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Relevance of Earnings Value, Book Value, and Operating Cash Flow in Manufacturing Companies in Indonesia

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Abstract

Research aims: This study examines the value relevance of accounting information consisting of earnings information, book values, and operating cash flows after Indonesia uses the full convergence of IFRS Financial Accounting Standards.

Design/Methodology/Approach: The value relevance test was conducted using Ohlson's (1995) pricing model and Easton and Harris' (1991) return model. The valuation model test employed two regression equations, i.e., testing the relationship between earnings information and book value with stock prices and then testing the relationship between earnings information, book value, and cash flow with stock prices. In addition, the return model testing was performed to examine the relationship between earnings information and earnings changes with stock returns and the relationship between cash flow and cash flow changes with stock returns. The research sample was 105 manufacturing companies, with a research period from 2016 to 2019.

Research findings: The test results with the pricing model approach revealed that earnings and cash flow had value relevance, while book value had no value relevance. This study's results suggest that earnings and cash flow information are helpful for investors in making investment decisions. Moreover, the test results with the return model approach also uncovered those earnings, changes in earnings, and changes in operating cash flows had value relevance while operating cash flows, on the other hand, had no value relevance.

Theoretical contribution/Originality: The utilized two models complement each other, and this study provides empirical evidence for standard setters who can renew beliefs about how much accounting information is reflected in stock prices in Indonesia, especially the manufacturing sector, after the full convergence of IFRS Financial Accounting Standards is applied.

Keywords: Value Relevance; Pricing Model; Return Model

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Introduction

Research on value relevance essentially aims to examine the usefulness of accounting information in determining firm value. It is reinforced by the views of Barth et al. (2001) that value relevance is one approach to operationalizing the relevant and reliable criteria as required by the International Accounting Standard Board (IASB) conceptual framework. Relevant information can influence investors' beliefs about future returns. Reliable information also affects investor confidence since it represents what it wants to measure. Studies on the value relevance of accounting

information are extensive and varied. Therefore, understanding the concept of value relevance is needed for researchers who want to explore value relevance research (Puspitaningtyas, 2018). The term value relevance became popular in the early 1990s in the accounting field, replacing the positive accounting theory approach widely used in the era of accounting research in the 80s. Value relevance research also uses fundamental methods and focuses on testing variables thought to explain the firm value. Nilson (2003) suggests four approaches that can be used to assess the value relevance of accounting information: fundamental, prediction, information, and measurement analysis approaches.

This study used a measurement approach. In this regard, accounting is seen as an instrument for measurement. Using this approach, the value relevance of financial statement information is measured based on the ability of financial statements to reflect information affecting the company's equity value (Francis & Schipper, 1999). The measurement approach is also categorized as an indirect test of the usefulness of accounting information for valuation purposes. Specifically, value relevance is determined based on valuation models examining the relationship between market and accounting metrics (Marton, 1998).

The models often employed in the measurement approach are the pricing and the return models. The return model was developed by Easton and Harris (1991), while the pricing model was proposed by Ohlson (1995). The two models complement each other and play an essential role in value-relevance research. The pricing model describes the relationship between market value and two accounting information, i.e., book value and earnings (Ohlson, 1995). Based on Ohlson's (1995) pricing model, the relevance of information is gauged by linking earnings and book value information to stock prices. In this study, the pricing model was tested with two regression equations. The first is to relate earnings and book value information to stock prices. Then, the second equation examines earnings information, book value, and operating cash flow on stock prices. Recent value-relevance literature has revealed that operating cash flows contain value-relevant information (Bepari et al., 2013; Tahat & Alhadab, 2017). Based on the assumption of a clean surplus accounting (CSA), Ohlson (1995) developed a pricing model to measure value relevance. The pricing model also provides a structured basis for examining the value relevance of accounting data, stating that stock prices are a direct function of earnings and book value information. Meanwhile, the return model was put forward by Easton and Harris (1991). The return model stems from the phenomenal work of Ball and Brown (1968), who found that earnings have value relevance to stock returns. The earnings information used is the earnings level.

