

MICRO AND MACROECONOMIC DETERMINANTS OF THE FINANCIAL PERFORMANCE OF LIFE INSURANCE FIRMS IN INDONESIA: AN EMPIRICAL EVIDENCE

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Abstract

Insurance sector is an integral part of financial system which offers an important contribution in the nation's economy. It provides long terms fund for investment which leads to improving financial and non-financial infrastructural facilities. The financial performance of insurance firms, therefore, is an important aspect needing special attention. The paper's objective is to investigate the impact of micro and macroeconomic indicators on the financial performance of life insurance firms. Based on the Indonesia Financial Service Authority (IFSA) database, a set sample of 30 life insurance firms for the periods of 2011-2018 was generated. Panel data regression analysis was performed to test the formulated hypotheses. Random effect model was identified as the appropriate model indicating that differences in the characteristics between the studied life insurance firms have an effect on the dependent variable, in this case the return on equity. Based on the resulted model, it is revealed that the financial performance i.e., return of equity is affected consecutively by economic growth, expense ratio and current ratio in different direction and magnitudes.

Keywords: *life insurance firms, microeconomic indicators, macroeconomic indicators, financial performance*

INTRODUCTION

The financial system is one of the most important properties in the order of modern economic society. In every economic system—including the Indonesian economy—inequality in all matters relating to the distribution of funds and capital is an unavoidable phenomenon. Usually there are two parties in opposite positions, namely one party is in a position of excess funds (surplus), while the other party is in a position of lack of funds (deficit) (IndraStra Global, 2016). In this situation, the financial system plays a crucial function, namely as an intermediary and performs an important economic function of channeling funds from parties in a position of surplus to parties in a position of deficit. The financial system itself, meanwhile, is a composition consisting of various financial institutions (i.e., banks and nonbanks), markets, regulations and laws, practices, money managers, analysts, transactions, and claims and liabilities (Finland Bank, 2021).

One of the five main functions of the financial system is the risk function and this function is carried out by the insurance company (the insurance sector). The Indonesian financial system is still dominated by banks (UNEP, 2015). Data as of September 2020 indicates that approximately 78.59% of the assets of all financial institutions are in the banking sector. The rest, approximately 21.41% percent, is distributed across insurance companies, pension funds, mutual funds and all other financial intermediaries (IFSA, 2020). Assets of the insurance sector are only around 11.58% of total assets of financial

institutions, while assets in the life insurance subsector are only around 4.90%. Although the proportion is small, less than five percent, life insurance is in a strategic position because its main function is to provide protection against financial loss or loss of income for a person or family due to the death of a family member (the insured) who is usually the source of income for the family. Therefore, the existence and sustainability of a life insurance company needs to be maintained because it contributes to maintaining financial system stability. The financial performance of a life insurance company is one measure related to the existence and sustainability of a life insurance company.

The level financial performance of a life insurance firm will determine the firm's position in the market environment it serves which, in turn, will increase its market growth. The diversity and fluctuations in the number of life insurance firms that have occurred in the past decade were dominantly due to the varying profitability of the firms. This phenomenon leads to a belief that internal (microeconomic) and external (macroeconomic) factors are assumed as the important determinant of the financial performance of a life insurance company. In accordance with the conditions described above, this study was conducted with the aim of analyzing the influence of internal factors (microeconomic indicators i.e., total asset, investment performance, current ratio, loss ratio, and expense ratio) and external factors (macroeconomic indicators i.e., economic growth, inflation, and referenced interest rate) on the financial performance of life insurance companies.

This study involved 30 life insurance companies which were strictly selected based on their suitability to the research objectives from around 40-50 companies for the observation period between 2011-2018 with no less than nine variables examined in this study. These variables consist of one dependent variable (i.e., return on assets) and eight independent variables (i.e., three macroeconomic indicators and five microeconomic indicators). In addition, there are three models of causal relationship between the independent variable and the dependent variable were examined in this study. Therefore, this research provides a substantial contribution to the field of insurance empirical research and, in turn, enriches the repertoire of empirical research on the insurance sector, especially the life insurance subsector.

LITERATURE REVIEWS

Insurance and Life Insurance Companies

Insurance, according to the Indonesia Financial Services Authority (IFSA, 2021) is the agreement between the guarantor and the insured that requires the insured to pay a premium to provide compensation for the risk of loss, damage, death or loss of expected benefits, which may occur over unforeseen events. Based on its definition, it is clear that insurance sector, including life insurance subsectors or companies, plays an important role in supporting the development of national financial system stability and economic development of a nation.

