THE RELATIONSHIPS BETWEEN THE FINANCIAL HEALTH AND FINANCIAL PERFORMANCE OF LIFE INSURANCE FIRMS: AN EMPIRICAL EVIDENCE FROM INDONESIA

[1,3]*Toto Sugiharto,* [2]*Novita Sulistiowati,* [1]*Rina Nofiyanti*
[1,2,3]*Fakultas Ekonomi Universitas Gunadarma, Jl. Margonda Raya no 100, Depok 16424, Jawa Barat*
[3] *tsharto@staff.gunadarma.ac.id*

Abstract

Financial performance is of importance for life insurance firms. It is affected by various factors including financial health which is measured by risk-based capital, technical reserve and equity. The study aims at analyzing the effect of these financial health measures on the financial performance of life insurance firms. Secondary data which include financial performance (i.e., return on assets), risk-based capital, technical reserve and equity of thirty three life insurance firms for the periods of 2011-2016 was used. Panel data regression analysis was performed to analyze the obtained data. Financial performance was affected by risk-based capital, technical reserves and equity in different directions. Financial performance of life insurance firms increases with low risk-based capital and technical reserves, but decreases with high equity.

Keywords*: equity; life insurance, risk-based capital; return on assets, technical reserves.*

This paper is a revised and expanded version of a paper entitled *Relationships Between The Financial Health and Financial Performance of Life Insurance: An Empirical Evidence from Indonesia* presented at UG Economic Faculty International Conference October 31st , 2019, Bekasi, West Java, Indonesia.

INTRODUCTION

Insurance sector provides long-term funds for infrastructure development and strengthening the risk taking ability of the country. Therefore, insurance is regarded to play a very significant role for economic development (Charumathi, 2012).

In accordance with its crucial contribution, it is necessary that insurance firms operate with profitability. Considering the structure of the nation's financial system which relies heavily on banking sector as well as the challenges faced by the insurance firms during the process of the development and consolidation of the non-bank financial systems, a well-developed insurance sector (i.e. profitable insurance firms) is a necessary since it makes the whole financial system possible to obtain the required development (Kripa and Ajasllari, 2016). The financial performance which include, among others, return on assets, return on equity and return on investment of insurance companies can be analyzed at both microeconomic level (internal factors i.e. firms characteristics) and macroeconomic level (external factors i.e. macroeconomic indicators). Accordingly, identifying the contributing factors—both internal and external factors—toward profitability of insurance firms is of importance for insurance firms' stakeholders such as investors, researchers, financial analysts and supervisory authorities.

Over the last decades, a number of researchers have been attracted by the underlying factors of insurance firm profitability. There are a number of reasons for this phenomenon, one of which is that insurance firms' profitability provides direct implications on stakeholders of insurance firms such as policyholders, shareholders, potential investors, employees, and other stakeholders.

However, the most important reason for a substantial attention of the community of scientific and professional on this subject is that the strategic roles and the importance and contribution of the insurance sectors to economic growth and national wealth.

In Indonesia, as per January 2019, there are 151 insurance firms which consists of 61 life insurance firms, 79 general insurance firms, 7 reinsurance firms, two Agencies Administering of Social Insurance, and two Companies Administering of Mandatory Insurance (The Indonesia Financial Authority, 2018; Statistics Indonesia, 2019). Assets of insurance sector to assets of financial Sector is relatively low which is only 8.92 percent.

However, since insurance sector plays a strategic and important role to nation's economy, measuring the financial performance of the insurance firms and analyzing the factors affecting its performance is a very interesting topic, theoretically and practically, to financial researches and to insurers.

One of the main tasks and goals of financial management is to increase shareholders wealth, accordingly profitability is one of the most important objectives of financial management.

At this point profitability is one of the main measure of the performance of a firm—including insurance firms (Lee, 2014; Burca & Batrinca, 2014).

This papers is focused on and aimed at analyzing the relationships between financial health and profitability of life insurance firms. Profitability measure used in this study is return on assets (ROA), measures of financial health, referring to the Indonesia Financial Authority Act Number 71/POJK.05/2016, are risk-based capital (RBC), technical reserves and equity.

LITERATURE REVIEW

The importance of Insurance Firms in the Economy

The efficiency of financial intermediaries and risk transfer have the potentials to affect economic growth. At the mean time the lack of solvability these financial institutions may lead to systemic crisis which in turn will cause unfavorable consequences for the whole economy of a nations (Naveed, Zulfiqar & Ahmad, 2011). Insurance firms play a very substantial role in the economy which allows individuals and firms to transfer risk for a premium.

