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The Existence of Accrual Anomaly Phenomena in Indonesia Capital Market

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Abstract:

Research aims: Sloan (1996) finds that investors mispriced the stock. They could not detect differences in earnings persistence. Such a phenomenon is called an accrual anomaly. This study aims to find out the existence of accrual anomalies in the Indonesian capital market.

Design/Methodology/Approach: The accrual anomaly phenomenon is supported by testing whether there is a negative effect between accrual and abnormal returns. The research sample consisted of manufacturing companies from 2014 - 2017, which were tested using the Ordinary Least Square.

Research findings: First, the results show that the company's accrual rate negatively influenced the abnormal returns, both before and after the use of control variables. Second, this article also discovered that companies having low accrual rates were consistent over four years and had greater returns compared to companies with high accrual rates.

Theoretical contribution/ Originality: This article contributes to financial literacy and accounting, especially to the theory of efficient market hypotheses. There was evidence of accrual anomalies indicating that the Indonesian capital market was inefficient.

Practitioner/Policy implication: Indeed, the results of this study contribute to investors and financial analysis to consider and reevaluate their long-term investment strategies in purpose to avoid mispricing in the earnings component.

Research limitation/Implication: This research is inseparable from limitations, one of which is the presence of shares that were not actively traded in the study sample. Second, this article only used a sample of companies that did not experience a loss.

Keywords: Anomaly Accrual; Abnormal Return; Accrual



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Introduction

Accounting and financial literature shows that the magnitude of the accrual component (cash flow) in earnings is negatively correlated with future stock returns (Koerniadi & Tourani-Rad, 2007). This anomalous phenomenon occurs because the investors only considered current earnings in decision making, which then resulting in stock price mispricing (Toha & Harahap, 2014).

However, the market is unaware that there are differences in persistence between the accrual component and the cash flow from reported net income (Koerniadi & Tourani-Rad, 2007; Sloan, 1996; Toha & Harahap, 2014).

The cash flow component has a more substantial persistence than the accrual component (Barth & Hutton, 2004; Bradshaw, Richardson, & Sloan, 2001; Sloan, 1996). Sloan (1996) argues that the accrual recording process is fragile to earnings management fraud because recording and decision making can be based on management's view. Thus, management can manage income broadly, based on their needs. The accruals method provides respite in the claiming timing of both revenues and expenses. This accrual method causes the accrual earnings component to have weak persistence compared to the cash component because it does not reflect the company's full capacity (Collins & Hribar, 2000; Kim, Kim, Kwon, & Lee, 2015; Koerniadi & Tourani-Rad, 2007; Park, Han, Lee, & Kim, 2018; Sloan, 1996; Toha & Harahap, 2014).

When the current year's earnings contain a high accrual component (cash flow), the earnings persistence becomes low (high). The low (high) persistence produces lower (higher) profit in the future if it is compared with the investor's expected profit. Consequently, the investor negatively (positively) reacts to company stocks (Toha & Harahap, 2014). Therefore, the investor who ignores the difference in profit persistence will cause the share highly accrual (overvalue) or lowly accrual (undervalue) (Koerniadi & Tourani-Rad, 2007).

Sloan (1996) introduces the first accrual anomaly phenomenon. He discovers that shares with low accrual (high) produce positive (negative) abnormal returns in the future. Then, the application of the accrual strategy in the portfolio produces a yearly significant abnormal return score of 10.4%. The abnormal return happens because the accruals and cash flows are negatively correlated. Sloan (1996) argues that cash flow anomalies and accrual anomalies exist side by side. On the one hand, investors tend to give excessive valuations (overprice) to companies having high accruals. On the other hand, they give undervaluations (underprice) to companies having low accruals. It causes the stock price to be corrected in the future (Toha & Harahap, 2014). Companies having high prices will decrease because their performance cannot answer the expectations of market participants, whereas companies with low prices will increase their stock prices as the performance produced in the future exceeds the expectations of market participants. Thus, due to the correction, an abnormal return occurs in consequence of the mispricing of the stock price in the previous period (Toha & Harahap, 2014).