This study aims to examine the relevance of accounting information values consisting of information on book value, earnings, and operating cash flow in manufacturing sector companies after the IFRS adoption. The reason for choosing the manufacturing sector is that manufacturing companies have significant fixed assets, so using IFRS is relevant. It is also because IFRS uses the fair value in measuring assets and liabilities, which can reflect the company's economic condition. Furthermore, research examining value relevance comprehensively in manufacturing companies is rarely performed.

Another motivation that underlies research on value relevance is the mixed results of previous studies. For example, Puspa's (2006) study found that operating income and cash flow had value relevance. The value relevance of the earnings was higher than that of operating cash flows. Research by Shamki and Rahman Abdul (2011) also revealed that net income information had value relevance, while information on book value and operating cash flow had no value relevance. Here, net income had a higher value relevance than book value and cash flows. Moreover, the research results of Faghani Makrani and Abdi (2014) showed that the effect of book value, net income, and cash flow decreased from 2007 to 2012. Also, book value had greater value relevance than net income and cash flow. Then, Mirza et al. (2018) uncovered that the book value of equity had value relevance in decision-making, while earnings had no value relevance. Thus, investors pay more attention to book value and less to earnings information in making investment decisions because of the perception of managerial bias in reported earnings. The research results of Bawono et al. (2020) also demonstrated that earnings and cash flow affected stock returns, while book value was not proven to be a moderating variable.

Further, the results of this study contribute to the standard-setting board concerning the quality of financial reporting information, especially information on earnings, book value of equity, and operating cash flows. The more relevant and reliable financial reporting for economic decision-making is for users, especially investors, the higher the quality of the information. The research results also contribute to the development of accounting literature, particularly financial accounting, and capital markets, and especially regarding the contribution of the book value of equity, earnings, and operating cash flow to firm value, which is reflected in stock prices and stock returns.

Literature Review and Hypotheses Development

Decision usefulness theory and the concept of a clean surplus accounting (CSA) underlie value relevance research with pricing model and return model measurement approaches, explaining that quality accounting information will be used for decision-making by users (Staubus, 2000). These theories are also employed as a reference in preparing the conceptual framework of the Financial Accounting Standard Board regarding the Statement of Financial Accounting Concepts (SFAC) in the United States (Staubus, 2000). Research on the relevance of accounting values is motivated by the need to assess the quality of accounting information that makes accounting information valuable in decision-making. In SFAC No. 2, value relevance and reliability are the primary qualities accounting information must meet to be useful for economic decision-making. Information is said to be relevant if the information can be used as a basis for making business decisions (Barth et al., 2001). In addition, value relevance research using direct valuation is intended to measure the relationship between accounting earnings and the market value of equity, either at the level of the market value of equity or changes in the market value of equity. Based on this direct valuation, standard setters are interested in researching the relationship between stock prices and accounting earnings compiled from several alternatives or measurements of the book value of equity.

Furthermore, the return and valuation models are widely used to measure value relevance. The fundamental difference between the two is that the return model aims to examine whether accounting information describes events affecting stock prices during the return period, while the valuation model investigates whether accounting information is included in stock prices cumulatively up to a specific point in time (Chen et al., 2001; Barth et al., 2001). The return model, theoretically, is superior to the pricing model since it uses the well-established Capital Asset Pricing Model (CAPM) theory. Meanwhile, the pricing model has not been based on an established valuation, but the pricing model produces an unbiased earnings coefficient because stock prices reflect the cumulative effect of earnings information (Kothari & Zimmermen, 1995). In addition, the return model developed by Easton and Harris (1991) stems from the phenomenal work of Ball and Brown (1968), who found that earnings changes have value relevance to stock returns. Theoretically, Easton and Harris (1991) assert that the level of earnings can be the best variable to explain return, even though the time series of earnings follow a random walk. Further, the return model developed by Easton and Harris (1991) expands the previous return model by including two variables of accounting information at once, i.e., the level of earnings and changes in earnings.

