

## Claim Management of Non-Life Insurance Companies in Ghana: Does It Impact on Profitability?

Alhassan BUNYAMINU<sup>1</sup>

University of Professional Studies, Ghana  
[alhassan.bunyaminu@upsamail.edu.gh](mailto:alhassan.bunyaminu@upsamail.edu.gh)

Shani BASHIRU

Accra Technical University, Ghana  
[shanibash@yahoo.co.uk](mailto:shanibash@yahoo.co.uk)

Ibrahim NANDOM YAKUBU

Ankara Yildirim Beyazit University, Turkey  
[kassibrahim@gmail.com](mailto:kassibrahim@gmail.com)

Emmanuel AGGREY

University of Professional Studies, Ghana  
[emmaaggreyasante21@gmail.com](mailto:emmaaggreyasante21@gmail.com)

Angelina APPIAH

University of Professional Studies, Ghana  
[angelinaappiah28@gmail.com](mailto:angelinaappiah28@gmail.com)

Samuel AMPONSAH TUFFOUR

University of Professional Studies, Ghana  
[samtuffour@yahoo.co.uk](mailto:samtuffour@yahoo.co.uk)

### Article's history:

Received 20<sup>th</sup> of March, 2022; Received in revised form 10<sup>th</sup> of April, 2022; Accepted 4<sup>th</sup> of June, 2022;  
Published 30<sup>th</sup> of June, 2022. All rights reserved to the Publishing House.

### Suggested citation:

Bunyaminu, A., Bashiru, S., Nandom Yakubu, I., Aggrey, E., Appiah, A., Amponsah Tuffour, S. 2022. Claim Management of Non-Life Insurance Companies in Ghana: Does It Impact on Profitability? *Journal of Applied Economic Sciences*, Volume XVII, Summer, 2(74): 97 – 106.

### Abstract:

This study seeks to interrogate the impact of claim management on the profitability of non-life insurance companies in Ghana covering the years 2013-2020. The study employs the fixed effects and random effects techniques with data covering the period 2013-2020. Hausman test is used as an appropriate approach to conduct this study. Our work measured profitability utilizing interpretive financial tools such as return on assets (ROA) and returns on equity (ROE).

The results of our research indicates that claim ratio and retention ratio have a profound adverse impact on return on asset. In terms of return on equity (ROE), claim ratio and expense ratio negatively and significantly affect profitability. This study recommends that non-life insurance companies should institute an effective claim processing system with highly qualified, experienced, trained and technical staff to ensure efficiency in claims management.

**Keywords:** claim management; profitability, non-life insurance; Ghana; ordinary least square.

**JEL Classification:** G52; F65; F43; B26.

### Introduction

Competitive pressures have hit the insurance industry in Ghana following the entry of several companies in the sector. Both life and non- life-oriented insurance sectors have realized increased competitive activities. Ghana is still considered to have an underdeveloped insurance market, compared with other countries (National Insurance Commission 2018), despite significant regulatory and structural changes put in place. This largely can be attributed to citizens' lack of information about insurance products and services. A major setback to the insurance in Ghana is low level of customer awareness and patronage of insurance products and services owing to long held misconceptions and suspicions about insurance operations by some considerable segment of the population. Consequently, degree of insurance penetration remains shallow.

---

<sup>1</sup> Corresponding author

The long-held misconceptions are fueled by delays and disputes between claimants and insurers during claims processing and settlement. Yusuf (2014) leading to conclude that, claims management poses formidable challenge affecting the insurance industry. Also, Yusuf (2014) posits that, insurances firms' have a bright opportunity to increase their market share and boost profitability if they can build a brand anchored on fair treatment to insurers during claims management.

According to the National Insurance Commission (2019), more complaints are often received annually with respect to non-life insurance as compared to life insurance. The complaints hinge on protracted delays, claims denial and misunderstanding over amounts payable to claimants. These disputes normally heighten the suspicion of clients over the level of solvency of insurance companies.

Tseng (2017) opined in his that the financial strength of a company could be jeopardized if efficient claim management processes are not instituted and this could adversely affect review of future premiums. This means that issues surrounding claims can have an adverse effect on the firm's profit if not well managed.

According to the National Insurance Commission (2018), annual report, the total assets of the insurance industry were GH¢6.2billion. It was made up of GHS3.1billion coming from the Life sector, GH¢2.4billion from the non-Life sector, and GH¢0.7billion from reinsurance. The average Life daily benefit paid by life insurers is GH¢1.9 million and daily claims incurred by non-Life companies is GH¢1.1 million. A study by the According to the National Insurance Commission (2018), revealed that insurance profitability in Ghana is low, as confirmed by 74.10% of the study. The heavy claims incurred by the insurance companies may have a severe effect on their profit if the claims are not well managed.

