

**EFFECT OF CORPORATE GOVERNANCE STRUCTURES ON  
GROWTH OF INSURANCE FIRMS IN KENYA**

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## DECLARATION

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

Signed:  Date: 10<sup>th</sup> November 2021

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

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## **DEDICATION**

I dedicate this project to my mother, Jane Njeri Kinyanjui, for her moral encouragement, and to my one and only sister, Regina Kamanga, for always believing in me. May the Almighty God reward you.

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## **LIST OF ABBREVIATIONS**

<b>ANOVA</b>	Analysis of Variance
<b>CEO</b>	Chief Executive Officer
<b>CG</b>	Corporate Governance
<b>IRA</b>	Insurance Regulatory Authority
<b>NPV</b>	Net Present Value
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>ROA</b>	Return on Assets
<b>ROI</b>	Return on Investments
<b>SEC</b>	Securities and Exchange Commission
<b>SPSS</b>	Statistical Package for Social Sciences
<b>USA</b>	United States of America
<b>VIF</b>	Variance Inflation Factors

## ABSTRACT

Corporate governance is not the ultimate goal of a firm but a way to support financial stability, economic efficiency and sustainable growth. Despite existence of tight regulatory framework within the insurance industry in Kenya, some insurance companies have either stagnated in growth or collapsed. Some insurance firms have been faced by scandals that are avoidable with good corporate governance structures. This research sought to bring out the effect of corporate governance structures on the growth among insurance firms in Kenya. The research established the effect of board size, ownership concentration and board independence on growth among insurance companies. Underwriting risk, liquidity and solvency margin were used as the control variables in the model. Descriptive research design was used. The target population was the 54 insurance firms in Kenya. There are 54 insurance companies in Kenya but only 49 provided complete data set. Research variables data were derived from audited company's annual financial statements from 2016 to 2020 for all 49 companies making 245 observations. Regression and correlation analysis were used to test the study hypotheses by establishing the relationship between corporate governance structures and growth. The study found that ownership concentration ( $\beta=0.218$ ,  $p=0.000$ ), board independence ( $\beta=0.211$ ,  $p=0.000$ ) and solvency margin ( $\beta=0.156$ ,  $p=0.001$ ) had a positive and significant relationship with growth among insurance firms. Underwriting risk has a significant negative effect on growth ( $\beta=-0.221$ ,  $p=0.000$ ) while board size ( $\beta=0.001$ ,  $p=0.538$ ) and liquidity ( $\beta=0.001$ ,  $p=0.834$ ) were not statistically significant. The results also indicated  $R^2$  of 0.234 which implied that the selected independent variables contributed 23.4% to variations in growth. The study recommends that owners of insurance firms should strive to keep a significant shareholding as this contributes to growth of the firms. Policy makers such as IRA should also come with policies and guidelines of the percentage of shares that can be held by one family. The study also recommends that IRA, which is the regulator, should make it mandatory for all insurance firms to have board independence.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

How a firm's governance is structured, has a direct effect on its capacity to deliver and this is likely to have a bearing on the growth of the organization. Corporate governance structure has the potential to influence immediate goals as well as future goals of the company. Corporate governance is supported by many academic studies that demonstrate that it helps a business both create and improve shareholder value (Korent, Dundek & Calopa, 2014). According to some researchers, good corporate governance allows companies to save money compared to those that don't. Uncoordinated choices inhibit development (Okiro, Aduda & Omoro, 2015).

On a theoretical perspective, this study draws support from agency theory, stakeholder theory and stewardship theory that have attempted to elaborate how CG structures relate to firm growth. Jensen and Meckling (1976) agency theory focused on the distinction between ownership and control and the monitoring activities of the board. The board solves the agency problems between executive and owners by replacing and compensating managers that fail to serve the interest of the shareholders which is value creation. The agency theory simply looks at the function of managers in fulfilling stakeholder interests whereas the above examines a network of connections that goes beyond just the managers. According to the stewardship theory, directors and executives manage their careers so as to portray their stewardship to their organizations. The management actions, together with those of the shareholders, will determine how the company is managed (Donaldson & Davis, 1991).

The concept of corporate governance has been discussed a lot in recent times following the collapse of mega corporations such as Enron, Global Crossing and WorldCom in

the early 2000s and the more recent 2008 credit crisis. The dip in investor confidence following the revelations of the amount of money lost in these scandals necessitated legislation and regulations to control corporate governance, especially in publicly owned firms. The Sarbanes-Oxley Act was then passed by the US Congress to this effect, and the Securities and Exchange Commission (SEC) passed stricter regulations for listed companies in the US (Monks & Minow, 2011). In Kenya, firms such as Blue Shield Insurance, Kenya National Assurance, Standard Assurance, among others have been affected by corporate governance issues (Luyima, 2015). Corporate governance practices are therefore important in ensuring that the management's decisions are kept in check for the sake of protecting the shareholders' and insured parties' interests.

### **1.1.1 Corporate Governance Structures**

Corporate governance (CG) structure is a collection of rules and procedures that help businesses to achieve accountability, transparency, fairness and responsibility within an organization (Peasnell et al., 2000). These structures influence organizational culture and set the right tone right from the top levels of management to the bottom levels of subordinates. CG structure can also be described as the process through which organizations uphold accountability through structured controlled systems directed towards effective leadership and attainment of organizational targets (Wilson, 2006). Furthermore, CG can be defined as a set of rules and regulations aimed at offering structural support towards achieving transparency, accountability, fairness and respecting the rights of both majority and minority shareholders (Beal et al., 2008).

The principals of corporate governance are established on two fundamental concepts: transparency of operations and effective disclosure of information (Bushman et al., 2011). Firms with effective CG structures are more likely to be transparent in their

disclosures and are more likely to meet shareholder's need of wealth maximization by investing effectively than firms with weak CG structures. For CG to be effective, top management need to set the right tone. High ability managers have the capacity and capability of upholding the principals of CG. They are well trained and are more transparent in their disclosures (Chen et al., 2017). By abiding by the set CG structures, these managers invest efficiently thus increasing their firm's operational efficiencies (Bidabad et al., 2017). CG has attracted renewed global attention as a result of major financial scandals and collapse of corporations curtesy of lack of adequate internal control systems that enhance financial transparency and accountability (Salem et al., 2019).

The following factors were used to operationalize CG: board size, board independence (measured by the proportion of non-executive directors on the board), and ownership concentration (measured by the percentage of shares owned by the company's biggest shareholder). This will follow recommendations by Chen et al. (2017). The aforementioned proxies have been informed by the realization that high ownership concentration leads to entrenched removal of a minority shareholder's equity from those under control of the majority shareholders which in turn negatively impacts firm growth. Non-executive shareholders with relevant qualifications play a critical role of monitoring firm performance and advising the board on operational activities. They therefore influence performance and growth of their firms.

### **1.1.2 Firm Growth**

According to Naceur and Goaid (2001) growth is a strategy used by firms to improve their revenues through sale of products or income derived from providing services. Lee (2009) states that growth is the increase in profitability achieved through minimization

of costs. Hence the growth of a firm can be described as an increase in sales, the expansion of a firm by way of merging or acquiring other firms, increase in profits, development of products and services, diversification and increased number of a firm's employees. In financial terms, growth can be described as the increase in the revenue and sales of a business. Gudda (2003) stated that business growth is the improvement of a substantial measure of the success of an enterprise. This can be accomplished by either boosting the core business or revenue of a firm through increased product sales or service income, raising business profitability through cost minimization.

Growth produces a legitimate expectation among investors and consumers of continued economic development. This inspires business investment and consumer spending which results to an increase the demand on money supply moving through the economy (Mogaka, Kiweu & Kamau, 2015). Growth makes simpler the way in which the population and society at large accesses the redistribution of incomes. The slight differences and swelling effects of the up-surgings rates, grow for periods of one decade or more (Boldeanu & Constantinescu, 2015). Production of goods and services increases with an increase in the rate of economic growth, the process of creating tangible or intangible products and services rises and in turn, the number of job opportunities grows, unemployment rate reduce and the population's living standard's improves (Haller, 2012).

There is no single measure of growth however, due to the changes that occur in financial statements for instance Comprehensive Income Statement and Financial situation statement, it is possible to determine the level of growth of a firm whether it is high or low. Growth in the insurance industry is measured in different ways by different insurance companies. Hagstrom (1981) notes measures of growth to include premium

income, life insurance income, assets held and earnings per share for insurance companies investing in common stock. Other types of insurance companies such as mutual insurance companies may measure growth in terms of successful service to the insured members. Hagstrom (1981) notes that the objective of growth for insurance companies is to increase income faster than the increase in expenses (Hagstrom, 1981). A submission on growth, creation of value and corporate by the OECD (2012) measures growth using two variables namely number of staff members and the value of sales revenue (OECD, 2012). The change in total gross written premium was used as a growth indicator in this research.

### **1.1.3 Corporate Governance Structures and Firm Growth**

The agency theory postulates that, managers only pursue their own interests and will only be forced to maximize shareholder returns in the presence of governance structures for monitoring and punishing bad practices (Jensen & Meckling, 1976). Additionally, the stewardship theory holds that governance problems do not always originate from executives; rather, these challenges stem from the choices of regulators and investors who are working toward their own goals of achieving self-fulfillment (Donaldson & Davis, 1991).

Studies done by Shleifer and Vishny (1997) show that adoption of a strong corporate governance structure aids in obtaining more capital, resulting in an increase in the development of the business. Good corporate governance encourages investors to put their money into businesses like this. Competitiveness in a dynamic environment requires companies to be creative and to adjust strong corporate governance policies and frameworks (OECD, 2004).

