**Analyzing Financial Risk and Financial Performance of Six Insurance Companies in Kenya: An Econometric Case Study**

# ABSTRACT

*The scientific knowledge of the determinants of insurers’ distress has further been reinvigorated by the 2017/2019 global economic and financial crises. However, there are also a number of market risks facing the industry resulting into financial performance, if left unchecked can lead to insurance failure. Thus to enhance industry stability, it is important for firms to take mitigation. The purpose of this research was to examine the financial risks on financial performance of the insurance companies in Kenya. The overall financial risk of the insurance companies is the independent variable and was determined using the Consumer price Index, Standard deviation on foreign exchange on USD and Interest Coverage Ratio. Quantitative models were adopted because the study used secondary data which was collected from financial statements as per the audits from the selected institution. The study targeted six listed insurance in Kenya which is sufficient for generalizing. The recorded data was then analyzed using SPSS version 20.0. Regression analysis was used to find the effect of financial risk on financial performance. The period under study was from 2014 to 2024. The study found out that all the independent variables operation risk, credit risk, market risk and legal risk are positively related to financial performance of insurance companies in listed in Nairobi security exchange meaning high risks contribute to low performance of most insurance companies in Nairobi security exchange. The study recommended appropriate mitigation of risks for the betterment of insurance of companies in Kenya.*

***Key terms: Financial Performance, operation risk, credit risk, market risk, legal risk***

**Introduction**

**Background of Study**

“Market risk encompasses various dimensions influenced by economic indicators, geopolitical events, and investor behavior. It can be categorized into several types, including equity risk, inflation risk, and interest rate. Common risk contains possible losses due to deteriorations in the. Interest rate risk ascends from deviations in interest rates that can unpleasantly affect the value of constant securities; rising interest rates often lead to declining bond prices, impacting portfolios heavily weighted in bonds” (Paul & Zhu, 2020). “Currency risk is particularly relevant for investors in international markets, as fluctuations in exchange rates can impact the value of investments and returns when converted to the investor's home currency” (Nobanee, Dilshad & Alnaqbi, 2022).

Financial distress can arise from various sources, including exposure to market risk, poor investment performance, and mismanagement. The implications of financial distress for insurers are significant. For one, it can lead to insolvency risks. When an insurance company faces financial distress, it may become insolvent if liabilities exceed assets, resulting in policyholder losses and a decline in confidence in the insurance sector. Dai, Han and Barrenechea (2024) examine the correlation between financial distress and insolvency in insurance firms. Moreover, financial distress can attract regulatory scrutiny, leading to increased oversight and potential intervention by regulators. Insurers facing financial difficulties may be required to enhance their capital reserves or adjust their business practices, as outlined by EIOPA (2020).

Globally, Insurance corporations are vital in an economy. Insurance enterprises in Indonesia and Malaysia are influential in nurturing reserves in the states nevertheless have problems in aligning themselves within their instantaneous environment in such a way that high financial distress discouraged their development (Akonga, C., J. 2014). “That is an indication that performance of insurers is prospective to be affected by internal factors such as principal and savings. Insurance firms in Turkey gain attractiveness by directing on internal setups” (Apanga, M, A., Appiah, K, O. & Arthur, J. 2016).

“Regionally, in Africa, insurance firms’ persistence is affected by a varied collection of dynamic. For illustration, insurers’ misery in Ghana are affected by numerous issues among them premium development, capability to captivate risks, progress in premiums, claims and underwriting risks” (Agarwal, R, 2018)).

Furthermore, insurance infiltration in Africa is low-slung in comparison to the global directories (Bogodistov, Y., & Wohlgemuth, V. 2017). In turn, financial distress of Tunisian insurance enterprises is affect risk administration, period, dimension, premium, cost of capital and soundness (Burca, M. & Batrinca, G, 2014).