Therefore the bankruptcy of insurance firms potentially reduce financial stability (Caporale, Cherato and Zhang, 2017). In other words, without financial institutions which provide both individuals and firms with facilities for transferring risk for a premium such as insurance firms, current business world would be unstable. That because on one hand, it is a normal phenomenon that some business units are surplus and some are in deficit and on the other hand, businesses do not have the capacity to assume all risks with which they face in the uncertain environment in which they operate (Kripa and Ajasllari, 2016).

High profits, according to Chen and Wong (2004), provide the availability of funds and the incentive for new investment which results in higher rate of return. There are two responsibilities that must be held by insurance companies, namely they must be profitable in order to either be able to make new investments or have the necessary solvability to convert other parts of the economy in previous state after the occurrence of damage. In relation with this, Kaya (2015) found that the size of the size and premium growth rate have positive effect on the performance, whereas age of the company, loss ratio, current ratio variables significantly influencing performance have negative sign.

In Romania, Burca and Batrînca (2014) examined the determinants of financial performance of insurance companies during the period 2008-2012 and discovered that the return on assets was affected by leverage, size, gross written premium growth, underwriting risk, risks retention ratio and solvency margin. Meanwhile, Lee (2014) in Taiwan investigated the effects of firm-specific and macroeconomic factors on profitability of property-liability insurance industry. Using the panel data of 15 insurers

over the 1999-2009 time period he found that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group have significant influence on profitability in both operating ratio and ROA models.

Financial Health and Financial Performance of Insurance Firms

The term of financial health, according to Necas (2016), is used in insurance sector but it has no specific definition. This is in accordance with Chen and Wong (2004) who state that the term of financial health is often used as a synonym with financial strength, solvency or financial stability. Solvency is generally defined as the long-term financial stability of a firm and its ability to cover its long-term obligations. In insurance sector, solvency is defined as the ability of an insurance firm to meet its commitments (Ianc, 2014). In Indonesia financial health of an insurance firm is measured by solvability (i.e., risk-based capital), technical reserves, investment adequacy, equity, guarantee fund, and other provision relating to finance (The Indonesia Financial Service Authority, 2016).

Burca and Batrinca (2014) argue that profitability, which is defined as proxy of financial performance, is the primary objectives of the management of insurance firms. Profit is a crucial prerequisite for an increasing competitiveness of an insurance firm operating in a market. Financial performance, at microeconomic level, is assumed as the direct result the management of various economic resources and the efficient use of economic resources within operational, investment and financing activities. Managerial decisions based on the right foundation are needed in order to optimize economic returns (Malik, 2011).

Return on Assets (ROA) is a type of return on investment (ROI) metric that measures the profitability of a business in relation to its total assets. This ratio indicates performance of a company by comparing the generated profit (net income) to the invested capital in assets. The higher the return, the more productive and efficient management is in utilizing economic resources. ROA is estimate using the following formulas.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Average Assets}} \quad \text{or} \quad \text{ROA} = \frac{\text{Net Income}}{\text{End of Period Assets}} \tag{1}$$

The ROA formula is an important ratio in analyzing profitability of a firm. Typically, this ratio is used when comparing performance of a company between periods, or when comparing performance of two different companies which have similar size and industry. It is necessary to note that considering the scale of a business and the performed operations when comparing two different firms using ROA is of importance.

The Importance of Return on Assets

The ROA formula is an important ratio in analyzing profitability of a firm. Typically, this ratio is used when comparing performance of a company between periods, or when comparing performance of two different companies which have similar size and industry. However, it is necessary to note that considering the scale of a business and the performed operations when comparing two different firms using ROA is of importance.

ROA's of firms in different industries are stereotypically different. In general, capital-intensive and require a high value of fixed assets for operations industries tend have a lower ROA, as their large asset base will increase the denominator of the formula. Naturally, a firm with a large asset base has the potentials to have a large ROA as long as they have adequately high income (Corporate Finance Institute, 2019).

RESEARCH METHOD

Population and Samples

Population in this research is life insurance firms registered on the Indonesia Financial Service Agency during the periods of 2011-2016. Sample, on the other hands, are those life insurance firms which provide complete financial reports for the same periods. There are 33 life insurance firms—out of 61 insurance firms—which fulfilled the above-specified criteria and are selected as samples of this study.