Insurance Sector and Financial Stability

Insurance sector is integral part of financial system. This sector provides a significant contribution in supporting the national development process through the accumulation of large amounts of long-term funds, which in turn become a source of development funds (IFSA, 2015). This is in line with the statements of Trainar (2004) and the Eroupean Central Bank (2009) that there are at least three reasons why the insurance sector is important in maintaining financial system stability. These include (i)

insurance is a big investor in financial markets, (ii) insurance has close relationships with banks and other financial institutions, subsequently problems facing insurance companies can spread to the banking sector (it has systemic effect), and (iii) insurance sector contributes to security household stability and solid balance sheet by insuring the risk. In summary, maintaining the stability of financial system is a primary and substantial contribution of insurance sector within an economic system.

Financial Performance Measures for Life Insurance Companies

A well-developed insurance sector makes a significant contribution to a country's economic development because this business sector provides the long-term funds needed for infrastructure development and, at the same time, strengthens the country's risk-taking capacity (Charumathi, 2012). Financial performance or profitability is a measure of the company's earnings, profit, the appreciation in value as evidenced by an increase the share price of the company. In the insurance sector, financial performance is measured by net premium income, profitability from underwriting activities, annual turnover, return on investment (ROI) and return on equity (ROE) (Mwangi & Murigu, 2015).

In Indonesia, the profitability ratio that is often and commonly used to measure the financial performance of life insurance companies is return on equity (ROE). Moreover, this profitability ratio is used by the 2020 Insurance Award Jury as one out of the nine bases for assessing the best insurance company in Indonesia, in this case a life insurance company (Media Asuransi News, 2020). The use of this profitability ratio (i.e., return on equity—ROE) is supported and based on Devinta, Dachyar & Nurcahyo (2018) through their research on the performance measurement for life insurance company in Indonesia involving seven experts and 32 respondents of 17 life insurance companies. Devinta *et al.* (2018) identified 41 performances measurement factors for life insurance companies in Indonesia. These factors are divided into 8 groups, namely (i) strategy, (ii) processes, (iii) capabilities, (iv) financial, (v) customer, (vi) internal business processes, (vii) learning and growth, and (viii) social. Within the financial performance factors group, return on equity (ROE) takes second place after the profit margin which indicates that this profitability ratio is considered the most suitable in measuring the financial performance of life insurance companies in Indonesia. Referring to these recommendations (Media Asuransi News, 2020) which is supported by comprehensive research results (Devinta *et al.*, 2018), return on equity (ROE) is used as the measure of life insurance financial performance in the present study.

Financial performance is an important determinants of life insurance companies which can be measured in various of ways. Return on equity was one measure that is widely used in measuring life insurance companies' financial performance, including in Indonesia. For these reasons this measure—return on asset—was used in the study.

The determining factors of profitability of life insurance

In general, the profitability of an insurance company is influenced by two types of factors, namely factors originating from the internal environment (microeconomic) and factors originating from the external environment (macroeconomics). Internal factors relate to the specific characteristics of an insurance company, while external factors relate to industry features and macroeconomic indicators (Akotey, Sackey & Amoah, 2013). Macroeconomic indicators that have the potential to affect the financial performance of life insurance companies include economic growth—GDP, inflation rate, interest rates, and exchange rate. Microeconomic indicators that are assumed to have influence on

insurance companies' financial performance, in the meantime, include company size, leverage ratio, liquidity ratio, loss ratio, and expense ratio.

The study of Meher & Zewudu (2020) in Ethiopia recognized a positive association between per capita GDP and size of insurance companies with financial performance. In Jordania, Alomari & Azzam (2017) found the similar association between GDP-growth along with market share with insurance companies' financial performance. The findings of Pradhan & Pokharel (2020) are in accordance with the above-mentioned studies where, in Nepal, financial performance of life insurance was positively influenced by GDP-growth. In the United Arab Emirates, Banerjee & Majumdar (2018) uncovered the same empirical evidences which indicates that GDP-growth affects financial performance of insurance companies in a positive way. In the US and UK, Batool & Sahi (2016), identified that financial performance of insurance companies in these countries was influenced positively by GDP-growth. Cudiamat & Siy (2017), on the other hand, discovered a different phenomenon where insurance companies' financial performance in the Philippines was not affected by GDP. Their findings are similar with the study results of Shawar & Siddiqui (2019) in Pakistan who recognized that financial performance of insurance companies was not significantly influenced neither by GDP nor the rate of interest. The rate of inflation was discovered to have significant impact of financial performance of insurance companies in Croatia Ćurak *et al.* (2013). The study of (Hussain, 2015) in Pakistan arrived at a conclusion that inflation has no significant influence on financial performance of insurance companies. The findings of Alomari and Azzam (2017) is in line with Hussain (2015) which showed that in Pakistan financial performance of insurance companies was not the function of inflation rate.

