

Research Article

Feltham Model: A Framework For Determining The Value Of A Change In The Information Decision (The Decision Maker)

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Abstract

In terms of the requirement on decision making for the company's performance, financial statement is one of the most important reporting for shareholder or investors whether it is private or public owner. There are two main basic financial statement that are officially provided by the company, they are Balance Sheet and Income Statement. Balance sheet consists of assets, liabilities and equities, while the income statement is a summary of financial results for a period certain. Balance sheet can help to make decision in lending and debt which providing information about the liquidation values. Income statement providing information about the realized profit and also the profit opportunities in the future. Feltham and Ohlson model, *Surplus Theory* describe that the decision can be made by looking company's performance on income statement and balance sheet.

Keywords: Feltham Model, Accounting Information, Decision Making

1. INTRODUCTION

The purpose of accounting is to provide information, especially for investors, which is expected to be used as the basis for taking one decision. To be useful in the decision-making process, the information must be relevant and reliable. Relevant information is information that has the potential to influence decisions taken, while reliable information is information that is not misleading (reliable).

A company has value for its owners because the assets are company's accumulation of *wealth* that can be used to meet needs. Thus, corporate ownership is a claim to welfare. Net surplus theory views accounting as a system of recording the creation and distribution of wealth (Feltham and Ohlson, 1995). The relationship between firm value and accounting information is used as the basis for developing valuation models in net surplus theory.

2. LITERATURE REVIEW

The objectives of financial reporting is presentation of the financial statement by business entities must be based on provisions of accounting and financial reporting provisions. To that end, the accounting profession has established the basics of accounting and financial reporting. FASB (1978) has defined financial reporting purposes (objectives of financial reporting).

That reporting should provide information useful for :

1. Investment decisions and credit
2. Assessing the prospects for cash flow
3. Resources and changes

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The above objectives are referred to as the first level of basic objectives which are related to accounting goals and objectives (Nasution et al., 2018). While the way of implementing the goals and objectives is the second level. In between levels of this objective requires *conceptual building blocks* certain that describes the qualitative characteristics information of accounting elements of the financial statements.

FASB (1980) has determined the qualitative characteristics of accounting information that can distinguish information that is better or more useful and information that is inferior or less useful for purpose decision-making.

To be useful accounting information for decision-making, it must be filled with two major quality that is of relevance and reliability. Relevant information can assist users for financial statement in making prediction about the final outcome of past events, present, and future. This means that the accounting information has predictive value. Relevant information must have feedback value that helps users confirm their prior expectation. Information is said to be relevant if it is available to the decision maker before he loses his ability to influence his decisions. Accounting information must be timely (*timelines*). So, for information to be relevant, it must have predictive value and feedback, and must be presented in a timely manner. Information reliable should give you an idea of real companies and should be able to be traced and neutral (IAI, 1999). Main Financial Statement are consist of :

1. Balance Sheet
2. Income Statement

Balance sheet consists of assets and liabilities, while the income statement is a summary of results for period certain. The balance sheet and income statement represent two accounting constructs, namely *“the stock”* and *“the flow”* (Subramanyam and Venkatchalam, 1998). The stock reflects the stock or inventory net of assets of a company at a point in time certain, and is expressed by the book value of equity contained in the balance sheet. *“The flow”* shows the growth (or decline) in the net inventory of assets during a period, and is expressed by net income in the income statement. Revenue during one period has an important role, namely measuring the profit or loss of the company during a certain period of time. This role can show the company’s ability to gain benefits for stakeholders.

Likewise, the balance sheet can provide relevant information for assessment. The balance sheet has a role to help make decisions in lending or monitor debt contracts. This role fulfilled by the balance sheet by providing information about the liquidation value, i.e. the amount available to lenders in the event of a default, assuming that the value book is approximately equal to the liquidation value. In this case, in income statement also has a role, namely providing information about a company’s abnormal profit opportunities and abnormal profit opportunities in the future (Barth et.al, 1998).

3. METHODS

This paper seeks to examine theoretically framework for determining the value of a change in the information decision and the development of research on the value relevance of accounting information which includes value relevance of :

- Earnings,
- Assets and liabilities
- Profit
- Book value of equity

This paper also examines theoretically the factor that influence the value of relevance of accounting information, such as :

- Earnings quality,
- Capital structure,
- Auditor quality,
- Risk company,
- Company size,
- Growth opportunities, and
- Earning persistence.

The value relevance of accounting earnings and book value of equity is affected by negative earnings, earning persistence, financial health, profitability and growth opportunities, accounting conservatism, and investment in intangible assets.

