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Determinants of Financial Performance; Evidence from Ethiopia Insurance Companies

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Abstract
The objective of this research was identifying the determinants of financial performance in case of Ethiopian Insurance Companies over the period of 2010-2015. Profitability ratios were used as proxy of financial performance measurement; return of asset (ROA) and return of equity (ROE). Panel data set from nine insurance companies over the period of six years were used. The descriptive statistics implied that nonexistence of variation in ROA and ROE since the standard deviation statistics for ROA (34%) and ROE (11%) were below the respective means (63% and 19%). To identify the determinants of financial performance, Ordinary least squire (OLS) estimation method was employed. The estimation result showed that capital adequacy, liquidity, size, age, loss, leverage were the key determinants of financial performance. From this researchers concluded that financial performance mainly driven by firm specific factors. Thus, attention should be given to firm specific variables to have a sound financial performance.

1. Introduction

The roles of financial institutions in the economy of a country in general and insurance companies in particular are indispensible for enhancement of efficient and effective financial system through savings mobilization, risk transfer and intermediation (Yuvara and Abate , 2013).

Insurance companies provide inimitable financial services to the growth and development of every economy. The risk absorption role of insurers promotes financial stability in the financial markets and provides a sense of peace to economic development as it provides long- term funds. The insurance companies' ability to cover risk in the economy hinges on their capacity to create profit or value for their shareholders (Mwangi & Wanjugu 2015).

Financial performance of an organization not just plays the task to move up the market value of that particular organization but also bring direct development of the financial sector which finally leads to success of market (Imran et . al. , 2015).

In insurance, performance is normally expressed in net premiums earned, profitability from underwrite activities, annual turnover, returns on investment, return on asset and return on equity. These measures can be classified as investment performance measures and profit performance measures. Profit performance includes the profits measured in monetary terms that come from the difference between the revenues and expense. This profit in turn influenced by firm-specific characteristics, industry features and macroeconomic variables IBID.

Similarly, the financial performance of insurance companies can be analyzed at micro and macroeconomic level, being determined by internal factors represented by specific characteristics of the company, and external factors regarding connected institutions and macroeconomic environment. Identifying the factors that contribute to insurance companies' profitability is useful for investors, researchers, financial analysts and supervisory authorities (Batrinca & Brca, 2014).

The concept of financial performance has received considerable attention from scholars in various areas of business. It is of primary concern of virtually all business stakeholders in any sector particularly for insurance companies' health and ultimately its survival (Mwangi & Wanjugu , 2015).

Apart from commercial banks, insurance companies contribute significantly for financial intermediation in the economy. As such, their success means the success of the economy; their failure means failure to the economy (Ansah-adu, Andoh, & Abor, 2012).

However financial performance of insurance companies can be hindered by different factors; firm specific factors, industry factors and macroeconomic factors. According to Batrinca & Brca (2014) study revealed that; financial leverage, company size, growth of gross written premiums, underwriting risk, risk retention ratio and solvency margin were some of firm specific factors of the financial performance in the Romanian insurance companies. According to YUVARA and ABATE , (2013), results from the regression showed; growth, leverage, volume of capital, size, and liquidity were identified as most important determining factors of profitability hence growth, size, and volume of capita are positively related. In contrast, liquidity ratio and leverage ratio are negatively but significantly related with profitability. The age of companies and tangibility of assets have not significant effect on profitability.

Daniel & Tilahun (2013) identified that insurers' size, Loss ratio (risk), tangibility and leverage were important determinants of performance of insurance companies in Ethiopia. But, growth in writing premium, insurers' age and liquidity have statistically insignificant effect on ROA. The study conducted by Meaza (2014) revealed; size of company, leverage ratio, liquidity ratio, loss ratio/ risk, tangibility of assets, growth and managerial efficiency, economic growth(GDP) and inflation have significant impact on ROA. The finding of Mwangi & Wanjugu (2015) indicate that leverage, equity capital, management competence index, size and ownership structure were the determinants of financial performance..

According to Imran et . al. , (2015) leverage, liquidity, size, risk, and tangibility have significant effect on financial performance of financial sectors.

Mohammed (2016) results showed that firm leverage, Size, tangibility and business risk have significant impact on performance of insurance companies in Ethiopia.

