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Value Relevance of Accounting Information in Sustainable Finance

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ABSTRACT

This study aims to provide empirical evidence related to the relevant factors of accounting information that need to be considered in Sustainable Finance for companies listed on the IDX. This relevance will be following the concept of sustainable finance if the information used as the basis for predictions shows a relevant value, that is, it has predictive, confirmative, and timely value. So it is necessary to know what components will be used in compiling a predictive model of firm value which is reflected in price and stock returns. This is important to do to determine the company's strategy in applying the principles of sustainable finance

The research uses Ohslon's measurement model and the robustness test using the earnings and cash flow relevance model. The research sample is companies listed on the Indonesia Stock Exchange that publish financial statements for the 2016 – 2019 period. The samples obtained are 472 companies with observation data of 1455 companies_years based on unbalanced panel data.

The results show that Ohslon's model can predict stock prices based on the relevance of book value and earnings value. Based on data analysis shows that book value and earnings have a significant effect on stock prices by 11.8%. To determine the consistency of the model, a robustness test was conducted using the relevance of earnings and cash flows. Robustness test results show consistent results that the value of earnings and cash flow can show the relevance of accounting information. Likewise, the use of variables shows consistent results, namely the relevance of book value, earnings, and cash flow to stock prices.

Keywords: *sustainable finance, book value, earnings per share, accrual, cash flow, return*

1. INTRODUCTION

1.1. Background

The relevance of the value of accounting information shows how much information capacity can influence users of information in making decisions by making predictions in the future with past data. Relevance relates past data reflected in financial statements to stock prices and returns [1].

Sustainable finance as stated in The Financial Services Authority (OJK) Regulation Number 51/POJK.03/2017 regulates the implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies. With this regulation, all companies are required to implement sustainable finance in all their operational activities.

The relevance of accounting information is a bridge between the company's accounting information and stock prices formed in the market. So that the concept of relevance will be important in describing the condition of the company which is reflected in the financial statements to be used as a tool for analyzing company performance and predicting future performance that relates to its market value through stock prices.

The concept of relevance will be following the concept of sustainable finance if the information used as the basis for predictions shows a relevant value, which has predictive, confirmative, and timely value. So it is necessary to know what components will be used in compiling a predictive model of firm value which is reflected in price and stock returns. This is important to do to determine the company's strategy in applying the principles of sustainable finance.

For analysis, this research was designed using several stages, namely, an introduction which contains the background, research problems, research objectives, and contributions as well as a literature review related to the relevance of accounting information. The second part contains the research methods used. The third section contains empirical test results and discussion. The last part is the conclusions and limitations of the study

1.2. Research Problems

The importance of knowing the factors that influence the relevance of information concerning the principle of sustainable finance, the formulation of the problem in this study is:

a. Do earnings and book value affect stock

prices? b. Does earnings affect stock returns c.

Does cash flow affect stock returns?

1.3. Research Purpose

This study aims to provide preliminary evidence regarding the importance of factors that influence the relevance of accounting information that need to be considered in the concept of sustainable finance.

1.4. Research Contribution

The research results are expected to contribute to:

a. Regulators as a material for consideration make regulations related to sustainable financial components that need to be compiled to improve the quality of the information presented

b. Companies that will make sustainable financial reports must pay attention to factors related to economic performance that is used as the basis for making decisions.

1.5. Relevance of Accounting Information

Value relevance is reporting accounting numbers that have a predictive model related to securities market values. The information presented must be relevant to decision-making. If the financial statements are not relevant, then the information will not provide benefits for its users in evaluating certain business finances.

[2] divide the concept of value relevance into four approaches: 1) Fundamental analysis approach, reveals that accounting information causes changes in market prices and detects stock price deviations. 2) Predictive approach, that accounting information is said to be relevant if it is useful for predicting the prospect of company performance in the future. 3) Approach to the realization of value relevance information, that accounting information Does Sustainable Reporting Moderate the Value Relevance of Accounting Information? 80 is said to be relevant if it is used by investors to set stock prices. 4) Value relevance measurement approach, that the value relevance of the information contained in financial statements is measured by its ability to capture and summarize business information and other activities.

