Earnings and Cash Flow Information on Its Value Relevance by The Book Value

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ABSTRACT

This study aims to examine the relationship of earnings and operating cash flow as an independent variable on the value relevance of accounting information proxied by stock returns by using book value as a moderating variable. The utilization of stock returns as an independent variable was selected as previous research on value relevance that tends to use stock prices as an independent variable. The sample of this study was all population of companies registered on the Jakarta Islamic Index (JII) in 2016-2018, June-November period (issued from June 1st), by using saturation sampling. The data used in this study was compound from annual reports in the Indonesia Stock Exchange (IDX) and stock prices from Yahoo Finance. Further, data were tested using multiple linear regression analysis. The results showed that earnings and cash flow affect value relevance proxied by stock returns. However, book value neither strengthens nor weakens earnings and cash flow towards stock returns as a moderating variable.

INTRODUCTION

The relevance of the value of accounting information is the ability of accounting information to explain or describe the latest company values that will assist the information users in comprehending and making financial decisions. Measurement of the value of relevance can be completed by estimating the statistical relationship between the value of the information presented in the financial statements with the value of the issuer's stock in the market (stock price/stock return). Oyerinde (2009) defined the relevance of accounting value from four perspectives: (1) The predictive view of value relevance, accounting number is exposed to be relevant if it can be used to predict future income, dividends, or future cash flows. (2) Information views on value relevance, where the relevance of the value of accounting information is measured in terms of market reactions to new information. (3) According to this approach, value relevance focuses on the use of accounting information in equity valuations. (4) Concerning the view of measuring the relevance of value, the author (Oyerinde) determined that financial statements are measured by their ability to attain or summarize information that affects the value of equity. Examining the relationship between accounting information and stock value requires a valuation model. There are two types of valuation models that are generally used to investigate this relationship, i.e., the issuer's stock value in the market that can be proxied using the price model and the return model.

In connection with the definition of accounting value expressed in four perspectives by Oyerinde (2009), an essential component in financial statements that is often used as a tool to measure the value relevance of corporate accounting information is accounting numbers that can be used to predict future earnings, dividends, future cash flows, market reaction, and equity value. Earnings information can be utilized to predict future earnings and estimate investment and credit risk.

Research related to accounting information on stock returns has previously been conducted by Purwanti, Masitoh W, Chomsatu (2015) and Putra and Widaningsih (2016), which stated that there is an influence between accounting information using earnings and cash flow variables on stock returns. In contrast to the two previous studies, Sopini (2016) and Ndakuneding (2015) showed that accounting earnings and cash flow do not influence stock returns. Other related research employed book value as an explanatory variable for value relevance.

Previous studies emphasized the relationship of earnings information to stock returns directly without considering other variables that can strengthen or weaken the relationship between the dependent variable and explanatory variables. The focus of this research is to examine the relationship between accounting information disclosed by the company to the relevance of value that is proxied using stock returns through book value as a moderating variable. The objects in this study were earnings, operating cash flow, book value, and stock return. Whereas, the subjects of this study were companies registered on the Jakarta Islamic Index in 2016-2018 since the JII index was considered to provide a fairly high rate of return because stocks listed in this index are included in leading stocks.

The difference of this research with previous research is First, this study used book value as a moderating variable. Second, sample selection, this study utilized companies registered in the Jakarta Islamic Index between 2016 and 2018, which was different from previous studies in both the corporate sector and the sampling period.

LITERATURE STUDY AND HYPOTHESIS DEVELOPMENT

Clean Surplus Theory

This theory shows that the company's market value is described in the fundamental variables of the income statement and balance sheet (Scott, 2015). The Clean Surplus Theory is a theory that considers accounting as the creator of wealth and the recording system of distribution and provides the basis of the relationship between company value and accounting numbers.

Agency Theory

Agency theory addresses the problems that arise in companies because of the separation of owners and managers and emphasizes the reduction of these problems. This theory assists in applying various governance mechanisms to control agent actions in jointly owned companies.

Conflicts of interest between the owner and agent are unavoidable and can cause agent decision making to be inconsistent with the owner's desire (Gitman & Zutter, 2015).