Various countries have studied the phenomenon of accrual anomalies. Some researchers found that anomalies occurred in European countries, Australia, Germany, and the United Kingdom (Ali & Gurun, 2009; Beer, Hamdi, & Zouaoui, 2018; Clinch, Fuller, Govendir, & Wells, 2012; Kaserer & Klingler, 2008; Li, Niu, Zhang, & Largay III, 2011; Papanastasopoulos, 2017; Park et al., 2018). Several literary studies have found accrual anomalies in Indonesia, Turkey, and China but with a not too large degree of magnitude (Li et al., 2011; Ozkan & Kayali, 2015; Toha & Harahap, 2014). Other studies found that accrual anomalies were not detected in some developing countries such as India, Brazil, and New Zealand (Cupertino, Martinez, & Costa Jr, 2012; Koerniadi & Tourani-Rad, 2007; Sehgal, Subramaniam, & Deisting, 2012). Pincus, Rajgopal, and Venkatachalam (2007) argue that differences of the legal system between countries

adhering to common law and those adhering to code law cause of different results of accrual anomalies in various countries.

The accrual anomaly phenomenon is an essential study because it can provide benefits for investors to evaluate their investment strategies and decisions to be more accurate. However, literacy studies about accrual anomalies in Indonesia are still limited. One of them is conducted by Toha and Harahap (2014). They found accruals anomaly in Indonesia, but the anomaly was different from that existing in America that was consistent for 30 years. This study is different from that conducted by Toha and Harahap (2014) as it explores the existence of accrual anomalies in the period after applying the IFRS in Indonesia. The IFRS application can improve the quality of financial statement information and reduce asymmetry information (Edvandini, Subroto, & Saraswati, 2014). The difference quality of financial statement information after the application of IFRS may have an impact on the earnings component quality, which is closely related to the accrual anomalies phenomenon. Therefore, the phenomenon of accrual anomalies after the application of IFRS is crucial to study.

Second, this article used the Ordinary Least Square (OLS) regression to test the mispricing of the accrual component. The usage of this method was based on findings from Kraft, Leone, and Wasley (2007). The majority of accrual anomaly research utilized the Miskins Test (MT) to explore the phenomenon of accrual anomalies. However, Kraft et al. (2007) show that the use of MT ignores several explanatory variables that might affect the determination of accrual mispricing. Therefore, the phenomenon of accrual anomalies is often lost when the researcher conducts accrual anomaly testing by involving explanatory variables. Kraft et al. (2007) argue that OLS is equivalent to MT when testing the market pricing accounting figures. Hence, Kraft et al. (2007) suggest considering the use of OLS if it is compared to MT because OLS offers some advantages in accounting research settings. This study involved accruals, CFO, and some control variables in determining the existence of accrual mispricing. Therefore, the use of OLS was considered more appropriate than the Mishkin Test.

Based on these two motivations, this study aims to explore the existence of the accrual anomaly phenomenon in the Indonesian capital market. Its existence indicates whether the investors in Indonesia make mistakes or not in interpreting the company's earnings information. Practically, this study provides benefits to investors in evaluating their investment strategies based on the research findings. Theoretically, this article contributes to the extends the efficient market hypothesis theory discussion in the Indonesia study context. The current study provides evidence that accrual anomalies occurred to indicate the inefficient Indonesian capital market.

Literature Review and Hypotheses Development

The efficient market hypothesis states that an efficient market is a condition when the market price of a security can reflect accessed or available information (Fama, 1970). Fama (1970) classifies efficient markets into three types, namely wear, semi-strong, and

strong forms. First, the market is said to be efficient in a weak form if the price of securities contained in the market can reflect past information that has been published. Second, the market is said to be efficient in the form of half strong if the price of a company's securities can reflect all past information plus new information that is published. Third, the market is stated to be efficient in a strong form if the price of a company's securities can reflect all information, including private information about the company. This research utilized past information regarding the company's past accrual level to determine whether or not it would correct the stock price in the future. Therefore, this research examined a weak-form efficient market in Indonesia.

