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Effects of Financial Ratios in Early Warning System and Macro-Economic to Stock Returns (Empirical Study at Insurance Companies at Indonesia Stock Exchange 2014 – 2018)

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Abstract

The objective of this research is to determine both partial and simultaneous effects of financial ratios in Early Warning Systems that consist of claims liability ratio, liquidity ratio, and SBI rate toward the stock return of insurance companies for the period 2014 – 2018 in Indonesia Stock Exchange. The research used a descriptive-analytical method. The research was conducted by an explanatory research technique in those insurance companies that were listed and active in Indonesia Stock Exchange by using secondary data, that is, financial statements of insurance companies for a period 2014-2018 and SBI rate, whereas the data analysis method used was a multiple regression by using SPSS. The result of the partial test showed that incurred claims liability ratio has a significant negative effect on the stock return of the insurance companies, the liquidity ratio has a significant positive effect on the stock return of the insurance companies, and the SBI rate has a significant positive effect on the stock return of the insurance companies. Meanwhile, the result of the test simultaneously showed that financial ratios in the early warning system (incurred claim liability ratio, liquidity ratio, and SBI ratio) have a significant effect on the stock return of the insurance companies in the Indonesia Stock Exchange.

Keywords: claim liability ratio, liquidity ratio, SBI ratio, stock return

INTRODUCTION

Insurance is an agreement of two or more parties with the insurer binding themselves with the insured by receiving insurance premiums to provide compensation to the insured due to loss, damage, or loss of expected profits or legal liability to third parties that may be suffered by the insured, arising from events that occur. Uncertain, or for payments based on the death or life of an insured person (Law of the Republic of Indonesia Number 2 of 1992). Insurance company operations are regulated and supervised by the Financial Services Authority (OJK), so there are regulations that insurance companies must comply with if they want to continue operating in Indonesia. As a profit-oriented institution, the purpose of operating an insurance company is to make a profit.

The capital market trades several types of securities that have different levels of risk. Stock is one of the securities that have a high level of risk. High risk is reflected in the uncertainty of the return that will be received by investors in the future. This is due to the risk of the stock in relation

to the circumstances, such as economic, political, industrial, and issuer conditions or the state of the company itself. And if investors want to gain benefit from stock investment, they need to pay attention to the factors that affect stock returns. The company's financial performance can be an indication of the ups and downs of stock prices. These factors can be factors from external or internal factors of the company itself. One of the external factors that affect stock returns is the SBI interest rate. The increase in interest rates is a negative sign for the capital market participants because, with the increase in interest rates, capital owners prefer to invest their money in banks rather than invest in shares. This condition is understandable because investing in the capital market in the form of shares is riskier than investing in banks in the form of deposits.

Hair (2016) states that good management performance will be shown through the success of management in generating large profits in the company or company profitability. To find out the company's financial performance, especially in insurance companies, it can be measured using financial ratios known as the Early Warning System (EWS). The Early Warning System is a benchmark for measuring financial performance and assessing the health level of insurance companies in Indonesia.

The company's stock price reflects the value of a company, and if the company achieves good performance, it will be more attractive to investors. The Early Warning System is used by many countries in monitoring the financial performance of an insurance company because the results of the analysis of this system provide an early warning of financial conditions so that it can be used in analyzing the financial condition of insurance companies (Satria, 2003). These ratios, among others, consist of the claim expense ratio, liquidity ratio, and the SBI interest rate to claims expense as internal and external factors for insurance companies.

In transaction activities on the Indonesia Stock Exchange, insurance is a business that is quite promising and is not inferior to other businesses whose shares are traded. Shares are securities issued by a company in the form of a limited liability company which states that the owner of the share is also a partial owner of the company. Limited liability companies and company stock prices reflect the value of a company, and if the company achieves good performance, it will be more attractive to investors. Thus, the more investors who buy or keep a stock, the stock price will increase, and conversely, the more investors who sell shares, it will have an impact on the decline in stock prices (Siregar, 2010).

One of the ways that companies take in meeting the need for funds to develop and remain competitive is the sale of shares through the capital market (Husnan, 2001). The determination of share prices in the capital market is objectively influenced by the strength of demand and supply of these shares. If the stock is overvalued by the market, then the amount of demand will decrease. On the other hand, if the market judges that the stock price is too low, the number of requests will increase.