Scrutiny of extant literature reveals a lack of empirical assessment of the effects of claim management on profitability of insurance companies in Ghana. The focus of most scholars has been on how profitability of insurance companies is impacted by macroeconomic variables which are external issues. This study however seeks to examine the management of claims of non-life insurance companies in Ghana and its effect on profitability. In terms of the significance of the study, the findings will help insurers take relevant actions to improve their claim management.

The results of this study will also assist insurance regulators to pay attention to the manner in which claims are being managed by the companies in the sector and take measures to prevent insolvency issues. The study will further help customers to know the abilities of non-life insurance companies about claims payment, based on the impact of claim management on the companies' profit. The study will finally contribute significantly to the existing literature on claim management and profitability of insurance companies which evidence are scanty. The rest of the study is as follows: First section entails the review of related and relevant literature. The methodology formed the second section of the study which includes data collection, study design, data collection and description, and the method of analysis including description on the methods of model estimation. Results of the study is captured in third section and in the final section is presented the conclusion of the research and recommendations.

## 1. Literature Review

### 1.1. Theoretical Literature

The Ruin Theory forms the theoretical basis of this study. This is a risk theory depicting a mathematical model which portrays the vulnerability of an insurer to insolvency. It is a model introduced by Filip Lundberg in 1903 as a theoretical basis of the Ruin hypothesis known as the Cramer-Lundberg ruin theory or the classical compound Poisson model (Tseng 2017). Cramer-Lundberg ruin theory or as Tseng (2017) put it the classical compound Poisson model. Central to the framework is the idea that insurance firms are confronted with dual effects of cash flows; incoming premiums and outgoing claims. The model postulates that cash flows are bolstered when insurance firms rake in earned premiums whilst payment of claims represents leakages to cash flows. If the capital and the solvency base of the firm assumes a negative trend, then we draw the conclusion that ruin occurs.

According to the theory, if  $U(t)$  denote the capital at a time of an insurer and we let  $\psi(u)$  denote the probability that this ever occurs, on the assumption that yearly premiums and system of claims handling are unaffected. The probability then becomes an important mechanism insurance official since it can be used to determine the reliability and efficiency of the insurer's premiums and claim systems collectively given the available initial capital  $u = U(0)$ . For an insurer that begins with the original capital surplus  $X$  at time  $t$  with premiums coming from clients at a constant pace and claims arriving according to intensity Poisson method:

$$X_t = X + ct - \sum_{i=1}^{Nt} \varepsilon_i \quad \text{for } t \geq 0 \quad (1)$$

Generally, the theory is to study whether the excess level of the insurer will eventually fall to zero (which will make the company bankrupt). The theory, therefore, forms the basis or reasons for which insurance companies especially non-life insurance companies who face the payment of huge claims must consider prudent management of their claims.

## 1.2. Empirical Review

Oyedokun and Femi (2018) examined the impact of claims management on profitability of listed companies in Higeria adopting quantitative approach and using multiple regression to analyse data. Claim management was measured in terms of expense ratio, net claims, and loss ratio while the profitability of the companies was measured using return on assets (ROA). The findings specifically revealed that loss ratio and net claims have a negative but insignificant effect on profitability while expense ratio shows a positive insignificant effect. Attempts were further made to examine how loss ratio is being affected by net premiums and net claims. It was concluded that net claims have a positive significant effect on loss ratio while net premium has a negative significance effect.

Afolabi (2018) also investigated the influence of claims payments on profit levels in Nigeria. The study also used multiple regression techniques just as in the case of Oyedokun and Femi (2018), Gathering data from two companies spanning five years within 2011 to 2016 and stipulated that ROA has an indirect connection with loss ratio and net claims but established a direct link between with expense ratio. The study espoused the view that the amount of claims for every earned premium is high, hence the need for the companies to effectively manage their claim processes.