4. RESULTS AND DISCUSSION

4.1. Result

Match Value

In accounting figures said relevant value if it has relationship predicted with market value of equity (Amir et.al, 1993; Beaver, 1998). For researchers, the purpose of conducting value relevance testing is to broaden knowledge about the relevance and reliability of accounting numbers reflected in equity values. Value relevance is an empirical operationalization of the criteria of relevance and reliability. An accounting number will be relevant, have a significant (predicted) relationship with stock prices, if the accounting numbers reflect information that is relevant for investors in assessing a company and is measured enough *reliably* to be reflected in prices stock (Barth et.al, 2001).

Likewise in research models that use the market value of equity as a function of the book value of assets and liabilities. If the value relevance of balance sheet information decreases over period of a time, it means that there has been a decrease in the ability of these variables to explain the value market of equity. The statistical relationship between accounting data and capital market value (stock prices and returns) is also used by Lev and Zarowin (1999) to assess the benefits of financial information for investors. The relationship reflects the consequences of investors' actions, while other benefit measures, such as questionnaires or *interviews*, only reflect investors' opinions and beliefs. Francis and Schipper (1999) state that there are four construct interpretations of value relevance. The first interpretation states that the information contained in the financial statements will affect stock prices. Value relevance is then measured as the profit resulting from the implementation of trading rules accounting-based.

The second interpretation states that information financial will have relevance if the information contains variables used in a valuation model or information that can assist in predicting these variables. Thus, the relevance of earnings value for the *discounted dividend valuation model*, *discounted cash flow valuation model*, or *discounted residual income model*, can be measured by the ability of earnings to predict future dividends, cash flows, earnings, or values book.

The third and fourth interpretations are based on the value relevance shown by the relationship statistical between financial information and prices stock. With the third interpretation, the statistical relationship will measure whether investors actually use the information in setting prices. Thus, value relevance can be measured by the ability of financial statement information to change the total information mix in the market.

Relevant information can change stock prices because investors change their expectations. The fourth interpretation states that the relationship statistical between accounting information and market value or returns, means that the information accounting relates to information used by investors. Value relevance is measured by the ability of financial statement information to capture or summarize information, regardless of its source, that affects the value of shares.

Fischer and Verrecchia (2000) determines the size of the value relevance in relation to earnings is parameter β is *slope* obtained from the regression profit on stock prices. Meanwhile Ali and Hwang (2000) measure the value relevance of data accounting through two approaches, namely the regression approach and the approach *hedge portfolio*. Regression is used to estimate the relevance of the value of earnings, accruals, and the relevance of the combined value of earnings and book value of equity. While the approach is *hedge portfolio* only applied to determining the relevance of the value of earnings. The value relevance here is mainly determined based on the *explanatory power* of variables, accounting namely earnings and book value of equity on securities yields, relative to the *explanatory power* of the companies American being compared.

Studies that examine the relevance of accounting numbers can be classified into three categories (Holthausen and Watts, 2001), namely: (1) *Relative association studies*, comparing the relationship between measures of *bottom-line* with the stock market value or change in value. For example, Biddle et.al. (1997) tested the information content of EVA (*economic value added*), *residual income*, and two performance measures, namely profit and cash flow from operations.

They relate these variables to stock returns to assess the content information of these variables. Harris and Ohlson (1987) tested the *explanatory power* of various measures that indicate the firm value of oil and gas companies. In general, these studies examine the difference in R² generated by the regression of these accounting numbers on the market value of the stock. Accounting figures that have a value of R² greater means more than the numbers have value relevance of accounting value of R² is smaller. (2) *Incremental association studies*, examine whether accounting numbers certain can help explain long-term value or returns. The accounting number is said to have value relevance if the estimated regression coefficient is significantly different from zero. For example, Aboody and Lev (1998) examined the relevance of software development costs, which is consistent with Statement No. 86 *Financial Accounting Standards Board* (SFAS No. 86) by relating these variables to prices and stock returns. By using the disclosure of SFAS No. 106, Amir (1993) tested the ability of the liability component and the component Cost of *postretirement benefit* (PRB) in explaining the variation of the *cross-sectional market-to-book ratio*. Ayers (1998) tested whether the tax liability deferred disclosed under SFAS No. 109 provides more relevant information value than if disclosed under APB No. 11. Barth (1994) found that the estimated (*fair value*) of investment securities has *explanatory power* a significant compared to if presented based on historical cost. (3) *Marginal information content studies*, examine whether numbers certain accounting add to the amount of information available to investors. These studies generally use an event study (*short window*) to determine whether the announcement of accounting numbers is related to changes in value.

