THE VALUE RELEVANCE OF ACCOUNTING INFORMATION IN INDONESIA : Portfolio Return Approach

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Abstract

Accounting Regulations in Indonesia have been strengthened over the past three decades as part of broader program of market-driven regulatory reform. Some efforts have been made by Indonesian Institute of the Accountants and government in enhancing the quality of accounting information presented in financial reporting since the reopening of Indonesian capital market in 1977. The central element of these efforts was the introduction of International Accounting Standards (IASs) to replace the old Indonesian accounting principles in late 1994. In late 1994, the Indonesian Institute of Accountants, launched a new set of financial accounting standards, known as Financial Accounting Standards. At the same time, the Indonesian government had introduced changes to company and capital market laws which have given these standards legal backing and provided mechanisms by which minority shareholders can seek damages from public companies if they produce misleading financial information. Collectively, these efforts may have had a positive impact on the confidence of Indonesian investors in accounting numbers.

This study is conducted to measure the value relevance of accounting information in Indonesia using the portfolio returns approach. Specifically, the objectives of this study are to examine the value relevance of accounting information under Indonesian accounting principles and financial accounting standards regimes. Sample covers 75 companies that have listed in Jakarta Stock Exchange in 1991. The sample period is 1991 to 2001.

The results show that the book value of equity plus the level and change in earnings are value- relevant for each year sample. The average of value relevance across the entire sample period is about 53.28%. This result indicates that about 53.28% of total perfect foresight returns are available to investors with advance knowledge of book value of equity plus the level and change in earnings. Furthermore, the findings in the Indonesian Accounting Principles regime (the Financial Accounting Standards) showed that knowledge of book value of equity plus the level and change in earnings earns, on average, 49.22% (55.45%) of total available returns. Statistically, the result showed that there is no difference the value relevance under the Indonesian Accounting Principles (IAPs) and the Financial Accounting Standards (FASs) regimes.

Keywords: *Value relevance; portfolio returns, book value, earnings*

1. Introducation
1.1. Background

The value relevance literature is related to the usefulness of financial statement information in equity valuation. Francis and Schipper (1999) have documented four approaches to research on the value relevance of accounting information. These are the fundamental analysis view of value relevance, the prediction view of value relevance, the information view of value relevance and the measurement view of value relevance (Nilsson, 2003).

In the 1990s, many studies on value relevance use the measurement view of value relevance approach to studying the value relevance of accounting information (Easton, 1999).Based on the measurement view of value relevance researchers often measure the value relevance as the association between an accounting measure and stock returns using long window and operationalize the value relevance in two ways: using the portfolio-returns approach and the regression-variations approach (Francis and Schipper, 1999; Hung, 2001).

Most of value relevance studies employed the regression-variations approach in measuring the value relevance, while a handful of them employed the portfolio returns approach. The portfolio-returns approach measures the value relevance as the proportions of all information in security returns that are captured by the accounting-based measures. Most of these studies have been done in developed market. Several studies in developed market have questioned the current financial reporting model in the US (Amir and Lev, 1996; Collins at al., 1997; Francis and Schiper, 1999; Lev and Zarowin, 1999). They described that the value relevance of accounting information has decreased over time due to, for example, decreased timeliness of financial statement information, increased economic reporting losses and increased importance of unreported intangible assets due to the increased relative importance of high-tech industries. They documented mixed results. Francis and Schipper (1999) found a decline in the value relevance of earnings, and an increase in the value relevance of balance sheet and book value over time. But, Lev and Zarowin (1999) documented deterioration in the value relevance of financial information (earnings, cash flows, and book value). Collins et al. (1997) found combined value-relevance of earnings and book values has not declined over the past 40 years and, in fact, appears to have increased slightly. The value relevance of "bottom line" earnings has declined over time, having been replaced by an increased value-relevance of book values.

Portfolio returns tests measure the value relevance as the proportions of all information in the security returns that are captured by the accounting-based measures. Moreover, portfolio returns tests have statistical superiority over the regression-variations approach. They control for changes in the volatility of market returns over time and explained variation tests do not. Depending on the source of returns volatility, failing to control for it could affect the interpretation of results. Another reason some might favor the portfolio return tests, at least when using the price model, is a concern that R^2 in a regression of equity value on accounting variables is sensitive to firm size, with larger firms having an inappropriately disproportionate influence. This concern is problematic when the sample distribution differs through time (Francis and Schipper, 1999; Hung, 2001).

In the emerging market, studies have questioned the value of financial statements information because emerging markets have institutional deficiencies such as disclosure is inadequacy, in some cases the poor accounting standards, audit quality has generally been perceived low; investors are too naïve, and irrational attention to accounting information (Aharony et al., 2000; Chen and Chen, 2001; Graham, 2001). However, the results showed that accounting in the Chinese stock market and selected Asian countries are value relevant. Earnings and earnings changes jointly explain about 11% of cross-sectional variation in stock returns in China (Chen and Chen, 2001). While, in five Asian countries, earning and book value jointly explain between 16.9 % - 68.3 % of variation in market value with varying sample period in each countries.

