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DETERMINANTS OF PROFITABILITY OF GENERAL INSURANCE COMPANIES IN INDONESIA

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ABSTRACT

This paper investigates the determinants of profitability of General Insurance in Indonesia, focusing on firm-specific factors and macroeconomics factors. General Insurance in Indonesia play important role in the economy by providing protection of risk of loss either to organizations and individuals. Based on this background, the aim of this paper is to study and improve the profitability of general insurance through a random effect analysis of 40 general insurance companies since 2013 until 2017. The data obtained is time series data and cross section data so that the data analysis in this study uses Panel Data Regression Analysis. The empirical study shows that firm size, liquidity ratio, equity growth, underwriting result, return on investment, input cost, claim ratio, technical ratio, economic growth rates and Bank Indonesia interest rate are significant factors that affect profitability of general insurance companies. Companies can improve their profitability by planning, monitoring and defining financial strategy based on the relation whether – positive or negative, between significant factors and profitability.

Keywords: firm specific, general insurance, insurance, macroeconomics, profitability

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INTRODUCTION

Insurance industry has an important role for the economy of a country, namely by distributing premiums received from the insured into investment instruments that exist in a country so as to encourage economic development activities. Public savings through the collection and management of insurance premiums is one tool that can be used to increase investment in Indonesia. Haiss and Sümegi (2008), state that the insurance sector has an important role in the financial services industry in almost all developed and developing countries. Without the presence of insurance, individuals and organizations must bear its own risks, maintain reserves that are available in large quantities, or avoid risk at all.

The continuity and success of a company, including general insurance companies is important considering the crucial role of general insurance in economic development in Indonesia. One measure that can be used in measuring the continuity and success of a company is through the profitability of the company. Profitability, as stated by Burca and Batrinca (2014), is one of the main financial objectives of insurance company's management. Decision making and appropriate actions by the company in maintaining profitability, are expected to be

achieved by understanding the things that affect profitability in an industry.

Data sourced from OJK Insurance Statistic in 2017, states that the number of general insurance companies in Indonesia in 2017 is the highest compared to other types of insurance businesses. General insurance industry in the last five years has the lowest claim ratio and is relatively stable compared to other types of insurance which respectively is equal to 0.47; 0.51; 0.55; 0.51; and 0.50 respectively from 2013 and 2017. This shows that the type of general insurance business has the potential and the opportunity to gain profits continues to increase. For more detail, see Figure 1.