Research Variables

Variables under investigation include return on assets (ROA) as dependent variable, which represents financial performance or profitability of life insurance firms, and measures of financial health including risk-based capital (RBC), equity (EQ) and technical reserves (TR) which serve as independent variables.

Method of Statistical Analysis

Panel data regression analysis was performed to analyze data. Procedures of the analysis is depicted in the following figure.

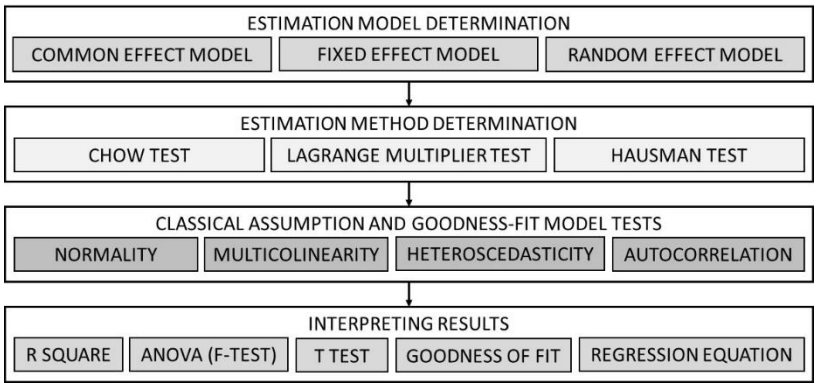

Figure 1. Panel Data Regression Analysis Procedures (Adapted from Zulfikar, 2018)

As clearly illustrated in the figure, the first step of panel data regression analysis is to generate the three possible effect model such as common effect, fixed effect and random effect models.

The following step is to perform *the Chow Test* to determine the most appropriate effect model between common effect model and fixed effect model.

If fixed effect model is selected as the appropriate model, *the Hausman Test* then should be performed to determine whether fixed effect model or random effect model is the most appropriate model.

If, otherwise common effect model is selected, *the Lagrange Multiplier Test* must be performed to determine the most appropriate effect model i.e. between random effect model and common effect model.

The next step is to perform the classical assumption test which include normality, multicollinearity, heteroscedasticity and autocorrelation to verify the validity of the classical linear regression model—CLRM.

Lastly is to interpret the resulting effect model i.e. common effect model, fixed effect model or random effect model.

RESULT AND DISCUSSION

Descriptive Analysis

The following table provides the results of descriptive analysis of research variables (risk-based capital, technical reserves, equity and return on assets) which include minimum and maximum values, mean, standard deviation and coefficient of variation.

Table 1. Descriptive Statistical Analysis

Variables	Min	Max	Mean	Stdev[1]	CV[2] (%)
Return on Assets	5.11	9.72	7.91	1.60	20.23
Risk-Based Capital	321.00	1091.00	829.33	281.88	33.88
Equity	4,334,322	9,097,637	6,460,765	1,838,525	28.46
Technical Reserves	24,027,598	51,665,493	38,603,979	9,582,433	24.82

Notes: [1]Standard deviation; [2]Coefficient of Variation

Referring to their related coefficient of variance as shown in the table, it is revealed that all variables under study are substantially varied. The values of the coefficients are relatively high which spread from 20.23 percent (return on assets) to 33.88 percent (risk-based capital). This indicates that both financial health (i.e. risk-based capita, equity and technical reserves) and financial performance (return on assets) of life insurance firms are considerably varied.

Inferential Analysis: Panel Data Regression Analysis

Details of the resulted estimation models which include common effect, random effect and fixed effects model are displayed in the following tables below, followed by their related regression equations

Table 2. Common Effect Model

Variables	Coefficient	SE[1]
Constant	5.6649	0.2723
Risk-Based Capital (RBC)	-0.00092	0.00034
Equity (Eq)	0.0000017	0.0000010
Technical Reserves (TR)	-0.00000019	0.00000021

Notes: [1]Standard Error.

ROA = 5.6649 -0.00092*RBC + 0.000017*Eq – 0.00000019*TR (2)

Table 3. Random Effect Model

Variables	Coefficient	SE[1]
Constant	5.6649	0.2980
Risk-Based Capital	-0.00092	0.00034
Equity	0.0000017	0.0000010
Technical Reserves	-0.00000019	0.00000021

Notes: [1]Standard Error.