Evidence of value relevance is usually indicated if there is a reaction or change in the share price. For example, Givoly and Hayn (1992) conducted an analysis *cross-sectional* linking returns unexpected stock around disclosures news about the *Tax Reform Act of 1986*. Barth et al (2001) summarize that value relevance studies use a variety of models valuation to construct tests, and typically use the market value of equity as a benchmark valuation. Tests often focus on the accounting number coefficients in the estimation equation. Several researchers such as Barth (1994), Barth et al (1996) and Nelson (1996) tested whether the coefficient of accounting numbers was significantly different from zero with the predicted sign. Another study tested whether accounting number coefficients differed from coefficients theoretical based on valuation models (Landsman, 1986). The theory of net surplus (*clean surplus theory*) states that the value of the company is reflected in the accounting data contained in the financial statements (Feltham and

Ohlson, 1995). Based on the theory of *clean surplus*, Feltham and Ohlson showed that the market value of the company can be shown in the income statement and balance sheet.

4.2. Discussion

Value Relevance of Accounting Information Accounting Earnings

The role of accounting earnings in determining the price of securities has become an important issue in research accounting research. Watts and Zimmerman (1986) summarize that most researchers focus on the relationship between earnings changes and stock price changes around the announcement of earnings changes. More specifically, it focuses on the relationship between changes in earnings and the rate of return on shares at the time of announcement of these earnings changes. Studies that measure market reactions, which are reflected in changes in prices stock, are known as *events studies* with short-term returns. The conclusion that can be drawn from the event study is whether earnings announcements cause investors to revise their expectations for cash flows as seen by changes in security prices in the short period around earnings announcements. The relationship between income and prices, in addition to be tested through the study of events, can also be tested using association studies (*association studies*) between income and prices. The relationship between profit and price is generally determined by using profit-to-price regression where

profit is the independent variable, and price is the dependent variable. In this model, the relationship between earnings and stock prices represented by the *slope*, β , produced by regression, and intercept, α , indicate constants. With determinant, α and β it can be predicted value relevance of earnings, as that can be captured from β (Fischer and Verrecchia, 2000). Various studies prove that profit accounting is related to prices and returns stock. Ball and Brown (1968) examined the relationship between the sign of unexpected earnings and the *mean abnormal rate of return*. The results of the study support the hypothesis that earnings convey information. This research was followed by a number of other researchers (eg, Foster 1975). In contrast to Ball and Brown who used the sign of unexpected earnings, Beaver et al (1979) tested the *magnitude* of earnings unexpected with abnormal average returns.

Meanwhile, Beaver (1968) uses the *variance abnormal return* as a measure of the content information of annual earnings. The results show that the annual earnings announcements contain relevant and useful information in the valuation of securities. Easton (1985) added a *fundamental link* to the relationship between accounting earnings and stock prices, namely future dividends. The results of the relationship information between accounting earnings and dividends future, and there is a valuation relationship between

future dividends and security prices. Several other authors examine the relevance of accounting information over a certain period of time, whether there is an increase or decrease in the value relevance of an accounting variable. The relevance of the value of earnings tested by Francis and Schipper (1999) showed a decrease in the relevance of the value of earnings during the period 1952-1994. The measure of the relevance value of earnings is measured by regressing changes in earnings and earnings rates against securities yields market-adjusted. The relevance of the value of earnings to common stocks listed on the NYSE during the period 1927-1993 by measuring the strength of the relationship between earnings and stock returns. The results test show no evidence of a significant increase in earnings relevance. Likewise, the tests conducted by Lev and Zarowin (1999) which examine the benefits of information financial for investors, show that there has been a decrease in profit benefits over a 20-year period.

Assets and Liabilities

In addition to showing a relationship between accounting profit and stock prices and returns, at the same time, a number of studies have also found a relationship between balance sheet size, namely assets and liabilities, and stock prices and returns. Francis and Schipper (1999) examined the information contained in the balance sheets of companies listed on the NASDAQ. The relevance of the balance sheet value is tested by regressing the book value assets and of a company's liabilities to prices and stock returns. The test results show that the *explanatory power* of the book value of assets and liabilities increases.

A number of studies are aimed at testing the value relevance of the fair value of certain assets and liabilities. The results of the study by Landsman (1986) and Amir (1993) show evidence that the assets and liabilities of pension funds are valued by the market as assets and liabilities of other companies. Barth (1991) tested the relevance and reliability of asset measures pension and liability and found that the fair value of pension assets and liabilities showed less *measurement error* than other measures. Another study deals with the question of whether estimates of the fair value of long-term assets -are *reliable*. Estimates of tangible assets are generally set by management so that they are prone to estimation errors. Bublitz et.al (1985) assessed the disclosure of *Statement No. 33* (disclosure of *current cost*) compared to historical cost. Based on the F test, *explanatory power* significant was found in data *Statement No. 33*. The data is information used by the market in setting the price of securities. Likewise, Hopwood and Schaefer (1989) and Lobo and Song (1989) show additional information in current cost income.