Further, Ethiopia's Insurance sector has shown strong resilience to a challenging macroeconomic environment and global development. For instance according to the report by NBE (2010) the size of the country's insurance sector in terms of assets has increased by 47.5% by the end of June 2010. There are also other studies conducted in developing country on insurance companies. These are; (Hussain, 2015) and (Ondigi & Willy M, 2016)

on macro economy and profitability of insurance companies. (Ahmed, et. al., 2010), (Almajali & Al-Soub, 2012) and (Derbali & Jamel, 2018) on determinants of Capital Structure and performance of Life Insurance sectors. (Ansah-adu, et.al., 2012) studied on evaluating the cost efficiency of insurance companies.

Despite some studies are conducted on the insurance sectors, literatures showed that most of the studies conducted on the banking sectors. Also in Ethiopia, to the best of the researcher knowledge, there are few studies which examined of determinants financial performance of insurance companies. Moreover, most of the studies focused only on firm specific factors that affect the financial performance of insurance companies. Taking in to consideration the inadequacy of empirical investigation, the researchers attempted to fill such gaps by incorporating both firm specific and macroeconomic factors that determine financial performance of insurance companies in Ethiopia.

Therefore, this research has contribution towards filling the gap by examining determinants from firm specific and macroeconomic factors. Firm specific factors identified by the researchers were size of the companies, leverage, loss (risk), liquidity, age of the firms and capital adequacy. Microeconomic factors were inflation and gross domestic product of Ethiopia. The dependant variable; financial performance of insurance companies were measured using profitability ratios (ROA and ROE).

2. Materials and Methods

2.1 Research Approach

Since the nature the data is quantitative, the researchers employed quantitative research approach. Therefore balanced panel data of nine insurance companies over the period 2010 to 2015 were used.

2.2 Source and Methods of Data Collection

In the study only secondary data was used which acquired from internal and external sources. The internal sources were statement of financial position and statement financial performance from nine insurance companies which is significant to identify firm specific factors. While, the external sources were the annual reports of National bank of Ethiopia (NBE) which enable to examine macroeconomic determinants of performance. The required data was gathered through document review of consecutive six years audited financial statement and annual reports of NBE.

2.3 Sampling Technique

In the study the researcher selected nine insurance companies which have consecutive six years financial statements through purposive sampling technique. Thus the study covers 54 observations (nine insurance companies over the period of six years).

2.4 Operational definition of variables

2.4.1 Dependent variable

Financial performance of insurance companies was the dependent variable that measured through profitability ratios from their annual reports. However, in this study two profitability measure ratios were used; return on asset (ROA) and return on equity (ROE).

Return on asset (ROA):- The return on assets defined as "insurance companies' after interest and tax profit over total assets" which enable to measure companies' financial performance.

Return on equity (ROE):- ROE measure the rate of return on the shareholders equity and calculated by dividing companies' net income after interest and taxes by equity capital.

2.4.2 Explanatory variables

In this study the independent variables are classified into firm specific and macroeconomic variables. The firm specific variables are under the control of firm's manager/s and treated as internal factors and while the macroeconomic variables are uncontrollable and hence external. The following table 2.1 presents the description of both dependent and explanatory variables with their respective measures. In order to minimize biasness on estimation two explanatory variables presented in logarithm form for regression purpose.

Table 2.1:- operational definition of variables

Variables		Notation in model	Measurement	Variable description in regression model
Dependent variable	Return on asset	ROA	$\frac{\text{Net income}}{\text{Total asset}}$	Net income to asset
	Return on equity	ROE	$\frac{\text{Net income}}{\text{equity}}$	Net income to equity
Explanatory variables	Size	SIZ	LnTA	Natural logarithm of total asset(lnTA)
	Capital adequacy	CA	$\frac{\text{Equity}}{\text{Total Asset}}$	Equity to total asset
	Leverage	LEV	$\frac{\text{Debt}}{\text{Equity}}$	Debt to equity ratio
	Loss	LOS	$\frac{\text{Incurred claim}}{\text{Earned premium}}$	Incurred claims to the earned premiums
	Liquidity	LIQ	$\frac{\text{Total current asset}}{\text{Total current liablity}}$	Total current assets to total current liabilities.
	Age	AGE	Ln of number of year in operation	Natural logarithm of number of years in operation
	Gross domestic product	GDP	GDP rate	yearly gross domestic product
	Inflation	INF	General inflation rate	Yearly general inflation rate