Information is said to be relevant if it is presented about three qualities, namely: reductive value, feedback, and timely. Predictive value is the quality of information that helps users to increase the probability of predicting accurately past or future outcomes. The value of feedback is the quality of information that helps users to confirm or correct previously made expectations. Timeliness is the state in which information is available before it loses its capacity to influence decisions.

1.6. The fundamentals of Value Relevance

1.6.1. Stock Price

The share price is the value of the statement of ownership of the company or limited liability company. Stock price fluctuations depending on the increase or decrease in supply and demand from one time to another. Stock prices rise when demand is greater than supply, and prices fall when demand decreases while supply increases.

1.6.2. Book Value

The book value of equity (equity book value) is the value of shares according to the books of the company issuing outstanding shares. More specifically, the book value can be calculated by the value per share (book value per share). Book value per share is not a measure of performance but shows how much guarantee to shareholders if the company is liquidated.

The book value of equity presented when associated with sustainable financial principles can provide relevant information for shareholders regarding investment guarantees in the future. So that changes in the book value of equity reflected in share prices are relevant information that can be considered in the application of sustainable financial principles

1.6.3. Earnings

Statement of Financial Accounting Concept (SFAC) No. 1 states that accounting profit is a good measuring tool for measuring company performance and that accounting profit can be used to forecast cash flows. The calculation of profit based on earnings per share (EPS) will provide information on the profits given to shareholders for each share. When associated with stock prices will provide information about the company's performance.

So that profit information becomes important if it is associated with sustainable financial principles as sustainable information about the company's performance in the future.

1.6.4. Operating Cash Flow

Operating cash flow is the main activity and other income-generating activities. Statement of Financial Accounting Standards (PSAK) No. 2 paragraph 12 explains the importance of operating cash flow as an indicator that determines whether the company's operations can generate sufficient cash flows to repay loans, maintain the company's operating capability, pay dividends, and make new investments without relying on outside sources of income.

So that operating cash flow information is importantly related to the company's financial sustainability principles in predicting cash availability.

1.7. Sustainable Finance

The application of sustainable finance principles in the financial institution system in Indonesia is the implementation of Law Number 32 of 2009 concerning Protection and Management

Environment to develop and implement environmental economic instruments, including environmentally friendly policies in banking, capital markets, and the non-bank financial industry.

The target of regulating the implementation of sustainable finance is so that every LJK, Issuer, and Public Company has awareness or commitment to the implementation of sustainable finance principles, contributing to product development in the form of goods and services that consider economic, social, and environmental aspects. In addition, this arrangement is expected to create conditions for fair competition and avoid any arbitration activities that are detrimental to one of the parties.

The objectives of implementing Sustainable Finance are:

a. provide adequate funding sources to achieve sustainable development goals and climate change-related finance;

b. improve the resilience and competitiveness of LJK (financial services institution), Issuers, and Public Companies through better management of social and environmental risks by developing financial products and/or services that apply the principles of Sustainable Finance to be able to contribute positively to the financial system stability;

c. reduce social inequality, reduce and prevent environmental damage, maintain biodiversity, and encourage efficient use of energy and natural resources; and develop financial products and/or services that apply the principles of Sustainable Finance.

1.8. Review of Previous Research on the Relevance of Accounting Information and Sustainable Financial

Previous research stated that sustainability reporting has a relationship with company performance [3], [4], [5]. This can encourage investors to use information from sustainable reporting in making decisions. So that the fulfillment of the quality of relevant information will provide a comprehensive picture in sustainable reporting.

Research in Indonesia on the relevance of accounting information and sustainable reporting (in the broad context is not specific to sustainable finance). [6] connects three dimensions of sustainability to the financial performance of companies in Indonesia. The results showed that the economic, social, and environmental dimensions had a positive effect on financial performance. [7] documented that sustainable reporting failed to moderate the relevance of corporate accounting information.

1.9. Hypothesis

H1: earnings and book value affect stock prices

H2: earnings affect stock returns

H3: cash flow affects stock returns.

2. MATERIALS AND METHODS

2.1. Sample

This study uses a sample of companies listed on the Indonesia Stock Exchange that publish financial statements for the 2016 – 2019 period. The sample obtained is 472 companies with observation data of 1455 companies based on unbalanced panel data.