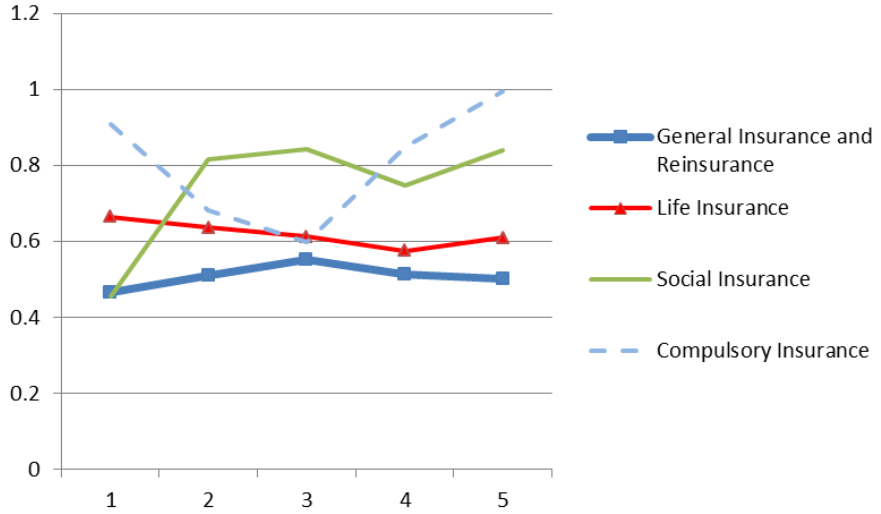

Figure 1. Claim Ratio (Total Claim/Gross Premium) of Insurance Industry

Source: OJK Insurance Statistics 2017

However, there was a phenomenon that happened to profits in the general insurance industry from 2013 to 2017. Even though the income from underwriting and investment returns has been increasing over the past five years, profits from the general insurance industry tend to continue to decline. For the past five years, profits from national general insurance amounted to 5.831; 6.003; 5.414; 4.719 and 4.619 in billions of rupiah respectively from 2013 to 2017.This condition raises the question of what caused the decline in profits from the general insurance industry over the past five years, and what actions should be taken by general insurance management to increase the profitability of general insurance companies. For more detail, see Figure 2.

Numerous studies have been conducted in determining the profitability factor of insurance companies in the developed and developing country. Oktiani (2017) has investigated the factors that affect profitability of 32 life insurance companies in Indonesia. The study that Lee (2014) has conducted, investigated the firm specific factors and macroeconomics on profitability of 15 property-liability insurance companies in Taiwan. Charumathi (2012) has analyzed the factors that determine the profitability of Indian life insurers taking Return on Assets as dependent variable. Kramaric et al. (2017) studied determinants of profitability of insurance industry in selected Central and Eastern European countries in the period of 2010 – 2014. Determinants of profitability of 25 non-life insurance companies in Poland for the period of 2002 – 2009 have been studied by Kozak (2011). Malik (2011) have investigated the determinants of profitability

proxied by Return on Assets in insurance companies of Pakistan. Lire and Tegegn (2016) identified the determinants of profitability of private insurance companies in Ethiopia.

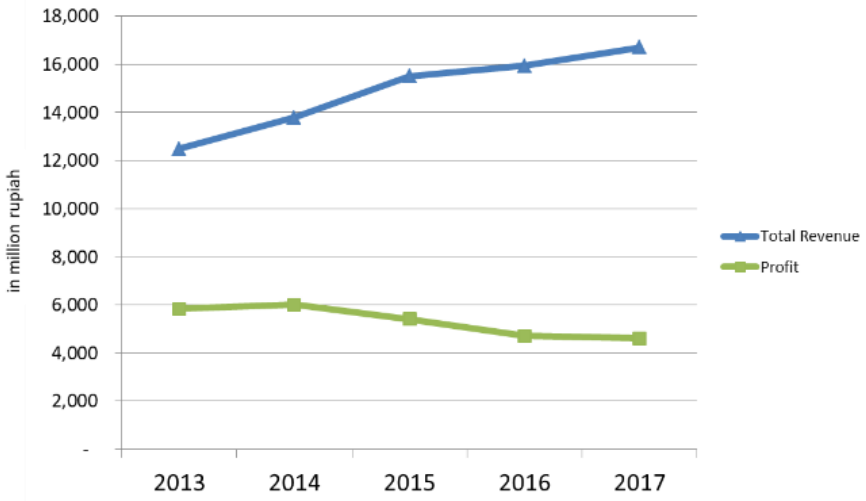

Figure 2. Profit of General Insurance Companies in Indonesia

Source: OJK Insurance Statistics 2017

However, to the best of the authors' knowledge, there has been no study focused on determining the profitability factors of general insurance companies in Indonesia. Therefore, this study is aimed to contribute in filling the gap to the body of knowledge.

Several researchers conducted studies that discussed the factors that affect profitability, use Return on Assets (ROA) as a measurement. These researchers include Oktiani (2017), Lee (2014), Charumathi (2012), Kramaric et al. (2017), Kalengkongan (2013), Boadi et al. (2013), Malik (2011), Brihanu (2017), Lire and Tegegn (2016), Ismail (2011), and Kozak (2011). Return on Assets (ROA) which is used by some researchers is a comparison between profit before tax and total assets owned by the company.