In the Philippines, it was recognized by Cudiamat & Siy (2017) through their study that interest rate has no significant influence towards insurance companies' financial performance in this country. This empirical fact is similar with empirical findings of Shawar & Siddiqui (2019) in which financial performance of insurance companies in Pakistan was not affected by the interest rate. Batool & Sahi (2016) mentioned that in the US and UK financial performance of insurance companies was negatively affected by the interest rate applied both countries.

The size of insurance companies in the Philippines was discovered to have negative significant impact on their financial performance (Cudiamat & Siy, 2017). In Pakistan, meanwhile, it was found that relative company size has no significant association with financial performance of insurance companies. Alomari & Azzam (2017) in Pakistan found a different finding where financial performance of insurance companies was significantly affected by their size in a positive way. Those insurance companies with larger size tend to have a better financial performance. In the US and UK similar findings were discovered by Batool & Sahi (2016), company size has strong and positive association with insurance companies' financial performance.

Empirical evidences obtained by Batool & Sahi (2016) through their study indicated that in the US leverage ratio was found to have positive influence on financial performance of insurance companies. The opposite phenomenon was recognized in the UK where leverage ratio negatively affects financial performance of insurance companies. In Pakistan was similar with that of in the UK where leverage ratio has negative impact on financial performance of insurance companies. Positive relationships between leverage ratio and financial performance of insurance companies were recognized by Boadi, Antwi & Lartey (2013) in their country, Ghana. Boadi *et al.* (2013)

stated that in Ghana financial performance of insurance companies was associated significantly with liquidity ratio in positive direction. The financial performance of insurance companies in Ethiopia was negatively influenced by liquidity ratio (Ayele, 2012). In India, Charumathi (2012) discovered that liquidity ratio significantly and positively affects the financial performance of insurance companies.

Negative impact of loss ratio on financial performance of insurance companies was recognized by Kaya (2015) through his/her study in Turkey. Malik (2011) in Pakistan and Mehari & Aemiro (2013) in Ethiopia proved that the financial performance of insurance companies in their countries were associated significantly with loss ratio. Koc (2016) supported Kaya (2015) findings where loss ratio has a negative impact on the financial performance of insurance companies in Turkey.

Expense ratio in Poland was found to have negative impact on insurance companies' financial performance (Kozak, 2011). In Indonesia, Firmansyah, Hasibuan, Sadalia and Muda, (2020) revealed that expense ratio negatively influenced the financial performance of insurance companies. Number of studies focusing on the relationships between expense ratio and financial performance of insurance companies—both life and non-life—is relatively limited.

As with companies engaged in various business sectors, the financial performance (i.e., profitability) of life insurance companies is widely influenced by a number of factors. These determining factors of life insurance companies' profitability in general were divided into two major groups namely macroeconomic factors and microeconomic factors. Macroeconomic indicators that are most often studied and used as factors that affect the profitability of life insurance companies are GDP, inflation rates and interest rates. Meanwhile, the most frequently studied micro-economic indicators are company size, liquidity ratio, loss ratio, and leverage ratio. Investment performance and expenditure ratio are micro-economic indicators that are identified rarely studied. The availability of data is thought to be one of the causes of the infrequent study of these two factors. Both of these factors are examined for their influence on the profitability of life insurance companies as measured by the return on assets.

The results of research on variables, both those that fall into the macroeconomic and microeconomic categories, that affect the profitability of life insurance companies, as described above, lead to different conclusions. Some have a significant effect and some have no effect at all. Among the variables that have a significant influence there are positive directions and some have negative directions. The magnitude of the influence, both positive and negative, also varies. The difference in the state of the business environment and the economic environment is considered to be a factor that causes the different conclusions.