ROA = 5.6649 -0.00092*RBC + 0.000017*Eq – 0.00000019*TR (3)

Table 4. Fixed Effect Model

Variables	Coefficient	SE[1]
Constant	5.6649	0.2980
Risk-Based Capital	-0.00092	0.00034
Equity	0.0000017	0.0000010
Technical Reserves	-0.00000019	0.00000021

Notes: [1]Standard Error.

ROA = 5.6649 -0.00092*RBC + 0.000017*Eq – 0.00000019*TR (4)

The three resulted models—common, fixed and random effect models—have exactly similar constants and regression coefficients. The differences are

only found in their related standard errors, the value of t-statistics and, accordingly, their level of significance, in this case for risk-based capital.

At first glance, the three equations generated are looked to have no difference at all. However, basically these three equations have different meanings and, consequently, must be comprehended with different approaches.

However, before interpreting these equations it necessary to perform the Chow Test to select among common effect model and fixed model.

Results of the Chow Test

Result of the Chow test to select the most appropriate model i.e. between common effect and fixed model is shown in table below.

The Chow Test indicates that common effect model is preferred as to compare with fixed effect model ($p>0.05$) where the resulting regression equation or econometric model is in equation (3). Since the Chow Test selects common effect model, the Lagrangian Multiplier Test should be performed to determine whether common effect model or random effect model is the most appropriate model for the analyzed data.

Results of the Lagrangian Multiplier Test

In table 6 which follows results of the Lagrangian Multiplier Test are displayed. Based on the value of *Breusch-Pagan* methods and its significance the *Lagrangian Multiplier Test* determines that random effect model is the most appropriate model in measuring or analyzing the magnitude and direction effect of independent variables i.e. risk-based capital, equity and technical reserves on life insurance profitability (return on assets—ROA) as well as their significances that is shown as follows..

Table 5. The Chow Test Results

Effects Test	Statistics	df[1]	Probability
Cross-section F	0.000	(32,162)	1.000
Cross-section Chi Square	0.000	32	1.000

[1]degree of freedom.

Table 6. Results of the Lagrangian Multiplier Test

Tests	**Test Hypothesis**		
	Cross-section	Time	Both
Breusch-Pagan	19.800 (0.000)	3168.00 (0.000)	3187.00 (0.000)
Honda	-4.449719 -	56.28499 (0.000)	36.65307 (0.000)
King-Wu	-4.449719	56.28499 (0.000)	50.70823 (0.000)
Standardized Honda	-4.399776	96.99485 (0.000)	41.09371 (0.000)
Standardized King-Wu	-4.399776	96.99485 (0.000)	74.85548 (0.000)
Gourierioux *et al*.*			3168.000 (<0.01)

The Effect of RBC, Equity and Technical Reserves on Return on Assets: Random Effect Model

The magnitude, direction and significance of effects on risk-based capital, equity and technical reserves on the financial performance of life insurance firms which is measured using profitability ratio i.e. return on assets are presented in table 7. The relationships amongst these variables are in random

manner which are determined by the results of the Lagrangian Multiplier Test where random effect model is selected as the appropriate model.

Table 7. Random Effect Model

Variables	Coefficient	Standard Error	t-statistic	Probability
Constant	5.6649	0.2980	19.0141	0.0000
Risk-Based Capital	-0.00092	0.00034	-2.666	0.0083
Equity	1.65E-06	1.01E-07	14.717	0.0000
Technical Reserves	-1.95E-07	2.13E-08	-8.322	0.0000
R-squared	0.68		Mean dependent variable	7.91
Adjusted R-squared	0.68		S.D. dependent variable	1.60
Standard Error of regression	0.91		Sum squared residuals	159.42
F-statistic	140.29		Durbin-Watson statistics	2.77
Probability (F-statistic)	0.00			

The resulting equation of regression is as follows where ROA is return on assets, RBC is risk-based capital, Eq is equity and TR is technical reserves.

$$ROA = 5.66490 – 0.00092*RBC + 0.0000017*Eq – 0.00000019*TR \quad (5)$$

Return on assets (ROA) is affected significantly by the three measures of financial health of life insurance firms, i.e. risk-based capital, equity and technical reserves in different magnitudes, direction and level of significance—indicated by the value of probability F-statistic of much less than 0.05 ($p<0.0000$). Risk-based capital significantly affects return on assets in negative manners ($p<0.0083$) which means that life insurance firms with higher risk-based capital tend to have lower financial performance represented by lower rate of return on assets.

