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Stock Reaction to the Implementation of Extensible Business Reporting Language

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Abstract

The purpose of this study is to examine the reaction of stock prices on the implementation of Extensible Business Reporting Language (XBRL) in companies listed on the Indonesia Stock Exchange (IDX). Using the event study method and calculating abnormal returns of the 2015 financial statements of 462 companies listed on the IDX, findings showed that 49 companies have not applied the XBRL format in their financial statements. Based on the results of the Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR) values, using the one-sample test, investors react to shares in companies that have not implemented XBRL and who have implemented XBRL; however, based on the independent t-test based on average values there are differences between companies that have not applied XBRL and those who have implemented XBRL. This research only looks at the one-year implementation of XBRL in financial reporting (2015), then the research does not separate which companies are on time in the delivery of financial statements to the public through the IDX website. Our research contributes to the understanding of the use of XBRL in corporate financial reporting because before the XBRL financial reporting format was published, the company had published a financial statement format based on the legal provisions of financial statements in Indonesia.

Keywords: Extensible Business Reporting Language (XBRL), Stock Price Reaction, Financial Statement

JEL Classification Code: G2, O3, E6, G1

1. Introduction

Accounting information submitted by the company must be relevant to the needs of users of financial accounting reports in terms of economic decision making and can provide benefits for users of financial statements to predict the past, present, or future. Quality financial reports not only require skilled human resources and experts in financial reporting, but also information technology that supports the financial reporting process, which can be received by users of financial statements in a timely, easy to analyze, and relevant manner (Alshammari et al., 2020; Minh & Vu, 2020; Cavdar et al., 2020; Camba & Camba, 2020).

The development of technology has become an obligation that must be followed by companies to be able to compete in the business world because all aspects of human life have been dominated by the use of technology. Extensible Markup Language (XML) was originally used as a format for Internet languages, but at the time it did not facilitate financial reporting on the Internet that needed data for further processing. Based on this reason, XML developed a new programming language format for financial and business reports referred to as Extensible Business Reporting Language (XBRL).

XBRL is an open-source XML-based system that has emerged for financial information, reporting, and analysis that has been jointly developed by more than 80 leading companies and organizations worldwide. Highly structured documents can easily be transferred between application formats and via the Web. (Strand et al., 2001). BEI (2014) introduced XBRL with the main objective of how business and financial data can be easily exchanged, compared, and used without language barriers and accounting standards.

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Since it was issued on 30 April 2014 and its implementation commenced on 22 June 2015 by the IDX, there are still many companies listed on the IDX that have not reported financial statements on an XBRL basis. Out of 498 companies listed on the IDX, as many as 443 companies have reported XBRL-based financial statements in 2015, and as many as 55 companies did not report financial statements on an XBRL-basis. XBRL in general can provide benefits, namely:

1. Increase the usefulness of the electronic financial reporting system because it implements:
   a. Standardized format to produce information and data that is comparable and easy to analyze.
   b. Validation automatically to minimize input errors.
2. Facilitate the publication of reports (including financial statements) because XBRL can be reprocessed into the desired format: PDF, HTML, Excel, TXT, etc.
3. Increase the ease of access to financial information, especially for international investors, because XBRL implements a standard for identifying information. Foreign investors can carry out their analysis independently and make comparisons using their language.
4. The benefits are seen in automation, cost savings, faster, more reliable, and more accurate data handling, better analysis, and better quality information and decision making as well as increased business decision making for investors.
5. XBRL format is useful for reporting IDX for the development of business intelligence which will be used for evaluation and monitoring of the listed company.

Oswari & Januarianto (2017) revealed that the XBRL format can standardize all financial statements of companies in the banking sector. This can also encourage the creation of a financial reporting format similar to not only the banking sector but also other sectors in Indonesia. XBRL is an innovation in information technology and can improve a company's performance. XBRL technology utilization can fundamentally change the business way of providing information to investors, markets, and regulators, and the way of each stakeholder group to make more informed decisions. Prasetya and Irwandi (2012) found that liquidity, profitability, leverage, and age of a company cannot significantly influence Internet Financial Statements.