This study investigates the value relevance of accounting information in Indonesia Stock Exchange based on the portfolio-returns approach.by taking accounting reform in Indonesia into consideration in studying the value relevance of accounting information. Over the past three decades Indonesia has strengthened its accounting regulations as part of a series of broader programs of market-driven regulatory reform. Accounting reform has been done continuously since 1973 until now. The aim of accounting reform is to enhance the quality of financial reporting practices. Efforts have been made by the government and accounting profession to improve accounting and financial reporting practices from time to time. These efforts can be broadly grouped into two. First is the development of Indonesian's accounting standard. The second efforts relate to introduction of other accounting provisions to tighten and strengthen the financial reporting practices. Further, the comparisons on value relevance are made between Indonesian Accounting Principles (IAPs) and Financial Accounting Standards (FASs) regimes.

The developments of accounting standards have started since 1973. These accounting principles were revised in 1984. In late 1994, the Indonesian Institute of the Accountants (IIA), launch a new set of financial accounting standards, known as Financial Accounting Standards (FASs) to replace the old IAPs.

1.2. Research Questions

Based on problem statement outlined above, two research questions are emerged in this study:

1. Is accounting information in Indonesian capital market value –relevant?
2. Is value relevance of accounting information under Financial Accounting Standards (FASs) regime higher than under Indonesia Accounting Principles (IAPs) regime?

1.3. Justification and Usefulness of Study

Changes in regulating regime also provide an opportunity to test value relevance under two regimes.The portfolio-returns approach which is far superior to the previously tested price and return models. The Portfolio returns approach, another way of measuring the value relevance of accounting information, has statistical superiority over the regression-variations approach (Francis and Schipper, 1999).

The empirical results of this study will give fruitful insight to the accounting profession and the Capital Market Supervisory Agency, the main actors, in shaping accounting policy in Indonesia. The empirical results will also provide evidence to accounting standard setters that can update their prior beliefs about how accounting amounts are reflected in share prices and, thus, can be informative to their deliberations on accounting standards. Furthermore, the empirical results of this study will give more evidence to accountant, auditors, standard setter and government (regulator) who aim at improving quality of accounting information through better understanding of usefulness of accounting information, particularly for investors.

2.Literature Review and Development of Hypotheses

2.1. Value Relevance Construct

The value relevance construct has been discussed in the literature such as Francis and Schipper, 1999; Barth et al., 2001; Nilsson, 2003. Francis and Schipper (1999) have identified four possible interpretations of the value relevance construct. Interpretation 1 is that financial statement information leads stock prices by capturing intrinsic share values toward which stock prices drift. Value relevance would then be measured as the profits generated from implementing accounting-based trading rules. Interpretation 2, financial information is value relevant if it contains the variables used in a valuation model or assists in predicting those variables. Interpretations 1 and 2 are related to fundamental analysis research in accounting. The first interpretation is classified as the fundamental analysis view of value relevance while the second interpretation is referred as the prediction view of value relevance (Nilsson, 2003).

Under interpretations 3 and 4, the value-relevance is indicated by a statistical association between financial information and prices or returns. Value relevance studies which use interpretation 3 are those conducted based on information view of value relevance (Nilsson, 2003). Accounting information is value relevant if it is used by investors when setting prices. Under the assumption that the stock market is efficient, statistical association measures are used as indicators as to whether investors actually use the information in question when making investment decisions.

A statistical association between accounting information and market values or returns, particularly over a long window, might mean only that the accounting information in question is correlated with information used by investors (interpretation 4). This interpretation does not require that financial statements be the earliest source of information. Nilsson (2003) refers to this interpretation as the measurement view of value relevance. According to Nilsson (2003) the underlying idea behind this interpretation is simple but compelling. A key role of financial statements is to summarize business transactions and other events. Under this construct, the value relevance of financial statement information is measured by its ability to capture or summarize information, regardless of source, that affects share values (Francis and Shipper, 1999). This interpretation is consistent with a measurement perspective on accounting. That is, accounting is viewed as an instrument for measurement (Marton, 1998).

2.2 Theoretical Framework of Measurement View of Value Relevance

The view that investors are the main audience for financial statements is widely accepted. It is supported by the financial reporting standard setting bodies such as the FASB and IASB. A key role of financial statements is to summarize business transactions and other events. It is assumed that financial statements enable investors in determining firm value and because of that investors demand value-relevant information from financial statements (Nilsson, 2003).

