Insurance Risks and Financial Performance of Insurance Companies in Kenya

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Abstract

The insurance industry is instrumental in economic growth through enabling protection, capital creation and promoting commerce. However, there has been a decline in the insurance industry's profitability in Kenya. Hence, the study assessed the effect of insurance risks on the financial performance of insurance companies in Kenya. Specifically, the study examined the effects of credit risk, liquidity risk, solvency risk, reinsurance risk and underwriting risk on financial performance of insurance companies in Kenya. GDP was used as a moderating variable. The study was anchored on agency theory, credit risk theory, liquidity preference theory and collective risk theory. The target population included all the 53 licensed insurance companies operating in Kenya since 2015. A census approach was used. Explanatory research design and positivism research philosophy were utilized. Secondary data was gathered from audited financial statements submitted to Insurance Regulatory Authority for the period between 2015 and 2020. With the aid of STATA, panel data was analysed through descriptive statistics, correlation and regression analyses. The multiple regression results revealed that credit risk had a negative significant effect on financial performance, liquidity risk had a negative significant effect on financial performance, solvency risk had a negative significant effect on financial performance and underwriting risk had a negative significant effect on financial performance. But reinsurance risk had a positive insignificant effect on financial performance. GDP growth rate significantly moderates the relationship between the insurance risks and the financial performance of insurance companies in Kenya. The study recommended that insurance companies should have good credit risk management frameworks to minimize credit risks, implement proper investment portfolio management to guard against liquidity risks, in cases of negative asset base, increase the share capital, cover most of their claims themselves but ensure they have adequate reinsurance where high risk investment is involved and put in place proper policy estimation and valuation techniques.

Keywords: *Credit risk, liquidity risk, solvency risk, reinsurance risk, underwriting risk, GDP, financial performance, insurance companies, Kenya*

1.0 Background of the Study

As financial intermediaries, insurance companies are instrumental in economic development. Insurance firms differ from the other financial intermediaries in their functions (Saunders & Cornett, 2008). Insurance can promote growth by effectively managing risks and mobilizing savings in investments through its risk indemnification and financial intermediary functions (Ward, 2000). It promotes economic growth by utilizing different channels, like creating certainty to improve investment, helping with access to capital, ensuring liquidity, and mobilizing savings thus contributing to sustainable and responsible development (Feyen, Lester, & Rocha, 2011). According to the Economic Survey of Kenya (2019), the finance and insurance sector contributed 6.6% to Kenya's GDP. Thus, despite the critical contribution to the GDP of the finance and insurance industry as a whole, the insurance industry contribution on its own has been declining. Insurance spending ratio, which measures the insurance industry's input to the country's economy, declined for the period 2015 to 2020, it declined by 18% from 2.79% in 2015 to 2.30% in 2020 (AKI Annual Report, 2020).

Insurance firms take risks on behalf of their customers and their own. Insurance firms struggle with various risks that significantly affect their performance (Omasete, 2014). Insurance companies' risks tend to hinder their ability to expand. The effect of risks on insurance firms' performance is more pronounced in developing countries because their regulatory framework is relatively weak compared to the developed countries. Indeed, Wilson (2012) highlights that the effective management of risk is an internal factor that affects the firm operational outcome and is ultimately expected to impact profitability. The common form of risks that insurance companies may face in their day-to-day activities include credit, underwriting, solvency, liquidity and reinsurance risks (Baluch, Mutenga & Parsons, 2011). Other risks which may affect insurance companies include operational, currency, interest rate and price risks. Insurance firms lacking risk control will aggregate claims from clients, bringing about more harm and poor performance (Magezi, 2003).

Rejda (2008) indicated that risk management incorporates identifying risk exposures and choosing effective procedures to manage them. The concept of risk has received different definitions that are attributed to the diverse nature of business units that face the risks (Holton, 2004). Due to the same, scholars have tended to define risks guided by the nature of the industry; insurance businesses fall under the financial services industry. Therefore, insurance risks will arise from financial operations of insurance business. Risks in insurance represents the possibility of investors losing investments if they are putting resources in a company with insufficient cash flows to satisfy commitments (Selvaraj & Karan, 2012). Such insurance risks include credit risk, liquidity risk, solvency risk, reinsurance risk and underwriting risk which were researched in this study.

Credit risk arise if a debtor does not fulfil legally binding commitments (Anthony & David, 1997). This risk normally arises when debtors don't pay for goods or services supplied to them on credit. In insurance companies credit risk may arise when credit customers do not pay premiums on a timely basis (Sisay, 2017). Brown and Moles (2014) proposed that in advancing a credit, a firm should compare the gain to be realized if there is no default against the potential loss of extending the credit on the basis that a default might take place and at the same time the amount to be lost if the default takes place. Further, credit risk is affected by exposure to parties that share the same characteristic, for example, insuring in one segment of the market with similar risk exposure and settlement risk that arises from processing transactions for other

parties. As business transactions increase, credit risk also changes because of the increased exposure on country risks as manifested by political, economic, currency and enforcement risk. The country risk comes about when a business firm diversifies to institutions and individuals in countries with different business codes, standards and legal systems (He & Xiong, 2012). The trends of credit risk in the Kenyan insurance industry are as shown in figure 1 below
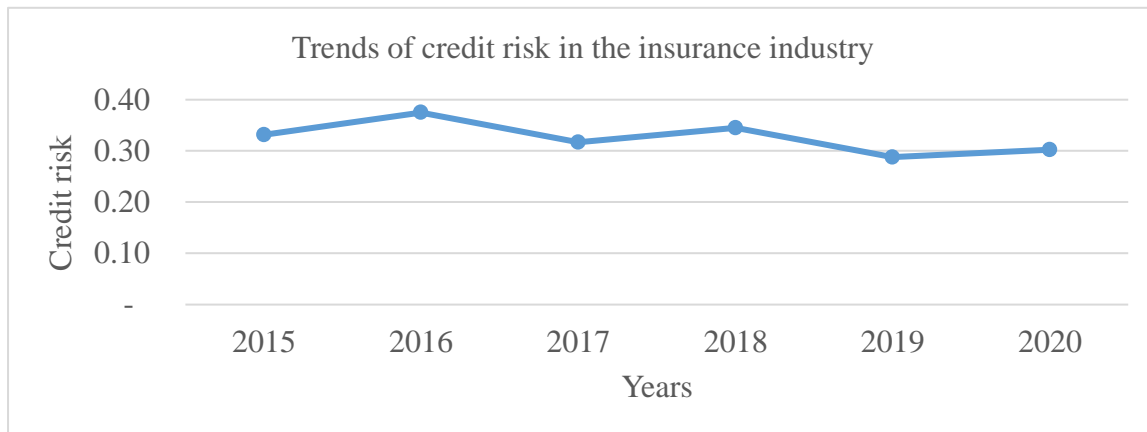

Figure 1: Trends of credit risk in the insurance industry

Source: IRA Annual Reports, (2015-2020)

As illustrated in Figure 1, the industry's credit risk determined by the ratio of outstanding premiums and amount due from reinsurer to net assets shows a random trend. The industry shows an increase of 13% in credit risk from the year 2015 to 2016, a decrease of 16% from the year 2016 to 2017, an increase of 9% from the year 2017 to 2018, a decrease of 17% from the year 2018 to 2019 and an increase of 5% from the year 2019 to 2020. Liargovas (2008) opined that liquidity risk measures the level to which liabilities due in the following year are financed by liquid assets or assets easily turned to cash. Hong (2014) emphasized that an expansion in the liquidity risk in insurance industry is because of changes in the monetary policy due to the volatility of interest rates. Similarly, Imbierowicz and Rauch (2014) assert that insurance firms take more risk when risk-free government securities increase, thus drawing more investors to the security market, which increases liquidity supply in inter-bank lending. The liquidity risk trends in the Kenyan insurance industry are as shown in figure 2 below
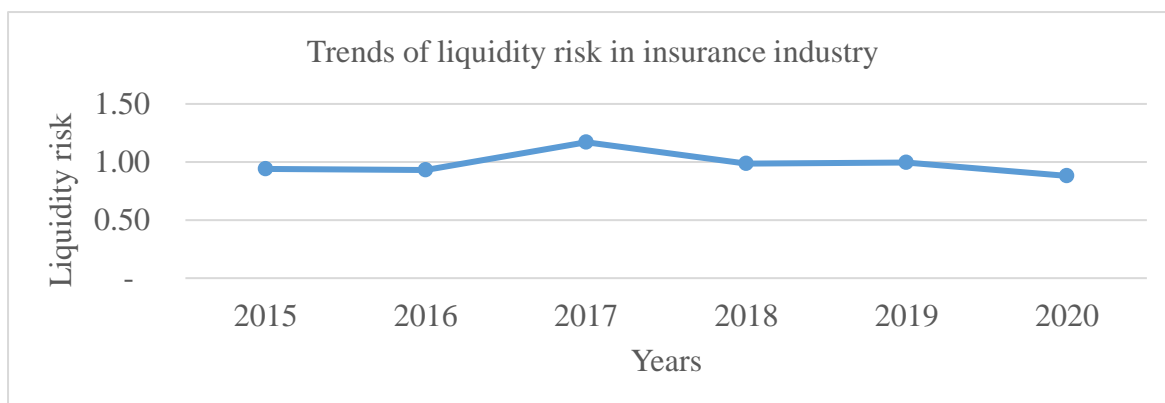

