Factors Affecting the Increase of Insurance Income Among Insurance Companies in Indonesia

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ABSTRACT

This study aimed to determine whether the risk-based capital, return-on-investment, the ratio of claim and premium-growth affect the increase in premium income among insurance companies listed in the Indonesia Stock Exchange (IDX) during 2013-2017. This study has a sample size of 10 mining companies listed in the IDX during the observation period. The samples were selected by using the purposive-sampling method. The data used in this study was in form of secondary data, which is the financial statements published on the IDX website: www.idx.co.id. The analysis model used was multiple-linear regression. The results of this study indicate that the risk-based capital, return-on-investment, the ratio of claim and premium-growth as a whole (simultaneous) have a significant effect on the increase of premium income. Partially, this research indicates that risk-based capital negatively but not significantly affects the increase of premium income; return-on-investment negatively and significantly affects the increase of premium income; claim ratio positively and significantly affects the increase of premium income; and premium-growth ratio positively but not significantly affects the increase of premium income.

Keywords: premium income, risk-based capital, return-on-investment, claim ratio, premium-growth ratio

1. INTRODUCTION

The development of an increasingly-advanced economy and technology, the possibility of risks that threaten the human beings' needs is even greater. The existence of the above reasons means the greater the problems that will be faced by human beings, both directly and indirectly. To deal with the unforeseen risks, entrepreneurs or individuals hold liabilities for goods, loans, and lives. The insurance agreement is an equivalent reciprocal agreement, whereas the first party pays a premium to the second party in accordance with the value insured. Meanwhile, the second party or the guarantor has an obligation to compensate the loss suffered by the insured.

Insurance can be imagined as an umbrella, which is needed when it rains. This means that disaster and misfortune that can befall a person and his / her possessions, is something that is not really expected to occur so that insurance acts as a protection for the person, the family, and the property when something unexpected happens. An increase in premium income indicates an increase in customer confidence in insurance services and a growing understanding of the importance of long-term protection related to the investments that do not only provide protection, but also have the potential to produce good results in the long-run. An increase in premium income can also be interpreted that the insurance company has a good level of liquidity so that it is able to meet its short-term obligations. Financial health of insurance companies is a benchmark for increasing premium income, because with clear regulations, it triggers customers' trust and interest in the security of the insurance company. According to a Chairman of the Indonesian Insurance Council (DAI), the low number of people who understand and have insurance, is because so far many have assumed that insurance is expensive and only for the upper-middle class [1]. To increase insurance penetration, which is still low, the socialization and education is needed about the importance of insurance. And this situation is exacerbated by the decline in public purchasing-power from 2015 to 2017. According to the data released by the Indonesia Investment Coordinating Board (BKPM), year-on-year in the first-half of 2015, 2016 and 2017, China had the highest number of employment-absorption compared to that in other countries, namely Japan, Singapore, and the United States. This phenomenon then had an impact on the level of unemployment in society which was reduced slightly. If people do not work, there is no income to buy or consume. This can be seen in Figure 1 below.
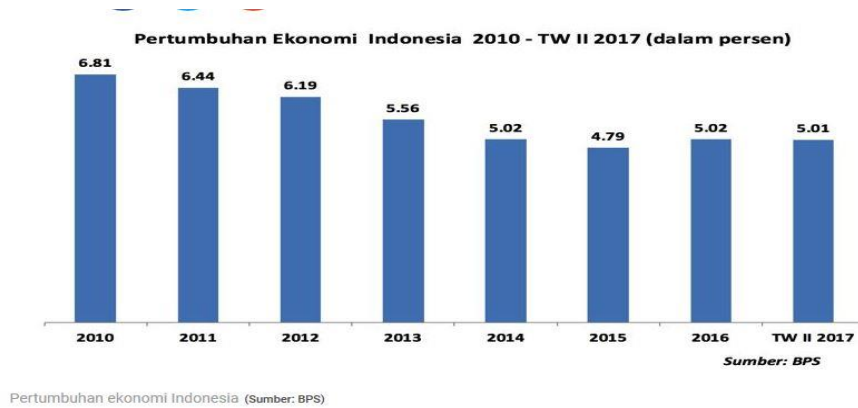
Figure 1 Economic Growth in Indonesia
Source: Central Statistics Agency (2018)