Bernard and Ruland (1987) found levels of additional fee income information now in analysis, *time-series* while the analysis *cross section* not found. Murdoch (1986) who tested the information content of FAS 33, did not find additional information content of *constant dollars* and *current costs* to historical costs.

The question of whether the estimated fair value of assets long-term tangible is reliable is also investigated with an emphasis on asset revaluation. Barth and Clinch (1998) examined the relevance, reliability and timeliness of asset revaluation in Australia.

The results show that financial assets, tangible assets, and intangible assets that have been revalued have relevance. Regarding non-financial tangible assets, the results of value relevance studies from fair value accounting generally show that the cost of assets intangible is relevant to investors and reflects the value of intangible assets implicit in stock prices. Relevance of information capitalization on software development cost, which is applied in accordance with SFAS No. 86 tested. With a sample over the 1987-95 period, it is found that capitalization annual of development costs is positively related to stock returns and software assets cumulative reported on the balance sheet are related to stock prices. Kerstein and Kim (1995) examine whether capital expenditures (*capital expenditures*) to provide relevant information.

The test results show that capital expenditures unexpected, which are associated with the moderating variables of growth, risk, and rate of return, provide additional value-relevant information. The analysis of the value relevance of the component *goodwill* conducted by Henning et al (2000) shows that there is a significant positive relationship between market value and the number of components *going-concern*, and a negative relationship with the component residual. Meanwhile, Ely and Waymire (1999) no found evidence of a relationship between assets intangible and stock prices.

In addition to assets, a number of studies are aimed at the fair value of debt and equity securities. The research question is whether the fair value of the securities is estimated *reliably*. Barth (1994) examines whether the disclosure of estimated fair value of investment bank securities is reflected in stock prices compared to historical costs. Studies by Barth et.al (1995), Eccher et.al (1996) and

Nelson (1996) prove that the estimated fair value of debt, securities, and long-term debt disclosed based on SFAS No. 107 has *explanatory power* significant compared to value book. So consistently these studies find that investors' perceptions of the estimated fair value of securities are more relevant than historical costs.

Accounting Earnings and Book Value of Equity

As mentioned above, several results research indicate a relationship between accounting earnings and stock prices and returns. Some evidence also shows a relationship between the components in the balance sheet, namely assets and liabilities, and stock prices and returns.

Studies that assess the relevance of assets and liabilities generally use the variable book value of assets and liabilities to draw conclusions about firm value. Among the valuation models that have been developed, there are several models that are based on profit and some are based on the book value of assets and liabilities (Landsman, 1986; Shevlin, 1991). These models can be justified as alternative assessment approaches. Asserts the superiority of the balance sheet in choosing an accounting model and the superiority of the concept of income based on changes in net worth.

In the theoretical model that assumes the existence of a perfect market, fair value accounting based on a balance sheet can still reflect all information relevant, but earnings measures as an alternative valuation are considered redundant (Barth and Landsman, 1995). Even under more market assumptions realistic, neither balance sheet nor income statement fully reflects all information value-relevant. Likewise, Beaver and Demski (1979) argue that in markets imperfect, income measurement cannot explain what accountants do.

Circumstances realistic in imperfect markets, systems accounting can provide information complementary about book values and earnings. The book value derived from the balance sheet provides information about the net value the company's resources. Meanwhile, profit, which comes from the income statement, provides a measure of value that reflects the results of the company's efforts in empowering its current resources. Therefore, Burgstahler and Dichev (1997) incorporate earnings and net assets in their equity value model, and book value of equity acts as a proxy for *adaptation value* and *abandonment value*.

Testing of the combined book value of assets and earnings began to be widely carried out in the mid-1990s

using the valuation framework developed by Ohlson (1995) and Feltham and Ohlson (1995). The framework shows that book value has an important role in valuation. Using the assumption of a *clean surplus relation*, Ohlson reformulated the *dividend discount model* which states price as the sum of the book value and the present value of earnings expected abnormal in the future.

Most empirical research focuses on the valuation of income statements versus balance sheets and earnings versus book values. Collins et al (1997) and Francis and Schipper (1999) regress book values and earnings on stock prices in a longitudinal analysis to assess the relevance of financial statement data. The evidence shows that the combined relevance of earnings and book value increases during the period of analysis and the incremental relevance of earnings (book value) decreases (increases) during this period. However, if separated, the relevance of earnings increased during the same period, while the book value decreased during the period. Consistent results were also obtained in testing *time-series* during the FASB period (1974-93) compared to the APB period (1960-73). the combined value relevance test of earnings and book value, Ali and Hwang (2000) also carried out which correlated the value relevance measure of financial accounting data with several factors inherent in a country.