Figure 2: Trends of liquidity risk in the insurance industry

Source: IRA Annual Reports, (2015-2020)

Figure 2 above illustrates the trends of liquidity risk in the insurance industry as determined by the current ratio which shows a fluctuating trend. The industry shows stability in liquidity risk from the year 2015 to 2016, an increase of 25.4% from the year 2016 to 2017, a decrease of 15.6% from the year 2017 to 2018, a stabilization from the year 2018 to 2019 and a decrease of 11% from the year 2019 to 2020. These trends show inconsistent increases, decreases and stability over the study period. Stulz (2010) stated that solvency is having enough value in assets to cover all the business liabilities. Solvency affects a firm's ability to acquire capital. The relationship between balance sheet items defines the extent of solvency in a business. Most firms have positive equity and when a firm has negative equity, it becomes bankrupt. If a business becomes insolvent, liquidation follows as it cannot make enough cash flows to meet its debt obligations appropriately (Okotha, 2003). The trends of solvency risk in the Kenyan insurance industry are as shown in figure 3 below
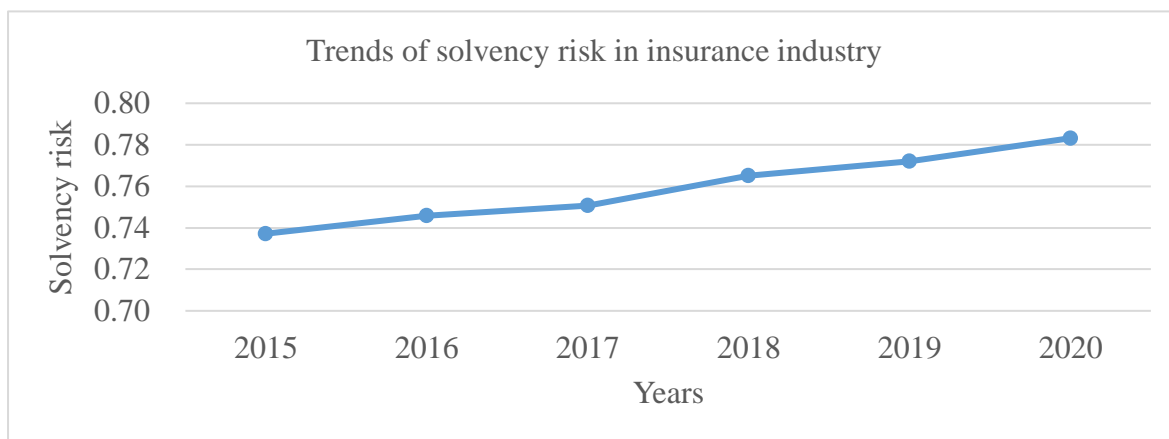

Figure 3: Trends of solvency risk in the insurance industry

Source: IRA Annual Reports, (2015-2020)

Figure 3 above illustrates the trends of solvency risk in the insurance industry as determined by ratio of total liabilities to total assets. The industry shows a consistent increase in solvency risk from 2015 to 2020, with an increase of 6.2% over the period. Reinsurance risk is an insurance risk that arises when a reinsurer agrees to compensate the reinsured for the damages the reinsured suffers as a result of a policy or policies issued (Obonyo, 2016). When creating the reinsurance plans, the firm must determine its risk tolerance in its underwriting and consider which reinsurance plans are appropriate to confining risks over the risk tolerance level. Reinsurance helps secure insurers against losses by enabling them to spread their risks. Cummins et al. (2008) observed that reinsurance purchase raises the insurer's expenses significantly; however, it dramatically minimizes the loss ratio volatility. The trends of reinsurance risk in the Kenyan insurance industry are as shown in figure 4 below
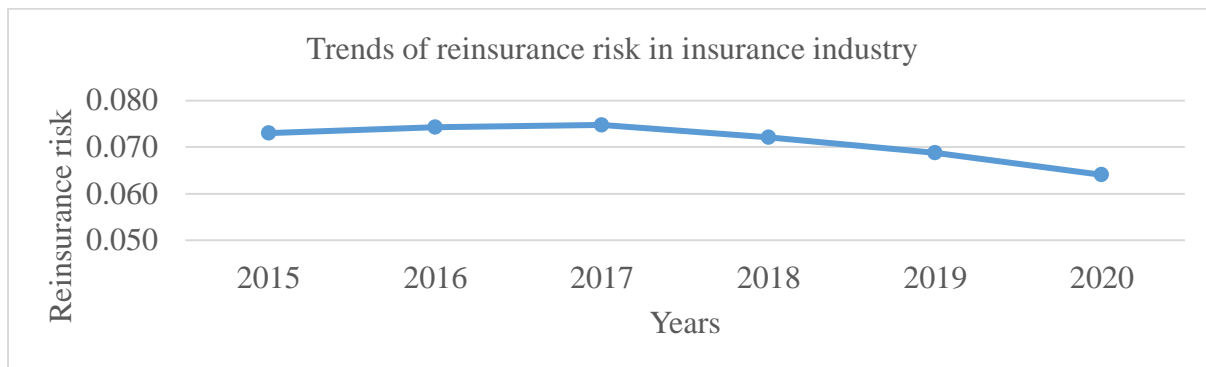
Figure 4: Trends of reinsurance risk in insurance industry

Source: IRA Annual Reports, (2015-2020)

As illustrated in Figure 4, the industry's reinsurance risk determined by ratio of premium ceded to total assets increased by 2.4% between years 2015 to 2017 and decreased by 14% between year 2017 and 2020. Bouriaux and Scott (2004) asserts underwriting risk relates to the risk that premiums received may be inadequate to meet the expense of cover because insurance rates are set as per forecasts of estimated claim expenses as well as costs of managing the policy. Underwriting entails pricing of a policy and probability of the event insured happening. Before the event insured happens there is pricing risk because the expenses and claims can exceed the contributed premiums. Some insurance companies in Kenya have been delaying payment of claims, leading to heavy fines from the regulator. The trends of underwriting risk in the Kenyan insurance industry are as shown in figure 5 below
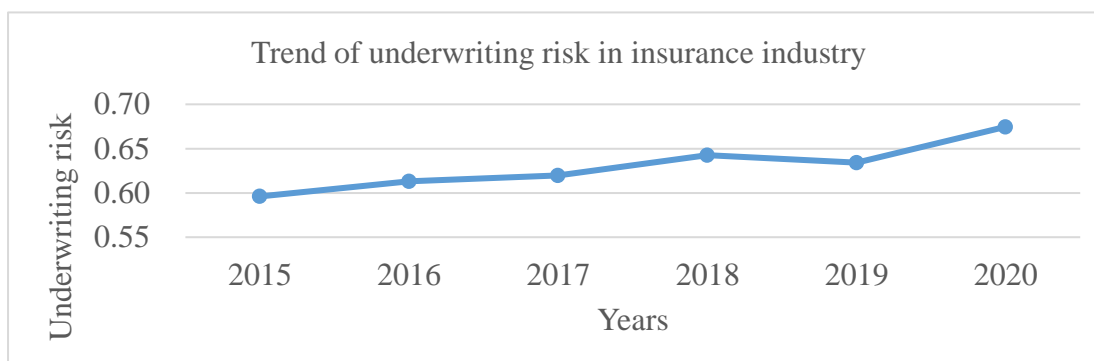

Figure 5: Trends of underwriting risk in the insurance industry

Source: IRA Annual Reports, (2015-2020)