There are several differences from the results of research that has been carried out by several researchers various the regions of the world. Premium growth, for example, Oktiani (2017) and Charumathi (2012) states in the results of his research that the premium growth rate in life insurance companies has a negative effect on profitability with Return on Assets (ROA) as a measurement. Meanwhile, Lire and Tegegn (2016) in the results of their research state the opposite, that premium growth has a positive effect on Return on Assets (ROA).

This paper is aimed to identify the determinants of profitability of general insurance in Indonesia, focusing on firm-specific factors and macroeconomics factors. This analysis uses the Panel Data Regression to explain profitability of general insurance industry in Indonesia. The findings of this study can be used by general insurance companies as consideration in making decisions to increase their profitability.Based on this background problem, this study aimed to determine factor that affect profitability in the Indonesian general insurance company.

LITERATURE REVIEW

Insurance is an agreement between two parties, namely an insurance company and policy holder, which is the basis for receipt of premiums by insurance companies in return for providing compensation to the insured or policy holder due to losses, damages, costs

incurred, loss of profits, or legal liability to third parties that may be suffered by the insured or policy holder due to an uncertain event; or provide payments based on the life of the insured with benefits that have been determined and / or based on the results of the management of funds. (Law of Republic Indonesia No. 40, 2014)

Profitability in a company is an indicator that shows the company's ability to generate profits. The company's profit becomes important for the company because it involves the sustainability of a company. Companies that have high profitability will gain competitive advantage compared to companies that have low profitability. The profitability of a company can be measured using the Return on Assets ratio. Return on Assets (ROA) is a comparison of Net Income with Total Assets (Total Assets) that shows the ability of a company to manage assets owned to make a profit. The greater ROA, the better company managing assets to earn profits.

Oktiani (2017) found that Equity Capital, Liquidity Ratio, Size of Company, and Leverage Ratio have a significant and positive effect on Return on Assets, while Premium Growth and Risk Based Capital have a significant and negative effect on Return on Assets. Study of Lee (2014) stated that Return on Investment and Economic Growth Rates have a significant and positive effect on Return on Assets, while underwriting Risk, Reinsurance, Financial Leverage, Input Cost have a significant negative effect. Charumathi (2012) stated that Return on Assets is significantly and negatively affected by Leverage Ratio, Premium Growth, Equity Capital, while Size of the Company and Liquidity have a significant positive effect on Return on Assets.

Study from Malik (2011) shows that, Return on Assets is affected by Age of the company and Gross Domestic Product Growth. The results obtained from the research of Lire and Tegegn (2016) stated that Premium Growth, Size of Companies have significant and positive effect on Return on Assets, while Underwriting Risk has a significant negative effect. Kozak (2011) stated that Gross Written Premium and Operating Expenses have a significant negative effect, while Gross Domestic Product Growth and Market Share have a significant positive effect on Return on Assets.

RESEARCH METHOD

This research uses secondary data obtained from Indonesian Insurance Statistics 2013 - 2017, General Insurance Company Financial Statements 2013 - 2017, Bank Indonesia website, OJK website. In addition, secondary data is obtained from scientific publications, journals and books as supporting data. This research is limited to the measurement of firm specific factors and macroeconomic factors to profitability and in an effort to determine factors that affect profitability in the general insurance industry in Indonesia. The population studied is all general insurance companies in Indonesia. While the sample used is a general insurance company registered with the Financial Services Authority (OJK) and has a complete annual financial report from 2013 to 2017.

Profitability of general insurance companies is the main thing that must be considered by company management because the company's profitability determines the sustainability of a company. Companies that have relatively stable profitability and tend to increase will gain a competitive advantage in an industry.

