

**EFFECT OF FINANCIAL RISKS ON GROWTH OF FIRMS: A CASE OF
INSURANCE COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE**

BY

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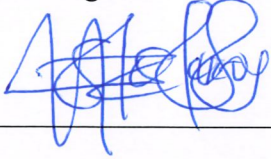
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DECLARATION

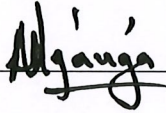
I declare that this proposal has not been presented to any institution or university other than the University of Nairobi for examination.

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

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DEDICATION

I'd like to dedicate my project to my family and many friends. A special feeling of gratitude to my loving parents who have seen through my education till now.

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LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
ERMT:	Enterprise Risk Management Theory
IRA:	Insurance Regulatory Authority
MPT:	Modern Portfolio Theory
NSE:	Nairobi Securities Exchange
PAT:	Profit after Tax
PBT:	Profit before Tax
ROA:	Return on Asset
ROCE:	Return on Capital Employed
ROE:	Return on Equity
ROI:	Return on Investment
ROS:	Return on Sales
SPSS:	Statistical Packages for Social Sciences

ABSTRACT

Local insurance firms listed at the Nairobi Securities Exchange (NSE) encounters myriad of challenges in their attempt to improve their business growth. One of the challenges that have affected growth of these firms exposure to various financial risks. The study intends to investigate the effect of financial risks on growth of insurance firms listed at NSE. The research used descriptive design while the target population was all the 6 insurance firms. Secondary time series data was gathered from annual financial reports obtained from specific companies' websites. Data was collected for a period of 5 years, 2016-2020. The study used Statistical Packages for Social Sciences (SPSS) version 20.0 software for data analysis. The study analyzed data using descriptive statistics and regression analysis tests. Various diagnostic tests were used to determine the reliability of the regression model. The study also test for the statistical significance using ANOVA. It was found that financial risks had negative significant relationship with the firm growth. Specifically, it concludes that solvency risk had negative but significant relationship with the growth of listed insurance firms hence it inhibits their growth. The research concludes that, liquidity risk was negatively but significantly related to the growth of insurance firms hence, a decrease in liquidity risk could result to increased firm growth. It concludes that reinsurance risk had a positive and statistical significant relationship with the growth of insurance firms listed at the NSE. Thus, decreased exposure to reinsurance risk by any percentage definitely led to increased firm growth. The study concludes that firm size had positive statistical significant relationship with the growth of insurance firms listed at the NSE hence, an increase in total assets could lead to increased firm growth. It recommends that, insurance firms should ensure that they hold adequate provision for outstanding claims by conducting sufficient analysis on liabilities and also by considering previous experiences so as to come up with comprehensive mechanism to efficiently and effectively control and monitor outstanding claims. The study recommends that the firms should endeavor to improve customer base to increase their net income by providing effective estimation procedures on policy premium price that will eventually help in the maximization of the firms' net premium earnings to ultimately promote growth. The research recommend that the firms should resort to diversification of their investment portfolio by investing in idle cash. Such measures will help cushion these firms from adverse financial risks such as liquidity risk exposures.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Firms in Kenya have integral mandate insofar as overall economic development is concerned. However, local firms have faced myriad of challenges, especially in their attempt to improve the growth of their businesses (Mwangi & Murigu, 2015). One of the challenges is the exposure to financial risks. Factually, all businesses encounter financial risks. This means that no business can operate without exposure to financial risks and this could adversely affect their overall growth (Juma & Atheru, 2018). Firms in the country have had to deal with the ever-unpredictable business environment that has exposed them to financial risks. Given that firms also need to make profit and also create value for their respective stakeholders, they have the obligation to ensure that losses and damages are minimized or eliminated to boost wealth creation for the shareholders as well as their growth (Ana-Maria & Ghiorghe, 2014). In agreement, Fali, Nyor, and Mustapha (2020) says that various firms are exposed to various financial risks and this could impact negatively firm growth.

Regarding theories, the current study will be premised on three theories. The first is the Modern Portfolio Theory (MPT) that was championed by Harry Markowitz in the year 1952. The theory proposes that rational investors usually utilize diversifications for portfolio maximization. In essence, it proposes that the market is efficient and assets cannot be undervalued or overvalued. The second theory is the Extreme Value Theory that was proposed by Leonard Tippett in the year 1950's. The theory is useful in the current study because it practically and usefully helps in quantifying and modeling financial risk. It gives guideline on the type of distribution an individual can choose to manage extreme financial risks that a

company may be faced with such as solvency risks, liquidity risks among others. The third is the Enterprise Risk Management Theory (ERMT) that was authored by Mikes in 2005. The theory proposes that a firm can cope with financial risks by mitigating each risk individually or by grouping risks together within a strategically provided framework. The theory proposes that the best approach to managing financial risks is to handle each risk separately. The theories will help in assessing the influence of financial risks on growth on insurance firms at the Nairobi Securities Exchange (NSE).

Across the globe, the insurance sector is gearing towards customer-alignment product. This means that the product and services rendered are directed towards luring more consumers than the rivals. To attract more customers, elements such as providing price undercuts, providing variety of products, accepting friendly and flexible options for premium payment as well as improving clients experience as a result of provision of simple products have been upheld (Arif, & Showket, 2015). Further, insurance firms have resorted to provision of the most far-reaching cover at affordable cost coupled with flexible and conducive payment option to lure more customers over their rivals (James & Kepha, 2013). However, with all these strategies, insurance firms still face myriad of financial risks that has disadvantaged their overall business operation, consequently having negative impact on shareholders' wealth creation and ultimately on their overall growth.

1.1.1 Financial Risks

Financial risk can be defined as the monetary danger exposed to businesses due to losses or events that could impede the performance of a firm thereby substantially affecting the asset base that consequently impedes the delivery of services (Arif & Showket, 2015). The losses in the financial market can be due to movements in prices of stocks, interest rates, and currencies among others. On the other hand, Dey, Hossain, and Rezaee (2018) define financial

risk as the likelihood of an organization collapsing while using debt to obtain financial objectives when there is inadequate cash.

According to Silva, Kimura, and Sobreiro (2017), financial risk is real in the modern business environment, especially with the current COVID-19 pandemic effects. As a result of the pandemic, several businesses are facing financial risks and this has negatively affected the investment value for business as well as the financial assets. As said by Giglio (2016), financial risks are associated with the uncertainty in the business environment due to rate of interests, commodity prices, stock prices, and the exchange rates among others and such uncertainty affects their growth. Furthermore, Juma, and Atheru (2018) indicate that financial risks could include; the technical provision risk, reinsurance risk, liquidity risk, solvency risks, underwriting risk, credit risks, and operational risks among others.

Underwriting risk is the main financial risk faced by insurance firms. In this risk, the cost for covering a claim could exceed total paid premium (Sisay, 2017). Thus, the claims ratio/incurred loss to premium obtained can be used as a measure for underwriting risk. Credit risk is another financial risk that can be significant for the realization of firm growth hence making it analytically important for firms to fully implement structured processes regarding reinsurance choices. On the other hand, the solvency risks can be measured using the ratio of net income as divided by the total liabilities of every firm (Dey et al, 2018). Further, another financial risk is known as the reinsurance risk and it can be measured by taking ratio of net premium and dividing by the firms' total assets (Juma & Atheru, 2018). Reinsurance risk occurs when a firm suffers high claims above its capability to meet the financial obligations. Another financial risk is referred as the liquidity risks that can be measured by taking the ratio of current assets and dividing it by the current liabilities of each firm (Onsongo et al.,

2020). Again, the technical provisions risk can be defined as an inadequate technical provisions that can be established by claims outstanding in connection to equity ratio.

1.1.2 Growth of Firms

Firm growth has been considered as an integral measure of success of firms. Several authors have also argued that there is nil difference between firm success and firm growth (Rehan & Javaid, 2019). Basically, firm growth determines success of firms. There are several factors that could determine growth of firms. The factors can be categorized into qualitative and quantitative determinants. Firm specific factors together with elements that relates to the external surrounding are known as the quantitative determinants that includes interest rates, economic stability and exchange rates among other. In the other hand, qualitative determinants are the factors that relates with characteristics and personality of the business such as position in the market, product quality, as well customers' goodwill. According to Audretsch, Coad, and Segarra (2014), firm managers have an obligation to promptly respond to both the qualitative and quantitative determinants to obtain firm growth.

To date, factors determining firm growth has broadly been evaluated. For instance, Serrasqueiro (2019) established the growth and profitability in Portuguese companies and used insolvency, sales (total volume of business), and profitability to measure firm growth. According to Johnson (2016), innovation, leverage, and liquidity can also be used to measure the growth of firms. Further, Kiyabo and Isaga (2020) used total fund' growth and added value as indicator for growth. Again, Erhardt (2019) used measures such as market share and solvency has also been used as indicator for firm growth. In a rejoinder, Canarella and Miller (2018) indicate that turnover as divided by sales, increase in employment, and total firm assets can also be used to determine growth.

1.1.3 Financial Risks and Growth of Firms

Therefore, to ascertain growth, insurance firms should ensure financial risks are identified and managed to improve the companies' position in the uncertain and ever-competitive business environment. According to Kinyua, Gakure, Gekara, and Orwa (2015), financial risks can expose companies to losses hence diminished growth. Onsongo, Muathe, and Mwangi (2020) argue that financial risks could adversely damage or lead to collapse of an established organization hence leading to nil growth and this can result to poor financial performance. Therefore, existence of financial risk could verily offers potential threats to organizational success vis-à-vis firm growth.

In a rejoinder, Mishra, Rolland, Satpathy, and Moore (2019) pointed out that financial risks could potentially diminish growth of an organization hence the affected organizations could inadequately support its financial obligations and this could lead to low investment by various stakeholders thus affecting the overall financial strength. From the above argument, it is clear that financial risks have a relationship with growth of companies. Simply put, financial risks determine growth of organizations.

