



Analysis of Relationship Revaluation of Property, Plant and Equipment Company on Stock Prices and the Rate of Return on Stock on Indonesian Stock Exchange

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Abstract: This study determined the relationship revaluation of property, plant and equipment on stock prices and the rate of return on stock in the manufacturing company. The population included the manufacturing companies included in the index LQ45 in Indonesia Stock Exchange in January 2011 to December 2013. The descriptive method utilized and the data were analyzed using multiple regression. The data were gathered from a yearly financial report in Indonesia stock exchange, data collection, data analysis, statistical analysis. The result of this research has shown that 1) There is the relationship between the financial asset classes of property, plant and equipment at fair value with reliability, 2) Reporting of fixed asset property, plant and equipment at fair value biased and unreliable especially for SE (The difference between the change in value of assets) and PPNINC (the increase of the value of property, plant, equipment company in period t), and 3) The fair value has ability to explain the explanatory power which is quite significant to the stock price, exceeds that can be presented with the historical cost. Based on the result, it can be concluded that asset reporting at fair value did not show a reliable quality. This was due to a difference in reporting an overvalued increase in the value of company asset in certain periods and increase in value property, plant and equipment in certain periods. And the changes in the value of property, plant, and equipment were reported together with the assessment made by investors and had a value of reliability.

Keywords: Revaluation of Property, Plant and Equipment, Rate of Return Stock, Stock Price

1. Introduction

Revaluation is the process to re-value an asset according to the current and up to date value, so the recording represents the fair value of the asset (IAI, 2007). The first revaluation of assets was allowable in Indonesia when Minister of Finance as the higher government officer established the regulation about fixed asset revaluation, announced the regulation Number: 486/KMK.03/2002 on the dates of 28 November 2002 about Corporate Fixed Asset Revaluation. For the further operational arrangement, there was Decision from Tax Directorate General Number: KEP-519/PJ/2002 on 2 December 2002 about Standard Operational and Procedures Implementation of Fixed Asset Revaluation. Based on this regulation, corporations have to report revaluation on their balance sheet on the item equity, with the name of the account difference of revaluation fixed asset and in this case

there should be an explanation on financial statement about deviation from the historical cost concept with the effects of financial reporting.

The main objective of financial statement is providing information about the financial position, performance, and the changes of company financial position that will be useful for most of the economic decision making. One of the users of financial statements is investor. Risk is often a main consideration for the investor to choose their investment. Investor interest with the risk related to the development of the results of current investment. Information is really important for decision making whether they should buy, hold or sell the current investment (IAI, 2007).

One of the qualitative characteristics of the financial report is reliability. The information has reliable quality if it is free from misguided understanding, material error/fault and could be reliably used as sincere or honest presentation (faithful

representation) of the things that should be present or as fair that could be present (IAI, 2007). The objective of this research was to analyze the reliability from revaluation of property, factory and equipment. Specifically, this research attempted to answer the following questions: Whether reporting fixed asset group property, factory, and equipment based on fair value resulted in an unbiased revaluation reserve towards reliable quality. Several theories underpinning this research is the theory of the efficient market hypothesis (efficient market hypothesis theory), information theory perspective, the theory of rational investors (rational investor theory), and decision theory.

In the context of this study, information about the revaluation should be fully reflected in the stock price in an efficient market revaluation if the information is relevant and useful for making investment decisions. According to Hitz (2005), information plays a role in the change of initial expectations (a- prior- expectation) to the expectations of the end (a- posterior - expectation). From the perspective of the information, financial reporting presents an information system that competes with others (Christensen & Demski, 2003). Therefore, in responding to the financial statement information, Scott (2006) argues that there are considerations in predicting the behavior of investors such as follows: (1) Investors have beliefs about the expected profit and risks are received from the company's stock. This belief is based on all publicly available information, including market prices until the announcement of the company's net income at that time; (2) According to the same announcement with respect to net income, a number of different investors may have different views. For example, for most investors, the announcement of earnings perceived as good news if the increase in revenue is higher than expected and based on this information, investors will revise their beliefs about revenue and earnings in the future. Other investors who may have high expectations about income gains that should have been received at this time, may interpret the same amount of revenue is a bad news; and (3) Investors who have revised their beliefs about the advantages and profits in the future will quickly make decisions and follow up to make one of the following three decisions depend on the investor tolerance for risk: selling shares held; purchase additional shares; or not do something.