Previous literature considers that the cash flow component has a stronger persistence than accrual earnings because it tends to be free from the element of earnings management (Collins & Hribar, 2000; Koerniadi & Tourani-Rad, 2007; Sloan, 1996). Some previous studies found that anomalies occurred in European countries, Australia, Germany, and England (Ali & Gurun, 2009; Beer et al., 2018; Clinch et al., 2012; Kaserer & Klingler, 2008; Li et al., 2011; Papanastasiopoulos, 2017; Park et al., 2018). Several studies have discovered accrual anomalies in Indonesia, Turkey, and China but with a not too large degree of magnitude (Li et al., 2011; Ozkan & Kayali, 2015; Toha & Harahap, 2014). Ozkan and Kayali (2015) and Li et al. (2011) uncovered that accrual anomalies were detected clearly when loss companies were excluded from the study. This article tries to provide an examination of the phenomenon of accrual anomalies in Indonesia's Capital Market by excluding companies suffering losses. Thus, it is suspected that accrual anomalies will be detected more clearly.

Sloan (1996) argues that investors are fixated on reported earnings without selecting the different persistence is from the earnings component. Sloan (1996) is known as the Earnings Fixation Hypothesis. Sloan (1996) further argues that the accrual recording process is fragile to earnings management fraud because recording and decision making can be based on management's view. Thus, management can manage income broadly, based on their needs. The accruals method provides respite in the claiming timing of both revenues and expenses. This accrual method causes the accrual earnings component to have weak persistence compared to the cash component because it does not reflect the company's full capacity (Collins & Hribar, 2000; Kim et al., 2015; Koerniadi & Tourani-Rad, 2007; Park et al., 2018; Sloan, 1996; Toha & Harahap, 2014).

Sloan (1996) shows that the persistence of the accrual component is lower than the cash component. However, investors fail to realize this component. The investors only focus on overall profits and ignore the potential impact contained in this persistence difference. Companies with high accruals and low cash flow will have low earnings persistence. The results of the research show that low (high) stock shares produce positive abnormal returns (negative), and trading strategies based on the company's accruals produce a significant annual abnormal return of 10.4%. This result indicates that accruals and cash flows are negatively correlated (Sloan, 1996). Sloan (1996) also found that the accrual component was negatively correlated (positively) with future stock returns and statistically significant. It indicates that the accrual component is a crucial thing causing stock valuation errors by investors (forecast error), too high

optimism for future earnings (companies with high accruals) is a form of weighting or wrong valuation. The negative effect between accounting accruals and abnormal returns occurred because the investors ignored the differences in the persistence of the earnings component.

Conversely, companies having high cash flow and low accruals will have high earnings persistence. High (low) earnings persistence will determine the success (failure) of the company facing investors' expectations. Investors will react positively (negatively) to success (failure) through the price of a company's securities in the capital market. The efficient market hypothesis (EMH) assumes investors as elements always acting rationally in responding to the information. The responding information rationally causes the price of a security to reach a new equilibrium point when the market receives new news. However, the investor failure in anticipating the differences persistence of earnings components and focus on earnings cause them to react improperly. They tend to overvalue the high-priced companies and undervalue the low-priced companies, causing anomalies and mispricing of stock prices. Thus, the hypothesis in this article is proposed as follows.

H₁: The accrual earnings component has a negative effect on abnormal returns.

Research Method

This research was conducted on manufacturing companies listed on the Indonesian Stock Exchange during 2014 to 2017 (four research periods). Manufacturing companies are considered to have complexity compared to service or trading companies. Thus, flexibility in accrual recognition is more complex, making it appropriate to be used as a research object about accrual anomalies. The sampling criteria are as follows. First, the sample companies must be consecutively listed on the Stock Exchange from 2014-2017. It was used for the calculation needs of operational variables. Second, to avoid the effects of too extreme returns due to price changes due to adjustments from corporate actions, the companies carrying out stock split and reverse stock during the study period were excluded from the sample. Third, based on the results of the study Ozkan and Kayali (2015) and Li et al. (2011), new accrual anomalies can be detected when loss companies are excluded from the study sample. Table 1 Shows the research sample calculation.