Operational definitions of variables are needed to explain the variables that have been identified as understanding efforts in research. In this study, the variables used are shown in Table 1. The model used in this study refers to the research model conducted by Lee (2014) in measuring company performance through profitability (ROA). The following research models are referred to as follows:

$$ROA_{it} = \alpha + \beta_1 FS_{it} + \beta_2 LR_{it} + \beta_3 EG_{it} + \beta_4 PG_{it} + \beta_5 UR_{it} + \beta_6 ROI_{it} + \beta_7 FL_{it} + \beta_8 IC_{it} + \beta_9 CR_{it} + \beta_{10} TR_{it} + \beta_{11} RE_{it} + \beta_{12} EGR_{it} + \beta_{13} IR_{it} + \beta_{14} BI_{it} + e_{it} \quad (1)$$

Explanation:
ROA : Return on Assets
FS : Firm Size
LR : Liquidity Ratio
EG : Equity Growth
PG : Premium Growth
UR : Underwriting Result
ROI : Return on Investment
FL : Financial Leverage
IC : Input Cost
CR : Claim Ratio
TR : Technical Ratio
RE : Reinsurance
EGR : Economic Growth Rates
IR : Inflation Rates
BI : Central Bank Rates
e : Error

Where subscript i and t represents respectively firm i in year t; α is the intercept; β_j is the estimated regression coefficient of independent variable; j=1,2,3…14; and e_{it} represent error term, assuming it follows a normal distribution.

The data obtained is time series data and cross section data so that the data analysis in this study uses Panel Data Regression Analysis. According to Juanda and Junaidi (2012), panel data is a combination of time series data with a cross section. Time series data is a data of one object that covers several time periods, while cross section data is data consisting of several or many objects in a given period. So panel data can be defined as data obtained from cross section data observed in the same individual unit at different times. Thus, the results of using panel data regression will get an overview of the behavior of some of these objects over a period of time.

Table 1. Variable Description

Variable	Code	Variable Definition
Return on Assets	ROA	Profit before taxes ÷Total Assets
Firm Size	FS	Total Assets
Liquidity Ratio	LR	Total Current Assets ÷ total liability
Equity Growth	EG	(Equity of current year – equity of prior year) ÷ (equity of prior year)
Premium Growth	PG	(Premium of current year – premium of prior year) ÷ (premium of prior year)
Underwriting Result	UR	Premium income ÷ Total Premiums
Return on Investment	ROI	Investment income
Financial Leverage	FL	Total liability ÷ total assets
Input Cost	IC	Total cost ÷ total premiums
Claim Ratio	CR	Total claim ÷ premium income
Technical Ratio	TR	Total insurance contract liability ÷ total premiums
Reinsurance	RE	Total reinsurance premiums ÷ own retention premiums
Economic Growth Rates	EGR	$(GDP_t - GDP_{t-1}) \div GDP_{t-1}$; (GDP = Gross Domestic Product)
Inflation Rates	IR	Yearly inflation rates
Central Bank Rates	BI	Central Bank interest rates

Source: Data was processed and conducted by the researcher (2020)

RESULT AND DISCUSSION

In panel data regression, determining the best model can be done using the Lagrange Multiplier, Chow Test and Hausman Test. The output of the E-views 10 software is explained in Table 2.

In the Hausman Test results, there is a message "Cross-section test variance is invalid. Hausman statistic set to zero". Because the results of the Hausman Test are not appropriate to use, the researcher presents three models to see the consistency of the coefficients of the independent variable that influences the dependent variable in this case is Return on Assets (ROA). The three models are Fixed Effect Model (FEM), Fixed Effect Model with cross-section weighting (FGLS), and Random Effect Model (REM). From the regression results of the three models, the coefficients of each variable almost all have the same sign (consistent), only one variable has a different coefficient sign that is negative Reinsurance variable in the FEM and REM model but positive in the FGLS model. Because the results of the three models are relatively consistent, the best model of the three models is FGLS. FGLS is Fixed Effect Model with weighting in cross-section data, this model also shows the biggest R-square compared to other models.