Research model and hypotheses

In accordance with the objective of the study, return on equity (ROE) was used to measure the financial performance of life insurance companies. Macroeconomic indicators which serve as independent variables are economic growth (i.e., real gross domestic product), inflation and the reference interest rate (i.e., Central Bank of Indonesia Rate). Microeconomic indicators, in the meantime, include company size (i.e., total asset), liquidity ratio (i.e., current ratio), loss ratio, and expense ratio.

Three different effect models were developed: common effect model, fixed effect model, and random effect model.

Common effect model

$$ROE_{it} = \alpha + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (1)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; IR = inflation rate; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α = regression model intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year.

Fixed effect model

$$ROE_{it} = \alpha_i + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (2a)$$

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (2b)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; IR = inflation rate; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α_i = the i^{th} insurance company's intercept; α_{it} = the i^{th} insurance company's at t^{th} year intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year.

Random effect model

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} + u_{it} \quad (3a)$$

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} + u_i \quad (3b)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; IR = inflation rate; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α_{it} = the i^{th} insurance company's at t^{th} year intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year; u_i = error of the i^{th} life insurance company.

The proposed hypotheses are as follows.

- H₁: reference interest rate (BI rate) has a negative influence on the financial performance of life insurance companies.
- H₂: economic growth (GDP) has a positive influence on the financial performance of life insurance companies.
- H₃: inflation rate has a negative influence on the financial performance of life insurance companies.
- H₄: investment performance has a positive influence on the financial performance of life insurance companies.
- H₅: company size (total asset) has a positive influence on the financial performance of life insurance companies.
- H₆: loss ratio has a negative influence on the financial performance of life insurance companies.
- H₇: current ratio (liquidity) has a positive influence on the financial performance of life insurance companies.
- H₈: expense ratio has a negative influence on the financial performance of life insurance companies.

RESEARCH METHOD

Based on the data-base of the Indonesia Financial Service Authority a set of data consisting of 30 life insurance companies for the period of 2011 to 2018 was generated.

Macroeconomic indicators were obtained from Central Bank of Indonesia, Statistics Indonesia, and the Indonesia Financial Service Authority. Microeconomic indicators and financial performance were obtained from financial reports of the selected (30) life insurance companies. The data obtained consisted both time series (i.e., data in a number of years) and cross-sectional data (i.e., data on a number of life insurance companies). The objectives of the paper, meanwhile, were to select the appropriate model which represents the pattern of the relationships amongst variables and to estimate the strengths and directions of the effect of independent variables towards dependent variable. Accordingly, panel data regression analyses were performed to test the proposed hypotheses. Three different effect models were developed: common effect model, fixed effect model, and random effect model, accordingly, as follows.

Common effect model

$$ROE_{it} = \alpha + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (1)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α = regression model intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year.

Fixed effect model

$$ROE_{it} = \alpha_i + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (2a)$$

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} \quad (2b)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; IR = inflation rate; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α_i = the i^{th} insurance company's intercept; α_{it} = the i^{th} insurance company's at t^{th} year intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year.

Random effect model

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} + u_{it} \quad (3a)$$

$$ROE_{it} = \alpha_{it} + \beta_1 BR_{it} + \beta_2 GDP_{it} + \beta_3 IR_{it} + \beta_4 IP_{it} + \beta_5 TA_{it} + \beta_6 LR_{it} + \beta_7 CR_{it} + \beta_8 ER_{it} + e_{it} + u_i \quad (3b)$$

where: ROE = return on equity; BR = BI Rate; GDP = gross domestic product; ; IR = inflation rate; IP = investment performance; TA = total asset; LR = loss ratio; CR = current ratio; ER = expense ratio; α_{it} = the i^{th} insurance company's at t^{th} year intercept; β_i = slope coefficient; e_{it} = error term of the i^{th} life insurance company at the t^{th} year; u_i = error of the i^{th} life insurance company.

EViews 9 statistical package was utilized to perform the analyses.

RESULTS AND DISCUSSIONS

Descriptive Statistical Analysis

The tables which follow provide descriptive analysis of data of the variables under study which cover minimum and maximum values, mean, standard deviations and coefficient of variations.

Table 1. Return of equity (ROE) of 30 life insurance companies 2011-2018

Year	Mean	Minimum	Maximum	Stdev	Coeff. Var
2011	63.02	-463.20	1356.72	182.62	289.77

Source: Estimated for OJK (2011-2019)

Financial performance (i.e., return on equity—ROE) of life insurance companies under study greatly varied. Its values, over an eight-year, spanned from -463.20 percent to 1356.72% with an average of 63.02% and a standard deviation of 182.62. The width of the gap is not only reflected in the range (the difference between the minimum value and the maximum value, namely 1,819.92%) but also by the standard deviation value (182.62) and, especially the magnitude of the coefficient of diversity, which is 289.77 percent.