There are several differences regarding the research findings conducted by the previous researchers regarding the analysis of the effect of the early warning system ratio on the stock price of going public insurance companies listed on the JSE in 2003-2005. The research conducted by Susilo (2007) stated that the margin among ratio solvency, premium growth ratio, changes in surplus, liability risk to permitted, and technical reserve ratio partially and simultaneously to the stock price of insurance companies listed on the JSE in 2003-2005, only the ratio of changes in surplus partially had a significant effect on the stock price of insurance companies that went public on the Jakarta Stock Exchange, while simultaneously the five ratios had a significant effect on the

movement of stock prices of insurance companies that went public on the Jakarta Stock Exchange. Meanwhile, research from Tb Aman Fathurachman (2010) stated that the effect of the early warning system on changes in stock prices in insurance companies listed on the Indonesia Stock Exchange for the period 2005-2008 found that the early warning system influenced changes in stock prices. Research conducted by Afif and Karmila (2016) show that the financial performance of PT Asuransi Umum Bumi Putra Muda 1967 seen from the solvency ratio, liquidity ratio, and premium growth ratio in good condition while viewed from the underwriting ratio, fund adequacy ratio, and ratio premium growth in unfavorable conditions.

By looking at the differences stated by previous researchers, the researcher is interested in taking this title and wants to examine the effect of the claims expense ratio, liquidity ratio, and interest rate ratio in the early warning system, which affects stock returns in insurance companies listed in Indonesia Stock Exchange period 2014-2018.

LITERATURE REVIEW

Definition of Insurance

In connection with the problems contained in this study, theories and concepts are needed to be explained. According to Article 246 of the Commercial Law in Muhammad (2015), insurance or coverage is an agreement whereby an insurer binds himself to an insured person by receiving a premium for compensation for greater losses.

Based on the Law of the Republic of Indonesia No. 2 of 1992 concerning Insurance business Chapter 1 article 1, insurance or coverage is an agreement between two or more parties, whereby the insurer binds himself to the insured due to loss, damage, or loss of expected profits, or legal liability to third parties that may be suffered by the insured, arising from an uncertain event, or provide payment based on the death or life of an insured person. While the experts provide an understanding of the definition of insurance as follows:

According to Mehr and Cammack in Dinarti (2011), insurance is a tool to reduce financial risk by collecting exposure units in sufficient numbers to make individual losses predictable. Then the predictable loss is shared equally by those who join. Green in Dinarti (2011) states that insurance is an economic institution that aims to reduce risk by combining in a management a number of objects that are quite large in number so that the overall loss can be predicted within certain limits.

Meanwhile, according to William and Heins in Dinarti (2011), defines insurance is based on two points of view, namely: insurance is a safeguard against financial loss by an insurer. Insurance is an agreement by which two or more persons or entities raise funds to cover financial losses. Similarly, based on Salim (2007), insurance is a willingness to determine small (slight) losses that are certain as a substitute or substitute for large losses that have not yet occurred.

Based on these definitions, it can be concluded that insurance is a tool to reduce the risks inherent in the economy by combining several units exposed to the same risk, in large enough quantities, so that the probability of the loss is predictable and if the predicted loss occurs, it will be divided proportionally by all parties in the combination.

Financial Ratios

Financial ratio analysis is one way of processing and interpreting accounting information expressed in relative or absolute terms to explain certain relationships between one number and another from a financial statement. According to Brigham and Weston (2006), financial statements are the result of an accounting process that can be used as a tool to communicate between financial data or the activities of a company with parties that have an interest in the funds or activities of the company.

Claim Expense Ratio

The claim expense ratio is one of the ratios used by the company as a formal request to the insurance company to ask for payment under the terms of the agreement. By claiming, insurance participants can obtain rights based on the insurance agreement to obtain benefits for a loss (Kotimah, 2014).

Generally, a person or system that handles claims will determine whether the information submitted for a claim is in accordance with the coverage stated in an applicable policy or not so that the person or system can decide to approve or reject the claim. According to Mutmainnah (2015), the ratio that can be used is the claim expense ratio, where the claim burden is the cost incurred by the insurer as a responsibility for the protection provided to the insured party in accordance with the previously insured risk.