Similarly, Olarinre, Shoyemi and Edewusi (2020) examined the impact of claims management on profitability of insurance firms in Nigeria. The focus of the study regarding claim management was on net claim, expense ratio, and loss ratio, and how these affect profitability with data collected from 2010-2018. Gathering data from two companies spanning five years within 2011 to 2016 and stipulated that ROA has an indirect connection with loss ratio and net claims but established a direct link between with expense ratio. The data collected from quoted insurance firms in Nigeria were subjected to regression analysis utilizing the ordinary least square estimation technique. The study suggested that return on assets is significantly affected when net loss occurs addidg that, the impact of expense ratio is insinically positive. The study further opined that, effective claims management system is positively linked to profitability of insurance companies. Using panel regression analysis on 25 companies in the United States of America, Kim (2015) investigated the nexus between claims management and firm profitability and concuded that effective claims management system results in building strong reserves and reinsurance recoveries. Yusuf and Dansu (2014) in their study on non-life insurance companies discovered that there is a direct connection between net claims and profitability.

Yusuf and Ajemunigbohun (2016) critically examined the effect of an effective and efficient claims management system in the Nigerian insurance sector and asserted that claims management systems should be handled with customer centric tactics in order to achieve the goals of the industry.

Hasibuan, Sadalia and Muda (2020) focused on listed insurance firms in Indonesia in their appraisal of the impact of claim ratio, retention ratio and profitfability The research relied on data collected from the period of 2011 to 2018, with a sample of nine (9) listed companies. Their study used return on assets to examine profitability of the companies. The study uses panel data regression method analysis techniques and revealed that claim ratio and operating expense ratio have a impact on profitability. In Indonesia, Hasibuan, Sadalia and Muda (2020) assessed the influence of income growth, net assets, ratio of claim and risk-based capital on profit levels of listed insurance companies and used static panel regression to analyze data from the period 2009 to 2015. He concluded that risk-based capital and claim ratio have an adverse influence on profitability whilst the impact on profit trends from revenue growth and net assets are less significant.

According to a study by Tseng (2017), claim management has both negative and positive effect on the profitability of insurance companies since it either reduce or increase premium growth. When customers patronize the insurance product it brings about expansion whilst contraction is a result of non-patronizing of insurance policies. Contraction in premium may be as a result of dissatisfaction of aggrieved customers responding to the product in the market. The poor management of claims may lead to customer complaints. According to Rao and Pandey (2013) complaints bring about losses to insurance operations, and found collaboration in Akotey and Abor (2013) when they postulated that complaints by clients put insurance companies at a disadvantage.

Quist (2018) delved into claim complaints affects profitability in Ghana with data collected between 2010 and 2016 from 12 randomly selected non-life insurance companies. In addition to claim complaints as a variable, claim ratio as an important component in claims management was also considered by the study. The panel

regression model was utilized in the analysis of data, and the fixed-effect model was identified to have best fit the data. The researcher used ROA to measure profitability of the companies. Findings of the study revealed that claim complaints are correlated negatively with ROA, premium growth, and claims incurred. They discovered that claim complaints impact on profitability in a negative way, albeit insignificantly. However, the impact of claims ratio was found to have a profound negative effect on profitability.

Akotey, Sackey, Amoah, and Frimpong-Manso (2013) analyzed the financial strength of insurance firms in Ghana. Even though the study did not necessarily focus on the management of claims, some important components of claim management featured in the study. They utilized a sample size of 10 companies and scanned data from their annual financial statements spanning 2000 to 2010. Relevant data from the financial statements was subjected to panel regression analysis and found that, gross premiums links positively with turnover and profitability whilst they stipulated that its relationship with investment returns is negative.

A further outcome of their study was that price undercutting and overtrading has led life insurers into hefty under written losses. The results also pointed that, the connection between underwriting profit and investment income as part of a strategy to enhance profitability of life insurers is one of set off rather than complementary. Effective claims arrangements in the view of Capgemini (2011) can impact positively through better client service, fall in indemnity cost, improves brand appeal, and smoothens the claim processing mechanism, reduction in claim downtime and minimizing claims processing costs. Evidenced adduced from our perusal of extant literature shows gaps in terms of impact of claims management on profitability. Most scholars delved into impact of claims management on general company performance. Our study adopts a focused approach by concentrating on one important aspect of performance- profitability (Agrawal 2014).

## 2. Research Methodology

### 2.1. Sample and Data

In ensuring that the sample to be selected from the population (non-life insurance companies) for the study is representative of the population, the sample size was determined using statistical technique. This technique allowed a margin of error of 5% (0.05), implying that the sample size is representative of the population at 95% confidence level. We utilized Yamane (1967) simplified formula for proportions to compute the sample size. The formula illustrates a very simplistic strategy in calculating sample size.

$$n = \frac{N}{1+N(e)^2} \quad (2)$$

This sample size equation is valid, where  $n$  is the sample size,  $N$  is the population size,  $e$  is the desired level of precision or the margin of error (0.05). The above relations or formula will be used to estimate the sample for the study as follows:

$$n = \frac{N}{1+N(e)^2} = \frac{29}{1+29(0.05)^2} = 27 \quad (3)$$

Based on the calculation, 27 of non-life insurance firms in Ghana were used in the study. Data on the respective variables of the study was therefore collected from the 27 sampled non-life insurance companies. The data for the study which covers from 2013 to 2020 were gathered from the annual market reports of non-life insurance companies published by the National Insurance Commission (NIC).