The purpose of this study was to test the reliability of the revaluation of property, plant, and equipment. Based on the theory of efficient markets, new information will be reflected in the share price, thus the stock price could be used to test the reliability of the revaluation of property, plant, and equipment and is reported through revaluation of fixed assets. The increase in the fair value of property, plant and equipment led to the increase in the balance of the market value of the company. The increase in the balance in the market value of the company as a reaction to the increase in the fair value of property, plant and equipment reflected on the coefficient equal to 1 (one). If the coefficient is different than 1 (one), the fair value of property, plant and equipment does not have the quality of reliability. To determine whether the coefficient of PPE (property, plant, and equipment)

equals with one or different from one, in this study using a T-test. The concept of this study and the model equations were used to test the reliability of the revaluation of property, plant, and equipment.

This research studied the reliability of the revaluation of fixed assets, especially property, plant, and equipment. The data used were taken from the annual financial statements from 2011 to 2013 as well as the company's stock price listed on the Indonesia Stock Exchange on January 2011 until December 2013. Researchers recognize that reliability is only one of the characteristics affecting the quality of information. There are some other characteristics that are not included in this study such as accuracy, timeliness, relevance, comparability, completeness, verifiable, and understandable.

2. Theoretical Background

2.1. Characteristics of Financial Statement

The financial report is a record of a company's financial information in an accounting period, which can be used to describe the performance of the company. These financial statements are part of the financial reporting process. Full financial statements usually include: Balance Sheet, Income Statement, Statement of Changes in Equity, Statement of Changes in Financial Position, which can be presented in the form of a cash flow statement or statement of fund flows, Notes and other reports, and explanatory material that are an integral part of these financial statements.

Elements that are directly related to the measurement of financial position are assets, liabilities, and equity. While elements relating to the measurement of performance in the income statement are income and expenses. Statements of financial position usually reflect income statement elements and changes in the various elements of the balance sheet. These financial statements are one of the resources that can be used for decision making. According to financial accounting standards, financial reporting purposes is to provide information regarding the financial position, performance and changes in financial position of an enterprise that is useful to a large number of users in making decisions. More specifically in the Statement of Financial Accounting Standard No. 1 (SFAS) on presentation of financial statements, paragraph 5, stated that the objective of financial statements is to provide information about the financial position, performance and cash flows of the company, which is beneficial for the majority of users report in order to make economic decisions, and demonstrate accountability (*stewardship*) management of the use of resources, which is entrusted to them (Financial Accounting Standard, 2007, paragraph 5, p.1.4).

The financial statements prepared for this purpose meet the common needs of large users. Nevertheless, the financial statements do not provide all the information that may be required by users in making economic decisions. Generally, it is because of the financial effects and past events which are not required to provide non-financial information.

2.2. Fair Value

Fair value is the value that is used to exchange the assets between parties who wish and have sufficient knowledge in a transaction that is fair (IAI, 2007).

According to FASB, fair value is the price at which an asset or debt could be exchanged at the time the transaction between parties who have sufficient information and are not under a pressure (FASB, 2004). The objective of the revaluation was to estimate the price of the exchange revaluation of assets and/or debt, without having any asset transaction or actual debt that would serve as gauge. In other words, the objective is the determination of the value revaluation of assets or debts that fully reflect the value of the asset or the debt. Another study that explored the reality from fair value was conducted by Petroni and Wahlen (1995), using sample from insurance industry.

2.3. Revaluation (Fair Value Accounting)

Revaluation an asset shows the value from an asset on sale or buying from the market sector. The value is measured based on the available price in the active market. If the market price is not available, the value is measured based on information and technics of giving the best estimation to measure the update market price. Market price from asset reflects the market estimation about *present value* from future cash flow that is related with specific asset calculate based on current interest and the estimation of market about risks. Risk means the difference between actual and expectation in amount and time (FASB, 2003).

About revaluation of company fixed asset for the Tax purposes that announce on 23 May 2008. PMK 79 replaces KMK 486/KMK.03/2002 on the date of 28 November 2002.

