

# *Firm Performance and Readability of the Annual Report*

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**Abstract-** This research aims to examine and prove empirically the association of the firm performance and the readability of annual reports, especially in the directors' report section. The population in this study are companies listed on the Indonesia Stock Exchange from 2013 to 2017. Through the process of selecting samples using certain criteria, this yields a sample of 1222 firm-years. The results of the study show that the director's reports with higher firm performance from sales or return on sales (ROS) are more readable. Conversely, firms with director's reports that are harder to read have lower ROS.

**Keywords -** Firm Performance, Return On Asset (ROA), Return On Equity (ROE), Return On Sales (ROS), Fog Index And Readability Of The Annual Report.

## I. INTRODUCTION

A public company that listed in Indonesia Stock Exchange have an incumbent to publish the annual report, so it can be used by users in order to make the decisions. The presentation of the annual report must fulfil the requirements by the competent authority. In Indonesia, this institution is Otoritas Jasa Keuangan (OJK). The OJK published the regulation that is Peraturan Otoritas Jasa Keuangan Number 29/POJK.04/2016 Chapter I Article 1, states that the annual report is the accountability report of the board of directors and the board of commissioners in managing and supervising listed companies publicly or companies within one year of the book to the general meeting of shareholders. In this regulation, it is also stated that the annual report consists of directors' reports, commissioner board reports, issuer's profiles, management analysis and discussion, issuer's governance, social responsibility and director's statement letter which is narrative information. Then, information about the summary of important financial data, share information, and audited financial statements which are quantitative information.

Good information possess the readable information. The OJK states in the regulation that is Surat Edaran Otoritas Jasa

Keuangan Number 30/SEOJK.04/2016 section III concerning the contents of the annual report point b that the annual report can present information in the form of pictures, graphs, tables, and/or diagrams with a clear title and/or information, with the result that the passages will be easy to read and understand.

Annual report that has quality can be profitable for users because they need the appropriate information. Reference [30] stated that the quality of corporate disclosure affects the quality of investment decisions made by investors. This shows that companies that disclose quality information about the company have built good and effective communication.

Good communication can deliver the information clearly, not convoluted, concise and simple. There are two inputs in measurement readability, namely word and sentence length to make good predictions of legibility [19]. Users who read long reports will make them feel bored and the level of their memory of the words that have been read will be low so that they read a text repeatedly. Meanwhile, the effective communication is communication without any obstacles or

interference. The effectiveness of communication can be disrupted due to factors such as the disturbance of emotional problem, excessive information, and deceptive tactics [6].

An annual report is a means of communication between managers who act as agents with company stakeholders who act as principals [4]. Management as a representative of the company must provide the right information so that the company becomes credible for investors, creditors, and other parties. This information is shown in the earnings information stated in the annual report.

The company always strives to generate profits. Profit is a form of firm performance that symbolizes that business goals have been achieved. However, companies do not always experience profits. Sometimes they have to deal with the loss. The reason for the loss is also informed to the shareholders. The way to interpret the information depends on the performance of the company itself.

Managers were unconsciously influenced to write non-standardized narrative disclosures by looking at whether the company experienced 'good' or 'bad' firm performance [1]. Another study conducted by [20] shows that financial performance affects the way the CEO reports the company's annual report. This statement is also supported by [29] that managers explain firm performance relative to benchmarks that are chosen strategically that attempt to describe the firm's performance in a more profitable way. Reference [3] states that the presentation for the disclosure of good news to investors is driven by the effort to write the news in a way that is easier to read compared to bad news carried out by intentional obfuscation.

The company makes an annual report that is easy to read so that users can understand the report. However, poorly performing companies will interpret their performance using words that are difficult to understand. Annual reports of good-performing companies were easier to read than companies with poor performance. Companies with good performance use strong writing in their annual reports unlike companies that perform poorly, but do not use significant jargon or modification [33]. Reference [24] states the same thing where the results of his research show that the company's annual report with low profits is difficult to read.

There is an experimental research by involving experienced managers conducted by [3]. The manager is asked to make company disclosures. They are asked to prepare disclosures for companies that are performing well and badly. The results show that for good performing companies, managers make the reports easy to read. On the

contrary, for poor performance, managers make disclosures in a positive way, which focuses on future prospects, the use of the causality, the use of passive sentences and little use of pronouns.