Table 1 Research Sample

Data Sample	Total
Manufacturing companies were successively listed on the Indonesia Stock Exchange 2014-2017	532
Manufacturing companies conducting stock split/reverse during the study period	(108)
Companies experiencing loss in the 2014-2017 period	(106)
The total sample of companies during the study period	318

The dependent variable in this study was the abnormal return (Y). Abnormal return is the advantage of returns occurring against normal returns (Jogiyanto, 2015). The abnormal return in this study was measured using Buy and Hold Abnormal Return (BHAR). Therefore, BHAR was calculated using the following formula (Barber & Lyon, 1997).

$$BHAR_{i,t} = \frac{\{(1 + R_{it1})(1 + R_{it2}) \dots (1 + R_{itT})\} - \{(1 + R_{mt1})(1 + R_{mt2}) \dots (1 + R_{mtT})\}}{\Sigma T} \quad (1)$$

Note:

BHAR : Buy and Hold Abnormal Return

R_{it} : The actual return occurring on the shares “i” period in t- month.

R_{mt} : Market returns occurring in the t-period.

ΣT : Number of T-periods.

While, the market returns are returns on portfolio groups formed based on their respective sizes (Koerniadi & Tourani-Rad, 2007; Toha & Harahap, 2014).

The independent variable in this study was the accruals component of earnings (X). The accrual earnings component is the profit generated from accounting policies to recognize an economic transaction as profit (both income and expenses) without cash flow (Toha & Harahap, 2014). The cash component of income is the difference between net income and the accrual income component (Sloan, 1996). The accrual component in this article was alternated using traditional accruals, with the following measurements.

$$\text{Traditional Accruals} = \frac{\text{Net Income} - \text{CFO}}{\text{Average Total Asset}} \quad (2)$$

The authors considered many factors that might affect the value of the company. Then, in the existence of an accrual anomaly testing, several control variables were used, namely Size, Book to Market Ratio, and Cash From Operation (CFO). The selection of control variables was based on a prior study regarding anomaly accruals. It is intended that the effect of the independent variable on the dependent variable is not biased projected, as measured by Size (Sloan, 1996), BM and CFO (Koerniadi & Tourani-Rad, 2007) by the following formula.

$$Size_{i,t} = [\text{Natural logarithm}] [(\text{Outstanding shares} \times \text{year} - \text{end stock price})] \quad (3)$$

$$BM_{i,t} = \frac{\text{Book to value of equity}_{i,t}}{\text{year} - \text{end securities price} \times \text{number of outstanding share}} \quad (4)$$

$$CFO_{i,t} = \frac{\text{CFO}}{\text{Average Total Asset}} \quad (5)$$

Data analysis can be assisted by statistical software, namely SPSS 22. There were two stages of data analysis used in this study, namely (1) descriptive statistical testing, (2) regression analysis testing. Then, the research hypothesis determined whether investors

in the Indonesian capital market mispriced the accruals earnings component. The multiple OLS regression testing (with control variables) was carried out to test the hypothesis with the following model. Based on the two hypotheses, the research model was arranged as follows.

$$AR_{t+1} = \beta_0 + \beta_1 \text{akrual} + \beta_2 \text{Size} + \beta_3 \text{BM} + \beta_4 \text{CFO} \tag{6}$$

Hypothesis testing was done by using the equation model (8). The null hypothesis criteria (Ho) and the alternative hypothesis (Ha) declared Ho is accepted if $\beta_1 \geq 0$, while the alternative hypothesis is accepted if Ha: $\beta_1 < 0$.

Result and Discussion

Descriptive statistical analysis showed that the variable Y (Abnormal Return) had a mean of -.017 (refer to Table 2). From the mean score of this variable, the company used in the study produced a negative abnormal return. By considering the average distribution of the score of the accrual variable, it can be concluded that the study sample was dominated by companies with negative accruals or low accruals. The size control variable showed the sample showing an equal distribution as the mean of this variable was also around the middle. The BM variable had a mediocre mean score company, and the means showed that the sample of the research had a book score of 1,628 times greater than its market value. The CFO control variable showed that the average company used as a sample had a total CFO of 7.5% of the total net income.