On the other side, the pricing model based on Ohlson's (1995) model indicates how market value is related to both the book value of equity and accounting earnings. Based on the assumption of a clean surplus accounting (CSA), Ohlson (1995) developed a pricing model to measure value relevance. The pricing model also provides a structured basis for examining the value relevance of accounting data since stock prices are a direct function of earnings and book value information. Besides, because these two components of accounting information play distinct roles in determining security prices, Ohlson's (1995) model broadens the scope of value-relevance research. The use of the two models, the return and pricing models, is further recommended as the two models complement each other regardless of their advantages and disadvantages.

Value Relevance of Earnings Information and Book Value

Studies investigating the value relevance of earnings information and book value with the Ohlson's (1995) model approach have been conducted in various countries and Indonesia with mixed research results in the last few decades. Some research results showed that earnings and book value information had value relevance (Puspa, 2006; Gee-Jung, 2009; Subekti, 2012; Ardila & Setiawan, 2018).

Several other studies have also documented different findings. Mirza et al. (2018) specified that the book value of equity had value relevance in decision-making, while earnings had no value relevance. Mostafa's (2016) research showed that if earnings and book value information were tested separately using simple regression, the results revealed that earnings and book value information had value relevance. On the other hand, if book value and earnings were assessed simultaneously utilizing multiple regression, the findings uncovered that earnings information had value relevance, while book value had no value relevance. In addition, a study by Shamki and Abdul Rahman (2012), examining value relevance individually and in the aggregate, exposed that 8 of 11

annual earnings regressions had value relevance, likewise for book value. However, their research results for panel data documented that earnings information had value relevance, whereas book value had no value relevance. In conclusion, earnings are more helpful in explaining market value. Based on the results of previous studies, the following hypothesis could be formulated:

H_1: *Earnings and book value have value relevance.*

Relevance of Earnings Value, Book Value, and Cash Flow

The 2018 Conceptual Framework for Financial Reporting (IASB) states that the statement of comprehensive income, financial position, and cash flows helps investors make investment decisions. Based on a review of the research results on the relevance of earnings value, book value, and cash flows conducted in developing countries, it is concluded that the research results are inconsistent and inconclusive. In this case, some researchers found that earnings are more relevant to investors' investment decisions than the book value of equity and operating cash flows. Others reported that the book value of equity is more value-relevant than operating income and cash flow. In contrast, other studies revealed that investors pay more attention to operating cash flows in making investment decisions.

Moreover, research conducted by Badu and Appiah (2018), Prihatini and Susanti (2018), Mostafa (2016), and Shamki and Rahman Abdul (2011) concluded that earnings information had higher value relevance than operating cash flow and the book value of equity found in the research results. It indicates that investors more trust earnings information for investment decision-making. In contrast, other studies by Almujamed and Alfraih (2019), Mirza et al. (2019), and Pervan and Bartulović (2014) showed that earnings had no value relevance, or the value relevance of earnings decreased compared to cash flow and book value. Investors then switched to using information other than comprehensive income since the content of earnings information was less relevant in making investment decisions, primarily if the management conducted managerial bias earnings management. Other researchers examining the relevance of the book value of equity unveiled that the book value of equity was more relevant for investment decision-making than earnings information and cash flows. Earnings information also becomes less relevant, particularly for companies that suffer losses or have small earnings, so investors use the information on the book value of equity (Mehmood et al., 2019, Mirza et al., 2019; Sharma et al., 2012; Tanaka, 2015). Meanwhile, the other results documented that operating cash flow information had more value relevance than earnings information and book value of equity since earnings information had a managerial bias, especially if there were indications of earnings management (Mostafa, 2016; Penman & Yehuda, 2009; Saeedi & Ebrahimi, 2010). Based on the description above, the hypothesis was derived:

H_2: *Earnings, book value, and cash flows have value relevance.*

Relevance of Earnings Value and Earnings Changes

Earnings play a vital role in determining the firm value. An extended study of the effect of earnings in explaining stock returns stems from the concept of Ball and Brown (1968), suggesting that unexpected earnings can explain stock returns. Their research used earnings changes as a natural proxy for unexpected earnings. Therefore, in the early studies that examined the relationship between earnings and stock returns, earnings changes were utilized as a variable that could explain stock returns. The study results (Ball and Brown, 1968) also provide empirical evidence that earnings have value relevance (Beaver, 1968), supporting the main findings (Ball & Brown, 1968).