Financial reports submitted using the XBRL format can facilitate users to obtain relevant information, as well as easier for decision making (Baldwin & Trinkle, 2011; Birt et al., 2017). XBRL also increases the transparency of financial information and is clearer and better documented (Birt et al., 2017). For large companies, XBRL can accelerate the filing of financial reporting (Du & Wu, 2018). The application of XBRL in a company can increase company liquidity, reduce the cost of equity capital and reduce the cost of information processing costs (Hao et al., 2014; Li et al., 2012). However, the application of XBRL does not necessarily run smoothly.

Fowler et al. (2011) revealed that there were 3 reasons for the hampered implementation of XBRL in the country of New Zealand, firstly the lack of government encouragement in the application of this new information technology (XBRL). Second, it appears that organizations do not believe that XBRL will beneficially reduce compliance costs. Third XBRL as technology is complex, so the development of the XBRL taxonomy becomes a complex problem, and the government experiences a lack of funds in reducing the complexity of the problem. Complexity in developing the structured language (taxonomy) for XBRL use has significant budgetary implications. Investments in the capital market have a liquidity appeal, that is, securities can be traded immediately and investors can reposition their investments at any time. Thus, the opportunity for investors to diversify into investments that they consider most feasible is open. As for issuers, the capital market can be a means to get the additional funds they need quickly and cheaply.

Several studies in the capital market explain that XBRL can improve the efficiency of capital market information, as revealed by Efendi et al. (2014) where the existence of XBRL can reduce excessive reaction to bad news about profits which is a form of information inefficiency. Yen and Wang (2015) explain their findings that the adoption of XBRL is positively related to market reactions in terms of revenue shocks and their research has policy implications and can ease company concerns about the benefits of adopting XBRL. This is contrary to the research by Zamroni and Aryani (2018) who stated that the use of XBRL does not have significant implications in the stock market environment, because the XBRL file is still limited and only focuses on the elements of financial reporting without explaining the numbers in the financial statements. The previous research also explained that financial reporting using the XBRL format did not have a positive effect or interest in investors (Blankespoor et al., 2014; Efendi et al., 2016; Li, 2017) because investors have large resources to obtain more comprehensive financial data that can be relied upon to analyze financial statements. Based on the explanation above, it can be formulated the problem in this study is: "Is there a difference in stock price reactions between companies that apply XBRL and not apply XBRL?

2. Literature Review

2.1. Extensible Business Reporting Language (XBRL)

The rapid development of communication technology through the Internet has been adopted by the business sector as an important tool for providing information. The development of information technology, especially the

Internet, has influenced the traditional form of presentation of company information so that new technologies emerge in the presentation of financial statements via the internet called Extensible Business Reporting Language. (XBRL) (Oswari & Januarianto, 2017). BEI (2014) states that XBRL is a standard of information in the form of language concepts that are made specifically and adjusted and easily understood by computers. Where the main purpose of XBRL is how business data and financial data can be easily exchanged, compared, and used without language barriers and accounting standards. The idea behind XBRL is simple. Instead of treating financial information as a block of text - as in a standard Internet page or a printed document (or PDF) - it provides identifying tags for each fact item of data. This tag can be easily read by a computer so data can be identified in any language. This method will make it easier for other parties to obtain and process data electronically without the need to translate and re-enter data. This data can be easily compared because of the same tags all over the world. XBRL is an XML-based language that provides an effective solution for the preparation, presentation, and exchange of International Financial Reporting Standards. XBRL - is a collaborative framework developed to make standardized and customized digital representations of financial, tax, and other business reports in detail and concise and extract data. On March 16, 2005, the SEC issued Final Rule 33-8529 encouraging registrants to voluntarily file tagged financial statement information on the EDGAR reporting System using XBRL format. This shows that the United States is preparing to convert its financial reporting format into XBRL format. In Indonesia, BAPEPAM-LK is conducting a study and plans to adopt XBRL in the next two years.

XBRL is a reporting language based on XML that was developed to facilitate communication and procedures for the use of data used in business. XBRL can overcome current financial reporting issues related to efficiency and accuracy of transparency and facilitate the company's efforts to achieve legislative compliance costs. With XBRL computers can treat data "intelligently" as they recognize the individual data facts in an XBRL document, select it, analyze it, store it, exchange it with other computers and present it to users in a variety of ways. XBRL greatly increases the speed of handling financial data, reduces the chance of error, and permits automatic checking of information.

