THE EFFECT OF NEGATIVE EARNINGS TOWARDS VALUE RELEVANCE OF ACCOUNTING NUMBERS

B. Linggar Yekti Nugraheni

Faculty of Economics, Soegijapranata Catholic University, email: linggarb@yahoo.com

Abstract

This study investigates the volatility in the value-relevance of earnings and book values of equity over the last 10 years in Indonesia. The study uses statistical association between stock prices and accounting numbers represented by earnings and book values of equity. This study addresses 3 main questions. First, how is the value relevance of the earnings and book value of equity. Second, how is the volatility pattern of value relevance of earnings and book value of equity. Third, how is the effect of negative earnings towards value relevance of the earnings and book value of equity. The sample used in this research are public companies listed in Indonesia Stock Exchange (IDX). The samples generated during the observation periods are 1860 companies listed in IDX. This study reports five primary findings. First, earnings and book value of equity, jointly and individually, have significant explanatory power for securities prices over the last 10 years. Second, the combined value-relevance of earnings and book values has increased over time. Third, the incremental value-relevance of book value of equity has increased over time while that of earnings has declined. Fourth, for companies which report negative earnings, book value of equity was not evidenced to have greater value relevance compared to earnings. Fifth, the frequencies of negative earnings is associated with the change of value relevance of earnings and book value of equity.

Keywords: value-relevance, earnings, book value of equity, negative earnings

Abstrak

Penelitian ini bertujuan untuk mengetahui pergerakan nilai terhadap *earning* dan nilai buku ekuitas di Indonesia selama 10 tahun. Penelitian ini menggunakan uji statistic antara harga saham dan angka akuntansi yang direpresentasikan dalam hasil dan nilai buku ekuitas. Penelitian ini menjawab tiga masalah utama. Pertama, relevansi nilai antara *earning* dan nilai buku ekuitas, kedua, pola pergerakannya dan terakhir pengaruh *earning* negatip terhadap relevansi nilai *earning* dan nilai buku ekuitas. Sampel penelitian badan usaha publik di Bursa Efek Indonesia sejumlah 1860 perusahaan. Penelitian ini menghasilkan lima temuan. Pertama, *earning* dan nilai buku secara bersama-sama dan partial siknifikan menjelaskan harga saham selama 10 tahun. Kedua, kombinasi relevansi nilai *earning* dan nilai buku ekuitas meningkat. Ketiga, pertambahan relevansi nilai buku ekuitas meningkat ketika *earning* turun. Keempat, untuk badan usaha dengan *earning* negatip, nilai buku ekuitas tidak meningkat dibandingkan *earning*. Kelima, frekuensi *earning* negatip berasosiasi dengan perubahan relevansi nilai *earning* dan nilai buku ekuitas.

Kata kunci: value-relevance, earnings, book value of equity, negative earnings

1. Introduction

This research is aimed to investigate the value relevance of earnings and book value of equity. Value relevance is defined as the ability of financial statement information to capture and summaries firm value. It is measured as the statistical association between financial statement information and stock market values or returns. There are some concerns stated that the historical

cost has been loss its value relevance as the change from industrial towards technological development. Franchis and Schipper (1999) suggested for doing some studies to develop the current financial report model in which its value has declined. Furthermore, its function has been complemented by other information that are not based on accounting numbers.

Some researches have been done regarding the value relevance of the accounting numbers. Harris et al., 1994; Hayn, 1995; Amir and Lev, 1996; Elliott and Hanna, 1996; Basu, 1997 conducted researches to validate the value relevance of financial report while Collins et al., 1997; Graham et al., 1998; Francis and Schipper, 1999; Lev and Zarowin, 1999; Ely and Waymire, 1999; Rees, 1999 focused on the evolution of value relevance. The result becomes a continuing debate regarding the trend of value relevance over the observed years. It might be caused by some factors i.e. : (a) the utilization of intangible assets, (b) the negative earnings reporting, (c) The special items reporting, (d) company size, (e) conservatism.