3. Methodology

The purpose of this study was to analyse the reliability of information on the revaluation of fixed assets in particular property, plant and equipment as measured by the performance of the stock price. The research design used in this research is descriptive method. Descriptive method is designed to describe the object or phenomenon that is obtained from the subject either individually or collectively. Moreover, it explains relevant aspects of the phenomenon or object. The population is a unit consisting of all the elements to be measured by the researcher (Aczel & Sounderpandian, 2007). If the population size is too large and impractical to take all the elements in the population, sampling representative of the overall population is often carried out as alternative. This study utilized data of all companies listed in the Indonesia Stock Exchange. Data were obtained from purposively sampled. The researcher conducted the selection and further observation with respect to the data. The following were the criteria used in sectioning the data: (1) Companies that have complete documents (*annual income statements and annual balance sheet including the notes to the financial statement*) are included in the calculation data;

(2) Companies whose financial statements are published on the official website of IDX were included in the calculation data.

Table 1. The number of enterprises revaluation and meet the criteria specified in the sample table below.

Summary	2011	2012	2013
The No. of Companies listed on IDX	346	342	386
The No of Companies that reported	87	83	85
Revaluation and have complete data presentation	25%	24%	22%

The data used in this research is secondary data. Secondary data are collected by data collection agencies and published to the user community data. Secondary data is collected by someone other than the user (Suliyanto, 2000).

4. Analysis of Data

The data needed for the study were obtained the researchers conducted the selection and further observations with respect to the data. Any data used must meet the criteria as described in Table 1 of samples and sampling techniques. And it attempted to know whether the data were incomplete, unclear or inappropriate as financial reporting data using the functional currency instead of dollars. Source of data used by researchers were in the form of financial statements consisting of the annual balance sheet, income statement. Furthermore, Notes to the annual financial statement of the companies listed on the Indonesia Stock Exchange started in 2011 to 2013 as well as historical data of share prices of listed companies the Indonesia Stock Exchange from January 2011 to December 2013

The research analysing data using statistical program E-view to regression test, and the test statistic T. Statistical tests using T (t-test) to test whether $\beta = 1$ or $\neq 1$. If β in equation (5) is not equal to one indicating that the independent variable revaluation of fixed assets (property, plant and equipment) was not reliable.

5. Results and Discussion

The purpose of this study was to find out the reliability of the information on revaluation of fixed assets group property, plant and equipment by the company listed in Stock Exchange in Indonesia. This section discusses relationship between the question in the formulation of the problem - reporting fixed assets property, plant, and equipment at a fair value resulting in revaluation reserve which is not biased and showing reliable quality?

Reliability Revaluation Group Fixed Assets, Property, Plant and Equipment

To answer the question in the formulation of the problem, "Is reporting the fixed assets property, plant, and equipment at the fair value revaluation difference that does not produce biased to having reliable quality? The hypothesis for this is, "Reporting the fixed assets property, plant, and equipment based on the value reasonable yields revaluation increment biased and does not have the quality.

Table 2. Below H_0 presents the test results for $\beta = 0$ by using the t test.

Independent	Coefficient	Std. Error	t-Statistic	Prob.	N
ANI	1.626998	2.459263	0.661579	0.5092	199
NI	1.841613	2.028298	0.90796	0.3653	199
DIV	-3.31405	2.946688	-1.12467	0.2624	199
SE	2.46376	3.132709	0.786463	0.4328	199
PPPINC	3.080173	66.85213	0.046074	0.9633	199

Rule conclusions are used in testing H_0 is when probability each variable ≤ 0.05 with the variable coefficients equal to zero. Statistical test results to the hypothesis presented in Table 2 shows that probability of NI, DIV, SE, and PPPINC statistically different from zero. This can be proven by looking at the probability of each independent variable which is greater than 0.05. These results suggested a link between the financial asset classes of property, plant and equipment at a fair value with reliability.

These results are consistent with the results of the research conducted by Barth (1994). Its results show that the fair value had the ability to explain (explanatory power) which is quite significant to the stock price, compare to the presented by the historical data.