Furthermore, according to Dhaniati (2011), the claim expense ratio provides an overview of the experience of claims (loss ratio) that occurs and the quality of the business that covers it against insurance premium income. The high level of claim burden due to certain relatively large claims will threaten the company's financial condition, thereby increasing the risk for the company. As a result, investors will usually avoid companies that always face such financial conditions because they do not get the returns expected by investors. The reduced ability of the company to generate profits will reduce investor interest in buying insurance shares and vice versa. This ratio can be calculated by the following formula:

$$\text{Claim Expense Ratio} = \frac{\text{Claim expense x 100\%}}{\text{Nett Premium Income}} \quad (1)$$

Liquidity Ratio

Liquidity shows the company's ability to pay the current (short-term) debt by using its current assets. According to Helfert (1997), high liquidity shows the company's ability to meet its short-term liabilities and cash ratio to measure the liquidity ratio. The measurement uses the formula:

$$\text{Liquidity Ratio} = \frac{\text{Amount of liability}}{\text{Total Wealth Allowed}} \quad (2)$$

The cash ratio is the strictest measure of liquidity because it only considers cash and short-term securities as components to meet maturing liabilities. It is further explained that the cash ratio aims to show the company's cash ability to meet its short-term liabilities.

According to Sunyoto (2014), the liquidity ratio is a ratio used to measure the company's ability to meet its short-term financial liabilities, both to finance the production process and outside the company. Furtherly, Kasmir (2017) stated that the liquidity of a company is a very important factor that must be considered in making decisions because liquidity is related to the company's ability to meet financial liabilities, where the liquidity ratio is a ratio used to measure how liquid a company is. From the definition presented by the experts above, it can be concluded that liquidity is the company's ability to meet its short-term liabilities. Here are the objectives of the liquidity ratio based on Kasmir (2017):

a. To measure the company's ability to pay liabilities
b. To measure the company's ability to pay short-term liability without considering inventory.
c. To measure or compare the amount of existing inventory with a working capital inventory.
d. To measure how much cash is available to pay debts. To measure how much cash turnover.
e. As a future planning tool, especially those related to cash and debt planning.
f. Become a trigger tool for management to improve their performance.
g. As a tool for external parties, especially those interested to assess the company
h. The company's ability to increase mutual trust.

While the benefits of the liquidity ratio, according to Kasmir (2017), are as follows:

a. Knowing the company's liabilities to pay short-term liability.
b. Knowing the company's ability to pay short-term liabilities without counting inventory.
c. Knowing the existing inventory with the company's working capital.
d. Knowing how much cash is available to pay debts.
e. Knowing how much cash turnover.
f. Knowing future financial planning, especially those related to cash and debt planning.
g. Knowing the condition and position of the company's liquidity from time to time by comparing over several periods.

According to Rahardjo (2006), the criteria for companies that have a strong financial position are being able to meet their financial liabilities to outside parties in a timely manner, being able to pay interest, dividend liabilities that must be paid, and maintaining a secure credit position.

Interest Rate Ratio

The interest rate is the price that people who need funds are willing to pay (Sudiyanto and Nuswandari, 2009). When interest rates are high, investors will withdraw their investment in stocks and move investments in the form of savings or deposits (Tandelin, 2010). According to Lipsey (1995), the interest rate is the price that must be paid to loan money over a certain period and is expressed as a percentage. Based on the opinion of Budiono (1998), interest is the price of funds distributed in the form of loans, where loan offers are formed by a group of depositors, namely those who have income higher than their consumption needs during a certain period while loan requests are formed by a group of investors.

Kashmir (2004) states that bank interest can be interpreted as remuneration provided by banks based on conventional principles to customers who buy or sell their products. Interest can also be interpreted as the price to be paid to customers (who have deposits) or the price to be paid to the bank (customers who obtain loans). The measurement uses the formula:

$$\text{Interest Rate Ratio} = \frac{\text{Total Liability x 100\%}}{\text{Total Income x 100\%}} \quad (3)$$

Stock Returns

Stock Return is the level of profit used by investors on an investment that they make (Robert Ang. 2001). In capital market theory, the rate of return received by an investor from shares traded in the capital market (shares of publicly traded companies) is usually termed as a return.