The emergence of XBRL itself is based on the need for a language that can synergy financial statements that have been made by the company into a format that can be processed easily and can be understood by all aspects at the same time. Financial reporting becomes very important here because in the era of interconnecting these state borders in the economic barrier less visible, and this may be an opportunity for a country to attract foreign investors with financial reporting both reflecting the economic value of a company. It is expected also of good reporting and XBRL format companies in all area ready to respond to risks that may threaten the company in achieving its goals (Jatmika, 2017)

XBRL has four important components to be able to understand the use of XBRL in the reporting process: (Venkatesh & Armitage, 2012; Jatmika, 2017)

1. The XBRL specification provides the framework and requirements needed to use XML technology to create XBRL taxonomies and the sample XBRL specification document elucidates technical details that explain how XBRL works and cannot be edited by the user.
2. Taxonomy is a dictionary that illustrates the main data elements (numbers or text) to create documents such as certain types of financial or business reporting.
3. Instance document, a computer-readable document consists of a collection of command data in accordance with the concepts found in the taxonomy used.
4. A style sheet is needed to make the data in the raw XBRL sample document readable by many people in pdf words or spreadsheet formats.

According to Jatmika (2017) the benefits of XBRL:

1. Can improve the use of electronic reporting systems for the application of:
2. Increase the usefulness of the electronic financial reporting system because it implements:
   a. Standardized format to produce information and data that is comparable and easy to analyze.
   b. Validation automatically to minimize input errors.
3. Facilitate the publication of reports (including financial statements) because XBRL can be reprocessed into the desired format: PDF, HTML, Excel, TXT, etc.
4. Increase the ease of access to financial information, especially for international investors, because XBRL implements a standard for identifying information. Foreign investors can carry out their analyzes independently and make comparisons using their language.
5. The benefits are seen in automation, cost savings, faster, more reliable, and more accurate data handling, better analysis, and better quality information and decision making as well as increased business decision making for investors.
6. XBRL format is useful for reporting IDX for the development of business intelligence which will be used for evaluation and monitoring of the listed company.

Liu et al. (2017) stated that XBRL is an XML-based data standard for business reporting that uses taxonomies to provide meta-data for semantic elements such as total sales to create a clear way to identify and compare one company's business performance with another company. Self-marking or tagging gives notation to the contents of the document and thus allows the search and extraction of

the desired information with a specially created computer program without downloading the entire document. In addition to improving the efficiency of financial disclosures, XBRL is expected to improve the quality of digital financial information, which is a key factor for decision performance. PT Indonesia Stock Exchange (IDX) since 2012 has started the development of reporting based on XBRL. To carry out reporting, IDX must prepare a taxonomy that represents the report. As an initial development step, IDX has completed a special taxonomy for the company's financial statements. Furthermore, the taxonomy of these financial statements will be disseminated to all Listed Companies. Reporting information about XBRL-based financial statements will soon be implemented in 2015.

Types of existing financial statement taxonomies include reports: (BEI, 2014)

1. Financial Report
2. Income statement
3. Statement of Changes in Equity
4. Cash flow statement

The taxonomy will standardize the format of the presentation of financial statements of companies of all types of sectors and subsectors that have been determined by the IDX. Detailed information related to the taxonomy and its presentation will be discussed in the taxonomy menu.

2.2. Market Efficiency Theory

In general, there are three kinds of efficient markets (Jogiyanto, 2012) First, information efficient markets, where information efficient markets are based on the availability of information. The market will react quickly and accurately to reach new equilibrium prices that fully reflect the available information. Second, the market is operationally efficient, this is more emphasized in market operations. In the sense that the market is said to be operationally efficient if market operations can be carried out quickly and at a low cost. Third, the market is efficient in decision making, based on market intelligence. Creating an efficient market not only requires information available but also requires investor intelligence in viewing and analyzing available information. Smart markets can make decisions correctly and vice versa. Efficient markets pay attention to whether prices at certain times "fully reflect" available information. The market is said to be efficient if there is a relationship between stock prices and information (Beaver, 1981; Irwanto et al., 1999).