2.2. Research Methodology

2.2.1. Variable and Measurements

The variables used in this study are stock prices and stock returns as the dependent variable. The stock price is the annual closing price and the stock return is calculated based on the difference in the stock price in year t minus the stock price in year t-1 divided by the stock price in t-1.

The independent variables consist of book value per share, earnings per share, earnings, changes in earnings, accruals, changes in accruals, cash flow operating, and changes in cash flow operating. Book value per share is total equity consisting of the nominal value of outstanding shares, premium paid-in capital, and retained earnings, divided by the number of shares outstanding. Earnings per share is the net income for one year divided by the number of shares outstanding during the year. Earnings are the company's net profit for period t. Change in earnings is the difference in earnings for period t minus earnings for period t-1. Accrual is the difference between earnings and operating cash flow. Changes in accrual are the difference between accrual period t minus accrual period t-1. Operating cash flow is the cash flow value from operating activities. Changes in operating cash flow are the difference in cash flow period t minus cash flow period t-1.

Control variables consist of return on equity (ROE), firm size (SIZE), and debt to asset ratio (DAR). ROE is net income divided by equity. SIZE as a proxy for company size is calculated based on the value of the company's asset log. DAR is the ratio of debt to assets.

2.2.2. Techniques of Analysis

To test the research hypothesis, the following regression equation is used:

$$P_{it} = \alpha_{0t} + \alpha_{1t}\, EPS_{it} + \alpha_{2t}BVPS_{it} + \varepsilon_{it} \qquad 1$$

Equation 1 is Ohslon's (1995) model which is also used in research [8], [9], [10]. Where Pit is share price, EPSit is earnings per share and BVPSit is book value per share.

To test the consistency of the equation 1 model, a robustness test was conducted, namely the earnings relevance model (equation 2) and the cash flow relevance (equation 3).

$$R_{it} = \alpha_{0t} + \alpha_{1t}\, \Delta E_{it} + \alpha_{2t}E_{it} + \varepsilon_{it} \qquad 2$$

Equation 2 is used to refer to research [11], [12]. This equation examines changes in earnings on stock returns. Where Rit is stock return period t, Eit is earnings change in period t and t-1, Eit is earnings in period t.

$$R_{it} = \beta_{0t} + \beta_{1t}\Delta CF_{it} + \beta_{2t}CF_{it} + \beta_{3t}\Delta ACC_{it} + \beta_{4t}\, ACC_{it} + \varepsilon_{it} \qquad 3$$

Equation 3 to estimate changes in accruals and operating cash flow to stock returns. This equation is used in research [13], [14]. Where Rit is stock return, CFit is the change in operating cash flow for period t to cash flow for period t-1, CFit is cash flow for period t, ACCit is the change in accrual value for period t and ACCit is the value for accrual for period t.

3. RESULTS AND DISCUSSION

3.1. Descriptive Statistic

Table 1 shows the descriptive statistics of the variables used. Descriptive statistics consist of the mean, median, minimum and maximum values of each variable

Table 1. Descriptive Statistic

	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
PRICE	1,455	1,698.08	460.00	83,800.00	20.00	4,743.83
RETURN	1,455	0.19	-0.02	44.00	-0.97	1.62
EPS	1,455	119.48	22.00	13,018.00	-4,765.00	774.29
BVS	1,455	1,704.89	379.00	494,758.00	-5,393.00	18,268.99
ΔEARN	1,455	0.00	0.00	5.33	-12.76	0.57
EARN	1,455	-0.04	0.04	3.60	-19.38	0.75
ΔCFO	1,455	0.03	0.01	11.71	-9.97	0.60
CFO	1,455	0.11	0.06	8.65	-2.76	0.47
ΔACC	1,455	-0.03	-0.01	10.58	-12.45	0.81
ACC	1,455	-0.15	-0.02	3.36	-19.15	0.88
DAR	1,455	10.24	0.47	4,871.42	0.00	197.45
ROE	1,455	-0.80	0.06	156.98	-1.60	38.68
SIZE	1,455	12.41	12.00	15.00	8.00	0.83

3.2. Empiric Results

Table 2 shows the empirical test results based on equations 1, 2, and 3. Equation 1 is the result of the empirical test of book value and earnings per share on stock prices. Equation 1a shows that the increase in book value and earnings per share affects increasing stock prices. This is consistent with the results of the equation 1b test which added the control variable.