2.5 Model specification

As stated in the earlier sections the main purpose of this study is to identify the determinants of financial performance, using the annual balanced panel data, where all the variables are observed for each cross-section and each time period. This indicates panel data, comprises from both cross-sectional elements and time-series elements; the cross-sectional element is reflected by the different insurance companies and the time-series element is reflected in the period of study (2010-2015). The general form of the regression model (mathematical equation) can be stated as:

$$Y_{it} = â + \beta_i X_{it} + u_{it}$$

Where, i stands for the i^{th} cross-sectional unit and t for the t^{th} time period; â is a constant term; β_i is estimated coefficient; X_{it} are the vector of explanatory variables and u_{it} is the combined cross-section and time series error component.

On the basis of the general regression equation two multiple regression models are specified and estimated to examine the relationship between the two dependent variables; ROA and ROE- each with eight explanatory variables; size, capital adequacy, leverage, loss, liquidity, age, GDP and inflation. The models are specified as below:

$$ROA_{it} = a+\beta_1 CA_{it} +\beta_2 LIQ_{it} + \beta_3 SIZ_{it} + \beta_4 LEV_{it} + \beta_5 LOS_{it} + B_6 AGE_{it} + B_7 INF_{it} + B_8 GDP_{it} + U_{it} \quad (1)$$

$$ROE_{it} = a+\beta_1 CA_{it} +\beta_2 LIQ_{it} + \beta_3 SIZ_{it} + \beta_4 LEV_{it} + \beta_5 LOS_{it} + B_6 AGE_{it} + B_7 INF_{it} + B_8 GDP_{it} + U_{it} \quad (2)$$

Where

i = company index

t = year index

Financial performance $_{it}$ = (ROA and ROE) $_{it}$

ROA $_{it}$ represents the return on assets for company i in year t

ROE $_{it}$ represents the return on equity for company i in year t

α is constant, βi are co-efficient where i=1, 2,3,4,5,6… Which represent the proportionate change in dependent variable due to independent variables

SIZ $_{it}$ represents size of company i in year t

CA $_{it}$ represents capital adequacy for company i in year t

LEV $_{it}$ represents leverage of company i in year t

LOS $_{it}$ represents loss of company i in year t

LIQ $_{it}$ represents liquidity of company i in year t

AGE $_{it}$ represents age of company i in year t

GDP $_{it}$ represents yearly gross domestic product in year t

INF $_{it}$ represents the general inflation rate in year t

U $_{it}$ represents unobservable factors of company i in year t

2.7 Method of Data Analysis

After careful and systematic collection of data, the next steps performed as below: First, the data should be sorted and inserted on STATA soft ware. The collected data regressed by

panel data ordinary least square (OLS) regression method and interpret with the help of different financial ratio and statistical description including standard deviation, mean, minimum and maximum (descriptive statistics). Descriptive statistics for dependent variable and all independent variables used to check whether there is a substantial variation in the data. This method gives guarantee for variation of data. A correlation coefficient also used merely to observe the direction and magnitude of relations among variables. However, this method does not give assurance for casual relation between the dependent variable and independent variables. Inferential statistics also used to test the hypothesis. The proposed hypotheses are tested statistically to arrive at the conclusion. Thus, the collected panel data was analyzed using descriptive statistics, correlations coefficient, and regression statistics.

2.8 Model assumptions

The following diagnostic tests were carried out to ensure that the data suits the basic assumptions of classical linear regression model (CLRM) underlying the OLS:

2.8.1 Multi collinarity

The existence of strong correlation between the independent variables was tested using variance inflation factor (VIF). The outcome implies that the VIF for all variables is significantly less than ten (1.88). Similarly, the 1/VIF significantly exceeds 0.1(range from 0.256452-0.918046) which is consistent with the rule of thumb. Hence, the researcher found that there is no Multi collinarity problem.

2.8.2 Heteroscedasticity:

To check for Heteroscedasticity, Breusch-Pagan/Cook-Weisberg test of Heteroscedasticity carried out. The test done indicates that there is no problem of Heteroscedasticity because (Prob > chi2 = 0.5699 and 0.1257 for ROA and ROE respectively). Therefore there is no Heteroscedasticity problem because the p-value is greater than five percent.