The efficiency of a market needs to be empirically tested. There are several ways to test the efficiency of a market (Jogiyanto, 2012):

a. Testing the market for weak forms of information efficiency using past data. In this test, stock prices reflect past data, so past data cannot be used to predict the price or return of a security. To test market efficiency, a weak form is called testing of return predictability.
b. Semi-strong test of market efficiency in the form of a semi-strong test using data that is being distributed. If this information is distributed quickly and spread, everyone gets it at the same time, as such, no one will be affected by getting an abnormal return. Testing the efficiency of a half-strong form of market is called event studies.
c. Test the form of efficiency test in a strong form of information using personal data, where security prices already reflect past data, data currently being distributed, and personal data. This test is called a personal information test.

In testing market efficiency, it is possible to find deviations from efficient market conditions. This deviation is called an anomaly.

2.3. Stock price

In the concept of Efficient Market Hypothesis (EMH), a market is said to be efficient (in the form of half strong) if the stock price quickly fully depicts all new and relevant information that is available (Fama, 1970). A stock price reaction is a reaction to the company's stock price on an event or announcement made by a company or other party that is related to the company.

There have been several studies on the reaction of stock prices. Ahn and Kim (2018) examined the relationship between the cumulative abnormal returns (CARs) induced by various events and long-term operating performances in the post-event period. They gathered six events from the KRX Disclosure System from 2000–2011 and then ascertained the different CAR patterns. Based on the general valuation model, stock return or price should reflect the firm's fundamental value and they expected CARs to show a close relationship with the firm's fundamental value over a long horizon. However, no distinct relationship between CARs and operating performances was found. The stock price reactions which are temporary and unrelated to the firm's fundamental values were explained by market inefficiency in Korea.

Syed and Bajwa (2018) aimed to find the response of the stock market against the announcements of quarterly earnings has been empirically tested by exploiting event study methodology. Efficient market hypothesis (EMH) on the Saudi stock exchange is also tried on. The results established that the Saudi Stock Market does not bear a semi-strong form of EMH. How efficient is the Saudi market is also reflected through evidence of significant abnormal returns and post-earnings announcement drift around earning announcements dates. That is, it was found that the semi-strong model of the EMH does not apply in the Saudi stock market, because the

market reacts more strongly on bad news compared to good news especially on announcement day.

Badertscher et al. (2018) found that stock price reactions not only occur at the time of earnings announcements but can also occur when submitting reports relating to regulators (2018). They investigated the role of bank regulatory reports in the information environments of banks. It was revealed that stock prices experienced movement when there were announcements of regulations about banking resulting in instability in the stock price and trading volume. After bank regulators undertook a "modernization project" to speed the processing and public dissemination of regulatory reports, the banking industry routinely experienced abnormal stock price volatility and trading volume on the 30th day of the quarter.

2.4. Hypotheses

Based on the explanation above, the hypothesis that was built in the study:

H_1: *Is there a stock price reaction in companies that do not implement XBRL*

H_2: *Is there a stock price reaction in companies that implement XBRL*

H_3: *Is there a difference between the reaction of stock prices in companies that implement XBRL and companies that do not implement XBRL*

3. Research Methods and Materials

This research will be conducted on companies listed on the IDX, totaling 462 companies. The data used to analyze stock price data was obtained from the yahoo finance website, where the data is the share price before XBRL-based financial reporting and after XBRL financial reporting for 2015 financial reporting. To answer the hypotheses that have been proposed, the analysis method used is event study, which identifies the reaction of the company's stock price on the IDX which is measured using abnormal returns. The abnormal return testing model in this study uses the event study model by Hartono (2010) and Strong (1992) (Irwanto et al., 1999):

1. Calculate the realized return or total return, where the overall return of an investment in a period is as follows

$$R_{it} = \left(\left(P_t - P_{t-1} \right) / P_{t-1} \right) \quad \text{..... (1)}$$

2. Calculating the expected return. To estimate the daily return of stock expectations using the market-adjusted model submitted by Brown and Warner (1985), where this model estimates the return of security with the market index return at the time of the event with the following formula:

$$E\left(R_{i,t} \right) = R_{M,t} \quad \text{..... (2)}$$

3. Calculates the abnormal return, the difference from the actual return that occurs with the expected return, which is calculated as follows:

$$AR_{i,t} = R_{i,t} - E\left(R_{i,t} \right) \quad \text{..... (3)}$$

4. Calculate the average abnormal return (average abnormal return), using the following formula:

$$AAR_t = \frac{\sum_{i=1}^{N} RTN_{i,t}}{N} \quad \text{..... (4)}$$

5. Calculate the average cumulative abnormal return (CAAR), which is the average accumulation of abnormal return accumulations in the previous days. The formalization:

$$CAAR(t1,tp)i = \sum_{t=t1}^{tp} AAR_{i,t} \quad \text{..... (5)}$$

4. Results and Discussion

4.1. One-Sample T-test

Based on the results of data collection, companies that reported 2015 financial statements on the IDX were 462 companies (all listed on the IDX in 2015), of which, 413 companies had reported financial reports in XBRL format, and the remaining 49 companies have not reported financial statements in XBRL format. Details of the sample in this study can be seen in Table 1:

In this study, the number of companies reporting financial statements in 2015 but not yet using the XBRL format was 49 companies. AAR value for this group of companies will be tested for the significance value (t-test). The purpose of this significant test is to see whether the statistically significant value is equal to zero, meaning that if the value is positive means there is good news for investors, but if the value is negative it means bad news for investors (Jogiyanto, 2012). The results can be seen in Table 2. From Table 2, the t-test values before and after the submission of the 2015 company's financial statements are different. In the 5 days before the submission of financial reporting, the AAR-5, AAR-4, AAR-3, and AAR-2 t-test scores gave positive values. This means that before submitting financial statements without XBRL is good news for investors, even though AAR-1 gives a negative value. However, after the company's financial statements were released to the public, the reaction of investors 5 days later was very different. The AAR1, AAR3, and AAR5 values indicate positive values while AAR2 and AAR4 values indicate negative values.

Table 1: Grouping of Companies that Implement and Not Apply XBRL by Sector

Company Sector	With XBRL format	Non-XBRL Format	Amount
Main	48	4	52
Manufacture	113	15	128
Services	252	30	282
Total	**413**	**49**	**462**

Table 2: One sample test for AAR without XBRL

	Test Value = 0		
	t	df	Sig. (2-tailed)
AAR5	,603	412	,547
AAR4	1,514	412	,131
AAR3	,784	412	,433
AAR2	1,155	412	,249
AAR1	1,283	412	,200
AAR0	,000	412	1,000
AAR-1	1,347	412	,179
AAR-2	,652	412	,515
AAR-3	1,182	412	,238
AAR-4	,683	412	,495
AAR-5	1,488	412	,138

Table 3: One-Sample Test AAR with XBRL

	Test Value = 0		
	t	df	Sig. (2-tailed)
AAR5	,603	412	,547
AAR4	1,514	412	,131
AAR3	,784	412	,433
AAR2	1,155	412	,249
AAR1	1,283	412	,200
AAR0	,000	412	1,000
AAR-1	1,347	412	,179
AAR-2	,652	412	,515
AAR-3	1,182	412	,238
AAR-4	,683	412	,495
AAR-5	1,488	412	,138

This test aims to see how significant the stock's reaction is to the submission of financial statements of companies that do not use the XBRL format, with a standard significant level of 0.05 (5%). It can be seen that the significant value in Table 2 shows that the AAR values 5 days after submission of the company's financial statements are above the significant level of 0.05, meaning that there is no stock reaction to the submission of financial statements by companies that do not use the XBRL format in their financial reporting. Therefore, it can be concluded that the H1 is rejected. Furthermore, in the 5 days before the submission of the financial statements, the significant value for 5 days, 4 days, 3 days, and 2 days before the financial reporting is above the significant value of 0.05; therefore, it can be said that H1 is rejected. 1 day before the submission of the financial reports, the significance value is below 0.05 is 0.11, which means accepting the H1.

4.2. Average Abnormal Return (AAR) with XBRL Format

The number of companies that have reported the 2015 financial statements using the XBRL format is 413 companies. The company's AAR value that has applied XBRL format is the same as the company's AAR value that has not applied the XBRL format, to find a significant value equal to zero, meaning that a positive value means good news, but a negative value means bad news for investors. The results can be seen in Table 3. below.

From Table 3 above it can be seen the value of the t-test before and after the submission of the 2015 company's financial statements shows different positive values. This shows that 5 days before and 5 days after the submission of financial statements, the use of XBRL format in financial reporting by 413 companies is good news for investors. Similar to the AAR test without using XBRL in the financial statements, this test also sees how significant the stock's reaction is to the submission of the company's financial statements using the XBRL format in the financial statements, with a standard significance level of 0.05 (5%)). It can be in Table 3 that the overall AAR value 5 days before and 5 days after the company submitted its financial statements using the XBRL format is above the significant level of 0.05, meaning that there is no stock of reaction to the submission of financial statements by companies that use the XBRL format in their financial reporting. Therefore, it can be concluded that H2 is rejected.

