	Insurance Capital Adequacy Guidelines
IRA	Insurance Regulatory Authority of Kenya
RBV	Resource Based View theory
ROA	Return on Assets
ROI	Return on Investment
VIF	Variance Inflation Factor measuring multicollinearity

ABSTRACT

The introduction of capital buffers in financial institutions was globally necessitated by the many cases in which capital shortfalls caught the authorities unprepared. This led to regular collapse of previously stable financial institutions resulting into heavy losses for the both the owners and users of the institutions. Commencing from the banking sector, that experience of cash or capital shortage was found to be replicating in the insurance industry. Soon, the insurance industry began applying to a small extent the capital buffers comparable to the banking system. Many countries have started applying the capital adequacy measures and Kenya as a growing economic nation recently passed a bill approving the rule. This study was therefore aimed at establishing the effect of capital adequacy on the financial performance of general insurance companies in Kenya over the last 3 years since 2017. The study used a longitudinal research design through a data capturing sheet over the 3 years from 2017 to 2019. In the mentioned period, there were 32 insurance firms in operation for the general insurance sector. This study was anchored on RBV theory, Capital Buffer theory and Agency theory. Field data was mined from the IRA database using financial information as posted for the industry regulator over the past 3 years since 2017. Using a panel data with a regression model, the study found that the largely positive position of the general insurance companies is an indication that capital adequacy requirements have a positive influence on the performance of the general insurance companies. In conclusion, the study observed the capital adequacy ratio rule is thus having a positive influence on the financial performance of the general insurance companies of Kenya. The study finally recommended that various general insurance firms should have adequate assets and more specifically, high quality assets that translate into good performance by the firms. Another recommendation is for scholars to undertake a study in comparing the effect of CAR on general versus life insurance firms. The study also makes recommendations that insurance firms are better off raising their capital adequacy ratio since this is the true way of confirming assurance of facing future uncertainties. The need for managing all processes that enhance the capital adequacy ratio in the insurance firm also point to the insurance firms getting the right mix of factors that will assure the capital adequacy ratio.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The concept of performance generally relates financial resource utilization to create or generate favorable results and outputs with respect to both stakeholders as well as shareholders of any given entity. The performance of any organization or firm largely anchors on the level of capital in the firm's reserves which in turn points to the fact that performance of the organization will largely be determined by the financial position at the time of measurement. Ashraf, Zheng, Jiang and Qian (2020) point out that the existence of a relationship between capital adequacy and good performance was unmistakably clear. Earlier observations by Jumreornvong, Chakreyavanich, Treepongkaruna, and Jiraporn (2018) pointed to the direct relation between capital adequacy growth and performance improvement in several organizations. The performance in terms of financial measures has globally focused on inquiries about return on equity as well as the return on assets and expense to premium ratios in the insurance industry. Other performance measures that have proved workable in the current times include customer orientation as well as satisfaction together with efficiency analysis as used in the USA, Asia and other countries (Copeland & Cabanda, 2018; Devinta, Dachyar & Nurcahyo, 2018; Ali, Chanar, Ghauri & Obaid, 2019).

Performance in many industries is defined and guided by specific theories that normally suit each sector. Globally, the theory of resource based view (Barney, 1991) has pointed towards use of specific resources to dictate how a firm performs in an industry with emphasis on uniqueness of such resources as the key in raising performance. Firms that have performed consistently well hinge their success on harmonizing the specific resources to optimize their production thus raising

performance (Sharma, Bhattacharya & Thukral 2019). On a wider perspective, the insurance industry is heavily regulated globally thus guided by theories that tighten the industry working. As a guide in the industry, capital buffer theory (Jokipii & Milne, 2011) has proven to be a key theory in performance of not just insurance but financial related sectors. The performance of financial institutions specifically benefits from application of this theory when regulatory bodies apply strict inspection of its application. Similarly, the insurance industry is forever structured to work in a principal-agent axis thus guided by agency theory (Eisenhardt, 1989) all the time as by all definitions, insurance is about one party acting on behalf of the other.

Insurance as the main tool for reduction of financially adverse effects in case of what could be termed as organizational loss generally becomes the number one mitigation in any form of business across several economic entities especially in the face of a competitive market environment. Specifically, the two main forms of insurance are general insurance and life insurance both of which play important roles in the society. However, general insurance is the most affected by new regulations whenever they are implemented (Cole *et al.*, 2017).

According to Nguyen, Thaichon and Thanh (2019) the world trends in general insurance have tended to focus on the performance of firms in terms of capital adequacy and general structure of the insurance firms dealing in general insurance sector. Similarly, there is a rise in the participation of privateers in the general insurance sector across the globe with the Indian market proving to be a case in point. The main area of competitiveness in this general insurance sector seems to be corporate customers as this brings in more capital than the individual customers thus driving the

case for general insurance as opposed to its rival, life insurance (Chakraborty, 2017). The key observation in the world trends is that solvency is paramount in the considerations of general insurance (Sharma, 2019). Regionally it is observable that the general insurance sector is designing models and big data analytics in order to handle the reputational risks in the industry as a whole (Adeoye, 2019)

1.1.1 Capital Adequacy

Industries of any kind have operated in a positive mode only if there are factors making all ends of the same industry run productively. As pointed out by Chakraborty (2017), every industry has specific factors that make the industry tick for example numbers in the airline industry, clear connection in telecommunication industry and quality in food industry. A major factor in the insurance industry is the need for Capital Adequacy for any player to pay out claims for their clients. Defined as the base amount for any given business regardless of sector that an entity is supposed to have at any given time in terms of risk (Jaaman & Ong, 2019), capital adequacy has played an important role globally in sustainability of insurance industry.

The Capital Adequacy Ratio (CAR) is an appropriate measure of organizational suitability in terms of liquidity and the ability to handle expected risk based losses (Park, 2020). Defined as that percentage that establishes the capital aggregate with the asset risk that is also aggregated with weighted measures and this ration is differently set across several countries as well as industry types on the open market (Haufler & Maier, 2019). However, key indicator of CAR normally comprises capital structure, firm liquidity, asset base and quality of asset. Other indicators include

but not limited to a firm's management competence, ordinary share capital, intangible assets, audited revenue reserves and financial assets deployment (Ashraf *et al.*, 2020).

Evidence from Britain has proved that the need for capital adequacy supersedes any strategy and management structure for a given insurance firm and that good performance is heavily reliant on this capital adequacy factor if well implemented (Claus, Silk & Wiltshire, 2017). Comparative studies in UK and Germany indicate that capital adequacy in insurance sector has helped in aligning companies to their strategic missions without the risk of failure (Leonida & Muzzupappa, 2018). In the USA, the need for capital adequacy is enforced through the Federal Reserve System with all players free to report any suspected signs of base capital breach of law (Lessambo, 2020). The same applies to the regional financial sector including banking and insurance with evidence from South Africa showing that the law on capital adequacy (Alhassan & Biekpe, 2018).

Capital adequacy is measured in various formats that help the industry to define the minimum capital that each player in the sector must maintain to appear to operate in the industry. The solvency test that compares company debt against its revenue position thus giving an evaluation metric based on actual cash flow as opposed to net income which might just be a calculation but without the capability of meeting company obligations (Srijanani & Rao, 2019). Similarly, the profitability ratio can be used to measure the capital adequacy of an insurance firm in the industry (Pjanić, Milenković, Kalaš & Mirović, 2018).