Financial statements portray the financial effects of transactions and other events by grouping them into broad classes according to their economic characteristic. These broad classes are termed in the elements of financial statements. A complete set of financial statements normally includes a balance sheet, an income statement,

statement of changes in financial position (which may be presented in a variety of ways, for example, as a statement of cash flows or a statement of funds flow), and those notes and other statements and explanatory material that are an integral part of the financial statements (IASC, 1994). This framework underlies the value relevance studies under the measurement point of view.

The value relevance of financial statement information is measured by its ability to capture or summarize information, regardless of source, that affects share values (Francis and Schipper, 1999). This is consistent with a measurement perspective on accounting. That is, accounting is viewed as an instrument for measurement (Marton, 1998). These studies investigate the relation describing firm value in terms of accounting number. It focuses on finding accounting numbers that associate with market measures of value, for example, with stock prices. Furthermore, these studies are design to assess whether particular accounting amounts reflect information that is used by investors in valuing firm's equity. Association models by long window are used for this purpose. Financial statement information displaying an association with market values or returns indicates value relevance (Nilsson, 2003).

The association models between accounting information and market values, by a long window, might mean only that the accounting information in question is correlated with information used by investors. This interpretation does not require that financial statements be the earliest source of information (Francis and Schiper, 1999). In sum, accounting information does not have to be new to a financial statement user to be relevant. This is consistent with relevance and reliability criteria as specified in FASB's conceptual framework or IASC's conceptual framework. Value relevance studies are empirical operationalization of these criteria because an accounting amount will be value relevant, i.e., have a predicted significant relation with share prices, only if the amount reflects information relevant to investors in valuing the firm and it is measured reliably enough to be reflected in share prices. Only if an accounting amount is relevant to a financial statement user it can be capable of making a difference to that user's decisions. These criteria show that information does not have to be new to a financial statement user to be relevant (Barth et al., 2001). Specifically, the value relevance studies measure the value relevance in two ways, namely the regression-variations and the portfolio-returns approaches. In the regression-variations approach, this study investigates the ability of accounting information from financial statements to explain returns or market values whereas in the portfolio-returns approach, it measures the proportion of all information in security returns that are captured by the accounting-based measures.

2.3. Approaches to Operationalize the Value Relevance

This study defines the value relevance as the ability of an accounting measure to capture or summarize information that affects firm value. Using this definition, researchers often measure value relevance as the association between an accounting measure and stock returns and operationalize the value relevance in two ways: using the portfolio-returns approach and the regression-variations approach (Francis and Schipper, 1999; Hung, 2001). A regression-variations approach measures the value relevance based on the explanatory power of accounting information for measure of market value; the ability of earnings to explain annual market-adjusted returns (return model); and the ability of earnings and book values of assets and liabilities to explain market values of equity (price model). While the portfolio-returns approach measures the value relevance as the proportions of all information in security returns that are captured by the accounting-based measures.

Most association models measure stock returns over a period of twelve months or more. The reason for using a return model with this length is that the period should be long enough to capture the information related to a firm's accounting measurement period. For annual financial statement, one therefore should associate the stock return over a fiscal year with financial statement information that year. Some associations models use a shifted return period, which would start three months after the beginning of the fiscal year, and end three months after the end the fiscal year (Nilsson, 2003). The use of a long return measurement period is typical to association studies. It differs, for example, from the event study approach, which is also widely used in financial accounting research. The objective of an event study is to assess the amount of news conveyed to investor by the announcement of an event. The amount of information conveyed through the announcement of an earnings number is often referred to as information content (Beaver, 1968)

2.4 The Portfolio -returns Approach

This approach defines the value relevance of accounting measures as the proportion of all information in security returns that are captured by the accounting measures (Alford et al., 1993; Francis and Schipper, 1999; Hung, 2001). For instance, the value relevance of earnings is calculated as return that could be earned from a portfolio based on perfect foresight of earnings divided by returns earned on a portfolio based on advance knowledge of market prices. The portfolio-returns approach has statistical superiority over the regression-variations approach because they control for changes in volatility of market returns over time; the explained variation tests do not (Kothari and Zimmerman, 1995; Francis and Schipper, 1999). The use of portfolio-returns approach to examine the value relevance of accounting information has been documented in the literature (Alford et al., 1993; Francis and Schipper, 1999; Hung, 2001).

2.5 Advantages of Portfolio-returns over the Regression-variations Approaches.

The Portfolio-returns approach has statistical superiority over the regression-variations approach (Kothari and Zimmerman, 1995; Francis and Schipper, 1999). This is because they control for changes in volatility of market returns over time; the explained variation tests do not. Depending on the source of returns volatility, failing to control for it could affect the interpretation of results. For example, if the absolute amount of value relevant information in financial statements is (truly) constant through time, but the volatility of market returns is increasing for reason that cannot be traced to information sources, the explained variation test will be biased toward the results that relevance is decreasing over time. This is because a greater portion of the variability in the dependent variable (market-adjusted returns or market values) will be unexplained by accounting information.