Figure 5 above illustrates the insurance industry's underwriting risk as determined by loss ratio claims incurred to premium earned consistently increased. There was an increase of 13.2% between years 2015 to 2020. Macroeconomic variables such as the GDP are likely to increase or decrease the financial performance of organizations. GDP is an economic measure that shows the level of gross economic output concerning the country's population (Ndunda, 2016). The GDP growth rate reflects economic activity and development, which influences the different factors associated with the demand and supply of insurance services (Suheyli, 2015). Global GDP reduced by 3.6% in the year 2020 in comparison to an increase of 2.3% in the year 2019, while Kenya's GDP is projected to have reduced by 0.3% as compared to an increase of 5.0% in the year 2019 because of the effects of COVID19 (IRA Annual Report, 2020). GDP

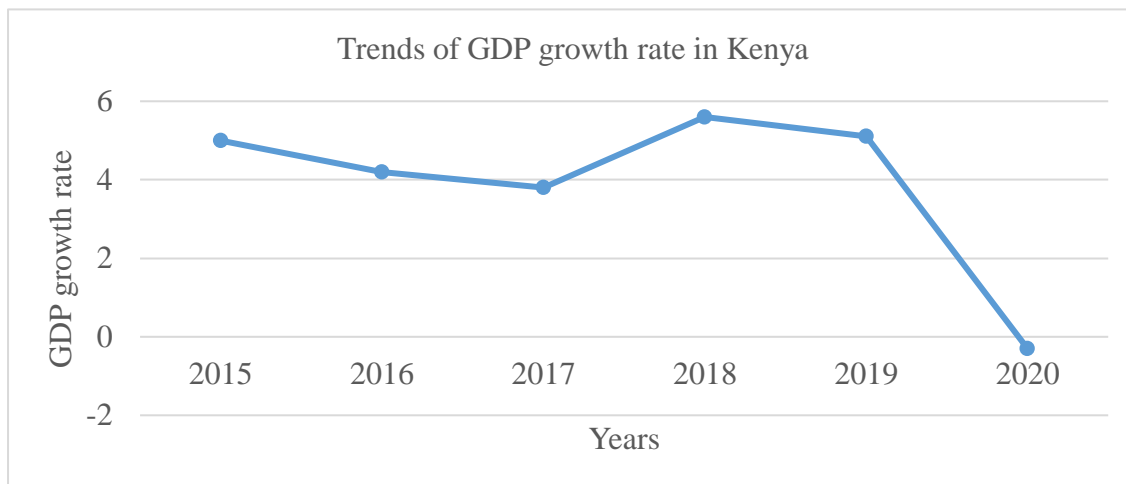growth rate was used as a moderating variable. The trends of GDP growth rate are as shown in figure 6 below:

Figure 6: Trends of GDP growth rates

Source: CBK annual GDP growth rates

Figure 6 above illustrates the GDP growth rates. There was a decrease of 24% between years 2015 to 2017 this can be partly attributed to instability caused by elections in 2017. Between year 2019 to 2020 the GDP growth late plummeted from 5.1 to -0.3 (106%) which can be explained by the severe effects of COVID19. From a technical standpoint, a company's financial performance is a subjective metric that measures how effectively the company uses its available capital to increase sales (Anginer, Demirguc-Kunt, Ma, 2018). As a result, a firm's financial success tests the organization's financial soundness and wellbeing in monetary terms. The financial success compares the performance of the companies. The ratios such as liquidity, debt, operations, and profitability ratios and so on are used to calculate financial efficiency (Sangmi & Nazir, 2010). The activities of firms which include revenues generated from the operations, other incomes from banking activities or income from the investment of shareholders are often used to assess financial performance (Mulwa, 2015). The emergence of COVID-19 is negatively influencing institution's performances in the World, including insurance firms. In Kenya, it is negatively affecting the sector in various ways, such as reduced interest income from the money markets, reduced premiums, and increased insurance claims (IRA Annual Report, 2020). The trends of financial performance in the Kenyan insurance industry are as shown in figure 7 below:
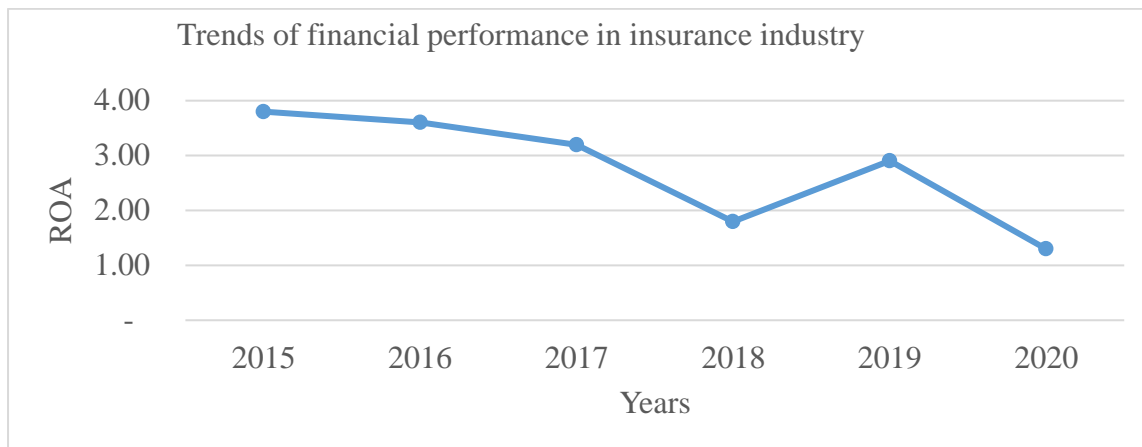
Figure 7: Trends of financial performance in the insurance industry

Source: IRA Annual Reports, (2015-2020)

Figure 7 indicates a financial performance trend in the insurance industry as measured by ROA with a huge decrease of 52.6% between the years 2015 to 2018 from 3.8 to 1.8. However, there was an increase in the industry profitability between 2018 and 2019, with the ROA increasing by 61.1%. There was a major decrease of ROA between the years 2019 to 2020 of 55.2% from 2.9 to 1.3 on the backdrop of the COVID-19.

1.1 Statement of the Problem

The insurance industry in Kenya has continued to post declining financial performance results in the recent past. Despite growth in premiums and asset base, the profitability for the industry has been showing irregular trends. The insurance industry ROA declined by 52.6% from the year 2015 to 2018 and by 55.2% from the year 2019 to 2020 while the industry ROE showed an almost similar trend by declining by 57% from the year 2015 to 2018 and by 59.8% from the year 2019 to 2020 (IRA Annual Reports, 2015-2020). The declining trends in financial performance in the Kenyan insurance industry show some instability which will need to be investigated if the industry is to ensure sustained economic growth. With the decline in financial performance and some insurance companies in Kenya having collapsed, liquidated, or put under statutory management in the past, there is a need to have a comprehensive view of the insurance risks, not individually but as a whole. Some of the affected insurance companies are; United Insurance, Blue Shield Insurance, Access Insurance Company, Kenya National Assurance Company, Concord Insurance and Resolution Insurance.

Previous studies on the present topic, for instance, Kamau & Njeru (2016); Muinde (2018); Dabo, Andow & James (2018) and Yatama, *et al* (2020) had not focused on credit, liquidity, solvency, reinsurance or underwriting risks in one research study. The studies also only considered listed insurance companies and the moderating effect of GDP was not factored in. The current study bridges the above conceptual gaps by considering insurance risks as a whole; it will include all the insurance companies and incorporate the moderating effect of GDP. Other studies such as Ogilo (2013), Muriithi *et al.* (2016), Isanzu (2017) studied the effects of credit risk and financial performance from commercial banks perspective; these researches did not consider credit risk in the insurance industry. Although insurance companies do not advance loans and credits like banks, they experience credit risk that may affect their financial performance. Mwangi & Iraya (2014), Mehari, D., & Aemiro, T. (2013), Aajao (2018), Hamal

(2020) and Kamau *et al.* (2021) focused on firm specific factors such as the growth of premiums, liquidity, loss ratio, leverage, firm size, firm age and financial performance but did not focus on the risks the insurance companies face. Thus, this study will determine the effect of insurance risks on financial performance of insurance companies in Kenya, with GDP as a moderating variable.

1.2 Research Objectives

  i.   To determine the effect of credit risk on financial performance of insurance companies in Kenya.
 ii.   To examine the effect of liquidity risk on financial performance of insurance companies in Kenya.
iii.   To assess the effect of solvency risk on financial performance of insurance companies in Kenya.
 iv.   To examine the effect of reinsurance risk on financial performance of insurance companies in Kenya.
  v.   To analyze the effect of underwriting risk on financial performance of insurance companies in Kenya.
 vi.   To determine the moderating effect of GDP on the relationship between the insurance risks and financial performance of insurance companies in Kenya.