Market Efficiency Theory

Market efficiency theory states that the stock prices reflect all relevant information and that it is impossible to beat the market or achieve above-average returns on an ongoing basis. There are numerous criticisms of this theory, such as behavioral economists, who believe in inherent market inefficiencies. According to Fama (1970), there are three types of market efficiency theories, i.e., weak form, semi-strong form, and strong form.

Signaling Theory

Signaling theory states that company executives who have better company information will be moved to convey that information to outsiders (users of financial statement information) aiming to raise stock prices.

Value Relevance

The value of accounting information contains an accounting information explanation concerning the market value of the company. This value is perceived by the stock price and stock return. This study applied the measurement of value relevance to the company's market value viewed from stock returns (return models). The return model is more applicable to explain changes in value over time (Barth et al., 2001; Karunarathne & Rajapakse, 2010).

Earnings

In accounting, earnings are one of the vital information that becomes a benchmark of company performance. The importance of earnings information is stated in Statement of Financial Accounting Concept (SFAC) No. 1 that earnings have benefits for assessing management's performance, assisting to estimate the ability of representative earnings in the long run, predicting earnings and calculating risks in investment or credit (Parawiyati, et al., 2000).

Operating Cash Flow

Cash flow is crucial in the value relevance of accounting information because cash flow is one of the information required by external parties in evaluating the company's ability to use its cash. Cash flow data is considered to present the main information in evaluating the market price of securities (Hendriksen, 1997). Operating cash flow is a valuable indicator for users to determine whether the company's operating activities can generate sufficient cash flow to finance the company's operational activities and pay for debts and dividends without relying on external funding sources.

Book value

Book value can be interpreted as the value of stocks according to the books of the issuer. Book Value per share of stock issued represents the amount of assets/equity owned by the company. Recognizing the book value of a stock is not only crucial to identify the capacity of the price per share of stock. It is also valuable to be used as a benchmark in determining whether the stock price in the market is reasonable or not (market value).

HYPOTHESIS DEVELOPMENT

Effect of Earnings on Stock Returns

Ball & Brown (1968) have examined the relationship between the value of US capital markets (that uses price proxies and stock returns) and the reported accounting earnings. The results of this study indicated that the ability of accounting earnings to summarize information affects firm value.

Based on this explanation, the hypothesis can be formulated as follows:

H1: Earnings affects the Stock Return

Effect of Operating Cash Flow on Stock Returns

Cash flow data is considered to present the main information in evaluating the market price of securities (Hendriksen, 1997). Hartono (2012) conducted a study that examined the effect of earnings and cash flow information on stock prices. The results showed that the total cash flow does not

have a significant effect on stock prices. However, the separation of cash flows into operating cash flow components, funding cash flows, and investment cash flows have a significant effect on stock prices.

Based on this elucidation, the hypothesis can be formulated as follows:

H2: Operating Cash Flow affects Stock Return

Effect of Book Value on the relationship of Earnings and Stock Returns

Book Value issued basically represents the amount of assets/equity owned by the company. Recognizing the book value of a stock is not only crucial to identify the capacity of the price per share of stock. It is also valuable to be used as a benchmark in determining whether the stock price in the market is reasonable or not (market value).

Based on this description, the hypothesis can be formulated as follows:

H3: Book Value strengthens the effect of Earnings on Stock Returns

Effect of Book Value on the relationship between Cash Flow and Stock Return

According to Sopini (2016), the cash flow statement provides information that allows the user to evaluate changes in the company's net assets, financial structure, and the company's ability to generate cash and allow users to develop models, to assess and compare the projected future cash flows of various companies. In addition to cash flow that has information content, which influences investors' decisions, book value also plays an essential role as stated in the study of Collins et al. (1999). It proves that when a company loses, the book value of equity plays an essential role as a proxy for expected future income, then the following hypothesis is formulated:

H4: Book Value strengthens the influence of Cash Flow on Stock Returns

METHODOLOGY

Method

The population of this research was the companies registered in JII in 2016-2018. The sampling technique used was saturated sampling. The total samples for 2016-2018 were 90 samples. Data sources in this study were the annual financial statements of companies registered on the Indonesia Stock Exchange from the website www.idx.co.id and a list of daily stock prices obtained from Yahoo Finance.