In the literature, the regression-variations approach is more frequent used than the portfolio-returns approach despite the less statistical power of the former. This is because the valuations models in regression-variations approach can be used to examine the value relevance in terms of level of firm value and changes in value (price and return models). Selection of which approach to use depends jointly on the hypothesis dictated by the research question and on econometric considerations (Landsman and Magliolo, 1988).

2.6. Development of Hypothesis and Empirical Evidence

Accounting information is the primary source of information needed to make rational decisions regarding future economic expectations of the reporting entity. Companies attempt to satisfy these needs by preparing financial statements and related financial disclosure.

Chen et al (2001) have asked the question whether the accounting information in China is value relevant as in mature market. They took unique environments in China into consideration in studying the value relevance of accounting information. They found that earning, earning changes and book value are value-relevant based on the return and price models.

In Indonesia the government and the accounting profession have made several advances in accounting practices since the capital market reactivation in 1977. These efforts indicated by improving the accounting standards continually and issuing some provisions related to accounting under law and government regulation in order to tighten the financial reporting requirement in practice. The effort of Indonesian Institute of the Accountant (IIA) can be traced back to 1973 when Indonesian government tried to reopen the capital market. 1974, IIA issued 1974 Indonesia accounting principles. These principles were used in practice for 10 years until the issuance of 1984 Indonesia accounting principles. These accounting principles were also used for a 10 year period, before IIA replaced them with Financial Accounting Standards (FAS) in late 1994. Financial Accounting Standards must be used in practice since January 1, 1995. In contrast to Indonesian accounting principles (IAPs), FASs were based largely on International Accounting Standards and therefore, were much more comprehensive set accounting regulations and high quality standards. To make sure that standards promulgated by IIA are consistent with those promulgated by the IASC, IIA adopted IASC's "framework for the Preparation and Presentation of Financial Statements".

In March 1995, the government continued the process of accounting reform when it introduced several provisions related to accounting in its company law. Article 58 made it mandatory for all companies to prepare their annual accounts in accordance with FASs. Article 59 required publicly-listed companies to have their accounts audited by a public accountant. Article 60 made company directors and commissioners personally liable for any losses incurred by any persons as a result of untrue or misleading information contained in financial reports. Later that year, the government introduced further legal requirements for accounting as part of its capital market law. This law contained general provisions specifying the format of financial reports and forbidding public companies from providing untrue or misleading information to the public. It also contained provisions that dealt with more specific disclosure matters. Public accountants who discovered that a company was breaching the law or felt that a company was in financial crisis were required to report their concerns to Bapepam (Capital market law, 1995).

Economic crisis made the government to pushed ahead to continually introduce accounting reform. In 1999, government issued the government regulation no 64 of 1999 that contains the rules that deal with all limited companies with assets of RP 25 billion or more required to publish financial statements that have been audited by external auditors. In July 1999, this was followed by a decision by nominally private but effectively government controlled the Jakarta Stock Exchange Company to introduce a new set of corporate governance regulations for publicly-listed companies. Among the main provisions of these regulations were a requirement for publicly-listed companies to reserve at least 30 percent of positions on their Boards of Directors for "independent" individuals and for these individual to form and lead companies' internal audit committees. Independent individuals were defined as those who had no connections to majority shareholders, other directors or other companies within the group (Rosser, 1999). Thus, collectively these efforts may have had a positive impact on the efficiency of market and confidence of Indonesia domestic investors in accounting number. Further, there are also reasons to believe that accounting information is impounded in stock valuation. As emerging market, accounting information from published financial statement is the main source of information considered by investor to make economic decision. Emerging market lacks alternative information sources such as earning forecasts and company research by financial analysts.

A number of studies have examined the value relevance of accounting information by employing the portfolio returns approach. Francis and Schipper (1999) examined the value relevance of financial statement over the period 1952-1954. The objective of this study is to test some of empirical implications of the claim that financial statements have lost their relevance over time. They found the average market-adjusted return across the entire sample period is about 14% for the SIGN-ΔEARN portfolio, compared to 20% for the Δ EARN portfolio, 6% for the ΔCASH portfolio, , and 18% for the RATIO 1 portfolio. The proportion of the market-adjusted return to the return-based hedge portfolio explained by each accounting measure indicate that about 45% of total perfect foresight return are available to investors with advance knowledge of sign of the earnings change; knowing both the sign and magnitude of the earnings change yields, on average, 59% of the total available return. In contrast, knowledge of the change in cash flows (ratio signal) earns 18% (52%) of these returns. Knowledge of the book value of equity plus the level and change in earnings (RATIO1) earns about 61% of total perfect foresight returns.