1.3 Research Hypotheses

H_{01}: Credit risk has no significant effect on financial performance of insurance companies in Kenya.

H_{02}: Liquidity risk does not significantly affect financial performance of insurance companies in Kenya.

H_{03}: Solvency risk does not significantly affect financial performance of insurance companies in Kenya.

H_{04}: Reinsurance risk does not significantly affect financial performance of insurance companies in Kenya.

H_{05}: Underwriting risk does not significantly affect financial performance of insurance companies in Kenya.

H_{06}: GDP does not significantly moderate the relationship between the insurance risks and financial performance of insurance companies in Kenya.

2.0 Literature Review

2.1 Theoretical Review

This study was based on agency theory, credit risk theory, liquidity risk theory and collective risk theory.

2.1.1 Agency Theory

Agency theory was advanced by Jensen and Meckling (1976). It presents principal and agent relation in an organization with separate ownership and control. The split of management and ownership leads to differences of the interests among the principal and agents (Hoskissonet al., 1999). This can create conflicts normally referred to as agency problem where management runs an organization with their interests not shareholders'. The opportunities of managers to access even more information than the principals create information asymmetry. The main concern in an agency relationship is finding solutions to agency problems created by the conflict between the principal's objectives and those of the agent. Managers are responsible for

reducing risks to minimize the varying organization returns by concentrating on profitability and the distribution of organization returns (Stulz, 1984). Agency theory is essential in this study as it links financial performance (profitability), the dependent variable, and the insurance risks management can take to ensure good profitability. Shareholders are the principal and management is the agent. Management should provide effective and efficient utilization of the resources entrusted to them by shareholders for better financial performance. An agency problem arises when an insurance company is poorly managed hence making losses and eventually collapsing. This makes the shareholders unable to earn dividends or recoup their investments.

2.1.2 Credit Risk Theory

Merton (1974) advanced credit risk theory, and suggests the possibility of defaulting of a firm and individual from its financial commitments is due from to its asset development designed by a process with continuous parameters. A default can occur throughout the life of an outstanding loan that has been advanced to a borrower or in the case of an insurance company, the inability to pay the premium payable by the insured. The credit risk theory is the principal accessible portfolio model for assessing credit risk (Cantor & Frank, 1996). The popularity of the Credit risk model is due to its application in many firms in their business. Organizations ought to foster a model to check credit risk across different instruments like trades, advances, traditional securities, fixed pay instruments; business contracts, including exchanging credits and receivables and different subsidiaries (Fatemi & Fooladi, 2006). The relevance of the theory in this study focuses on evaluating credit risk and credit risk management in different firms, in this case, insurance companies. If insurance companies' customers default on their premiums, it may lead to the firm's cash flow problems which may affect their financial performance. It is therefore important that insurance firms ensure they have good credit risk evaluation and management practices in place.

2.1.3 Liquidity Preference Theory

Keynes (1989) proposed liquidity preference theory. According to the theory, the requirements of an investor of high-interest rates that have a long maturity period are due to the high risks connected with them. All other factors being equal, investors would rather keep cash or other liquid assets that entail less risk. When an investment is highly liquid, it is quicker to exchange it at its worth (Maug, 1998). Investors in insurance companies who want to save funds favour short-period bonds over long-period debt because short-period bonds are more liquid, meaning they can be convertible to cash at less risk of losing the principal. On the other hand, when Insurance Companies borrow, they favour long-period debt since short-period debt exposes them to repay the debt under difficult conditions. Jarrow, Lando and Yu (2005), argue that combining these two sets of expectations results in a favourable maturity risk premium that rises with maturity. A firm, has a liquidity preference that decides which combination of assets and liabilities is appropriate to them. Insurance companies with liquidity preferences will not passively satisfy credit demand, but will compare estimated returns and liquidity of all purchasable assets first. Liquidity preference theory is useful in this study since it illustrates how insurance firms must find a balance between assets and liabilities to ensure that they can satisfy their debt commitments as and when due and avoid liquidity risks.

2.1.4 Collective Risk Theory

Collective risk theory was proposed by Lundberg in 1934 and further developed by Cram et al. The theory states that the insurance business undergoes two types of risks, commercial risks and insurance risks (Gathu, 2018). Commercial risks rely on basic economic variations and poor investments. In contrast, insurance risks are distinct and related to risk changes as measured by the difference between claim amounts and expected claim amounts. According to this theory, insurance risks are classified into two types; exterior risks such as excess deaths resulting from wars and also epidemics and the risk of random variations. The theory of risk has been developed which uses mathematical versions to determine how an insurance company may be shielded from the damaging results of these fluctuations. This theory investigates the whole risk enterprise, the main interest is not on individual claim policies gains or losses but on the total gains from all policies in a portfolio (Schemetter, 2005). This theory is essential to this study as it forms the basis of determining premiums to charge, expected claims, their severity and frequency, reserves to cover claims and the reserves to invest. These activities may affect insurance-specific risks, such as underwriting and reinsurance risks, affecting financial performance.

2.2 Empirical Review

A number of local and foreign scholars have looked at risks and financial performance; here is a review of some of them.

2.2.1 Credit Risk and Financial Performance

Kiptoo, Kariuki and Ocharo (2021) studied risk management and financial performance of insurance firms in Kenya. Credit risk, market risk, operation risk and liquidity risk were the independent variables. Control variables were age and size of the firm. The dependent variable was financial performance. Using regression analysis the research found that credit risk negatively and significantly affects financial performance. The current study introduced other categories of insurance risks such as solvency risk and reinsurance risk which had not been covered. GDP growth rate was included as a moderating variable. Yatama, Ali and Shamali (2020) conducted a comparative research study by examining credit risk variables and profitability among the insurance companies at Kuwait stock exchange. The independent variables were credit, operational and liquidity risks, while ROA and ROE measured profitability. Panel data from the companies was used. The outcome of the investigation indicated that credit risk variables and profitability are positively related. Cross-sectional research by Caporale, Cerrato and Zhang (2016) examined the impact of credit risk in the UK's general insurance businesses. The research obtained secondary data on firm-specific characteristics from general insurance companies. The criteria considered were underwriting profit, leverage, reinsurance, written growth premium, excess capital claims incurred, investment profit, and derivatives use. This study will include other insurance risks and credit risks for general and life insurance companies and will be carried out in Kenya and not in the UK. Ogilo (2013) used secondary data from Central Bank of Kenya to determine effect credit risk and performance of commercial banks. Using causal research design and multiple regression analysis, the study found there was significant relationship between credit risk and performance.

2.2.2 Liquidity Risk and Financial Performance

Kamau, Olweny and Muturi (2021) investigated the influence of firm attributes on the financial performance of insurance firms in Kenya. Secondary data was collected from IRA, Association of Kenya Insurers (AKI) and individual firms' websites. Liquidity and leverage were the independent variables in the study while financial performance was the dependent variable. Panel data was analysed through a regression model. The study results showed that leverage and liquidity had a significant negative effect on financial performance of insurance firms in Kenya. The current study introduced other components of insurance risks such as credit risk, reinsurance risk and underwriting risk which had not been covered. A study was conducted by Saleh, Afifa, Murray (2020) to examine the effect of liquidity risk, credit risk and capital on profitability of the banks based in Jordan. Using econometric panel data analysed through generalized methods of moments, the study revealed liquidity risk, credit risk and capital affects profitability. The study concluded that understanding and enforcement of Basel requirements can improve banks profitability and also help in risk management. However, the study was for commercial banks, hence the findings can't be generalized to insurance firms.

Kamau and Njeru (2016), investigated the impact of liquidity risk on performance of listed insurance companies in Kenya. Descriptive study design was utilized. A regression model was used to establish the relationship between the liquidity risk and performance. The study findings were liquidity risk and ROE were negatively related. Mehari and Aemiro (2013) analysed firm characteristics that affect performance of insurance companies in Ethiopia. Using secondary data, loss ratio was found to be significantly and negatively related with return on total assets. Growth in writing premium, the insurer's age and the insurer's liquidity have a statistically insignificant relationship with ROA. Credit, solvency, reinsurance and underwriting risks were not included in this research as risks that might affect insurance companies' financial performance.