Initially, value relevance research was mainly conducted in developed countries focusing on earnings. Earnings have been reported to have value relevance and support investors' decision-making (Beaver et al., 1979; Collins et al., 1997; Easton & Harris, 1991; Foster, 1977; Amir & Lev, 1996; Patell & Wolfson, 1984). On the other hand, Easton and Harris (1991) theoretically assert that the earnings level can be the best variable to explain return, even though the earnings time series follows a random walk. This argument seems to imply that the value relevance of changes in earnings and earnings levels does not depend on whether earnings are permanent.

In its development, the Easton and Harris (1991) model is widely employed by researchers to investigate the value relevance of earnings information. This model uses earnings information, both at the level and on changes in earnings. In addition, earnings information has value relevance if the earnings level and earnings changes influence stock returns. The results of previous studies have shown that earnings had value relevance and support investors for decision-making (Easton & Harris, 1991; Agnes Cheng et al., 2013; Amir & Lev, 1996; Patell & Wolfson, 1984). Based on this description, the following hypothesis is proposed:

***H_3**: Earnings and earnings changes have value relevance.*

Relevance of Operating Cash Flow Levels and Changes in Operating Cash Flow

Typically, often studied value-relevance research is related to earnings and book value information (Kothari, 2001). Previous literature has stated that operating cash flows also contain value-relevant information (Bepari et al., 2013; Tahat & Alhadab, 2017)). The IASB (2018) supports that operating cash flows contain relevant information. Based on that, operating cash flows contribute to supporting investment decision-making.

A study by Mirza et al. (2019), using the stock price model, found that operating cash flow had value relevance, and operating cash flow information affected stock prices. In this regard, the pricing and the return models, in essence, have the same theoretical foundation. In addition, Puspa's (2006) research revealed that earnings and operating cash flows had value relevance. The results also showed that the value relevance of earnings information was higher than operating cash flow information. Operating cash

flow here reflects the company's ability to have cash flow internally from the primary business operations so that it can be used to measure performance, which can affect operating cash flow.

Moreover, investment and financing cash flows are functions of operating cash flows. Operating cash flows will determine the need for external financing and future investments. Operating cash flow is also real money compared to net income, which has led to an intensive discussion in previous research about the preference for the relevance of the value of operating cash flows to the relevance of the value of net income (Ragab and El-Chaarani, 2018). Besides, the research results by Freeman and Tse (1992) and Dimitropoulos et al. (2010) argue that investors look for alternative measurements other than earnings to assess performance, namely cash flow information, as a value-relevant variable. Based on the previous explanation, the following hypothesis was put forward:

***H_4**: Cash flow levels and changes in cash flows have value relevance.*

Research Method

The research population was all manufacturing companies listed on the Indonesia Stock Exchange from 2016 to 2019. The research sample was 105 manufacturing companies, and with a data collection period of four years, the number of research observations was 420 companies. Further, this study used two models: the return and pricing models. The pricing model by Feltham and Ohlson (1996) consisted of two equations. First, the pricing model related earnings and book value to stock prices, and second, the pricing model correlated earnings, book values, and cash flows to stock prices. On the other side, the return model by Easton and Harris (1991) was divided into equations linking earnings and stock returns and those correlating operating cash flows and stock returns.

Pricing model: Book value and earnings

This model examined the relationship between earnings information and book value with stock prices.

$MVjt = a0 + at1BVjt + at2Ejt + ejt$ (1)

$MVjt = a0 + at1BVjt + at2Ejt + at3CFjt + ejt$ (2)

Return model: Earnings and cash flow

This model scrutinized the relationship between earnings information and earnings changes on returns. This study tested the relationship between cash flow and changes in cash flow to return.