Research on this readability has received considerable attention from academics because the readability has declined year by year [5], [18], [23] and [24] that examined the readability of annual reports with current earnings and earnings persistence and found that low-profit companies have annual reports that are difficult to read and companies that have easy-to-read annual reports have more persistent positive earnings. Reference [2] and [25] examine whether the readability of a company's annual report contains earnings management, the results show that companies that manage their profits tend to make more complex annual reports.

Research on the relationship between firm performance and readability has been carried out by several researchers. However, the results obtained are still different, this is due to the measurement of readability and firm performance is different for each researcher. Some stated that there was a relationship between firm performance and readability [3], [4], [22], [24], [26] and [33], and the other finds different [8], [9], and [18]. In addition to the different measurements to measure the readability, previous studies examined the readability of an article in English. Meanwhile, for this study examined the readability of a piece of writing was judged from Indonesian report so that this was the motivation for this research.

This research contributes in two ways. First, it provides a new approach for measuring the quality of information or the quality of disclosure of annual reports. Second, this study also contributes to support the previous research that managers have an effort to disclose the information strategically depends on the firm's performance [1], [3], [20], [29]. The users of financial statements need to understand about the information in annual reports. This information will be used by users in order to make decisions. By knowing that a good-performing company has an annual report that can be read, the users of financial statements know that companies do not use difficult words to describe the information. For organizations, with the results of this study, they are expected to present information honestly because if they present an annual report with excessive interpretation, it is feared that users of financial statements will conclude that the company hides "something" in its operational performance that is not mentioned in the annual report.

Based on the background described above, is there an association between the company's performance and the

readability of the annual report? This question will prove empirically the association between firm performances on the readability of annual reports, especially in the directors' report section.

This paper proceeds as follows: in section 1 discuss about the background of this study. In section 2, I describe about the literature, empirical measures of the readability of annual report and firm performance, and then the hypotheses of this study. I present the research design in section 3. Result and discussion will discuss in section 4, and section 5 is conclusion.

## **II. LITERATURE REVIEW AND HYPOTHESES**

### **2.1 Agency Theory**

The manager as a party who is given the mandate by the owner has an obligation to manage the company. The relationship between the manager and the owner is formed in a cooperation contract, where the manager works for the owner. It is called the agency relationship. Agency relationship according to [17] is a contract between one person or more (principal) who hires another person (agent) to undertake the task in accordance with the interests of the owner by delegating some decision-making authority to the manager.

Managers deal with the company's operational activities directly, and then the results of the operational activities are communicated through the annual report. Therefore, they know more about the actual condition of the company than the owner. However, this agency problem occurs because agents should act to maximize the wealth of the owner [17]. The compensation will be given by the owner in the form of salaries, bonuses and other forms of reward. This can also encourage managers to behave that can benefit themselves [36]. Reference [12] suggests three assumptions of human nature, they are humans are generally selfish, humans have limited thinking about the perception of the future, and humans always avoid risk.

The three basic human characteristics will encourage managers to behave that can benefit themselves. As mentioned earlier, the information obtained by managers is more than the owner, so this can lead to information asymmetry. Reference [39] explained about information asymmetry. He tested how good quality goods can reduce information asymmetry that occurs between sellers and buyers, leaving "lemons" behind them. The term lemon in America means that the car was found damaged after the car was purchased. The individual who bought the car did not know whether the car was good or lemon. This problem leads

us to believe that the company has its own interests to maximize its profits by putting aside the interests of stakeholders. Managers who act as agents and owners who act as principals have an interest in maximizing company profits. If managers and business owners share the same goal of maximizing utility, there is a reason to believe that agents do not always act in accordance with the interests of principals [17].

### **2.2 Attribution Theory**

Attribution theory is a field of psychology about how individuals infer the cause of an event. Reference [15] is a psychology scientist from Austria. He distinguished attribution processes namely internal attribution and external attribution. Internal attribution implies individual characteristics (such as ability, personality, mood and effort) because they have caused certain behaviours. External attribution implies external factors (such as assignments, other people, or luck) because it caused an event.