### 2.2. Data Analytical Approach

We employed the ordinary least square (OLS), fixed impacts, and random panel approaches. The panel data technique deploys pooled observations over cross section of units covering different time periods. In our attempt to determine which of the panel regression frameworks to use (fixed effect or random effect) in order to derive the best possible data, fit and interpretation, we settled on Hausman test in a bid to examine whether unique errors (ui) correlate with regressors. Where they are correlated, preference is made for the fixed effects model. Otherwise, the random effects model is preferred.

The general empirical models based on the selected variables for the study are specified as follows:

$$ROA_{it} = a + \beta_1 CR_{it} + \beta_2 ER_{it} + \beta_3 RR_{it} + \beta_4 MS_{it} + \beta_5 FS_{it} + \varepsilon_{it} \quad (4)$$

$$ROE_{it} = a + \beta_1 CR_{it} + \beta_2 ER_{it} + \beta_3 RR_{it} + \beta_4 MS_{it} + \beta_5 FS_{it} + \varepsilon_{it} \quad (5)$$

where  $\beta_1, \beta_2, \dots, \beta_5, > 0$ , and represent the regression coefficients.

The subscript *i* stands for the cross-sectional elements and *t* stands for time series dimension. ROA stands for return on assets whilst ROE represents return on equity which are the dependent variables, and are the most commonly employed profitability measures in the literature (see Yakubu 2019, Yakubu and Bunyaminu 2022, Bougategf 2017). The independent variables which include claim ratio, expense ratio, and retention ratio are symbolized by CR, ER, and RR respectively. The control factors are market share and firm size represented by MS and FS respectively. The descriptions of the variables are shown in Table 1.

Table 1. Description of variables

Variable	Description
Dependent variable	
Return on Assets (ROA)	Net Income before taxes/Total Assets
Return on Equity (ROE)	Net income/Shareholders' equity
Independent variables	
Claim Ratio (CR)	Net claims incurred/ Earned Premium
Expense Ratio (ER)	Total expense as a percentage of Net Earned Premium
Retention Ratio (RR)	Net Written Premium/Gross Written Premium
Control variables	
Market Share (MS)	Sales over the period/Total sales over the same period
Firm Size (F Size)	Natural logarithm of total assets during the period

### 3. Results and Discussion

#### 3.1. Descriptive Statistics

Table 2 depicts the descriptive statistics of the variables in measuring claim management and profitability and the control variables. These help to visualize the data and describe patterns and attributes with regards to the management of insurance claims and the performance of the companies.

Table 2. Descriptive statistics

Variables	ROA	ROE	Claims Ratio	Expense Ratio	Retention Ratio	Market Share	Firm Size
Mean	0.030	0.040	0.388	0.935	0.666	0.172	8.229
S. D	0.093	0.240	0.173	0.467	0.183	0.171	0.388
Skewness	-1.143	-2.652	0.686	5.819	-0.776	1.601	0.059
Kurtosis	6.468	12.846	4.251	47.095	2.785	5.001	3.086
Min	-0.32	-1.360	-0.030	0.500	0.200	0.006	7.098
Max	0.340	0.400	1.010	4.950	0.950	0.805	9.312
Obs.	137	133	140	140	140	140	140

Source: Stata Output, 2021

Table 2 shows the descriptive statistics of the variables employed in our study which describes the data gathered over the period covering 2013 to 2019. The use of the descriptive statistics assisted us to with outliers in the data

The mean return on assets (ROA) measured by the pre-tax profit of the companies divided by the total assets shows an average return of 0.030 (3%). The ROA determines the effectiveness of the non-life insurance companies in utilizing their fixed assets to make earnings. The average estimate of 3% infers that for every GH¢ 100 invested in assets the average return would be GH¢ 3.00. The standard deviation (0.090) however points out the actual data on ROA deviates slightly from the average.

Return on equity (ROE) used as one of the measures of financial performance of the non-life insurance companies recorded an average of 0.04 (4%), suggesting that on the average the performance of non-life insurance companies with respect to the amount of investment made by equity shareholders is quite not encouraging. There are however large deviations in the ROE of the companies from the market average as shown by the standard deviation (S.D = 0.240). Findings show that for every GH¢100 invested by investors in these companies, average net earnings of GH¢4 are accrued to equity holders.