Hung (2001) used the portfolio-returns approach in assessing the value relevance of accounting information in 21 countries. Nearly all of the sample countries are developed countries. She found that the proportions of all information in security returns that are captured by the accounting –based measured vary among countries. The value relevance numbers range from 4.7% to 55.7 % for earnings information and from 15.4% to 66.7% for ROE information. Further, she found that the use of accrual accounting (versus cash accounting) negatively affects the value relevance of financial statements in countries with weak shareholder protection.

Ely and Waymire (1999) investigated whether earnings relevance is higher following (1) empowerment of the Committee on Accounting Procedure (CAP) as the first USA accounting standard–setting body in 1939, and (2) subsequent reorganizations of the standard-setting process leading to creation of the Accounting Principles Board (APB) in 1959 and the Financial Accounting Standards Board (FASB) in 1973. The evidence provided only limited support for the hypothesis that earnings relevance is materially higher after either empowerment of the CAP or subsequent reorganizations of the standard-setting process. For the pooled regressions, the adjusted R^2 increased from 11.97% in the pre-CAP to 16.25% in the CAP period, but declined to 14.27% in the APB era and 10.47% during the FASB's tenure.

Based on some reasons above mentioned, it is expected that the domestic investors in Indonesian stocks market perceive accounting information based on the Indonesian GAAP to be value relevant. The proportions of all information in security returns that are captured by the accounting-based measures is used to measure the value relevance in this study.

H_1: The proportion of all information in security returns that are captured by accounting-based measures is greater than zero

H2: The proportion of all information in security returns that are captured by accounting-based measures in the Financial Accounting Standards (FASs) are higher than in the Indonesian Accounting Principles (IAPs) regime.

3. Research Methodology

3.1. Sample Selection

The sample covers publicly-listed companies that have been listed in Jakarta Stock Exchange in 1991. The sample selections criteria are financial companies are excluded (insurance, banks, and other miscellaneous financial companies). Accounting practice for these firms is so distinct that their valuation parameters are likely to be substantially different from those for industrial firms. The number of sample that fulfills the criteria was 79 companies. And the same sample was taken during the sample period from 1991 to 2001 to produce the homogeneity of the sample. The objectives of this study is to examine the comparison of the value relevance between two regimes, the Indonesian Accounting Principles (IAPs regime) and the Financial Accounting Standards (FASs regime). The IAPs regime was from 1991 to 1994 and FASs regime was from 1995 to 2001. Thus, homogeneity of the sample is important to produce better results. As a result the same companies were maintained throughout the period of study**.**

3.2. Data

The accounting information data and stocks price data obtained from the Company Annual Report, the Indonesia Capital Market Directory produced by the Jakarta Stock Exchange. For the portfolio-returns approach each firm-year observation must fulfill some requirements. First, firm-year observations must have sufficient data to calculate change in earnings, book values and returns (Ret). Second, the fiscal year-end during the sample period must be not changed by firms. Third, financial statement must be prepared under domestic accounting standards. Forth, firms-year observations do not include the highest or lowest 2% values each variable namely earnings, change in earnings and book values (Francis and Schiper, 1999; Hung, 2001).

3.3. Portfolio Returns Test Procedure

The measure of value relevance focus on the mean-adjusted returns which could be earned based on foreknowledge of accounting information. This model attempts to calculate the proportion of information in security returns captured by the accounting measure consisting of earnings, earning changes, and the book value. The hedge portfolio formed on predictions based on the following returns-book value and earnings regression:

$$R_{j,t} = \beta_0 + \beta_1 \Delta EARN_{jt} + \beta_2 EARN_{jt} + \beta_3 BV_{jt} + \varepsilon_{jt}$$

Where

$R_{j,t}$ = the cummulative the market-adjusted returns on security j over the 15 Months ending 4 months following the end of fiscal year t.

$\Delta EARN_{j,t}$ = firm j earnings before extraordinary items in year t minus its annual earnings in year t-1, deflated by the market value of equity at the end of the fiscal year t-1.

$EARN_{j,t}$ = firm j earnings before extraordinary items in year t deflated by the market value of equity at the end of the fiscal year t-1.

$BV_{j,t}$ = per share book value of firm j's equity j at the end of fiscal year t.

Using the yearly coefficient estimates, rank the observations in year t on the basis of their predicted values of the dependen variabel. This portfolio takes long positions in the highest 40% of the predicted values and short positions in the lowest 40%. Compute the market adjusted return to a perfect foresight return-based hedge portfolio. This portfolio takes long (short) positions in the stocks in this accounting-based hedge portfolio with positive (negative) 16-month market-adjusted returns. The market-adjusted returns on this return-based hedge portfolio in year t is

denoted RET. Scale the accounting-based hedge portfolio returns in year t by RET. The resulting scaled measures describe the proportions of all information in security returns that are captured in the accounting-based measures (Francis and Schipper, 1999).