The Regulation of the Indonesia Minister of Finance Number 53 / PMK.010 / 2012 [2] concerning the financial health of insurance companies and reinsurance companies was issued to encourage the growth of insurance industry and increase the protection for the insured or policy holders, as it appears that the insurance industry seems to escape government restructuring. Tariff war especially for insurance will backfire for customers in paying claims and policyholders will be harmed. Even this is a concern by the Financial Services Authority (FSA) that needs to regulate the standardization of insurance premium-rates in Indonesia, because so far, the general-insurance premium-rates tend to be below the fair price or underpriced [3].

The measurement standards set by the government through the Regulation of the Minister of Finance No. 53 / PMK.010 / 2012 [2] mandates the insurance companies to have a minimum solvency-level of 120%. This level of solvency is commonly called the Risk-Based Capital (RBC). High RBC means that the company is assessed in good condition. However, RBC as a benchmark for the financial health of insurance companies is also a polemic for them because of the caution in increasing the amount of capital or RBC and its management (the unbalance between increasing capital with increasing market share and obtaining premiums), it is feared that it will have a reduced prudent-principle in analyzing or subordinating a business risk that ultimately increases the volume of claims and erodes the existing capital.

The Indonesian General Insurance Association (AAUI) recorded the gross premium of the general insurance industry in 2015 amounting to Rp58.9 trillion or experiencing a growth of 6.7%. However, this growth has decreased significantly compared to the premium growth in 2014 which reached 17.9% [4]. This is due to the drop in the two largest types of market share, namely property and property insurance. The claim ratio increased significantly in 2015, amounting to 55.08%, whereas in 2014 the industry claims ratio-rate was 49.29% [5].

1.1. Related Work

The theoretical basis used in this research is as follows:

1.1.1. Insurance Concept

According to [15] on Insurance Business, in Chapter 1 Article 1: "Insurance or Coverage is an agreement between two or more parties by which the insurer binds itself to the insured by receiving insurance premiums to provide compensation to the insured due to loss, damage or loss of profit expected, or legal liability to a third party that the insured may suffer, arising from an uncertain event, or providing a payment based on the life or death of an insured person.

1.1.2. Increase in Premium Income

According to [7], income is the gross inflow of economic benefits arising from the normal activities of the company during a period, if the inflows result in an increase in capital (equity) that do not originate from investment contributions. According to [8], revenue is income from the sale of products and services. According to the Indonesian Institute of Accounting, revenue is income that arises from ordinary company activities and is known by a different designation such as sales.

According to [9], "Revenues are the inflows of other additions to the activities of an entity or the settlement of its obligations or a combination of both originating from the delivery or production of goods, rendering of services or other activities that constitute core operations".

According to [10] "Revenue is the gross inflow of economic benefits arising from the normal activities of a company during a period if the inflows result in an increase in equity that do not originate from investment contributions".

Insurance premium according to [11], is the money paid by the insured to an insurance company that can be determined in a certain way.

According to [12], a premium is something that is given as a gift or for something paid extra as an incentive or illuminator or something as extra payment above the normal payment.

The definition of Increased Premium Income according to PT. Asuransi Jasa Indonesia (Persero) is an increase in gross inflows during a period compared to that in the previous period when the premium income results in an increase in equity that does not originate from the contribution of the financier, which can be calculated by the formula as follow:

$$\text{Increase in Premium Income} = \frac{\text{Current Year of Premium Income} - \text{Previous Year of Premium Income}}{\text{Previous Year of Premium Income}} \times 100\%$$

1.1.3. Risk-Based Capital (RBC)

The measurement standards set by the government [2] mandate that insurance companies must have a minimum solvency-level of 120%. This level of solvency is commonly called the Risk-Based Capital (RBC), which is the ratio of the total assets of a company to the total number of insurance claims. According to [13], "Risk-Based Capital Health Ratio is a measure that informs the level of financial security or health of an insurance company that must be met by 120%, in which the greater the ratio of risk-based capital of an insurance company is, the healthier the financial condition of the company will be.