To support the presence of relationship between financial risk and organizational growth, Sisay (2017) assessed the extent financial risk influenced the development of firms (insurance), Ethiopia. The study found that financial risk indicators; liquidity risk, solvency risks, and credit risk had significant association with development of insurance firms. Further, Kamau and Njeru (2016) also showed that financial risks as indicated by liquidity and operational risks had significant relationship with performance of insurance firms while Matayo and Muturi (2018) established that financial risk (credit risks, solvency risk, reinsurance risks, underwriting risks, and liquidity risks) had significant relation with performance of big-scale chain stores.

1.1.4 Insurance Firms Listed at NSE

According to the NSE (2021), there are six listed insurance firms. These firms are; Kenya Re-Insurance Corporation, Jubilee Holdings Ltd, Liberty Kenya Holdings Ltd, Britam Holdings, CIC Insurance Group, and Sanlam Kenya PLC. In the recent past the growth of several companies in Kenya including the listed insurance firms have been dwindling. The key contributor to this effect is the COVID-19 pandemic. This has exposed several insurance firms to financial risks that if left unchecked could polarize the sector further.

Notably, the success of the insurance sector is crucial to every modern economy. This is because they encourage savings through investors owning financial instruments like shares and debentures. However, the overall growth of insurance firms in Kenya has remained low with only six listed companies out of a total of 57 registered firms are listed at NSE (IRA report, 2017) making about 10.5% of the total insurance companies registered. To remain relevant, insurance firms have resorted to specialization of financial services ranging from securing of risks inherent in enterprises as well as risk absorptions.

The insurance companies in the country are regulated by Insurance Regulatory Authority (2018). According to Insurance (Amendment) Act 2006, IRA is mandated to promote regulation, supervision; more importantly, promotion of growth of the industry in the country. Therefore, IRA helps in the implementation of risk-based supervision. The fact that the body assist in the implementation of risk-based supervision has offered the insurance firms ground to begin positioning the insurance sector at par with leading economies. However, with current uncertainty in the business environment, listed insurance firms are exposed to financial risks that need prompt management to remain afloat and consequently realize improved growth.

Insurance firms are faced with various financial risks. These risks includes but not limited to; underwriting risks, liquidity risks, insolvency risks, and reinsurance risks. Other risk facing

insurance firms include, the credit risks, operational risks, and provisions risks among others (Sisay, 2017). Credit risk is significant for the obtainment of improved firm growth while reinsurance risk occurs when a firm suffers high claims beyond its ability to meet its financial obligations. Firms also faces liquidity risks that if left unchecked may expose a firm to financial difficulties hence could impede the financing of various activities (Onsongo et al., 2020). Again, insurance can be exposed to technical provisions risk can lead to unjustifiably excessive provisions (Matayo & Muturi, 2018). Therefore, the current study joins the debate by assessing the influence of financial risks on growth of insurance companies registered at NSE. Insurance are also faced with underwriting risk that be as a result of the presence of insufficient premiums in the form of the premiums' underestimation.

1.2 Research Problem

In essence, the success of firms in the country is integral to the growth of modern economy. To remain relevant in the market and ensure improved growth, both small and large firms have resorted to specialization of financial services ranging from securing of risks inherent in enterprises as well as risk absorptions. However, the effect of the pandemic has exacerbated the exposure of many listed firms in the country to unprecedented financial risks as a result of taking excessive risks that often attract enormous losses thereby diminishing the investor confidence. Further, financial risks have also exposed many listed firms in Kenya to huge losses especially in the wake of COVID-19. If left unchecked, the financial risks could further plunge many firms listed at the NSE into financial difficulties thereby impeding their growth and consequently, the overall national economic growth.

With respect to insurance firms in the country, a decline in the growth of insurance firms listed at the NSE has been witnessed. For instance, one particular pointer to the decline in the insurance firms' growth is shown by the NSE financial and growth report for the years 2014-

2018. The report established that most firms listed the NSE including insurance firms showed a decrease in growth. Specifically, 17%, 18% and 8% of them were from the insurance industry in the year 2015, 2017 and 2018 respectively (Nairobi Securities handbooks, 2014-2018). One of the factors cited as having led to dismal growth was the financial risks the listed insurance firms faced (Mutegei 2017). However, the IRA report (2017) indicated that the growth of insurance firms has remained low with only six listed at the NSE out of a total of 57 registered firms. This is about 10.5% of the total insurance firms registered in the country. This is a worrying trend that needs review hence the need for the current study to answer the question; could it be as result of influence of financial risks?

Furthermore, researches such as one by Arif and Showket (2015) in India observed that liquidity, solvency, underwriting risks exhibit significant but negative correlation with firm performance. The study was done in a developed economy hence a contextual gap. In Ethiopia, Sisay (2017) established that financial risk did have significant positive influence on insurance firms' performance. Nevertheless, it was done in a different economy hence the findings cannot be used to generalize the local situation. In Kenya, Wanjiku (2016) found that measures of financial risks (interest rate, foreign currency, liquidity, and credit risks) had significant and positive relationship with NSE firms' efficiency. However, the research used efficiency as dependent variable while the current study uses growth. A study by Mwangi and Murigu (2015) was on the factors that affected general insurance firms' profitability. Study has a contextual gap because it involved all insurance firms in Kenya.

Based on the studies, it is evident that a conceptual gap exists. Particularly, studies on influence of financial risks on insurance firms (listed at NSE) growth in Kenya is scanty. The existing studies either used profitability or financial performance rather than growth as

dependent variable thereby necessitating a research gap. Thus, this research seeks to respond to the question, what is the effect of financial risks on growth of insurance firms?

1.3 Research Objective

The aim of the research is to find out the effect of financial risks on the growth of firms: a case of insurance companies listed at NSE, Kenya.

1.4 Value of the Study

The study finding will offer the government through its policy makers (IRA) to formulate financial risk management policies that would present a friendly business ground for insurance firms. Through this study, the policy makers will also be able to adopt the recommendations to come up with insurance growth related policies that will protect the firms from financial risks as a result financial shocks in the market.

The study findings will be valuable to the insurance firms since they will be able to know the financial risks that hinders their growth. Such understanding will enable them to employ risk management strategies that will reduce exposure to excessive financial risks thereby decreasing or eliminating losses.

The management of the listed insurance firms will find the findings crucial insofar as management of financial risks is concerned. They will be able to initiate financial risks management measures that would see improved growth in the industry to increase investor confidence through prompt management of financial risks.

The study will be valuable to future academicians who could be interested in carrying out a further research in the same area. Finance discipline scholars may also borrow from the recommendations to further relevant researches that could improve knowledge on financial risks and growth of insurance firms. Basically, the results will provide enormous future

research ground for scholars and academicians to conduct further researches on financial risks and their influence on the growth of listed insurance firms in Kenya.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

The section entails, theoretical reviews and its criticisms. Determinants of dependent variable are also discussed. The chapter also includes empirical reviews, the conceptualized framework, and finally literature summary.

2.2 Theoretical Review

This research will be premised on three theories. These will include the modern portfolio theory, extreme value theory, and enterprise risk management theory. The theories are discussed together with their criticisms.

2.2.1 Modern Portfolio Theory (MPT)

The theory was championed by Harry Markowitz in the year 1952. The theory proposes that rational investors usually utilize diversifications for portfolio maximization. In essence, it proposes that the market is efficient and assets cannot be undervalued or overvalued. The theory proposes the criteria that can be used to price risky assets and that assets trade at fair prices. According to the theory, the methods for pricing risky assets can help in reducing company exposures to financial risks such as credit risks and liquidity risks among others. Markowitz introduced the optimal portfolio selection theory based on the context of trade-offs between returns and tradeoffs. The theory basically focused on the portfolio diversification idea as a risk reduction criteria and this led to what has presently become the MPT. Thus, it recognizes the importance of financial risks management.

The MPT is applicable to this research since it argues that, for an organization or an investor to minimize risky businesses, they should embrace portfolio diversification to maximize profits. Further, the fact that the theory argue that organizations does face financial risks makes it relevant to the current study hence it will help in explaining how various financial risks relates with the growth of insurance firms listed at the NSE.

However, the theory has been criticized by Williams (1938) who challenged the issue of financial markets and asset pricing to minimize risks. The critics argue that market do not maintain efficiency but rather investment correlations do change over time, actually investment correlation do change several times in any given period.

2.2.2 Extreme Value Theory

It was proposed by Leonard Tippett in the year 1950's. The theory is useful in the current study because it practically and usefully helps in quantifying and modeling financial risk. Basically, the theory models and measures events occurring with very minor probability; meaning, its importance in modeling risks occurs with minimal probability. The theory proposes that huge losses' probability is ultimately governed by simple function, despite the presence of a specific distribution that could underlie the process for returns. It gives guideline on the type of distribution an individual can choose to manage extreme financial risks that a company may be faced with such as solvency risks, liquidity risks among others.

Its relevance this study is based on the fact that, it greatly helps in estimating and measuring the frequency of huge losses that may expose companies to financial risks that could ultimately hinder their growth. Given that the theory provides guideline that can be used by firms to reduce extreme risks, it is relevant to this study because such measures will assist

insurance firms to lay down strategies that can be used to mitigate financial risks so as to realize improved growth.

Nevertheless, the theory's key criticism is that it is only focusing on huge losses and omits the impact of small losses which also plays a significant role in exposing a given company to financial risks which in turn reduces the chances of growth. To realize growth, all firms need to understand the impact of both large and small losses so that appropriate risk management strategies are put in place to minimize the impact of both cases. Simply put, the theory ignores a very important element, the impact of the so called 'small losses'.