Locally, in Kenya insurance companies is supreme to economic development. (Çekrezi, A 2015). Routine of insurers in Kenya is also claimed to be a function of numerous issues. The financial distress for general insurance companies is high due to a variety of reasons. According to Mishra, B. K., Rolland, E., Satpathy, A., & Moore, M. (2019) “there are several drivers of distress of insurers in Kenya which include size of the firm and savings”. Muriithi, J, G. & Waweru, K, M (2017) illustrated that “insurer’s distress in Kenya is affected by factors such as growth of premiums, investments returns, expense ratio and loss ratio”.

**Statement of the Problem**

“Worldwide insurance companies have central importance since they cover risks for persons and companies. Kenya Insurance companies are anticipated to display respectable financial performance since they are few portions a population. Insurance dispersion in Kenya has persistent to increase. Nevertheless, insurance companies, by feature of their setups are predisposed to major risks that unless their management structures internal operations optimally, chances of business failure are high. In Kenya, for example, in spite of insurance infiltration growing in the last decade, performance of insurance companies has been gloomy. In the year 2021 underwriting outcomes fell by 2.441 percent, retention ratio was -0.7 percent, shareholders’ funds to total assets dropped by 1.9 percent” (IRA, 2021).

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

Muriithi, J, G., Muturi, W, M. & Waweru, K, M. (2016) tracked to “find out the degree to which they influence financial distress of insurance companies. Profitability was used as a financial distress indicator. He noted that interest rate influence financial distress of Kenyan insurance companies; nonetheless he did not state their affiliation”.

Chen N. (2016) scrutinized the causes of financial distress of insurance companies in Kenya. He found out that; increase of the insurance donates to financial distress. His finding was reasonably dissimilar from those found by Christopher M. (2017).

Darush Y. & Peter O. (2015) wanted to “find out factors that influence financial distress of life assurance companies in Kenya. He established varied marginally from the results of the two immediate studies above in that he concluded that cost of capital, invention and proprietorship structure are determinants of financial distress, but did not postulate the connection”.

Past works reveal that the findings from most investigators have not grasped to a common inference. Specifically, their results did not specify the relationship between the various factors which they establish to control financial distress of general insurance companies of Kenya. Moreover, the findings by Chen N. (2016), Christopher M. (2017) and Darush Y. & Peter O. (2015) were unsettled.

**General objectives of the Study**

The main objective of this research was to find out how financial risks affect the financial performance of insurance companies listed Nairobi security exchange.

**Specific objectives**

1. To determine the effects of operation risk on financial performance of insurance companies listed Nairobi security exchange.
2. To determine the effects of credit risk on financial performance of insurance companies listed Nairobi security exchange.
3. To determine the effects market risk on financial performance of insurance companies listed Nairobi security exchange.
4. To determine the effects legal risk on financial performance of insurance companies listed Nairobi security exchange.

**Research Hypotheses**

1. H01: There is no effects of operation risk on the financial performance of insurance companies listed Nairobi security exchange
2. H02: There is no effect of the credit risk on the financial performance of insurance companies’ listed Nairobi security exchange?
3. H03: There is no effect of market risk on the financial performance of insurance companies’ listed Nairobi security exchange?
4. H04: There is no effect of legal risk on the financial performance of insurance companies’ listed Nairobi security exchange?

## Fig 1: The Conceptual Framework

**Independent Variable Dependent Variable**

* Operation Risk - Standard deviation.
* Credit Risk- Standard deviation.

Financial Performance - Profitability

* Market Risk - Standard deviation.
* Legal Risk - Standard deviation.

**Source; (Author, 2025)**

**Literature Review**

Foreign exchange risk is the threat of antagonistic influence on financial performance due to currency instabilities (World Bank, 2020). Likewise it can be defines as the probable losses from changes in foreign currency values affecting assets and liabilities (CBK 2021). Irene (2021) did a study on the effects of foreign exchange brisk on the financial performance of insurance firms in Kenya.