The same direction of the effect of technical reserves on return on assets is recognized ($p<0.0000$) which indicates that the higher the technical reserves allocated by life insurance firms the lower the financial performance of the firms. Equity, on the other hands, significantly affects return on assets in positive way ($p<0.0000$) where life insurance with large equity tend to have a better financial performance. Higher return on assets of life insurance firms will be achieved by firms those have higher equity.

The intercept of the random effect model, unlike in its counterpart fixe effect model, is constant or invariable across group, i.e. individual life insurance firm, and or across time, i.e. year of observation.

Accordingly, the results of the study—the value of intercept (constant) can be interpreted this way as follows: when the value of the three observed independent variables, i.e. risk-based capital, equity and technical reserves, are assumed zero (null), the value of return on assets on life insurance firm equals 5.66490 percent across individual life insurance firm as well as across time periods of the study, i.e. year.

Risk-based capital, equity and technical reserves are able to explain the variability of return on assets of life insurance firms by 68 percent—indicated by the value of R-squared or coefficient of determination. In other words, return of assets of life insurance firms is affected by these variable representing the financial health of the firms by 68 percent.

The rest of it (i.e. 32 percent) is affected by other variables that are not part of the independent variables in the present

study and are not analyzed in the present study.

Study on the causal relationships between life insurance firms' financial health, in this case risk-based capital, equity and technical reserves (IFSA, 2016), with the firms' financial performance which is represented by the return on assets ratio, is very limited.

Risk-based capital and return on assets

Putra (2017) discovered that risk-based capital of life insurance firms in Indonesia affects the profitability in negative direction meaning that the higher the level of risk-based capital the lower the profitability of the firm which represented by return on assets.

The finding of the present study is in line with Putra's (2017) study, as mentioned above, as well as with Marlina and Puryati's (2013) study who used only one insurance firm, i.e. Jasindo in Insonesia, but in different magnitude.

Equity and return on assets

Study on this topic is extremely limited. The only study that relative closely related to the present study is Abebe and Abera (2019) and Berhe and Kaur (2017) who revealed that the capital adequacy of insurance firms in Ethiopia significantly affects the firms return on assets in positive directions. Results of these studies are closely similar to some extent with the present study's finding where equity affects positively the firms' return on assets. It necessary to explain that capital adequacy of insurance firms is estimated using the following formula.

Technical reserves and return on assets

The study of Doumpos, Gaganis and Pasiouras (2012) is the one which relatively relevant to the present study. Their findings indicate that return on assets of insurance firms in Romania is affected by the net technical reserves ratio. In general it is in line with the results of the present study where technical reserves of life insurance firms significantly affects in negative direction the return on assets of the firms. Doumpus *et al*. (2012) estimates the firms' net technical reserves using formula which

$$\text{CA} = \frac{\text{Equity}}{\text{Total Assets}} \quad (5)$$

$$\text{Net Technical Reserves Ratio} = \frac{\text{Net Tehcnical Reserves}}{\text{Net Premium Written}} \quad (6)$$

follows. Technical reserve is one type of liability that must be included in the calculation of solvency, namely risk-based capital (IFSA, 2018). In other words, technical reserves are an integral part of solvency so their impact on financial performance, in this case return on assets, is in line with the impact of a solvency that is negative or the high value of technical reserves and solvency reduces profitability.

CONCLUSION AND SUGGESTION

The results of the study recognize that financial performance of life insurance firms in Indonesia is significantly affected by the level of financial health of the firms. Firm performance of life insurance firms, which is represented by return on assets—ROA, is affected in different magnitude, directions and level of significance by risk based capital, equity and technical

reserves, i.e. the financial health measures set by the Indonesia Financial Service Authority (IFSA, 2016). RBC and technical reserves reduce profitability it means that life insurance companies that have high RBC and technical reserves are likely to have low profitability. Meanwhile, equity increases the profitability of life insurance companies where life insurance companies with high equity will have high profitability.

The random effect model is determined as the most appropriate model in analyzing the effect of the financial health level on the financial performance of life insurance firms. This indicates that the value of intercept in the resulted regression equation is constant across individual life insurance firms and across time horizon, i.e. year. The implications resulted from the findings of the study include, among other things, the magnitudes of both risk-based capital and technical reserves should be to some extent limited. The optimum level of both risk-based capital and technical reserves should be set accordingly. The equity of life insurance firms, on the other hand, is encouraged to be maximized. This is in line with OJK regulations which set a minimum equity amount of IDR 100 billion.

