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Relationship Between Financial Leverage And Insurance Penetration In Kenya

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Abstract
Life insurance is an important aspect of the social-economic development of the society. It helps to safeguard the future while also ensure some savings that can be used in a later date. According to IRA life insurance report, the total premium income and contributions from all the classes of life insurance business was Kshs 34.27 billion in the year 2019 compared to Kshs 30.81 billion in 2018, representing a growth of 10.1%. The contribution of life insurance sector to Kenya's GDP dropped to 3.4% in 2019 compared 3.5% in 2018. This means that other sectors of the economy grew faster than life insurance. According to Third Medium Term Report, Health insurance coverage in Kenya is generally low at 19%. It is important to note that Third Medium Term Plan has not addressed firm financial characteristics and insurance penetration of the Life Insurance Firms in Kenya with economic environment as the moderating variable, which is the research gap the current study analyzed. The objective of the study was to analyze the effect of financial leverage on insurance penetration in Kenya. The study is based on trade-off theory. The study was based on positivists' research philosophy. This study adopted longitudinal research design and targeted all the 26 registered life insurance firms in Kenya, which were operational from 2011 to 2022 and had filed their audited financial statements with the insurance regulatory authority for the period (IRA, 2020). There were only 18 Life Insurance Firms that met the criteria for the study where such have been operated since the year 2011 which is the period of the study. The study therefore purposively took the 18 companies as the sample size suitable to attain the set objectives. Both primary and secondary data was collected. The study finding demonstrated that there is statistically significant evidence that financial leverage does have a positive effect on insurance penetration in Kenya. The positive effect of financial leverage indicates that firms with higher levels of debt relative to their equity are more likely to contribute to insurance penetration. In conclusion, these findings suggest that policies and initiatives aimed at promoting insurance penetration in Kenya should consider not only the characteristics of individual consumers but also the characteristics of firms, particularly their size and financial structure

Key Words: *Financial Leverage, Insurance, Penetration, Kenya*

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I. Introduction

In Kenya, insurance penetration has fallen to 2.34%, the lowest in the last 15 years (Kenya Insurance Industry Survey, 2019), compared to South Africa, whose penetration is 16.9% with a population of 53.2 million (National Insurance Commission, 2019). In Kenya, the number of insurance firms is 59, equivalent to a 1:1 ratio for every 1 million Kenyans, which is close to that of the banking sector in Kenya. In the last five years, 10.7 percent in the year 2015, 13.2 percent in the year 2016, 6.3 percent in the year 2017, 3.5 percent in the year 2018 and 6.1 percent in the year 2019, the Gross Direct Premium in Kenya was on the downward trend (IRA, 2019). This situation is the subject of the current study to determine if the worsening situation is caused by particular firm financial characteristics and the economic climate of insurance companies in Kenya.

Kenya's insurance sector is affected by specific factors, both internal and external, that affect the performance of insurance companies. Internal variables include retention of premiums, margin of solvency, business size and company age (Nduati, 2018). Lin (2015) analyzed the relation between bank-specific variables and commercial banks' bank efficiency, and the findings showed that bank performance was influenced by factors such as financial leverage, bank size and solvency ratio. The current research examined firm financial characteristics from insurance companies since different scholars have already studied the impact on results of specific factors from companies. Muneeni (2015) revealed that bank size, leverage and liquidity improved the performance of listed companies. Osoro (2014) analyzed the variables influencing the performance of the bank sector and the results showed that bank size, liquidity, solvency margin influenced the performance of the bank. Bongoye, Banafa and Kingi (2016) examined the correlation between company-specific factors and listed

companies' financial performance, and the results showed that company size and financial leverage were significantly linked to financial performance.

While businesses operating in the same sector have different levels of financial performance and deal with the same external variables, studies have shown that internal factors influence firm performance. Firm size, financial leverage, liquidity, investment efficiency, capital adequacy are among the main internal factors (Zablon & Ariemba, 2015). Lwaminah (2017) examined the impact of asset quality, liquidity, investment quality, capital adequacy and firm size on the financial performance of commercial banks in Kenya in a further empirical analysis of company specific factors. Study by Kitati, Zablon and Maithya (2015), which sought to identify evidence supporting the presence of effect of the selected macro-economic variables: hard currency foreign exchange rate, interest rate and inflation rate on fluctuations in share prices, found that interest rate and inflation rate had an impact on stock prices.