$RETjt = a0 + at1Ejt/Pjt-1/+at2(Ejt-Ejt-1)/Pjt-1+ejt$ (3)

$RETjt = \beta0 + \beta t1CFjt/Pjt-1/+\beta t2(CFjt-CFjt-1)/Pjt-1+ejt$ (4)

Results and Discussion

The descriptive statistical test results using the pricing and the return models are shown in Table 1. Table 1 displays descriptive statistics for book value, earnings, and stock market prices.

Table 1 Descriptive statistics

	Mean	Std Dev	Minimum	Median	Maximum
MV	-0.002	0.044	-0.183	-0.001	0.068
Book Value	0.087	0.273	-2.301	0.025	1.863
Return	-0.004	0.045	-0.125	-0.005	0.099
CFO	0,078	0,273	-2,301	0,021	1,864
EPS	0.045	0.065	-0.170	0.048	0.196
CFPS	0.078	0.263	-2.301	0.021	1.863
CFO Changes	0.007	0.070	-0.356	0.042	0.286
EPS Changes	0.007	0.066	-0.193	0.012	0.198
CFPS Changes	0.007	0.070	-0.356	0.042	0.286

Table 2 presents the value relevance test results using Ohlson's (1995) pricing model approach. The tested pricing model consisted of two regression equations. Model 1 examined the relationship between earnings and book value on stock prices. Meanwhile, Model 2 inspected the relationship between earnings, book value, and operating cash flow. In Model 1, the book value had a positive coefficient of 0.009 and a significance value of 0.273. Earnings also had a coefficient of 0.095 and a significance value of 0.0045. The results of this study indicate that earnings affected stock prices, while book value did not affect stock prices. Based on the results of testing Model 1, it can be concluded that earnings are accounting information investors use in making investment decisions. Usually, often studied value relevance research is the relevance of earnings value and book value (Kothari, 2001). In addition, Ohlson's (1995) model states that firm value is a function of book value plus the present value of future residual income and other information.

Table 2 The results of the multiple regression test with the pricing model: book value, earnings, and cash flow

MODEL 1			MODEL 2			
$MV_{jt} = a_0 + a_{t1}BV_{jt} + a_{t2}E_{jt} + e_{jt}$			$MV_{jt} = a_0 + a_{t1}BV_{jt} + a_{t2}E_{jt} + a_{t3}CF_{jt}^{+}e_{jt}$			
a_0	**Book Value (BV)**	**E(earnings)**	a_0	**Book Value (BV)**	**E (earnings)**	**Cash Flows from Operation (CFO)**
- 0.005	0.009	0.095	-0.005	-0.071	0.107	0.085
- 2.290	1.084	2.859***	−2.363	−2.271**	4.117***	2.644***
	Sig (0.273)	Sig (0.0045)		Sig (-0.024)	Sig (0.000)	Sig (0.008)

Dependent variable: Stock prices (market values) four months after the end of the financial year
Significant at 0.1 *; Significant at < 0.05 **; Significant at < 0.01***.

Ohlson (1995) redefined the purpose of value relevance research by developing a modeling structure that associates earnings and book value information with firm value. This study showed that book value had no relevance for investors in making investment decisions. In addition, earnings on an accrual basis, according to the IASB, are the most important financial reporting information used to predict a company's future cash flows to assist investors in making investment decisions. The results of this study strengthen the IASB notation. Information, especially earnings, is superior for making investment decisions. Previous research in developing countries has noted that earnings, book value, and operating cash flow are value-relevant, but earnings are more value relevant than operating cash flow and book value. The results also revealed that investors believe that earnings are vital information for making investment decisions (Badu & Appiah, 2018; Mostafa, 2016; Prihatini & Susanti, 2018; Shamki & Rahman Abdul, 2011; Hung & Subramanyam, 2007).

Moreover, many studies have consensus that earnings still have value relevance, but their value relevance is reduced because investors also believe that the book value of equity and operating cash flows play a role in investment decision-making (Gan et al., 2016; Kwon, 2018; Tahat & Alhadab, 2017). Collins et al. (1997), using Ohlson's (1995) model, found empirical evidence that book value has greater value relevance in contrast to earnings. The shift in value relevance from earnings information to book value results from increasing companies reporting losses and the number of temporary (non-permanent) items in earnings. In this study, the argument about the shift in the relevance of earnings to book value is not proven in Indonesia.