1.1.2 Financial Performance

Financial performance is according to (Cui *et al.*, 2019) the full conversion of firm assets to generate measurable revenues in a profitable manner. Similarly, financial performance has also pointed towards the full achievement of firm objectives that were set to bring profitable outputs as well as tangible positive results (Murigu, 2014). Generally, financial performance is used to describe the positive production that have led to profitability over a specific period that can be compared to the present performance. From a balance sheet of a firm, one can have a snapshot of firm financial position which to an extent can indicate the performance of a firm but not full proof measure as such (Mwangi & Iraya, 2014). The importance of financial performance specifically manifests in the monitoring and evaluation of firm short as well as long term decision making process. According to Batool and Sahi (2019), financial performance will point out to the health of a firm over a period of time and is measured with ROI. In general practice, insurance industry in Kenya applies ratios in measuring performance which include loss ratio, liquidity ration and leverage ratio as well as expenses ratio. These performance measures have been used by among others Bett and Wepukhulu (2019), Ndichu (2019) and Ortyński, (2016). The current study will adopt the ROI method in measuring performance in general insurance firms of Kenya.

Generally, performance can be classified into financial and non-financial indicators of a given firm in achieving their stated objectives (Cui *et al.*, 2029). In the key area of insurance, the main determinant of performance is financial indicators in which the profitability and evidence to have utilized assets come into play. The relationship between ownership and proper use of company structures to turn assets into profitable outputs all point towards financial measures as the main

approach for determining performance (Batool & Sahi, 2019). Performance also comes from the firm's leverage in which there is a positive correlation leading to positive results. The profitability of a company and positive results in all company output sectors was also an indicator of performance (Bett & Wepukhulu, 2019). It is also evident from results in other studies that the size of a firm has a positive relationship with performance (Mwangi & Iraya, 2014)

1.1.3 Capital Adequacy and Financial Performance

Capital adequacy as defined in financial circles focuses on the establishment of a seemingly safe reserve of capital that can avoid abrupt bankruptcy or a situation where a financial institution fails to meet its financial obligations especially to its immediate customers (Pukała, Vnukova, Achkasova & Smoliak, 2017). As demonstrated in capital buffer theory, the need to have financial performance staying positive necessitates embracing the capital adequacy guidelines (Mankai & Belgacem, 2016). In the China, USA, Europe and Asia, capital adequacy has been used as a guard against bankruptcy in financial sector for a long time (Jiang *et al.*, 2020; Abbas *et al.*, 2019; Cruz-García & Fernandez de Guevara, 2020). It clearly follows that with proper application of the capital adequacy, an assurance of financial performance can be guaranteed.

Locally, Kenya effected The Insurance Act (Cap 487) specifically Section 3A on dealing with capital adequacy by insurance and reinsurance companies effective July 2020. Officially cited as Insurance Capital Adequacy Guidelines, 2017, this was meant to assure the financial soundness of the insurer and guard against loss on the policy holders by having the insurer maintain a strong capital base (IRA, 2018). The Act specifically tables a schedule for premium reserve risk factor

on one hand and claim reserve factor on the other in terms of percentages with respect to each class of business. Capital adequacy is assessed using the capital required and the capital available by the insurer.

Generally, Kenya is viewed to have a very well-developed insurance industry with studies indicating a high 5 percent rate of penetration. This has the implication that most firms can be very competitive once they set their base in Kenya specifically the city of Nairobi (IRA, 2019). The performance of the insurance sector is a key indicator of the strength of the industry as demonstrated in the financial year report by IRA in which an increase in performance is recorded to be almost 7 percent. The majority of this insurance data was in favour of general insurance. This is also a clear indication of the highly competitive nature of the Kenya insurance industry with a positive performance all round. The long term insurance business sector experienced a positive growth of 6.9 percent in Gross Premium income, 33 percent in investment income but a negative growth of -4.3 percent in the shareholders' funds to total assets ratio.

1.1.4 General Insurance Companies in Kenya

Kenya general insurance sector is dominated by 5 key companies in the market including Jubilee at 9.8 percent, APA at 8.3 percent, Britam at 7.4 percent, CIC at 7.1 percent, UAP at 6.4 percent while the rest of the industry holds 62.1 percent of the market (IRA, 2019). The insurance sector points towards capital structure, asset quality, the liquidity of a firm and the asset base as key factors in determining the capital adequacy of a firm (Barus, Muturi, Kibati & Koima, 2017). Not

only is this requirement of capital adequacy been applied in key banking sector, but also many results both positive and negative are associated with the issues of capital adequacy.

Performance of general insurance on the market with respect to the competition is therefore affected with the introduction of capital adequacy rule (Mwangi, 2019). In the general insurance business sector, things were a bit slow with Gross Premium income at 2.9 percent increase from 2018 and a negative investment income at -1.9 percent (IRA, 2019).

The general insurance factors that are of importance in the industry are well tabulated in the Appendix 2 of the Insurance Act (Cap 487) and include all motor vehicle types, aviation, engineering, marine, both domestic industrial fire, workmen's compensation, theft and miscellaneous. Each of the business categories have been allocated a risk factor percentage with respect to premium reserve and corresponding claim reserve (IRA). Scholars including Purnamawati (2019), Billah (2019) as well as Bett and Wepukhulu (2019) have pointed to the growing need to have the business categories well-documented recommending electronic information storage systems that would verify these categories. Even though different categories call for different premium against the claim reserves, the need for capital adequacy clearly indicates how the Insurance Act is necessary in this wide general insurance industry.

1.2 Research Problem

Performance is the key tool in keeping a vibrant market in efficient state with both the players and regulator maintaining a fair competitive environment. The performance in terms of financial

approach has always defined the industry and hence the need to have an indication of how the financial performance of a firm over a period becomes clearly important in the market. Studies in the global context have shown a tendency to apply specific theories especially financial related as well as managerial to demonstrate the need for financial or capital control in financial industry. Azarenkova *et al.*, (2014) point out that performance in the insurance industry can be largely dependent on the role played by government and its regulatory bodies. In effect, Wu et al observed that governments directing their investment in insurance firms can heavily influence the performance of a country's insurance sector. Similarly, Porrini (2017) suggests that general insurance companies on their own also target government investment through their agents manipulating pricing of their products with the knowledge that the government would take up those products. Similarly, there have been cases in which the premium has a negative effect on risk based capital (RBC) leading to poor claim versus premium analysis further necessitating the need for capital adequacy ratio implementation (Taherinia & Baqeri, 2018).

As indicated in earlier studies, the financial performance of a firm is a true indicator of a firm having converted its assets into profitability with achievement of the company objectives. This is only visible if a comparison with similar players in the industry is made for example in the insurance industry that has experienced fluctuating fortunes due to unstable capital bases. The potential to make profit is strongly related to the ability of a firm to have adequate capital and this has been cited as a key item in the failure of insurance firms on the market. Global studies have shown that the ability to make profits and the servicing of debts were the key determinants in a

firm making positive profitability. This observation thus calls for the introduction of measures that would drive firms towards achieving both profit making position and debt serving position.

The introduction of capital adequacy law services this key requirement as demonstrate in the USA, Europe and Asia and to some extent the African region. This law on its own cannot work unless supported better financial management, excellent financial management as well as both internal and external funding that would ensure adequate capital outlay. It is from this need to demonstrate profitability that this study was inspired to establish the effect of capital adequacy on the financial performance of general insurance firms in Kenya. Various scholars including Mwangi and Murigu (2015), Goel (2018) and Mitra (2017) have indicated the need to have some control over the amount of capital that a firm declares and can prove to have in the insurance industry. All these studies have aimed at showing how the capital adequacy measures in insurance industry can play a key role in performance of the same. Global contexts and usage of various indicators in performance determination have created gaps. This inspired the current study focusing on Kenya with the specific question: Does the capital adequacy ratio law play a role in the performance of general insurance firms in Kenya?

1.3 Research Objective

The main objective of the study was to establish the effect of capital adequacy on the financial performance of general insurance companies in Kenya.

1.4 Value of the Study

This study would benefit the policy makers and law creators of the country especially in the wake of the newly implemented capital adequacy law. This would also act as a guide to many including such decision implementers as licensed insurance brokers, investment advisers, investment bankers and fund managers maximizing on opportunities in the wake of capital adequacy regulations. Second, the study would benefit regulatory authorities in insurance and government policy makers at the Treasury, Insurance Regulatory Authority and Central Bank in controlling risk of insolvency caused by inadequate capital base. This will be useful in formulating an improved economy adopting insurance profession.