2.2.3 Enterprise Risk Management Theory (ERMT)

The theory was authored by Mikes in 2005. The theory proposes that a firm can cope with financial risks by mitigating each risk individually or by grouping risks together within a strategically provided framework. The theory proposes that the best approach to managing financial risks is to handle each risk separately. Such approach greatly benefits a given firm insofar as reducing impact of financial risk on the overall firm growth is concerned. According to the theory, when risks are identified, measured, managed structurally, and procedurally, firms are reinforced and this enables them to meet their long-term growth objectives and helps in maximizing shareholders value (Arena et al., 2010).

Its relevance to this research is anchored on the fact, insurance firms also face financial risks including; foreign exchange, liquidity risks, credit risks, reinsurance risks, and operational risks, among others hence the fact that the theory provides for the guidance that requires dealing with each risk separately can help improve the growth of the firms (Emmett & Vaughan, 2003). The theory is applicable to the study because it offers a detailed framework

for the measurement, specification, and structural management of risks by insurance companies that can promote a positive relationships between financial risks and firm growth.

The theory has also faced criticisms. First, the risk manager' performances is very difficult to measure in a realistic quantifiable terms. Secondly, cost savings within firms are usually cumbersome to quantify so as to attribute to them to risk personnel such as auditor.

2.3 Determinants of Growth of Firms

2.3.1 Financial Risks

Financial risks are usually interconnected with the insurance firms' financial operations. The financial risks that an insurance may be faced with are; the reinsurance, solvency, underwriting, liquidity, and operational risks among others. If left unchecked, the mentioned financial risk could impede the growth of the insurance companies. The current study uses liquidity risk, reinsurance risk, solvency risk as independent variables. Fali et al. (2020) observe that insurance firms are exposed to various financial risks and this could impact negatively on the firm growth. Therefore, insurance companies in the country should provide mechanisms that can help in the identification, analysis, evaluation, and regular assessment of the potential financial risks that are likely to expose them to financial difficulties. Laying down appropriate measures could help companies reduce the negative impact the possible financial risks may have on the growth of insurance firms.

2.3.2 Liquidity

The study uses liquidity as determinant for firm growth. Liquidity can be defined as the ease by which a company converts asset into cash (Mamatzakis & Bermpei, 2017). Liquidity can also mean the rate in which a firm converts its security and assets into cash in a manner that the process does not affect the asset's market price (Díaz & Escribano, 2020). Also, Ahmad (2016) has defined liquidity as how fast a firm can convert its assets and security into cash to finance its operations. Liquidity has been measured using current ratio and quick ratio (Mamatzakis & Bermpei, 2017).

Further, Beekman and Robinson (2004) measured liquidity using cash ratio, quick ratio, and working capital. According to Díaz and Escribano (2020), firms can grow faster as long as

they can hold a sustainable current asset level in order to service liabilities (short-term). Mateev and Anastasov (2010) also used current ratio to measure liquidity level. This liquidity ratio is part of the organizational specific characteristics that can affect the growth of the company. Current ratio will thus, be used to measure liquidity risks and will be calculated taking total current assets and dividing it by total current liabilities.

According to Gill and Mathur (2011), increasing a firm's current ratio could reinforce its liquidity position and improve growth. Therefore, any firm having a lower liquidity level will experience regular cash constraints which will expose them to more financial difficulties in their attempts to repay suppliers. Notably, proper cash cycle commence with good working capital as such a firm that cannot hold a certain liquidity level will experience hardship in keeping its attempts to reduce financial risks that could ultimately affect their growth.

Furthermore, Anderson (2012) observe that companies that ably maintain high liquidity levels, are likely to face less financial risks. Simply put, higher liquidity can shrink financing risks and constraints thereby enabling firms to ably finance opportunities for growth at a reduced cost thus minimizing financial risks. Essentially, a firm that has the ability to invest at lower cost, can be highly ambitious to go into investment more in order to aim for growth (Limère, Laveren, & Van Hoof, 2014). Similarly, Anderson (2012) also believed that holding adequate liquid assets improves firm growth. Thus, the study anticipate that liquidity as measured by current ratio will have a positive relationship with the growth of insurance firms.

2.3.3 Leverage

The study uses financial leverage as a determinant of firm growth. Leverage can be defined as the utilization of borrowed capital to finance investment (Onyema & Oji, 2018). Huyghebaert and Van de Gucht (2007) define leverage as amount of debt employed to buy a

firm asset with the anticipation that higher capital will be made from it. It can also refer as use of borrowed cash to purchase additional assets (Nguyen, Nguyen, Tran, & Nghiem, 2019). Financial leverage has been measured using various ratios. For instance, Nwanna and Ivie (2017) measured leverage by dividing total liabilities; that is, both non-current and current by a firm's shareholders' equity.

Furthermore, a study by Kini, Shenoy, and Subramaniam (2017) measured leverage using debt equity ratio and debt ratio. Debt ratio refers to the percentage of total assets that has been serviced by debts. On the other hand, debt equity ratio means the percentage of equity financed by debt. Further, Malm and Krolikowski (2017) measured leverage using interest rate coverage ratio that refers as the ratio of profit made by a firm to interest. Therefore, the higher the interest paid by a company, the higher the interest coverage ratio.

According to the pecking order theory, firms do prioritize their financing sources. This implies that firms first utilizes internal financing sources to purchase assets. Firms will also resort to usage of debt sources of financing to invest. Once, all internal avenues for financing are utilized, firms will attempt to look for capital from external equity. Basically, internal financing is the most preferred means that firms use to access capital because it is relatively cheaper (Huyghebaert & Van de Gucht, 2007).

Additionally, Durinck, Laveren and Lybaert (2007) established that the faster the firm grows, the less that particular firm uses retained earnings, consequently, the better they employ externalized sources of funding, thus an indication of a positive correlations between the variables. Similarly, a study by Honjo and Harada (2006) used leverage as a determinant to

firm growth and found that leverage as measured by total liabilities as divided by shareholders' equity had a positive relationship with firm growth.

According to Enekwe, Agu, and Eziedo (2014), the ability of a firm to grow is pegged on its financial leverage. Specifically, the firms that operates efficiently are able to utilize their financial leverages for the expansion of shareholder returns. Therefore, the growth concept is usually linked with the internal and external financing sources (Bei & Wijewardana, 2012). Such divergent sources of financing reduces financial risks and in return, a reduced risk leads to improved firm growth.

Notwithstanding, the relationship between leverage and firm growth have been inconsistent at its best. For instance, Aivazian, Ge, and Qiu (2005); Lang, Ofek, and Stulz (2006) established negative relation between leverage and growth. On contrary, studies by Anton (2016), Huynh and Petrunia (2010) found positive correlation between growth and financial leverage. Such inconsistencies could be as a result of different growth measures that have been employed by researchers.

For instance, Anton (2016) used net investment, capital expenditures, sales, liquidity, employment growth, and assets to measure growth while Lang, Ofek, and Stulz (2006) used capital expenditures, sales, leverage (debt ratio) to measure growth. Therefore, this study intend to bridge that gap by assessing the relationship between leverage as measured by debt ratio (total assets financed by debts) with the growth of insurance companies.

2.3.4 Profitability

This research utilizes profitability as firm growth determinant. Profit making is the primary goal of any business and can determine whether an organization is growing or otherwise. By

definition, profitability means the degree by which a firm yields financial gain (Tan, Floros, & Anchor, 2017). According to Jumono and Mala (2019), profitability is defined as the possibility of an organization to earn profits from its operations. Another definition by Nanda and Panda (2018) indicate that profitability is the capability of any given company to earn good returns from sale of products and services. Based on the mentioned definitions, profitability can mean the ability of a firm to generate revenues that exceeds its expenses from its businesses.

There are several financial measures that can be used for profitability. One such measure is the return on equity (ROE) that was used by Brigham and Ehrhardt (2016). The study calculated ROE by taking the net profit and dividing it by equity of shareholders. Further, ROI, ROA, and ROCE (Tennent, 2018) have also been used to measure profitability. ROA has been used to indicate the profitability of a company based on its total assets and has been operationalized by dividing profit before tax (PBT) by total assets. ROA shows the extent a firm employs its assets to generate revenues. For instance, Dogan (2013) utilized ROA to determine the profitability of firms. He argue that the higher the ROA ratio the lower a given firm is exposed to financial risks and the higher the growth. Therefore, high ROA imply that the possibility of a firm being vulnerable to risks is minimized thus it promotes growth.

Furthermore, scholars such as Robinson (2002) Galbraith and Schendel (2003) also used return on sales (ROS), ROE, ROCE, and ROA as to measure profitability of firms. The study found that increased ROS, ROE and ROA enhances financial stability of firms hence they become unsusceptible to financial risks thus promoting growth. Despite that there are several

profitability measures, the current study uses ROE that will be calculated by dividing profit after tax (PAT) by annual total assets (Devi & Devi, 2014).

According to Oladele (2013), profitability is an integral firm growth driver that acts an indispensable condition for the creation of value for an organization. Similarly, Niresh and Velnampy (2014) observes that profitability offers a clearer picture of firm growth hence the higher the profitability the higher the firm is seen to be growing and vice versa. In agreement, Boadi, Antwi, and Lartey (2013) says that profitability provide a company with financial stability, especially during financial shocks and economic recession. This means that, firms that makes good profits stands higher chances of withstanding financial risks in the short or long run. Therefore, a profitable organization is able to invest more to promote growth.

However, the theoretical linkage between profitability and firm growth has been contradicting. For instance, Coad and Hölzl (2010); Bashar and Islam (2014) found that profitability as measured by ROA had negative relationship with growth of firms. While a study by (Burja, 2011) found that profitability as measured by ROI, ROE, and ROI had positive relationship with firm growth. In agreement, earlier study by Friedman (2003) observed that the link between growth and profitability are elucidated by various theories that affirm aforementioned concepts.