The panel data regression results show a significant Firm Size variable on ROA, with a coefficient of 0.322978 which is the largest coefficient compared to other significant firm-specific variables. This means that the larger the size of the company, the greater the profit per total asset obtained by the company. These results are consistent with Lee's research (2014, Oktiani (2017), Charumathi (2012), Boadi et al. (2013), and Lire and Tegegn (2016). Companies that have large assets, will have advantages in cost efficiency and distribution. risk so that the company is more likely to get optimal earnings per asset.

Tabel 2. Lagrange Test, Chow Test, and Hausman Test

Test	Indicator	Value	Hypothesis
Lagrange Test	Breusch-Pagan	97,366	H_1
	Probability	0,000	Fixed Effect Model
Chow Test	Chi-square statistic	266,121	H_0
	Probability	0,000	Random Effect Model
Hausman Test	Cross-section rand.	0,000	H_1
	Probability	1,000	Random Effect Model

Source: processed data (2020)

Companies that have optimal liquidity reflect the company's ability to fulfill short-term obligations. Liquidity Ratio is a significant variable to ROA with a coefficient of 0,009, so that when Liquidity Ratio increases by 1%, ROA will increase by 0,009%. Oktiani (2017), Charumathi (2012), Satria (1994), Boadi et al. (2013) also stated the same thing, the greater the company's liquidity, the more likely the company to get greater profits. Equity Growth (Equity Growth) reflects the source of capital that becomes the company's assets without any obligation to return the capital. This variable has a coefficient of 0,016 and is significant for ROA. The same thing was stated by Malik (2011) and Oktiani (2017), that is, positive equity growth can increase profitability.

Underwriting Result and Return on Investment are variables that can indicate the source of income from the two main activities of general insurance companies, namely underwrite and investment. These two variables are significant for ROA with coefficients of 0,259 and 0,172, respectively. This can be interpreted if the Underwriting Result and Return on Investment each

increase by 1%, then ROA will increase by 0,259% and 0,172%.

Input Cost is costs incurred in the business activities of receiving insurance premiums. Kozak (2011) Lire and Tegegn (2016) and Lee (2014) state that the higher Input Cost will reduce profitability. The same thing was stated by Marwansyah and Utami (2017) and Malik (2011) regarding Claim Ratio, namely the higher the Claim Ratio, the lower the profitability. Technical Ratio shows the amount of premium income reserved compared to the premium received, if the greater the premium income is reserved, the profit from the company in that year will be reduced because it is allocated for claims. Input Cost, Claim Ratio, and Technical Ratio are significant variables towards ROA. The coefficients of these three variables for ROA are -0,131, -0,023, and -0,024, respectively, which means that ROA will decrease by 0,131%, 0,023%, and -0,024% respectively when Input Cost, Claim Ratio, and Technical Ratio respectively increases by 1%.

There are three macroeconomic factors in this study, namely Economic Growth Rates (Gross Domestic Product/GDP growth), Inflation Rates (inflation rate), and BI Rates (Bank Indonesia interest rates). The Economic Growth Rates measured using Indonesia's Gross Domestic Product (GDP) growth have a significant effect on ROA with a coefficient of 1,844 which means that when Economic Growth Rates increase by 1%, ROA will increase by 1,844%. GDP growth increases people's purchasing power so that the premium income of general insurance companies will increase along with the increase in public consumption. This result is in accordance with the research conducted by Lee (2014), Kramaric (2017), and Kozak (2011) that Economic Growth Rates (GDP growth) has a significant positive effect on ROA.

The next variable that influences ROA is BI rates. BI Rates affect investment demand in Indonesia and investment returns of general insurance companies. The higher BI Rates the greater the investment return received due to the majority of the portfolios invested by general insurance companies in the form of deposits. This variable has coefficients of 0,475, which means that ROA will increase by 0,475% when BI Rates increase by 1%. Kalengkongan (2013) states that interest rates affect investment demand and investment returns. So that this variable can increase ROA from general insurance companies in Indonesia.