Based on the results, it is suggested that a link between the financial assets at fair value asset classes of property, plant, and equipment. Researchers continued to analyse whether changes in the value of property, plant, and equipment are reported together with the assessment made by investors and had a value of reliability. Furthermore, Table 3 presents the results of testing H_0 for $\beta = 1$ by using the t test.

Table 3. Summary of Test Results $\beta = 1$.

Independent	Coefficient	Std. Error	t-Statistic	Prob	N
ANI	1.63	6.38	0.25	0.80	199
NI	1.84	4.44	0.41	0.68	199
DIV	-3.31	2.26	-1.46	0.14	199
SE	2.46	5.27	0.47	0.64	199
PPPINC	3.08	98.99	0.03	0.98	199

The conclusions were used in testing H_0 when the probability to each variable coefficient was equal to one ≥ 1 . Statistical test results to the hypothesis presented in Table 2 show that the probability of NICH, NI, DIV, SE, and PPPINC was statistically equal to one. With this, result suggests that changes in the value of property, plant, and equipment were reported at the value expected by the investor.

These results stirred the researchers' interest in conducting further analysis to see whether each variable was reported to the proper value or over (under) valued by looking at each of the variable coefficients. If the coefficient of each variable > 1 was then declared undervalued while the coefficient of < 1 was stated overvalued. As presented in Table 2, NICH, NI, SE, and PPPINC were reported as undervalued than overvalued reported DIV.

This conclusion is based on findings that the coefficient of each variable was greater than one unless DIV was smaller than one. Undervalue means investors believed the value reported in the financial statements was smaller than that assessed by investors. On the other hand, investors argued that overvalued mean values reported in the financial

statements were greater than that assessed by the investor. As an example for the SE and PPPINC which is the focus of this study, it was found undervalued, which means that if the change in the value of fixed assets based on the fair value reported was worth an investor, the investor would give more than one because it was considered the value of one which was too small. With these, results suggest that the reporting group of assets property, plant and equipment was at fair value bias and did not have a reliable value of H_0 .

Reporting group fixed assets property, plant, and equipment were based on fair value revaluation reserve produce biased so it did not have acceptable quality reliability. These results are consistent with research conducted by several studies in Australia, Britain and the United States which found that the reporting of the results of fixed assets based on fair value was not reliable (Beaver, Christie, & Griffin, 1980; Ro, 1980; Beaver, Landsman, & Griffin, 1982; Standish & Ung, 1982; Brown & Finn, 1989; Emanuel, 1989). On the other hand some research were also conducted in Australia, the UK, and US which found evidence that reporting of fixed assets based on fair values were reliable (Shape & Walker, 1975; Noreen & Sepe, 1981; Bublitz, Frecka & McKeown, 1985; Lobo & Song, 1988; Barth, 1994; Sami & White, 1994; Barth, Beaver & Landsman, 1996; Eccher, Ramesh, & Thiagarajan, 1996; Venkatachalam, 1996; Easton & Eddey, 1997; Barth & Clinch, 1998; Aboody, Barth, & dan Kasznik, 1999).

The number of samples used in this study were 199 companies. This company was used as a research sample of a company revalued and had complete data used in the study as beginning and ending of outstanding shares, the price (the difference between the shares prices at the date of the financial statement date published, no more than 20 days). Both caused the total number of samples of 199 companies.

To improve the quality of research, the researchers had further analysis by the separation between the sample firms reporting increasing revaluation of the current year (increment) with a sample of companies that did not report increments. After seeing the overall sample there, it was found that only 22 observations were reported increments. The test was then performed separately on these samples. Tests were carried out using equation (5) and the assumption of multicollinearity test, Heteroskedasticity, and autocorrelation. Table 3 presents the summary of test results $\beta = 0$ equation. The results found that the assumption of this equation was free of the three assumptions which did not necessitate for any adjustment to the equation.

Table 4. Summary of Test Results $\beta = 0$ Equation 5 (increment only).