Table 2 also reports the results of Ohlson's (1995) pricing model testing by adding the tested operating cash flow variables together with book value and earnings (Model 2). The results showed that information on book value, earnings, and cash flow had value relevance. The book value had a negative coefficient value of -0.071 and a significance value of 0.024. Thus, book value had a negative effect on stock prices. Then, earnings had a coefficient value of 0.107 and a significance value of 0.000, indicating that earnings could explain stock prices. In addition, cash flow had a positive coefficient value of 0.0895 and a significance value of 0.008. In other words, cash flow can be used to determine stock prices. The results of this study also suggest that although it affected stock prices, book value had a negative coefficient sign. This finding is not in line with the pricing model (Ohlson 1995), stating that firm value is a function of book value plus the present value of future residual income and other information. Further, because book value affected stock prices even with a negative coefficient, it can be concluded that book value had no value relevance. Then, the results of this study have proven that earnings are superior to operating cash flow and book value. Earnings information here is helpful for investors as a basis for making investment decisions.

Furthermore, the results revealed that operating cash flow, based on Ohlson's (1995) pricing model, affected stock prices. Thus, operating cash flows had value relevance and could be used by investors for investment decisions other than earnings. In addition, recently, value relevance researchers have begun to focus on investigating the relevance of operating cash flows. Operating cash flow provides an overview of the organization's

ability to survive in the long term and is seen as information to predict future cash flows, thus helping investors make investment decisions, mainly if earnings include earnings management practices (Lee, 1974).

Furthermore, most empirical literature still believes that operating income and cash flow provide accounting information with value relevance, but the value relevance of earnings is higher than operating cash flow (Bepari, 2015; Charitou et al., 2001; Garrod et al., 2003; Habib, 2008; Miranda-Lopez & Nichols, 2012).

Table 3 Simple regression results with pricing model: book value, earnings, and cash flow

Year	Book value $MV_{jt} = a_0 + a_{t1}BV_{jt}+e_{jt}$		Earnings $MV_{jt} = a_0 + a_{t1}E_{jt}+e_{jt}$		Cash flow $MV_{jt} = a_0 + a_{t1}CF_{jt}+e_{jt}$	
	a_0	BV	a_0	E	a_0	CF
2016	0.008	0.014	0.007	0.106	0.008	0.014
	1.669	1.183	1.455	2.164**	1.729	1.128
		Sig (0.239)		Sig (0.033)		Sig (0.262)
2017	0.005	-0.012	0.003	0.118	0.004	0.004
	1.143	-0.493	0.707	2.804***	0.894	0.135
		Sig (0.623)		Sig (0.006)		Sig (0.892)
2018	-0.00003	-0.109	-0.001	0.02	-0.001	-0.474
	-0.009	1.807*	-0.358	0.424	-0.160	-0.590
		Sig (0.074)		Sig (0.672)		Sig (0.556)
2019	-0.026	0.021	-0.026	0.084	-0.025	0.019
	-5.775	1.770*	-5.774	1.790*	-5.686	1.526
		Sig (0.080)		Sig (0.076)		Sig (0.130)
2016-2019	-0.004	0.013	-0.004	0.084	-0.004	0.016
	-1.653	1.662*	-2.013	3.538***	-1.695	1.895***
		Sig (0.097)		Sig (0.000)		Sig (0.008)

Significant at 0.1 *; Significant at < 0.05 **; Significant at < 0.01***.

Table 3 summarizes the regression test results on an annual basis for four years for each variable of book value, earnings, and operating cash flow. The annual regression test results demonstrate that book value information had value relevance from 2018 to 2019, except for 2016 and 2017, and it had a negative coefficient sign for 2018. Thus, it can be concluded that book value relevance is not in accordance with Ohlson's (1995) pricing model. In addition, earnings information had value relevance from 2016 to 2019, except for 2018. Meanwhile, cash flow information had no value relevance in the 2016 to 2019 test timeframe.