4. Result and discussion

In the portfolio returns approach, the value relevance of accounting information is defined as the proportion of information in security returns captured by the accounting-based measures (Alford et al., 1993; Francis and Schipper., 1999 and Hung., 2001). This study has made two main modifications regarding the procedure to compute value relevance in order to capture emerging market conditions that are different from developed market. The two of modifications involve the method of value relevance calculation and type of information used in the calculation of value relevance.

The first modification in this study is the calculation of value relevance of accounting information. For instance, this study calculates the value relevance of accounting information by taking the average of the value relevance of lowest 40% of accounting information and that of the highest 40% of accounting information. To calculate the value relevance of the lowest 40% of accounting information is by taking the proportion of the mean adjusted return that could be earned from the lowest 40% of accounting informatio portfolio to the mean adjusted return that could be earned from the lowest 40% of mean adjusted returns portfolio. The calculation the value relevance of the highest 40% of accounting information is similar to that of the lowest 40%. Previous studies from developed market measure the value relevance as the total return that could be earned from a portfolio based on accounting information. Value relevance is scaled by the total return earned on a portfolio based on market price (market-adjusted returns).

This study uses a different method of calculation of value relevance of accounting information because of the high occurrence negative returns for each sample year. This condition causes returns earned from the lowest 40% of accounting information portfolio and from the lowest 40% of adjusted returns portfolio both have negative sign, while returns earned from the highest 40% of accounting information portfolio and from the highest 40% of adjusted return portfolio both have positive sign. In addition, based on the data, there is small difference between negative returns earned from the lowest 40% of accounting-based portfolio and the positive returns earned from the highest 40% of accounting-based portfolio. The small difference between negative returns earned from the lowest 40% of returns portfolio and the positive returns earned from the highest 40% of returns portfolio are also found in the returns portfolio. Consequently, based on these reasons, the use of total return could not be done in this study because this could create two conditions, namely the extremely high value relevance ratio or the opposite sign between returns earned from the accounting portfolio and returns earned from the returns portfolio.

Based on the explanation above, the calculation of the value relevance in this study is adjusted to reach the objective of this study. However, this adjusted calculation is still consistent with the value relevance concept stated in literature which defines the value relevance of accounting measures as the proportion of information in security returns captured by the accounting-based measures (Alford et al., .1993; Chang, 1998; Francis and Schipper, 1999; and Hung, 2001).

The second modification involves the use of mean-adjusted returns to measure the value relevance, while previous researches from developed markets, on the other hand, used the market adjusted returns. This study does not use the market- adjusted returns because the stock price index in Indonesia, both the Composite Stock Price Index (CSPI) and the LQ45 are not appropriate to calculate the market adjusted returns. The CSPI uses all listed stock as the index components. The CSPI was introduced the first time on 1 April 1983, is the indicator of the movement of all the listed stocks' prices in the Jakarta Stock Exchange, for both the regular and preferred stocks. Because it includes all listed stocks, the use of CSPI could over estimate or under estimate market adjusted returns as it also includes non-synchronously traded stocks due to infrequent trading. This does not reflect the true value of the Indonesian market scenario. Meanwhile, the LQ45 Index consists of 45 stocks chosen after several selection criteria so as it consists of the stocks with the high liquidity (liquid) and also considers the market capitalization of the stocks. However, the LQ45 Index was only introduced in Indonesia on 13 July 1994, whereas this study uses the data that date back to 1991. Because of this, there is insufficient information from the LQ45 to calculate market- adjusted returns in this study.

4.1. Value Relevance Results

This section present the findings on value relevance based on the portfolio-returns approach. The first part of this section discusses value relevance result for each sample year. The second part compares the value relevance between two regimes.

4.1.1 Value Relevance of Earnings level, Change in Earnings dan Book Values.

Tables 1 presents the information of cumulative mean-adjusted returns to hedge portfolio based on the perfect knowledge of earnings, change in earnings, book values and stock price (16-month period ending four months after the fiscal year-end). It shows the results of calculation of mean-adjusted returns earned from a portfolio based on the earnings and book values information and mean-adjusted returns earned from a portfolio based on return information.