Again, Jang and Park (2011) found profits has positive relationship with growth of firms and this is in uniform with Alchian's firm theory that argue that profitable firms are able to survive and maintain upward growth (Alchian, 1950). In support, Nousheen and Arshad (2013) says that profitable companies will be greatly inspired to grow, due to the fact that they possess the financial ability to expand and at the same time sustain growth.

2.3.5 Firm Size

Firm size shows the debt amount that a firm can access in order to finance project. Essentially, big firms have an upper hand over smaller firms as a result of utilization of average production cost due to operations' effectiveness and efficiency. Firms with larger assets tend to access debt easily during financial risk exposures than firms with smaller assets and this build stakeholder and investor confidence (Cheng, 2008). The stability of firms with larger assets implies that they are less susceptible to financial risks than smaller firms. As observed by Meanza (2014), firms with large assets have higher chances of making profit even if faced with financial risks than smaller firms.

For example, a study by Arif and Showket (2015) firm size (used as intervening variable) was negatively but significantly related to financial performance while a study by Sisay (2017) found that firm size had significant but negative relationship with performance (ROA). On the other hand, Muinde (2018) established that firm size used as control variable also had statistical positive relationship with ROA but not significant to each liquidity risks while Tabari, Ahmadi, and Emami (2013) found that firm size had positive relationship with ROE.

2.4 Empirical Studies

A study was done by Tabari et al. (2013) assessed effect of financial risks on development of Iranian commercial banks. Study used descriptive research design and secondary data gathered for the period 2003 to 2011. Credit, foreign exchange, liquidity, and underwriting risks formed specific objectives. Firm size was control variable and performance indicated by ROE. All 15 commercial banks were studied and panel data was used. The study utilized multivariate regression analysis. The research found that firm size, inflation risk, and

underwriting risk had positive relationship with ROE. Meanwhile, credit risk and liquidity risk was negatively related with performance hence resulted to decreased ROE. However, they used performance as dependent variable and also used regression analysis without utilizing diagnostic tests to determine the reliability of the model hence a contextual research gap.

In yet another research, Eneyew (2013) investigated financial risks effects on Ethiopian banks' profitability. Research used a descriptive design and eight commercial banks formed target population. The data was gathered for 2000-2011. Both descriptive statistics and Spearman rank correlation was used. The research found that risks such as credit and liquidity was negatively correlated with profitability whereas risks such as, foreign exchange and interest rate risk had no significant statistical relationship with profitability as measured by ROI and ROE. Both firm size industry (control variables) had statistical and positive significant correlation with profitability. However, study focused on banks while this research looks at the listed insurance companies in Kenya. Again, the research utilized profitability as dependent while the current study uses it as a determinant for firm growth (dependent variable).

Further, Arif and Anees's (2014) study was on association between the financial risks and Pakistani commercial banks' performance. It used quantitative research design and data collected from 2004-2009. All the 22 banks were sampled. The study applied multiple regressions. The study established liquidity risk and operational risk had positive significant correlation with performance of banks. On the contrary, risks such as, credit and solvency possessed significant but negative relationship with bank performance. The study had a contextual knowledge gap because it was done in a developed economy while the current

study focuses on a developing country hence the findings cannot be employed to generalize the Kenyan situation. Again, the study used performance as dependent variable as opposed to this study that uses insurance firm growth hence the need for the current study.

Again, Akonga (2014) analyzed the influence of financial risk management on Kenya's banks financial performance. The study used capital risk as measured by "total capital to risk weighted assets"; "liquidity risk as measured by current ratio and cash to deposit ratio" while ROA was used as indicator for performance. Data was collected for six years (2008-2013) for all 44 banks. Inferential statistics were used. Study found that capital risk, cash to deposit ratio, and liquidity risk had significant statistical relationship with ROA. Despite that the study used liquidity risk and capital risk as measures of independent variable (financial risk management), the current study uses such measures as indicators to financial risks. Again, the study focused on banks contrary to this study that, specifically looks at insurance companies.

Similarly, Yemane and Raju (2015) conducted a study on financial risks' impacts on insurance companies' performance in Turkey. Financial risks (independent) variable included; liquidity risks, foreign exchange risks, solvency risks, and underwriting risk while firm age and size were used as intervening variables. The research utilized descriptive design. The sample size was 10 insurance companies. This research gathered secondary data from annual financial reports from 2009-2013. Descriptive statistics and regression analysis were applied during data analysis. The study established that firm size, liquidity risks, and foreign exchange risks had significant positive correlation with performance as indicated by ROA and leverage. Meanwhile, solvency risks and underwriting risk had no statistical significant relationship with performance. The research depicts a contextual research gap

because it was done in Ethiopia, a country that has a geographical variation with Kenya hence the findings cannot be used to generalize the Kenyan case. The study was also done many years back hence the need for the current study because it will provide latest information about financial risk that can be used by future researchers as point of reference.

A study was done by Arif and Showket (2015) on association between financial risks and performance among Indian insurance companies. Target population was all listed 24 firms. The sample size was the 8 life insurance firms. The study collected secondary data from 2006-2013 for liquidity risk, firm size, underwriting risk, and solvency risk from each company's annual reports. Using SPSS, analysis of data was through regression. It was established that solvency risk, firm size (used as intervening variable), and liquidity risk had been negatively but significantly related to financial performance. However, underwriting risk was found not significantly related with performance. The study suffers from contextual gap due to the fact it was conducted in India and also used financial performance as dependent variable rather than firm growth hence the findings cannot be used to determine the local situation.

In Kenya, Wanjiku (2016) did a study on financial risks' effects on NSE listed companies' efficiency. Descriptive design was utilized and target population consisted of all listed 63 companies. The study collected secondary data for the period of 2011-2015. The study used both descriptive statistics and multivariate regression model. It was established that financial risks measures such as interest rate, foreign currency, liquidity, and credit had statistical positive relationship with firm efficiency. However, the study generalized the findings based on all the 63 firms hence establishing how each sector's efficiency was affected by financial risk was difficult hence the need for the current study to specifically focus on listed insurance

to find how financial risks affect their growth.

Further, Muriithi, Muturi and Waweru (2016) researched on effects of market risk on commercial banks' performance. The research design was quantitative. Secondary data covered 2005 to 2014. All 43 commercial banks were targeted and used as sample size. The research utilized "fixed effects and random effects" (panel data estimations) together with generalized method of moments (GMM). The research found that financial leverage, foreign exchange, and interest rate risks had negative but significant relationship with ROE. However, the study used different independent and dependent variables while the current study uses financial risks and firm growth.

Moreover, Sisay's (2017) was on the influence of financial risk on Ethiopian insurance companies' performance. The design was descriptive research. Target population was all 16 private insurance companies. Financial risks such as, technical provision, credit, underwriting, and solvency risks were used as independent variable' measures. ROA was used as firm performance indicator while firm size and firm age were used as intervening and moderating variables respectively. Secondary data was gathered from 2000-2015. This study used E-view software to analyze data. The regression analysis was adopted for analysis. It was established that underwriting risk, liquidity risk, reinsurance risk, and solvency risk had a significant statistical positive relationship with firm performance while technical provision risk, credit risk, firm size, credit risk, and firm age had significant but negative relationship with performance (ROA). Despite that the study focused on insurance firms, it did not use firm growth as dependent variable hence a research gap that the current study intends to bridge by using growth as indicated by leverage, liquidity and profitability as dependent variable. Further, the study was done in Ethiopia hence a contextual study gap

that requires a local study.

In addition, Muinde (2018) studied financial risks' effects insurance companies' performance. Descriptive research design was used. All the six insurance firms were targeted and data was collected for six years (2012-2017). Data analysis was done through descriptive, correlations, and regression model. Through regression analysis, it was observed that underwriting risk, solvency risk, and liquidity risk was negatively correlated with ROA while reinsurance risk had positive correlation. Further, regression analysis found that financial leverage (control variable) was negatively and statistically not significantly related with ROA. Firm size (control variable) also had statistical positive relationship with ROA but not significant to each other. Nevertheless, the study used financial performance as dependent variable while the current study will use firm growth (measured by liquidity, profitability, and leverage) as dependent variable to bridge the contextual knowledge gap.

2.5 Summary of Literature Review

This study established that financial risks does have a relationship with growth of businesses. For instance, Fali et al. (2020) found that financial risks (credit risks, operational risks, liquidity risk, underwriting risks, reinsurance risks, solvency risks, foreign exchange risks, and interest rate risks among other) exposure can impede growth of insurance companies hence a study is required to determine the relationship with the growth of insurance firms in Kenya. Further, firm growth determinants such as leverage, liquidity, and profitability had both negative and positive correlation with firm growth hence a mixed research that calls for the current study.

The study also found a contextual knowledge gap in the reviewed literature. This is because,

studies reviewed especially local studies, did not use growth as dependent variable hence a research gap that this study intend to bridge. Again, some studies were done in both developed and developing countries that were outside Kenya hence their findings cannot be used for the generalization of the local situation, thus the need for the current study.

Moreover, many studies used regression models but failed to test its reliability using diagnostic tests such heteroscedasticity, normality, multicollinearity, autocorrelations among others and this could have resulted to the inconsistencies in the findings especially on the correlation between financial risks and growth. This research will ensure that the model's reliability is tested by use of various diagnostic tests. Further, the reviewed theories also supported a relationship between financial risks and growth of firms albeit with some level of variation.

2.6 Conceptual Framework

This study used conceptualized framework to show relationship between the variables.

Diagrammatical representation is indicated in Figure 1.