Table 2 Descriptive Statistical Analysis

Variable	N	Minimum	Maximum	Mean
BHAR	318.000	-1.576	7.305	-0.017
Acc	318.000	-0.219	0.315	-0.012
Size	318.000	30.535	40.403	34.937
BM	318.000	-0.002	91.157	1.628
CFO	318.000	-0.314	0.571	0.075

Table 3 shows the results of hypothesis testing without using control variables. The results of regression analysis testing without using control variables showed that the accruals had a negative coefficient score (below 0) equal to -1.31432, with a p-value of 0.0739. The score indicates that the company’s accruals have supported having a significant negative effect on the company’s abnormal returns. However, to ensure the results of the study, a regression test using control variables was also carried out. The test aimed to find out whether the negative effect of accruals on abnormal returns will disappear if company size, market value, and company CFO are controlled. Then, the results can be seen in Table 4.

Table 3 Regression Analysis without Control Variables

Variable	Coefficient	t-statistic	P-Value
(Constanta's)	-0.03276	-0.63064	0.52873
Accruals**	-1.31432	-1.79317	0.07390
R Square			0.00700
F Statistic			3.25100
F Significance**			0.07400

The results of the regression analysis in Table 4 represent a regression between independent variables (accruals) and the control variables (Size and BM) toward the dependent variable (abnormal return). The model formed together with the control variable had a significance score of 0.138 (significant with a degree of confidence of 15%). It means that the model forming the independent variable, together with the control variable, was feasible. Then, hypothesis testing using the control variable showed that the effect of the independent variable (accrual) could negatively affect the dependent variable (abnormal return). The test result showed a negative coefficient score of -2.250, as well as a p-value significance that increased by 0.023. An increase in p-value indicates that the effect of accruals on abnormal returns is more substantial when tested with control variables. Therefore, the effect of negative accruals on actual abnormal returns was not caused by differences in company characteristics or market value or other impacts.

Table 4 Regression Analysis with Control Variables

Variable	Coefficient	t-statistic	P-Value
(Constanta's)	0.23200	0.24500	0.80700
Accruals***	-2.25000	-2.28600	0.02300
Size	-0.00600	-0.20800	0.83500
BM	-0.00800	-1.04800	0.29600
CFO	-1.07800	-1.39800	0.16300
R Square			0.00941
F Statistic			1.75300
F Significance			0.13800

Furthermore, the portfolio returns were compared between companies with low accrual rates and companies with high accrual rates in purpose to strengthen confidence regarding the existence of anomalous accrual phenomena in the Indonesian capital market. The phenomenon of accrual anomalies can be concluded if there is a negative influence between the accrual level of the company and abnormal returns. This phenomenon indicates that investors are mispricing the accrual component. The mispricing of the accrual component can also be found, if the companies with high accrual rates considered as undervalued by investors have a greater return compared to companies with high accrual rates considered as overvalued by investors. To examine the statement, this article conducted a different test on the company's abnormal returns with low accrual rates and high accrual rates, with the following results.

Table 5 Testing of Low Accrual and High Accrual Portfolios

Years	Low Accruals	High Accruals	t-statistic
All**	0.04539	-0.12002	0.06300
2014	-0.06601	-0.10905	0.55700
2015***	0.10513	-0.31102	0.01200
2016	0.04090	-0.02162	0.84400
2017	0.10162	-0.08415	0.16700

Table 5 shows that overall companies with low rate accruals always produced greater returns than companies with high accruals, and the difference was significantly supported with a p-value of 0.063. Then, if the low accrual and high accrual portfolios were compared per year, each year, the low accrual portfolio had a greater return than the high accrual portfolio. However, statistically, only in 2015, the p-value was concluded to be significant of 0.012.

Thus, based on the results of the regression test in Tables 3 and 4, it is concluded that accruals had a negative influence on abnormal returns. It means that the lower level of the company's accruals will produce higher abnormal returns. Conversely, the higher the accrual rate, the smaller the abnormal return produced. This situation indicates that investors in Indonesia are likely to make mistakes in investment decision making. Investors tend to overvalue companies with high accrual rates and underestimate the potential of low accrual level companies. Then, they were unaware of the impact of differences in persistence contained in the earnings component. The comparison of portfolio tests in table 5 found that companies with low accrual rates had higher returns compared to companies with high accruals. Thus, it strengthens the evidence that investors mispriced the components of accrual earnings.