Reference [16] explain the attribution style in three types, as follows:

- a. Optimistic. The impact of attribution is on internal factors for positive results, and attributions to external factors for something negative. For example, attributing success in diagnosing personal abilities, and attributing inadequate information given by patients if the doctor is wrong in diagnosing the disease.
- b. Pessimistic. The impact of attribution is on internal factors if the results are negative and external factor that causes positive attribution. For example, attributing success to luck, and attributing failure due to lack of self-ability.
- c. Hostile. The effect is to attribute something to external factors for negative results. For example, attribute work problems to managers.

### **2.3 Vagueness**

Unclearness or obscurity in language is an abstract trait that can cause differences in concluding things. In dealing with abstract things, symbols (usually words) are the best way to understand the abstract. Symbols in language have properties that can influence the mind so that if someone's analytical considerations are wrong, the symbol can be wrong. However, if we realize that symbolism is wrong, then we can avoid the wrong idea. This is a concept of vagueness [28].

Reference [31] states that there is an error in drawing conclusions if in a sentence has a false premise. There is an example of drawing conclusions in a sorites argument according to [13], namely:

- a. A man with a height of 2000 mm is called tall
- b. If a man is n millimetres tall, men with a height of n-1 mm are called tall
- c. So, a man with a height of 1000 mm is called tall.

The sentence (c) is the conclusion of the premises (a) and (b). Reference [13] has an approach to nihilism and epistemic in explaining obscurity. Based on the sorites argument above, the word "high" has an unclear meaning. According to nihilists like [35] and [37], the meaning of high words does not describe the real concept. It could be that the high word means "height" or "being somewhere with a height of 1000 mm". While according to epistemic experts, such as [32] and [38], states that men with n-1 mm do not include height. So, it can be concluded that obscurity can make wrong conclusions. Vagueness can be said to be unclear if all premises have sentences that are vague [40].

### 2.3 Readability of the Annual Report

Readability is a condition where the passages can be read easily remembered and understood. Reference [10] define readability as the total number of all elements in printed material that can make a group of readers understand the material, read it at optimal speed and the material is interesting to read.

There are certain assumptions that are inherited by professional writers and editors related to the legibility of an article [7] as follows: short sentences are easier to read than long sentences; words with slightly syllables more readable than words with many syllables; short words are easier to read

than long words; and active sentences are easier to read than passive sentences.

This study involved students from the management major to read the directors' report in order to obtain objective results. They were asked to read the directors' report in accordance with the established criteria. The reading assessment criteria include the following:

- a. Read and identify difficult words. Difficult words are words that use a dictionary to find meaning. For example, "advokasi", "kapitalisasi", "stimulus", "retrospektif", "restrukturisasi", and so forth.
- b. Words that use jargon are calculated as difficult words, because it can be understood by certain groups. For example, "portofolio", "depresiasi", "docking", etc.

After obtaining the directors' report that has been marked by the reader, the author then uses the following procedure to calculate readability.

- a. Count the number of words and the number of sentences in the report section of the board of directors.
- b. Calculate difficult words that have been identified by the reader.
- c. Use the Fog index calculation to measure the readability of the annual report.

To measure the readability of an article, a formula called the Fog Index is used. This index was first developed by Robert Gunning. This measurement is based on the word "Foggy" or fog. The calculation of the Fog Index readability is:

$$GFScore = 0,4 \times \left( \frac{Words}{Sentences} \right) + 100 \times \left( \frac{Complexwords}{Words} \right)$$

Where words are defined as the sum of words, sentences means the sum of sentences, and complex words are defined as words that use a dictionary to find meaning.

The Fog Index is a simple formula for measuring readability. The selection of this measure is done because many researchers use the Fog index to measure the readability of an annual report such as [2], [22], [23], [24] and [25]. In addition, the reason for choosing the Fog index is because this formula uses indicators of difficult words to identify a text that can be read or not. This measurement takes into account the average length of sentences calculated using a comparison of the number of words with the number of sentences and measure the average number of difficult words by comparing the number of difficult words with the number of words.

Therefore, this measurement is worth to assess the readability of a passage.

The readability status for this measurement is: Fog  $\geq 18$  means the text cannot be read; 14-18 (difficult); 12-14 (ideal); 10-12 (acceptable) and 8-10 (easy to read). So, the higher the Fog index the harder it is to write and understand.