Over the period, the claim ratio of the non-life insurance companies recorded an average of 38.8% (0.388). This indicates that non-life insurance companies in Ghana averagely are paying back about 38% of each cedi premium paid to them by customers. This is very favorable to the companies since the ratio is below the required international acceptable standard which ranges between 60% and 80%. Some individual companies however need to be closely monitored and advised as the maximum claim ratio indicates a claim payment of over 100% (1.010). Such companies are overwhelmed by claims payments. It is deduced that while the industry is generally benefiting from low levels of claim payment, some individual companies are stressed. The claim ratio being about 20% below the lower limit of the internationally acceptable standard (60%) should be a point of caution to the industry as to whether the companies are playing their core obligation of claim payments to the insurer and in the right proportions.

The expenses by the non-life insurance companies in the management of claims have also been included in the study. The expense ratio examined in this study incorporates both management expenses and commissions expenditure. The results show that, on average, the ratio of expenses of the non-life insurance companies to their net earned premium is 0.935 (93.5%), with some slight deviations (S.D = 0.467). According to the NIC (2020), the international acceptable ratio is below 40%. It is implied that prompt payment of claims would likely be affected as the high level of the expense ratio is an indication that the insurers are mostly insufficient in discharging their insurance obligation. Interestingly, the minimum ratio of expense by the companies does not meet internationally accepted standards.

With regards to the retention ratio, the companies recorded an average of 0.666 over the period. This ratio indicates that, generally, non-life insurance companies do not pass on 66.6% of their risks to reinsurers. In other words, the companies on average passed on about 33.4% of their risks to reinsurers. This indicates that most non - life insurance firms exposed to more risks with the margin of tolerance varying based on the kind of business lines of the firm.

### 3.2. Diagnostic Tests

Our study tested for the existence of multicollinearity, heteroscedasticity, and autocorrelations in the residuals or the error term. These diagnostic tests are necessary to determine any possible violation of the assumptions about the model estimations and to make the right decisions regarding estimations.

#### Multicollinearity Analysis

The study tests the presence of multicollinearity problems. We utilized the Variance Inflation Factor in conducting the tests. The results are presented in Table 3. We observed that the variance inflation factors respectively are far less than 10. We therefore suggest that there is no multicollinearity between the independent variables.

Table 1. Test for multicollinearity

Variable	VIF	1/VIF
Firm Size	2.52	0.397
Market Share	2.36	0.423
Retention Ratio	1.29	0.774
Expense Ratio	1.25	0.800
Claims Ratio	1.07	0.937
Mean VIF	1.70	

Source: Stata Output, 2021

#### Heteroskedasticity Test

To promote the efficiency of the regression estimates, an underlying assumption is that variances of the error terms have to be held constant, that is homoscedastic. A breach of this fundamental, therefore, renders parameter estimates inefficient. Heteroscedasticity occurs when the variance of the error terms differs across observations, thus not constant. The study tested the null hypothesis of a constant variance using the Breusch-Pagan test as disclosed in Table 4. From the results, at a p-value (0.000) < 0.05, we reject the null hypothesis that the variance is constant overtime. It concludes therefore that the error term is heteroskedastic and there is the absence of homogeneity in the model. This also means that the variance of the error term or the residuals of the model is not constant, hence estimations of the model cannot necessarily be based on the standard error

term; the robust error term would be preferable for accurate and reliable estimations. The use of the robust error technique assists in effecting corrections on the issue of heteroscedasticity.

Table 2. Breusch-Pagan/ Cook-Weisberg test for heteroskedasticity

Ho: Constant variance	
Chi-square ( $\chi^2$ )	37.28
Prob.	0.000

Source: Stata Output, 2021

### Test for Autocorrelation

Regression models also require that the data is composed of little or no autocorrelations, inferring that the error terms are not independent of each other. In this study, the Wooldridge test for autocorrelation has been applied since the data is panel in structure. From Table 5, the test statistic of 0.026 and p-value (0.875) < 0.05 infer that we fail to reject the null hypothesis, indicating that there are no first-order autocorrelations or serial correlations. This also means that residuals or the error term are not linearly auto-correlated.