RBC is calculated by each insurance company in accordance with the standards or conditions set by the government [14] concerning the Guidelines for Calculation of Solvency-Level Limits, which explains that the minimum solvency-level limit is a minimum amount of solvency-level specified, which is equal to the amount of funds used to cover the risk of losses arising as the result of deviation of wealth and liability management from the components of the minimum solvency level, which is also called the Risk-Based Capital. According to [15], the Risk-Based Capital (RBC) formula is as follow:

$$RBC = \frac{\text{Level of Solvability}}{\text{Limits of Minimum Solvability-Level}}$$

1.1.4. Return on Investment

Investment ratio is a measurement of the company's overall ability to generate profits with the total amount of assets available in the company [16]. According to [17], Investment Ratio is equal to net income to total assets. This ratio tries to measure the effectiveness of company resources. According to [18], Return-on-Investment is a measure of a company's ability to generate profits that are used to cover investments incurred.

ROI is a ratio that can show the percentage (%) of net profit obtained when measured from owner's capital. There are 2 (two) factors that can affect the Investment Ratio including: (1) The level of asset turnover in the company's operational activities. (2) Profit margin is the amount of operating profit expressed in terms of a percentage and the amount of sales sold. Profit margins can measure a company's profit level by being associated with sales.

Investment ratio analysis (ROI) in financial analysis has a very important meaning because it is one of the techniques of analysis that is comprehensive (comprehensive). Investment Ratio Analysis (ROI) is an analytical technique commonly used to measure the level of effectiveness of a company's overall operations. Investment Ratio (ROI) is one of the profitability ratios that measures the ability of a company with the overall investment invested in the total assets used to obtain profits.

The magnitude of the investment ratio (ROI) can be calculated based on the following formula [17]:

$$ROI = \frac{\text{Net Profit After-Tax}}{\text{Total Assets}} \times 100\%$$

1.1.5. Claim Ratio

According to [19], insurance claims are demands from the insured party with a contract agreement between the insurance and the insured party that each party is bound to guarantee compensation payment by the insurer if the insurance premium payment has been made by the insured party, when there is a disaster suffered by the insured.

Insurance claim is an official request to the insurance company, to request the payment based on the terms of the agreement. The submitted insurance claim will be reviewed by the company for its validity and then paid to the insured party after approval. Claims are one of the operational activities that must be completed or carried out by insurance companies in the context of serving the risk that has happened to consumers or customers.

Companies can find out how much the payment of claims that have been made due to the losses suffered by policyholders (the insured). As stated in the Statement of Corporate Intent of PT. Asuransi Jasa Indonesia (Persero) in 2004-2006, the ratio of claims can be calculated using the following formula:

$$\text{Claim Ratio} = \frac{\text{Claim Burden}}{\text{Claim Income}}$$

1.1.6. Premium-Growth Ratio

The premium growth ratio is the ratio that illustrates the sharp increase / decrease in the net-premium volume giving an indication of the lack of stability of the company's business activities. As stated in the Statement of Corporate Intent of PT. Asuransi Jasa Indonesia (Persero) in 2004-2006, the Premium-Growth (PG) Ratio can be calculated using the following formula:

$$\text{PG-Ratio} = \frac{\text{Increase or Decrease of Net Premium}}{\text{Previous Net Premium Income}}$$