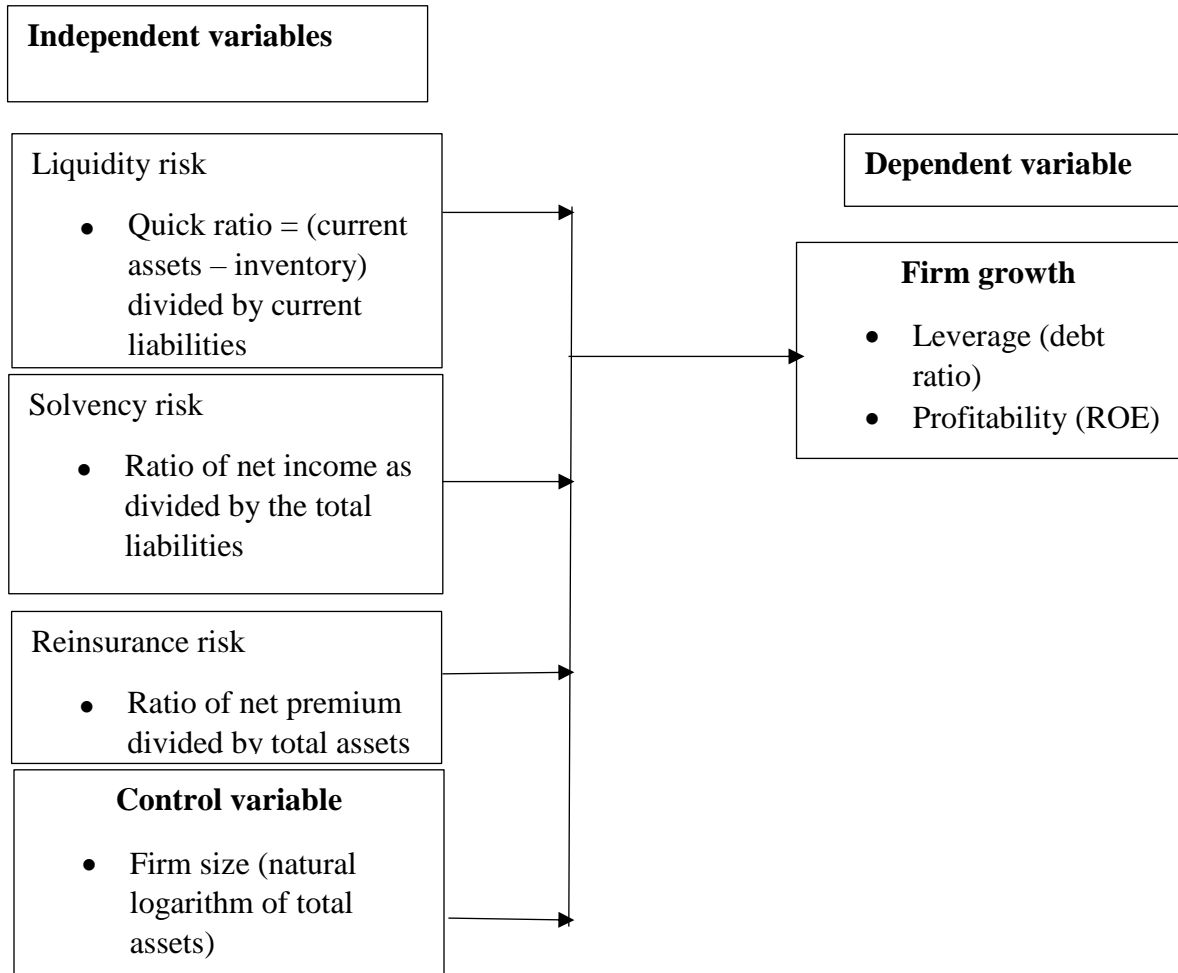


Figure 1: The Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section consists of methodologies that shall be employed. It presents the research design, population, data gathering procedures, and diagnostic tests. Further, operationalization of study variables and data analysis procedures are also discussed.

3.2 Research Design

The current research used descriptive design (Bell, Bryman, & Harley, 2018). Through interpretation and observation methods, the design helped in representing a precise profile of the current conditions, phenomenon, and attitudes. Precisely, the study adopted descriptive research design because it can help a researcher to gather quantitative data that can be descriptively and inferentially analyzed. Further, the design was preferred because it allowed a study to infer the research findings to a broader population by offering a detailed evaluation of certain situations to answer the research questions.

3.3 Population

A study population can be defined as a set of elements, events, or individuals that a particular research strives to study or draw inferences from (Rahi, 2017). In the current study, the population was all the insurance firms listed at NSE. According to NSE (2021), there are only six listed insurance companies (Appendix I). Due to the manageability and smallness of the population, all the listed insurance firms were studied. Therefore, there was no need for use of any sampling technique or formula rather than through census.

3.4 Data Collection

The current research utilized secondary time series data that shall be able to provide information insofar as financial risks and growth of insurance firms are concerned. Secondary sources provided time series data. Such information was gathered from annual financial reports obtained from specific companies' websites or the NSE's websites. Data for independent variables included reinsurance risk, liquidity risk, and solvency risk while data for dependent variable was growth and for firm size as control variable was also gathered. The researcher collected time series data for 5 years, 2016-2020. The secondary data collected is shown in Appendix II.

3.6 Diagnostic Tests

The study utilized several diagnostic tests to measure goodness of the regression model. The tests entailed; normality test, multicollinearity test, autocorrelation test, heteroscedasticity, and stationarity tests.

Normality Test

The research employed normality test to establish the normal distribution of the data based on the study population. Normality test assist in obtaining practical accuracy and reliability of data (Mishra, Pandey, Singh, Gupta, Sahu, & Keshri, 2019). The current study utilized Shapiro Wilk test of normality to assess the data normal distribution. Therefore, if the residuals follow the straight line on the graph, the data was to be normally distributed and vice versa.

Multicollinearity Test

Multicollinearity in a study minimizes the estimate coefficients' precision thereby weakening the statistical power of the model. The model assume that data are not multicollinear. This test helped in ensuring that the data that was gathered was not be biased (Disatnik & Sivan, 2016). The test helped in ensuring that one variable data is unrelated to another variable data. Multicollinearity happens in presence of exact or nearly exact linear relation among several variables (independent). The study used the variance of inflation (VIF) to test multicollinearity. Therefore, a VIF that was less than 1 or greater than 10, indicated presence of multicollinearity. On the contrary, VIF values that fell between 1 and 10, indicated absence of multicollinearity (Daoud, 2017).

Autocorrelation Test

Autocorrelation occurs when observations are dependent in aspects instead of time (Vanhatalo & Kulahci, 2016). Therefore, it can result to concerns in conventional analyses such as OLS that assumes observations' independence. An autocorrelation helped in measuring the similarity between a certain lagged value and time series over successive time periods. To test autocorrelation, the study used Durbin Watson test. The test reports a statistic values between 0 and 4 whereby, 2 or <2 is no autocorrelation hence autocorrelation is not present. This means that where the statistic is less than 2 there is presence of a positive autocorrelation. On the contrary, values that will be greater than 2 implies presence of a negative autocorrelation hence autocorrelation is present.

Heteroscedasticity

The assumption of the model is that the errors have constant variance. Usually, residuals are graphed to examine such assumption. Standard estimation methods are ineffective if the errors are heteroscedastic (Imbens & Kolesar, 2016). Simply put, heteroscedasticity's presence causes inefficient regression predictions and this must be corrected. The rule for establishing heteroscedasticity is when there is a violation of a constant variance. Precisely, the variance does not change in a range of observations and this is referred as homoscedasticity (same scatter). In the event that the variance changes, it is referred as different scatter (heteroscedasticity). The null hypothesis should be rejected as long as the p-values are <0.05 and vice versa (Halunga, Orme, & Yamagata, 2017).

Test for Stationarity

Non-stationary test leads to false results where the test statistics exhibit a significant relationship between variables even when no such relationship exists. Therefore, performing a stationarity test is important to amend such anomaly that is always assumed to be present in time series (Bandyopadhyay & Rao, 2017). To resolve the non-stationarity concern, the study utilized the unit root test using Levin-Lin-chu test to establish if a unit root is present. The test assumes a common autoregressive parameter for all data. If the p-value that is established is less than the significant alpha level of 0.05 then the null hypothesis should be rejected; this implies that the alternative hypothesis is to be accepted. The solution for non-stationary data is to transform the data so that it is stationary. For instance, a non-stationary process that is without a drift or random walk can be transformed into stationary by differencing (Castle, Doornik, & Hendry, 2020).

3.7 Data Analysis

After data collection, the researcher conducted data validation and coding to ensure all data inclusions to avoid mistakes (Johnston, 2017). The study used Statistical Packages for Social Sciences (SPSS) version 20.0 software for data analysis procedures. The study analyzed data using descriptive statistics and regression analysis tests. Descriptive statistics summarized data into standard deviation, mean, maximum, and minimum values. To test the fitness of the regression model, various diagnostic tests were used. The study used regression analysis to achieve its objective by determining the relationship between independent, control, and dependent variables. The model also helped in checking the influence of financial risks on firm growth.

3.7.1 Analytical Model

The study used multiple regression method as the analytical model (Plonsky & Oswald, 2017). In the current study, the insurance firm growth is the responsive variables while the predictor variables includes liquidity risk, reinsurance risk, solvency risk, and firm size.

Thus, the regression model was denoted by;

$$Y_{it} = \beta_0 + \beta_1 \text{SOR}_{it} + \beta_2 \text{LIR}_{it} + \beta_3 \text{RIR}_{it} + \beta_4 \text{FIS}_{it} + \varepsilon$$

Where:

Y_{it} = Growth of firm i at time t

β_0 = a constant

$\beta_1, \beta_2, \beta_3,$ and β_4 = Beta coefficients of the variables (independent)

SOR_{it} = Solvency risk of firm i at time t

LIR_{it} = Liquidity risk of firm i at time t

RIR_{it} = Reinsurance risk of firm i at time t

FIS_{it} = Firm size of firm i at time t

ε = Error term

i = Firm 1 up to firm 5

t = Year 2016 up to year 2020

3.7.2 Operationalization and Measures of Study Variables

The operationalization and measures of study variables are shown in Table 1.