Table 2. Macroeconomic indicators

Year	BI Rate (%)	GDP (Trillion IDR)	Inflation Rate (%)
Mean	6.03	11,115.80	4.74
Minimum	4.25	7,831.73	3.02
Maximum	7.50	14,837.36	8.36
Std. Dev.	1.09	2,280.22	2.12
Coeff. Var.	18.00	20.51	44.79

Source: Estimated from BI, BPS and OJK

The reference interest rate which is represented by BI Rate in eight years times horizons relatively stable, it ranged from 4.25% to 7.50% with an average of 6.03%, standard deviation of 1.09 and coefficient of variation of 18%. The value of economic has grown steadily over a span of eight years starting from 7.831.73 trillion IDR in 2011 to 14,837.22 trillion IDR, averaging at 11,115.80 trillion IDR and having standard deviation and coefficient of variation of 2.280.22 and 20.51%, respectively. Referring to its coefficient of variation i.e., 44.79%, the rate of inflation over eight years span was assumed to vary substantially. The lowest rate was at 3.02% and the highest rate was at 8.36% with an average of 4.74% and standard deviation of 2.12. Based on these indicators, the Indonesia macroeconomic during the research periods can be regarded as good or conducive.

Table 3. Microeconomic indicators of 30 life insurance companies 2011-2018 (%)

Attributes	Investment Performance (%)	Total Asset (Trillion IDR)	Loss Ratio (%)	Current Ratio (%)	Expense Ratio (%)
Mean	7.13	9.21	96.54	217.26	111.39
Minimum	-10.36	0.07	-596.05	4.80	0.00
Maximum	27.04	71.76	3133.27	2307.77	1307.73
Stdev.	5.14	13.38	212.68	223.09	124.03
Coeff. Var.	72.08	145.30	220.30	102.68	111.34

Source: Estimated from OJK (2011-2019)

Investment performance of the studied life insurance companies varies with minimum of -10.36% and maximum of 27.04%. It averaged at 7.13% with standard deviation and coefficient of variation of, respectively, 5.14 and 72.08%. Size of companies—represented by total asset—were substantially varied as clearly illustrated by its coefficient of variation of higher than 100%, i.e., 145.30%. The smallest company

has total asset only 0.07 trillion IDR (approximately 70 billion IDR), meanwhile the largest company's total asset worth at 71.76 trillion IDR with an average of 9.21 trillion IDR. Loss ratio, current ratio, and expense ratio of the studied companies, based on their value of coefficient of variations which were higher than 100% (i.e., 220.30, 102.68 and 111.34% respectively) are assumed to vary relatively widely.

Inferential Statistical Analysis: Panel Data Regression Analysis

The value of parameters of the resulting effect models: common effect model, fixed effect model, and random effect model are presented in table which follows.

Table 4. Parameters of the resulting effect models

Variables	Common Effect Model		Fixed Effect Model		Random Effect Model	
	Coefficient	Probabilit	Coefficient	Probabilit	Coefficient	Probabilit
	s	y	s	y	s	y
Constant	-					
	160.751	0.138	-128.471	0.223	-152.714	0.142
BIRate	-14.334	0.178	-17.209	0.093	-15.208	0.135
GDP	0.029	0.000	0.025	0.000	0.028	0.000
Inflation	-2.771	0.605	-1.821	0.722	-2.477	0.627
Inv. Performanc						
e	2.327	0.257	-1.565	0.500	1.229	0.552
Total Asset	0.574	0.460	3.642	0.193	0.730	0.433
Loss Ratio	-0.054	0.266	-0.048	0.345	-0.054	0.256
Current Ratio						
Expense Ratio	0.071	0.144	0.101	0.044	0.082	0.086
	-0.249	0.006	-0.149	0.145	-0.219	0.016
R-squared	0.2865		0.4351		0.2952	
Adj. R ²	0.2618		0.3317		0.2708	
F-Statistics	11.5967		4.2058		12.0930	
Probability	0.0000		0.0000		0.0000	