### 2.4 Firm Performance

Firm performance is a tool that is used as a benchmark by internal and external parties. According to a market perspective, organizations achieve their goals where they do something that satisfies their customers more effectively and efficiently than other competitors [21]. Firm performance is measured using profitability ratios. Profitability ratios are

ratios that measure a company's ability to generate profits by using resources owned by a company such as assets, capital

and company sales. Performance calculations are presented in the following table:

Table 1: The Measurements of Firm Performance

| Firm Performance       | Definition                                                                                                   | Formula                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Return on asset (ROA)  | The company's ability to use all assets owned by the company to generate earning after tax.                  | $\frac{\text{Earning after taxes}}{\text{Total assets}}$ |
| Return on equity (ROE) | ROE shows the company's ability to generate earning after tax by using its own capital owned by the company. | $\frac{\text{Earning after taxes}}{\text{Total equity}}$ |
| Return on sales (ROS)  | This ratio measures the company's ability to generate earning after tax using sales achieved by the company. | $\frac{\text{Earning after taxes}}{\text{Sales}}$        |

## 2.5 Hypothesis Framework

The annual report is the responsibility of management to stakeholders who are expected to present information that can be read and understood. Readability is an important indicator that must exist in the firm's annual report, because the annual report will be used as a basis for decision making.

Managers try to improve the performance of the company in accordance with the interests of the owner. However, if companies have the lower performance, then they do not get compensation. Therefore, managers have an incentive to manipulate the accounting numbers or attribute the bad news to conditions, situations, and environments that affect the occurrence of events with the long explanations.

The annual reports of firms with good performance are easy to read because they only need to interpret the information in line with the results that have been achieved. They do not need to spend time to window-dressing the explanation about the causes the firm's performance is good or bad. An easy-to-read annual report means the smaller Fog index. On the contrary, poorly performing companies have difficult annual reports [3], [4], [22], [24], [26] and [33]. The

annual report that hard to read is indicated by the high Fog index value. The use of persuasive sentences, long explanations, or complex words in the annual report will influence the readers because it can obfuscate the information. Based on the explanation that has been stated, the hypothesis in this study is presented as follows:

H: The firm's performance (ROA, ROE, and ROS) is negatively associated with Fog index.

## III. RESEARCH METHOD

### 3.1 Research Design

This research is an empirical study conducted to analyze the relationship of firm performance as an independent variable on the readability of annual reports on companies listed on the Indonesia Stock Exchange (IDX) as the dependent variable. The population in this study are companies listed on the Indonesia Stock Exchange (IDX) from 2013 to 2017. Sample selection is based on certain criteria. The following table presents the total sample size in this study.

Table 2: Sample Selection Criteria

| Criteria                                | Observations |
|-----------------------------------------|--------------|
| All companies listed in IDX in 2017     | 555          |
| Companies in financial services         | (87)         |
| Companies that not exist in 2013 - 2017 | (38)         |

|                                                  |       |
|--------------------------------------------------|-------|
| Companies that not publish annual report in 2017 | (180) |
| Number of companies                              | 250   |
| Number of observations = 250 x 5 years           | 1250  |

The type of data used in this study is secondary data. Data sources used in this study are data derived from the company's annual report. Data on the annual report are from the official website of the IDX, [www.idx.co.id](http://www.idx.co.id) and from the official company website.

### 3.2 Research Model

The regression model used in this study is multiple regression analysis, because the independent variable is more than one in this study. Multiple regression analysis technique is a test technique that is used to determine the effect of independent variables, namely ROA, ROE, and ROS on the dependent variable, namely the readability of the annual report. Multiple regression analysis equations can be formulated as follows:

$$Fog = \alpha + \beta_1 ROA + \beta_2 ROE + \beta_3 ROS + \varepsilon$$

Where Fog refers to readability, ROA refers to return on assets, ROE is return on equity and ROS is return on sales.

## IV. RESULTS AND DISCUSSION

### 4.1 Description of Research Variables

Description of research variables aims to look at the characteristics of the data based on the variables studied so that it is easy to understand. The following is a description of the variables examined by using the SPSS program.