Table 3. Wooldridge test for autocorrelation in panel data

Ho: No first-order autocorrelation	
F (1, 19)	0.026
Prob.	0.875

Source: Stata Output, 2021

### 3.3. Effect of Claim Management on Profitability in Terms of Return of Assets (ROA)

This section of the study seeks to address the research objectives by examining the effect of claim management (claim ratio, expense ratio, and retention ratio) on return on assets (ROA). In estimating the model, the Hausman test was conducted to choose between the fixed and random effect models. The test revealed a test statistic of 47.85 supported by a p-value (0.000) < 0.05, indicating that the fixed effect is most appropriate for modelling the relationship between the variables.

Table 4. Fixed-Effect GLS regression

	Coef.	Robust Std. Err.	T	P> t	95% Confidence Interval	
Claims Ratio	-0.169	0.057	-2.94	0.008	-0.289	-0.049
Expense Ratio	-0.091	0.061	-1.50	0.151	-0.218	0.036
Retention Ratio	-0.209	0.108	-1.92	0.070	-0.437	0.019
Market Share	-0.115	0.100	-1.14	0.267	-0.325	0.095
Firm Size	-0.065	0.046	-1.42	0.173	-0.160	0.031
Constant	0.870	0.433	2.10	0.06	-0.037	1.779
F (5, 19)	6.08					
Prob.	0.002					
Rho	0.559					
Hausman test $\lambda^2$	47.85					
Prob. ( $\lambda^2$ )	0.000					
No. of obs.	135					

Source: Stata Output, 2021

The model above shows that the profitability of non-life insurance companies in terms of return on assets (ROA) can be predicted by the measures of their claim management. This is indicated by the p-value (0.002) < 0.05. Results further explained that 55.9% (rho=0.559) of the variation in the model is a result of differences across companies. ROA of the non-life insurance companies is negatively affected by the claim ratio. This is significant at p-value (0.008) < 0.05. It is disclosed that with any unit increase in claim ratio of the companies, their return on assets will decrease by about 16.9%. This agrees with the findings of Quist (2018) and Putra (2017) that claim ratio has a negative significant effect on ROA.

However, the expense ratio and retention ratio, both have a negative but insignificant effect on ROA. This is supported by p-value (0.151, 0.070) >0.05 respectively. These findings agree with Hasibuan, Sadalia and Muda (2020), that expense ratio has a negative effect on ROA, but in their case the effect was significant. On the contrary, the study disagrees with Hasibuan, Sadalia and Muda (2020) on the fact that retention ratio has a positive significant influence on ROA.

Nonetheless, this still calls for concern for the non-life insurance sector in Ghana. Should the level of expenses on the management of claims continue to increase, it's the negative influence on ROA would be significant in the future and this might spell doom for some individual companies and the industry as a whole.

### 3.4. Effect of Claim Management on Profitability in Terms of ROE

In this section, we examined the effect of claim management (claim ratio, expense ratio, retention ratio) on the probability of the non-life insurance companies using return on equity. The Hausman test was relied once again to determine the best model in establishing the causal links between the variable. The p-value (0.048) < 0.05 of the Hausman test is significant at 5% and therefore the fixed effect model is most appropriate.

Table 5. Fixed-Effect GLS Regression

Variables	Coef.	Robust Std. Err.	T	P> t	95% Confidence Interval	
Claims Ratio	-0.607	0.181	-3.35	0.003	-0.985	-0.227
Expense Ratio	-0.432	0.167	-2.58	0.018	-0.781	-0.082
Retention Ratio	-0.250	0.255	-0.98	0.340	-0.784	0.285
Market Share	-0.045	0.213	-0.21	0.834	-0.491	0.401
Firm Size	-0.152	0.119	-1.28	0.217	-0.402	0.097
Constant	2.090	1.083	1.93	0.069	-0.176	4.357
F (5, 19)	5.21					
Prob.	0.004					
Rho	0.359					
Hausman test $\lambda^2$	11.17					
Prob. ( $\lambda^2$ )	0.048					
No. of Obs.	132					

Source: Stata Output, 2021

The model shows that the profitability of non-life insurance companies in terms of return on equity (ROE) can be predicted by the measures of their claim management. This is indicated by the p-value (0.004) <0.05. Results further explained that 35.9% (rho=0.35.9) of the variation in the model is as a result of differences across companies. The claim ratio again has been demonstrated to have a negative (-0.607) significant (p=0.003<0.05) effect on profitability in terms of return on equity (ROE). Likewise, the expense ratio has a negative (-0.432) significant (p=0.018<0.05) effect on ROE. Retention ratio however has an insignificant negative effect on ROE, as shown by p-value (0.340) >0.05.