The study is also useful for clients of general insurance who will have confidence of doing competitive business with the knowledge that there is an implemented regulation on capital adequacy. It is also prudent to note that financial performance base of knowledge will receive a boost with the conclusions and recommendations from this study. As a rejoinder, the study will inspire further research by other scholars in insurance studies as well as capital adequacy related fields.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section reviews both theoretical and empirical literature related to factors of organization that affect sustainable competitive advantage. It further explores the challenges in development of sustainable competitive advantage using a designed conceptual framework.

2.2 Theoretical Framework

This section examines theories that have been associated with studies on competitiveness and capital adequacy. The selected theories include Research Based View theory, capital buffer theory and agency theory.

2.2.1 Research Based View Theory

Resource Based View (RBV) is a theory fronted by Barney (1991) in which resources present a firm's unique strength leveraging on specific unique resources that make the firm stay ahead of the competition. In this theory, a framework for selecting and accumulating the specific resource for a firm is designed such that a solid foundation internally supports that resource. A firm therefore works around its structures to support and increase the functionality of the resource in order to maintain its position on the general as well as specific market environment.

RBV theory observes that the dominance and survival of firm will hinge on the continuity of that unique resource that separates it from the rest of the industry players. Apparently, this could also be external in which a firm gets a strong customer acting as the key resource. This could be a true

case in the insurance industry in which a firm holds into a key customer for large reliable premiums paid in lumpsum over a long period of time coinciding with low payment claim rates (Kaufman, 2015).

Criticism cited by Hazarika and Zhang (2019) point out that RBV theory does not examine the social context within which the resources are embedded including organizational cultures, regulatory factors and networking. It is also notable that RBV does not point out how organizations do or do not make rational resource selections.

As insurance industry, this RBV theory fits in the current study as has been previously applied in other studies including Zainudin, Mahdzan and Leong (2018) in Asia, Oppong, Pattanayak and Irfan (2019) in West Africa and Mwangi (2018) in Kenya. The admissible items for insurance firms to achieve the capital adequacy requirements relate to the resources these firms. The RBV theory therefore plays a big role in the measurement of performance of the insurance industry.

2.2.2 Capital Buffer Theory

The capital buffer theory as proposed by Jokipii and Milne (2011) suggests that excessive stocking of capital more than can be actually required by an entity decreases the risks of that entity. This theory further suggests that high capital stocking increases performance as it gives the firm confidence to engage in all ventures. Capital buffering has ensured that operations of financial institutions are uninterrupted especially when put into well-observed regulatory regimes. Capital buffering is best achieved if time is given at least for 6 months or one year to enable the concerned

financial institutions accumulate the required buffer zone (Irresberger, Muhl nickel, Schmidt & Weiss, 2017).

Criticism of capital buffer theory hold that buffer capitals are most likely sources of fraud as the chance of committing such crimes remain high. According to Akpan, Mahat, Nordin and Nassir (2017), capital buffers might lead to increased competition yet recycle the financial institutions into acts of more risk that could lead to losses.

The capital buffer concept is strongly applicable in performance of financial institutions including banks and insurance firms as demonstrated in studies by Akpan *et al.*, (2017), Irresberger *et al.*, (2017) and locally Chepkilot (2019). This theory is applicable to the current study as capital adequacy is central to the financial performance of general insurance firms of Kenya.

2.2.3 Agency Theory

Agency theory (Barney, 2001; Lafontaine, 1992) also known as principal-agency dictates that there exist an organization (principal) that is in position to make decisions that impact on the other entity (agents). This relationship normally referred to as agency enables the drawing of plans on how to run daily services or produce goods remotely for the principal with a trusting environment that ensures each party is satisfied at the end of the day. Rising costs in any agency relationship is a cause of concern since it eats into the profits of the organization and would even raise questions of trust leading to less profits or reduced income (Rashid, 2015). This is very applicable in insurance industry where premiums are solely in the hands of the insurer while the insured has no guarantee they would get paid for any claims they make (Ogwu, 2015).

The key suggestions for the agency theory point towards a market that is very volatile and most imperfect such that information becomes very prudent in order to help the agents determine the best form of investment on the volatile market. Even though specific investments may be more lucrative than others, it is upon the agent to decide how best to invest the premiums of the principal meaning that there exists a chance for misappropriation of well received funds or premiums. If such an organization was on the other hand run and managed by a sole proprietor not applying the agency principle, it would require prudence to make a decision but without observation or monitoring from any external source. The insurance field is heavily run through principal-agency set-up and this is a critical set up in the industry.

The main criticism of agency theory is that it presents a conflict of interest between the principal and the agent. According to Panda and Leepsa (2017), separation of the asset owner from the controller of this asset sets ground for conflict which in turn leads to agency costs that are very much leaves the principle feeling unhappy. Another criticism from most scholars is the different risk preference by the principal and agent that generates information asymmetry as well as moral hazard (Nobanee & Abraham, 2017). This theory therefore fits well in the proposed study on effect of capital adequacy on financial performance of general insurance companies in Kenya.

2.3 Determinants of Financial Performance

Financial performance is the true indicator of how a firm has operated over a period of time as defined by various scholars including Batool and Sahi (2019) as well as Murigu (2014). In the wake of insurance industry performance fluctuations, many factors have come to be viewed as the

main determinants of this industry performance. This study specifically starts the determinant discussion with the capital adequacy studies as they are the control to the insurance performance having been made into law in Kenya. Other factors include asset base, cash flows, asset quality and premium income. These factors are briefly discussed.

2.3.1 Capital Adequacy

Studies and experience indicate that capital adequacy is strongly related the financial performance leading to many scholars concluding that it is a key financial driver in observing how a firm has performed over a period of time. One such study by Pukała *et al.*, (2017) has shown that capital adequacy had a direct relation to company performance in which an increase in capital adequacy has led to the same or similar positive increase in financial performance. In Poland, another study by Ortyński (2016) was also carried out to establish determinants of profitability and in which study findings as well as conclusions pointed towards capital adequacy acting as a spur to financial performance. In the further findings, Ortyński point to the safeguarding of customers by having a buffer fund that assures a company of profitability while at the same time, serving their esteemed customers. In essence, capital availability takes care of smooth operations and stabilizes the services as well as goods production of the firm (Cui *et al.*, 2019). Additionally, capital availability is a guard against losses that would occur in case of lack of profitable activities (Murigu, 2014).

This capital assuredness is a way of indicating that the firm is competent and also transparent in its operations as portrayed on the market that also point towards good strategic planning which is very important in financial performance of any firm (Srijanani & Rao, 2019). Specifically, the

competitiveness and pricing indicators of a firm are heavily reliant on the capital availability meaning that capital adequacy plays important role in achieving this objective in a firm. It is unanimously agreed that the best way to measure capital adequacy is through capital adequacy ratio popularly abbreviated as CAR. According to Copeland and Cabanda (2018), CAR is the percentage of a firm's overall capital with respect to the aggregated and weighted risk assets and as would be expected, CAR varies from one sector to another in any economy as well as any country with respect to the implementing regulatory authorities (Mwangi & Iraya, 2014). However, key indicators for measuring CAR have majorly remained the same. These indicators include liquidity of the firm, asset quality, structure of capital and asset base. Similarly, Bett and Wepukhulu (2019) CAR also point towards a firm's capability in utilization of assets to turn into profitable outputs. Kenya has implemented the CAR law and this study will look into financial performance with respect to the new law.