Table 3: Description of Research Variables

| Descriptive Statistics |      |         |         |        |                |
|------------------------|------|---------|---------|--------|----------------|
|                        | N    | Minimum | Maximum | Mean   | Std. Deviation |
| ROA                    | 1222 | -107.22 | 74.84   | 4.4317 | 9.93491        |
| ROE                    | 1222 | -264.26 | 799.10  | 8.3028 | 39.23900       |
| ROS                    | 1222 | -572.30 | 562.89  | 4.5968 | 50.41761       |
| FOG                    | 1222 | 7.00    | 17.78   | 9.4820 | 1.32998        |
| Valid N (list wise)    | 1222 |         |         |        |                |

Table 3 shows the statistical description of the research variables have the Fog index (FOG) with an average of 9.4820. The Fog index is classified into five groups, that are  $Fog \geq 18$  means the text cannot be read; 14-18 (difficult); 12-14 (ideal); 10-12 (quite easy to read); and 8-10 (easy to read). The average annual report of the company is in the range of 8-10. That is, the company's annual report is in an easy-to-read range. The highest value of the Fog index is 17.78. This shows that the company's annual report is difficult to read. The lowest Fog index is 7.00. This value is very small, even smaller than the lowest Fog index classification. This shows that the company has an annual report that is very easy to read.

Return on assets (ROA) is the amount of earning after tax on its total assets. ROA shows the company's ability to obtain net income from its assets. In Table 3, it is stated that the average value of ROA is 4.4317%. That is, the average company can earn a profit of 4.4317% with its assets. The highest ROA value is 74.84%, indicating that the company is

able to earn a profit of 74.84% of its assets. The lowest ROA value is -107.22%. This happened because the company suffered a loss so that the company was unable to make a profit on its assets.

The value of return on equity (ROE) is obtained by comparing the earnings after tax with the company's own capital. Based on Table 3, the average of ROE is 8.3028. That is, the company is able to generate a profit of 8.3028% of the value of its own capital in average. The highest ROE value is 799.1. This shows that the company is able to generate a profit of 799.1% of the value of its own capital. Meanwhile, the lowest ROE value of -264.26. The company suffered a loss in 2015 so that the ROE value became negative and the company was unable to generate profits from its own capital.

Return on sales (ROS) is obtained from the value of net income on sales that received by the company. Based on Table 3, the average of ROS is 4.5968%. This shows that the company is able to generate profits from the income received by 4.5968% in average. The highest ROS value is 562.89%.

That is, the company is able to generate a profit of 562.89% of the sales by the company. While the lowest ROS value is - 572.30%. The company has a low ROS value due to the company experiencing a loss so that they are unable to generate profits from the sales.

## 4.2 Correlation Matrix

Correlation matrix shows whether the existing sample data provides evidence that there is relationship between variables. This correlation matrix uses Spearman rank by looking at the rho coefficient and its significance value. The following is the correlation matrix for this study.

Table 4: Correlation Matrix

| Correlations   |     |                         |        |        |        |        |
|----------------|-----|-------------------------|--------|--------|--------|--------|
|                |     |                         | ROA    | ROE    | ROS    | FOG    |
| Spearman's rho | ROA | Correlation Coefficient | 1.000  | .899** | .826** | .075** |
|                |     | Sig. (2-tailed)         | .      | .000   | .000   | .009   |
|                |     | N                       | 1222   | 1222   | 1222   | 1222   |
|                | ROE | Correlation Coefficient | .899** | 1.000  | .729** | .086** |
|                |     | Sig. (2-tailed)         | .000   | .      | .000   | .003   |
|                |     | N                       | 1222   | 1222   | 1222   | 1222   |
|                | ROS | Correlation Coefficient | .826** | .729** | 1.000  | .073*  |
|                |     | Sig. (2-tailed)         | .000   | .000   | .      | .011   |
|                |     | N                       | 1222   | 1222   | 1222   | 1222   |
|                | FOG | Correlation Coefficient | .075** | .086** | .073*  | 1.000  |
|                |     | Sig. (2-tailed)         | .009   | .003   | .011   | .      |
|                |     | N                       | 1222   | 1222   | 1222   | 1222   |

In Table 4, it can be seen that the value of rho of the ROA, ROE, and ROS on FOG is very small. This shows that by using the Spearman correlation matrix, the correlation between the independent variables and the dependent variable is very small, which is < 10%. The value of rho for the ROA variable is 0.075 or 7.5%, the rho value for ROE is 0.086 or 8.6% and the rho value for ROS is 0.073 or 7.3% on the readability of the annual report (FOG). However, judging from the significance value, the three independent variables were significantly related to the dependent variable, indicated by significant values < 0.05. This is due to the independent variables related to economics while the readability of annual reports discusses aspects of linguistics. In addition, the average of firm's performance described in the director's report is in the form of earnings. While this paper examines the relationship of firm performance that is not only measured using earnings but also uses other attributes to assess the firm's performance in assets, equity and sales. Because of there are additional variables to assess firm performance, then

this is the reason why the association between ROA, ROE, and ROS with the Fog index becomes small. Therefore, the relationship between the independent variables on the dependent variable is very weak.