A study on Mauritian listed companies by Padachi, Ramsurrun and Ramen (2017) indicated a positive relation between the corporate governance index value of firms and their financial performance. Business governance and corporate competitiveness were shown to be positively correlated, according to the study. The findings of this research are confirmed by those of Opanga (2013) who found a favorable correlation between governance and financial success among insurance firms in Kenya. However, an earlier research by Luyima (2015) found that although financial success is positively correlated with other aspects of performance such as customer performance, learning, and growth, the connection between corporate governance and financial performance was neutral.

#### **1.1.4 Insurance Firms in Kenya**

The Insurance Act (Cap 487 of the Laws of Kenya) regulates the insurance sector in Kenya, and the Insurance Regulatory Authority is in charge of enforcing it (IRA). The IRA licenses and regulates a variety of players in the industry, including insurance service providers (risk managers, surveyors, investigators, loss assessors, claims settling agents) insurance intermediaries (agents, medical insurance providers, brokers), reinsurance companies and insurance companies. Currently, the Kenyan insurance sector is made up of 59 licensed insurance underwriters, including 54 insurance firms and 5 reinsurance companies. There are 25 general (non-life) insurance underwriters, 18 long-term (life) insurance underwriters, and 11 composite insurers among the insurance firms (life and non-life insurance) (IRA's 2019 Annual Report).

IRA mentions specific areas of focus for corporate governance which are accurate disclosures, social responsibility, probity, fairness, responsibility, accountability, independence, transparency and discipline on financial matters, performance, ownership, governance arrangements, legal and regulatory compliance (IRA, 2018).



IRA charges the Board of Directors with the obligations to oversee the affairs of the insurance company and this responsibility cannot be avoided even when the Board has delegated responsibility to committees. The regulations require the board to form committees to deal with policy holder protection, asset liability management, risk management, audit, investment, ethics and nomination and recruitment. The Board is also responsible for appointing a principal officer, an actuary and an independent auditor (IRA, 2018).

According to the 2017 year-end report, overall earnings before tax fell from Kshs. 14.1 billion in 2015 and 2016 to Kshs. 12.8 billion in 2017. This implies that insurance firm growth is at 2.7% of GDP. Furthermore, BlueShield Insurance Companies was recently placed in the statutory hands of management because of an extended financial decline. Similarly, Real Insurance Company was purchased by Britam because of the company's current and long-term viability. In addition to Concord Insurance Company, other insurance firms that have ceased to exist include:

Access Insurance Company, Kenya National Assurance Company and Standard Assurance. Corporate governance has therefore impacted the development of insurance companies in Kenya.

## **1.2 Research Problem**

Corporate governance is not the ultimate goal of a firm but a way to support financial stability, economic efficiency and sustainable growth. Hence, it enables a company to have access to capital in the long run while interests of owners and stakeholders whose contribution towards long term success of an organization are accounted for through fair treatment such as improved returns and quality of service respectively (OECD, 2012). Lamport et al. (2011) stated that, prior studies argue that good governance

structure impacts positively on the growth of firms. Gaining a clear understanding of sound governance procedures is very important to helping businesses prevent fraud and building a positive image. It additionally becomes vital for companies to improve firm growth, enhance the investment environment as well as to encourage development (Braga & Shastri, 2011).

Despite existence of tight regulatory framework within the insurance industry in Kenya, some insurance companies have either stagnated in growth or collapsed. This was aggregated by scandals such companies have experienced (Muriithi, 2009). Therefore, the topic of corporate governance is an area of interest to researchers due to its impact on the firm's value or its growth. Some companies have experienced different results depending on how they embrace corporate governance issues. Firms which have embraced good practices are in a position to satisfy major stakeholders. On the other hand, companies which fail to embrace good corporate governance practices have experienced difficulties. Due to a lengthy history of poor financial performance, BlueShield Insurance has been placed under statutory administration. A combination of Real Insurance Company being purchased by Britam, and doubt in its long-term viability, contributed to the uncertainty that Britam might face. Besides Standard Assurance, which was bought out by AIG, Kenya National Assurance Company, and Access Insurance Company also fell to financial ruin.

Many studies of the relationship between CG and companies' development in industrialized countries have shown conflicting results, but according to empirical data, this remains true. A study published in the academic journal "Wiley Interdisciplinary Reviews: In a 2014 study done on corporate governance, it was discovered that inadequate governance may hinder a company's development, whereas other research

published in the "Wiley Interdisciplinary Reviews: Corporate Governance" in 2012 came to the opposite conclusion: poor corporate governance has no impact on a firm's growth. As a result, there is no correlation between the variables. These findings, found by Piesses (2005), showed contradictory evidence about the connection between CG development and business growth. This diverse research therefore implies that the link between corporate governance and development is not constant throughout the context of a particular corporation or across all kinds of corporate governance systems.

Within Kenya, Olick (2015) in another study explored the impact that governance has on the ROA of microfinance firms. Using statistics, the research found that size had a substantial impact on ROA while gender diversity had a substantial negative relation to performance. Nyamongo and Temesgen (2013) argues that companies with board size which are large performance is likely to be negative while the presence of an independent board of directors always leads to good financial performance. Kiragu (2014) in assessing the challenges encountered by the insurance business to improve the financial performance of a company in Kenya, governance regulations were discovered to be the key element. From the aforementioned published research, it is apparent that most studies discover disagreement in their conclusions. However, some show fluctuations in the results, which oscillate from negative to positive, while others show no connection at all. The studies also were carried using different methodologies in varying contexts making it difficult to generalize the findings to a particular context. In addition, no conclusive study has documented the interactions between corporate governance and growth of insurance firms in Kenya hence an empirical literature gap. This motivated the research question, what is the effect of corporate governance structures on growth of the insurance firms in Kenya?

### **1.3 Research Objective**

The study's intent was assessing how corporate governance structures affect growth of the insurance firms in Kenya.

### **1.4 Value of the Study**

This study will be important to insurance companies, who are tasked with developing new policies, and to the literature of finance, which studies investment. Because insurance companies can make the most use of corporate governance, it shines a light on methods they may enhance growth. These findings will help managers in their decision-making process.

The study will also be of value to policymaking organizations like governments, the insurance regulatory authorities and economic bodies that formulate the various policies on corporate governance and growth of insurance firms. The policy making bodies may use the study recommendations to come with effective corporate governance strategies to enhance insurance firm growth in Kenya.

Finally, the review will add on to the available theoretical discussion on the stewardship theory, stakeholder theory and agency theory. An important contribution to the existing body of research on corporate governance procedures and insurance companies' development will be made in the study. Additionally, studies may also be carried out based on the recommendation and suggestions for further research.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The chapter clarifies the theories on which corporate governance structures and growth is based. It further discusses the previous empirical studies; knowledge gaps identified and summarizes with a conceptual framework and hypotheses displaying the expected study variable relationship.

### **2.2 Theoretical Framework**

This segment examines theories which underpin the study of corporate governance structure and firm growth. Theoretical reviews covered are agency, stakeholder as well as stewardship theory.

#### **2.2.1 Agency Theory**

It forms the present study's anchor theory. Jensen and Meckling (1976) agency theory describe an 'agent' as someone who works on behalf of another person. The problem with the principal-agent relationship is that principals cannot contractually specify what the agent can do in any case (Moenga, 2015). Three factors can exacerbate the problems that arise from the principal-agent relationship: opportunism, sunk costs, and secret facts (Njau, 2016). Hidden information happens when agents have knowledge that the principal does not have and the agent has an opportunity to keep the knowledge hidden from the principal, all other factors held responsible. Hidden knowledge has the effect of allowing the agent to 'shirk' or minimize efforts to the disadvantage of the principal. Agency theory has implications for why corporate governance best practice structures can provide productivity benefits and competitive advantages to organizations are thus based on the convention that corporate governance is required to ensure agent action is directed toward principal interests (Aimone & Butera, 2016).

Notwithstanding, agency theory has inherent limitations. The agency theory is not able to sway so many of the complexities and difficulties that the agents face in their attempts to discharge their responsibilities and assignment of the principal. Furthermore, the control mechanisms proposed in relation to agency theory are not only costly, but also ineffective economically, because shareholders' interest protection mechanisms can interfere with the implementation of strategic decisions, restrict collective activities, change investment plans, and neglect other stakeholder interest, resulting in a reduction in their commitment to the development of economic value (Segrestin & Hatchuel, 2011).

Suitability of Agency theory to this research is because it clarifies how management, as the agent, is supposed to fulfill their ideal fiduciary duty of acting in principals' best interests and to prepare and offer principals with financial reports. As a result, agency theory is thought to provide a sound theoretical basis for the research's primary objective which is the affiliation between corporate governance and firm growth.

### **2.2.2 Stakeholder Theory**

Freeman (1984) profound the theory with the intention of being utilized as a management tool. However, since then it has progressed into a firm theory with a lot of explanatory power. The stakeholder theory is a methodological framework for organizational ethics and management that focuses on ethical as well as moral ideologies in the management of public and private organizations. Stakeholder theory stresses the importance of maintaining a balance of stakeholders' interests as the primary determinant of organizational strategy.

The single-valued objective supposition, according to which advantages go to a firm's stakeholders, is a source of criticism for this theory. According to Jensen (2016), there

are additional ways to assess an organization's performance apart from the benefits stakeholders receive. The factors comprise flow of information from top administration to lower-level employees, the work conditions, and interpersonal relationships inside the company.

Stakeholder theory is applicable to this research since it provides support for agency theory, which failed to capture all other important stakeholders who depend on financial results to make economic decisions, such as regulators, creditors, staff, financial analysts, and potential investors, among others. It lays a theoretical basis for understanding how various individuals and entities both within and outside of a firm need accurate information, in compliance with code of corporate governance and legal requirements, it may be guaranteed. As a result, the theory is supposed to include theoretical reasons for all of the practical objectives so that, if the board of directors and management have all stakeholders' interests at heart, they can completely comply with corporate governance code and ensure that performance results provided to stakeholders are correct, relevant, and represent the true situation of the firm.