2.3.2 Asset Base

The assets that give value to a firm always get referred as asset base with key determinant being the shareholder's equity (Bilah, 2019). The asset base as noted by Bett and Wepukhulu (2019) is not fixed since there are fluctuations depending on the appreciation and depreciation nature of the market forces that dictate profits and losses. The reporting period of the asset base also plays an important role in the valuation of the asset base with rules put in place to guard against fraudulent book manipulation to reflect positive standing in terms of asset base calculation (Taherinia & Baqeri, 2018).

Some assets are known to generate more income than others as observed in studies across Asia indicating that most insurance companies would go for such assets at all costs to either make genuine profits or be in good terms with the shareholders as well as stakeholders (Ayuba, Bambale, Ibrahim & Sulaiman, 2019). Similarly, asset bases including bonds, certificates of deposits (CD) and as well as property rentals and dividend yielding stocks are found to be very popular in European economies that are having positive operations on the markets (Braun, Schmeiser & Schreiber, 2018).

2.3.3 Cash Flows

Cash flows refer to the assessment made by insurance companies in determining income streams and expenses which is critical for payment of premiums and claims (Purnamawati, 2019). Studies in many countries indicate that cash flow is one of the key determinants of performance not just for insurance industry but all industrial players in direct money control business (Shapoval & Kolotii, 2019). Any cash equivalent is also a sign of performance for the firm and will determine how fluid the company is at any given period (Eling & Jia, 2018).

In African regions, the amount of cash available to an insurance firm is always observed on three fronts including cash for operations that for investing and more important, cash for financing of firm business activities that contribute to income generation in many forms (Barbara, Cortis, Perotti, Sammut & Vella, 2017). It also goes without saying that salary expenses are normally achieved through cash flow that can be sustained leading to low number of employees in the insurance firms in order to meet this one very important aspect of daily operations. As pointed out

by (Shapoval & Kolotii, 2019), there is always a chance that net profit could be manipulated to reflect as cash flow and this is likely to cause fraud in the insurance industry.

2.3.4 Asset Quality

As pointed by Ozili (2019), asset quality will always refer to the credit risk quantity in terms of the loan and investment portfolios of the insurance firm. This could well be reflected even on off-balance sheet transactions. The portfolio management therefore plays a key role in management of asset quality since they almost have a direct relationship (Bace, 2016). Many insurance companies across Europe spread their assets to increase the level of quality but in particular intangible assets play a key role in determining the performance of the insurance industry (Arrawatia, Dawar, Maitra & Dash, 2019).

There is also the preference for liquid assets in which most insurance companies prefer this for ease of and speed of conversion to cash (Purnamawati, 2019). In other well developed nations, the securities issued by governments and multilateral corporations present some of the most highly sought assets for surest asset quality recordings. Locally, studies have indicated that asset quality plays a key role in the performance of Kenyan insurance sector citing leading firms as having invested heavily in high earning portfolios across the economy (Owuor, 2018).

2.3.5 Premium Income

The premium income of an insurance firm refers to the revenues from which an insurance investor must derive payments through careful investment of the same to earn enough excess profits

supporting the firm operations as well as paying out the claims (Arrawatia et al., 2019). Studies by Shapoval and Kolotii (2019) demonstrate the key role played by premium income and that if not protected by law or prudent form, it can be the lead factor in failure of insurance business. Others scholars including Barbara *et al.*, (2017) and Braun *et al.*, (2018) also point to the period of selection by the payees and insurance firms in terms of lump sum, monthly or quarterly. This is important since a firm could then get involved in specific size of investment based on the lump sum, quarterly or monthly basis.

Locally, studies have indicated that the premium income has forever played a strong role in the performance of both banking and insurance industry across many business markets. Lemiso (2018) points to the poor receiving of premium as the key factor that makes firms perform poorly yet the competition in the industry is quite intense. Similarly, other studies by Mabele (2019) and Marengo (2018) point to the written insurance claims as being a variant of the net premium income that has to be controlled carefully to improve the insurance performance.

2.4 Empirical Review

There are many studies that indicate usage of capital adequacy in relationship with financial performance across the globe, regionally and locally as discussed in this section with specific emphasis on contextualization, methodology, findings as well as established study gaps.

In a study of corporate governance and environmental impact of financial firms, Sharma *et al.*, (2019) sought to establish the sustainability of financial performance in the emerging economy of

India. The study was focusing on RBV theory with a longitudinal approach in determining the performance of the financial firms. To measure the firm performance, this study used return on assets – ROA. In the study findings, it was found that the firm size played a key role in the performance both social and financial and that the larger a firm the more likely it was possible for it to convert its assets into profitable outputs.

Elsewhere in Asia, a study to establish financial soundness by firms in Pakistan was carried out by Ali *et al.*, (2019). Using the non-life insurance sector, the study selected 22 insurance firms measuring their financial performance between the years 2007 to 2016 through panel data technique. In their study findings, Ali *et al* established that firm- specific factors including age of firm, management competence and operating ratios were key in determining the financial soundness of firms. The study further identified other seven specific-firm factors that played a role in the financial soundness of a firm. These they listed as the size of the firm, the leverage, equity capital, the market share, investment ratio, premium growth as well as solvency margin.

European experience on financial performance is well-documented with examples on insurance and financial institutions galore. In a study aimed at determining financial profitability of general insurance firms in Poland and generally central Europe, Ortyński (2016) sought to establish the factors determining financial performance in the general insurance industry. The study used a panel data set approach combining both firm specific and macroeconomic factors over the period 2006 to 2013, analyzing data through weight least squares. Findings by Ortyński indicate that profitability was negatively affected by underwriting as well as net operating expenses. On the

positive, the study established that size of a company, profitability ratio and written premium ratio had a positive relationship with financial positive performance.

In the USA, a study by Copeland and Cabanda (2018) sought to establish the efficiency and profitability of the public held insurance firms of the country over the period 2011 to 2013. Applying a two-stage efficiency model, the study employed a data envelopment analysis together with stochastic Tobit regression on 141 operational US insurance firms held by the public. Results from their analysis findings indicate that there was no consistent performance over the period using input-output matrix. The study also established that there was a significant correlation between financial performance and technical efficiency. Similarly, Copeland and Cabanda found that there was no relation between performance and the type of insurance in terms of life or general.

Similarly, in the USA, a study on buffer capital viz a viz interest and profit margins was carried out by Abbas *et al.*, (2019). The study used panel data set approach to compare three sets of data in pre, during and post-economic crisis period. The study focused on capital buffer, tier 1 capital buffer as well as common equity buffer analyzing the data through two-step generalized method of moment in coming up with results. Findings by Abbas *et al.*, indicate a negative correlation of all three buffers with risk. However, there was a strong positive relation between net interest margins and buffer capital. Significantly, the study indicated there was a big different in the pre and during crisis period on the one hand and the post-crisis period with lower margins on the other hand when regulations enforced the buffer capital requirements.

Regionally, studies on financial performance have shown different results. In Ghana a study aimed at establishing link between intellectual capital and productivity in insurance industry was carried out by Oppong *et al.*, (2019). The study used 33 insurance companies assessing their performance over the period 2008 to 2016. Intellectual capital was measured using value added coefficients while productivity was measured using Malmquist productivity index and analysed through generalized method of moment. Study findings by Oppong *et al.*, indicated that there was improved productivity over 3 year intervals and that this was significantly related to the experience and increased intellectual strength of the firm employees.

In Kenya, various scholars have studied the performance of insurance industry specifically performance using various determinants. Mwangi and Iraya (2014) have studied the performance determinants of general insurance companies in Kenya. Using the following factors of premiums growth, insurer size, ratio retention, assets for earning, yield on investment, ratio of loss and ratio of expense, the scholars targeted general insurance underwriters over the period 2010 to 2012. Mwangi and Iraya specifically used multiple linear regression analysis to come up with results indicating that some factors related positively while others were negative. The positive factors included earning assets and investment yield while negative relations with performance were found to exist with loss ratio as well as expense ratio. However, there was no effect by the size, growth and retention ratio to performance of general insurance firms.