Blacconier et al (2000) examined the effect of deregulation on the electricity industry on the relationship between market value and book value and earnings. Their prediction is that

deregulation decreases (increases) the ability of book value (earnings) to explain stock prices. Their findings are in accordance with the prediction that the regression coefficient and *incremental explanatory power* of book value (earnings) have decreased (increased) during the period 1988-1996. The book value variable can eliminate the bias that occurs in the simple profit capitalization model that only relates changes or levels of earnings to stock prices and returns. The assumption that underlies the simple profit capitalization model is a positive and homogeneous relationship between profit and price, both for companies that earn profits and losses. This assumption can result in profit coefficient a biased. If it is separated between companies that report profits and companies that report losses, it is found that the profit-price relationship is not homogeneous between profit and companies loss (Hayn, 1995). This anomaly was investigated by Collins et al. (1999) which stated that the negative relationship profit-price for loss-making firms was due to the neglected, variable namely the book value of equity variable. The findings of Collins et. al (1999) shows that, without the value variable book of equity in the simple profit capitalization model, the profit coefficient is negatively biased for loss firms and positive bias for profit firms. The profit-price relationship is also not homogeneous between profit and firms loss firms.

Factors Affecting the Relevance of Value Accounting Information

Testing of the factors affecting the value relevance of accounting information was initially focused on factors that affect the profit coefficient or what is often called the *earnings response coefficient* (ERC). Several research results show that ERC varies *crosssectional* and *intertemporal*. studies have Subsequently shown that the book value of equity also plays a role in equity valuation. Testing of the factors that affect the relevance value of the book value of equity is generally done by testing the combined book value of equity and accounting profit. The test is directed at the importance of the book value of equity compared to accounting profit in determining the value of equity or vice versa.

Factors Affecting the Value Relevance of

Accounting (*Earnings Response Coefficient*) Earnings Quality.

The higher the quality of earnings, investors will be better able to predict the performance company's in the future based on performance current (Scott, 1997). Therefore, ERC is expected to be higher for companies that generate high-quality profits. Using the 12 "*fundamentals*" used by financial analysts in evaluating quality earnings, Lev and Thiagarajan (1993) find that groups of firms that generate earnings higher quality have higher ERCs.

The twelve fundamentals are given a score of 0 for a negative signal or 1 for a positive signal. Positive signals such as inventory growth is greater than sales, implying bad news and vice versa. A low total score indicates high quality, while a high total score implies quality earnings low earnings.

Capital Structure.

In companies that have more debt, any increase in earnings before interest will have an impact on the security of lenders (*debt holders*), not shareholders. Empirical evidence that the ERC of companies with high debt will be low was reported by Dhaliwal et. al (1991). The company's capital structure will be reflected in the (*debt to equity ratio debt to equity ratio*). Dhaliwal and Reynold (1994) use debt-to-equity ratios and *bond ratings* as proxies for *default risk*, and find that *informativeness of earnings* decreases with *default of risk*.

Auditor Quality.

As a proxy for credibility or auditor quality, Teoh and Wong (1993) use auditor size, while Uyara and Tuasikal (2002) use auditor industry specialization. quality Auditis positively related to the

earnings quality of companies the audited and therefore also positively related to ERC. The test results show that ERC is positively related to auditor quality.

Company Risk.

Empirical evidence suggests that ERC is inversely (negatively) with associated systemic risk or beta (Collins and Kothari, 1989; Easton and Zmijewski, 1989). The higher the systematic risk, the lower the present value of the expected future dividends. Therefore, the reaction of investors to unexpected profits will be lower. Barth et. al (1998) who uses the volatility of securities yields as a risk proxy also finds a negative net income coefficient, and a positive book value coefficient of equity.

Company Size.

Firm(*size*) is a proxy for various phenomena such as earnings persistence, risk, accounting practices, and financial health (Barth et.al, 1998). Barth et al find that the net income incremental coefficient for large firms is negative and the book value coefficient of equity is positive. Firm size is also a proxy for differences in the information environment that will affect how price changes anticipate changes in earnings (Collins and Kothari 1989).

Stock prices of large companies are usually more informative than small companies. Collins and Kothari (1989), Bushan (1989), and Atiase (1985) find that ERC varies negatively with firm size, meaning the market anticipates earnings changes more quickly for larger firms. However, the results of Easton and Zmijewski (1989) show that ERC is positively related to firm size, although the results are not significant.

Growth Opportunities.

The success of a project that is currently being run by a company, will be a sign that the company will be able to run other projects successfully as well. Companies that are constantly such are called growing companies, which easily attract capital, and this is a source of growth. Profit information on these companies will be responded positively by investors. Using the ratio of market value of equity to book value of equity as a measure of growth opportunity, Collins and Kothari (1989) found a positive relationship between this measure and ERC.