Tabel 3. Firm-specific, Macroeconomics factors on Profitability

Variable	Value	Fixed Effect Model	Fixed Effect Model (GLS Weight)	Random Effect Model
Firm Size	Coefficient	0,487*	0,323*	0,446*
	Std. Error	(0,202)	(0,131)	(0,106)
Liquidity Ratio	Coefficient	0,009	0,009*	0,016*
	Std. Error	(0,006)	(0,004)	(0,005)
Equity Growth	Coefficient	0,017*	0,016*	0,015*
	Std. Error	(0,005)	(0,003)	(0,005)
Premium Growth	Coefficient	0,003	0,009	0,006
	Std. Error	(0,007)	(0,005)	(0,007)
Underwriting Result	Coefficient	0,248*	0,259*	0,255*
	Std. Error	(0,025)	(0,020)	(0,021)
Return on Investment	Coefficient	0,152*	0,172*	0,132*
	Std. Error	(0,042)	(0,030)	(0,040)
Financial Leverage	Coefficient	0,057	0,013	0,062*
	Std. Error	(0,031)	(0,022)	(0,024)
Input Cost	Coefficient	-0,103*	-0,131*	-0,145*
	Std. Error	(0,027)	(0,022)	(0,023)
Claim Ratio	Coefficient	-0,040*	-0,023*	-0,035*
	Std. Error	(0,009)	(0,007)	(0,009)
Technical Ratio	Coefficient	-0,027*	-0,024*	-0,026*
	Std. Error	(0,005)	(0,004)	(0,004)
Reinsurance	Coefficient	-0,000	0,000	-0,001
	Std. Error	(0,001)	(0,001)	(0,001)
Economic Growth Rates	Coefficient	2,081*	1,844*	2,088*
	Std. Error	(0,796)	(0,480)	(0,780)
Inflation Rates	Coefficient	-0,110	-0,856	-0,127
	Std. Error	(0,088)	(0,0617)	(0,102)
BI Rates	Coefficient	0,546*	0,475*	0,517*
	Std. Error	(0,131)	(0,080)	(0,127)
R^2		90,41%	94,90%	58,34%

*significant to Return on Assets (ROA)
Source: processed data (2020)

The effort that can be made by General Insurance Companies is to maintain the growth of assets owned organically by maintain premium earned and inorganically by maintaining equity and debt in order to be better at managing risk and achieving economies of scale. Another effort that can be done is to improve the quality of the underwriting process so that it can reduce claims in the future and increase revenue from underwriting results. The next thing that should be considered is Input Cost, if the company can reduce expenditure costs in the business of receiving premiums such as commissions and marketing costs. The last thing that needs attention is the interest rate of Bank Indonesia. Although the company does not have the capacity to influence Bank Indonesia interest rates, the company can change the allocation of assets invested. The company can enter the Bank Indonesia interest rate factor into consideration in allocating assets to be invested. By paying attention to these matters, it is expected that

general insurance companies in Indonesia can increase their profitability.

CONCLUSION

The objective of the study is to investigated the effects of factors on the profitability of 40 general insurance companies in Indonesia over the period of 2013 to 2017 using the secondary data obtained publicly from financial reports of companies, Bank Central and Financial Services Authority websites.

The findings of this study contribute to better knowledge of the ability of general insurance companies in Indonesia to generate profit and the factors that can affect it so that the management of the insurance company can take these factors into account in carrying out corporate actions in order to improve their profitability. This study led to the conclusion that internal factors such as Firm Size, Liquidity Ratio, Equity Growth, Underwriting Result, Return on Investment, Input Cost, Claim Ratio, and Technical Ratio and economic macro factors such as Economic Growth Rates and BI Rates have a significant effect on Return on Asset (ROA). Variable Firm Size, Liquidity Ratio, Equity Growth, Underwriting Result, Return on Investment, and BI Rates have a positive effect on ROA. Whereas Input Cost, Claim Ratio, Technical Ratio and Economic Growth Rates negatively affect ROA.

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