1.2. Hypotheses Development

This section presents the hypotheses development as follows: (1) There is a positive influence of Risk-Based Capital (RBC) on the increase of premium income among insurance companies listed in IDX during 2013-2017 (H_1); (2) There is a positive influence of Investment Ratio (ROI) on the increase of premium income among insurance companies listed in IDX during 2013-2017 (H_2); (3)There is a positive influence of Claim Ratio on the increase of premium income among insurance companies listed in IDX during 2013-2017 (H_3); (4) There is a positive influence of Premium-Growth Ratio on the increase of premium income among insurance companies listed in IDX during 2013-2017 (H_4). From the hypothesis formulated above, the research framework can be described as follow:
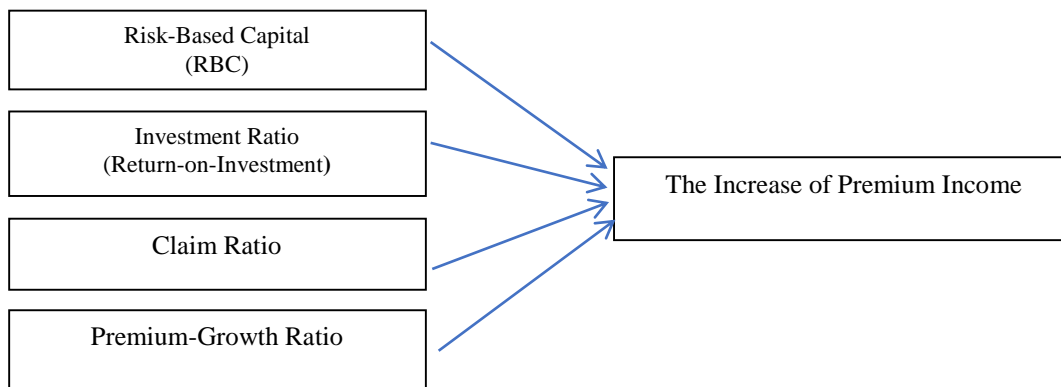

Figure 2 The Proposed Framework of This Research

2. RESEARCH METHOD

The model and design of this study is to obtain data on variables that affect the Risk-Based Capital (RBC), investment ratio (ROI), claim ratio, and premium-growth ratio among insurance companies listed in IDX. The type of data used in this study is secondary data. The data used is a combination of time-series and cross-section data. The population in this study is all insurance companies listed in IDX during 2015-2017, amounting to 14 companies. In this study, data was obtained by using the documentation method. The data is in the form of financial statements. The researcher also looked for non-financial information data as additional material in the analysis. The research variables in this study can be classified into two types, namely the Independent Variables namely Risk-Based Capital (RPC), Investment Ratio (ROI), Claim Ratio, and Premium-Growth Ratio, and a Dependent Variable, namely Increased Premium-Income. The research data was be analyzed using SPSS version 23 as a tool of analysis consisting of: descriptive statistics, testing of the data quality i.e reliability test and validity test, classical-assumption test, and hypothesis test with the multiple-regression equation as follow:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Y   = The Increase of Premium Income
X_1 = Risk-Based Capital (RBC)
X_2 = Investment Ratio
X_3 = Claim Ratio
X_4 = Premium-Growth Ratio
A   = Constant
B   = Coefficient of Regression
E   = Error

3. RESULTS AND DISCUSSIONS

This section presents main results and followed by discussions.

3.1. Research Object Description

The result of descriptive statistics in this research can be seen in Table 1 below:

Table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
RBC	50	130.75	4446.00	390.0000	637.08861
ROI	50	1.64	10.32	4.9514	2.17659
Claim Ratio	50	.10	.99	.4880	.18827
Premium-Growth Ratio	50	2.93	29.90	11.3934	5.93277
Premium-Income Ratio	50	.33	19.12	6.0732	4.59975
Valid N (listwise)	50				