4.3. Independent T-Test

In this test, we see if there are differences in stock reactions in companies that do not use the XBRL format and those companies that use XBRL in their financial statements. Using the CAAR value 5 days before and after the submission of the financial statements, a standard level of 0.05 (5%) can be seen in Table 4.

Based on the results of the independent test above, it can be explained that investors react through stock prices as seen from the value of CAAR in companies that apply XBRL or companies that have not applied XBRL in the 2015 financial statements for 5 days before and 5 days after the submission of financial statements, with significant value (2 tailed) as a whole showing a value below 0.05. That is, 5 days before (0,000), 3 days before (0,000), 2 days before (0,000), 1 day before (0,000), 1 day after (0,000), 2 days after (0.004), 3 days after (0,000), 4 days after (0,000), and 5 days after (0,000). With these values below the standard level of 0.05, it can be concluded that there are differences in the reaction of stock prices in companies that have not applied the XBRL format and those who have applied XBRL in the 2015 financial statements published on the IDX, meaning that H3 is accepted.

Based on Table 5 it can be explained that this study used two assessments to see the stock price reaction - the value of AAR and the value of the CAAR. Both values were tested using a one-sample test, to see whether there are reactions before and after the company's submission of its financial statements, that is, companies that have not used the XBRL format and companies that have used the XBRL format.

Table 4: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
CAAR5	Equal variances assumed	2416,106	,000	14,971	460	,000
	Equal variances not assumed			5,142	48,014	,000
CAAR4	Equal variances assumed	49,993	,000	-17,054	460	,000
	Equal variances not assumed			-11,490	52,126	,000
CAAR3	Equal variances assumed	1670,801	,000	15,118	460	,000
	Equal variances not assumed			5,226	48,032	,000
CAAR2	Equal variances assumed	1,578	,210	-2,908	460	,004
	Equal variances not assumed			-2,552	56,470	,013
CAAR1	Equal variances assumed	699,317	,000	-8,303	460	,000
	Equal variances not assumed			-24,033	418,489	,000
CAAR0	Equal variances assumed	27,300	,000	11,726	460	,000
	Equal variances not assumed			8,269	52,693	,000
CAAR-1	Equal variances assumed	116,811	,000	-10,326	460	,000
	Equal variances not assumed			-27,943	455,501	,000
CAAR-2	Equal variances assumed	668,734	,000	-4,296	460	,000
	Equal variances not assumed			-10,371	312,499	,000
CAAR-3	Equal variances assumed	243,882	,000	-7,916	460	,000
	Equal variances not assumed			-20,932	437,000	,000
CAAR-4	Equal variances assumed	161,430	,000	1,334	460	,183
	Equal variances not assumed			1,793	74,990	,077
CAAR-5	Equal variances assumed	712,559	,000	-8,062	460	,000
	Equal variances not assumed			-22,915	442,634	,000

The second test is performed using an independent t-test, to test if there are differences between companies that have implemented the XBRL format in their financial statements and companies that have not applied the XBRL format in their financial statements, for 5 days before the submission of financial statements and 5 days after the submission of financial reports, for the financial year of 2015. Based on the test results, it can be explained that by using the one-sample test on the AAR value, investors react through stock prices only to companies that have not implemented XBRL, namely one day before the submission of financial statements, with a significance value of 0.011, whereas in companies that have implemented XBRL there is no reaction because the use of XBRL in the 2015 financial statements has become an obligation for the company. From the CAAR value, for companies that have not implemented XBRL and companies that have implemented XBRL during the observation period 5 days before the submission of financial