Economic growth (i.e., real GDP) is recognized to have a highly significant in all model ($p < 0.01$) with coefficient of regression ranges from 0.025 (fixed effect model), 0.028 (random effect model) to 0.029 (common effect model). BI Rate was found to significantly influence in negative direction the financial performance in the fixed effect model ($p < 0.10$). Expense ratio was recognized to have significant negative effect towards the financial performance in the common effect model ($p < 0.01$) and the random effect model ($p < 0.05$). Current ratio was discovered to have significant positive impact in the fixed effect model ($p < 0.05$) and the random effect model ($p < 0.10$). Other indicators—micro (investment performance, company size, and loss ratio) and macroeconomic (inflation rate)—were identified to have no significant influence on the financial performance of life insurance companies in all models. All models have large F statistics and high significance levels ($p < 0.01$) which indicate that the relationships between dependent and independent variables in the resulting model exist and are empirically supported.

The results of Chow's test, Hausman test, and the Lagrangian Multiplier test indicated that random effect model was the appropriate model. This shows that the regression line equation that describes the causal relationship between the independent

variable and the dependent variable is assumed to, first, have different inter-individual regression interceptions and coefficients (cross sectional effect). The second assumption is that in the resulting equation the intercept and regression coefficients differ both between individual life insurance companies and over time (time series effect). As depicted in table 4, in the random effect model, variables that have significant influence on the financial performance of life insurance companies are GDP, current ratio and expense ratio. GDP which describes the condition of the national economy has a positive effect on the financial performance of life insurance companies ($p < 0.01$). A good and conducive economic condition which is represented by the amount of GDP which continues to increase in a sustainable manner will encourage the increased financial performance of life insurance companies. This finding is in line with Meher & Zewudu (2020) in Ethiopia, Alomari & Azzam (2017) in Jordan, Pradhan & Pokharel (2020) in Nepal, Banerjee & Majumdar (2018) in the UEA, and Batool & Sahi (2016) in the US and the UK. However, it is different from what happened in the Philippines (Cudiamat & Siy, 2017), and in Pakistan (Shawar & Siddiqui, 2019) where the financial performance of insurance companies, both life and general, is not influenced by GDP.

The current ratio, although not as strong as the influence of GDP and expenditure ratios, is proven to have a positive effect on the financial performance of life insurance companies ($p < 0.10$). The ratio that shows the company's ability to meet all its current obligations, in the context of insurance being able to pay all claims filed is very supportive of the company's financial performance. The results of research by Boadi *et al.* (2013) in Ghana are in line with these findings. Likewise, the results of research by Charumathi (2012) in India. However, a different finding occurs in Ethiopia where the current ratio negatively affects the financial performance of insurance companies (Meher & Zewudu, 2020).

The financial performance of life insurance companies is negatively affected by the expense ratio ($p < 0.05$). This means that a high expense ratio will, to some extent, interfere with the company's financial performance. The findings of this study are in accordance with the results of Kozak's study in Poland. Kozak (2011) strengthen the results of research by Firmansyah *et al.* (2020) in Indonesia, which shows that the expense ratio has an effect on reducing the financial performance of life insurance companies.

CONCLUSION AND SUGGESTION

The insurance sector, although its financial contribution is smaller than the banking sector, plays an important role in supporting the development of national financial system stability. The financial performance of insurance companies, especially life insurance, needs adequate attention since this variable is a prerequisite for a sound financial system. As described in the previous section, the results of the study show that the financial performance of life insurance companies was positively influenced by economic growth, in this case GDP. A healthy and conducive economic condition is a necessary climate for the growth of the insurance sector, particularly life insurance. The two others macroeconomic indicators i.e., inflation rates and interest rates, were identified to have no significant effects on the financial of life insurance companies. The current ratio and the expense ratio are found to be microeconomic indicators that affect the financial performance of life insurance. Current ratio positively affects life insurance firms' financial performance, expense ratio, on the other hand, affects life insurance firms' financial performance in negative manner. The effect of other microeconomic

indicators on the financial performance of life insurance companies such as investment performance, loss ratio, and expense ratio were found to be insignificant.

Findings of this study imply that these three variables need adequate attention from both company managers and other stakeholders, especially the government. The current ratio has an effect on improving financial performance, on the other hand, the expense ratio has an effect on reducing the financial performance of life insurance companies. Increasing the current ratio to a certain level which is considered optimal and reducing the expense ratio to a reasonable level is a tough task for the manager of a life insurance company. Policymakers, from different points of view, are required to create a comfortable and conducive business environment through the issuance of various regulations that are appropriate and in line with the needs of insurance business players.

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