### **2.2.3 Stewardship Theory**

The theory of Donaldson and Davis was first put forward (1991). It emerges as a critical counterpoint to agency theory. A manager's principal purpose, as per stewardship theory, is to maximize the company's output since a manager's passion for success as well as achievement is gratified whenever the firm performs effectively. This theory counters the agency theory by arguing that managerial opportunism is unimportant. Stewardship and agency theory mainly differ in that stewardship theory substitutes the absence of confidence that agency theory relates to with reverence for authority and the desire of managers to behave ethically. According to stewardship theory, managers in

publicly held firms are discouraged from operating against the interests of shareholders by their concern for their own reputations and career development, so agency costs should be naturally reduced (Donaldson & Davis, 1991). Because of detailed understanding of organizational operations, such as access to data and technical skills, an insider-dominated board, according to Muth and Donaldson (1998), is more successful. Compensation incentivizes shareholders' agents to work for the good of all stakeholders. True stewards and executives adhere to corporate governance code as well as regulatory directives, and disclosing the true earnings quality to stakeholders (Chen et al., 2016).

Critics of stewardship theory such as Pastoriza and Ariño (2018), posit that stewardship theory is over-simplified and unrealistic because individuals are predisposed to becoming stewards due to situational and psychological factors. These factors do not affect all managers as the question arises: where there is a misalignment between the company's management theory and the manager's psychological features, what then happens to the organizational pursuit? Furthermore, stewardship theory asserts that becoming steward results merely from a rational process, but it is unclear which fundamental mechanisms lead a person to choose. The question is how a person can determine whether or not he has a steward's nature. It's critical to figure out the kind of inner drive motivates a person to look besides his own self-interest and resolve inter-motivational conflict within himself (Daodu, Nakpodia & Adegbite, 2017).

Stewardship theory is relevant to the research since it complements stakeholder theory, which captures all other important stakeholders other than management who depend on financial results to make economic decisions, such as shareholders, regulators, creditors, staff, financial analysts, and potential investors, among others. It offers a



theoretical framework for understanding how successful stewards who are managers of firms manage their own careers by discharging their duties with utmost dignity, an absolute need for any company's compliance with corporate governance guidelines, and the disclosure of correct, appropriate, and useful reports to all stakeholders at regular intervals without placing any stakeholder at a disadvantage.

### **2.3 Determinants of Insurance Firms' Growth**

There are several firm growth determinants of a firm; these factors are found either within or outside the firm. Internal factors are firm-specific and can be manipulated internally. They are corporate governance, solvency margin, underwriting risk and liquidity. Factors outside a firm that influence firm growth include; regulatory environment, tax rates, political stability, corruption amongst others (Athanasoglou et al., 2005).

#### **2.3.1 Corporate Governance Structure**

Jensen and Meckling (1976) states that managers only keep their self-interests in mind and the maximization of shareholder value is conditional to having efficient governance structures that will punish wrongful acts. Additionally, the stewardship theory holds that governance problems do not always originate from executives; rather, these challenges stem from the choices of regulators and investors who are working toward their own goals of achieving self-fulfillment (Donaldson & Davis, 1991).

Companies that implemented sound corporate governance structures had more access to capital and better profits, as was discovered by Shleifer and Vishny (1997). Good corporate governance encourages investors to put their money into businesses like this. Competitiveness in a dynamic environment requires companies to be creative and to adjust strong corporate governance policies and frameworks (OECD, 2004).

### **2.3.2 Underwriting Risk**

In Ansah-Adu, Andoh, and Abor (2012), capacity to guarantee claim payments over a certain time is termed underwriting risk. General insurance companies generally aren't anticipated to be successful since they must spend more money on claims payouts than they receive in premiums. The claims ratio should therefore be advantageous in this regard. Insurance firms are thus required to disclose the specific underwriting guidelines they use to avoid impeding their performance.

In other words, insurance companies should have a diverse portfolio in order to prevent risks that are predestined to occur as shown by claims data (Giesbert & Steiner, 2011). While people and businesses have to bear the risks associated with insurance, those same risks may be taken on by reinsurers for insurance companies, via reinsurance (Chhibber & Majumdar, 2011). Reinsurance provides insurance companies with a means of coping with unforeseen losses, helping them maintain their profits stability, and expanding their underwriting capabilities (Charumathi, 2012). Another important factor for insurance company success is premium growth and market acceptance. However, premium growth doesn't necessarily mean a successful insurer; it is possible to raise premiums in a low-rate manner rather than rely on the addition of new policies.

### **2.3.3 Solvency Margin**

Many different things have impact on the overall financial well-being of the firm, including the total amount of assets and the size of the business. Small insurers may have the most difficulty being liquidated by the regulators (IRA), but it is anticipated that larger insurers would not have a problem. Two key components of liquidity are cash flow and asset disposal (Pastor & Veronesi, 2013). According to Bhunia (2012), current liquidity ratio is an important factor in assessing a company's solvency. The

liquidity ratio was defined as an important indicator of business solvency. When being profitable meant insurers gained more money in income than money that was distributed as costs, then insurers must have ended up making a profit.

Based on findings by Harris and Raviv (2013), it seems that operating margin is inversely correlated with insolvency ratio. While financial success of insurers is said to be important, it's also necessary to emphasize solvency and other solvency-affecting variables. Other businesses go out of business because they cannot fulfill their financial obligations due of a lack of solvency margin. A financially-solvent company strives to be profitable, and one method to get there is to ensure that their solvency margins remain consistent in order to finance new projects and fulfill financial obligations (Chakraborty, 2008).

#### **2.3.4 Firm Liquidity**

The capacity of a company to pay all of its debt obligations that mature within a year using cash or short-lived assets, such as assets that may be rapidly disposed of in return for cash, is referred to as liquidity. Liquidation of financial assets is the situation resulting from a company's capacity to keep up with its creditors without going through a bankruptcy process (Adam & Buckle, 2003).

Liquid assets, according to Liargovas and Skandalis (2008), are capable of supporting companies' operations as well as providing a source of investment capital when outside finance is unavailable. Liquidity allows firms to prepare for and fulfill commitments that come due unexpectedly. According to Almajali et al. (2012), increased liquidity for a company is crucial to productivity; therefore, companies should seek to boost their current asset holdings while simultaneously reducing their current liabilities. Jovanovic

(1982) argued that excessive liquidity could do more damage than good for the company.

## **2.4 Empirical Review**

A considerable amount of research has been done locally and globally to support the argument that corporate governance is closely linked to company development, but the findings of these studies have shown to be divergent.

### **2.4.1 Global Studies**

From a sample of 122 Nigerian listed companies, Ujunwa (2012) examined how CG affects company performance, and found that it had a significant impact. A connection was found between board size, CEO dualism, and the company's success. Also, the improved board performance was closely connected to board dualism. The study's main objective was to concentrate on the critical components surrounding corporate governance and to understand how that late-stage company performance had little to do with non-listed companies and firm development.

In a recent study conducted by Danoshana and Ravivathani (2013), they examined the impact that computer-generated imagery has on the performance of listed companies in Sri Lanka. They defined and measured the firm's performance, size, and the frequency of meetings based on net income to equity. A cluster sampling was utilized to pick a sample of twenty-five businesses. For the chosen companies, audited financials were used as a secondary source of data for the years 2008 to 2012. As a result, the results demonstrated that board size and audit committee both influence the frequency of performance meetings.

In Sri Lanka, where the social, cultural, and economic conditions are distinct, this research was performed. The authors, Adams and Buckle (2013), set out to discover

drivers of insurance company success among Bermudian companies. A panel data analysis that included the consideration of 47 insurance firms was used. Operational performance was influenced by the capital structure, underwriting risk and degree of liquidity of the companies. In addition, it was shown that inadequate supply of liquidity and leverage were positively correlated with financial success, whereas the inverse was true for risk underwriting. The research also showed that business size and market development had little impact on firm performance. Corporate governance was not taken into consideration in the research.

The agency theory was used to analyze the effect of CG on industrial and services companies in Jordan from 2000 to 2010 by Marashdeh (2014). In this research, businesses on the Amman Stock Exchange were enrolled as study participants; from which 115 companies were selected using cluster sampling. Year-over-year financial data and multiple regression analysis showed that the information gathered was significant. When it comes to CEO duality, executive and non-executive directors have opposite impacts on company success. The study's emphasis was on the performance of the company, while the present study's goal is company growth.

In their examination, Bermpei and Mamatzakis (2015) measured the impact of the CG on the annual reports and regulatory filings of the 23 investment banks in the study sample over the time period of 2000 to 2012. Analysis was done using descriptive statistics that used values that were regressed. Results revealed that board participation was adversely related to performance; executive power had a direct effect on performance, and the link between board involvement and performance was indirect. This research examined insurance companies that had a difference in their investment banking activities.

### **2.4.2 Local Studies**

Nyarige (2012) also tried to examine how the Kenyan commercial bank's corporate governance structure influences their financial performance. The study mainly concentrated on NSE listed banks. The independent variables were board meetings, executive compensation and size while the explained variable was the performance. The finding indicated that size had an inverse impact on performance while board independence had a direct impact. However, the relation between CG and Tobin's Q was not significant. Ownership concentration was not considered as a CG mechanism that influences growth of firms.

Additionally, Muigai (2014) examined the relationship between selected corporate board dynamics (such as executive board composition and the number of non-executive members) and firm return on assets. The study's strategy used a descriptive approach to investigate the population of 43 licensed Kenyan banks during the course of 2009 to 2013, collecting secondary data. Both descriptive statistics and a multiple regression analysis were used to examine the research. From the study's results, it seems that a direct negative correlation exists between the composition of the board and the ROA, and an indirect inverse correlation exists between gender diversity and the ROA. The goal of that research was to gauge the financial health of the company, whereas the goal of current study is to track the development of the company.