2.2.3 Solvency Risk and Financial Performance

Kamanda and Sibindi (2021) assessed the solvency, underwriting risk and profitability of the Kenyan insurance sector. The proxy for solvency risk was solvency ratio while underwriting risk was proxied by combined ratio. ROA and ROE were the proxies for performance. Using secondary data from IRA annual reports, the study employed descriptive statistics and correlational analysis. The study found both solvency and underwriting risk were positively correlated to financial performance. Secondly, it was also found that solvency and underwriting risk have been on upward trend. This study did not include panel regression analysis. Other insurance risk components such as credit, liquidity and reinsurance risk were not covered. The current study filled the above gaps. Dabo et al. (2018) examined the effect of solvency risk on performance. The study was conducted within insurance firms in Nigeria. The target population were 25 firms and all of them were included. The study used secondary data from annual reports of listed insurance firms in Nigeria. It was found solvency risk had a significant positive effect on profitability. The context of the study was different from the current research, which will focus on the insurance industry in Kenya.

Another study was conducted by Omasete (2014) on the risk management and financial performance of Kenyan insurance companies. The study utilized both primary and secondary data. Questionnaires were used to collect primary data while secondary data was obtained from IRA. Exploratory research design was used. The outcome of the investigation showed that solvency risk management and performance had positive relationship. However, the current

research will investigate various insurance risks that may affect performance with moderating effect of GDP included. Further, Ismail (2013) researched factors affecting financial performance among insurance companies in Malaysia. Profit ratios, equity returns, solvency margins, and underwriting operations' stability were the explanatory variables' proxies. Using causal research design, the study found solvency ratios had a significant positive effect on performance. These findings confirm Chen and Wong's (2004) earlier findings that big-size takaful and insurance firms are well-positioned to establish a solid supporting framework. These frameworks include strengthening information management systems, upgrading risk management, and improving technological and managerial skills. The current study will be conducted in Kenya and not Malaysia, whose insurance industry and economic environment is different.

2.2.4 Reinsurance Risk and Financial Performance

Andoh and Yamoah (2021) did a study on reinsurance and financial performance of non-life insurance companies in Ghana. Secondary data was obtained from National Insurance Commission. The study results showed that reinsurance alone does not affect profitability of non-life insurance companies, but reinsurance and solvency ratio combined significantly impact their profitability. The current study included other risk components namely, credit risk, liquidity risk and underwriting risk. The study will be conducted in Kenya and it will include life insurance companies which had not been covered in the above study. A study done by Ibrahim, Terzungwe, Lateef and Mustapha (2020) to look at reinsurance risk among other specific insurance risks affecting profitability of insurance companies in Nigeria. Using secondary data, the study results showed that reinsurance risk had minimal negative effect on profit. Nonetheless, the research did not focus on other insurance risks such as credit, liquidity and solvency, the current study will fill the above gaps, and it will also be done in Kenya and not Nigeria. Caporale et al. (2017) investigated the causes of insolvency risk for general insurance firms in the UK. Multiple regression analysis was employed. The research revealed that insolvency risk is different across firms depending on their business concentrations and that different reinsurance levels of general insurance firms affect the insolvency risk.

2.2.5 Underwriting Risk and Financial Performance

Makau and Okeyo (2021) employed descriptive research design to determine the relationship between risk underwriting, regulatory framework and performance of Sanlam general insurance company. Data collection was done through use of questionnaires. The study found that risk underwriting positively and significantly affected performance of the company. Further, insurance regulations had a positive moderating effect on the relationship between underwriting and performance. Maseki, Kung'u, and Nderitu (2019) employed a descriptive study approach in Kenya to examine characteristics that influence listed insurance companies' performance. Stratified sampling was employed to choose respondents. The research concluded that selected factors, risk judgement, macroeconomic factors, and investment portfolio did not significantly influence financial performance. The study did not delve into the insurance risk components; the current study will fill in this gap by looking at various insurance risks components, including underwriting risk. Erick, Kefah and Nyaoga (2014) sought to determine how executive compensation and Kenyan insurance companies' financial performance relate. The study employed capital adequacy, underwriting ratios and solvency ratios as the independent variables. The research employed a causal research design and the findings reveal, there is negative non-significant relationship as Aduda (2011) found. The

context of this study is not similar with the current study as it did not investigate about the insurance risks of the insurance companies.

2.2.6 Insurance Risks, Gross Domestic Product and Financial Performance

Walde and Makori (2022) undertook a study to determine the effect of macroeconomic variables on the financial performance of deposit taking microfinance institutions in Kenya. GDP, inflation rate, interest rate and exchange rate were the independent variables while financial performance was the dependent variable. Annual growth rate was the proxy for GDP. Using secondary data from CBK and KNBS the research utilized causal research design and multiple regression analysis. GDP was found to have a positive significant effect on performance. The study used GDP as an independent variable and it was for deposit taking microfinance institutions. The current study utilized GDP as a moderating variable and focused on insurance companies. Meher and Zewudu (2020) employed quantitative approach and used panel data and explanatory research design to determine effect of macroeconomic factors and the financial performance of Ethiopian insurance firms. It was noted that GDP per capita and size showed a significant positive relationship with ROA. While leverage, liquidity and underwriting risk showed a significant negative relationship with ROA. However, GDP in the investigation was used as an explanatory variable, contrary to the current study that will use it as a moderating variable.

In addition, Datu (2016) looked at the effect of GDP on the profitability of the non-life insurance firms in Philippines. The study used panel data. The outcome of the investigation indicated that GDP had an insignificant effect but insurance specific factors have a significant effect on profitability. Nonetheless, the research was done in the Philippines, whose insurance industry is not similar to Kenyan. The current research will be done in Kenya and GDP will be used as a moderating variable. Another study was undertaken by Ogada, Achoki, and Njuguna (2016) to look at whether economic growth (growth rate of GDP) has a moderating effect on the financial performance of merged institutions in Kenya. Descriptive research, inferential statistics and panel data analysis were utilized. The outcome of the investigation indicated that growth rate of GDP had a significant moderating effect on performance. However, GDP growth rate was a moderating variable in insurance companies and not merged institutions in this study.

2.3 Conceptual Framework

A conceptual framework shows the relationship between the variables (independent and dependent variables). Figure 8 summarises the conceptual framework.
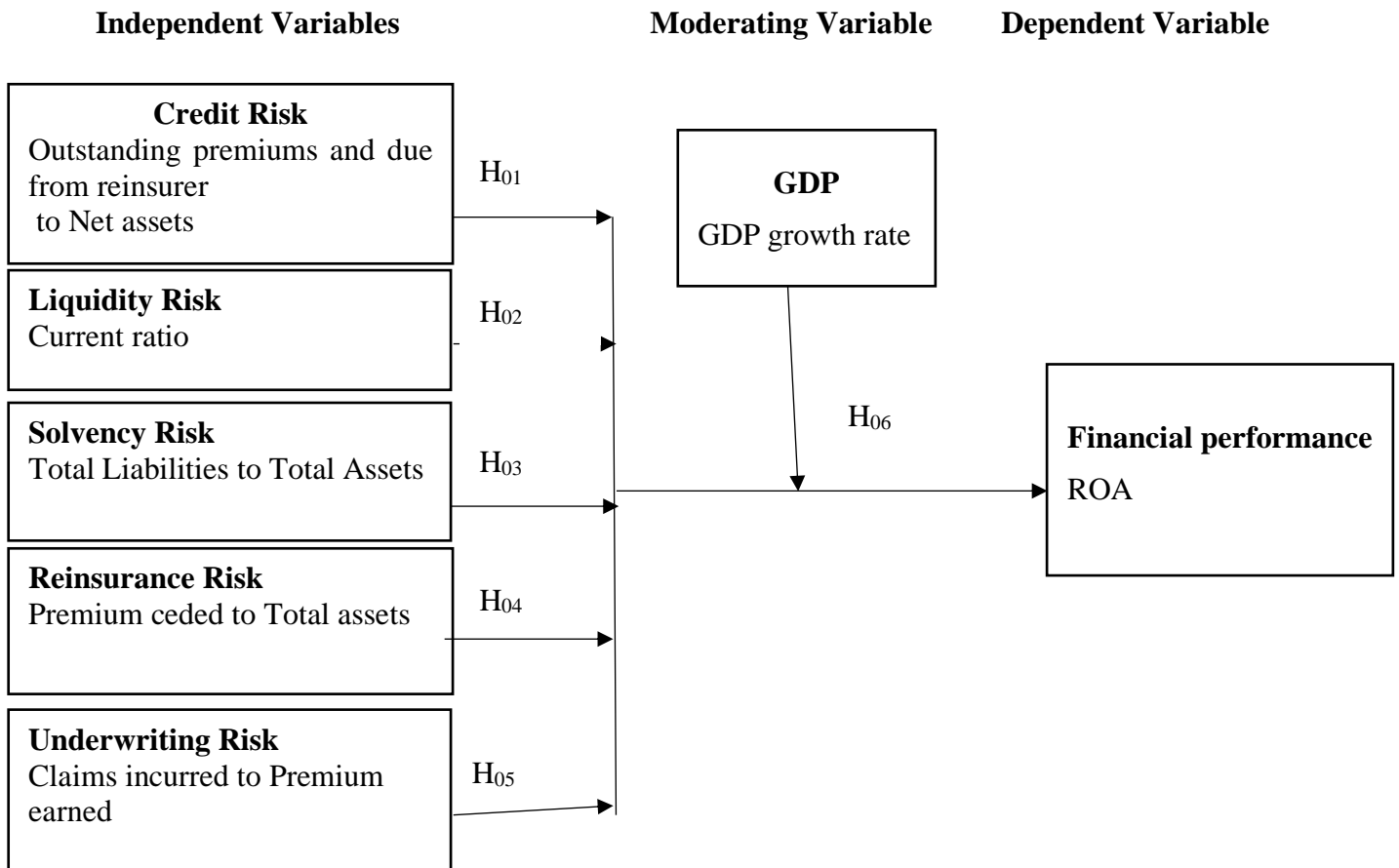
Independent Variables   **Moderating Variable**   **Dependent Variable**