Source: SPSS Output, 2018

3.2. Classical-Assumption Test Results

The classic-assumption tests conducted in this research consist of: (1) Normality Test: Based on the results of the normality test, the significance value of the K-S test in the Kolmogorov-Smirnov regression model is 1.406 with a significance of 0.068. Based on this test result, this regression model has met the normality requirements, because the significance value is 0.068 (> 0.05); (2) Multicollinearity Test: Based on the multicollinearity test result, the tolerance values are higher than 0.10 and the VIF values are lower than 10 for each variable. The tolerance value generated for variable risk-based capital is 0.566, return-on-investment is 0.275, claim ratio is 0.171, and premium-growth ratio is 0.198. Meanwhile, the VIF value of Risk-Based Capital is 1.768, Return-on-Investment is 3.638, claim ratio is 5.839, and premium-growth ratio is 5.051. Thus, it can be concluded that all independent variables in the regression model do not have multicollinearity problems and are suitable to be used in this study. (3) Heteroscedasticity Test: The output result shows that there is no single variable whose significance value is below 0.05. Therefore, it can be concluded that each variable does not experience heteroscedasticity problem. Thus, there is no heteroscedasticity in the regression model, so this regression model is declared appropriate to be used. Next, the results of t-tests and F-test can be seen in Table 2 and Table 3 below:

Table 2 The Results of t-Tests

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1		-1.498	1.606		-.933	.356
	RBC	-.001	.001	-.086	-1.247	.219
	ROI	-1.565	.210	-.740	-7.449	.000
	Claim Ratio	28.190	3.077	1.154	9.162	.000
	Premium-Growth Ratio	.158	.091	.204	1.745	.088

a. Dependent Variable: Premium-Income ratio

Source: SPSS Output, 2018

From the results of t-tests as displayed in Table 2, the variables of RBC (X_1) and ROI (X_2) have an opposite relationship with the Increase of Premium Income (Y), in which there is only a significant effect of ROI on the Increase of Premium Income (Y). Meanwhile, the Claim-Ratio variable (X_3) positively and significantly affects the Increase of Premium Income, and the last, the Premium-Growth Ratio variable (X_4) positively but not significantly affects the Increase of Premium-Income (Y).

Table 3 The Result of F-Test

ANOVAᵃ

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	910.023	4	227.506	80.800	.000ᵇ
Residual	126.705	45	2.816		
Total	1036.728	49			

a. Dependent Variable: Premium-Income Ratio

b. Predictors: (Constant), RBC, ROI, Claim Ratio, Premium-Growth Ratio

Source: SPSS Output, 2018

From the result of the F-test, it can be seen that the independent variables simultaneously have a significant effect on the dependent variable, or it can be said that Risk-Based Capital, Return-on-Investment, Claim Ratio, and Premium-Growth Ratio simultaneously significantly affect the Increase of Premium Income.

3.3. The effect of Risk-Based Capital on the increase of premium income

The result of the first hypothesis (H_1) test proves that Risk-Based Capital negatively but not significantly affect the increase of premium income. This is due to the low level of solvency that is owned by insurance companies in Indonesia. Risk-Based Capital is a measure that informs the level of financial security or health of an insurance company. The greater the RBC ratio of an insurance company is, the healthier the financial condition of the company will be. In measuring RBC, the worst risks may occur and will make the company's financial condition decline. The inclusion of these risks reflects the uncertainties faced by the company in its daily activities, for example, the possibility of a collapse in the value of assets in the short-term due to the investment in more-risky instruments, interest-rates, termination-rates and so on. The RBC variable measured by the level of solvency shows that there is still a number of insurance companies that have a low level of solvency or close to the minimum limit of government regulations. This happens because the assets permitted by the company are still very low, the magnitude of the company's burden is due to the high increase in claims. This happens because of the large liabilities of the insurance company and the small amount of capital paid-up by the insurance company concerned. With this condition, the insurance company is expected not only able to generate profits, but also able to maintain the financial condition from year to year, in order to be competitive and sustainable amidst the declining financial conditions or trends in almost all countries.