Secondly, insurance continued to be a relatively niche sub-sector under the Third Medium Term Plan (2018-2022), with the level of use remaining at 6% of the population and contributing 1.5% to GDP in 2016. In Kenya, health insurance coverage is usually low at 19% (IRA, 2019). The NHIF is Kenya's largest health insurer, covering 16 percent of Kenyans, while the 32 private health insurers cover only 1 percent of the Kenyan population collectively. By 2019, with the statutory National Hospital Insurance Fund (NHIF) at 21 per cent, 19% of the population had some kind of health insurance cover. NHIF membership increased to 7.6 million people in 2019, up from 6.1 million in 2016, reflecting an 11.1 percent rise. In 2017, with over 2.2 million members, there were nearly 1,200 registered retirement benefits / pension schemes. Kenya's insurance penetration (2.34%) is, as suggested, far lower than the regional average of 3.8% (Africa Insurance Outlook, 2019).

In addition, the general lack of a savings culture, insufficient tax incentives and a perceived industry reputation crisis in the public eyes, especially with regard to the settlement of claims, were cited as likely causes for a low penetration of insurance in Kenya (Gakeri, 2015). Insurance penetration in Kenya is still poor and this is due to a low degree of consumer awareness of its advantages and the belief that insurance is only for wealthy members of society. The researcher identifies this as the research gap that will be of interest to insurance policy holders (IRA), the practice of insurance coverage in Kenya (the insurance providers) and the insurance plan clients. Since the low insurance penetration is a recorded problem in Kenya based on insufficient literature hence the need of empirical research that examines the relevant factors and insurance penetration of companies in Kenya.

II. Literature Review

Theoretical Review

Myers and Majluf developed the tradeoff principle in 1984 and took into account the tax benefit and the cost of debt. The trade-off principle of capital leverage notes that by balancing personal tax, bankruptcy, or organization costs against tax shields (Myers, 1984), value-maximizing companies achieve an effective capital structure. In this principle, optimizing the valuation of corporations obtains an effective capital structure by balancing debt costs and debt advantages such as tax shields. In this study, financial leverage is linked to the theory of trade off in the sense that large companies are more diversified in debt acceptance, which boost insurance penetration. The trade-off theory remains relevant in understanding firms' capital structure decisions, despite some criticisms. Here are some citations that highlight the relevance of the trade-off theory: Fama & French (2002) examined the trade-off theory alongside the pecking order theory in explaining firms' financing decisions. The study provides empirical evidence supporting the trade-off theory's predictions regarding the relationship between debt levels, profitability, and investment opportunities, suggesting that firms adjust their capital structures in response to changes in tax and bankruptcy costs

The trade-off theory often assumes that firms and managers act rationally in maximizing shareholder value, but critics argue that this rational choice framework may overlook behavioral biases, bounded rationality, and cognitive limitations that influence firms' financing decisions. Behavioral factors such as overconfidence, loss aversion, and herding behavior may lead firms to deviate from the predictions of the trade-off theory and exhibit suboptimal capital structure choices. The trade-off theory may not fully account for the contextual specificity of firms' capital structure decisions, as different industries, firms, and market environments may exhibit unique financing preferences and constraints.

Despite these critiques, the trade-off theory has contributed valuable insights into understanding the determinants of firms' capital structure decisions and remains a foundational framework in corporate finance. However, researchers continue to refine and extend the theory to address its limitations and incorporate additional factors that shape firms' financing choices in practice. These citations demonstrate the ongoing relevance of the trade-off theory in explaining firms' capital structure decisions and provide empirical support for its predictions across diverse settings. While the theory has faced some critiques, it remains a valuable framework for understanding the trade-offs and considerations that firms face when determining their optimal mix of debt and

equity financing. This theory was the basis for analyzing the effect of financial leverage on insurance penetration in Kenya.

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Empirical Literature Review

Pottier (2006) studied the determinants of private debt holdings: evidence from the life insurance industry. The study noted that life insurers hold the majority of private debt. Lenders in the private debt market must have the ability to evaluate the credit quality of borrowers and to perform ongoing risk monitoring. The relatively low liquidity of private debt and renegotiation potential enhances the value of a long-term relation with a reputable lender. The less transparent risk of private debt and the absence of market valuation for private debt provide relatively more risk-shifting opportunities than public debt. Transactions costs and diversification needs tend to give larger lenders a comparative advantage in the private debt market. The purpose of this study was to examine the determinants of private debt holdings in the life insurance industry. The results suggest that larger insurers, insurers with higher financial quality, mutual insurers, publicly-traded insurers, insurers facing stringent regulation, and insurers with greater cash holdings are more prevalent lenders in the private debt market.