2.8.3 Normality

The normal distribution of residual is tested using Shapiro- Wilk test for normality, it tests the null hypothesis that residuals are normally distributed. In this case, the tests display insignificant p-values (i.e., 0.1164 and 0.1344 for ROA and ROE respectively) because it is

greater than five percent. Therefore, the researchers conclude that residuals have a normal distribution pattern.

2.8.4 Misspecification

An information matrix (IM) test is used to diagnosis the regression models in response to specification problem which involve a combined test of Heteroscedasticity, Skewness and Kurtosis. The test reveals that the p-values of the three assumptions under the two models are strongly insignificant (i.e. p-value = 0.8199 and 0.3462 for ROA & ROE). In other words the p-values are greater than 5 %. Therefore, the null hypothesis that there is homoskedascity, symmetry and kurtosis is failed to reject. The assumptions are satisfied and the researcher found the models have no specification problem.

3. Result and Discussion

The descriptive statistics presents a statistical description of companies' financial performance as expressed by both return on asset (ROA) and return on equity (ROE). Table 3.1 presents the descriptive statistics of the firm specific and macroeconomic variables that determine financial performance of companies. The table reports the mean, standard deviation, minimum and maximum of each variable in the sample.

3.1 Descriptive Statistics for ROA and ROE

Table 3.1:- Descriptive Statistics for ROA and ROE

Variables	Mean	Standard. Deviation	Minimum	Maximum
ROA	0.635173	0.340778	-0.0143854	0.1380159
ROE	0.1925281	0.1110249	-0.0608776	0.5956368
CA	0.3329773	0.1679269	0.12	1.32
LIQ	2.351662	1.649357	0.9430352	7.700222
SIZ	8.331505	0.4155866	7.564167	9.242293
LEV	2.126262	0.8395303	0.3933995	5.434469
LOS	0.6836817	0.2319592	0.0074	0.993683
AGE	15.83333	7.29629	5	37
INF	0.22059	0.1152183	0.028	0.364
GDP	0.0891667	0.0236322	0.05	0.118

As table 3.1 shows, the average ROA and ROE for insurance companies were 63 % and 19% respectively over the last six years (2010-2015). From the total of 54 observations, the mean of ROA equals 63 % with a minimum of - 1 % and a maximum of 13 %. That means, the most profitable company may earned 13 % (1 birr and 30 cent) of net income from investing one birr on asset. On the other hand, the maximum losses incurred by the sample companies were -1% (1 cent) on each of birr one investment on asset. Similarly, from the total of 54 observations, the mean of ROE equals 19 % with a minimum of - 6 % and a maximum of 59 %. That means, the most profitable company from the sample companies earned 5.90 birr (59 %) of net income from a single one birr equity investment. On the other hand, the maximum losses incurred by the sample companies is a loss of 6 ETB (-6 %) on each of birr one investment on equity. Thus, the statistical summary implies that there is no variation in both ROA and ROE because the standard deviation statistics for ROA and ROE was 34% and 11% respectively which is below the respective means.

Regarding explanatory variables, the size of insurance companies which measured by natural logarithm of total asset (LnTA) has mean value of 833 % (8.33) with a standard deviation of 41% (0.41) whereas the minimum and maximum values are 756% (7.56) and 924% (9.24) respectively. This implies there is no volatility in level of asset since its standard deviation is below the respective means.

Capital adequacy (CAR) is another explanatory variable which measured by ratio of equity to total asset with mean value of 33 % (0.33) and with a standard deviation of 16% (0.16). This implies that capital adequacy was the least deviated variable from its mean as compared to others firm-specific variable during the period of the study.

Loss ratio that measures total claim over total earned premium; its mean value is 68%. The standard deviation of loss ratio is 23% which implies there is less variation between the companies. The minimum and maximum value of loss ratio is 0.7 % and 99% respectively.

Leverage is the ratio of the debt financing to equity financing. As per the mean value (212%) of this variable insurance companies in Ethiopia were more financed through leverage than equity capital. On the other hand, the minimum leverage value of 39% indicating few insurance companies are financed more through equity capital than debt. However, the maximum value for this variable is 543 % which indicate that large insurance companies are financed more through debt than equity it means the companies are highly

leveraged. In addition , the standard deviation also signify as leverage was the other stable factor since its standard deviation (83%) less than the 0 mean which is an indication less variation among insurance companies.