Other scholars to have dealt in performance include Bett and Wepukhulu (2019) who sought to determine the risk based supervision methodology and its effect on financial performance of

insurance companies in Kenya. Using a census study of 55 insurance firms over the period 2012 to 2018, the study applied both statistical and referential analysis to establish the empirical results. In their findings, Bett and Wepukhulu established that there was a significant relationship between capital adequacy and financial performance as well as an inverse link between actuarial valuation and financial performance. There was also a positive relationship between investment and financial performance.

Elsewhere in Kenya, Kogo and Kimencu (2018) have focused on the organizational capabilities and performance of insurance companies in Nairobi county with the aim of establishing various capabilities in the insurance industry including marketing, product, human and technological capabilities. Based on the RBV and well as KBV and MBV theories, the study targeted 1300 respondents from 51 insurance firms in Nairobi County with stratified sampling through both quantitative and thematic analysis. Results of the findings indicate that marketing capability coupled with product capability was strongly related to performance in the insurance industry.

2.5 Conceptual Framework

The conceptual framework represents a diagrammatic explanation of study variables including the dependent and independent ones to establish a likelihood of a relationship between the two. In this study, the dependent variable is financial performance measured using ROI while the independent variables include asset quality, asset base and cash flow as well as premium income as indicated in Figure 2.1.

Independent Variables (X)

Dependent Variable (Y)
Performance

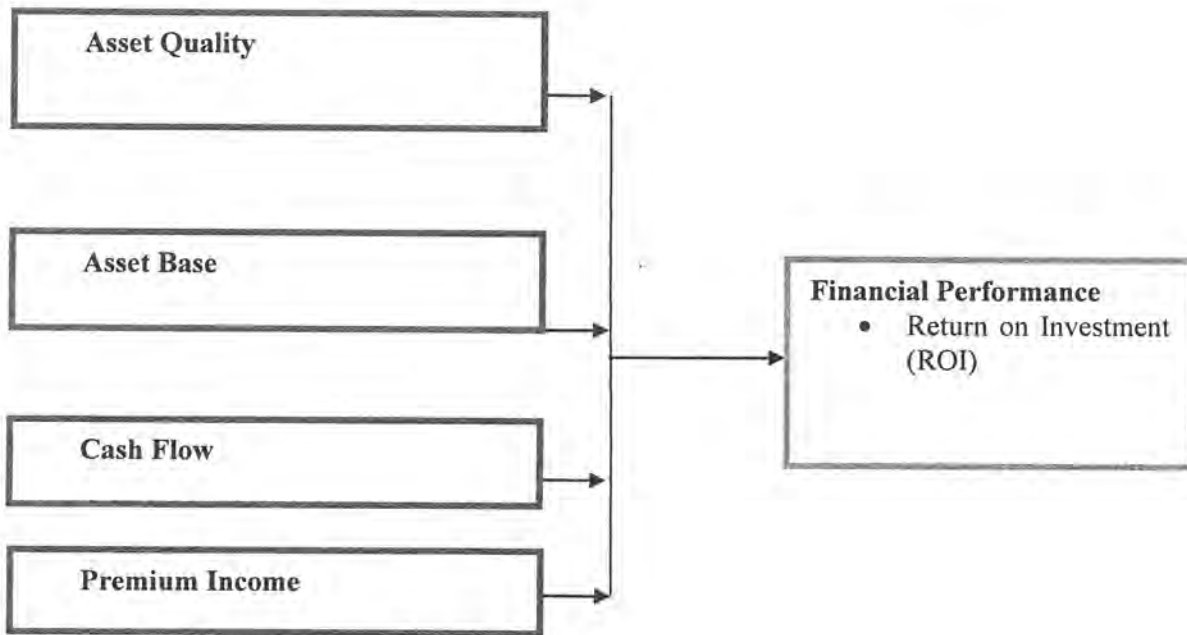


Figure 2.1: Conceptual Framework

Author (2020)

2.6 Summary of Literature Review and Research Gaps

The literature reviewed in the study has identified various gaps in the field of insurance industry as well as in the methodologies used. First the majority of the studies covered have come from global view especially in the European developed nations and the Asian countries whose insurance industry is very developed. The methodologies applied in the majority of the studies have been different from the current study. Some theories also differ while others are similar to the current study. The capital adequacy ratio applications in these countries is most likely very different from

the ones in Kenya. The asset set ups in the US also differ much from the Kenyan context given that the capital adequacy law has been applicable in the US for a far much longer period than in Kenya. Yet another identified gap in the study is that the periods covering most of the studies is different and during those periods, many socio economic factors have changed and hence affected the investment plans in Kenya. It is therefore expected that the Kenyan results would present a different scenario covering the period 2017-2019.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Chapter 3 concerns the research methodology which points to the choices that researchers make about cases to be studied. This brings together the methods of data gathering including the research design, population, sampling, data collection and data analysis procedures.

3.2 Research Design

This study adopted a longitudinal research design in capturing all the 32 registered general insurance companies in Kenya. The need for longitudinal research is necessitated by the type of research which will involve repeated observations of performance data over a period of time (Saunders, Lewis & Thornhill, 2016). Other scholars that have used longitudinal research include Copeland and Cabanda (2018), Ali *et al.*, (2019), Mwangi and Iraya (2018) and Bett and Wepukhulu (2019) among others. According to Coopers and Schindler (2014), longitudinal designs include cohort, panel data and record linkage. This study specifically used panel data research design.

3.3 Population

The IRA has got 32 registered and operational general insurance firms that formed the population of the study (See Appendix 1). This then also constituted sampling frame in which the companies registered in by IRA as at 2019 were evaluated. Specifically, the study sought to get secondary data from audited financial reports submitted at the IRA.

3.4 Data Collection

As a desk study, the main data collected comprised secondary type due to quantitative modes of analysis. The secondary data from financial reports ensured coverage of the whole industry through financial reports. The secondary data covered the period 2017 to 2019. Specifically, the sheet for data collection included current assets, fixed assets, total assets, net income, total liabilities, shareholder equity, current liabilities, cash and cash equivalents and investments

3.5 Diagnostic Tests

The study ran diagnostic tests to ensure results were not biased. Results with minimum bias involve normality, reliability and validity testing (Saunders *et al.*, 2016). The three tests were carried out on the data collected.

Normality

In order to fully test for normality, this study applied skewness and Kurtosis method. This enabled a tolerance limit derived by computers to maintain the given level of confidence which is 99 percent of the population with 95 percent confidence.

Reliability

This test checks to confirm if tolerance (VIF) of dependent variable is explained by the independent variables. Specifically, the R^2 value is to the figure 1, the more likelihood of multicollinearity since the VIF will be higher. When faced with multicollinearity, the concerned

variables were ignored, since the presence of multicollinearity would imply that there was redundancy in the other study variables.

Validity

Validity describes the situation in which all the error terms for independent variables is similar. A random pattern of points in the study results would indicate acceptance of the data for full analysis while a constant term would make the data be rejected. In simple terms Cooper and Schindler (2014) describes validity as the homogeneity of variance which means that the response variables have the same variance.

3.6 Data Analysis

Panel data analysis was used for analysis of the data collected between 2017 and 2019. A regression model was used to establish the effect of capital adequacy on performance across the general insurance companies in Kenya.

A multiple regression model was adopted as follows

$$Y_{it} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y_{it} was the dependent variable (performance of General Insurance in the period t)

β_0 is the constant, While X_i represents aspects of CAR

X_1 is Asset Quality

X_2 is Asset Base

X_3 is Cash Flow

X_4 is Premium Income

...

ε is the error of component or industry noise in insurance.

3.7 Tests of Significance

The study established the interrelationship between both independent and dependent variables through correlation analysis. The specific analysis applied was Pearson's correlation coefficient.