Ismail B. (2016), carried out a study on the relationship between the foreign exchange rates and the performance of stock market.

Accoding to Joonas H. (2017), there exists not at all significant relationship between inflation and financial performance. At the same time, the study discovered that there was not any significant relationship between performance and interest rates.

 After considering above studies, little has been done on the effects of foreign exchange on performance of insurance firms in Kenya. Thus this study is pursuing to answer the question; what is the effect of foreign exchange exposure on financial performance of insurance firms in Kenya?

Interest rate risk is the prospective of financial losses due to antagonistic variations in interest rates, as defined by both the World Bank (2020) and Central bank of Kenya (2021). This risk affects borrowers and lenders alike, with shifts in interest rates influencing the cost of debt and investment returns.

Joseph M. & Jagongo A. (2017) studied “the determinants of interest rate in Costa Rica. They established that the intermediation margin tended in the short term to have an inertial tendency to increase and that higher short term deposits are the result of more aggressive policies to depositors via attractive interest rates and thus lead to lower interest rate”.

Joseph N.M (2014) pursued “the relationship between interest rate and financial performance of insurance firms in Kenya. The result was that there is positive relationship between financial performances and interest rate where internal and external variables hare significance influencing on financial performance. It also establish that interest rate spread affect performance of assets in insurance as it increases the cost of loans charged on the borrowers, regulation on interest rates have far reaching effects on assets non-performance. The study recommended that there is need for government to regulate interest rates as this would help to safeguard borrowers from exploitation by insurance”

According to Badawi, A. (2017) he also did a research on impact of equity trading on financial performance of commercial banks. The objective of this research was to examine the connotation among forex dealing and financial performance. A consensus design was assumed in which all commercial banks were used in the study.

Also according Bony, S. Z., & Moniruzzaman, M. D. (2017), in his topic of study, relationship between financial performance of insurance firms and equity. Deloitte. (2015) noted the strong association between fiscal performance for international organizations and equity risk unpredictability.

Geetha, N. (2016) considered association of firm size and financial performance of insurance companies in Meru County. The research used on debenture financing as a variable but this study is going to use three independent variables. The results of regression analysis were analyzed using different statistical tests, including t and f tests. The price in informative was estimated using price synchronization combined with the transparency of markets information. The results indicated that firm size had an effect of the performance of the insurance firms from a price perspective. The study also recommended that stock price may contain some information that managers do not know. As a result, the study findings can help managers in portfolio decision making. The study is going to use secondary data to clearly find the relationship of firm size and return on investments.

Isaac, L. (2015), carried out the study on the impact of company size on borrowing inl insurance companies in Kenya and establish a negative relationship which was due to accessibility of financing. Before employing the multiple linear regression models used in brief the study's findings, several and involving tests were conducted. The outcomes of these relationships revealed that return on investment and insurance firms. A strong effect on performance and insurance firms’ interest was shown by hypothesis testing at a 5% significance level. Since the heuristic test was insufficient, a second regression analysis was carried out.

**Theoretical Review**

### The Purchasing Power Parity (PPP) Theory

“Purchasing Power Parity (PPP) theory was developed by Gustav Cassel, a Swedish economist, in in 1918. The fundamental argument of PPP theory is based on the law of one price, which states that identical goods should sell for the same price when expressed in a common currency. The PPP theory argues that in the long run, exchange rates risk should adjust to equalize the cost of a basket of goods and services in two different countries. This is because the buying power of two currencies must vary in order for them to be equal” (Jeleel, A., & Olayiwola, B. (2017). The ratio between the prices of a basket of goods and services in each nation and the relative prices in the other country should be used to determine the exchange rate between two currencies. According to the theory, currency risk should be proportional to the disparity in inflation rates between the two nations. The theory assumes that there are no transportation costs, no trade restrictions, and those goods and services can be freely exchanged across nations.