Yllka and Etem (2022) studied the factors affecting profitability of insurance companies, evidence from Kosovo. The study noted that profitability expresses the ability to make a profit from all the business activities of the company. It shows how efficiently management generates profit by utilizing all available resources. This study examined the effects of specific company factors, namely independent variables such as: liquidity, company size, company age, tangible asset, leverage, company capital and growth of company, on profitability represented by return on assets (ROA) and net profit margin (NPM) as a dependent variable. The sample in this study includes eleven insurance companies for the period 2015 - 2020. The regression results indicate that size, leverage and age of company, have significant effects on the ROA. Meanwhile in NPM of insurance companies in Kosovo size of company and firm growth have significant effects.

Khalid (2012) studied the determinants of leverage of listed companies. The study aimed to empirically investigate the determinants of leverage of listed companies. The study sample included 121 listed companies on the Jordanian stock exchange extended from the period 2007 to 2010. The results show that for both industrial and services sectors; there were no statistical significant relationship. When the two sectors were separated, the results for the industrial sector revealed that liquidity and tangibility have significant relationship with leverage, whereas the results for the services sector revealed that the growth rate, liquidity, and tangibility have significant relationship with leverage.

Adegboyega, Jayeola, Kajola, Asaolu (2019) studied the effect of leverage on financial performance of Nigerian firms. This study examined the relationship between leverage and financial performance of Nigerian firms between the years 2007 and 2016. The Random Effects Generalised Least Squares (REGLS) revealed a positive and significant effect between leverage (DR and DER) and ROCE ($p < 0.05$). However, ICR has a positive but insignificant effect on ROCE ($p > 0.05$). The outcome of the study was consistent with the Static trade-off theory of capital structure. The study suggests that firms should continuously employ debt capital in order to benefit from available tax shields which ultimately enhance profitability. The limitation of the study is that only firms in the food and beverage sector in Nigerian business environment were covered by the study. The study contributed to the existing theory and literature by using empirical evidence from an emerging market to bridge the existing gap in knowledge of the effect of leverage on the performance of firms.

III. Research Methodology

The study was based on positivists' research philosophy. This study adopted longitudinal research design and targeted all the 26 registered life insurance firms in Kenya, which were operational from 2011 to 2022 and had filed their audited financial statements with the insurance regulatory authority for the period (IRA, 2020). There were only 18 Life Insurance Firms that met the criteria for the study where such have been operated since the year 2011 which is the period of the study. The study therefore purposively took the 18 companies as the sample size suitable to attain the set objectives. Both primary and secondary data was collected. Primary data was collected using a questionnaire while secondary data was collected using a secondary data collection schedule. Data was analyzed using panel data regression based on Hausman Test which was used to choose between fixed and random model.

IV. Study Findings

Financial leverage, in the context of insurance firms, refers to the use of borrowed funds or debt to finance a portion of the firm's operations or investments. It involves the practice of utilizing debt capital alongside equity capital to increase the overall assets of the insurance company. This concept is crucial in understanding how insurance firms manage their capital structure and optimize their financial resources. This study used the leverage ratio which is a metric that compares the amount of debt used to finance a company's assets to the amount of equity.

Table 1: Descriptive Statistics of Financial Leverage

Descriptive Statistics	Financial Leverage
Minimum	0.000
Maximum	30.445
Mean	0.841
Std. Deviation	4.806
N	216

The minimum value of 0.000 indicates that during the study period there were insurance firms in the dataset that had no debt or financial leverage, meaning they were entirely financed by equity. This could suggest conservative financial management or low-risk tolerance for debt. The maximum value of 30.445 signifies that there is an insurance firm with a relatively high leverage ratio, indicating a substantial reliance on debt to finance its assets. Such a high ratio could potentially indicate higher financial risk and the need for careful management of interest payments.

The mean (average) leverage ratio of 0.841 reflects the average level of financial leverage across all insurance firms in the dataset. On average, insurance firms in Kenya use a certain amount of debt relative to equity in their capital structure. The standard deviation of 4.806 indicates the degree of variability in the leverage ratios across the dataset. A higher standard deviation suggests a wider range of leverage ratios, signifying diversity in financial structures among insurance firms.