Components of a return consist of two types known as current returns and capital gains. Current returns are profits obtained through periodic payments such as payment of deposit interest, bond interest, and so on. It is also called current income, where profits are received in the form of cash or cash equivalents. Robert Ang (2001) said that current income means profit received in the form of cash or cash equivalents, so that it can be cashed out quickly, for example, bond coupons that pay interest in the form of demand deposits or checks that are only cashed, as well as stock dividends, which are paid in the form of shares that are converted into cash by selling the shares received.

Furthermore, the second component of stock returns is capital gains, namely profits received due to the difference between the selling price and the purchase price of an investment instrument. Investments that can provide capital gains such as bonds and stocks, while those that do not provide capital gains such as certificates of deposit, savings, and so on.

Hypothesis

H1: Claims Expenses Ratio has a significant effect on stock returns

H2: Liquidity Ratio has a significant effect on stock returns

H3: Interest Rate Ratio has a significant effect on stock returns

H4: Claim Expenses Ratio, liquidity ratio, and interest rate ratio has a significant effect on stock returns.

METHODOLOGY

This study used quantitative data obtained from the annual financial statements of insurance service companies which are published through the official website of the Indonesia Stock Exchange (www.idx.co.id). The secondary data used in this study was taken in the form of documents and written information related to the object of research, namely the annual financial statements of insurance companies listed on the Indonesia Stock Exchange (IDX) in the period 2014 – 2018.

According to Emzir (2010), comparative causal is a study to determine the causal relationship between the results are based on observations of the consequences that occur by looking for factors that are the cause through the data collected.

This research was conducted by taking samples from insurance companies listed on the Indonesia Stock Exchange (IDX) 2014-2018.

According to Sugiono (2011), the population is all the elements that are collected as certain characteristics that are used in making decisions.

The population in this study is ten insurance companies listed on the Indonesia Stock Exchange (IDX) in 2014-2018. The sampling technique used in this study was purposive sampling. The researcher selected the companies that meet the criteria for this research. The criteria are, first, the company must be on the list on Indonesia Stock Exchange from 2014 to 2018. Second, it must provide a complete financial report needed as the variable of this research.

Table 1: List of Research Sample

No.	Type	Issuers
1.	ABD	ASURANSI BINA DANA ARTA Tbk..
2.	ASR	ASURANSI BINTANG Tbk.
3.	DAY	ASURANSI DAYIN MITRA Tbk..
4.	AHA	ASURANSI HARTA AMAN PRA. Tbk..
5.	AJT	ASURANSI JASA TANIA Tbk.
6.	JMA	ASURANSI JIWA SYARIAH JASA MITRA ABADI Tbk.
7.	AMM	ASURANSI KRESNA MITRA Tbk..
8.	AMA	ASURANSI MULTI ARTA GUNA Tbk..
9.	RAM	ASURANSI RAMAYANA Tbk.
10.	MSIG	ASURANSI TUGU PRATAMA IND. Tbk.

Source: www.idx.co.id

According to Sugiono (2013), the research method is a scientific way to obtain data with certain goals and uses. The researcher used SPSS 24 software to test the effect and relationship between the independent and dependent variables contained in the statistical test using the F Test (Simultaneous), Partial Test (t-Test), and Coefficient of Determination Test (R2).

Simultaneous F Test

The F-count test is used to analyze the influence of the independent variable, and the claim expense ratio is very influential on stock returns.

If the probability of the significance level of the F-count test shows a number that is smaller than the significance level, namely @ <0.05, and is greater than the F table, the influence of the independent variables simultaneously affects the dependent variable.

Partial Test (t-Test)

The t statistic is used to test the significance of the coefficient (Bi), which partially tests the regression coefficient and independent variables. This is to see whether each independent variable has a significant effect on the dependent variable.

Coefficient of Determination Test (R2)

The measurement of the level of the model's ability to explain the variation of the dependent variable using the coefficient of determination (R2). If the value of R2 is close to one, it means that the ability of the independent variable in the regression model is getting stronger to explain the dependent variable.

Multiple Linear Regression Analysis

Cooper, Boris, and Pamela (2008) explain that multiple linear regression analysis shows a causal relationship between variable X (independent variable) which is the cause, and variable Y (independent variable), which is the effect, and multiple linear analysis is a method used to describe the influence of independent variables that affect the dependent variable.