### The Macaulay Duration Theory

MacaulayDuration theory was developed by F. Macaulay in 1938. The ttheory argues that the value of a constant-revenue security, such as a bond, is sensitive to interest rate risk. Duration represents the weighted average time it takes to receive the cash flows from a bond. It considers both the timing and magnitude of cash flows, incorporating the coupon payments and the bond's final principal payment. Duration allows for the comparison of bonds with different maturities, coupon rates, and yields. It provides a standardized measure that can help investors assess the interest rate risk associated with different bond investments.

According to Kassi, D. F., Rathnayake, D. N., Louembe, P. A., & Ding, N. (2019), IRP holds in the longer period, but that deviations from IRP can persistent in the shorter period. The study used Macaulay Duration Theory to investigate the effect of interest rate risk on the financial distress of insurance companies in Kenya.

## Research Design

This study adopted descriptive survey research design as the study attempts to examine relationship between market risks and the financial distress of Insurance Industry in Kenya. The design was relevant as it explains the current status of a phenomenon and is concerned with finding out the what, where and how of a phenomenon Little, R., & Rubin, D. (2014).

## Research Philosophy

A methodology particular investigator's tactic to the research to guarantee dependable, binding outcomes that address their goals and purposes. It includes what data they are going to collect and where from, as well as how it's being composed and scrutinized.

A framework that directs research methodology based on conceptions of reality and the nature of knowledge is known as a research philosophy (Cytonn Investments. (2020). There are two primary research philosophies: interpretivism and positivism. Since positivism holds that reality exists independently of humans and that researchers may thus study reality objectively, both ideologies reflect two essentially different ways that humans interpret the world. According to interpretivism, reality is very subjective since our perceptions shape it Cytonn Investments. (2020.

## Data Collection Instrument

 Secondary data was used from financial statements as per the audits reports. Data was received from the Insurance Regulatory authority. The data was from a period of ten years (2013-2024).

## Data Collection Procedure

The researcher first obtained an introductory letter from the university which facilitated the acquisition of necessary data from respective companies. Using the introduction letter from the university, the researcher sought permission from IRA to access financial statements of the 10 major Insurance Companies between 2013 and 2024. The data collected was used to calculate ratios for individual study variables. The cross sectional data consisted of the firms while the time series data were the years between 2013 and 2024.

## Data Analysis and presentation

## Data was first being tilted, set and organized for analysis. Data Statistical package for social sciences (SPSS) software will be used. Average statistics was used for illustration for this study.

### 3.9.1 Models used to study data analysis

The multiple regression equation will take the form below.

Y =BO+B1X1 +B2X2+B3X3 +B4X4+ Ɛ.

Where;

 Y= Financial performance

BO= coefficient of intercept

 X1 = Operation Risk

 X2= Credit Risk

 X3= Market Risk

 X4=Legal Risk

B1= Sensitivity of Financial perfomanceto the independent variable

Ɛ= Error term.

# Limitations of the study

Some respondents were reluctant to answer questions due to sensitivity of the sector and their position in the company.

**Findings**

**Table 1: Result of Descriptive Statistics**

|  |
| --- |
| **Descriptive Statistics** |
| Operation risk | 20 | 4 | 1.4 |
| Market risk | 20 | 4.35 | 0.9 |
| Credit risk | 20 | 4.35 | 0.9 |
| Legal risk | 20 | 4.35 | 1 |
| Financial performance | 20 | 4.1 | 1.3 |

With a mean of 4 and standard deviation of 1.4, the outcome showed that operation risks negatively affects financial performance of insurance companies listed in Nairobi security exchange. This finding is in agreement with Oketch, J., Namusonge, G., & Sakwa, M. (2018) who found that financial performance is directly proportional to operation risk of insurance firms operating in Small and Medium Enterprises.