The hypothesis in this study was accepted, meaning that the phenomenon of accrual anomalies existed in the Indonesian capital market. The investors in the Indonesian capital market were likely to misprice the accrual component. The mispricing happened because investors focused only on earnings without considering the potential for differences persistence of earnings components, leading to the emergence of accrual anomalies. Such a phenomenon indicates the inefficient Indonesian capital market.

Pincus et al. (2007) state that accrual anomalies correlate with the use of extensive accrual accounting, common law traditions, weak investor protection, and capital markets with a low concentration of share ownership. First, in line with Pincus (2007), it may be that the adoption of IFRS, which emphasizes more on the principle-based, might cause wider accounting accrual flexibility than the previous standard. It is also consistent with the findings of Kaserer & Klinger (2008), revealing that accrual anomalies occurred in companies presenting their financial statements under IFRS or US-GAAP, whereas anomalies were not detected in companies complying with German GAAP.

Second, in line with Pincus et al. (2007) stating that accrual anomalies might be triggered by a rating of weak investor protection and the use of a common-law system. Referring to Leuz, Nanda, and Wysocki (2003) and Putra (2016), Indonesia had a low level of investor protection. Leuz et al. (2003) in their study, compared investor

protection in various countries in the world. In their study, Indonesia was classified as a country with low investor protection, based on the category of investor legal protection, capital market developments, and ownership concentrations. Meanwhile, Putra (2016) argues that based on investor legal protection and information protection through disclosure, Indonesia is considered weak compared to countries such as the United States, the United Kingdom, and Japan.

Third, it is slightly different from Pincus et al. (2007), who found that accrual anomalies were found in countries that adopted a common law system compared to code law. This article discovered that Indonesia, which adopted a code law system, also experienced the phenomenon of anomaly accruals. This difference might occur because Indonesia still uses broad accrual accounting standards, and weak investor protection, as explained in the first and second points.

Fourth, it is different from previous accrual anomaly research in Indonesia, conducted by Toha and Harahap (2014). This article managed to examine the negative effect of the accrual rate on abnormal returns. Differences in research results may occur because this article focused on companies that did not experience losses, causing the phenomenon of accrual anomalies can be seen more clearly. The results of the study are also in line with Ozkan and Kayali (2015) and Li et al. (2011), finding that anomalies were clearly detected if they did not use companies suffering losses. Indeed, the results of this study are in line with previous researchers who found that anomalies occurred in European countries, Australia, Germany, and the United Kingdom (Ali & Gurun, 2009; Beer et al., 2018; Clinch et al., 2012; Kaserer & Klingler, 2008; Li et al., 2011; Papanastasopoulos, 2017; Park et al., 2018). As well as several other studies that found accrual anomalies in Indonesia, Turkey, and China but with a not too large magnitude (Li et al., 2011; Ozkan & Kayali, 2015; Toha & Harahap, 2014).

Conclusion

This article aims to examine whether or not the phenomenon of accrual anomalies existed in the Indonesian capital market. The statistical tests showed that the company's accrual rate negatively affected abnormal returns. Furthermore, it was also found that companies with accrual rates could generate higher returns each year compared to companies with high accrual rates. The statement depicted that accrual anomalies were also detected in the Indonesian capital market. Investors in the Indonesian capital market did not pay more attention to differences in the persistence of the earnings component and were likely to focus on earnings when making investment decisions. This phenomenon caused the mispricing of the accrual component.

Indeed, the results of this study contribute to investors and financial analysis to consider and reevaluate their long-term investment strategies to avoid mispricing in the earnings component. This article contributes to financial literacy and accounting, especially to the development of the Indonesian capital market theory, as there is evidence that accrual anomalies indicate the inefficient Indonesian capital market.

This research is inseparable from limitations, one of which is the presence of shares that were not actively traded in the study sample. Second, this article only used a sample of companies that did not experience a loss. Different results may be obtained if using a company suffering losses. The future studies, hopefully, can exclude these stocks from the research sample, to reduce bias in the interpretation of the accrual anomalies phenomenon. Future studies can also explore types of accruals, such as discretionary accruals and non-discretionary accruals.

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