## 4.3 Results of Data Analysis and Hypothesis Testing

### 4.3.1 Normality Test

Normality aims to identify whether the data has been normally distributed. It can be used Kolmogorov-Smirnov test (K-S Test). The research data is characterized in normal distribution if the Asymp.Sig (2-tailed) residual variable value is more than 0.05 and vice versa.

Based on the normality test processing that has been done using Kolmogorov-Smirnov (K-S Test), the following results are obtained:

Table 5: Normality Test

| One-Sample Kolmogorov-Smirnov Test |      |                         |
|------------------------------------|------|-------------------------|
|                                    |      | Unstandardized Residual |
| N                                  |      | 1222                    |
| Normal Parameters <sup>a,b</sup>   | Mean | .0000000                |

|                          |                |            |
|--------------------------|----------------|------------|
|                          | Std. Deviation | 1.32592119 |
| Most Extreme Differences | Absolute       | .056       |
|                          | Positive       | .056       |
|                          | Negative       | -.036      |
| Kolmogorov-Smirnov Z     |                | 1.967      |
| Asymp. Sig. (2-tailed)   |                | .001       |

Table 6: Multicollinearity Test

| Model |            | Collinearity Statistics |       |
|-------|------------|-------------------------|-------|
|       |            | Tolerance               | VIF   |
| 1     | (Constant) |                         |       |
|       | ROA        | .695                    | 1.439 |
|       | ROE        | .888                    | 1.126 |
|       | ROS        | .761                    | 1.314 |

Table 7: Heteroscedasticity Test

| Model |            | t      | Sig. |
|-------|------------|--------|------|
| 1     | (Constant) | 39.273 | .000 |
|       | ROA        | .127   | .899 |
|       | ROE        | -.559  | .576 |
|       | ROS        | -.717  | .474 |

Based on Table 5, it can be seen that the data is not normally distributed. This is seen in the Asymp. Sig (2-tailed) value of 0.001 < 0.05. Reference [14] states that the assumption of normality may not be too important in large data sets i.e. the amount of data is more than 30. In this study the number of observations was 1222 observations. So, in accordance with Gujarati's statement, the assumption of normality in this study is not too much of a problem.

#### 4.3.2 Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables. Multicollinearity is tested using VIF (Variance Inflation Factor) and tolerance values. If the VIF value is < 10 and the tolerance value is > 0.01 then it can be concluded that there is no multicollinearity. Based on Table 6, it appears that this study does not have multicollinearity problems. That is, each independent variable does not have an influence between one variable and another. This is indicated by the VIF value for the variables ROA, ROE, and ROS < 10.

#### 4.3.3 Heteroscedasticity Test

Heteroscedasticity test is a test that aims to test whether in a regression model there is a residual variance inequality from

an observation to another observation. The problem of heteroscedasticity occurs when the spread is not balanced or when the variance of the probability distribution is not constant for all observations of the independent variables. To test whether or not there is heteroscedasticity, the Glejser test is used. If sig > 0.05, there is no symptom of heteroscedasticity, where a good model is that heteroscedasticity does not occur.

In Table 7, it can be seen that the significant values of each independent variable are ROA, ROE, and ROS > 0.05. This shows that this study is free from the symptoms of heteroscedasticity and it is suitable for use in regression analysis.