Table 5: Summary of the Results of One-Sample Test and Independent T-Test

Test	Variable	Group XBRL	Value	Level sign	Window period	Information
One Sample test	AAR	Non XBRL	0,011	0,05	-1	Significant
		XBRL	-	-	-	-
	CAAR	Non XBRL	0,000	0,05	5	Significant
			0,002	0,05	4	Significant
			0,000	0,05	3	Significant
			0,000	0,05	2	Significant
			0,000	0,05	1	Significant
			0,000	0,05	-1	Significant
			0,000	0,05	-2	Significant
			0,000	0,05	-3	Significant
			0,000	0,05	-4	Significant
			0,001	0,05	-5	Significant
		XBRL	0,000	0,05	5	Significant
			0,000	0,05	4	Significant
			0,000	0,05	3	Significant
			0,000	0,05	2	Significant
			0,000	0,05	1	Significant
			0,000	0,05	-1	Significant
			0,000	0,05	-2	Significant
			0,000	0,05	-3	Significant
			0,000	0,05	-4	Significant
			0,000	0,05	-5	Significant
T-test	AAR	Non XBRL & XBRL	0,037	0,05	-4	Significant
			0,000	0,05	3	Significant
			0,001	0,05	4	Significant
			0,000	0,05	5	Significant
	CAAR	Non XBRL & XBRL	0,000	0,05	5	Significant
			0,000	0,05	4	Significant
			0,000	0,05	3	Significant
			0,004	0,05	2	Significant
			0,000	0,05	1	Significant
			0,000	0,05	-1	Significant
			0,000	0,05	-2	Significant
			0,000	0,05	-3	Significant
			0,000	0,05	-5	Significant

reports and 5 days after the submission of financial reports, it showed a significant stock reaction. That is, investors reacted to shares in companies that have not implemented XBRL and companies that have implemented XBRL (based on the results of CAAR values) The results of this study are in line with research by Willows and Rockey (2018) who analyzed whether significant CAAR is observed before and after the release of financial results and integrated reports. The study data was top 40 companies listed on the Johannesburg Stock Exchange, over the period from 2012-2015. The study finds evidence of statistically significant CAAR. Furthermore, there appears to be a stronger market reaction to the release of financial results than integrated reports.

Based on the independent t-test, there is a difference between the average value between companies that apply XBRL in financial statements and companies that do not apply XBRL in financial statements. Seen from the AAR value, the significant difference is four days before the submission of the financial statements, then three days, four days, and five days after the submission of the financial statements where the significance value is below 0.05. The CAAR value difference in the average value between companies that apply XBRL in financial statements with companies that do not apply XBRL in financial statements occur on all days of observation (window period), where the significance value is below 0.05.

Although there are differences between the two, as seen from AAR and CAAR, the highest average value is in companies that have applied XBRL in the financial statements (statistical group). This is because the efficiency and ease in financial statement analysis using good technology can enable investors to make appropriate decisions. The results of this study are in line with the studies by Peng et al. (2014) and Liu et al. (2017) where the existence of XBRL-based financial statements play an important role in the decision-making process of investors, as well as provide evidence that XBRL is the right option to be implemented in the business world. With the existence of XBRL in the submission of financial statements, companies can provide high-quality information, because investors in estimating the desired value and the risks faced when making decisions on shares owned must require quality financial statement information. This is to ensure that no information asymmetry and moral hazard arises from the company. Biddle et al. (2009) stated that financial reports submitted using XBRL will have an attractive effect on investors, especially financial analysts, and have a positive impact and increase the company's stock price (Chen et al., 2018; Cormier et al., 2019).

5. Conclusions

The purpose of this study is to examine the reaction of stock prices on the implementation of XBRL on companies listed on the Indonesia Stock Exchange (IDX), using the event study method and calculating abnormal returns with an observation period (windows period) - 5 days before and 5 days after the submission of the 2015 financial statements. Using the event study method and calculating abnormal returns of the 2015 financial statements of 462 companies listed on the IDX, findings showed that 49 companies have not applied the XBRL format in their financial statements. Based on the results of the Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR) values, using the one-sample test, investors still react to shares in companies that have not implemented XBRL and who have implemented XBRL; however, based on the independent t-test based on average values there are differences between companies that have not applied XBRL and those who have implemented XBRL.

This study has limitations, namely, first, this study only looks at the one-year implementation of XBRL in financial reporting (2015); therefore, it was still considered insufficient to prove the reaction of stock prices over the implementation of this XBRL. Second, the research does not separate which companies are on time in the delivery of financial statements to the public through the IDX website. Third, this study only distinguishes between companies that have implemented XBRL in financial statements with companies that have not implemented XBRL in financial statements.

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