Credit Risk
Outstanding premiums and due from reinsurer
 to Net assets H_{01}

Liquidity Risk
Current ratio H_{02}

Solvency Risk
Total Liabilities to Total Assets H_{03}

Reinsurance Risk
Premium ceded to Total assets H_{04}

Underwriting Risk
Claims incurred to Premium earned H_{05}

GDP
GDP growth rate

H_{06}

Financial performance
ROA

Figure 8: Conceptual Framework

Source: Researcher (2022)

3.0 Research Methodology

The study used positivism philosophy because the data studied was objective, external and not connected to the researcher. The explanatory research design was used in this study. Explanatory studies, in contrast to descriptive studies, not only witness and describe the occurrence but also attempts to explain why it occurs (Cooper & Schindler, 2003). The researcher was able to identify, explain and report certain links between insurance risks, financial performance and moderating effect of GDP. The panel regression model was used. The empirical model was based on two tests: the direct effect test and the moderation effect test, both these tests found the relationship between variables and moderating effect. The following model was employed in the study.

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \varepsilon_{it}$ …………………………….. (1)

Where:

Y_{it} = Dependent variable (Financial Performance) of insurance company i at time t

$X1_{it}$ =   Credit risk
$X2_{it}$ =   Liquidity risk
$X3_{it}$ =   Solvency risk
$X4_{it}$ =   Reinsurance risk
$X5_{it}$ =   Underwriting risk

ε   =   Error term

β_0= Constant term; $\beta_1 \ldots \beta_5$= Coefficients of the independent variables

i=insurance company under observation with i = 1 . . . 53; t is the time, with t = 2015 . . . 2020

Moderating Effect Model

The GDP was used as a moderating variable. In accordance with Whisman and McClelland (2005), the moderation effect model was built in two steps.

Step One

In this step, GDP was an explanatory variable together with independent variables.

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 GDP_t + \varepsilon_{it}$……………………2

Step Two

The interaction between independent variables and moderating variable was computed.

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 GDP_t + \beta_7 (X_{1it}*GDP_t) + \beta_8 (X_{2it}*GDP_t) + \beta_9 (X_{3it}*GDP_t) + \beta_{10} (X_{4it}*GDP_t) + \beta_{11} (X_{5it}*GDP_t) + \varepsilon_{it}$………………….…3

Where:

GDP   =   GDP (moderating variable)

X1GDP   =   Interaction between credit risk and GDP

X2GDP   =   Interaction between liquidity risk and GDP

X3GDP   =   Interaction between solvency risk and GDP

X4GDP   =   Interaction between reinsurance risk and GDP

X5 GDP   =   Interaction between underwriting risk and GDP

$X_5 GDP$ = Interaction between underwriting risk and GDP

The target population incorporated 53 insurance firms operating in Kenya between 2015 and 2020 and licensed by the Insurance Regulatory Authority. Census was employed and thus data was collected from all the 53 firms. Secondary data was utilized. Data for analysis was collected from all 53 firms. Secondary data was utilized. Data for the analysis was obtained from audited financial statements of insurance companies and reports from the Insurance Regulatory Authority. The data was gathered for each company during a six-year period from 2015 to 2020. The study used both descriptive and inferential statistics. Descriptive analysis included mean, standard deviation, maximum and minimum values. Inferential statistics were analysed using correlation and regression analysis. Stata software was used for the analysis.

4.0 Research Findings and Discussion

4.1 Descriptive Statistics

The descriptive statistics include the discussion of the mean, standard deviation, minimum and maximum values of the variables used in the study. The descriptive statistics results are presented in Table 1

Table 1: Descriptive Statistics

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
Credit Risk	318	0.452708	1.066153	-1.97221	11.69411
Liquidity Risk	318	0.742628	0.36484	0.02472	2.574627
Solvency Risk	318	0.694701	0.268486	0.012573	2.195909
Reinsurance Risk	318	0.2002805	0.0264	0.003019	1.962052
Underwriting risk	318	0.596696	0.138273	0.082206	1.315852
GDP (Growth rate)	318	3.883333	1.963035	-0.3	5.6
Financial performance (ROA%)	318	2.675709	7.179461	-26.6176	31.69552

Source: Study Data (2022)

The study results presented in Table 1 indicate that the mean credit risk measured as a ratio between the summation of outstanding premiums and due from reinsurer over net assets over six years from 2015 to 2020 among the insurance companies in Kenya was 0.452708 with a standard deviation of 1.066153. The minimum credit risk in the same period was found to be -1.97221, with the maximum being 11.69411. The negative credit risk indicates some insurance companies had a negative asset base. Further, it was found that the minimum liquidity risk, a ratio between current assets and current liabilities, was found to be 0.02472, with the maximum being 2.574627. The mean value was 0.2742628 with a standard deviation of 0.036484. The current ratio of less than 1.00 indicates that some insurance companies cannot settle their current liabilities when the fall due. Moreover, it was found that the mean of solvency risk, determined as a ratio between total liabilities and total assets over six years from 2015 to 2020, was 0.694701 with a standard deviation of 0.268486. The minimum solvency risk in the same period was 0.012573, with the maximum being 2.195909. This indicates insurance companies with this ratio above 1.00 had more liabilities than their assets hence a negative asset base and they may struggle to settle customer claims and other liabilities.

The study found that the mean of reinsurance risk, premium ceded over total assets was 0.2002805 with a standard deviation of 0.0264039 the minimum value was found to be 0.0030197, with the maximum value being 1.962052. This implied that some firms had recoverable reinsurance while others had payables. Furthermore, the mean value of the underwriting risk a ratio of claims incurred over the premium earned was 0.596696, with a standard deviation of 0.138273. The minimum value of underwriting risk was found to be 0.082206, with the maximum being 1.315852. The mean value of 0.596696 signified on average insurance companies were doing better in managing their underwriting income while those with maximum of 1.315852 it showed the premium earned was less than the claims incurred leading to underwriting losses. The study found that the average growth rate (GDP) in Kenya between 2015 and 2020 was found to 3.883333 with a standard deviation of 1.963035. The minimum growth rate in the same period was found to be -0.3, with the maximum being 5.6. The Growth rate contraction of -0.3 was in 2020 in the backdrop of COVID-19 pandemic. Finally, the study found that minimum financial performance, determined by ROA (net income over total assets) over six years from 2015 to 2020 among the insurance companies in Kenya was -26.6176%, with the maximum being 31.69552%. The mean value was 2.675709, with a standard deviation of 7.179461. The negative ROA implied that some of the insurance had negative net income and had been reporting losses. There was also a huge variation in the earnings of insurance companies.

4.2 Correlation analysis

The correlation coefficient is measured on a scale that varies from + 1 through 0 to - 1. The study results presented in Table 2 present the correlation results.