#### 4.4 Research Model

The regression model used in this study is multiple linear regression analysis, because the independent variable is more than one in this study. Multiple regression analysis technique is a test technique that is used to determine the effect of independent variables (firm performance: ROA, ROE, and ROS) on the dependent variable (the readability of the annual report). Multiple regression analysis is carried out using the

SPSS program. Here are the results of the regression process obtained:

Table 8: Multiple Linear Regression Analysis

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t       | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|---------|------|
|       |            | B                           | Std. Error | Beta                      |         |      |
| 1     | (Constant) | 9.441                       | .042       |                           | 224.645 | .000 |
|       | ROA        | .009                        | .005       | .070                      | 2.033   | .042 |
|       | ROE        | .001                        | .001       | .026                      | .866    | .387 |
|       | ROS        | -.002                       | .001       | -.067                     | -2.042  | .041 |

Table 9: Simultaneously Test

| Model |            | Sum of Squares | df   | Mean Square | F     | Sig.              |
|-------|------------|----------------|------|-------------|-------|-------------------|
| 1     | Regression | 13.171         | 3    | 4.390       | 2.491 | .059 <sup>a</sup> |
|       | Residual   | 2146.600       | 1218 | 1.762       |       |                   |
|       | Total      | 2159.770       | 1221 |             |       |                   |

Table 10: Determination Coefficient

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .078 <sup>a</sup> | .006     | .004              | 1.32755                    |

From the statistical data above, multiple linear regression equation can be formulated as follows:

$$Y = 9.441 + 0.009 (\text{ROA}) + 0.001 (\text{ROE}) - 0.002 (\text{ROS})$$

Based on the equations in this study, the constant value is 9.441. That is, without the variable ROA, ROE, and ROS, the readability value of the annual report is 9.441. The ROA coefficient value is 0.009 indicating that every increase in ROA of 1% will increase the value of annual report readability of 0.009. The ROE coefficient value is 0.001. This shows that if there is an increase in ROE of 1%, it will increase the value of the readability of the annual report of 0.001. The ROS coefficient is 0.002 and has a negative value which indicates that every ROS increase of 1% will reduce the value of annual report readability of 0.002.

#### 4.4 Hypothesis Test Results

##### 4.4.1 Simultaneously Test (F Test)

F test is used to determine whether the regression model can predict the effect of all independent variables on the dependent variable. This test can be seen in the probability value by using F distribution.

From the results of the multiple regression analysis, the regression model can predict the influence of all independent variables on the dependent variable. This can be seen in the probability value by using F distribution. Based on Table 9,

with a significance level of 10% or 0.1, if the probability value is <0.1 then the research model can be used. Contrarily, if the probability > 0.1 then there is no effect together between the independent variables on the dependent variable. Based on Table 9, the probability of F is seen at the significance value of 0.059 <0.1. This shows that the research model can be continued or accepted.

##### 4.4.2 Determination Coefficient

The ability of the model to explain the effect of the independent variable on the dependent variable can be seen in the coefficient of determination. In SPSS, the coefficient of determination can be seen from the adjusted R<sup>2</sup> value. There is a strong relationship between the independent variables on the dependent variable if the adjusted R<sup>2</sup> value approaches 1.

The estimation results in Table 10 show that the adjusted R<sup>2</sup> value is 0.004. This indicates that the contribution of the independent variable to the dependent variable is 0.4%, and 99.6% is determined by other variables that are not analyzed in this study.

##### 4.4.3 Hypothesis Test (t Test)

To examine the effect of independent variables partially on the dependent variable, statistical t test is used in multiple regression analysis testing. If the significance value is smaller

than 0.1, it can be concluded that there are a relationship between the independent variables on the dependent variable.

Based on the results in Table 8, it can be seen the relationship between independent variables on the dependent variable separately. The hypothesis in this study is firm performance (ROA, ROE, and ROS) are negatively associated with Fog index. The higher the firm's performance, the easier the annual report to read. An easy-to-read annual report is identified by a low Fog Index. The results show that the ROS coefficient is negative so the results confirm the hypothesis proposed. This shows that companies with high ROS have annual reports that are easy to read. Table 8 shows that the ROS coefficient is 0.002 and has a negative value with a significance of  $0.041 < 0.1$ . While for ROA and ROE does not support the hypothesis that in this study expect that the coefficient of each independent variable is negative. That is, ROA and ROE have no association to the readability of the annual report.