Then, the pooled data regression test from 2016 to 2019 uncovered that the book value had a coefficient value of 0.013 and a significance value of 0.097. In other words, book value affected stock prices. In addition, earnings had a positive coefficient of 0.084 and a significance value of 0.000. Also, operating cash flow had a positive coefficient value of 0.016, with a significance value of 0.008. Further, this simple regression test's results strengthen the previous test findings presented in Table 2, documenting that earnings information had a more dominant value relevance than book value and operating cash flows.

Table 4 Multiple regression test results with the return model: earnings and cash flow

MODEL 3			MODEL 4		
$RET_{jt} = a_0 + a_{t1}E_{jt}/P_{jt-1}+a_{t2}(E_{jt}-E_{jt-1})/P_{jt-1}+e_{jt}$			RET_{jt} return$= \beta_0 + \beta_{t1}CF_{jt}/P_{jt-1}+\beta_{t2}(CF_{jt}-CF_{jt-1})/P_{jt-1}+e_{jt}$		
a_0	E_{jt}/P_{jt-1}	$(E_{jt}-E_{jt-1})/P_{jt-1}+e_{jt}$	β_0	CF_{jt}/P_{jt-1}	$(CF_{jt}-CF_{jt-1})/P_{jt-1}$
−0.012	0.142	0.151	−0.005	0.010	0.128
−3.914	3.267***	3.927***	−2.439	1.096	3.679***
	Sig (0.0012)	Sig (0.0001)		Sig (0.2739)	Sig (0.0003)

Significant at 0.1 *; Significant at < 0.05 **; Significant at < 0.01***.

Table 4 displays the multiple regression test results with the return model consisting of two equations (Model 3 and Model 4). The first was the regression equation examining the relationship between earnings and earnings changes to returns. The second was a regression equation investigating the relationship between cash flows and changes in cash flows to returns. Based on Table 4, the earnings coefficient was 0.142, which is positive, with a significance value of 0.0012, and the coefficient of earnings change was 0.151, with a significance value of 0.0001. The coefficient values were less than 0.01. Thus, it can be concluded that earnings information and changes positively affect stock returns.

Furthermore, the hypothesis testing results indicate that the earnings level and earnings changes had value relevance. These results strengthen Ball and Brown's (1968) research findings, asserting the importance of earnings information for determining firm value. According to Ball and Brown (1968), earnings changes are a proxy for unexpected earnings that can explain returns, likewise for earnings levels. The results of this study align with the results of studies such as Agnes Cheng et al. (2013); Shamki and Abdul Rahman (2012); Chen et al. (2001); Graham et al. (2000); Lev and Zarowin (1999); Francis and Schipper (1999); Collins et al. (1997); Alford et al. (1993). Their study results documented that the earnings level and earnings changes had value relevance. The research results by Agnes Cheng et al. (2013) and Shamki and Abdul Rahman (2012) also found that the earnings level could predict future earnings and future returns better than earnings changes.

Since earnings levels have higher value relevance than earnings changes, earnings levels can be used to estimate expected future earnings. Earnings levels are also seen as stable compared to earnings changes. In other words, earnings levels are a proxy with better value relevance in the earnings-return relationship. Meanwhile, earnings changes are susceptible to temporary or non-permanent earnings. On the other hand, this study's results indicate that earnings changes had higher value relevance than earnings levels. It is not consistent with the research results by Easton and Harris (1991), which showed that the level of earnings is the most important variable in explaining stock returns and that the value relevance of the earnings levels does not depend on the permanence of earnings, as in a study by Agnes Cheng et al. (2013). The results of this study also documented that earnings information had value relevance with adopting the IFRS Converged Accounting Standards. In addition, the earnings information presented in the comprehensive income statement has quality information since it helps make economic decisions for its users.