Worth mentioning, previous scholars have not focused on the effect of claim management on the ROE of insurance companies as conducted in this study based on an argument that, in insurance companies, ROE is a weak measure of profit performance. On the contrary, our findings are quiet revealing with some implications for management strategic decisions. Comparatively, the level of change that these claim management measures (claim ratio, expense ratio, and retention ratio) because ROE is far more than that of ROA. For instance, whiles the claim ratio would reduce ROA but about 16.9%, it would reduce ROE by 60.7%. The influence of these management issues on the return of equity shareholders of the companies cannot be downplayed.

### Conclusion and Policy Implications

This study examined the impact of claim management on the profitability of non-life insurance companies in Ghana. The analysis of data was conducted using descriptive statistics to determine data pattern and some important revelations that would assist in the estimation of the model. Findings show that return on asset (ROA) of non-life insurance companies in Ghana over the period of 2013 to 2019 is averagely 0.03, inferring that the non-life insurance companies in utilizing their assets earned only 3% as profit. Return on equity (ROE) as another measure of profitability of the companies is averaged 0.04 over the period covered. This is an indication that 4% of average net earnings would be accrued to equity holders of non-life insurance companies.

Averagely non-life insurance companies are able to pay 38% of premiums paid by customers back to them as claims. The ratio of payments by the companies in Ghana is averagely below the belt, it is below international acceptable standards. With regards to expenses which include administrative expenses and commissions expenses, the average industry expense ratio according to the study was estimated at 93.5%. Non-life insurance companies in Ghana on the average passed on about 33.4% of their risks to reinsurers; an indication that huge proportion of the risk is absorbed by the insurance firms. Our research also established strong links between claims management and profit outlook of insurance organizations on the evidence of both ROA and ROE., the relationship however has been negative, which calls for great concern for the companies in Ghana.

On the strength of our findings, we infer that non-life insurance companies in Ghana generally are able to generate positive returns on their assets and from equity investments. These returns are however not encouraging as some of the companies perform poorly in terms of profitability. The non-life insurance market generally does not look good regarding the payment of claims, since the claim ratio of the market is far below the international acceptable standards. Similarly, non-life insurance firms are affected by the prevalence of surging expense ratio. A huge chunk of their earned net premiums is put into administrative/ management expense and commission expenses. Despite these, the companies retained most of their risk, as the retention ratio is high.

We further conclude that issues of claim management by the non-life insurance companies have significant impact on their ability to post sustainable profits judging from the use of both ROA and ROE. Specifically, claim ratio has significant negative effect on return on asset and return on equity of the companies. Despite not meeting international acceptable standards of claim payments, the payment of claims yet has the probability of decreasing profitability of the companies. The expenses of the companies also have a significant negative effect on return on asset but this is insignificant. However, we assert that it has a very profound negative impact on return on equity. Non- life insurance firms should come to the realization that their huge operational expenditure is adversely impacting on their capacity to post year in year out profits which will also weaken their ability to create shareholder value. We found that retention ratio is impacting negatively but insignificantly on profitability of the companies. Management of non-life insurance firms should consider instituting prudent and efficient claims processing systems in order to stem the tide of rising operational expenditure to enable them chalk sustainable profits.

For policy significance, we recommend that management of non-life insurance companies should ensure that due diligence is done in the payment of claims. The underwriting staffs of the companies especially must be well trained to avoid issues such as adverse selection. A well-structured claim system that radiates efficiency should be set up in non-life insurance firms. The quality of human resources a company defines to a large extent its capacity to operate profitably. Insurance firms need to attract, train and refresh the skills and competencies of the staff to build their capacities to handle and dispense insurance claims with customer-oriented tactics. Much as insurance companies are profit maximizing outfits, they are better off building customer trust in order to build a brand that exudes confidence through payment of genuine claims speedily in order to reduce customer dissonance. Insurance firms should analyze their administrative costs as a whole in order to identify and curtail wasteful activities that lacks value addition but rather shrinks profit margins. The regulator of the insurance industry, National Insurance Commission should strengthen its watchdog role and exercise supervision of the financial practices of insurance firms in order to institute measures that will make firms operate according to best practices and acceptable industry standards.