Table 1: Operationalization and Measures of Study Variables

VARIABLE	SYMBOL	MEASUREMENT	JUSTIFICATION
Firm growth	FG	Leverage (debt ratio) = Total Debts-Total Assets	Kini, Shenoy, and Subramaniam (2017)
Liquidity risks	LIR	Profitability (ROE) Quick ratio = (current assets – inventory) divided by current liabilities of the firms	Tabari et al. (2013 (Onsongo et al., 2020)

Reinsurance risk	RIR	Taking ratio of net premium and dividing it by the firms' total assets	(Juma & Atheru, 2018).
Solvency risks	SOR	The ratio of net income as divided by the total liabilities of every firm	(Dey et al, 2018).
Firm size	FIS	The average natural logarithm (ln) of total assets	(Dalbor, Kim, & Upneja, 2014)

3.7.3 Statistical Tests of Significance

To test for the model' significance in measuring the financial risks and growth of insurance firms, the current study carried out an Analysis of Variance (ANOVA). The ANOVA statistics helped in determining the significance value (p-value). The study tested for the significance values at the 95% level of confidence and 5% significant levels. Therefore, if the P-value was to be less than or equal to the critical value (0.05), then the model was significant. Meanwhile, a p-value that was more than 0.05, then the model was not significant in explaining the relationship between the variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents data analysis, results and discussion based on collected data. Specifically, descriptive data analysis is presented followed by diagnostic tests. The section also present results for multiple regression analysis. The final section entails discussion for the results.

4.2 Results for Descriptive Statistics

The results for descriptive statistics for solvency, liquidity, reinsurance (independent variables), and firm size (control variable) are presented. Descriptive statistics for dependent variable as measured by leverage and ROE are also presented in Table 2.

Table 2: Results for Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Solvency risk	30	0.17	7.54	1.3285	1.46958
Liquidity risk	30	0.01	4.21	1.2986	1.18300
Reinsurance risk	30	0.02	4.51	1.7868	1.17715
Firm size	30	6.95	8.16	7.5065	0.33525
Leverage (Debit ratio)	30	0.00	3.96	1.1471	1.15254
ROE	30	-0.50	0.32	0.0302	0.12086
Valid N (listwise)	30				

As shown in Table 2, solvency risks had a mean value of 1.33 while the minimum and maximum values were 0.17 and 7.54 respectively with a standard deviation of 1.46958. The results are an indication that all the insurance firms were exposed to solvency risk for the 5

years and this might have had negative impact on their growth. Liquidity risk as measured by quick ratio was found to have a mean of 1.29 with a variation of standard deviation of 1.18300 from the mean while the minimum and maximum scores were 0.01 and 4.21 respectively. This means that some insurance firms were exposed to liquidity risks as shown by quick ratios that were less than 1. Further, reinsurance risks had a mean of 1.79 with a varying standard deviation of 1.17715 while the minimum and maximum values were 0.02 and 4.51, respectively. The results imply that, all insurance firms listed at NSE were exposed to reinsurance risk and this could have affected their growth. Again, firm size as measured by natural logarithm of the firms' total assets was found to have a mean of 7.5065 varying at 0.33525 (standard deviation). The minimum and maximum for firm size was and 8.16, respectively.

Regarding measures for firm growth, the study found that leverage as measured by debt ratio had a mean of 1.1471 varying at 1.15254. The maximum and minimum scores for debt ratio was 3.96 and 0.00 respectively. This mean that insurance firms were riskier in some years because of the debt ratio score that is above 2, thus this had negative impact on their overall growth. However, the 0.00 minimum value is an indication that some firms were safe in some years. Furthermore, ROE was also used as a growth measure and the study found a mean value of 0.0302 with a standard deviation of 0.12086. The minimum and maximum values for ROE were -0.50 and 0.32 respectively. The results are an indication that some insurance firms performed poorly as depicted by negative ROE hence this affected their growth.

4.3 Results for Diagnostic Tests

Several diagnostic tests were carried out to determine the reliability of the data used for analysis. The tests also helped in determining the reliability of the regression model. The results are presented in the following sub sections.

4.3.1 Normality Test

The study utilized Shapiro Wilk test of normality to assess normality of data. Therefore, if the residuals follow the straight line on the graph, the data was normally distributed and vice versa. The results are shown in the following figures. From the results presented below, all the variables had their residuals scattered along the diagonal line; this means that the data was normally distributed.