In Model 4 (Table 4), the coefficient of cash flow level was positive at 0.01 and was not significant. Also, the coefficient of change in cash flows was 0.128, with a significance value of 0.0003. Hence, it can be concluded that the level of cash flow did not affect stock returns, while changes in cash flow positively affected stock returns. Therefore, the hypothesis testing results only partially support the proposed hypothesis. In this case, the level of operating cash flow had no value relevance in making investment decisions by investors; on the contrary, changes in cash flows had value relevance. This study's results are inconsistent with the research findings reported by Mostafa (2016), examining the relevance of operating cash flows to aspects of levels and changes in cash flows in Egypt. His research also found that cash flow, both at the level and change, did not impact stock returns. These results suggest that cash flow had no relevance in investors' decision-making in Egypt. It is because, in Egypt, cash flow had a high variance and was not persistent. Another explanation is that financial statement users are more familiar with net income information than cash flow. These results are also inconsistent with US and UK studies (Cheng & Yang, 2003; Mostafa & Dixon, 2013; Mostafa, 2016).

Based on the test on the return model, it can be concluded that earnings information had a higher value relevance than cash flow information. This finding is in line with the rationality given by the conceptual framework of financial reporting related to the dominance of earnings in deciding investments due to the perception of managerial bias in earnings, especially if there is earnings management. In other words, cash flow information had less value relevance than earnings information. It is indicated by the level of cash flow from operations, which had no value relevance, meaning that information on operating cash flow levels did not affect stock returns. Thus, cash flow information did not have the quality of information indicated by relevant and reliable criteria, as stated in the conceptual framework for preparing accounting standards. However, operating cash flows provide beneficial information on liquidity and solvency that can help predict potential financial failures and evaluate a company's ability to pay dividends and meet its obligations. Thus, when evaluating company performance, cash flow and earnings information play a role and complement each other. Although operating cash flow is less relevant, earnings are also an accrual-adjusted operating cash flow and are still proven to have value relevance. In addition, book value information had no relevance to stock prices, even though Indonesia has adopted full IFRS. The conclusion of the hypothesis test results can be seen in Table 5.

Table 5 Conclusion of hypothesis test results

Description	Model	Conclusion
Hypothesis 1	Model 1	The hypothesis is partially supported.
Hypothesis 2	Model 2	The hypothesis is partially supported.
Hypothesis 3	Model 3	The hypothesis is supported.
Hypothesis 4	Model 4	The hypothesis is partially supported.

Conclusion

This study aims to examine the value relevance of accounting information consisting of earnings information, book value, and operating cash flows after Indonesia uses the full convergence of IFRS Financial Accounting Standards, proxied to measure the value quality of information using two models. The regression test on the pricing model showed that earnings had a higher value relevance than cash flow. The results of this study support the 2018 IASB conceptual framework, which places earnings as superior information in making investors' investment decisions. Earnings based on the accrual basis, according to the IASB, are the most important financial reporting information used to predict the company's future cash flows, which will assist investors in making investment decisions. This finding is reinforced by the simple regression test results, which separately examined information on book value, earnings, and cash flow on stock prices annually and by pooled data.

Meanwhile, in the return model, changes in cash flow had value relevance, while cash flow levels had no value relevance. This result contradicts the results tested with the pricing model, where the level of cash flow had value relevance. The results of the return model investigating the earnings levels and earnings changes revealed that these two variables had value relevance. Based on testing on all models, both the pricing and the return models, it can be concluded that earnings information dominated the value relevance of financial statement information. Thus, earnings are more important for investors in deciding to invest in Indonesia.

Further, future research is expected to compare the quality of information before and after IFRS-based financial accounting standards were adopted in Indonesia in the manufacturing sector. For regulators, such as the standard-setting board, the results of this study provide empirical evidence about the value relevance of financial reporting information prepared using IFRS converged accounting standards. Comprehensively, the results of this study prove that earnings remain the most relevant accounting information in company valuation compared to book value and cash flow.

Principally, value relevance research can be tested using regression analysis and portfolio return methods. The portfolio return method measures value relevance by determining the proportion of all information that accounting measurements can capture in security returns. On the other side, the portfolio return method has the advantage of statistical aspects compared to the regression method since the portfolio return can control changes in the movement of market returns over a specific time. However, in the literature, the value relevance research uses the regression method more widely. Therefore, it is recommended that further researchers use a portfolio return approach in testing the value relevance of accounting information to expand the model for testing the value relevance of accounting information in Indonesia.

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