Liquidity is the ratio of current asset to current liability with mean value of 235 %. This value indicates on average the insurance company in Ethiopia has a capacity to meet their short term liability. The minimum and maximum value of liquidity is 94% and 770% respectively. The standard deviation (164%) also indicates less variation within the insurance company.

Age (AGE) is the other firm specific variable which indicated by operating years of the companies from date of establishment to the date of observation. As table 3.1 shows, the mean value of age is 158% (15.8years) and there are significant differ between min value of 500% (5 years) and maximum value of 370% (37 years).

Regarding macro-economic variables the researchers employed inflation (INF) and real growth rate of gross domestic product (GDP). The mean value of GDP is 8.9% and its minimum and maximum values were 5% and 11.8% respectively. On the other hand, the average value of inflation for the period of the study was 22 % with a standard deviation of 11.5 %. This implies during the period of 2010 to 2015 performance and inflation does not present volatility, since standard deviation is under the respective means. It indicates that during the observation year the economic growth were reasonably stable and less inflation variations in Ethiopia.

3.2 Correlation coefficients for ROA and ROE

This section presents the relationship between the identified explanatory variables and their relationship with companies' financial performance as expressed by ROA and ROE. In addition, the relationship between the explanatory variables also presented. As stated by Gujarati (2004) the correlation coefficients show the magnitude and direction of the relationships, whether it is strong, weak, positive or negative. The higher the values the stronger the relationship, and the smaller the coefficient is an indicator of a weak relationship. The sign also shows the direction of the relationship. The positive sign shows a positive relationship and the negative shows the opposite. However, the correlation coefficients does not highly support whether there is a casual effect between variables that

are not theoretically related and have no casual effect that may reveal significant association.

Table 3.2: Correctional analysis

Variables	ROA	ROE	SIZ	LEV	LOS	LIQ	AGE	CAD	INF	GDP
ROA	1.0000									
ROE	0.6129	1.0000								
SIZ	**0.2936**	***0.5335***	1.0000							
LEV	-0.2125	-0.1046	0.2637	1.0000						
LOS	**-0.3054**	*-0.4420**	-0.3101	-0.0650	1.0000					
LIQ	0.0174	-0.1066	-0.4479	0.0184	0.1004	1.0000				
AGE	0.0115	0.2575	0.7099	0.2818	-0.3889	-0.0810	1.0000			
CA	0.1489	**-0.3575**	-0.2592	-0.2931	0.0122	-0.0709	-0.1853	1.0000		
INF	-0.0613	-0.0274	0.0729	0.1979	0.0812	-0.0507	0.0354	-0.1609	1.0000	
GDP	***-0.3648***	***-0.3709***	-0.3737	-.02405	0.4038	-0.0396	-0.2319	0.0995	-0.1127	1.0000

Source:-researchers own computation using STATA software package

As stated in table 3.2 size, capital adequacy, age and liquidity are positively correlated with ROA while loss ratio, leverage, GDP and inflation were negatively correlated. On the other hand, capital adequacy, liquidity, loss ratio, leverage, GDP and inflation were negatively correlated except size and age with ROE.

Size (SIZ) of the companies that measured in terms of ln of total assets have a significant and positive relation with performance as measured by (ROA and ROE). The positive sign of size indicates that the larger the insurance companies achieve a higher ROA and ROE than smaller ones. This means when the insurance companies' asset goes up the performance also moves in the same direction.

Likewise, there is a positive correlation between insurance company's (liquidity and capital adequacy) with performance as measured by ROA. But liquidity and capital adequacy negatively related with performance as measured by ROE. This implies as the level of liquidity (LIQ) and capital adequacy (CA) increases the performance (ROA) of the company also improved while ROE goes in opposite direction.

On the contrary to the above independent variables loss ratio has a negative but significant relationship with performance (ROA and ROE). When the insurance companies' loss ratio increases the performance the company showed a decreasing trend.

Leverage (LEV) negatively correlated with performance as measured by (ROA and ROE). It indicates when the company's more financed with leverage their performance become low.