In the paper by Olick (2015), the study looked at the effect on company ROA of management practices (such as the percentage of non-executive directors, gender diversity, and board size) in the microfinance sector in Kenya. Data was gathered from secondary sources (e.g. from 9 licensed MFI reports from 2010 to 2014) for the research using a census methodology. In the research, a multiple regression model was found

suitable and the model was useful in explaining variances in order to ascertain the significance of the results. With regard to ROA, the research found that the size of the company had a considerable beneficial influence, while gender diversity had a detrimental effect on performance. In this research, the emphasis was on microfinance institutions with their business models that are distinct from insurance companies.

During the study performed by Nduati (2018), Kenyan insurance firms were examined to find out how company specific factors influence performance. During the study period, the length of time studied was five years (2013-2017). Descriptive statistics like correlation and regression were used for evaluating the causal connection between the response and predictor variables, whereas inferential statistics like correlation and regression were used for analysis. The research showed a significant positive connection between solvency margin and performance. The study's findings also indicated that liquidity management is unrelated to the success of the company. Premium retention was weakly negatively correlated with firm size and performance.

Nevertheless, it was shown that negative insignificant relations were present between age of the company, financial leverage, and performance. No research specifically took into consideration CG as a particular company feature that has an impact on the development of businesses.

Koech (2018) studied the determinants of effective CG among state corporations found in Kenya. The study targeted managers from the 187 corporations and regression method analysed the data. Findings showed that corporate governance had a positive relation to board characteristics among the corporations. This study did not investigate the influence of CG on other variables such as firm growth. In addition, the study was

conducted among state corporations and therefore its findings cannot be generalized in the insurance industry as their nature of operations and risks are different.

## **2.5 Summary of the Literature Review and Research Gaps**

The theoretical connection between CG and growth of insurance companies has been well-established with the use of several frameworks. This course will introduce you to many theories such as agency, stakeholder, and stewardship. In this section, several factors affecting a company's growth have been addressed. Studies on CG and company development have been conducted both domestically and internationally. This section addresses their results. The small number of prior scholars who had the same viewpoint is all the justification we need to undertake additional investigation. This research took advantage of this gap.

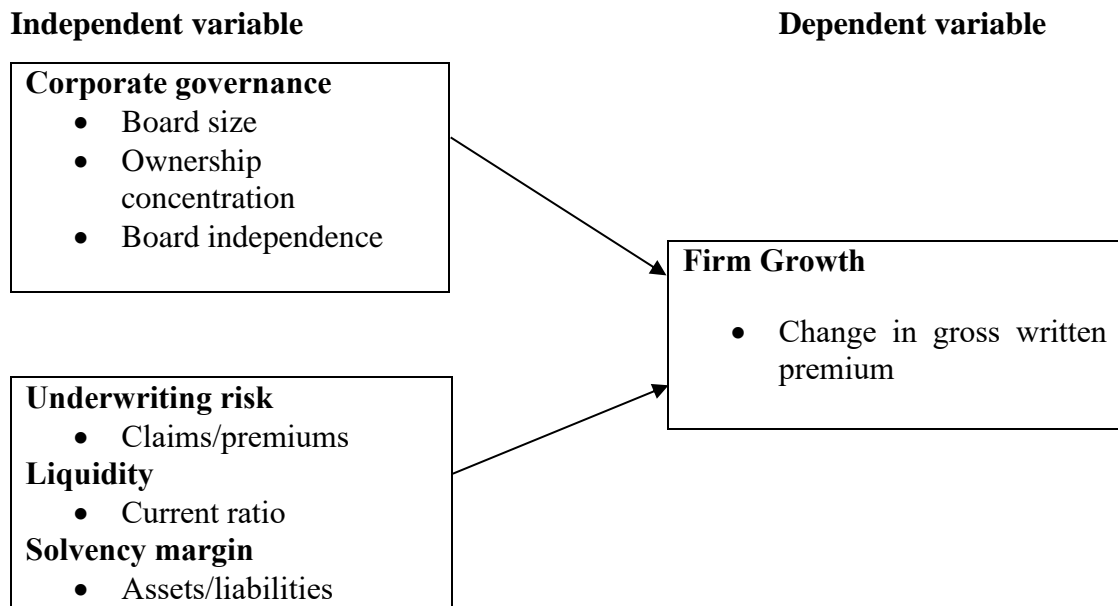
From the studies reviewed above, there exists a conceptual, methodological and contextual gap. The existence of gaps related to the concept were shown by the different operationalization of governance and growth. Gaps in the methodology were demonstrated by limited consensus in the study methods used. Gaps related to the contexts were shown through the different study settings. Many of the studies done were in developed countries and those done in the local context did not focus on insurance firms. The gaps show that there is a lack of empirical agreement on studies on CG and business growth relationships. The study's aim was to add to the literature in this area.

## **2.6 Conceptual Framework**

The relationship shown below corresponds to the anticipated relationship between the variables. The independent variable for the study was CG measured as board size, board independence and ownership concentration. The control variables were underwriting



risk, solvency margin and firm liquidity. The dependent variable was firm growth as measured by change in gross written premium.



**Figure 2.1: The Conceptual Model**

**Source: Researcher (2021)**

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

The chapter designates the approaches utilized in accomplishing the research objective which was to determine how CG affects firm growth. In particular, the study highlighted the; design, diagnostic tests and data collection, as well as analysis.

### **3.2 Research Design**

A descriptive design was adopted to determine how corporate governance and firm growth of NSE listed firms relate. This design was appropriate since the nature of the phenomena is of key interest to the researcher (Khan, 2008). It was also sufficient in defining the interrelationships of the phenomena. This design also validly and accurately represented the variables thereby giving sufficient answers to the study questions (Cooper & Schindler, 2008).

### **3.3 Population**

A population is anything seen from a collection of several types of concern (Burns & Burns, 2008). This research included the 54 insurance companies in Kenya as at December 31<sup>st</sup> 2020. It was necessary to conduct a survey of the 54 companies, since the population was relatively small (see appendix I).

### **3.4 Data Collection**

The study used secondary data obtained from Insurance Regulatory Authority (IRA) covering a period of 5 years from 2016 to 2020 on an annual basis. The specific data collected for firm growth was annual gross written premium, for board size, the data collected was total number of board members, for board independence, the data collected was the number of executive directors and non-executive directors in a board

while for ownership concentration, the data collected pertained the percentage of shares held by families. For the control variables, underwriting risk data collected was total claims and total premiums, for solvency margin the data collected was total assets and total liabilities while for liquidity, the ratio for current liabilities and current assets.

### **3.5 Data Analysis**

In data analysis, version 24 of SPSS software was used. Tables presented the findings in a quantitative manner. Descriptive statistics were employed in the calculation of central tendency measures as well as dispersion such as mean as well as standard deviation for every variable. Inferential statistics relied on correlation as well as regression. Correlation determined the magnitude of the affiliation between the variables in the research and a regression determined cause and effect among variables. A multivariate regression linearly determined the relation between the dependent and independent variables.

#### **3.5.1 Diagnostic Tests**

To ascertain the model viability, a number of diagnostic tests were done, like normality, stationarity, multicollinearity, homogeneity and autocorrelation. The assumption of normality is that the dependent variable's residual would be normally distributed and closer to the mean. This was accomplished by use of the Jarque-Bera Test. In instances where one of the variables had no normal distribution, it was adjusted using the logarithmic adjustment methodology. Stationarity test was utilized in determining if the statistical characteristics such as variance, mean, as well as autocorrelation change with the passage of time. This property was ascertained via the augmented Dickey Fuller test. In the event the data does not meet this property, the data was transformed using

natural logarithm. Robust regression was also used as it provides better regression coefficients than ordinary least square (Khan, 2008).

Autocorrelation is a measure of how similar one time series is when compared to its lagged value across successive timings. The measure of this test was done using the Wooldridge test and in the event that the presumption is breached the robust standard errors were used in the model. Multicollinearity exists when a perfect or near perfect linear relation is made between a number of independent variables. Variance Inflation Factors (VIF) as well as tolerance levels were utilized. Any multicollinear variable was eliminated and a new measurement used in place of the variable having co-linearity. Heteroskedasticity confirms if the errors variance in a regression lies among the independent variables. This was tested using the Levene test and if data does not meet the homogeneity of variances assumption, robust regression analysis was employed as it provides better regression coefficients when outliers exist in the data (Burns & Burns, 2008).

### **3.5.2 Analytical Model**

The regression model below was used:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon.$$

Where: Y = Firm growth calculated by change in gross written premium

$\alpha$  = y intercept of equation.

$\beta_1 \dots \beta_6$  = are the regression coefficients

$X_1$  = Board size as measured by the natural logarithm of total number of directors in a board

$X_2$  = Ownership concentration as calculated by fraction of ownership owned by

families

$X_3$  = Board independence as calculated by the fraction of non-executive directors to total directors

$X_4$  = Underwriting risk was determined by dividing total claims by total premiums on a yearly basis

$X_5$  = Liquidity was determined by dividing current assets by current liabilities

$X_6$  = Solvency margin was determined by dividing the ratio of total assets by total liabilities on a yearly basis

$\varepsilon$  =error term

### **3.5.3 Tests of Significance**

The overall model and the importance of each individual variable were determined using parametric testing. The F-test determined the overall model's significance and this was achieved by means of ANOVA while a t-test determined coefficient significance.

## CHAPTER FOUR: DATA ANALYSIS RESULTS AND FINDINGS

### 4.1 Introduction

This chapter deals with the analysis of data. The objective of the research was to establish the relationship between corporate governance structures and growth among insurance firms in Kenya. Patterns were studied by descriptive and inferential analysis, that were then analyzed and conclusions drawn on them, in accordance with the specific objectives.