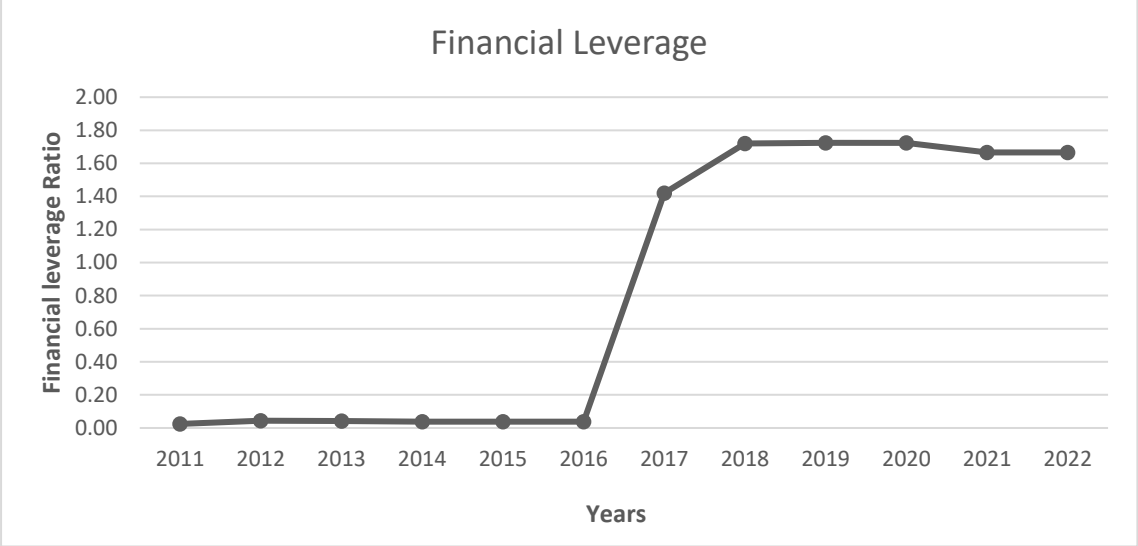

Figure 1: Variation in Average Financial Leverage Ratio for Insurance Industry between 2011 and 2022

Figure 1 represents the trend analysis of the average leverage ratio of insurance firms in Kenya over a twelve-year period. From 2011 to 2016, the average leverage ratio remained relatively constant at a low level, with all values around 0.02 to 0.04. This suggests that during this period, insurance firms in Kenya maintained a conservative financial structure with minimal reliance on debt. A significant change occurred in 2017, where the average leverage ratio experiences a substantial increase to 1.42. This indicates a sudden shift in the financial structure of insurance firms, with a greater utilization of debt to finance their operations or investments.

The high average leverage ratio continued in 2018 and remained constant at 1.72 until 2020. During this period, insurance firms appear to maintain a consistent level of financial leverage, indicating a sustained preference for using debt as a financing source. The average leverage ratio decreases slightly in 2021 and 2022 to 1.67, which suggests a possible trend towards moderation or optimization of debt usage. The initial years between 2011 and 2016 of low average leverage ratios suggest that insurance firms adopted a cautious financial approach with minimal debt. This might indicate a focus on stability and risk avoidance. The abrupt increase in the average leverage ratio in 2017 indicated a change in financial strategy, where insurance firms began to rely more heavily on debt. This shift could be driven by various factors, such as growth initiatives, expansion plans, or changing market dynamics. The period of higher average leverage ratios (2017 to 2020) could signify increased financial risk for insurance firms. Higher leverage ratios mean higher levels of debt, which in turn increases the obligations to service interest payments. This risk is especially pronounced if the company's operating income does not grow at the same rate as its debt obligations. These finding are consistent with those of Gweyi and

Karanja (2014) whose found that in Kenya, majority of the firms use debt to a large extent than equity to fund their operations and, as a result, capital costs are very high compared to the profit generated.

Correlation Analysis

Table 2 presents the correlation matrix. Correlation analysis is a statistical method used to measure the strength and direction of the relationship between two variables.