Independent	Coefficient	Std. Error	t-Statistic	Prob.	N
ANI	-0.39126	0.135714	-2.88297	0.0108	22
NI	2.634279	0.238501	11.04516	0	22
DIV	3.688368	0.846204	4.358719	0.0005	22
SE	0.226401	0.146248	1.548064	0.1412	22
PPPINC	-1.9684	1.179825	-1.66839	0.1147	22

The conclusions were used in testing H_0 when probability of each variable ≤ 0.05 then the variable coefficients were

equal to zero. Statistical test results to the hypothesis presented in Table 4 show that the probability of NICH, NI, DIV was statistically equal to zero. While the SE and PPPINC were not equal to zero. This could be proved by looking at the probability of each independent variable: NICH, NI, DIV which was less than 0.05, while the SE, and PPINC were greater than 0.05. These results suggested a relationship between the financial asset classes of property, plant and equipment at a fair value with reliability, especially for the SE and PPPINC. These results are consistent with the research on the reliability of fair value created by Petroni and Wahlen (1995). Findings of these studies reveal that the fair value had an explanatory power to the stock price exceeding historical cost.

Based on the results, it is suggested that the relation between the financial assets at fair value asset classes of property, plant, and equipment, researchers continue to analyse and measure whether changes in the value of property, plant, and equipment were reported together with the assessment made by the investor. Following.

Table 5. Results of testing H_0 for $\beta = 1$ by using the t test is presented.

Variable	coefficient	Std. Error	t-Statistic	Prob.	N
Δ NI	-0.39	0.04	-10.25	0.00	22
	2.63	0.38	6.85	0.00	22
DIV	3.69	1.16	3.18	0.00	22
SE	0.23	-0.04	-5.29	0.00	22
PPPINC	-1.97	0.78	-2.52	0.01	22

Based on the results of statistical tests in Table 5 it was found that the probability of NICH, NI, DIV, SE, and PPPINC was not equal to one. This indicates that the change in the value of each variable in the financial statements was not the same as those assessed by the investor. Furthermore, the researchers conducted an analysis of the coefficients of each variable to see if it was different or caused by overvalued or undervalued. Furthermore, variables Δ NI, SE, and PPPINC had reported overvalued while the variable NI and DIV reported undervalued. These results can be seen from the coefficients of the variables Δ NI, SE, and PPPINC which were smaller than a while for NI, and DIV greater than one. For SE and PPPINC, which is the focus of research, it found overvalued mean changes in the value of property and plant. Based on this, report in the financial statements was greater than that assessed by the investor. Based on these results, it was increasingly evident that the reporting group of assets property, plant and equipment at a fair value bias did not have a reliable value to be accepted. These results are not conclusive coefficient on the variable SE and PPPINC which were the focus of this study. In the overall test, it was found that both variables are reported undervalued while the test was devoted to companies that reported an increase (increment) found to be overvalued for SE and PPPINC. These different results may be due to the number of different samples from tests performed. In this case, the results were used in making the conclusion as the result of the test by using a sample of 22 companies, although of a smaller sample, but researchers believed the results are more accurate

because only companies that reported an increase were included.

These results are consistent with research conducted by Barth and Clinch (1998), which examined the relevance, reliability, and timeliness of asset revaluation. Barth and Clinch tested the value relevance, reliability, and timeliness of the information presented by dividing long-term assets into several classes such as investments; property, plant, and equipment (PPE); and intangible asset rather than using a simpler method of analysis to analyse the company-announced revaluation of assets. This study found that the revaluation is relevant but not for the value of reliability and timeliness.

6. Conclusion

This study tested the reliability of the quality of the group fixed asset revaluation of property, plant and equipment. This section discusses the conclusions obtained from the findings of this study. Recommendations for further research in accounting and finance, more specifically related to the reporting of fixed assets based on fair value are also presented.

Did reporting group fixed assets property, plant and equipment at a fair value result in revaluation reserve which was unbiased and of reliable quality? This problem was investigated because of the issue still argued by scholars. It was found that the reporting of group assets at a fair value did not have a reliable quality due to the overvalued reporting of SE and PPINC which were the focus of this study.