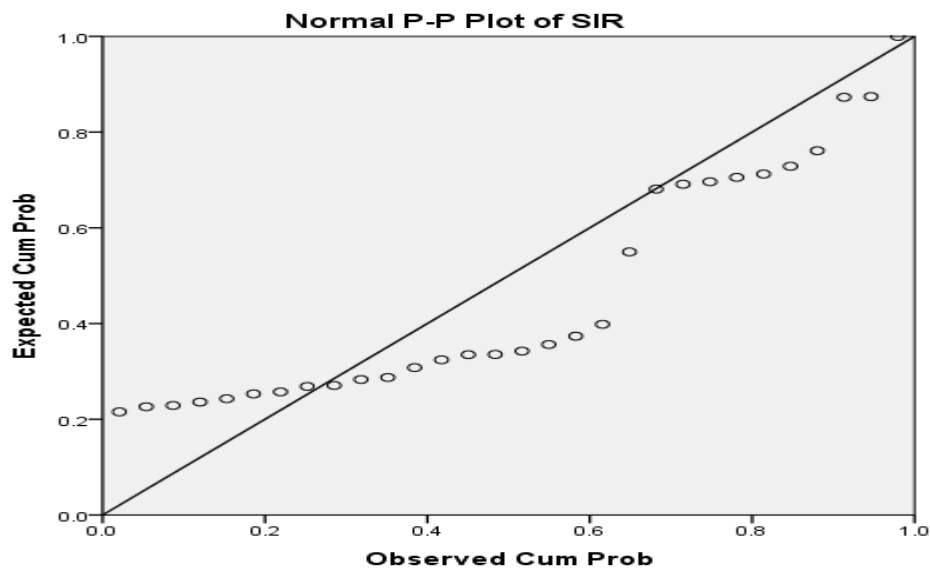


Figure 2: Normality Results for Solvency Risks

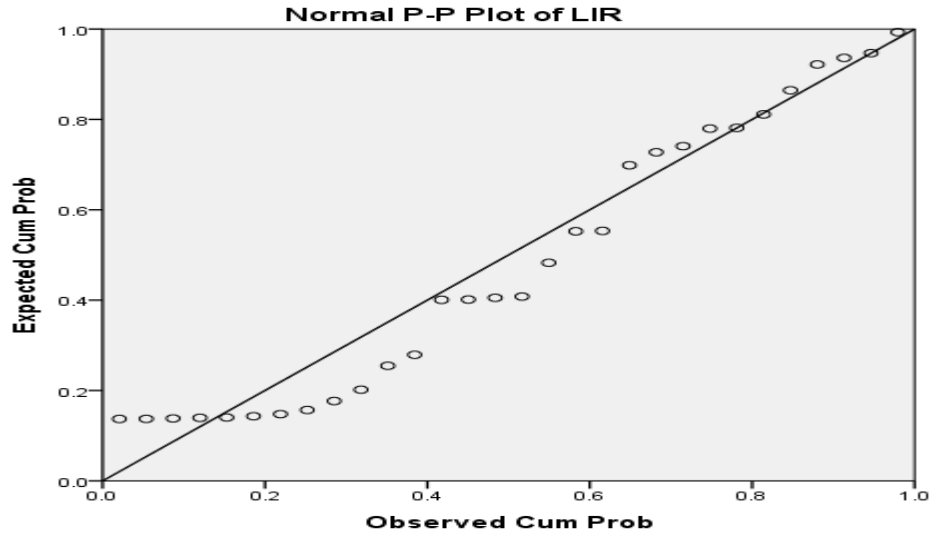


Figure 3: Normality Results for Liquidity Risks

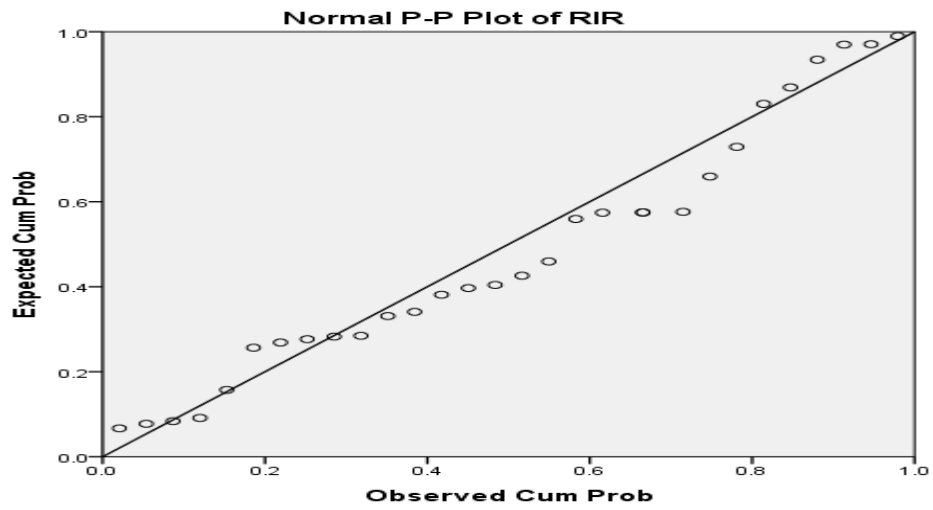


Figure 4: Normality Results for Reinsurance Risks

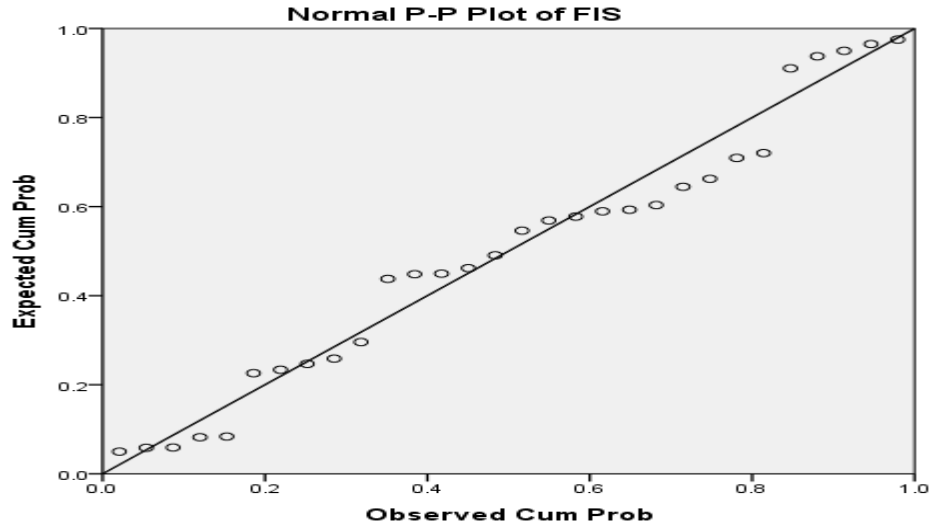


Figure 5: Normality Results for Firm Size

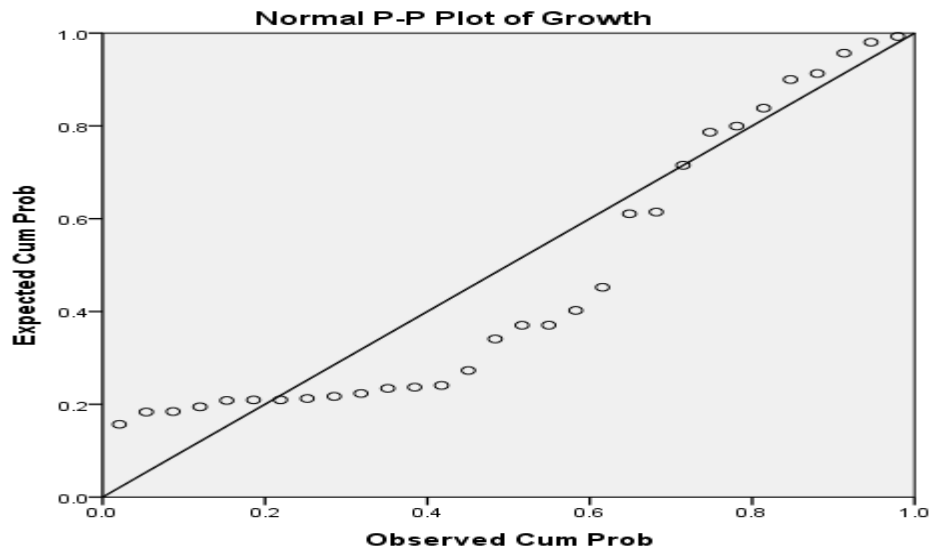


Figure 6: Normality Results for Firm Growth

4.3.2 Diagnostic Results for Multicollinearity, Heteroscedasticity, and Stationarity

The study affirmed reliability of data and the regression model by conducting various diagnostic test. The results for the multicollinearity, heteroscedasticity, and stationarity are presented in Table 3.

Table 3: Diagnostic Results for Multicollinearity, Heteroscedasticity, and Stationarity

Variables	Multicollinearity	Heteroscedasticity	Stationarity	
	VIF	t	Sig	Sig.
Growth (ROE & Leverage)	2.146	0.562	0.445	0.022
Solvency risk	1.259	0.521	0.545	0.001
Liquidity risk	1.686	0.014	0.255	0.032
Reinsurance risk	1.412	0.104	0.401	0.043
Firm Size (Ln)	1.014	0.343	0.546	0.038

The VIF was used to test the presence of multicollinearity. From the results, growth (measured by ROE and leverage), solvency risks, liquidity risks, reinsurance risks, and firm size scored a VIFs of 2.146, 1.259, 1.686, 1.412, and 1.014, respectively. Based on the results, the null hypothesis is, therefore, rejected; there is no multicollinearity.

Concerning heteroscedasticity, it was established that firm growth had p-value of 0.445, solvency risk had a p-value of 0.545; liquidity risks was found to have a p-value of 0.255, reinsurance risk had p-value of 0.401 while firm size had a p-value of 0.546. Evidently, all variables had their p-values >0.05 . This is interpreted to mean that the data was homoscedastic. Simply put, heteroscedasticity was not present.

Further, the study conducted stationarity test using by use of the Levin-Lin-chu test. It was observed that growth (ROE and leverage), solvency risk, liquidity risk, reinsurance risk, and firm size scored p-values of 0.022, 0.001, 0.032, 0.043, and 0.038, in that order. As witnessed, all the p-values for the variables were less than 0.05 hence, significant at the 5% significant levels. This imply that, data was stationary at the 5% significance level; thus, null hypothesis is rejected.

4.3.3 Results for Autocorrelation

The study also conducted autocorrelation test. Durbin Watson test was used. The test reports a statistic with values between 0 and 4 whereby, 2 is no autocorrelation, >2 is negative autocorrelation, and <2 is positive autocorrelation. Both positive and no autocorrelation imply progress to next test.

Table 4: Results for Autocorrelation

Durbin Watson test	
Statistic value:	1.159

The Durbin Watson test shows that the results for the autocorrelation is <2 . This means that the autocorrelation was positive and subsequently, the null hypothesis is rejected because there is no autocorrelation hence, the need to proceed to the next test.

4.4 Regression Model

The study conducted a multiple regression test to determine the relationship between the independent, control and dependent variables. The results are presented and interpreted as shown in Table 5.

Table 5: Regression Model

Dependent variable = Firm growth (ROE and Leverage)				
Variables	Standardized Coefficient (Beta)	Standard errors	t-value	p-value
Constant	1.216	2.55	1.511	0.143
Solvency risk	-0.353	0.086	-3.155	0.004
Liquidity risk	-0.296	0.123	-2.284	0.031
Reinsurance risk	-0.466	0.114	-3.938	0.001
Firm size (Ln)	0.137	0.338	1.367	0.050
Model summary:				
R	.867 ^a			
R square	0.751			
ANOVA:				
F-statistic (p-value)	18.932 (0.000 ^b)			
		N = 30		

^a = Constant;

^b=Coefficients of each variable

Significance level = 0.05

The results in Table 5 show that the R square is 0.751; actually it is about 75.1%. This means that the independent and control variables used in this study account for 75.1% variation in the growth of insurance of insurance firms listed at the NSE. The rest of the percentage 24.9% can be accounted by other variables not included in the current study.

For statistical test of significance, the study used the ANOVA that helped in determining the significance value (p-value). The study tested significance value at the 95% level of confidence and 5% significant levels. Regarding ANOVA results, the study established that

the model is significantly reliable at the 5% level; actually it is significant reliable with a p-value of 0.000.

The regression model was stated as:

$$Y_{it} = \beta_0 + \beta_1 \text{SOR}_{it} + \beta_2 \text{LIR}_{it} + \beta_3 \text{RIR}_{it} + \beta_4 \text{FIS}_{it} + \varepsilon$$

Thus, the model is restated as;

$$\text{Growth}_{it} = 1.216 + \text{SOR} - 0.353_{it} + \beta_2 \text{LIR} - 0.296_{it} + \beta_3 \text{RIR} - 0.466_{it} + \beta_4 \text{FIS} 0.137_{it} + 2.55$$

Regarding the regression coefficient, the study found that solvency risk was negatively related with firm growth and statistically significant at 5% ($\beta = -0.353$; p-value = 0.004). This means that a decrease in solvency risk by -0.353 leads to an increase in the growth of insurance firms. Again, the study revealed that liquidity risk as measured by quick ratio was negatively and significantly related with firm growth at the 5% significance level ($\beta = -0.296$; p-value = 0.031). This is an indication that a decrease in liquidity risk will improve growth of insurance firms. Further, reinsurance risk was found to be negatively but significantly related to firm growth at the 5% level ($\beta = -0.466$; p-value = 0.001) which is an indication that a reduction in the reinsurance risk by about -46% could increase growth of insurance firms. However, firm size as measured by natural logarithm of total assets was observed to have positive and significant relationship with firm growth ($\beta = 0.137$; p-value = 0.050). The results imply that an increase in firm size by about 13.7% could lead to an improvement in the growth of insurance firms listed at the NSE by the same margin.

4.5 Discussion of the Results

The results show that the R square is 0.751; actually it is about 75.1%. This means that the independent and control variables used in this study account for 75.1% variation in the growth of insurance of insurance firms listed at the NSE. The rest of the percentage 24.9% can be accounted by other variables not included in the current study. Regarding ANOVA results that test statistical significance, the study established that the model is significantly reliable at the 5% level; actually it is significant reliable with a p-value of 0.000. The results affirm the findings by Muinde (2018) and Sisay's (2017) who both found a high R square and reliably significant model.

Regarding the regression coefficient, the study found that solvency risk was negatively related with firm growth and statistically significant at 5% ($\beta = -0.353$; p-value = 0.004). This means that a decrease in solvency risk by -0.353 leads to an increase in the growth of insurance firms. In congruence, Arif and Anees's (2014) found that solvency possessed significant but negative relationship with bank performance. Meanwhile, a study by Yemane and Raju (2015) found that, solvency risks had no statistical significant relationship with performance.