This study observes empirical evidences of value relevance of the earnings and book value of equity and the change of the value relevance over the 10 years to see the value relevance volatility of the accounting numbers. Furthermore, it also examines the effect of negative earnings towards value relevance of the earnings of book value of equity. This research uses the Ohlson model (1995) i.e. price model derived from the linear information model. This model describes that stock price is a function of earnings and book value of equity. In another words, it identifies to the extent accounting information reflected in the stock price.

2. Literature Review and Hypothesis

Value relevance is defined as the ability of financial statement information to capture and summaries firm value (Beaver, 1968). Some researches aimed to investigate an empirical association between the stock market values and accounting information. The models which capture this association are divided into two categories, i.e., price model and return model. Ohlson (1995) developed those models from the linear information model.

This research captures the price model following Collins et al. (1997), Graham et al. (1998), and Rees (1999) to anticipate the return model weaknesses. Some difficulties found in the return model are: (a) the price change in the current period could associate with the accounting variables in the following periods as price anticipates the accounting variables as independent variables, (b) The explanatory variables which are remain sTable during periods have no significant influence although they trigger substantively towards company value (3) The difference of independent and dependent variables in the return model must be assumed comparable during the periods, but the accounting practice against this assumption. Price model is then suiTable to be applied by considering the return model weaknesses.

Harris et al. (1994) compared the value relevance of accounting data for Americans and German Companies which are matched based on the industry and company size. Using the price model, it was found that the value relevance of the German Companies ($R^2 = 0.14$) was far less than American ($R^2 = 0.34$). Hayn (1995) compared companies which report the negative earnings and positive earnings. The finding showed that companies with negative earnings tend to have the lower association. The negative earnings and nonrecurring items would affect negatively the earnings value relevance. Amir and Lev (1996) investigated the cellular industries in which intangible assets are used extensively. Using the return mode, they found that earnings, book value of equity and cash flow are not relevant. They proposed the new variables which are relevant and modified the earnings and assets measurement in those industries. Elliot and Hanna (1996) examined the earnings informativeness using the nonrecurring or unusual charges. They examined the market-adjusted excess return with unexpected earnings before special items and the special items themself. The first represented the permanent components while the later represented the transitory components. These findings showed that market downgraded the unexpected earnings before special items compared to special items. Basu (1997) examined the

impact of conservatism towards value relevance of earnings and interpreted that conservative income reflect the bad news. He found R^2 of 7,99% for the agregate sample and 2,09% for the sample with good news and 6,64% for the bad news. In conclusion, earnings with the bad news has lower association compared with the goodnews as conservaism is supposed to be more transitory.

Collins et al. (1997) investigated the change of value elevance of earnings and book value equity by using price model during 1953-1993 periods. They found that the value relevance of earnings and book value equity increased slightly during the observaton periods. Furthermore, they also found that the value relevance of earnings declined but has been replaced by the increase of the value relevance of book value of equity.It was caused by the increasing frequencies of special items, negative earnings, company size volatility and the intangible assets intensity during those periods. .

Graham et al. (1998) investgated the value relevance of quarter earnings announcement during 1992-1997 periods in Thailand Companies. Using price model, they found that earnings and book value of equity associate positively with price. Earnings and book value of equity had an incremental information content. Graham et. Al (1998) also provided evindence that the value relevance of book value of equity increased after the declined of Bath during the economic crisis in Thailand.

Francis and Schipper (1999) investigated the change of value relevance of accounting numbers during 1952-1994 periods. Using the price model, the finding showed that the value relevance of earnings and book value of equity increased during those periods. Further more, they also found that value relevance of earnings declined while value relevance of book value of equity increased. They devided samples into high and low technology companies and there were no differences between those two samples regarding the value relevance of earnings and book *value of equity and their changes.*

Lev and Zarowin (1999) investigated the change of value relevance of accounting numbers in the periods of 1977-1996. They found the decline of value relevance of accounting numbers which was shown by the decline of stock market value and accounting information association. These findings were not consistent with Collins et.al (1997) and Francis and Shipper (1999). They suggested the importance of intangible assets which were not reported and described how the financial reporting failed to reflect and adapt with the business environment which explain the decline of value relevance. They expect that loss and special items as not causal factors, but as symptoms of the decline of value relevance.