### 4.2 Descriptive Statistics

The study sought to describe the data in terms of their mean and standard deviations. The descriptive analysis was necessary as it helps in understanding the characteristics of the collected data before conducting inferential analysis. The results are as shown in

Table 4.1

**Table 4.1: Descriptive Results**

	N	Minimum	Maximum	Mean	Std. Deviation
Growth	245	-.570	.390	.03941	.112951
Board size	245	5.000	18.000	10.04898	2.853968
Ownership concentration	245	.029	.950	.58485	.153287
Underwriting risk	245	.025	1.419	.46773	.238230
Liquidity	245	.343	11.648	2.25865	1.779511
Solvency margin	245	1.002	10.549	3.75653	2.371323
Valid N (listwise)	245				

**Source: Research Findings (2021)**

Table 4.1 shows the descriptive analysis, with 245 observations for each variable based on the product of the number of cross-sectional units and the number of periods studied ( $49 \times 5 = 245$ ). The dependent variable was growth while the independent variable was

corporate governance structures (board size, ownership concentration and board independence). Finally, the control variables were underwriting risk, liquidity and solvency margin.

### 4.3 Diagnostic Tests

To ascertain the model viability, a number of diagnostic tests were done, like normality, stationarity, Multicollinearity test, homogeneity of variance and autocorrelation.

#### 4.3.1 Normality Test

To test whether the collected data assumed a normal distribution, normality test was conducted using the Jarque-Bera Test. The threshold was that, if the p value is greater than 0.05, then the data assumes a normal distribution.

**Table 4.2: Test for Normality**

	<b>Jarque-Bera Coefficient</b>	<b>P-value</b>
Growth	2.587	0.100
Board size	5.304	0.202
Ownership concentration	3.428	0.304
Underwriting risk	1.763	0.315
Liquidity	2.153	0.227
Solvency margin	3.239	0.300
Board size	3.145	0.201

**Source: Research Findings (2021)**

The normality test results revealed a p- value above 0.05 thus the null hypothesis rejection and acceptance of the alternate hypothesis meaning the normality test revealing normal distribution in the data.

#### 4.3.2 Multicollinearity Test

Multicollinearity exists when a perfect or near perfect linear relation exist between a number of independent variables. Variance Inflation Factors (VIF) as well as tolerance levels were utilized.

**Table 4.3: Multicollinearity**

Variable	Collinearity Statistics	
	Tolerance	VIF
Board size	0.776	1.289
Ownership concentration	0.675	1.481
Board independence	0.697	1.434
Underwriting risk	0.703	1.422
Liquidity	0.661	1.513
Solvency margin	0.634	1.577

**Source: Research Findings (2021)**

The outcomes in Table 4.3 specify that all the variables had a VIF values <10 and tolerance values >0.2 suggesting that Multicollinearity did not exist.

#### 4.3.3 Heteroskedasticity test

Cross-sectional units tend to exhibit homoskedastic error processes; however, unit-specific variances are more common and are referred to as group-wise heteroscedasticity. The command with the heftiest weight is used in computing the Breuch Pagan group wise Heteroscedasticity when residuals are utilized. The null hypothesis states that  $\sigma^2_i = \sigma^2$  for  $i = 1 \dots Ng$ , where Ng is the number of cross-sectional units. Table 4.4 shows Heteroskedasticity Test Results.

**Table 4.4: Heteroskedasticity Results**

<b>Modified Wald test for group wise heteroskedasticity in regression model</b>
H0: $\sigma^2(i) = \sigma^2$ for all i
chi2 (245) = 336.23
Prob>chi2 = 0.0741

**Source: Research Findings (2021)**

The null hypothesis of Homoskedastic error terms is not rejected, according to the results in Table 4.4, which are supported by a 0.0741 p-value



#### 4.3.4 Autocorrelation Test

Autocorrelation is a measure of how similar one time series was when compared to its lagged value across successive timings. The measure of this test was done using the Wooldridge test.

**Table 4.5: Test of Autocorrelation**

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<b>Wooldridge test for autocorrelation in panel data</b>	
<b>H0: no first-order autocorrelation</b>	
F( 1, 245) =	0.341
Prob> F =	0.5612

---

**Source: Research Findings (2021)**

From the results of Table 4.5, the null hypothesis of no serial correlation is not rejected given that the p-value is significant (p-value = 0.5612).

#### 4.3.5 Stationarity Test

Stationarity test was utilized in determining if the statistical characteristics such as variance, mean, as well as autocorrelation change with the passage of time. Table 4.6 shows Levin-Lin Chu unit root test results.

**Table 4.6: Levin-Lin Chu unit-root test**

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<b>Levin-Lin Chu unit-root test</b>			
<b>Variable</b>	<b>Hypothesis</b>	<b>p value</b>	<b>Verdict</b>
Growth	Ho: Panels contain unit roots	0.0000	Reject Ho
Board size	Ho: Panels contain unit roots	0.0000	Reject Ho
Ownership concentration	Ho: Panels contain unit roots	0.0000	Reject Ho
Board independence	Ho: Panels contain unit roots	0.0000	Reject Ho
Underwriting risk	Ho: Panels contain unit roots	0.0000	Reject Ho
Liquidity	Ho: Panels contain unit roots	0.0000	Reject Ho
Solvency margin	Ho: Panels contain unit roots	0.0000	Reject Ho

---

**Source: Research Findings (2021)**

Based on the findings in Table 4.6, the null hypotheses that: Panels contain unit roots were rejected for all the variables, because the p values were less than 0.05. This implied that the panel data for all the variables were stationary.

#### 4.4 Correlation Results

Correlation analysis was carried out to establish the strength and direction of association between each predictor variable and the response variable. The results in Table 4.7 show the nature of relationships between the study variables in terms of magnitude and direction.

**Table 4.7: Correlation Results**

		Growth	Board size	O/ship conc.	Board independ	Underwriting risk	Liquidity	Solvency margin
Growth	Pearson Correlation	1						
	Sig. (2-tailed)							
Board size	Pearson Correlation	.002	1					
	Sig. (2-tailed)	.977						
Ownership concentration	Pearson Correlation	.194**	.212**	1				
	Sig. (2-tailed)	.002	.001					
Board independence	Pearson Correlation	.164*	.204**	.072	1			
	Sig. (2-tailed)	.010	.000	.264				
Underwriting risk	Pearson Correlation	-.457**	-.047	.162*	.101	1		
	Sig. (2-tailed)	.000	.469	.011	.114			
Liquidity	Pearson Correlation	.032	.183**	-.050	.112	.009	1	
	Sig. (2-tailed)	.624	.004	.440	.079	.884		
Solvency margin	Pearson Correlation	.365**	.245**	.269**	.061	.165**	.075	1
	Sig. (2-tailed)	.000	.000	.000	.341	.010	.241	

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

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

c. Listwise N=245

**Source: Research Findings (2021)**

The results in Table 4.7 reveal that board size and growth are positively but not significantly correlated ( $r=0.002$ ) at 5 % significance level. In addition, the results show that ownership concentration and growth are positively and significantly correlated ( $r=0.194^{**}$ ) at 5 % significance level. This implies that both ownership concentration and growth change in the same direction. Further, results show that board independence and growth are positively and significantly correlated ( $r=0.164^*$ ) at 5 % significance level. This implies that both board independence and growth change in the same direction. In regards to the control variables, underwriting risk exhibited a negative and significant association with growth while solvency margin had a positive association with growth. Liquidity did not exhibit a significant association with growth as shown by a p value greater than 0.05.

#### 4.5 Regression Results

Regression analysis was carried out to establish the extent to which growth is explained by the selected variables. The regression results were presented in Table 4.8 to 4.10.

**Table 4.8: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.484 <sup>a</sup>	.234	.215	.100068

a. Predictors: (Constant), Solvency margin, Board independence, Liquidity, Underwriting risk, Ownership concentration, Board size

**Source: Research Findings (2021)**

From the findings as represented by the adjusted  $R^2$ , the independent variables that were studied explained 23.4% of the variations in growth among insurance firms in Kenya. This therefore means the six variables contributed 23.4% of the variations in growth of insurance firms in Kenya while other factors not studied in this research contribute 76.6%.

**Table 4.9: ANOVA Analysis**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.730	6	.122	12.145	.000 <sup>b</sup>
	Residual	2.383	238	.010		
	Total	3.113	244			

a. Dependent Variable: Growth  
b. Predictors: (Constant), Solvency margin, Board independence, Liquidity, Underwriting risk, Ownership concentration, Board size

**Source: Research Findings (2021)**

ANOVA statistics in Table 4.9 show that the data had a 0.000 level of significance hence this indicates that the data is ideal for making conclusions on the variables.

**Table 4.9: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.113	.095		2.766	.006
	Board size	.001	.002	.038	.617	.538
	Ownership concentration	.211	.039	.412	5.382	.000
	Board independence	.218	.024	.492	5.984	.000
	Underwriting risk	-.221	.028	-.467	-7.996	.000
	Liquidity	.001	.004	.012	.210	.834
	Solvency margin	.156	.016	.198	3.403	.001

a. Dependent Variable: Growth

**Source: Research Findings (2021)**

The coefficient of regression model was as below;

$$Y = 0.113 + 0.211X_1 + 0.218X_2 - 0.221X_3 + 0.156X_4$$

Where:

Y = Growth X<sub>1</sub> = Ownership concentration; X<sub>2</sub> = board independence; X<sub>3</sub> = underwriting risk; X<sub>4</sub> = Solvency margin

#### **4.6 Discussion of Research Findings**

The objective of this study was to establish the effect of CG structures on growth. The study utilized a descriptive design while population was the 54 insurance firms. Data was obtained from 49 firms giving a response rate of 90.7% which was considered adequate. The study relied on secondary data which was obtained from IRA and individual firms annual reports. The specific attributes of CG considered were; board size, ownership concentration and board independence. The control variables were underwriting risk, solvency margin and liquidity. Data was analyzed using both descriptive and inferential statistics. The results are discussed in this section.