This shows that the book value per share and earnings per share are relevant in influencing changes in stock prices in a significantly positive manner. So that information on book value and earnings per share can be used as a predictive tool in the concept of sustainable finance.

3.3. Robustness Test

The robustness test uses equations 2 and 3. The results of the analysis are shown in table 2 in the columns of equations 2 and 3.

The results of the 2c equation test show that the values of 1 = 0.397 and 2 = 0.119. Changes in earnings (α_1) and the number of earnings (α_2) are said to be relevant if 1+ 2 is positive. The test results show that changes in earnings and the number of earnings are relevant to changes in returns because they are positive (0.516 = 0.397+0.119). Likewise for the 2d equation shows consistent results

Table 2. Empiric Results

	Equation 1		Equation 2		Equation 3	
	a	b	c	d	e	f
BVS	0.016	0.013				
	2.545***	2.236**				
EPS	1.124	1.097				
	14.929***	15.203***				
ΔEARN			0.397	0.4830		
			4.687***	5.041***		
EARN			0.119	0.1606		
			1.867*	2.331***		
ΔACC					0.485543	0.4884
					4.836***	4.846***
ACC					-0.176807	-0.1815
					-2.343***	-2.391***
ΔCFO					0.712	0.7203
					5.631***	5.662***
CFO					-0.359	-0.3785
					-2.815***	-2.903***
ROE		2.588		0.0002		0.0002
		0.986		0.1899		0.228
SIZE		1044.249		0.0384		0.0336
		8.416***		0.7409		0.643
DAR		0.668		0.0001		0.0001
		1.201		0.3098		0.344
R^2	0.118	0.169	0.014	0.015	0.020	0.019
F-statistic	129.355***	70.806***	11.749***	5.436***	8.444***	4.918***

Equation 3e test results show that the value of 1 = 0.485; 2 = -0.177; 3 = 0.712; 4 = -0.359. Changes in accrual (α_1) and the amount of accrual (α_2) are said to be relevant to stock returns if 1 + 2 is positive. The value of 1 + 2 shows a positive result, namely 0.308 (0.485-0.177). Changes in cash flow (α_3) and the amount of cash flow (α_4) are also relevant to stock returns because they have a positive value = 0.353 (0.712-0.359). This result is consistent with equation 3f which includes the control variable.

The results of the test of equations 1, 2, and 3 show that the book value and earnings per share variables show the greatest influence, which is 11.8% compared to the earnings relevance equation and its change is 1.4% and the relevance of accruals and cash flow is 2%.

3.4. Discussion

Sustainable finance is an effort to improve the company's sustainable reporting that can be used as a basis for comprehensive decision-making by considering economic, social, and environmental factors. So it takes a study of the elements that can be included in financial sustainability, including company financial information that is associated with measuring the value of the relevance of information.

The test results show that the company's accounting information can be used as a tool to predict the value of the company which is reflected in the price and stock returns. So that the measurement model of the value of relevance of information can be used as a predictive model that provides information about the economic condition of the company in the future so that it is expected to provide an overview of the company's condition in a sustainable manner.

4. CONCLUSION

Conclusions based on empirical test results are: first, the three models used, the relevance of book value, earnings, and cash flow affect stock prices and returns. Second, the results of this study support previous research. Third, empirical test evidence can be used as a reference to consider accounting information such as book value, earnings, accruals, and cash flow in the framework of sustainable financial reporting.

As for this research, there are still limitations because it has not included the application of sustainable finance in the analysis because the implementation in Indonesia is still in the early stages so that complete data has not been obtained.

AUTHORS' CONTRIBUTIONS

Author 1 conceived of the presented idea, developed the theory and performed the computations. Author 1 and 2, verified the analytical methods and author 2 supervised the findings of this work. All authors discussed the results and contributed to the final manuscript

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