Ely and Waymire (1999) tested the change of value relevance during the establishment of standard setters in America. Based on the price model, the value relevance was increasing during the periods of APB (1960-1973) and FASB (1974-1993). Furthermore, Rees (1999) applied the derivative of Ohlson Model (1995) and investigated the association of stock price and earnings and book value of equity for English companies during 1987-1997 periods. He found that the relative weight of book value of equity and earnings were varying during the observation periods. He also found that value relevance of earnings increased during those periods. This finding did not support the study done by Collins et al. (1997). The coefficients were also varying based on company size, dividend policy, and ROE.

The previous studies are categorized into two major objectives. Firstly, they were aimed to see the accounting information value relevance (Harris et al., 1994; Hayn, 1995; Amir and Lev, 1996; Elliott and Hanna, 1996; Basu, 1997). Secondly, to observe the change of value relevance during the observation periods (Collins et al., 1997; Graham et al., 1998; Francis and Schipper, 1999; Lev and Zarowin, 1999; Ely and Waymire, 1999; Rees, 1999). The findings were not consistent, based on the sign of the coefficient or some issues related to the value relevance such as intangible assets intensity, earnings reporting, company size, and conservatism.

This research is aimed to investigates to what extend accounting information could explain the price variety. It also observed he trend and the expanatory power over the 10 periods. Considering some factors influencing the value relevance, this research focus on the effect of negative earnings and its frequency towards value relevance of earnings and book value of equity. The Ohlson model (1995) notes that price is a function of earnings and book value of equity. This research is aimed to test the robustness of the model. The model has confirmed that the association between accounting numbers and price is positively related. Hence, the hypothesis are:

H_1: Earnings and Book value of equity have value relevance simoultantinously
H_2: Earnings and Book value of equity have value relevance individually

Some studies investigated the change of value relevance of accounting information. In general, the result shows there is a gradual decrease of the earnings value relevance. Collins et al. (1997), Francis and Schipper (1999), and Ely and Waymire (1999) found the increase of value relevance of earnings and book value equity. Study in Thailand showed that value relevance of book value of equity increase after the depreciation of Bath currency. It was contradictive with study done by Lev and Zarowin (1999) who found the value relevance decrease of the accounting numbers.

H_3: There is a value relevance increase or decrease of earnings and book value of equity
H_4: There is an incremental value relevance increase or decrease of earnings and book value of equity

Hayn (1995), Elliott and Hanna (1996), Basu (1997), and Collins et al. (1997) signed that the loss or negative earnings would decrease the earnings value relevance as the negative earnings also include the transitory components. Following the economic crisis in Indonesia in 1997, negative earnings frequency is increasing. Collins et.al. (1997) implies that negative earnings would be followed by the increase of value relevance of book value of equity. The negative earnings imply the financial distress condition of company. The abandonment value is more relevant towards shareholder value comparing with earnings. In another term, book value is more related with this value.

H_5: Book value of equity would be more relevant compared to earnings during the negative earnings periods
H_6: Negative earnings frequencies are associated with the change of value relevance of earnings and book value of equity

3. Research Method
3.1. Sampling Method

The sample used in this research is all public companies listed in Indonesia Stock Exchange (IDX). The sampling method applied is purposive sampling method with criterias as follows:

a. Public companies listed in the IDX during 1998-2007 periods.
b. The data of earnings announcement dates are available
c. The publication dates are no later than 90 days after the year end. The late publication is considered to be bias for research investigation.
d. The data used in this research are available, whitch consist of: earnings, outstanding shares, book value of equity, stock price.