Variable Measurement
Stock returns

This study utilized actual stock returns as a proxy for value relevance as the dependent variable, where stock returns were obtained by subtracting current stock prices from stock prices in the previous period and divided by previous period stock prices.

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1}$$

Earnings

Earnings calculation in this study is the current year's net earnings generated by the company. Earnings are the net profit obtained by the company for its operations.

Operating Cash Flow

This study utilized operating cash flow obtained from the annual financial statements section of the statement of financial position.

Book Value

This research applied the book value equity formula where the calculation is obtained from the division of company equity by the number of shares of the company in circulation.

$$Book\,Value = \frac{Equity}{Number\,of\,stocks\,outstanding}$$

Multiple Linear Regression Analysis Test

$$Y = \alpha + \beta_1 EARNINGS + \beta_2 CFO + \varepsilon$$

$$Y = \alpha + \beta_1 EARNINGS + \beta_2 CFO + \beta_3 BV + \beta_4 BV\_EARNINGS + \beta_5 BV\_CFO + \varepsilon$$

Dimana :

Y = *Stock returns*

α = Constant

β = Regression Coefficient

EARNINGS = Earnings/profit

CFO = Operating Cash Flow

BV = *Book Value*

ε = *error*

RESULTS AND DISCUSSION

Kolmogorov-Smirnov non-parametric residual normality test has significance value of p = 5% or 0.05 (Ghazali, 2012). Normality test results show that the residual data of the regression model are normally distributed. The multicollinearity test denotes that there is no correlation between the independent variables, indicated by the Variance Inflation Factor (VIF) value of ≤10 and Tolerance of > 0.10 (Ghazali, 2012). Heteroscedasticity test using Spearman's test also previews that there is no heteroscedasticity condition or the absence of heteroscedasticity symptoms that occur in the estimation process of the estimator model parameters, where the value of sig. > 0.05 (Ghazali, 2012). The autocorrelation test presents a high limit value (dU) of the first equation of 1.6971 with a 4-dU value of 2.3029. The DW value is 2.055, it can be concluded dU <DW <4 - dU (1.6971 <2.055 <2.3029), which means that there is no positive and

negative autocorrelation. Whereas, for the second equation the high limit value (dU) is 1.7740 with a value of 4-dU of 2,226. The DW value is 2.063, it can be concluded that dU <DW <4 - dU (1.7740 <2.063 <2.226), which denotes that there is no positive and negative autocorrelation. The F-test in this study shows that the sig. less than 0.05, which means that the independent variable influences the level of ISR disclosure simultaneously. It indicates that the regression model is declared fit. According to the adjusted R2 Test, the first equation is 0.105, which means that the value of 10.5% of stock return is influenced by earnings, cash flow, and book value variables and the remaining 89.5% is influenced by other variables outside the study. The Adjusted R2 Test for the second equation is 0.078, it indicates that the value of 13.3% stock return is influenced by earnings, cash flow, and book value variables and the remaining 92.2% is influenced by other variables outside the study.

Classic Assumption Test Results

Information	Normality test		Multicollinearity Test		Heteroscedasticity Test	Autocorrelation Test
	K-S	Sig.	Tolerance	VIF	Sig.	
Unst. Residual (1)	1,108	0,171				
Unst. Residual (2)	1,217	0,103				
EARNINGS			0,209	4,793	0,478	
CFO			0,209	4,793	0,833	
BV					0,353	
BV_EARNINGS					0,991	
BV_CFO					0,417	
Durbin Watson						2,055
Durbin Watson						2,063

Source: Secondary processed data

Regression Test Results

Statistical t-test	B	T	Sig.	Information
Constant	-0,002	-0,812	0,419	
EARNINGS	3,217E-9	3,236	0,002	H_1 Accepted
CFO	-2,285E-9	-3,442	0,001	H_2 Accepted
BV_EARNINGS	-2,510E-13	-0,324	0,747	H_4 Rejected
BV_CFO	1,029E-13	0,225	0,823	H_6 Rejected
Statistical F-Test				
Equation 1				
F Value			5,996	
Sig.			0,004	

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Equation 2		
Value F	2,446	
Sig.	0,041	
Test		
Equation 1		
R Square		0,126
Adjusted R Square	0,105	
Equation 2		
R Square		0,133
Adjusted R Square	0,078	