Table 2: Correlation Matrix

		Financial Leverage	Insurance Penetration Rate
Financial Leverage	Pearson Correlation	1	
	Sig. (2-tailed)		
Insurance Penetration Rate	Pearson Correlation	0.646**	1
	Sig. (2-tailed)	0.002	
	N	**216**	**216**
*Correlation is significant at the 0.05 level (2-tailed).			

The results further show that financial leverage had a positive and strong correlation (r=0.646, p=0.002) with insurance penetration in Kenya. The finding implied that higher financial leverage (debt) is associated with high insurance penetration rates. This suggests that excessive debt might enhance investment in growth initiatives or product development, ultimately hindering market expansion. These finding are consistent with those of Gweyi and Karanja (2014) who found that in Kenya, majority of the firms use debt to a large extent than equity to fund their operations and, as a result, capital costs are very high compared to the profit generated.

Regression Analysis

Based on the diagnostic tests conducted, the study employed a random effect model to predict the relation between financial leverage and insurance penetration in Kenya. Table 3 shows the results from a random effect model estimation.

Table 3: Random effects regression analysis

Insurance Penetration Rate	Coef.	Std. Err.	z	P>|z|
Financial Leverage	0.020559	0.00459	4.48	0.000
_cons	0.531068	0.281463	1.89	0.059
R-sq: = 0.5014				
Wald chi2(4) = 100.82				
Prob > chi2 = 0.0000				
Number of obs = 216				
Number of groups = 18				

***Random-effects GLS regression

Table 3 presents the results of a random effects regression analysis with insurance penetration rate as the dependent variable and firm size as independent variables. The R-squared value of 0.5014 indicates that the model explains 50.14% of the variance in insurance penetration rates. This is a relatively high R-squared for a model, suggesting that the model does a good job of capturing the relationship between financial leverage and insurance penetration. The statistically significant Wald chi-square test ($p < 0.001$) indicates that the independent variables had a significant impact on insurance penetration. Therefore, the model was significant in predicting the relationship between the dependent variable and financial leverage as independent variables. The coefficient of 0.021 suggests that for every unit increase in financial leverage, the insurance penetration rate is expected to increase by 0.021, holding other variables constant. This positive and statistically significant coefficient ($p < 0.001$) aligns with the earlier Pearson correlation analysis.

The finding implied that there is statistically significant evidence that financial leverage does have a positive effect on insurance penetration in Kenya. These finding are consistent with those of Gweyi and Karanja (2014) who found that in Kenya, majority of the firms use debt to a large extent than equity to fund their operations and, as a result, capital costs are very high compared to the profit generated.

The study findings agreed with Yllka and Etem (2022) that studied that factors affecting profitability of insurance companies, evidence from Kosovo. The regression results indicated that size, leverage and age of

company, have significant effects on the ROA. Meanwhile in NPM of insurance companies in Kosovo size of company and firm growth have significant effects. Similarly, Khalid (2012) results show that for both industrial and services sectors; there were no statistical significant relationship. When the two sectors were separated, the results for the industrial sector revealed that liquidity and tangibly have significant relationship with leverage, whereas the results for the services sector revealed that the growth rate, liquidity, and tangibility have significant relationship with leverage. The study further supported the finding of Mazviona and Mbakisi (2017) studied the factors influencing the output of insurance firms in Zimbabwe. The research used secondary details from twenty short-term insurance firms. The statistics were for the period 2010 to 2014 and established that although leverage and liquidity have a positive effect on profitability, the study shows that insurance companies can implement mechanisms such as automated systems that reduce operating costs.

V. Conclusions And Recommendations

The positive effect of financial leverage indicates that firms with higher levels of debt relative to their equity are more likely to contribute to insurance penetration. In conclusion, these findings suggest that policies and initiatives aimed at promoting insurance penetration in Kenya should consider not only the characteristics of individual consumers but also the characteristics of firms, particularly their size and financial structure. Encouraging larger firms and those with higher financial leverage to invest in insurance products potentially results to increased overall insurance penetration in the country.

Based on the conclusion that financial leverage positively impacts insurance penetration, the study made the following recommendations: Regulatory bodies and policymakers could incentivize insurance companies to utilize debt financing alongside equity. This could involve tax breaks on interest payments or allowing insurers to hold a higher percentage of debt in their capital structure. To mitigate the potential risks associated with higher debt levels, implementing risk-sharing mechanisms between insurance companies and the government or other financial institutions could be beneficial. This would provide a safety net for leveraged insurers facing financial difficulties.

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