Again, the study revealed that liquidity risk as measured by quick ratio was negatively and significantly related with firm growth at the 5% significance level ($\beta = -0.296$; p-value = 0.031). This is an indication that a decrease in liquidity risk will improve growth of insurance firms. The results resonate with another study by Anderson (2012) that found that, liquidity had negative relationship with firm growth as measured. In agreement, another study by Mamatzakis and Bermpei (2017) established that, liquidity risk had positive but insignificant relationship with firm performance.

Further, reinsurance risk was found to be negatively but significantly related to firm growth at the 5% level ($\beta = -0.466$; p-value = 0.001) which is an indication that a reduction in the reinsurance risk by about -46% could increase growth of insurance firms. The results are in disagreement with another study by Sisay's (2017) that found that reinsurance risk had a significant statistical positive relationship with firm performance. However, Muinde (2018) revealed that, reinsurance risk had positive correlation with ROA.

However, firm size as measured by natural logarithm of total assets was observed to have positive and significant relationship with firm growth ($\beta = 0.137$; p-value = 0.050). The results imply that an increase in firm size by about 13.7% could lead to an improvement in the growth of insurance firms listed at the NSE. However, Sisay (2017) found that firm size had significant but negative relationship with performance (ROA) while Tabari et al. (2013) found that firm size had positive relationship with ROE; in which case ROE was used as measure of growth in this study. In yet another study, Meanza (2014) found that firms with large assets have higher chances of making profits and ultimately growth even if faced with financial risks than smaller firms.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter consist of the summary of findings. Conclusions are also drawn based on study findings. Further, recommendations are also highlighted as per the results of the study. Finally, limitations and areas for further study were also presented.

5.2 Summary of the Findings

The study found that the regression model had high R and R square as represented by about 87% and 75%, respectively. This means the variation in the growth of insurance firms is explained by the reinsurance risk, liquidity risk, solvency risks, and firm size. The study used the ANOVA test of significance to determine the significance level of the model using p-value. The significance value was tested at the 95% level of confidence and 5% significant levels. Therefore, the study established that the model is significantly reliable at the 5% level; actually it was significantly reliable with a p-value of 0.000

Concerning the regression coefficient, the study found that solvency risk was negatively ($\beta = -0.353$) related with firm growth and statistically significant at 5% (p-value = 0.004). This means that a decrease in solvency risk by -0.353 leads to an increase in the growth of insurance firms listed at the NSE. Again, the study revealed that liquidity risk as measured by quick ratio was negatively ($\beta = -0.296$) and significantly related with firm growth at the 5% significance level (p-value = 0.031); hence, an indication that a decrease in liquidity risk will improve growth of insurance firms. Moreover, reinsurance risk was found to be negatively (β

= -0.466) but significantly related to firm growth at the 5% level (p-value = 0.001) which is an indication that a reduction in the reinsurance risk by about -46% could increase growth of insurance firms. However, firm size as measured by natural logarithm of total assets was observed to have positive ($\beta = 0.137$) and significant relationship with firm growth (p-value = 0.050); which is an indication that an increase in firm size by any value could lead to an improvement in the growth of insurance firms listed at the NSE.

5.3 Conclusions

The study concludes that the solvency risk had negative but significant relationship with the growth of listed insurance firms in the country. The negative relationship infer that the solvency risk inhibits growth of insurance firms. This is an indication that, the insurance firms had high liabilities that ultimately affected their net incomes thereby exposing them to solvency risk and consequently, diminished their growth.

The research concludes that, liquidity risk as measured by quick ratio was negatively but significantly related to the growth of insurance firms listed at the NSE. Therefore, a decrease in liquidity risk could result to increased firm growth in the country. The results imply that, the firms were unable to pay their short term liabilities hence resorted to selling inventories or other external financing mechanisms thus exposing them to adverse liquidity risk which ultimately had negative effect on growth.

It concludes that reinsurance risk had a positive and statistical significant relationship with the growth of insurance firms listed at the NSE. Thus, decreased exposure to reinsurance risk by any percentage definitely led to increased firm growth. This means that, the listed firms did not have adequate reinsurance policies that could protect them against disastrous

claims or losses thus, the firms could not sufficiently cover the losses claimed by their clients and this had negative impact on their growth.

The study concludes that firm size as measured by natural logarithm of total assets had positive statistical significant relationship with the growth of insurance firms listed at the NSE. Suffice it to say, an increase in total assets could lead to increased insurance firm growth. This imply that the larger the firm size, the higher the chances that such firms may not be adversely exposed to various financial risks and vice versa.

5.4 Recommendations

Based on the findings, the following recommendations are drawn;

It recommends that, insurance firms listed at the NSE should ensure that they hold adequate provision for outstanding claims by conducting sufficient analysis on liabilities and also by considering previous experiences so as to come up with comprehensive mechanism to efficiently and effectively control and monitor outstanding claims.

The study recommends that, the firms should endeavor to improve customer base so as to increase their net income by providing effective estimation procedures on policy premium price that will eventually help in the maximization of the firms' net premium earnings thereby ultimately promoting their growth.

The research also recommend that the listed insurance firms should resort to diversification of their investment portfolio by investing in idle cash on profitable sectors in the country. Such measures will help cushion these firms from adverse financial risks such as liquidity risk exposures. Therefore, through proper and effective management of investment portfolios, the firm will be able to realize improved return thereby reducing adverse exposure

to risks.

Due to the fact that the reinsurance cost is relatively expensive in the country, the firms should ensure that during engagement with clients, they should include high risk portfolio customers such as the ever increasing huge industries so that whenever such firms resort for insurance coverage, the insurers should adequately offer the required services without outstretching their financial capability which could make them susceptible to various financial risks including reinsurance risks. Therefore, effective assessment and monitoring of high risk portfolio customers is necessary and, therefore, a commendable step that could minimize adverse exposure to financial risks.

5.5 Limitations of the Study

One of the limitations encountered by this study is that, the scope of the research was only the listed insurance firms in the country totaling to six. This means that about 50 registered insurance firms were ignored hence the results were only limited to effect of financial risks on the growth of listed insurance firms hence this was a study gap.

Further, data covered a period of 5 years and this duration included a period of pre-pandemic and during the pandemic. This means that inferences were made based the two periods that may have variation in terms of effect of the financial risk on the growth of the insurance firms. Therefore, a much more realistic scenario was to exclude the pandemic period and limit the study on pre-pandemic period. Nevertheless, the intention of the study was to include latest financial risk and growth data and this compelled the researcher to include the pandemic period as well.

The accuracy of the data used could also not be validated and this proved to be one of the

limitations. Being a secondary data, it is a bit cumbersome to authentic the sources of data and the only solace was the assumption that the collected information were accurate, reliable, and valid.

5.6 Areas for Further Research

The aim of the research was to find out the effect of financial risks on the growth of firms: a case of insurance companies listed at NSE, Kenya. However, there are about 57 registered firms in Kenya out of which only 6 are listed at the NSE. This means that, inferences were limited to NSE listed insurance firms thereby ignoring other firms not listed at the NSE. Therefore, the study recommends that a further study could be conducted with the aim of establishing the effect of financial risks on the growth of registered insurance firms in Kenya.

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APPENDIX I: LISTED INSURANCE COMPANIES

1. Jubilee Holdings Ltd
2. Kenya Re-Insurance Corporation
3. Liberty Kenya Holdings Ltd
4. Britam Holdings Ltd
5. CIC Insurance Group Ltd
6. Sanlam Kenya PLC

APPENDIX II: SECONDARY DATA FOR THE PERIOD 2016-2020

Years	Solvency risk	Liquidity risk	Reinsurance risk	Firm size	Growth	
					Leverage (Debt ratio)	ROE
2016	0.6584	1.0234	1.3041	7.956974	0.123	0.0405
2017	0.4856	2.6007	1.5013	8.057543	0.678	0.037
2018	0.3704	1.4543	1.0168	8.021055	0.0012	0.0397
2019	0.9504	0.3102	4.0101	8.1142	1.011	0.0308
2020	0.7021	0.005	2.2701	8.163947	2.045	0.028
2016	0.732	3.1013	0.217	7.585397	0.181	0.085
2017	0.3046	2.217	1.479	7.63076	0.408	0.0881
2018	0.2714	2.014	1.089	7.647017	0.211	0.0498
2019	0.3511	0.0111	2.911	7.702111	1.742	0.0766
2020	7.539	0.018	1.272	7.691294	2.044	0.0807
2016	1.512	4.211	0.603	7.545282	0.342	0.01788
2017	0.7041	3.207	1.963	7.572162	0.786	0.018
2018	0.224	1.914	2.009	7.564718	0.191	0.0149
2019	2.083	0.201	3.561	7.582312	3.092	0.018
2020	2.152	0.037	1.567	7.594406	2.274	0.01719
2016	2.02	2.063	0.113	7.277088	0.188	0.131
2017	0.431	2.974	1.061	7.289461	0.396	-0.0268
2018	0.504	1.015	1.431	7.254319	0.941	-0.0426
2019	3.013	0.061	2.505	7.326597	2.543	0.167
2020	2.122	0.107	1.667	7.262802	2.003	-0.4975
2016	0.422	1.003	0.162	7.043628	0.106	0.05355
2017	0.171	2.211	2.013	7.040061	0.216	0.04959
2018	0.787	1.001	2.009	6.982476	0.761	0.04375
2019	2.223	0.006	4.511	6.954729	3.503	0.00149
2020	2.062	0.518	1.117	6.98071	2.612	0.0109
2016	0.237	1.457	0.021	7.453975	0.067	0.3164
2017	0.591	2.342	2.007	7.474377	0.177	0.1006
2018	0.855	1.247	1.11	7.463923	0.301	-0.006
2019	3.004	0.022	3.997	7.462877	3.957	-0.019
2020	2.372	0.606	3.107	7.4986	1.512	-0.0178