References

- [1] Aczel, D. A. & Sounderpandian, J. (2007). *Complete business statistics*. Boston: McGraw-hill.
- [2] American Institute of Certified Public Accountant. (2003). APB Statement No. 4. 1970. *Basic Concepts and Accounting Principles Underlying Financial Statement of Business Enterprises*. New York: AICPA.
- [3] Ball, R. & Brown, P. (1968). *An Empirical Evaluation of Accounting Income Numbers*. *Journal of Accounting Research*, 6(2), 159-178.
- [4] Ball, R., Brown, P. & Finn, F. J. (1977). *Share Capitalization Changes, Information and the Australian Equity Market*. *Australian Journal of Management*, 2(2), 105- 125.
- [5] Ball, R., Brown, P. & Finn, F. J. (1978). *Published Investment Recommendations and Share Prices: Are There Free Lunches in Security Analysis?* *Jassa*, 2(1), 5-10.
- [6] Barlev, B., Fried, D., Haddad, J. R. & Livnat, J. (2007). *Revaluation of Revaluations: A Cross-Country Examination of the Motives and Effects on Future Performance*. *Journal of Business Finance and Accounting*, 34(7-8), 1025-1050.
- [7] Barth, M. E. (2000). —*Valuation-Based Research Implications for Financial Reporting and Opportunities for Future Research*. *Accounting and Finance*, 40: 7—31.

- [8] Barth, M. E. (1991). —*Relative Measurement Errors among Alternative Pension Asset and Liability Measures*], *Accounting Review*, Vol. 66, No. 3 (July): 433–63.
- [9] Bernard, V. L. & Thomas, J. K. (1990). Evidence that Stock Prices Do Not Fully Reflect the Implications of Current Earnings for Future Earnings. *Journal of Accounting and Economics*, 13(4), 305-34.
- [10] Christensen, J. A. & Demski, J. S. (2003). *Accounting Theory: An Information Content Perspective*.
- [11] Dirga, Dinhi, (22 September 2007). *Implementation IFRS, between harmonization and Conspiracy*. Retrieved http://en.wikipedia.org/wiki/_
- [12] Easton, P. D. & Harris, T. S. (1991). *Earnings as an Explanatory Variable for Returns*. *Journal of Accounting Research*, 29(1), 19-37.
- [13] Eccher, E. A., K. Ramesh, and S. R. Thiagarajan. (1996). —*Fair value disclosures by bFank holding companies*], *Journal of Accounting and Economics*, Vol. 22, No. 1–3 (Aug.– Dec.): 79–117.
- [14] Financial Accounting Standard Board (FASB). (2008, January 25). *Statement of Financial Accounting Standard Board*. Retrieved from <http://www.fsb.org/st>.
- [15] Hitz, J. M. (2005). —*The Decision Usefulness of Fair Value Accounting-A Theoretical Perspective: Cologne Working Paper on Banking, Corporate Finance, Accounting and Taxation*, Retrieved from <http://www.wiso.uni-koeln.de>.
- [16] Jegadeesh, N. & Livnat, J. (2006). *Revenue Surprises and Stock Returns*. *Journal of Accounting and Economics*, 41(2), 147-171.
- [17] Lobo, G. J. and I. Song. (1989). —*The Incremental Information in SFAS No. 33 Income Disclosures over Historical Cost Income and Its Cash and Accrual Components*], *Accounting Review*, Vol. 64, No. 2 (April): 329–43.
- [18] Maddala, G. S. (1992). *Introduction to Econometrics*. New York: Prentice-Hall Inc.
- [19] Merton, R. C. (1987). —*A Simple Model of Capital Market Equilibrium with Incomplete Markets*. *The Journal of Finance*, p. 483—510.
- [20] Nelson, K. K., (1996), —*Fair value accounting for commercial banks: An empirical analysis of SFAS 107*, *The Accounting Review* Vol. 71, n2 (April 1996), 161– 182.
- [21] Rivera, M. M. Jr, Rivera, R. V., (1996). *Practical Guide to Thesis and Dissertation Writing*.
- [22] Sami, H. & White, R. A. (1994). *Incremental Information Content of SFAS No. 33 Earnings Disclosure: Some New Evidence*. *Journal of Accounting and Public Policy*, 13(3), 253-279.
- [23] Scott, W. R. (2006). *Financial Accounting Theory*. Toronto Canada: Prentice-Hall.
- [24] White, G. I., Sondhi, A. C., & Fried, D. (1993). *The analysis and use of financial statements*. New York: John Wiley & Sons.