3.4. The effect of Return-on-Investment on the increase of premium income

Based on the result of the second hypothesis (H_2) test, the Return-on-Investment negatively and significantly affects

the increase of premium income. This is due to the company's ability to generate profits is still very low and can be proven by looking at the extent to which management can decide on the investment owned in the framework or purpose of generating profits. The ratio of investment is equal to net income divided by total assets. This ratio tries to measure the effectiveness of company resources. The worst risks that often occur in insurance companies make the company's performance disrupted so that the company focuses in generating disrupted profits. When the company is able to generate maximum profits, it will certainly increase the premium income. From the analysis that has been proven, researchers see that there are still many companies that have not been able to manage their investments that can generate profits for the companies later. The variable of ROI as measured by net profit of the company (net profit after-tax) divided by total assets, shows a very low result. This is because the premium income generated by insurance companies is still very low or small. Very high costs also contribute to the low net profit earned by insurance companies. However, there are some companies that have good assets and show a good ROI. In addition, insurance companies listed in IDX have not been able to produce a good return-on-investment, or in other words, the performance of insurance companies is still low.

3.5. The effect of claim ratio on the increase of premium income

From the result of the third hypothesis (H_3) test, the claim ratio positively and significantly affects the increase of premium income. This is because the higher claim ratio will greatly affect the increase of premium income. The burden of claims that are still very high and low claim income makes many insurance companies have not been able to generate maximum profit. Insurance claim is a premium request to an insurance company for the payment based on the terms of the agreement. The risk borne by the insurance company makes the company have to pay its obligations to the insured due to the damage or accident to the insured. And this obviously greatly affects the premium income received by the insurance company. With this huge risk, the insurance company must really have a good underwriting system to be able to see whether the risk to be borne can be paid by the insurance company. The claim-ratio variable which is measured by claim load, shows a high level of

claim ratio, whereas the level of claim expense is high. These high costs make some insurance companies still have a high claim-ratio. The claim-ratio variable, measured by claim income, shows a high level of claim ratio. Low claim income proves that the insurance company's underwriting system is still very bad and there needs to be an evaluation by each insurance company.

3.6. The Effect of premium-growth ratio on the increase of premium income

Based on the result of the fourth hypothesis (H_4) test, premium growth positively but not significantly affects the increase of premium income. This is due to the decrease of premium which will make the income to decrease as well. Increasing the growth of premium that is significant from year to year is one of the things that make an increase in premium income. On the other hand, a significant decrease in premiums from year to year will result in a decrease in the income. The premium-growth ratio illustrates the sharp increase / decrease ratio in the net-premium volume and gives an indication of the lack of stability in the company's business activities. And because of that, the insurance company must maintain the stability of the premium in order to be able to generate maximum revenue.

The variable of premium-growth ratio as measured by the change in net premium, shows a less-well premium-growth rate. The good performance of the insurance company causes an increase in premiums every year, whereas the poor performance of the insurance company is characterized by a decrease in the rate of premium growth each year.

The variable of premium-growth ratio, as measured by the change of premium income divided by the previous year's net premium income, shows a poor premium-growth rate. This is because insurance companies do not have a good management system so that the net premium income decreases every year so that it becomes an obstacle for them to develop even better.

4. CONCLUSIONS

The conclusions obtained from this research are as follows:

(1) Risk-Based Capital negatively but not significantly affects the increase of premium income. This is caused by the low level of solvency of insurance companies in Indonesia. In addition, the magnitude of the risk costs that must be borne, makes many insurance companies experience a decrease in income.

(2) Return-on-Investment negatively and significantly affects the increase of premium income. This is because the company's ability to generate profits is still very low. This ratio tries to measure the effectiveness of the use of company resources. Good investment management will provide a good feedback for the company.

(3) The Claim Ratio positively and significantly affects the increase of premium income. This is because the

higher the ratio of claims will greatly affect the increase in premium income. The burden of claims that are still very high and low claim-income makes many insurance companies have not been able to generate maximum profit.

(4) Premium-growth ratio positively but not significantly affects the increase of premium income. This is caused by the decrease of premium which will make the income to decrease as well. Increasing the growth of premium that is significant from year to year, is one of the things that can make an increase in premium income.

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