The coefficient of determination (R^2) was used in testing the relationship between the variables.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The main objective of the study was to establish the effect of capital adequacy on the financial performance of general insurance companies in Kenya over the last 3 years since 2017. The population of general insurance companies totaling 32 was fully mined from the IRA website reports.

4.2 Diagnostic Tests

The study performed different diagnostic tests prior to the inferential statistics. The tests were done to ensure the analyzed data met the required standard for inferential statistics. The three tests included normality tests, reliability tests, and validity tests.

4.2.1 Normality Test

In order to commence the diagnostics, Normality tests were determined using the skewness and kurtosis test. Normally distributed data has skewness threshold value of -2 to +2 and kurtosis threshold value of -7 to +7. The result shows the skewness result of the variables ranged from -0.23 to -0.754 which was within the threshold value of -2 to +2. For Kurtosis, the variable results ranged from 0.029 to 2.126 which was within the threshold value of -7 to +7. This shows the variables were normally distributed as indicated on Table 4.1.

Table 4.1: Normality Test

	N		Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
	Valid	Missing				
AQ	32	2	-0.23	0.114	0.029	0.119
AB	32	1	-0.366	0.211	0.859	0.312
CF	32	4	-0.532	0.009	0.184	0.113
PI	32	2	-0.405	0.003	0.502	0.236
FP	32	0	-0.754	0.072	2.126	0.419

4.2.2. Reliability Tests

The test of reliability was assessed using the Composite Reliability (CR). Composite reliability values that are greater than or equal to 0.7 show that the data is reliable based on the instrument used. The value of the composite reliability for financial performance was 0.884 which was greater than 0.7. This shows the data for financial performance was reliable for analysis as presented on Table 4.2,

Table 4.2: Reliability Tests

Variable	Composite reliability (CR)	Number of item
Financial Performance	0.884	5

4.2.3. Validity Tests

Validity test was determined by testing the discriminant and convergent validity of the financial performance based on the cash flows and asset base variables. The Average Variance Extracted (AVE) was used to determine convergent validity. For a good data, the convergent validity should

be above 50 per cent. The result of the test shows the AVE for financial performance was 0.611 which was above the 0.5 threshold indicating that financial performance accounted for more than 50% of the variance. On the discriminant validity, the value of financial performance was .611 (in bold) which was higher than the correlation coefficient loadings of cash flows (.572) and asset base (.430). This concludes that the discriminant validity and convergent validity were positive as indicated on Table 4.3.

Table 4.3: Average Variance Extracted Matrix for Financial Performance

Variable	AVE	Cash Flows	Asset Base
Financial Performance	0.611	.572**	.430**

4.3 Variable Analysis

After the initial diagnostic tests of normality, reliability and validity full analysis was carried out targeting the independent variable as well as the key independent variables of cash flows with asset base.

4.3.1 Cash Flows

To measure the cash flows of the insurance companies in Kenya the study used levered cash flow. In general practice, levered cash flow is translated as the net income which insurance companies retain once the entire financial obligation has been settled and this will normally include but not limited to payment of debt. From the study findings indicated in Table 4.4, cash flow had a mean of 14.21934 with a standard deviation of 2.821462. Accordingly, this showed that the balance of

net income after meeting all payment obligations strongly differed across the general insurance field. However, this was also an indication that several firms could be retaining huge incomes after full debt repayment while others made very little after such payments of obligatory nature. The results therefore specifically point towards an industry that is showing signs of positive growth with all the ingredients provided and a growing economy.

Table 4.4: Cash Flow Measurement

Levered Cash Flow	1	32	14.21934	2.821462
Valid N (listwise) = 36				

4.3.2 Asset Base

To measure this key component of the capital adequacy for insurance companies, the total assets of the insurance companies was taken into consideration across the industry. Specifically, the mean and standard deviations of the total asset base was calculated for all the general insurance companies in Kenya. Results from the data analysis as shown in Table 4.5 indicate a mean of 17.02152 with a standard deviation of 2.013842. Accordingly, the results were an indication that the deviation was greater than the observed asset figures. From the standard deviation the insurance companies have wide variety of asset portfolios with some having very large while others have very small portfolios.

Table 4.5: Asset Base Measurement

Total Assets	1	32	17.02152	2.013842
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Valid N (listwise) = 32

4.3.3 Asset Quality

The measure of asset quality was also considered and its effect on the financial performance of the general insurance companies. Using panel data regression, the means and standard deviations was derived from the natural logarithms of the longitudinal data over the period 2017 to 2019. Results from the data analysis as shown in Table 4.6 indicate a mean of 12.17456 with a standard deviation of 1.07972. Accordingly, the results were an indication that the deviation was greater than the observed asset figures. From the standard deviation the insurance companies have high quality assets that are most likely to positively affect the financial performance of the general insurance companies.

Table 4.6: Asset Quality Measurement

Total Assets	1	32	12.17456	1.07972
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Valid N (listwise) = 32

4.3.4 Financial Performance

The main independent variable of the study was financial performance and this was measured using Return on Investment (ROI) for all the 32 general insurance companies with a mean and standard deviation for the period over 2017 to 2019. The average ROI for each of the firms for the five years was obtained. The results as shown in Table 4.7 indicate that that the mean for financial performance was 0.4712614 and the SD was 0.0104823. The study findings indicate that there was a positive performance by the insurance companies in the general sector for the period of study as indicated. Similarly, the standard deviation is small enough to show that the values were not very deviant from the mean value.

Table 4.7: Return on Investment

Return On Investment (ROI)	2	5	0.4712614	0.0104823
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Valid N (listwise) = 32

4.4 Correlation Analysis

In order to further establish the relationship between study variables which included dependent financial performance and independent variables, a regression analysis was performed. In the regression analysis, the variables were measured differently with Return on Investment (ROI) being the key measurement for financial performance, Levered cash flow being the basis for cash flows and key among the independent variables was total company assets used as the measure for asset base. Premium income was left out as it did not present significant variance with all firms

appearing to have premium incomes regardless of their status of financial performance. As indicated in Table 4.8 regression analysis results showed an inverse correlation between asset base and asset quality with a value of -0.327 which translates as one item rising while the other decreases. Since the study used a 2-tailed test the correlation was deemed irrelevant with a p-value of 0.07. The second observation was that cash flow and asset quality had a positive correlation with a posted value of 0.271. From the positive correlation figure, there is a clear indication that a rise in the asset quality will translate into a high income return and retained by the insurance company while meeting financial obligations that has a significant number of creditors being adequately compensated for their provision of services and goods to the insurance firm. Thirdly, the cash flow and asset quality were also correlated and from the study results, there was a high likelihood of a strong positive correlation with p-value figure of 0.014. However, the correlation between asset base and cash flow was relatively inverse and weak with p-value figure of 0.203. From the analysis findings, it can be observed that a rise in asset base would most likely improve the cash flow status in a given general insurance company in Kenya over the past 3 years 2017 to 2019. Specifically, the correlation between financial performance and all independent variable

Table 4.8: Variable Correlation Analysis

	Asset Base	Asset Quality	Cash Flow	Financial Performance	
Asset Base	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	32			
Asset Quality	Pearson Correlation	-0.327	1		
	Sig. (2-tailed)	0.07			
	N	32	32		
Cash Flow	Pearson Correlation	0.203	0.271	1	
	Sig. (2-tailed)	.012	0.014		
	N	32	32	32	
Financial Performance	Pearson Correlation	.147*	.241**	.030	1
	Sig. (2-tailed)	.021	.000	.013	
	N	32	32	32	32