Earnings Persistence.

Investors will predict future profit flows generated by their investments. They prefer a smoother and more persistent income stream. Net income consists of three components, namely *permanent*, *transitory*, and *price irrelevance*, each of which has a different persistence (Ramakrishnan and Thomas, 1991). The permanent income component is expected to be persistent in an indefinite period of time (assumption). *going concerns*). That is income *transitory* affects only the current year's profit and will not affect earnings in the coming years.

The earnings component *price irrelevance* has zero persistence. Earning persistence is the average persistence of the three components. Evidence that the higher the persistence of earnings the higher the ERC is shown by Kormendi and Lipe (1987), Lipe (1990) and Collins and Kothari (1989). If more good news or bad news on current earnings is expected to persist in the future, then the

expected ERC will be higher. Good news generated by management's success in running a business will be responded to by investors more than good news generated by temporary transactions such as equipment sales.

Factors Affecting the Relevance of Accounting Earnings Value and Book Value of Equity Based on Abnormal Earnings Model The abnormal

Earnings model (AEM) or *residual income model* (RIM) restates the *dividend discount model*, in a condition *clean surplus accounting*. AEM states that the value of equity is equal to the book value of equity plus the present value of expected abnormal profits in the future. Assuming *clean surplus accounting*, Ohlson (1995) and Feltham and Ohlson (1995; 1996) show that the value of equity can be expressed as a linear function of earnings and book value. However, subsequent empirical evidence suggests that the effect of earnings and book value is non-linear (eg, Burgstahler and Dichev, 1997; Collins et. al, 1999).

Negative Profit.

Hayn (1995) finds that companies that report negative earnings have lower ERCs because shareholders have the option to liquidate the company. Collins et.al (1997) found that the relevance of earnings value (book value) decreased (increased) if the company reported non- *recurring items* or negative earnings. Unlike positive profits, negative profits not

can determine the company's profitability in the future. Negative profits are less useful as a proxy for expected profits in the future.

Thus, information about expected future profits for loss-making companies is reflected in the book value of equity. Collins et.al (1997) argues that the role of book value of equity as a proxy for normal expected future earnings will increase in loss-making companies because negative earnings do not provide information about future operating results.

Earnings Persistence.

In Ohlson's (1995) formulation, the greater the persistence of abnormal earnings, the greater the *earnings multiples*. The prediction also states that the book value coefficient of equity is also influenced by the persistence of abnormal earnings. If the company is able to generate abnormal earnings that are expected to continue to be persistent, then earnings will provide relevant information, as opposed to information provided by the book value of equity (Ohlson and Shroff, 1992; Ohlson, 1995).

Financial Health.

The main financial statements that must be issued by a company are the balance sheet and income statement, each of which has a different role. The balance sheet plays a role in assisting management in lending decisions and monitoring debt contracts, while the income statement plays a role in equity valuation (Barth et.al, 1998). The balance sheet will fulfill its role by providing information on the liquidation value, namely the amount available to lenders in the event of a *default*, while the income statement will fulfill its role by providing information about abnormal profit opportunities, and future growth opportunities. Thus, if there is an increase in risk *default*,

the liquidation value will be important in equity valuation. Barth et.al (1998) found that in companies experiencing a decline in financial health, the role of the balance sheet will increase and the role of the income statement will decrease.

Profitability and Growth Opportunities.

The accounting system provides information on the book value of equity and profit. The book value of equity derived from the balance sheet provides information about the net value of the company's resources, while the profit from the income statement provides a measure of value that reflects the results of the use of company resources (Burgstahler and Dichev, 1997). If the company's current activities are successful where relatively profit is higher than book value and continues, then profit as a determinant of equity value becomes more important.

If the earnings to book value (ROE) ratio is low, it is possible for the company to take an alternative to utilize its resources in an alternative use that is superior, so that the book value of equity as a determinant of equity value becomes more important. Zhang predicts that for low-efficiency firms, the book value of equity is better able to explain the value of equity than earnings (Zhang, 2000), this is consistent with the findings of Barth et.al (1998) in firms experiencing a decline in financial health. But for the company to grow, Zhang predicts that profit and book value together the same can explain the value of equity (Zhang, 2000). So, the value of the company is a function of profit and book value, because the company has the choice to continue its current activities or to adjust its resources to other alternative uses.

Accounting Conservatism.

The conservative principle is the tendency to recognize losses faster than gains, so that profits reflect "bad news" more quickly than "good news". The result of conservatism is anticipating losses into profits, but delaying the realization of gains. Based on this, Basu (1997) argues that negative earnings changes are more frequent (reverse) than positive earnings changes. He found that positive earnings changes tend to be more persistent, while the negative earnings changes showed a tendency to turn(*reverse*). This persistence difference causes positive earnings changes to have a higher ERC than negative earnings changes.