Source: Secondary processed data

Effect of Earnings on Stock Returns

Earnings variable affects the Stock Return variable. It is indicated by the significance value (sig t) of the Earnings variable of 0.002 ($<\alpha = 0.05$), which means the first hypothesis is accepted. This result is in line with research conducted by Purwati, Masitoh W and Chomsatu (2015) that examined the relationship between accounting earnings and cash flow on stock returns. It shows that earnings have a stock return relationship. Accounting earnings have a direct effect on the obtained accounting income that will later be distributed back to shareholders for their investment returns. The greater the increase in earnings obtained the greater the dividends distributed to shareholders. However, this result is not in line with research conducted by Sopini (2016) with the same research variables as research by Purwati, Masitoh W and Chomsatu (2015), which showed that the earnings variable does not affect stock returns. It denotes that earnings are proven to have a relationship to the relevance of the value of information proxied by stock returns.

Accounting earnings information announced by the company will be responded to by the market and becomes a benchmark for investors in assessing the company's performance. The higher the earnings generated by the issuer company, the higher the returns obtained by investors, and vice versa the lower the earnings generated by the issuer company, the lower the returns obtained by investors.

Effect of Operating Cash Flow on Stock Returns

The CFO variable (operating cash flow) has a significance value (sig t) of 0.001. It shows that the significance value of CFO <0.05. It can be concluded that CFO affects the Stock Return or it means that the second hypothesis is accepted. This result is in line with research conducted by Putra and Widaningsih (2016), which mentioned that operating cash flow affects stock returns. Operating cash flow is an indicator of the company whether the company has generated sufficient cash flow from operating activities in paying off debts, funding company operations, dividend distribution, and making new investments without relying on funds from external companies. This result is not in line with research by Ndakudening (2015), which revealed that operating cash flow has no direct effect on stock returns. It denotes that cash flow is proven to have a relationship to the relevance of the value of information proxied by stock returns.

Cash flow statements can be a good parameter for assessing financial performance and providing additional information on the capital market. Cash flow from operating activities is obtained from the main income-generating activities of the company that is directly related to changes in stock prices and also stock returns.

Effect of Book Value on the relationship of Earnings and Stock Returns

Based on the hypothesis testing variable book value, * earnings have a significance value of 0.747 ($>\alpha = 0.05$) so that the third hypothesis is rejected. It proves that the book value does not strengthen nor weaken the relationship of the Earnings variable to the Stock Return variable.

The results of the regression analysis of the equation show the earnings variable gives a parameter coefficient of 3.217 with a significance

level of 0.002. The book value variable gives a parameter coefficient value of 1.385 with a significance level of 0.908, and the moderate variable 2 gives a parameter coefficient value of -2.510 with a significance level of 0.747. Thus, the moderate variable 2 that links the interaction between earnings and book value is not significant, the book value variable is a moderating variable that is homologized moderation, which indicates that the variable has the potential to be a moderating variable. Since the test results show insignificant results, thus, it can be revealed that book value cannot moderate the relationship between earnings and stock returns.

Effect of Book Value on the relationship between Cash Flow and Stock Return

Based on hypothesis testing, the book value * operating cash flow variable has a significance value of 0.823 (> α = 0.05) so that the fourth hypothesis is rejected. It proves that the book value does not strengthen nor weaken the relationship of the Earnings variable to the Stock Return variable.

The results of the regression equation analysis denote the operating cash flow variable that gives a parameter coefficient of -2.285 with a significance level of 0.001. The book value variable gives a parameter coefficient value of 1.385 with a significance level of 0.908, and the moderate variable 2 gives a parameter coefficient value of 1.029 with a significance level of 0.823. Thus, the moderate variable 2 that links the interaction between cash flow and book value is not significant, the book value variable is a moderating variable that is homologized moderation, which means

the variable has the potential to be a moderating variable. Since the test results show insignificant results, thus, it can be revealed that book value can moderate the relationship between cash flow and stock returns.