Table 2: Correlation analysis

Variables	Financial performance (ROA%)	Credit risk	Liquidity risk	Solvency risk	Reinsurance risk	Underwriting risk
Financial performance (ROA%)	1.0000					
Credit risk	-0.3795	1.0000				
Liquidity risk	-0.6285	0.2972	1.0000			
Solvency risk	-0.1231	0.0175	0.1007	1.0000		
Reinsurance risk	0.1446	0.0753	0.1429	0.1040	1.0000	
Underwriting risk	-0.2330	0.1960	0.2242	0.1372	-0.0659	1.0000

Source: Study Data (2022)

Using Pearson correlation, the correlation results depicted in Table 2 established that credit risk is negatively associated with financial performance (ROA%) (r=-.3795). Besides, liquidity risk is negatively associated with financial performance (ROA%) (r=-.0652). Moreover, solvency risk is negatively associated with financial performance (ROA%) (r=-.1231). The study found that reinsurance risk is positively associated with financial performance (ROA%) (r=.1446). Lastly, underwriting risk is negatively associated with financial performance (ROA%) (r=-.2330).

4.3 Model Regression Analysis

The study examined the regression analysis to establish the relationship between the variables. The study demonstrated the results of two regression analysis. The first presentation is the regression analysis without moderation, while the second regression analysis will include the regression analysis after the inclusion of the moderating effect of the GDP growth rate.

4.3.1 Panel Regression Results

The study sought to carry out a panel regression analysis to establish the effect of credit risk, liquidity risk, solvency risk, reinsurance risk and underwriting risk on financial performance (ROA). The panel regression results presented in Table 3.

Table 3: Panel Regression Results

Financial Performance (ROA)	Coef.	Std. Err.	z	P>z
Credit Risk	-1.08281	0.239285	4.5300	0.0000
Liquidity Risk	-0.76831	0.070912	10.8300	0.0000
Solvency Risk	-3.44892	1.649123	2.0900	0.0360
Reinsurance Risk	0.095877	1.34081	0.0700	0.9430
Underwriting Risk	-6.24592	2.159279	2.8900	0.0040
Constant	7.845377	1.782804	4.4000	0.0000

R squared=0.4784
F Statistics=203.28
Prob > chi2 = 0.0000

Source: Study Data (2022)

The model was;

$Y_{it} = 7.845377 - 1.08281X_{1it} - 0.76831X_{2it} - 3.44892_{3it} + 0.095877X_{4it} - 6.24592X_{5it}$

Where: Y_{it} = Financial Performance of insurance company *i* at time *t*

X_{1it} = Credit risk; X_{2it} = Liquidity risk; X_{3it} = Solvency risk; X_{4it} = Reinsurance risk; X_{5it} = Underwriting risk

The results presented in Table 3 show that credit risk, liquidity risk, solvency risk, reinsurance risk, and underwriting risk explain 47.84% of the financial performance (ROA) variations of the insurance companies in Kenya. The F statistics value of 203.28 with a p-value of 0.0000 which is less than 0.05 significance level indicates that insurance risks have significant effect on financial performance. The regression results show that in the absence of credit risk, liquidity risk, solvency risk, reinsurance risk, and underwriting risk, the financial performance (ROA) of the insurance companies in Kenya will be at 7.845377 units.

4.4 Hypotheses Testing

4.4.1 Effect of credit risk on financial performance of insurance companies in Kenya

The first objective of the study was to determine how credit risk affected financial performance of insurance companies in Kenya. The hypothesis to be tested was **H0₁**: Credit risk has no significant effect on financial performance of insurance companies in Kenya. From the results presented in Table 3, (β=-1.08281, p=0.000<0.05), we reject the null hypothesis and conclude that credit risk had a negative significant effect on financial performance of insurance companies in Kenya. This implies that an increase in credit risk by one unit would lead to a decrease in the financial performance (ROA) by 1.08281 units while the other factors are held constant. The study results are consistent with the findings of Muriithi, Waweru, and Muturi (2016), which revealed credit risk has a negative and significant association with bank performance. Further, Kiptoo, Kariuki and Ocharo (2021) indicate that credit risk negatively and significantly affects financial performance.

4.4.2 Effect of liquidity risk on financial performance of insurance companies in Kenya.

The second objective of the study was to examine the effect of liquidity risk on financial performance of insurance companies in Kenya. The hypothesis to be tested was **H0₂**: Liquidity risk does not significantly affect financial performance of insurance companies in Kenya. From the results presented in Table 3, (β=-0.76831, p=0.000<0.05), we reject the null hypothesis and conclude that liquidity risk had a negative significant effect on financial performance of insurance companies in Kenya. This signifies an increase in liquidity risk by one unit would decrease the financial performance (ROA) by 0.76831 units while the other factors are held constant. The study results concur with Kamau and Njeru (2016), who indicated that liquidity risk and ROE are negatively correlated. Sisay (2017) found that financial risk has a negative effect on the financial performance of insurance firms.

4.4.3 Effect of solvency risk on financial performance of insurance companies in Kenya

The third objective of the study was to assess the effect of solvency risk on financial performance of insurance companies in Kenya. The hypothesis to be tested was **H0₃:** Solvency risk does not significantly affect financial performance of insurance companies in Kenya. From the results presented in Table 3, (β=-3.44892, p=0.0360<0.05), we reject the null hypothesis and conclude that solvency risk had a negative significant effect on financial performance of insurance companies in Kenya. This meant that an increase in solvency risk by one unit would

decrease the financial performance (ROA) by 3.44892 units while the other factors are held constant. The study results agree with Muinde's (2018) findings, which revealed that solvency risk, liquidity risk, underwriting risk, reinsurance risk, and financial leverage are negatively related to financial performance.

4.4.4 Effect of reinsurance risk on financial performance of insurance companies in Kenya

The fourth objective of the study was to examine the effect of reinsurance risk on financial performance of insurance companies in Kenya. The hypothesis to be tested was; **H0₄:** Reinsurance risk does not significantly affect financial performance of insurance companies in Kenya. From the results presented in Table 3, (β=0.095877, p=0.9430>0.05), we fail to reject the null hypothesis and conclude that reinsurance risk had a positive insignificant effect on financial performance of insurance companies in Kenya. This meant that an increase in reinsurance risk by one unit would lead to a rise in the financial performance (ROA) by 0.095877 units while the other factors are held constant. The results are in agreement with the findings of Obonyo (2016), who indicated there exist a positive but insignificant relationship between reinsurance and financial performance. On the contrary, Andoh and Yamoah (2021) established reinsurance significantly impacts profitability.

4.4.5 Effect of underwriting risk on financial performance of insurance companies in Kenya

The fifth objective of the study was to analyse the effect of underwriting risk on financial performance of insurance companies in Kenya. The hypothesis to be tested was **H0₅**: Underwriting risk does not significantly affect financial performance of insurance companies in Kenya. From the results presented in Table 3, (β=-6.24592, p=0.0040<0.05), we reject the null hypothesis and conclude that underwriting risk had a negative significant effect on financial performance of insurance companies in Kenya. This meant that an increase in underwriting risk by one unit would decrease the financial performance (ROA) by 6.24592 units while the other factors are held constant.

4.4.6 Moderating effect of GDP on the relationship between the insurance risks and financial performance of insurance companies in Kenya.