This study used multiple linear regression analysis because it has more than one independent variable (multiple) and the data collected contains elements of time series (5 years of observation in each company).

This measurement aims to determine the effect of the independent variables, namely the fundamental to the dependent variable, which is stock returns (Wing, 2011) with the formula:

Y = Stock Return

B0 = constant

X1 = Claim Expense Ratio

X2 = Liquidity Ratio

X3 = Interest Rate Ratio

B1-B3 = Regression coefficient of each independent variable

e = residual variable

The equations include the following:

$Y = B0 + B1X1+B2X2+B3X3+e$

RESULTS AND DISCUSSION

Research Data Descriptive Statistics

The objects of this research are 10 (ten) insurance companies listed on the Indonesia Stock Exchange in 2014, 2015, 2016, 2017, and 2018. In this study, several criteria were set to obtain the objects in this study.

Table 2: Analysis Result of Descriptive Statistics

	Mean	Std. Deviation	N

Y	1.334,040	2.032,053	50
X1	0.2804000	0.301445112	50
X2			
X3	2.3168000	1.33284153	50

Explanation:
a. dependent variable Y (return stock)
b. independent variable X1, X2 dan X3
Source: Results of Data Processing using SPSS

From Table 2, the results of the descriptive statistical test of insurance companies in 2014-2018 show the average stock value for five years is 1,335.04 with a standard deviation of 2032.0533. The 5-year average claim expense ratio is 0.2804 with a standard deviation of 0.301445. The average liquidity ratio for five years is 2,467, with a standard deviation of 3,254. Meanwhile, the average interest rate ratio for five years is 2,317, and the standard deviation is 1.333.

These results are supported by previous studies conducted by Siswandaru K (2006), Achmad Solechan (2007), Atia Verinda (2009), and Ratauli Soregar (2010). The results show that the claims expense ratio, liquidity ratio, agent's balance to surplus ratio, premium growth ratio, and SBI interest rate have a significant effect on the insurance company's stock price.

Multiple Linear Regression Analysis

The following is the estimation result of the multiple regression model from the influence of the claims expense ratio, liquidity ratio, and the ratio of interest rates to stock returns. The estimation results of this multiple linear regression model use SPSS version 24 software, and the following calculation results are obtained:

Table 3: Multiple Linear Regression Analysis

Model	*Coefficient B*	*Standardize Coefisien B T*	*Siq*
Constant	-417.900	0,00	
Liquidity	8.36	0.054	
Interest rate ratio	3.52	-441	

Source: Results of Data Processing using SPSS

Table 3 shows that the liquidity ratio is in the first place with the most influence on stock value with the largest regression coefficient is 8.36%, then followed by the interest rate ratio with a 3.52% effect on stock returns. At the same time, the claim expense ratio has no effect because it is eliminated from the measured sample. This means that only 11.88% of the liquidity ratio and the interest rate ratio influence stock returns, while the claims expense ratio has no effect on stock returns for five years. This sample was taken from 2014-2018 for insurance companies listed on the Indonesia Stock Exchange.

CONCLUSION

Based on the research results obtained through statistical testing and discussion as described in chapter IV, it can be concluded that partially the claim expense ratio has no effect on stock returns, and the liquidity ratio affects stock returns of 8.36%, and SBI interest rates effect on stock returns of 3.52%. Then simultaneously, the claims expense ratio, liquidity ratio, and ratio of interest rates have an effect of 11.88 percent on interest rates, while 88.22% is influenced by other factors not examined in this study.

Suggestions

There are several suggestions based on the discussion above. Firstly, for insurance companies to be able to use the ratios in the early warning system that can provide an early warning towards financial difficulties that probably happen in the company's future operations.

Second, the investors cannot use historical information to get returns because that information is already reflected in the current price. For this reason, investors can use public information such as announcements of newly informed stock prices, announcements of earnings and dividends, and mergers and stock splits.

For further researchers, it is better to increase the number of samples, and other factors such as management factors, fund adequacy ratios, investment return ratios and others, or even researchers can include external factors such as tax regulation factors and bank interest factors as well as other economic condition factors.

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