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

4.5 Financial Performance and the Effect of Capital Adequacy

This study set out to establish the effect of capital adequacy on the financial performance of general insurance companies in Kenya over the last 3 years since 2017. As opposed to covering the whole insurance industry, this specific study only focused on the general insurance sector with a view to observing the financial performance and the corresponding factors that affect it for capital adequacy considerations in Kenya. This were found to be asset base, asset quality and cash flow with premium incomes left out having failed the validity test. The financial performance was measured using Return on Investment (ROI). As the investigation involved periodical data over several years beginning 2017 to 2019, all the summations used in the analysis were in logarithmic format suitable for application on the longitudinal data series. In order to run such longitudinal data in a series format, panel data regression approach was used throughout. Results in Table 4.9 for specific variables indicate asset quality to have some negative coefficient with a value of -

0.002 and a standard error of 0.069 coupled with a p-value of 0.471. With p-value standard ($p < 0.05$), the result point towards no significance indicating that there is relatively little or no relation between financial performance and asset quality in the general insurance companies of Kenya. The second observation from the analysis was that asset base had a coefficient value of 0.015 with a standard error of 0.121 but with a poor significant value of 0.242 which is way above standard p-value ($p < 0.05$) leading to the confirmation that asset base was not significantly related to the financial performance in the general insurance sector of Kenya. Finally, the study results on the correlation between cash flow and financial performance produced a coefficient value of 0.028 with a standard error of 0.002 but with a p-value of 0.011 ($p < 0.05$). This final regression result indicates a high correlation between cash flow and financial performance in the general insurance companies of Kenya in the period 2015 to 2019.

Table 4.9: Capital Adequacy and Financial Regression in Panel Data

- Constant	-.127	.192	-.491	.628	
- Asset Quality	.222	.069	-.017	.471	0.34
- Asset Base	.015	.121	.274	.242	2.09
- Levered Cash Flow	.028	.002	4.991	.011	1.71
Valid N (listwise) = 32					
Mean dependent var	.204565		S.D Dependent Var	.1566980	
Sum Squared Resd	.325692		S.E of regression	.1207091	
R-Squared	.387		Adjusted R-Squared	.380	
F(2, 32)	11.278		P-value (F)	.000	

Test of Significance

The study further sought to establish more relationships through the regression analysis process of exploring the test of significance in which the R-Squared value referred to as the coefficient of analysis was calculated from the Panel data approach. This was the same approach in establishing the financial regression above using natural logarithms for the large data commencing 2017 to 2019. Results from Table 4.8 indicate the R-Squared value to be 0.387 with the subsequent Adjusted R-Squared at 0.380. The study results show a direct relationship between dependent variable and independent variables through a function of 0.380 out of 1 meaning that 38 percent changes in independent variables translate to a unit variance in dependent variable. For this study, this implies 38 percent of financial performance is a direct result of inputs in asset base, asset quality and cash flows of the general insurance company. To establish the significance of the relationship, study results explored the p-value which was 0.011 ($p < 0.05$) implying a strong significance and suitable to use the results for fitting into regression equation.

Model Fitting

The adopted linear regression of the form $Y_{it} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Was thus fitted with discarding of the premium incomes which remained irrelevant in the earlier calculations. Subsequently the regression model was satisfied as follows:

$$Y_{it} = -0.127 + 0.222X_{it} + 0.015 z_i + 0.028 u_i + 0.192$$

From the regression model, the study observes that if no consideration is taken to the independent variables, the financial performance would be in negative of -0.127 units. Similarly, the weight of 0.222 determines the influence of asset quality, the weight of 0.015 determines asset base and the

weight of 0.028 determines the cash flow leveraging while the industry error or noise is deemed to be weighted at 0.192 all over the period 2017-2019. In any calculation error or environmental noise is important to mention since not all factors or variables can be covered in any one model. Finally, the panel data also produced multicollinearity check using VIF values with an aim of establishing if they were above the maximum threshold of figure 5. Accordingly, results in Table 4.6 indicate VIF values of 0.34, 2.09 and 1.71 respectively for asset quality, asset base and levered cash flow. All the VIF values were therefore acceptable ($VIF < 5$) and proved that there was linear correlation between the independent variables hence no multicollinearity.

4.4 Discussion of Study Findings

The study thus sought to establish the effect of capital adequacy on the financial performance of general insurance companies in Kenya over the last 3 years 2017-2019 and from the findings, it is clear the results support some previous findings while others are in contravention. The clear supporting results from the other studies indicate that cash flow is positively related to the financial performance of insurance companies as found in the studies by Abbas et al., (2019) as well as Akpan et al., (2017). Similarly, Azarenkova et al., (2017) determined that the cash flow leveraging of insurance companies was very critical in the fluid performance of the insurance firms. On the contrary, Chakraborty (2017) in studies of Insurance firms in India found that the cash flow could not be seriously used to determine the financial performance since most firms put up brave face on their financial statements with little insight into the assets held by the firms. Otherwise, more studies in Kenya have indicated that cash flow management is a true sign of financial performance both in the insurance industry and the banking industry where capital buffering has been

successfully applied over the years. This is demonstrated in the Chepkilot (2019) study in which a demonstration of the importance of cash flow in financial institutions is shown to lead to sound financial performance. Also in concurrence is the study by Eling and Jia (2018) in which solvency was a factor in the good performance of banking and insurance industry. The study further established that asset quality was paramount in the generation of quick cash flow for a firm and hence leading to good performance all around. Capital adequacy is the key factor in all the studies as pointed in the findings by Kogo and Kimencu (2018) who demonstrated that conforming to the capital adequacy rule in the banking industry had explored the possibility of good performance if cash flow requirements were fully met. Similarly, the findings and conclusions by Ndichu (2019), Owuor (2018) as well as Zainadun et al., (2018) demonstrate that capital adequacy is a key ingredient in understanding the financial position of firms in the insurance industry.

CHAPTER FIVE: SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Introduction

In this final chapter of the study, the main aim is to provide a conclusion that would lead to recommendations in the field of general insurance in Kenya based capital adequacy considerations as introduced in the insurance industry. It is therefore clear that the recommendations and suggestions will be based on the findings in the previous chapters and the main study objective that sought to establish the effect of capital adequacy on the financial performance of general insurance companies in Kenya over the last 3 years from 2017 to 2019.

5.2 Summary

The key factors in the financial sector have always played a role in the positive performance of the industry. Various studies have established the driving factors that have enhanced performance across the globe beginning with the highly developed countries including the USA, European Western countries and the fast emerging nations of the Asian sub-continent including India and China. The study made an attempt to mix the theories of resources and finances in an effort to have a balance especially in the insurance sector which has both resources in terms of assets and heavily involved in the holding of large finances for firms with yet more resources. As pointed out in the introduction, the study had the main objective of determining the effect of capital adequacy on the financial performance of general insurance companies in Kenya. A longitudinal design was used to collect data from the IRA website analysed directly using natural logarithms in panel data

analysis. The findings indicated that there is strong correlation between the selected independent variables and dependent variable.

5.3 Conclusion

The study relied on the three key theories that closely relate to the financial sector of which insurance industry belongs. First, the buffer theory was found fitting in the study given the need to have capital base that was fixed in order to protect the interests of the insured persons that could be both personal or corporate. Similarly, there was a demonstration of the use of RBV theory in which it was evident that insurance industry takes care of large varieties of resources both for clients and itself in terms of investing to generate funds in order to run the insurance business. Final observation of the agency theory proved very critical as the insurance industry operates on the principal agency basis almost directly. It was also observed that the insurance industry required a law to streamline the often-cited information asymmetry in which one party has information unknown to the other party. This asymmetry in agency theory could thus be avoided with the capital adequacy ratio law in place. In conclusion, the study observed that there was indeed a high correlation between the Return on Investment (ROI) and the asset of the insurance firms. This means profits in the general insurance industry is based on the assets held by the general insurance firms. It is also clear that the general insurance companies have invested well in quality assets that help generate a liquid cash flow environment leading to the profits as witnessed between 2017 and 2019. The largely positive position of the general insurance companies is an indication that capital adequacy requirements have a positive influence on the performance of the general insurance companies. The capital adequacy ratio rule is thus having a positive influence on the financial

performance of the general insurance companies of Kenya. The financial soundness of the insurance firms is thus coming out as a key factor of operations and restoration of confidence in the insurance sector. Firms have thus increased the observation of guidelines that determine the effectiveness of having capital adequacy as a basis for good performance. From the results, it implies that the higher the capital adequacy ratio, the more likely that a firm can withstand any unforeseen losses or hazards in the industry. Again, results and theory work reviewed indicate that with a high capital adequacy ratio, there is a high likelihood of avoiding insolvency since both Tier-1 and Tier-2 capital forms are well taken care of in the rule guiding adequacy.