With a mean of 4.5 and standard deviation of 0.9, the outcome showed that credit risks negatively affects financial performance of insurance companies listed in Nairobi security exchange. This finding is in agreement with Kamau, P. (2017), who found that financial performance is absolutely influenced by credit risk of insurance firms operating in Kenya.

With a mean of 4.35 and standard deviation of 0.9, the outcome showed that market risks negatively affects financial performance of insurance companies listed in Nairobi security exchange. This finding is in agreement with Dai, T., Han, S., & Barrenechea, D. W. (2024) who found that financial performance is definitely affected by credit risk of insurance firms.

With a mean of 4.35 and standard deviation of 1, the outcome showed that legal risks negatively affects financial performance of insurance companies listed in Nairobi security exchange. This finding is in agreement with Ogunbote, O. O., & Ogundipe, A. A. (2021) who found that financial performance is positively affected by credit risk of insurance firms.

Since all variable used in the study have been found to be influencing financial performance which lead to a conclusion that financial risk is negatively affecting financial performance which is agreement with Saruni, L.A. (2016) whose study found out that financial risk have effect on financial performance.

### Models used to study data analysis

The multiple regression equation took the form below.

Y =-1+0.295X1 +1.258X2+0.378X3 +-0.939X4

**Conclusion**

The research established that insurance companies’ financial performance is affected by financial risks. There were negative and significant correlations.

The study's main objective was to define how financial risk affected the financial performance of insurance companies listed in Nairobi security exchange in Kenya. The study displayed a relationship between financial risk and financial performance on insurance companies was favorable. Outcomes from panel data further reinforced a promising connection financial risk and financial performance on insurance companies.

The specific objective was to appraise how operation risk affects the financial performance of insurance companies. Notwithstanding lack of strength to draw firm conclusions, the analysis suggested strong relationship between financial performance and operation risk. As a result, these risks have strong impact on financial performance.

Measuring the influence of credit risk on the financial performance in Kenya was the other objective. Nevertheless there was a negative association between financial performance and credit risks, the connection remained unstable but significant since statistical significance was achieved.

The valuation of the influences of market risks on the financial performance was the main objective of the fourth set of objectives. The study recognized a strong relationship between financial performance and market risks.

The fifth objective was to look at how legal risk affects financial performance of insurance firms listed in Nairobi security exchange. The study recognized that legal risk strongly affects the financial performance of insurance firms listed in Nairobi security exchange.

**Recommendations**

Owing to nature of the study findings, it will be in order for the corporate managements of insurance companies to mitigate risk and scrutinize the greatest share of risk in order to enhance their financial performance. It’s better for the corporate management to balance risk and returns.

In the meantime the finding cautious about operation risk than other kind of risks because of its effect on financial performance. It is in order for investors who are looking for stability should be careful with operation risk. These will results into greater profitability of the firms.

Since credit risk are also affects financial performance negatively and significantly, the study proposes that even though there exists a strong affirmative connection between returns on credit risk and financial performance, this connection may not be substantial enough to markedly affect return on equity, consequently stakeholders should judiciously allocate their resources to credit risk and envisage diversifying their investments to enhance their inclusive financial performance.

Since money market frisk categorically shake financial performance therefore the study recommend that insurance firms to incorporate them into the decision making which will improve the businesses financial performance.

 Insurance firms must be careful how they channel their resources into asset investments to avoid risk and enhance returns. The study therefore suggests that insurance firms should appraise the risk and return profile of their avenue of investment.

Similarly, the study recommends that stakeholders should manage risky opportunities to supplement and improve their income. Lastly, the study recommends that stakeholders should considerately balancing risk to diversify their allotments to investment portfolio as a precaution against failure.

Ethical Approval

Known methods were used in collection of data from respondents. The researcher guaranteed privacy and confidentiality. The study sought authorization from National Council for Science and Technology in the ministry of education.

Disclaimer (Artificial intelligence)

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Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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Details of the AI usage are given below:

1.

2.

3.

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