The last objective of the study was to determine the moderating effect of GDP on the relationship between the insurance risks and the financial performance of insurance companies in Kenya. The hypothesis to be tested was **H0₆:** GDP does not significantly moderate the relationship between the insurance risks and financial performance of insurance companies in Kenya

4.4.6.1 Moderation Effect of GDP Growth rate
The study sought to establish the moderating effect of the GDP growth rate on the relationship between the insurance risks and the financial performance of insurance companies in Kenya. In accordance with Whisman and McClelland (2005), the moderation effect model was built in two steps. In step one, the GDP was used as a predictor variable. The regression coefficients in step one after the GDP has been included as one of the predictor variables are summarized in Table 4

Table 4: Moderation Effect of GDP (Growth rate)- Step One

Financial Performance (ROA)	Coef.	Std. Err.	z	P>z
Credit Risk	-1.0829	0.2397	4.5200	0.0000
Liquidity Risk	-0.7684	0.0710	10.8200	0.0000
Solvency Risk	-3.4077	1.6591	2.0500	0.0400
Reinsurance Risk	0.0977	1.3426	0.0700	0.9420
Underwriting Risk	-6.2519	2.1634	2.8900	0.0040
GDP (Growth rate)	0.0238	0.1179	0.2000	0.8400
Constant	7.7273	1.8664	4.1400	0.0000

R-Squared= 0.4789

F Statistics=   202.74

Prob > chi2 = 0.0000

Source: Study Data (2022)

The model in step one was;

In step one: $Y_{it}= 7.7273-1.0829X_{1it} -0.7684X_{2\,it}-3.4077X_{3it} + 0.0977X_{4\,it}-6.2519X_{5\,it} + 0.0238 X_{6it}$

Where;

Y_{it}= Financial Performance; $X_{1it=}$ Credit Risk; $X_{2it=}$ Liquidity Risk; $X_{3it=}$ Solvency Risk; $X_{4it=}$ Reinsurance Risk; $X_{5it=}$ Underwriting Risk; $X_{6it=}$ GDP Growth rate

The study results presented in Table 4 show that the inclusion of the GDP growth rate in the model led to the coefficient of determination (R square) to increase from 47.84% to 47.89%. The, F statistics value was 202.74 a p value of 0.000 which is less than 0.05. This indicates that insurance risks and moderating variable GDP were significant in explaining variations in financial performance. The coefficient of GDP growth rate (β=0.0238, p=0.84>0.05) shows a statistically insignificant positive effect on financial performance of insurance companies in Kenya. The null hypothesis was thus rejected. Therefore, GDP moderates the relationship between insurance risks and financial performance since it is insignificant in the model.

Table 5: Moderation Effect of GDP (Growth rate)- Step Two

Financial Performance (ROA)	Coef.	Std. Err.	z	P>z
Credit Risk	-0.7102	0.2835	-2.5100	0.0120
Liquidity Risk	-0.3368	0.0681	-4.9500	0.0000
Solvency Risk	-5.6056	1.7907	-3.1300	0.0020
Reinsurance Risk	5.7666	1.7245	3.3400	0.0010
Underwriting Risk	-15.8972	5.3398	-2.9800	0.0030
GDP (Growth rate)	0.1405	0.0882	1.5900	0.1110
Credit Risk* GDP (Growth rate)	-0.6453	0.2847	2.2700	0.0230
Liquidity Risk* GDP (Growth rate)	-0.2433	0.0200	12.1800	0.0000
Solvency Risk* GDP (Growth rate)	0.9012	0.3457	2.6100	0.0090
Reinsurance Risk* GDP (Growth rate)	-0.8073	0.3446	2.3400	0.0190
Underwriting Risk* GDP (Growth rate)	12.7312	5.1805	2.4600	0.0140
Constant	6.8667	1.7425	3.9400	0.0000

R-Squared= 0.6105
F Statistics= 474.18
Prob > chi2 = 0.0000

Source: Study Data (2022)

The model in step two was;

Y_{it}= 6.8667-0.7102X_{1it} -0.3368$X_{2\ it}$-5.6056X_{3it}+5.7666 X_{4it}-15.8972X_{5it} +0.1405X_{6it}-0.6453 X_{7it}-0.2433X_{8it}+0.9012X_{9it}-0.8073 X_{10it}+12.7312 X_{11it}

Where;

Y_{it}= Financial Performance; $X_{1it=}$ Credit Risk; $X_{2it=}$ Liquidity Risk; $X_{3it=}$ Solvency Risk; $X_{4it=}$ Reinsurance Risk; $X_{5it=}$ Underwriting Risk; $X_{6it=}$ GDP (Growth rate); $X_{7it=}$ Credit Risk* GDP (Growth rate); $X_{8it=}$Liquidity Risk* GDP (Growth rate); $X_{9it=}$ Solvency Risk* GDP (Growth rate); $X_{10it=}$ Reinsurance Risk* GDP (Growth rate); $X_{11it=}$ Underwriting Risk* GDP (Growth rate)

The study results presented in Table 5 show that on introduction of the interaction of independent variables and the moderating variable, the coefficient of determination (R squared) changed from 47.89% in step one to 61.05% in step two. F statistics value was 474.18, p value of 0.000 which is less than 0.05. This indicates that insurance risks, moderating variable GDP growth rate and the interactions of insurance risks and GDP growth rate were significant in explaining variations in financial performance. Also, there is a significant effect of the interaction terms between credit risk and GDP growth rate (β=-0.6453, p=0.0230<0.05), liquidity risk and GDP growth rate (β=-0.2433, p=0.0000<0.05), solvency risk and GDP growth rate (β=0.9012, p=0.0090<0.05), reinsurance risk and GDP growth rate (β=-0.8073, p=0.0190<0.05) and underwriting risk and GDP growth rate (β=0.12.7312, p=0.0140<0.05). Hence, the null hypothesis was thus rejected. It can be concluded that GDP growth rate significantly moderates the relationship between the insurance risks and the financial performance of insurance companies in Kenya. The study results concur with Walde and Makori (2022), Meher and Zewudu's (2020) who demonstrate that GDP has a positive and significant relationship with ROA. Contrary a study by Datu (2016) established that insurer-specific factors significantly affect profitability while macroeconomic indicators like GDP and inflation had no significant effect on the profitability of insurance firms in the Philippines. Also, Ogada, Achoki and Njuguna (2016) established a significant relationship between the moderating effect of economic growth as measured by GDP growth rate and the financial performance of merged institutions.

5.0 Conclusion

It is concluded that for insurance companies to have better financial performance they need to manage their credit risk. The results from the regression analysis showed that credit risk is negatively and significantly related to financial performance. This implies that failure to receive premiums due from debtors and reinsurance companies not paying the due amount will ultimately lead to declining financial performance of insurance companies. The study found that liquidity risk is negatively and significantly associated with financial performance. An increase in liquidity risk will lead to a decline in financial performance of insurance companies. This means some insurance companies will be unable to meet their current liabilities when they become due. Also holding of excess current assets and failing to invest can lead to losing an opportunity to improve financial performance through increased income.

The study results showed that solvency risk is negatively associated with financial performance. The regression results showed that solvency risk is negatively and significantly related to financial performance. The study concludes that insurance companies with high solvency risk had more liabilities than assets therefore no enough value in the form of assets to

cover all the liabilities. The higher debt to asset ratio means there is need for external financing, which affects performance of the insurance companies negatively. The study concludes that reinsurance risk is positively associated with financial performance. The regression results revealed that reinsurance risk is positively but insignificantly related to financial performance. This means an increase in reinsurance risk does not lead to a decrease in performance of insurance companies. The study concludes that although reinsurance companies protect insurance companies against big losses most of the claims are settled by the insurance companies themselves.

It is concluded that underwriting risk is negatively associated with financial performance. The regression results revealed that underwriting risk is negatively and significantly related to financial performance therefore an increase in underwriting risk will lead to a decrease in financial performance. This implies that insurance companies with high underwriting risk incur more claims than the premiums received. Further, the study concludes that the GDP growth rate moderates the relationship between insurance risks and the financial performance of insurance companies in Kenya. Notably, the relationship between credit risk, liquidity risk, solvency risk, reinsurance risk and underwriting risk is moderated by the GDP growth rate. This implies that slow or contracting GDP growth rate can increase the insurance risks insurance companies face leading to poor financial performance.

6.0 Recommendations

The study recommends that insurance companies ensure that credit risks are well managed, since credit risk is negatively and significantly related to financial performance. Credit risks include insurance companies not receiving premiums due and reinsurance companies not paying amount due. The insurance companies in Kenya should develop credit risk management frameworks that will minimize the possibility of a loss resulting from debtors not paying their premiums, put in place efficient paying plans for their customers and reinsure with credible reinsurance companies who will compensate them promptly in case of loss. The insurance companies with high current ratio should consider investing excess cash in various sectors. While insurance companies with low current ratio should liquidate some investments to ensure they cover current obligations when they fall due. The companies should develop and implement appropriate investment portfolio management to improve their financial performance. It is recommended that insurance companies in Kenya should increase their customers to boost their income hence maximize their net premium earnings and net assets.

It is recommended that insurance companies in Kenya continue to cover most of their claim by themselves. The reinsurance risk is caused by the inability of the reinsurer to compensate the insurer at the right time and at a reasonable cost. Besides, it is recommended that insurance companies in Kenya should ensure proper policy estimation pricing techniques considering the riskiness of the specific sectors. Insurance companies should also ensure claims and costs are well managed. The government policies should give more emphasis to factors that can enhance consumption, investments, government spending and trade since they influence the GDP growth rate. The study also recommends that insurance companies should manage their insurance risks according to the GDP performance to ensure better financial performance.

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