The results of correlation analysis revealed that board size did not have a significant association with growth among insurance firms in Kenya. Although the association was positive, the magnitude was not significant. The results further revealed that ownership concentration had a negative and significant association with growth which implies that when the ownership concentration is increasing, growth is also positive. Board independence exhibited a positive and significant association with growth implying that firms with more independent boards are likely to have a higher level of growth. The association between underwriting risk was found to be negative and significant while the association between solvency margin and growth was found to be positive and statistically significant. Liquidity did not exhibit a significant association with growth.

The regression results revealed that the six selected predictor variables explain 23.4% of changes in growth among insurance firms in Kenya. The explanatory power was also significant as the p value was 0.000 which is less than 0.05. This implies that the model was sufficient in describing the cause and effect among the study variables. Individually, board size does not have a significant influence on growth while the results further revealed that ownership concentration and board independence were

significant determiners of growth. Underwriting risk was found to have a significant negative effect on growth while solvency margin was found to have a significant positive influence on the level of growth while liquidity was not statistically significant.

These results concur with Nduati (2018) who focused on Kenyan insurance firms to find out how company specific factors influence performance. During the study period, the length of time studied was five years (2013-2017). Descriptive statistics like correlation and regression were used for evaluating the causal connection between the response and predictor variables, whereas inferential statistics like correlation and regression were used for analysis. The research showed a significant positive connection between solvency margin and performance. The study's findings also indicated that liquidity management is unrelated to the success of the company.

The results also concur with Ujunwa (2012) who examined how CG affects company performance, and found that it had a significant impact. A connection was found between board size, CEO dualism, and the company's success. Also, the improved board performance was closely connected to board dualism. The study's main objective was to concentrate on the critical components surrounding corporate governance and to understand how that late-stage company performance had little to do with non-listed companies and firm development.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter reviews the results from the previous chapter, it further derives conclusions as well as the limitations encountered during the study. In addition, it provides recommendation for policy makers and gives suggestions on areas where further studies can be done.

### **5.2 Summary of Findings**

The objective of this research was to assess how CG attributes influence growth of Kenyan insurance firms. The selected variables for this investigation included; board size, ownership concentration, board independence, liquidity, underwriting risk and solvency margin. A descriptive research design was selected to complete the research. Secondary data was gathered from IRA and an analysis made using SPSS. Yearly data for 49 insurance firms for five years from 2016 to 2020 was obtained from their annual reports.

The first objective was to establish the effect of board size on growth among insurance firms in Kenya. The correlation results at 5 % significance level show that board size had a positive but not significant correlation with growth. This implies that improvement in board size would not necessarily lead to increase in growth. Regression results ( $\beta=0.001$ ,  $p=0.538$ ) show that there was a positive but not significant effect of board size on growth among insurance firms Kenya.

The second objective was to assess the effect of ownership concentration on growth among insurance firms in Kenya. The correlation results at 5 % significance level show that ownership concentration had a positive correlation with growth. This implies that

improvement in ownership concentration would lead to increase in growth. Regression results ( $\beta=0.211$ ,  $p=0.000$ ) show that there was a positive and significant effect of ownership concentration on growth among insurance firms.

The third objective was to examine the effect of board independence on growth among Kenyan insurance firms. The correlation results at 5 % significance level show that board independence had a positive correlation with growth. This implies that improvement in board independence would lead to increase in growth. Regression results ( $\beta=0.218$ ,  $p=0.000$ ) show that there was a positive and significant effect of board independence on growth among insurance firms.

The fourth objective was to examine the effect of underwriting risk on growth among Kenyan insurance firms. The correlation results at 5 % significance level show that underwriting risk had a negative correlation with growth. This implies that an increase in underwriting risk would lead to a decrease in growth. Regression results ( $\beta=-0.221$ ,  $p=0.000$ ) show that there was a negative and significant effect of underwriting risk on growth among insurance firms.

The fifth objective was to examine the effect of liquidity on growth among Kenyan insurance firms. The correlation results at 5 % significance level show that liquidity had a positive correlation with growth. The correlation was however not statistically significant. Regression results ( $\beta=0.001$ ,  $p=0.834$ ) show that there was a positive and not significant effect of liquidity on growth among Kenyan insurance firms.

The sixth objective was to examine the effect of solvency margin on growth among Kenyan insurance firms. The correlation results at 5 % significance level show that solvency margin had a positive correlation with growth. This implies that improvement in solvency margin would lead to increase in growth. Regression results ( $\beta=0.156$ ,



p=0.001) show that there was a positive and significant effect of solvency margin on growth among Kenyan insurance firms.

### **5.3 Conclusions**

The study purpose of the research was to find out the association between corporate governance structures and growth. The findings indicated that board size structure had a positive but not significant effect on growth. This may imply that insurance firms with large board size do not necessarily have high level of growth.

The study results further indicated that ownership concentration had a positive and significant effect on growth which might mean that boards with a high proportion of family ownership are beneficial in growth. This might be explained by the fact that most insurance firms with high percentage of family ownership have some family members involved in the daily management of the firm which can contribute to better decision making and effective monitoring.

The study results showed that board independence had a positive and significant effect on growth. This may mean that the higher proportion of independent non-executive and executive directors increased board effectiveness in monitoring managerial opportunism and preventing self-interest thereby consequently, increased growth.

In addition, the results revealed that underwriting risk has a significant negative effect on growth. This implies that firms with high levels of claims relative to the premiums collected are likely to record low growth. This can be explained by the fact that high claims leads to an increase in premiums which might erode the client base. Further, the study revealed that solvency margin has a significant positive effect on growth. This might be explained by the fact that insurance firms with more assets are able to take advantage of investment opportunities when they arise.

#### **5.4 Recommendations for Policy and Practice**

The study findings reveal that ownership concentration had a positive and significant effect on growth. The study therefore recommends that owners of insurance firms should strive to keep a significant shareholding as this contributes to growth of the firms. Policy makers such as IRA should also come up with policies and guidelines of the percentage of shares that can be held by one family.

From the study findings, board independence had a significant effect on growth. Therefore, the study recommends that IRA, which is the regulator, should make it mandatory for all insurance firms to have board independence. Furthermore, an effective board should have a majority of non-executive directors, who are seen to give greater performance due to their independence from firm management, which allows them to make suitable and non-partisan judgments.

Further, the study found out that underwriting risk has a significant negative influence on growth of insurance firms. This study recommends that insurance firms should come up with effective evaluation mechanisms to ensure that they do not end up paying claims that exceed their premiums. The study also recommends that IRA should come up with a solvency margin requirement where all insurance firms are mandated to exceed a given lower limit.

#### **5.5 Limitations of the Study**

The focus was on some of the elements that are thought to affect the growth of Kenyan insurance companies. The study focused on six explanatory variables in particular. However, there are other factors that are likely to influence a firm's growth. Some are controlled by the company, such as management efficiency and internal controls, while others are not.

The research used secondary quantitative data. The study did not take into account qualitative data that could explain other factors that influence the relationship between CG structures and insurance firm's growth. Qualitative methods like focus groups, open-ended surveys, and interviews can aid in the development of more definite outcomes.

The study focused on a five-year period (2016 to 2020). It's unclear whether the results will last for a longer period of time. It is also unclear whether similar results will be achieved after 2020. In order to account for key economic events, the study should have been conducted over a longer period of time.

The researchers utilized an OLS regression model to analyze the data. Because of the limitations of employing regression models, such as erroneous and deceptive outcomes that cause the value of the variable to change, it was not possible to generalize the conclusions of the research with accuracy. More so the result could be different if more data was added in the regression.

### **5.6 Suggestions for Further Research**

The study findings revealed an R square of 23.4%. This implies that there are other factors that affect growth among the insurance firms that were not addressed by the research. Other researches ought thus to focus on other factors for example; CEO tenure, incentive compensation, board composition in terms of expertise, audit committee, among other corporate governance aspects that affect growth among the insurance firms.

The study was limited to insurance companies in Kenya. Additional research on other Kenyan companies should be conducted. Future research should also look into how CG

structures affect other factors besides the growth, such as company value, efficiency, and performance, to name a few.

The focus of this research was drawn to the last five years. Future studies may span a longer time period, such as ten or twenty years, and might have a significant impact on this study by either complementing or contradicting its conclusions. A longer study has the advantage of allowing the researcher to capture the effects of business cycles such as booms and recessions.

Finally, this research relied on a regression model, which has its own set of limitations, such as errors and misleading results when a variable is changed. Future study should concentrate on models such as the Vector Error Correction Model (VECM) in order to investigate the numerous relationships between CG structures and growth.