Table 1. Sample list

Sample Criteria	
Public companies listed in the Indonesian Stock Exchange 1998-2007	287
Publication date is not availabe	(54)
Late publication	(47)
The data are not available	0
Total sample	186

3.2. Analytical Model

Ohlson model (1995) implies that equity value as a function of earnings and book value of equity.

$$P_{it} = \alpha_0 + \alpha_1 EPS_{it} + \alpha_2 EKU + \in_{it}$$

P_{it} is represented by the value of stock piece of outstanding shares of i company on the earnings publication date (3 months after year end), t, E_{it} is represented by earnings per outstanding shares of i company during the t year, BV_{it} is represented by book value per share of i company during the t year, and E_{it} is information with other value relevance of I company for the t year which is orthogonal with earnings and book value equity. P_{it} is defined as stock value of I company on the earnings publication date. The equation 1 is used to measure the value relevance with determination coefficient is $R^2[TOTAL]$. It measures the strength of earnings and book value to explain the price variation.

In order to in line with the research done by Biddle et al. (1995), this research defines the relative value relevance and incremental value-relevance. Comparing the two source of information, the first resource could give higher, lower or even similar value relevance than the other. For instance, earnings could have a higher ability to explain comparing with book value. Incremental value-relevance is defined as the ability of information to explain over another. Earnings have an ability to explain higher than book value of equity and vice versa, regardless which one has bigger information.

To measure the relative value relevance of earnings and book value equity, the regression is applied for earnings towards price and book value of equity towards price.

$$P_{it} = \alpha_0 + \alpha_1 EPS_{it} + \in_{it}$$
$$P_{it} = \alpha_0 + \alpha_1 EKU + \in_{it}$$

The $R^2[EPS]$ and $R^2[EKU]$ are measures of earnings and book value of equity partially to explain the stock price variety. Furthermore, value relevance of earnings stated as $INCR\_EPS$, is measured by the difference between $R^2[TOTAL]$ and $R^2[EKU]$. It is also applied for book value equity, which is symbolized by $INCR\_EKU$, is measured by the diference between $R^2[TOTAL]$ and $R^2[EPS]$.

To investigate the increase and decrease pattern of value relevance, this research regresses the $R^2[TOTAL]$, $INCR\_EPS$, and $INCR\_EKU$ individually with the time trend variable

$$R^2(TOTAL)_t = \phi_0 + \phi_1 TIME_t + \in_t$$
$$INC\_EPS_t = \phi_0 + \phi_1 TIME_t + \in_t$$
$$INC\_EKU_t = \phi_0 + \phi_1 TIME_t + \in_t$$

where *TIME* is 1, 2, …., 10 which align with the research period from 1998-2007. The incremental ability to explain would decrease (increase) during the time trend if $\square_1$ is negative (positive) significantly.

Adopting the technique done by Collins et.al. (1997) the effect of negative earnings towards incremental value relevance of earnings and book value equity is tested by dividing the sample into two groups : the negative and positive earnings. If the earnings incremental ability to explain of the negative earnings is lower than the positive earnings, it would be concluded that book value would be more relevant compared with earnings and vice versa.

Collins et al. (1997) implies that the negative earnings would change the value relevance movement. When value relevance of earnings decrease, it would be replaced by value relevance of book value of equity. Furthermore, the negative earnings frequency would decrease the value relevance of earnings. Equation 7,8 and 9 would include the earnings negative frequency to confirm the hypothesis:

$$R^2(TOTAL)_t = \phi_0 + \phi_1 TIME + \phi_2 LOSS_t + \in_t$$

$$INC\_EPS_t = \phi_0 + \phi_1 TIME + \phi_2 LOSS_t + \in_t$$

$$INC\_EKU_t = \phi_0 + \phi_1 TIME + \phi_2 LOSS_t + \in_t$$

where *TIME* is 1, 2, …., 10 as research periods is from 1998 -2007 and *LOSS* is a percentage of companies with the negative earnings.

4. Results and Discussions
4.1. Result for Hypothesis 1

The total samples in this research is 1860. After the normality test, the final sample is 1432. The next steps are to test the heterocedasticity and autocorrelation. The result shows that the data are valid to be continued to the hypothesis testing.