The definition of conservative accounting, by Feltham and Ohlson (1995) is associated with a bias in book values as opposed to *unbiased accounting*. Unbiased accounting results in an average book value equal to market value, accounting profit equal to economic income, and *book rates of return* equal to the *discount factor* (Zhang, 2000). Whereas in conservative accounting, book value is lower than market value. However, in conservative accounting, earnings can be higher, equal to, or lower than economic income, depending on growth (Davidson et. al, 1982). In Zhang's analysis, growth plays an important role in determining the relationship between profit and economic income (Zhang, 2000). If there is no growth, operating profit equals economic income. In addition to influencing book value and profit, conservative accounting also affects the *book rate of return*. Because in conservative accounting the book value is lower, the *book rate of return* will exceed R-1.

Unbiased accounting and conservative accounting will also affect the results of equity valuation. If accounting is not biased, neither the balance sheet approach which uses book value as the market

value estimator nor the income statement approach which uses profit as the market value estimator will not be biased.

Likewise, the combination of the two will result in an unbiased estimate of the market value. In conservative accounting, the balance sheet approach is biased. But the income statement approach depends on growth. If there is no growth, accounting profit on average is equal to economic income, so profit is a good indicator of firm value. If there is growth, conservative accounting will result in lower book values and lower profits (Zhang, X, 2000).

Investment in Intangible Assets.

Barth et.al (1998) found that the coefficients of book value and profit vary between industries due to the degree of intangible assets that are not recognized. The greater the amount of unrecognized assets, the lower the value relevance of the book value. For pharmaceutical companies that have substantial unrecognized intangible assets, earnings have higher *explanatory power* than book value. Meanwhile, for financial institutions where most of the balance sheets contain the book value of financial assets and liabilities which are recognized at an amount that is almost the same as fair value, the balance sheet perspective is more often used in the assessment of financial institutions.

5. CONCLUSION

To be useful accounting information for decision-making, it must be relevance and reliable. Relevance means predictive, has feedback and timely, while reliable is the information should be eligible. In terms of that, the financial statement plays an important role for the shareholders or investors in taking right decisions in a company for a certain period or even in predicting the financial opportunities in future. The basic financial reporting officially used in determining and analyzing the financial results are balance sheet and income statement. Both reports has each role in helping management and shareholder taking decisions, i.e balance sheet is used to provide information about the liquidity of the company hence the management or investors can decide whether they can be a lender of the idle cash or even they should take a debt from the third parties in fulfilling the short of cash flow. While income statement has a role namely providing information about company's profit opportunities and predicting bigger profit in the future.

REFERENCE

1. Aboody, D. & B. Lev. (1998). The Value Relevance of Intangibles: The Case of Software Capitalization. *Journal of Accounting Research* Supplement, 161-191.
2. Schroff. (1992). Changes versus Levels in Earnings as Explanatory Variables for Returns: Some Theoretical Considerations. *Journal of Accounting Research* Autumn, 210-226.
3. Ahmed, AS, Morton, RM, & Schaefer, TF (2000). Accounting conservatism and the valuation of accounting numbers: Evidence on the Feltham-Ohlson (1996) model. *Journal of Accounting, Auditing & Finance*, 15(3), 271-292.
4. Ali, & L. Hwang. (2000). Country-Specific Factors Related to Financial Reporting and the Value Relevance of Accounting Data. *Journal of Accounting Research* 38, 1-21.
5. Atiase, R.K. (1985). Predisclosure Information, Firm Capitalization, and Security Price Behavior around Earnings Announcements. *Journal of Accounting Research* Spring, 21-36.
6. Burgstahler & I. Dichev. (1997). Earnings, Adaptation, and Equity Value. *The Accounting Review* 72, 187-215.
7. Callen, JL, & Segal, D. (2005). Empirical tests of the Feltham-Ohlson (1995) model. *Review of Accounting Studies*, 10(4), 409-429.