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## APPENDICES

### Appendix I: Research Data

Company ID	Year	Growth	Board size	Ownership concentration	Board independence	Underwriting risk	Liquidity	Solvency margin
1	2016	-0.160	9.000	0.662	0.727	0.513	1.766	3.340
1	2017	-0.060	9.000	0.655	0.889	0.456	2.909	3.210
1	2018	0.150	10.000	0.644	0.900	0.676	5.958	3.110
1	2019	0.040	10.000	0.591	0.900	0.745	11.648	2.980
1	2020	0.050	10.000	0.519	0.900	0.723	7.503	2.860
2	2016	0.140	18.000	0.492	0.944	0.274	2.123	3.340
2	2017	0.150	18.000	0.504	0.944	0.325	3.237	3.340
2	2018	0.120	11.000	0.538	0.944	0.289	1.082	3.320
2	2019	0.090	11.000	0.525	0.944	0.295	2.279	3.280
2	2020	0.110	11.000	0.505	0.889	0.275	1.303	3.390
3	2016	0.010	10.000	0.552	0.875	0.643	1.594	1.094
3	2017	0.020	10.000	0.492	0.875	0.666	1.438	1.087
3	2018	0.020	10.000	0.490	0.875	0.664	1.013	1.098
3	2019	0.040	10.000	0.442	0.875	0.653	0.911	1.102
3	2020	0.060	10.000	0.416	0.875	0.637	2.355	1.109
4	2016	0.130	9.000	0.607	0.889	0.116	3.047	2.320
4	2017	0.120	9.000	0.575	0.714	0.132	3.001	2.280

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
4	2018	0.130	9.000	0.539	0.714	0.166	2.807	2.270
4	2019	0.170	10.000	0.470	0.714	0.147	2.973	2.340
4	2020	0.220	10.000	0.482	0.714	0.127	2.834	2.290
5	2016	0.040	13.000	0.587	0.714	0.701	3.249	1.873
5	2017	0.050	13.000	0.636	0.818	0.691	6.252	1.877
5	2018	0.010	13.000	0.614	0.818	0.702	2.076	1.892
5	2019	0.010	13.000	0.645	0.818	0.650	2.051	1.875
5	2020	0.070	13.000	0.647	0.833	0.538	2.674	1.839
6	2016	-0.100	9.000	0.740	0.833	0.733	1.940	4.420
6	2017	-0.080	11.000	0.740	0.833	0.661	1.022	4.450
6	2018	0.020	11.000	0.743	0.833	0.595	0.721	4.760
6	2019	0.390	11.000	0.721	0.833	0.608	0.699	4.890
6	2020	0.060	11.000	0.748	0.833	0.550	0.803	4.950
7	2016	-0.040	7.000	0.826	0.833	0.383	1.052	2.760
7	2017	0.150	9.000	0.830	0.857	0.355	2.357	2.740
7	2018	0.310	11.000	0.833	0.857	0.403	2.297	2.680
7	2019	-0.020	11.000	0.833	0.857	0.573	2.681	2.740
7	2020	0.110	11.000	0.843	0.857	0.561	2.348	2.680
8	2016	0.350	5.000	0.722	0.867	0.289	2.620	2.560
8	2017	-0.180	5.000	0.730	0.867	0.551	1.316	2.540
8	2018	0.390	5.000	0.729	0.867	0.431	1.196	2.620
8	2019	-0.190	5.000	0.741	0.875	0.765	1.174	2.570
8	2020	0.050	5.000	0.759	0.875	0.580	1.206	2.610

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
9	2016	0.100	10.000	0.817	0.875	0.248	1.228	1.002
9	2017	0.110	10.000	0.817	0.875	0.241	1.056	1.002
9	2018	0.120	10.000	0.817	0.875	0.358	1.096	1.002
9	2019	0.040	10.000	0.817	0.875	0.228	1.112	1.002
9	2020	0.050	10.000	0.817	0.889	0.221	1.160	1.002
10	2016	0.020	10.000	0.652	0.889	0.514	1.123	2.680
10	2017	0.020	10.000	0.713	0.889	0.530	4.511	2.720
10	2018	0.190	10.000	0.780	0.889	0.587	6.296	2.690
10	2019	0.020	10.000	0.775	0.889	0.693	10.089	2.680
10	2020	0.030	10.000	0.755	0.889	0.607	4.258	2.710
11	2016	0.090	10.000	0.724	0.889	0.535	8.843	9.720
11	2017	0.090	10.000	0.721	0.889	0.592	1.107	9.770
11	2018	0.100	11.000	0.710	0.889	0.508	1.146	9.520
11	2019	0.040	10.000	0.651	0.889	0.693	1.382	9.760
11	2020	0.020	10.000	0.710	0.889	0.763	1.536	9.650
12	2016	0.020	11.000	0.822	0.889	0.795	1.464	10.549
12	2017	0.020	11.000	0.819	0.889	0.785	1.283	10.549
12	2018	0.030	11.000	0.820	0.889	0.697	1.168	10.549
12	2019	0.040	10.000	0.812	0.889	0.668	1.305	10.549
12	2020	0.030	9.000	0.805	0.899	0.683	1.197	10.549
13	2016	-0.060	5.000	0.950	0.899	1.307	1.161	10.512
13	2017	-0.190	5.000	0.950	0.899	1.229	1.585	10.512
13	2018	-0.190	5.000	0.950	0.899	1.033	0.946	10.512

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
13	2019	-0.020	5.000	0.950	0.899	0.810	1.085	10.512
13	2020	-0.040	5.000	0.950	0.899	0.746	1.024	6.172
14	2016	0.300	7.000	0.791	0.900	0.156	1.469	6.172
14	2017	0.240	7.000	0.793	0.900	0.174	0.984	6.172
14	2018	0.200	7.000	0.790	0.900	0.336	1.334	8.570
14	2019	0.170	7.000	0.789	0.900	0.322	1.540	3.466
14	2020	0.140	7.000	0.787	0.900	0.377	1.259	7.433
15	2016	0.000	6.000	0.782	0.909	0.393	1.115	7.060
15	2017	-0.200	6.000	0.884	0.909	0.444	4.144	10.053
15	2018	-0.010	6.000	0.784	0.909	0.384	6.657	10.053
15	2019	-0.020	6.000	0.785	0.909	0.328	7.954	5.900
15	2020	0.120	6.000	0.791	0.909	0.270	8.475	5.900
16	2016	0.020	6.000	0.392	0.909	0.142	3.345	5.901
16	2017	0.030	6.000	0.391	0.909	0.104	0.951	6.268
16	2018	0.130	6.000	0.392	0.909	0.090	1.097	6.268
16	2019	0.380	6.000	0.394	0.909	0.188	1.422	8.848
16	2020	0.010	6.000	0.393	0.909	0.295	1.486	9.532
17	2016	-0.050	10.000	0.394	0.909	0.582	1.736	9.532
17	2017	0.050	10.000	0.620	0.909	0.529	1.237	2.326
17	2018	-0.070	10.000	0.648	0.909	0.569	0.950	2.326
17	2019	0.050	10.000	0.654	0.909	0.462	0.935	2.591
17	2020	0.050	10.000	0.638	0.909	0.507	0.968	2.591
18	2016	0.070	9.000	0.645	0.909	0.437	1.224	2.591

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
18	2017	0.060	9.000	0.668	0.917	0.465	1.643	6.646
18	2018	0.050	9.000	0.691	0.917	0.486	1.032	2.000
18	2019	0.040	9.000	0.541	0.917	0.495	0.923	2.000
18	2020	0.030	9.000	0.478	0.917	0.615	0.897	2.000
19	2016	-0.210	9.000	0.492	0.917	1.006	1.157	2.000
19	2017	-0.050	9.000	0.492	0.923	0.797	0.502	2.000
19	2018	-0.050	9.000	0.492	0.923	0.966	0.465	4.259
19	2019	-0.080	9.000	0.492	0.923	0.366	0.563	4.485
19	2020	0.030	9.000	0.492	0.923	0.446	1.400	2.854
20	2016	-0.570	9.000	0.645	0.935	1.419	0.624	2.844
20	2017	-0.530	9.000	0.668	0.909	0.867	0.740	2.844
20	2018	0.080	9.000	0.669	0.909	0.520	0.693	2.844
20	2019	0.060	9.000	0.688	0.909	0.475	0.563	2.674
20	2020	0.000	9.000	0.713	0.909	0.466	0.636	3.005
21	2016	0.060	7.000	0.533	0.909	0.381	2.205	3.005
21	2017	0.070	7.000	0.541	0.909	0.383	2.524	3.005
21	2018	0.060	7.000	0.491	0.909	0.394	3.374	2.000
21	2019	0.040	7.000	0.477	0.909	0.471	2.833	2.000
21	2020	0.120	7.000	0.416	0.909	0.279	3.020	2.000
22	2016	0.130	15.000	0.690	0.909	0.285	4.402	2.000
22	2017	0.160	15.000	0.692	0.909	0.295	2.328	2.000
22	2018	0.200	15.000	0.675	0.909	0.266	1.771	2.000
22	2019	0.230	14.000	0.581	0.909	0.280	1.895	2.000

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
22	2020	0.020	14.000	0.561	0.909	0.277	2.131	2.000
23	2016	0.060	8.000	0.428	0.714	0.240	0.955	2.000
23	2017	0.060	8.000	0.558	0.818	0.261	1.219	2.000
23	2018	0.100	8.000	0.615	0.818	0.240	1.156	2.000
23	2019	0.080	7.000	0.619	0.818	0.216	1.116	3.782
23	2020	0.120	7.000	0.571	0.818	0.820	1.078	3.782
24	2016	0.160	7.000	0.628	0.909	0.888	1.524	3.782
24	2017	0.140	7.000	0.631	0.909	0.801	1.488	3.782
24	2018	0.110	6.000	0.602	0.917	0.855	1.277	3.782
24	2019	0.110	6.000	0.500	0.917	0.868	1.300	1.002
24	2020	0.170	6.000	0.367	0.917	0.078	1.100	1.002
25	2016	0.050	7.000	0.645	0.917	0.091	0.630	1.002
25	2017	0.010	7.000	0.668	0.917	0.148	1.595	1.002
25	2018	-0.090	7.000	0.503	0.917	0.191	1.487	1.002
25	2019	0.100	7.000	0.382	0.917	0.239	1.285	1.087
25	2020	-0.030	7.000	0.173	0.917	0.265	1.410	1.094
26	2016	0.050	7.000	0.667	0.857	0.221	0.343	1.098
26	2017	0.010	8.000	0.700	0.875	0.229	0.672	1.102
26	2018	0.090	8.000	0.700	0.875	0.253	2.973	1.109
26	2019	-0.030	7.000	0.700	0.875	0.303	2.834	1.839
26	2020	0.050	7.000	0.700	0.857	0.294	3.249	1.873
27	2016	-0.010	16.000	0.700	0.875	0.280	6.252	1.875
27	2017	0.070	16.000	0.727	0.938	0.284	2.076	1.877