#### References:

- [1] Agrawal 2014. Dimension of knowledge management. *Global Business Review*, 15(1): 179-182. DOI: [10.1177/0972150914528076](https://doi.org/10.1177/0972150914528076)
- [2] Akotey, J., Sackey, F., Amoah, L., Frimpong-Manso, R. 2013. The financial performance of life insurance companies in Ghana. *Journal of Risk Finance*, 3: 286-302.
- [3] Akotey, O., Abor, J. 2013. Risk management in the Ghanaian insurance industry. *Qualitative Research in Financial Markets*, 5(1): 26-42.
- [4] Capgemini. 2011. Claims system migration & enhancement cuts costs by \$15 million and improves customer relationship. Available online: [https://www.capgemini.com/wp-content/uploads/2017/07/ss\\_Claims\\_Management.pdf](https://www.capgemini.com/wp-content/uploads/2017/07/ss_Claims_Management.pdf)
- [5] Afolabi, T. 2018. Effect of Claims Payments on Profitability in The Nigerian Insurance Industry. *Advances in Social Sciences Research Journal*, 5(4): 94-101.

- [6] Bougatef, K. 2017. Determinants of bank profitability in Tunisia: does corruption matter? *Journal of Money Laundering Control*, 20(1): 70-78. DOI:[10.1108/JMLC-10-2015-0044](https://doi.org/10.1108/JMLC-10-2015-0044)
- [7] Hasibuan, A., Sadalia, I., Muda, I. 2020. The Effect of Claim Ratio, Operational Ratio and Retention Ratio on Profitability Performance of Insurance Companies in Indonesia Stock Exchange. *International Journal of Research and Review*, 7(3): 223-231.
- [8] Kim 2015. Relationship between claims management and firm profitability in United State of America. *Academic Research International*, 1(3): 315-321.
- [9] Oyedokun, G., Femi, G. 2018. Effects of Claims Management on Profitability of Listed Insurance Companies in Nigeria. *American Journal of Management*, 18(5): 37-45. DOI: <https://doi.org/10.33423/ajm.v18i5.252>
- [10] Olarinre, O., Shoyemi, O., Edewusi, D. 2020. eEffects of claims management on profitability of insurance firms in Nigeria. *British Journal of Management and Marketing Studies*, 3(4): 106-114.
- [11] Panjer, H., Willmott, G. 2015. Models for the Distribution of Aggregate Claims. *Transactions of the Society of Actuaries*, 36: 399-452.
- [12] Putra, N.D.D. 2017. Influence growth of income, assets, ratio of claim and risk-based capital on the profitability of life insurance companies in Indonesia. *International Journal of Business and Commerce*, 6(09): 24-42.
- [13] Quist, J. 2018. Impact of Claims Complaints on Profitability of Non-Life Insurance Operations in Ghana. University of Ghana digital collections. Available online: <http://ugspace.ug.edu.gh/handle/123456789/29545>
- [14] Rao, J., Pandey, K. 2013. A study on factors influencing claims in general insurance business in India. *The Journal of Risk Finance*, 14(3): 303-314. DOI: [10.1108/JRF-11-2012-0071](https://doi.org/10.1108/JRF-11-2012-0071)
- [15] Tseng, L. 2017. Why do lenient claims handling practices exist in the insurance industry? A survey study of ethical decisions by claims adjusters. *Managerial Finance*, 43(11): 1254-1273. DOI: <https://doi.org/10.1108/MF-02-2017-0050>
- [16] Yamane, T. 1967. *Statistics, an Introductory Analysis*. New York: Harper and Row.
- [17] Yakubu, I.N. 2019. Does corruption grease or sand the wheels of bank profitability in Ghana? *Cogent Economics & Finance*, 7(1), 1701909.
- [18] Yakubu, I.N., Bunyaminu, A. 2022. Bank Profitability in Sub-Saharan Africa: Does Economic Globalization Matter? *Journal of Economic and Administrative Sciences*. DOI:[10.1108/JEAS-08-2021-0158](https://doi.org/10.1108/JEAS-08-2021-0158)
- [19] Yusuf, T., Dansu, F. 2014. Effect of claim cost on insurers' profitability in Nigeria. *International Journal of Business and Commerce*, 3(10): 2-10.
- [20] Yusuf, T. 2014. Brokers and the control of postcontractual opportunism in the Nigeria insurance market. *Journal of Financial Crime*, 17(2): 223-239. DOI: [10.1108/13590791011033917](https://doi.org/10.1108/13590791011033917)
- [21] Yusuf, T., Ajemunigbohun, S. 2016. Effectiveness, efficiency and promptness of claims handling process in the Nigerian insurance industry. *Journal of Economics and Business*, 67(2): 69-84. DOI: <https://doi.org/10.12955/ejbe.v10i2.686>
- \*\*\* National Insurance Commission. 2018. Annual insurance industry report, 2018. Accra: National Insurance Commission .
- \*\*\* National Insurance Commission. 2019. Increasing insurance penetration in Ghana: The challenges and strategies. Accra: NIC.