CONCLUSION

This study is conducted to examine the effect that is directly related to the relevance of earnings and cash flow information-clarification capability on stock returns by book value as a moderating variable. This study used 90 samples of companies registered on the Jakarta Islamic Index (JII) in 2016-2018. Based on the results of the analysis obtained, it can be concluded as follows:

a. Earnings variable influences the Stock Return variable. It is indicated by the significance value (sig t) 0.002 (<α = 0.05). Thus, it can be imparted that earnings have a relationship to the relevance of value that is proxied by stock returns.

b. Operating Cash Flow Variable influences the Stock Return variable. It is indicated by the significance value (sig t) of 0.001 (<α = 0.05). Thus, it can be revealed that Operating Cash Flow has sufficient evidence of significant value relevance to Stock Return.

c. Based on the results of the second regression equation that rejects the book value variable as a moderating variable on the relationship of earnings and flows with stock returns, it is recognized that the moderating variable in this study is a moderator homologous variable.

REFERENCES

[1] Ball, R., & Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research*, *6*(2), 159-178.

[2] Barth, M. E., W. H. Beaver, dan W. R. Landsman. 2001. The Relevance of The Value Relevance for Accounting Policy Makers: Another View. *Journal of Accounting and Economics* 1-38.

[3] Fama, E.F. 1970. "Efficient Capital Market: A Review of Theory and Empirical Work". *Journal of Financial 25* : 383-417.

[4] Ghazali., Imam. 2012. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 20*. Badan Penerbit Universitas Diponegoro.

[5] Gitman, L. J., & Zutter, C. J. 2015. *Principles Of Managerial Finance, 14th edition*. London: Pearson Education Limited.

[6] Hartono, S. 2012. Pengaruh Informasi Laba Dan Arus Kas Terhadap Harga Saham. *Jurnal Ilmiah Akuntansi No.7*.

[7] Hendriksen, E. 1997. Accounting Theory, 4th edition. Jakarta: Erlangga

[8] Kurniawan, A. & Yusra, I.2019. Apakah Profitanilitas dan Nilai Buku Berdampak Terhadap Return Saham? Studi Empiris Pada Perusahaan LQ45.

[9] Ndakuneding, Glorious G. 2015. Pengaruh Arus Kas Operasi Terhadap Return Saham Dengan Earning Per Share (EPS) Sebagai Variabel Mediasi (Studi Pada Perusahaan Properti dan Real Estate yang terdaftar di Bursa Efek Indonesia, di Luar LQ45, Tahun 2011-2013).

[10] Oyerinde, D. T. 2009. Value Relevance of Accounting Information in Emerging Stock Market: The Case of Nigeria. *Repositioning African Business and Development for the 21th Century, Proceedings of the 10th Annual Conference*.

[11] Parawiyati, Ambar dan Edi. (2000). Penggunaan Informasi Keuangan untuk Memprediksi Keubtungan Investasi bagi Investor diPasar Modal. Jurnal Riset Akuntansi Indonesia, Vol. 3, No. 2, Juli 2000.Hal. 214 – 228.

[12] Purwanti, Sri., W, Endang, M., & Chomsatu, Yuli. (2015). Pengaruh Laba Akuntansi dan Arus Kas Terhadap Return Saham Perusahaan yang Listing di BEI. *Jurnal Akuntansi dan Pajak*. 16(1): 113-123.

[13] Putra, Yogie R., & Widaningsih, M. 2016. Pengaruh Laba Akuntansi, Komponen Arus Kas, dan Dividend Yield Terhadap Returm Saham (Studi pada Perusahaan Sektor Pertambangan di Bursa Efek Indonesia Periode 2012-2014). Jurnal Riset Akuntansi dan Keuangan. 4(2).

[14] Scott, W. R. (2015). *Financial Accounting Theory, 7th edition*. USA: Pearson Canada, Inc.

[15] Sha, T. L. (2015). Pengaruh Kebijakan Dividen, Likuiditas, Net Profit Margin, Return on Equity, dan Price to Book Value Terhadap Harga Saham pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia 2010-2013.

[16] Sopini, P. (2016). Pengaruh Laba Akuntansi dan Arus Kas Terhadap Return Saham. Eksis 7(1).

[17] The Statement of Financial Accounting Concept (SFAC) No.1. 1978. Financial Accounting Standards Board (FSAB).