This hypothesis 1 is aimed to test the value relevance of EPS and book value per share together .

Table 2. Hypothesis 1 Testing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.249(a)	0.062	0.061	1306.77259	1.946

a Predictors: (Constant), EKU, EPS
b Dependent Variable: PRICE

The Table shows that during 10 years, earnings per share (EPS) and the book value of equity (EKU) have value relevance. The value of R^2 is more than 0, shows that those accounting numbers have value relevance.

4.2. Result for Hypothesis 2

This hypothesis test the individual value relevance of earnings and book value of equity.

Table 3. Hypothesis 2 Testing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.229(a)	0.052	0.052	1313.13220	1.351

a Predictors: (Constant), EPS
b Dependent Variable: PRICE

The Tables show that earnings per share and book value of equity have value relevance individually. Adjusted R^2 for earnings per share and book value of equity hence, the hypothesis 2 is evidenced empirically.

Table 4. Hypothesis 2 Testing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.100(a)	0.010	0.009	1342.01441	1.401

a Predictors: (Constant), EKU
b Dependent Variable: PRICE

4.3. Result for Hypothesis 3

The test is continued by the annual regression for the EPS and EKU variables with the stock price simoultantinously and partially. The result is total R^2 for simoultant testing and R^2 for individual testing. The difference between the two kinds of R^2 is then mentioned as R^2 incremental.

Table 5. Table R^2 and Incremental R^2

Year	R^2 TOT	R^2 EKU	R^2 EPS	inc eku	inc eps
1998	0.25	0.114	0.105	0.136	0.145
1999	0.622	0.625	0.125	-0.003	0.497
2000	0.175	0.142	0.061	0.033	0.114
2001	0.28	0.016	0.273	0.264	0.007
2002	0.6	0.052	0.551	0.548	0.049
2003	0.693	0.09	0.667	0.603	0.026
2004	0.849	0.115	0.851	0.734	-0.002
2005	0.93	0.327	0.899	0.603	0.031
2006	0.91	0.249	0.859	0.661	0.051
2007	0.865	0.437	0.784	0.428	0.081

The R^2s would be used as a basis for identification of earnings and book value equity value relevance. R^2 are then regressed towards time variable over the 10 years. The result is as follows :

Table 6. Hypothesis 3 Testing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	0.180	0.115		1.564	.156		
TIME	0.080	0.019	0.835	4.292	.003	1.000	1.000

a Dependent Variable: RTOT

The Table shows that the regression coefficient is positive and 0,003 significant in the level of 5%. It shows that over the 10 years, there is an increasing pattern of value relevance of earnings together with book value of equity. Hence, the hypothesis 3 is evidenced empirically. This result supports the study conducted by Collins et al. (1997), Francis and Schipper (1999) and Ely and Waymire (1999). After the economic crisis in Indonesia, value relevance of accounting numbers increased as credibility of Indonesian companies increased. Investor started to appreciate the accounting information released by companies.

4.4. Result for Hypothesis 4

This hypothesis testing is to provide evidence that earnings and book value equity incremental value relevance have the increase or decrease pattern. The $R^2[TOTAL]$, *INCREPS* and *INCREKU* are regressed with the time trend. The results are as follows :

Table 7. Hypothesis 4 Testing

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	0.239	0.091		2.623	0.031		
TIME	-0.025	0.015	-0.520	-1.720	0.024	1.000	1.000

a Dependent Variable: INCEKU

The result shows that regression coefficient between TIME and *INCREKU* is -0,520 and p value is 0,024 significant in the level 5%. Meanwhile, the regression coefficient between TIME and *INCREPS* is 0,779 and p value is 0,008 significant in the level of 5%. It shows that earnings incremental value relevance experiences an increase pattern and book value equity incremental value relevance experiences a decrease pattern. Hence, the hypothesis 4 is evidenced empirically. The ability of **earnings to explain** increased over 10 years obeservation periods. By conntrast, the abiity of book value of equity to explain decreased. This result support the argument, that earnings explanatory power is still high compared to book value of equity, regardless how big the information of those numbers.