Surprisingly, from macro economic variables GDP had a negative correlation with both ROA and ROE but the relationship is insignificant. This relationship supports the view that GDP growth is not necessarily positively related with companies' performance. At last, inflation has a significant and negative relationship with performance (ROA and ROE).

In the same way, as indicated on the correlation matrix almost all correlations that have occurred among explanatory variables are surprisingly weak correlations.

3.3 Estimation method

To identify the determinants of financial performance, annual balanced panel data was used, where all the variables were observed for each cross-section and each time period. In order to realize this objective the researchers made a choice between the least square methods of random effects (RE) and fixed effects (FE) to identify the best estimation method. The choice between RE and FE was done by the Haussmann specification test on ROA and ROE. The result shows that the difference in coefficients between FE and RE is not systematic, providing evidence in favor of a RE since the p values were greater than 5 percent (Prob>chi square = 0.058 and 0.544 for ROA and ROE respectively). Therefore, further test is required to identify the best estimator. Breusch-Pagan Lagrange multiplier (LM) test was conducted in order to make choice between random effects (RE) and ordinary least square (OLS). This test is performed to identify the appropriate model by comparing RE and OLS estimator and the test result reveals that OLS model is appropriate for this study because the p - values were greater than 5 percent (Prob > chi square = 0.6125 and 0.2071 for ROA and ROE respectively).

3.4 Regression analysis

To accomplish the objective of the study, two multiple regression models were specified and estimated: ROA used as the dependent variable in the first model, whereas ROE used as dependent variable in the second model. The characteristics of the models and used variables in equation, likely not violate the classical assumptions underlying the OLS model.

In the same way, to verify the fitness of this model (Prob > F) values were checked, the result signifies a strong statistical significance (Prob > F = 0.0000 for both ROA and ROE since the values were less than 5 %), which enhanced the reliability and validity of the models. On the other hand, R-squared shows the percentage of the variance in the dependent variable that can be explained by all the independents variables taken together. Alternatively, the adjusted R-squared is the version of R-squared that has been adjusted for the number of predictors in the model used. As shown on table 3.3 and 3.4 the model fits reasonably well (R square = 0.9027, 0.9214 with respective adjusted R squared value of 0.8682, 0.8943 for ROA and ROE respectively). This implies there is no significant variation between the actual (ROA and ROE) and the estimated (ROA and ROE). In addition, the result indicates that the changes in independent variables explain 86.9 % and 89.4 % of the changes in the dependent variable. That is size (SIZ), capital adequacy (CA), leverage (LEV), loss (LOS), liquidity(LIQ), age (AGE), gross domestic product (GDP) and inflation (INF) collectively explain 86.8 % and 89.4 % of the changes in ROA and ROE respectively. The rest 13.2 % and 10.6 % of changes was explained by other factors which were not measured. In general, it is evident to say those above listed independent variables are collectively good explanatory variables to measure financial performance of insurance companies.

Furthermore, in order to realize the targeted objective of the study both ROA and ROE regressed against all firm specific and macro-economic variables. This shows the coefficients, and the absolute t-statistics obtained from the application of OLS regression model. The following regression result shows the effect of firm specific and macroeconomic factors on the performance of companies. Regression results on table 3.3 and 3.4 presents as follows.

3.4.1 Regression analysis for Return on Asset (ROA)

Table 3.3: Regression analysis for Return on asset (ROA)

Dependent variable : Return on Asset (ROA)				
Independent Variables	**Coefficients (β)**	**Standard Error**	**t-Statistics (t-value)**	P > |t|
CA	0.0498577	0.0237309	2.10	0.050**
LIQ	0.0900O18	0.0028908	3.11	0.001*
SIZ	0.0775572	0.0171019	4.53	0.000*
LEV	-0.010832	0.0047689	-2.27	0.037**
LOS	-0.040529	0.0186045	-2.21	0.043**
AGE	-0.0329802	0.0008253	-3.62	0.001*
INF	0.0048665	0.0326029	0.15	0.672
GDP	-0.1680122	0.1915408	-0.88	0.658

3.4.2 Regression analysis for Return on Equity (ROE)

Table 3.4: Regression analysis for Return on Equity (ROE)