#### **4.5 Discussion**

Based on Table 8, the results of statistical analysis that has been carried out using the SPSS program, it can be seen that ROA does not support the proposed hypothesis. This led us to believe that good or bad the ROA does not affect the readability of the directors' report. ROA is a measure of firm performance that is most widely used by several previous researchers [41]. This means that the user of the annual report can judge that the company has managed to increase the ROA. Therefore, they do not need to discuss why ROA increases

There is no association between ROE to the readability of the annual report. This is based on Table 8, depicts that coefficient of ROE is positive to Fog index. It does not support the hypothesis. ROE is the firm's performance obtained from share capital, additional paid-in capital, retained earnings, non-controlling interests, and other sources that related to an increase in equity value. Even though the stock movement of a company is productive so that it can increase the value of the company's equity, it is not a superior activity. This is because not all shareholders are sophisticated investors. Of course, among investors who invest in companies are uninformed investors or just follow other investors. Therefore, although ROE is one of the measures to assess firm performance, ROE is not the main determinant that with the good value of ROE, the readability of an annual report will be good too. The good presentation of a company's ROE is not related to the way managers interpret the ROE value in the annual report.

The results of this study are in line with [8] which states that the good or bad score of the readability of the annual report, is not associated with the level of risk and profitability of the company. He also stated that the prose in the annual report is not manipulated by emphasizing good things or by covering up bad things. The same thing is also stated by [18] where, ROE does not affect the readability of the annual report. Reference [9] also found that there was no relationship between the profitability of the company and the readability of the annual report.

ROS support the hypothesis. Based on Table 8, it can be seen that ROS has a significant negative association on the Fog index. This means that the higher the ROS value the easier the annual report can be read. This is because sales are the company's main activity. The company is able to convert products, whether goods or services into certain prices. Sales are physical activities of the company so that if the company is able to obtain sales, the company manager will openly inform what causes the firm's performance to increase without needing to be hidden. However, this ROS can be a boomerang for managers if ROS has decreased. Because if the ROS has decreased, the user of the annual report concludes that the company is unable to achieve the company's goals. Therefore, it will encourage managers to interpret the ROS value by using persuasive sentences or it can just hide information about the causes of the decline.

The results of this study support previous research which states that the firm's performance have the relationship to the readability of the annual report [3], [4], [11], [22], [24], [26] and [33]. The results of the research that have been carried out by the researchers previously stated that companies that have good performance have annual reports that are easy to read.

#### **V. CONCLUSION**

Based on the findings of the research and testing the hypotheses previously proposed, it can be concluded that the company's performance, namely ROA and ROE, does not affect the readability of the annual report. This happens because assets and equity are not the main activities of the company so that it is not a major concern for investors to determine whether the high value of ROA and ROE, the annual report is easy to read. The results of this study are in line with [8] and [9] who found that ROA as a company performance is not associated with the readability of annual reports. Reference [18] also found that ROE has no effect on readability. This happens because the readability index only focuses on the complexity of words. While ROS affects the readability of the annual report. the results of this study

support previous research which states that company performance influences the readability of annual reports [3], [4], [11], [22], [24], [26], [33].

The results of research on company performance and its relationship with the readability of annual reports have implications that companies make annual reports that are easy to read if the firm's performance is good. Conversely, it is difficult for companies to disclose poor firm's performance so that the company distributes the bad news using reasons that can obscure the views of readers of the annual report. Therefore, capital market regulators need to add standard about the page policies needed in making annual reports because the more explanation for the firm's performance shows that the company has decreased performance. The company seeks to convince users of annual reports to be credible by using reasons that can obscure readers' views in assessing their performance.

Researchers have tried to design and develop research in such a way, but there are still some limitations in this study that still need to be revised for further researchers. There are many tools to measure readability. In this study, to measure readability I use the Fog index. Because this measurement has a difficult word indicator that can indicate that the passages is easy or difficult to read. In addition, the assessment of the readability of annual reports by expert judgements is not same because their comprehension of a word is different from one another.

Some suggestions can be obtained from the results of this study. It can be using control variables like size, age, or complexity of business, because this study aims to find the relationship between economics and linguistics so the control variables is needed to explain the relationship between firm performance and readability of the annual report. In addition, the next researcher used another measuring instrument to assess readability as a comparison. This study found that ROA has a positive and significant association on the readability of the annual report. The researcher can identify what causes ROA to have a significantly positive association to the readability of the annual report. Furthermore, the researcher can identifies what performance information is presented in the director's report.

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