8. Collins, D.W. & S.P. Kothari. (1989). An Analysis of Intertemporal and Cross-sectional Determinants of Earnings Response Coefficients. *Journal of Accounting and Economics* 11, 143-181.
9. Dhaliwal, D.S. & S.S. Reynold. (1994). The Effect of Default Risk of Debt on the Earnings Response Coefficient. *The Accounting Review* 69, 412-419.
10. Djaballah, A. (2019). Valuation-based Accounting Research: Predominance of the Clean Surplus Valuation Model. *International Journal of Economics and Financial Issues*, 9(2), 265.
11. Easton. (1985). Accounting Earnings and Security Valuation: Empirical Evidence of the Fundamental Links. *Journal of Accounting Research* (Supplement), 54-77.
12. Esplin, A. (2021). Industry-level versus firm-level forecasts of long-term earnings growth. *Finance Research Letters*, 102516.
13. Francis, J. & K. Schipper. (1999). Have Financial Statements Lost Their Relevance? *Journal of Accounting Research* (Autumn), 319-352.
14. Gama, APM, Segura, LC, & Milani Filho, MAF (2017). The Ohlson and Feltham Ohlson Models. In *Equity Valuation and Negative Earnings* (pp. 19-41). Springer, Singapore.
15. Harasheh, M., Amaduzzi, A., & Darwish, F. (2020). The relevance of valuation models: insights from Palestine exchange. *International Journal of Islamic and Middle Eastern Finance and Management*. *Journal of Accounting Research* (Autumn), 353-385.
16. Hayn, C. (1995). The Information Content of Losses. *Journal of Accounting and Economics* 20, 125-153.
17. Henning, S.L., B.L. Lewis & W.H. Shaw. (2000). Valuation of the Components of Purchased Goodwill. *Journal of Accounting Research* 38.
18. Holthausen, R.W. & R.L. Watts. (2001). The Relevance of the Value Relevance Literature for Financial Accounting Standard Setting. *Journal of Accounting Economics* 31, 3-75.
19. Hopwood, W. & T. Schaefer. (1989). Firm-Specific Responsiveness to Input Price Changes and the Incremental Information in Current Cost Income. *The Accounting Review* 64, 313-328.
20. Kerstein, J. & S. Kim. (1995). The Incremental Information Content of Capital Expenditures.
21. Lev, B. dan P. Zarowin. 1999. The Boundaries of Financial Reporting and How to Extend Them. *Journal Accounting Research* 11, 661-687. P.
22. Lipe, R.C. (1990). The Relation between Stock Returns and Accounting Earnings Given Alternative Information. *The Accounting Review* 65, 49-71.
23. Liu, J., & Ohlson, JA (2000). The Feltham-Ohlson (1995) model: empirical implications. *Journal of Accounting, Auditing & Finance*, 15(3), 321-331.
24. Murdoch, B. (1986). The Information Content of FAS 33 Returns on Equity. *The Accounting Review* 61, 273-287.
25. Nasution, S.; Putri, R.; & Ginting, S. (2018). Positive Accounting Theory: Theoretical Perspectives on Accounting Policy Choice. Proceedings of the 1st Unimed International Conference on Economics Education and Social Science - Volume 1: UNICEES, p.1128-1133. DOI: 10.5220/0009506011281133. <https://www.scitepress.org/PublicationsDetail.aspx?ID=t2D6UTYq+/M=&t=1>
26. Ohlson, J. A. (1995). Earnings, Book Values, and Dividends in Security Valuation. *Contemporary*.
27. Podhorska, I., & Kliestik, T. (2019). Barriers in the Calculation of Residual Income in Slovak Companies. In *Economic and Financial Challenges for Eastern Europe* (pp. 109-123). Springer, Cham.

28. Ramakrishnan, R.T.S. dan J.K. Thomas. (1991). The Valuation of Permanent, Transitory and Price- Irrelevant Earnings. *Journal of Accounting, Auditing, and Finance* 13, 301-336.
29. Scott, W.R. (1997). *Financial Accounting Theory*. New Jersey, Prentice-Hall, Inc.
30. Susanto, H., Prasetyo, I., Indrawati, T., Aliyyah, N., Rusdiyanto, R., Tjaraka, H., ... & Zainurrafiqi, Z. (2021). The impacts of earnings volatility, net income and comprehensive income on share Price: Evidence from Indonesia Stock Exchange. *Accounting*, 7(5), 1009-1016.
31. Teoh, S.H. dan T.J. Wong. (1993). Perceived Auditor Quality and the Earnings Response Coefficient. *The Accounting Review* 68, 346-366.
32. Eccher, E.A., K. Ramesh & S.R. Thiagarajan. (1996). Fair Value Disclosures by Bank Holding Companies. *Journal of Accounting and Economics* 22, 79-117.
33. Uyara, A.S. & A. Tuasikal. (2002). Moderasi Aliran Kas Bebas terhadap Hubungan rasio Pembayaran Dividend an pengeluaran Modal dengan Earnings Response Coefficient. *Simposium Nasional Akuntansi V*, 16-26.
34. Victor, B. (1995). The Feltham-Ohlson framework: implications for empiricists. *Contemporary Accounting Research*, 11(Spring), 733-747.
35. Watts, R.L. & J. Zimmerman. 1986. *Positive Accounting Theory*. NJ, Prentice-Hall, Englewood Cliffs.
36. Zhang, X. (2000). Conservative Accounting and Equity Valuation. *Journal of Accounting and Economics* 29, 125-149.