<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
27	2018	0.090	16.000	0.727	0.938	0.382	2.051	1.892
27	2019	-0.070	13.000	0.727	0.923	0.283	2.674	2.270
27	2020	-0.080	13.000	0.750	0.938	0.271	2.828	2.280
28	2016	0.010	14.000	0.750	0.857	0.267	2.910	2.290
28	2017	0.000	14.000	0.620	0.929	0.236	3.463	2.320
28	2018	0.080	14.000	0.676	0.929	0.241	3.601	2.340
28	2019	-0.070	14.000	0.640	0.889	1.139	4.359	2.540
28	2020	-0.250	14.000	0.622	0.889	0.939	1.766	2.560
29	2016	-0.140	12.000	0.637	0.917	0.728	2.909	2.570
29	2017	-0.160	12.000	0.602	0.917	0.673	5.958	2.610
29	2018	0.000	12.000	0.546	0.917	0.587	11.648	2.620
29	2019	0.010	13.000	0.563	0.917	0.476	7.503	2.680
29	2020	0.000	13.000	0.505	0.917	0.437	2.123	2.680
30	2016	-0.030	10.000	0.432	0.900	0.388	3.237	2.680
30	2017	0.010	10.000	0.347	0.900	0.347	1.082	2.680
30	2018	0.030	10.000	0.416	0.900	0.346	2.279	2.690
30	2019	0.040	10.000	0.439	0.900	0.348	1.303	2.710
30	2020	0.030	10.000	0.439	0.900	0.347	1.594	2.720
31	2016	0.020	5.000	0.302	0.800	0.310	1.438	2.740
31	2017	0.040	5.000	0.555	0.800	0.357	1.013	2.740
31	2018	0.060	5.000	0.605	0.800	0.369	0.911	2.760
31	2019	-0.230	5.000	0.649	0.800	0.683	2.355	2.860
31	2020	0.030	5.000	0.620	0.800	0.679	3.047	2.980

<b>Company ID</b>	<b>Year</b>	<b>Growth</b>	<b>Board size</b>	<b>Ownership concentration</b>	<b>Board independence</b>	<b>Underwriting risk</b>	<b>Liquidity</b>	<b>Solvency margin</b>
32	2016	0.030	11.000	0.545	0.909	0.594	3.001	3.110
32	2017	0.100	11.000	0.360	0.909	0.763	2.807	3.210
32	2018	0.030	11.000	0.424	0.909	0.754	2.973	3.280
32	2019	-0.040	11.000	0.403	0.909	1.087	2.834	3.320
32	2020	-0.040	11.000	0.364	0.909	1.053	3.249	3.340
33	2016	-0.100	12.000	0.029	0.917	1.011	6.252	3.340
33	2017	0.000	12.000	0.302	0.917	0.906	2.076	3.340
33	2018	0.030	12.000	0.302	0.917	0.889	2.051	3.390
33	2019	-0.080	12.000	0.266	0.917	0.530	2.674	4.420
33	2020	-0.030	12.000	0.379	0.917	0.526	2.271	4.450
34	2016	0.000	8.000	0.309	0.750	0.537	1.838	4.760
34	2017	0.000	8.000	0.453	0.750	0.452	2.358	4.890
34	2018	-0.110	8.000	0.480	0.750	0.403	2.522	4.950
34	2019	0.100	8.000	0.487	0.750	0.046	1.310	9.520
34	2020	0.090	8.000	0.462	0.833	0.075	1.175	9.720
35	2016	0.160	9.000	0.496	0.714	0.075	1.170	9.760
35	2017	0.190	9.000	0.611	0.714	0.084	1.167	9.770
35	2018	0.230	9.000	0.652	0.818	0.364	1.138	5.251
35	2019	0.190	9.000	0.658	0.818	0.560	0.448	5.267
35	2020	0.260	9.000	0.626	0.818	0.524	1.042	5.271
36	2016	0.270	8.000	0.654	0.818	0.526	1.059	5.261
36	2017	0.230	8.000	0.624	0.800	0.555	1.112	5.230
36	2018	0.220	8.000	0.689	0.875	0.025	1.125	5.428

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36	2019	0.060	8.000	0.645	0.875	0.718	1.159	5.310
36	2020	-0.230	8.000	0.668	0.875	0.710	1.144	5.372
37	2016	-0.120	11.000	0.728	0.875	0.636	1.145	5.436
37	2017	-0.050	11.000	0.629	0.875	0.567	1.094	4.269
37	2018	0.060	11.000	0.609	0.571	0.491	1.033	4.271
37	2019	0.050	11.000	0.739	0.571	0.492	1.271	3.838
37	2020	0.090	11.000	0.743	0.571	0.448	1.278	3.877
38	2016	0.130	9.000	0.517	0.571	0.423	1.172	3.836
38	2017	0.170	9.000	0.517	0.714	0.437	1.166	4.358
38	2018	-0.120	9.000	0.517	0.889	0.486	1.558	4.396
38	2019	0.040	9.000	0.517	0.889	0.392	1.623	4.293
38	2020	0.030	9.000	0.517	0.889	0.280	1.638	3.741
39	2016	-0.040	9.000	0.517	0.889	0.530	1.605	3.267
39	2017	0.050	9.000	0.517	0.889	0.468	1.505	3.316
39	2018	0.039	9.000	0.457	0.889	0.450	1.265	3.354
39	2019	0.039	9.000	0.475	0.889	0.442	1.287	3.382
39	2020	0.036	9.000	0.475	0.889	0.341	1.278	3.414
40	2016	0.028	17.000	0.475	0.941	0.283	1.222	3.267
40	2017	0.050	15.000	0.457	0.933	0.400	1.047	3.316
40	2018	0.039	15.000	0.475	0.933	0.318	1.169	3.354
40	2019	0.039	15.000	0.538	0.933	0.399	1.125	3.382
40	2020	0.036	15.000	0.538	0.933	0.400	1.100	3.414
41	2016	0.028	14.000	0.523	0.938	0.335	1.042	3.291

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41	2017	0.045	16.000	0.538	0.938	0.326	1.240	3.343
41	2018	0.045	12.000	0.457	0.938	0.338	1.198	3.347
41	2019	0.047	12.000	0.529	0.938	0.376	1.159	3.369
41	2020	0.028	12.000	0.529	0.938	0.337	1.148	3.399
42	2016	0.037	12.000	0.489	0.917	0.460	1.081	3.035
42	2017	0.042	12.000	0.489	0.917	0.679	2.095	3.083
42	2018	0.041	13.000	0.600	0.923	0.414	2.365	3.164
42	2019	0.043	16.000	0.600	0.938	0.737	2.520	3.219
42	2020	0.039	17.000	0.600	0.941	0.546	2.253	3.229
43	2016	0.036	11.000	0.600	0.909	0.390	2.313	2.966
43	2017	0.014	11.000	0.600	0.909	0.440	2.941	3.089
43	2018	0.007	11.000	0.500	0.909	0.420	2.381	3.096
43	2019	-0.010	11.000	0.500	0.909	0.380	2.632	3.061
43	2020	0.001	11.000	0.500	0.909	0.230	4.348	3.484
44	2016	0.038	14.000	0.500	0.900	0.202	4.950	3.509
44	2017	0.040	14.000	0.500	0.900	0.368	2.717	3.576
44	2018	0.045	14.000	0.400	0.900	0.331	3.021	3.670
44	2019	0.039	14.000	0.400	0.900	0.308	3.247	3.703
44	2020	0.041	14.000	0.400	0.900	0.280	3.571	2.290
45	2016	0.040	12.000	0.400	0.900	0.211	4.739	3.043
45	2017	0.042	12.000	0.400	0.900	0.460	2.174	3.138
45	2018	0.023	12.000	0.509	0.899	0.340	2.941	3.170
45	2019	0.041	13.000	0.509	0.899	0.304	3.289	3.215

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45	2020	0.041	13.000	0.509	0.899	0.291	3.436	2.609
46	2016	0.019	10.000	0.509	0.899	0.337	2.967	2.670
46	2017	0.019	10.000	0.509	0.899	0.376	2.660	2.782
46	2018	0.016	10.000	0.600	0.899	0.679	1.473	2.001
46	2019	0.021	10.000	0.600	0.889	0.414	2.415	2.000
46	2020	0.011	10.000	0.600	0.889	0.737	1.357	3.334
47	2016	0.056	14.000	0.600	0.889	0.546	1.832	3.377
47	2017	0.056	14.000	0.600	0.889	0.390	2.564	3.441
47	2018	0.067	14.000	0.350	0.889	0.340	2.941	3.533
47	2019	0.052	14.000	0.350	0.889	0.440	2.273	3.579
47	2020	0.042	14.000	0.350	0.889	0.604	1.656	3.300
48	2016	0.040	12.000	0.350	0.889	0.480	2.083	3.360
48	2017	0.042	12.000	0.433	0.889	0.400	2.500	3.451
48	2018	0.033	12.000	0.314	0.889	0.340	2.941	3.531
48	2019	0.034	13.000	0.314	0.889	0.240	4.167	3.544
48	2020	0.038	13.000	0.418	0.889	0.230	4.348	2.670
49	2016	0.023	10.000	0.418	0.889	0.202	4.950	2.782
49	2017	0.029	10.000	0.418	0.889	0.368	2.717	3.234
49	2018	0.032	10.000	0.418	0.889	0.331	3.021	3.298
49	2019	0.025	10.000	0.400	0.889	0.308	3.247	3.312
49	2020	0.022	10.000	0.475	0.889	0.280	3.571	1.846