ACKNOWLEDGEMENTS

Special appreciation is addressed to the Directorate of Research and Extensions, Directorate General of Higher Education, Ministry of Research, Technology and Higher Education of the Republic of Indonesia for providing the required research funds.

BIBLIOGRAPHY

Abebe, A.K and Abera., M.T. (2019). Determinants of financial performance: Evidence from Ethiopia. *Journal of Accounting, Finance and Auditing Studies. 5*(1), 155-172.

Berhe, T. A. and Kaur., J.(2017). Determinants of insurance companies' profitability analysis of insurance sector in Ethiopia. *International Journal of Research in Finance and Marketing*, *7*(4), 124-137.

Burca, A-M and Batrinca., G. (2014). The determinants of financial performance in the Romanian insurance market. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4*(1), 299–308.

Caporale, G.M., Cherato., M and Zhang, X. (2017). Analysing the determinants of insolvency risk for general insurance firms in the UK. *Journal of Banking and Finance, 84*, 107-122.

Charumati, B. (2012). *On the Determinants of Profitability of Indian Life Insurers–An Empirical Study*. Proceedings of the World Congress on Engineering 2012, Vol I WCE 2012, July 4 - 6, 2012, London, U.K.

Chen, R. and Wong, K.A (2004). The determinant of financial health of Asian insurance companies. *Journal of Risk and Insurance*, *71*(3), 469-499.

Coporate Financial Institute (2019). *Return on assets and ROA formula*. Retrieved from https://corporatefinanceinstitute.com/resources/knowledge/finance/return-on-assets-roa-formula/ (21st October 2019).

Doumpos, M., Gaganis, C. and Pasiouras, F. (2012). Estimating and explaining the financial performance of property and casualty insurers: A two-stages analysis. *Journal of Centrum Cathedra: The Business and Economics Research Journal, 5*(1), 155-170.

Ianc, M. M. F. (2014). Solvency of insurance companies in the Romania. *Annals of the „Constantin Brâncuşi" University of Târgu Jiu, Economy Series, 4*(2014), 274-276.

Kaya, E. O. (2015). The effects of firm-specific factors on the profitability of

non-life insurance companies in Turkey. *International Journal of Financial Study*, *3*, 510-529.

Kripa, D. and D Ajasllari. (2016). Factors affecting the profitability of insurance companies in Albania. *European Journal of Multidisciplinary Studies*, *1*(1), 352-360.

Lee, C.Y (2014). The effects of firm specific factors and macroeconomics on profitability of property-liability insurance industry in Taiwan. *Asian Economic and Financial Review*, *4*(5), 681-691.

Malik, H. (2011). Determinants of insurance companies profitability: An analysis of insurance sector of Pakistan. *Academic Research International*, *1*(3), 315-321.

Marlina, R. and Puryati., D. (2013). The influence of risk based capital to profitability in Jasindo insurance company. *South East Asia Journal of Contemporary Business, Economics and Law*, *2*(1), 8-16.

Naveed, A., Zulfiqar, A. and Ahmad., U. (2011). Determinants of performance: A case of life insurance sector of Pakistan. *International Research Journal of Finance and Economics*, *61*. 123-128.

Necas, S. (2016). Financial health of a commercial insurance company and its coherences. *Trends Economics and Management*, *25*(1), 22-32.

Putra, I. N. P. D. (2019). The 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.

Statistics of Indonesia—BPS. (2018). *Statistics of Indonesia Insurance Industries*. Statistics of Indonesia. Jakarta.

The Indonesia Financial Service Authority—IFSA. (2016). *The Indonesia Financial Service Authority Regulation Number 71/POJK.05/2016 Regarding Insurance Firms' Financial Health*. The Indonesia Financial Service Authority, Jakarta.

The Indonesia Financial Service Authority—IFSA. (2018). *Insurance Statistics of Indonesia 2018*. The Indonesia Financial Service Authority, Jakarta.

Zulfikar, R. (2019). *Estimation model and selection method of panel data regression: An overview of common effect, fixed effect and random effect models*. Retrieved from https://www.researchgates.net/326142125._Estimation_Model_And_Selection_Method_Of_Panel_Data_Regression_An_Overview_Of_Common_Effect_Fixed_Effect_And_Random_Effect_Models (20 August 2019).