Tabel 1

Mean-adjusted Returns to hedge portfolio based on the knowledge of accounting information
(sixteen month period ending four month after the fiscal year end)

Year	N	Portofolio Based on coefficient estimates of earnings and book values.		Portofolio based on Mean-adjusted Returns	
		Lowest 40% (A)	Highest 40% (B)	Lowest 40% (C)	Highest 40% (D)
91	75	-16.0287	16.6906	-25.4429	32.9716
92	75	-21.8558	18.7477	-37.4219	36.5035
93	75	-26.6668	42.7468	-58.8387	68.2107
94	75	-8.6027	8.1040	-26.5383	25.6523
95	75	-42.3723	39.7206	-54.1329	63.3548
96	75	-45.5625	52.8299	-82.4611	88.7477
97	75	-25.6454	30.6769	-48.1466	51.6294
98	75	-27.0213	37.2847	-55.6310	74.5570
99	75	-144.3344	35.1684	-211.8357	87.6172
00	75	-17.4113	8.4410	-36.3816	35.0923
01	75	-28.8623	42.0337	-50.1850	58.7040
Average		-36.7603	30.2222	-62.4560	56.6401

N= sampel

Table 2 reports the value relevance of accounting information, namely earnings, earnings change and book value. The Table shows the proportions of all information in security returns that are captured by the accounting earnings-based measure. These findings demonstrate that the proportions of all information in security returns that are captured by the accounting earnings-based measure for each sample year are greater than zero. Hence, these results support the alternative hypothesis that the proportions of all information in security returns that are captured by the accounting earnings-based measure are greater than zero (hypothesis no 1).

Table 2
Value Relevance of earnings level, earnings change plus book values

Year	N	Value Relevance of Accounting Information		
		Lowest 40% A : C (1)	Highest 40% B : D (2)	Average (1 and 2)
1991	75	62.9987	50.6213	56.8100
1992	75	58.4037	51.3587	54.8812
1993	75	45.3219	62.6688	53.9954
1994	75	32.4160	31.5917	32.0038
1995	75	78.2745	62.6955	70.4850
1996	75	55.25335	59.5282	57.3908
1997	75	53.2652	59.4175	56.3414
1998	75	48.5724	50.0083	49.2904
1999	75	68.1350	40.1387	54.1368
2000	75	47.8574	24.0536	35.9555
2001	75	57.5119	71.6027	64.5573
Average		55.2737	51.2441	53.2589

Overall, Tables 1 and 2 reveal that the average mean-adjusted returns earned from the lowest 40% of accounting information portfolio and the average mean-adjusted returns earned from the highest 40% of accounting information portfolio for the whole sample period are about -36.76% and 30.22% respectively. The average mean-adjusted returns earned from the lowest 40% of the mean adjusted returns portfolio and the average mean-adjusted returns earned from the highest 40% of the mean-adjusted returns portfolio for the whole sample period are about -62.45% and 56.44 % respectively. The average of value relevance of the lowest 40% of accounting information portfolio and the average of value relevance of the highest 40% of accounting information portfolio are 55.27% and 51.24%, respectively. Consequently, the average value of the value relevance of accounting earnings across the entire sample period is 53.26 %. This number indicates that about 53.26 % of total perfect foresight returns are available to Indonesian investors with advanced knowledge of earnings, change in earnings and book value. This result is comparable to the findings of other researches (Hung, 2001; Alford et al., 1993; Francis and Schipper., 1999). Hung (2001) reported that the average of the value relevance of changes in earnings in Switzerland is 48.6%, whereas Alford et al. (1993) and Francis and Schipper (1999) reported that the average of the value relevance of change in earnings in the U.S sample are 46 % and 59.1% respectively. Francis and Schipper used longer sample period (1952-1994) than that of Alford at al. (1984-1990).

4.1.2. Comparison of Value Relevance of Accounting Earnings, Earnings Change and Book Value between IAPs regime and FAS regime.

The ability of accounting information in terms of earnings level, change in earnings plus book value to capture or summarize information, regardless of source, that affects share values, is higher in the new regime (FASs) as shown in Tables 4 and 5. The results provide evidence that about 55.45% of total perfect foresight returns are available to Indonesian investors with advanced knowledge of earnings level, earnings change and book values in the FASs regime. This number is higher than that in the IAPs regime (49.42%). However, statisticaly T-test shows that the difference between the mean in the IAPs regime and that of the FASs regime is not significant at α=0.05. This finding is not consistent with the expectation as specified in the alternative hypothesis suggesting that the proportion of all information in security returns that are captured by accounting information in the FASs regime is higher than that in the IAPs regime (the hypothesis no.2).

Table 3
Value Relevance of earnings level, earnings change plus book values under IAPs regime

Year	N	Value Relevance of Accounting Information		
		Lowest 40% A : C (1)	Highest 40% B : D (2)	Mean (1 and 2)
1991	75	62,9987	50,6213	56,8100
1992	75	58,4037	51,3587	54,8812
1993	75	45,3219	62,6688	53,9954
1994	75	32.4160	31.5917	32.0038
Average		49.7851	49.0601	49.4226

Table 4
Value Relevance of Earnings Level, Earnings change plus Book Values under FASs regime