Dependent variable : Return on Equity (ROE)				
Explanatory Variables	**Coefficients(β)**	**Standard Error**	**t-Statistics (t- value)**	**P >** |t|
CA	-0.1585539	0.0482668	-3.28	0.002*
LIQ	0.01637	0.007412	2.21	0.042**
SIZ	0.2194198	0.0428289	5.12	0.000*
LEV	-0.088222	0.0221008	-0.40	0.698
LOS	-0.894385	0.0725465	-2.61	0.012**
AGE	-0.0073726	0.002908	-2.54	0.015**
INF	-0.0495976	0.0795237	-0.62	0.876
GDP	-0.0185933	0.4587919	-0.04	0.778
R-squared	0.9214			
Adjusted R-squared	0.8943			
Probability (F-statistics)	0.0000			
Regression model:-				
$ROE_{it} = \alpha + \beta 1CA_{it} + \beta 2LIQ_{it} + \beta 3SIZ_{it} + \beta 4LOS_{it} + \beta 5AGE_{it} + \beta 6LEV_{t} + \beta 7INF_{it} + \beta 8GDP_{i,t}$				

Source- researchers own computation using STATA software package
Note * and ** represent significant at 1% and 5% respectively

Capital adequacy (CA): Capital adequacy has a positive and significant effect on performance (ROA) at 5% significant level. On the contrary, capital adequacy had a negative impact on performance (ROE) at 1 % significant level. The positive coefficient of capital adequacy (β = 0.0498577) in case of ROA implies that, increase in capital by one ETB (Ethiopian Birr) results increase in companies' performance by 5cents (0.049). It is interesting to note that, higher the capital level brings higher performance because having more capital; act as a buffer in case of adverse situation. On the contrary the negative coefficient of capital adequacy (β = -0.1585539) with ROE implies as the level of capital increase the performance goes in opposite direction. This implies capital adequacy was the key determinants of insurance companies' financial performance as measured by both ROA and ROE.

Liquidity:-Liquidity had a positive and significant effect on performance (ROA and ROE) at 1% and 5 % significant level respectively. The positive coefficient of liquidity (β=0.0900018, 0.01637) implies when the level of liquidity (liquid assets) increase by one ETB performance also goes in the same direction by 9 cent(0.090) and 2 cent (0.016) for ROA and ROE respectively. The higher level of liquidity the more ability to indemnify loses (fulfill claim of insured). Therefore liquidity can be taken as a key determinant of financial performance.

Size (SIZ): As shown on table 3.3 and 3.4 the size of companies have a positive and significant effect on performance as measured by both ROA and ROE at 1% significant level. The positive coefficient of size (β= 0.0775572, 0.2194198) for ROA and ROE respectively indicates increase in asset by 1 ETB leads increase in performance by 8 cent(0.077) and 22 cent(0.219) for ROA and ROE respectively. In general it possible to say size is the key determinants companies' financial performance as measured by both ROA and ROE.

Loss (LOS):- loss ratios have a negative and significant effect on performance (ROA and ROE) at 5% significant level. The negative sign of beta (β = -0.040529, -0.1894385) for ROA and ROE indicates that the increase in loss ratio by one ETB reduces companies performance by 4 cent (-0.040) and 19 cent (-0.189) for ROA and ROE respectively.

Age (AGE): - Is the other firm specific variable which measured by operating years of companies since incorporation to the date of observation. It had a significant and negative

effect on financial performance (ROA & ROE) at 1% and 5 % significant level. The negative sign of beta (β = -0.0329802, -0.0073726) implies when firms age increase performance of the companies decrease by 3 cent and 7 cent for ROA and ROE respectively.

Because older firms can gain experience-based on economy of learning and can avoid the liabilities of newness however, with age inertia and rigidities in adaptability leading to lower performance this may be due to younger firms are more focused on maximization of their profit through adaptation of new technology, quality of service, good management, resource utilization, and so on.

Leverage (LEV):- Leverage had a negative and significant impact on performance (ROA) at 5% significant level. The negative sign (β = -0.010832) implies increase in external financing (debt) by one ETB leads decrease in performance by 1cent (0.010). This predicts that the performances of highly levered companies are going have low performance and implies equity financing is better than debt financing. Similarly, leverage had a negative (β= -0.0088222) impact on performance (ROE) but statistically insignificant.

In case of macroeconomic factor; both inflation and GDP have insignificant and negative effect on performance (ROE). Similarly GDP and inflation have insignificant effect on ROA but the impact of inflation was positive.

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