5.4 Recommendations

It was understood from the study that industry players as well as stakeholders were interrelated in one way or another. From the interaction of theories and field practices observed in the field work, the study noted industry variations that could guide on many recommendations. Using the study conclusion, recommendations are given in both policy and development terms. This study therefore recommends that the various general insurance firms should have adequate assets and more specifically, high quality assets that translate into good performance by the firms. In the insurance industry, risks are very high and hence there is need for insurance players to have strong research mechanism to pinpoint the exact information in which transactions are taking place. This stems from the field result that showed capital adequacy as being central to the smooth running of the industry. There is a possibility of coordination between the insurance firms in the ascertaining of resources presented for insurance and this would go a long way in protecting the insurance environment. Similarly, the insurance firms could form a watchdog by themselves to oversee and

coordinate with the industry regulator in trying to police the new law as it is nurtured into total fruition without harming the operations of the industry. The study also recommends that government as the regulator of insurance industry through the IRA should put in place measures that make investment in quality assets a must in order to encourage general insurance firms to be investing in quality assets. In order to increase the quality of assets to the Kenyan market, the study recommends the formation of quality management groups in the general insurance industry that would help in the advocating for total embracing of the quality management that would ensure any assets acquired by the industry players are of the highest quality as they would contribute towards positive returns on investment. The insurance industry players could also engage in educating their clients over the new rule to boost confidence since clients would know that their insurer meets the tough rules on the capital adequacy limits.

5.5 Limitations of the Study

The study was also faced with specific limitations in which the market is much skewed towards one the larger firms that dominate the market but averages used in the calculations tried to limit the skewness of the results. This study although using desk research was carried out in the Covid-19 pandemic period thus limiting most movements for review of data with peers in the field of insurance. The use of technology for example Zoom was at hand in solving this social distancing problem. There is always a likelihood that information collected from secondary sources as happened for this study will almost be impossible to contest since as a research, the confidentiality clause avoids this. However, the study worked on trust that all secondary data was in safe public organization.

5.6 Areas of Further Research

This study has opened an avenue for further exploration both in the field of capital adequacy as well as financial performance. Specifically, it is recommended that further studies are undertaken in the area of quality circles that general insurance companies could explore to establish asset management in quality environment. This would take the form of a correlational or comparative study either for example the general sector versus life sector in the insurance industry in Kenya.

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APPENDICES

APPENDIX I: List of General Insurance Companies as Regulated (2017-2019)

1	AAR INSURANCE KENYA
2	AFRICAN MERCHANT (ARMACO)
3	AIG INSURANCE COMPANY
4	ALLIANZ INSURANCE COMPANY
5	APA INSURANCE COMPANY
6	BRITAM GENERAL INSURANCE
7	CIC GENERAL INSURANCE COMPANY
8	CORPORATE INSURANCE COMPANY
9	DIRECTLINE ASSURANCE COMPANY
10	FIDELITY SHIELD INSURANCE
11	FIRST ASSURANCE COMPANY
12	GA INSURANCE COMPANY
13	GEMINIA INSURANCE COMPANY
14	HERITAGE INSURANCE COMPANY
15	ICEA LION GENERAL INSURANCE
16	INTRA-AFRICA ASSURANCE
17	JUBILEE GENERAL INSURANCE
18	KENINDIA ASSURANCE COMPANY
19	KENYA ORIENT INSURANCE
20	MADISON GENERAL INSURANCE COMPANY
21	MAYFAIR INSURANCE COMPANY
22	OCCIDENTAL INSURANCE COMPANY
23	PACIS INSURANCE COMPANY
24	PIONEER GENERAL INSURANCE COMPANY
25	RESOLUTION INSURANCE COMPANY

26	SANLAM INSURANCE COMPANY
27	TAKAFUL INSURANCE OF AFRICA
28	TAUSI ASSURANCE COMPANY
29	THE MONARCH INSURANCE
30	TRIDENT INSURANCE COMPANY
31	UAP INSURANCE COMPANY
32	XPLICO INSURANCE COMPANY

APPENDIX II: Data Collection Sheet

current assets (CA), fixed assets (FA), total assets (TA), net income (NI), total liabilities (TL), shareholder equity (SE), current liabilities (CL), cash and cash equivalents (CCE) and investments (IV).

General Insurance Firm	C A	F A	T A	N I	T L	SE	C L	C C E	I V
1. AAR INSURANCE KENYA									
2. AFRICAN MERCHANT (ARMACO)									
3. AIG INSURANCE COMPANY									
4. ALLIANZ INSURANCE COMPANY									
5. APA INSURANCE COMPANY									
6. BRITAM GENERAL INSURANCE									
7. CIC GENERAL INSURANCE COMPANY									
8. CORPORATE INSURANCE COMPANY									
9. DIRECTLINE ASSURANCE COMPANY									
10. FIDELITY SHIELD INSURANCE									
11. FIRST ASSURANCE COMPANY									

General Insurance Firm	C A	F A	T A	N I	T L	SE	C L	C C E	I V
12. GA INSURANCE COMPANY									
13. GEMINIA INSURANCE COMPANY									
14. HERITAGE INSURANCE COMPANY									
15. ICEA LION GENERAL INSURANCE									
16. INTRA-AFRICA ASSURANCE									
17. JUBILEE GENERAL INSURANCE									
18. KENINDIA ASSURANCE COMPANY									
19. KENYA ORIENT INSURANCE									
20. MADISON GENERAL INSURANCE COMPANY									
21. MAYFAIR INSURANCE COMPANY									
22. OCCIDENTAL INSURANCE COMPANY									
23. PACIS INSURANCE COMPANY									

General Insurance Firm	C A	F A	T A	N I	T L	SE	C L	C C E	I V
24. PIONEER GENERAL INSURANCE COMPANY									
25. RESOLUTION INSURANCE COMPANY									
26. SANLAM INSURANE COMPANY									
27. TAKAFUL INSURANCE OF AFRICA									
28. TAUSI ASSURANCE COMPANY									
29. THE MONARCH INSURANCE									
30. TRIDENT INSURANCE COMPANY									
31. UAP INSURANCE COMPANY									
32. XPLICO INSURANCE COMPANY									

APPENDIX III: Data Collection Summary

Key Indicators	Grand Totals for Indicators		
	2017	2018	2019
Gross Direct Premium	124,779,625	127,511,726	117,207,817
Inward Reinsurance	1,413,845	1,341,651	1,372,351
Outward Reinsurance	37,289,222	36,890,782	35,199,312
Net Premium Written	88,904,246	91,962,592	83,380,856
UPR B/F	37,080,137	34,350,795	32,010,192
Unexpired Risk Reserve (B/F)	196,893	513,847	459,130
UPR C/F	34,586,113	35,227,959	32,440,518
Unexpired Risk Reserve (B/F)	299,039	515,601	464,027
Net Earned Premium Income	91,296,125	91,083,677	82,945,637
Incurred Claims	56,151,966	56,928,003	53,425,245
Net Commissions	7,046,781	6,600,121	5,381,633
Expense of Management	29,125,225	30,144,417	27,512,716
Underwriting Profit /(Loss)	(1,027,851)	(2,588,861)	(3,373,963)
Investment Income	7,153,376	5,777,032	6,867,747
Profit transferred to P&L	6,125,527	3,188,175	3,493,782