Year	N	*Value Relevance* of Accounting Information		
		Terendah 40% A : C (1)	Tertinggi 40% B : D (2)	Average (1 and 2)
1995	75	78.2745	62.6955	70.4850
1996	75	55.25335	59.5282	57.3908
1997	75	53,2652	59,4175	56,3414
1998	75	48,5724	50,0083	49,2904
1999	75	68.1350	40,1387	54,1368
2000	75	47,8574	24,0536	35,9555
2001	75	57.5119	71.6027	64.5573
Average		58.4100	52.4921	55.4510

This result is not consistent with the previous study (Ely and Waymire, 1999). This study has taken development of accounting into consideration in studying the value-relevance of accounting information. Ely and Waymire (1999) investigated whether earnings relevance is higher following (1) empowerment of the Committee on Accounting Procedure (CAP) as the first USA accounting standard–setting body in 1939, and (2) subsequent reorganizations of the standard-setting process leading to creation of the Accounting Principles Board (APB) in 1959 and the Financial Accounting Standards Board (FASB) in 1973. The evidence provided only limited support for the hypothesis that earnings relevance is materially higher after either empowerment of the CAP or subsequent reorganizations of the standard-setting process. For the pooled regressions, the adjusted R^2 increased from 11.97% in the pre-CAP to 16.25% in the CAP period, but declined to 14.27% in the APB era and 10.47% during the FASB's tenure. The price model showed evidence that the combined relevance of earnings and book value increased during the tenure of the FASB (1974-93) compared to that of the APB (1960-73).

5. Conclusions, Implications and Suggestions For Future Research

5.1 Conclusions

The main objective of the study is to examine empirically whether the domestic investors in Indonesian stock market perceive accounting information based on the Indonesian GAAP to be value-relevant. The specific objectives are to examine the proportions of all information in security returns that are captured by the accounting-based measures (earnings level, earnings change and book values); to examine whether the proportions of all

information in security returns that are captured by the accounting-based measures in the FASs regime are higher than in the IAPs regime.

The portfolio-returns approach are employed to measure the value relevance. The portfolio-returns approach measures the value relevance of three types of accounting information. These are earnings level, the change in earnings and book values.

The sample covers all listed companies in Jakarta Stock Exchange in 1991. Financial and utilities companies are excluded because accounting practice for these companies are so distinct and are subject to regulatory processes that can influence their earnings numbers. The number of companies that fulfills the criteria is 79. The sample was selected from the period 1991 to 2001.

The results also show that accounting information is value-relevant. This number indicates that about 53.26 % of total perfect foresight returns are available to Indonesian investors with advanced knowledge of earnings, change in earnings and book value. The results provide evidence that about 55.45% of total perfect foresight returns are available to Indonesian investors with advanced knowledge of earnings level, earnings change and book values in the FASs regime. This number is higher than that in the IAPs regime (49.42%). However, statisticaly T-test shows that the difference between the mean in the IAPs regime and that of the FASs regime is not significant at α=0.05. The results in the FASs regime (IAPs) indicate that knowing earnings level, earnings change and book values yielded, on average, 55.45% (49.42%) of the total available returns. However, statisticaly T-test shows that the difference between the mean in the IAPs regime and that of the FASs regime is not significant at α=0.05.

5.2 Implications

The findings on value relevance have given implications to practitioners in Indonesia as well as other emerging markets. First, these findings provide evidence to accounting policy maker such as the Indonesian Institute of Accountants and the Capital Market Supervisory Agency that investors in the Indonesian stock market are rational and sophisticated with respect to the use of accounting information, despite the young age of market, and the nature of accounting and financial reporting development is still developing. Collectively, various efforts which have been made by the Indonesian Institute of Accountants (IIA) and the government have had a positive impact on the confidence of Indonesian investors in accounting numbers. The study has shown that these efforts have impact on the value relevance of accounting information in Indonesia. For academic researchers, these findings can extend their knowledge regarding the relevance and reliability of accounting amounts as reflected in equity values. Tests of value relevance represent one approach to operationalize the FASB's stated criteria of relevance and reliability (Barth et al., 2001).

5.3 Limitations and Suggestions for Future Research

The study is not without its limitations. There are several limitations of this study. First, it uses the association models by long window to measure the value relevance. These associations describe the relationship between accounting information and stock prices or return. While the study attempts to take accounting reform in Indonesia into consideration in studying the value relevance by making the association between the share prices and the return, there are many other factors that might have implications on share prices and market return such as economic downturn and political upheaval that deserve careful examination.

Second, the time period of old regime used to test value relevance in terms of comparison between two regimes is short. This is because the numbers of listed companies before 1990 are limited. Additional research could be done to know whether the value relevance of accounting information have increased over time in Indonesia. Finally, this study takes accounting reform in terms of developing accounting standard and issuance of regulations related to accounting in studying the value-relevance of accounting information. There are presumably many other factors, especially those related to supporting infrastructure, such as auditing quality, corporate governance, analysts coverage that deserve careful examination in the future research.

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