Table 8. Hypothesis 4 Testing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	0.014	0.124		0.116	0.911		
TIME	0.070	0.020	0.779	3.519	0.008	1.000	1.000

a Dependent Variable: INCEPS

4.5. Result for Hypothesis 5

Adopting Collins et al. (1997), the negative earnings are investigated to see their effects towards incremental value relevance of earnings and book value equity. The samples divided into two categories i.e. sample with the negative earnings and sample with the positive earnings.

Tabel 9. Hypothesis 5 Testing
(For the negative earnings samples)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.763(a)	0.582	0.530	0.04690845	2.582

a Predictors: (Constant), TIME
b Dependent Variable: INCEPS

Tabel 10. Hypothesis 5 Testing
(For the positive earnings samples)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.426(a)	0.182	0.079	0.16082070	2.517

a Predictors: (Constant), TIME
b Dependent Variable: INCEPS_POS

The R^2 incremental EPS value for the negative earnings is 53%. Meanwhile, R^2 incremental EPS value for the positive earnings is 7.9. This shows that for the negative earnings samples, the value relevance of EPS is higher than positive earnings.

Table 11. R Incremental for The Negative Earnings

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.450(a)	0.203	0.103	0.08930394	1.529

a Predictors: (Constant), TIME
b Dependent Variable: INCEKU

Table 12. Hypothesis Testing for R Incremental of Negative Earnings

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.134	0.061		2.202	0.059		
	TIME	-0.014	0.010	-0.450	-1.426	0.002	1.000	1.000

a Dependent Variable: INCEKU

For the book value equity, the EKU R^2 incremental value for the negative earnings is 10.3%. Meanwhile the EKU R^2 incremental value for the positive earnings is 54.8%, . The data describes that the earnings incremental R^2 for the negative earnings is higher compared to book value of equity incremental R^2. In another words, the explanation power of earnings (book value equity) for the negative earnings is much higher (lower) compared to the explanation power for the positive earnings. It could be concluded that earnings is more relevant for the companies which experience negative earnings. Therefore, the hypothesis 5 is evidenced empirically.

Table 13. R Incremental for The Positive Earnings

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.773(a)	0.598	0.548	0.23152384	1.674

a Predictors: (Constant), TIME
b Dependent Variable: INCEKU_POS

Table 14. Hypothesis Testing for R Incremental of Positive Earnings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	-0.023	0.158		-0.148	0.886		
TIME	0.088	0.025	0.773	3.451	0.009	1.000	1.000

a Dependent Variable: INCEKU_POS

This result also provides evidence that earnings have higher explanation power than book value of equity. It does not support the study conducted by Collins et al. (1997) who imply that during the negative earnings periods, the value relevance of earnings is decreasing and would be substitutedof by the value relevance of book value equity. Hence, earnings power is much higher than book value equity, even during the negative earnings periods. The earnings is supposed to have more information content compared to book value of equity. It also does not support the researches done by Hayn (1995), Elliott and Hanna (1996) and Basu (1997) that the

loss of negative earnings would decrease the value relevance because it consists of transitory components.

This finding support the argument that companies which experience negative earnings might not in the financial distress. Negative earnings are not considered as bad signal of the companies hence investors still rely on this number. Investor might look into the components of earnings, not only into the total figure of earnings. They might look into the permanent component versus the transitory components of earnings and the accounting methods and policies used by companies. Investor may considers that negative earnings could be generated mainly from the major operation or from the transitory components. If the negative earnings is generated from transitory earnings, investor would not think that the negative eanrings would sustain for the longer periods. The depreciation of some assets during the economic crisis is not considered disadvantage. Investors still consider ather factors such as company's prospect, growth and business environment. This finding also reflects the efficient market hypothesis which show how the semi strong market has to be. The price does not reflect all information included unpublished information. Therefore, eventhough in the negative earnings periods, investors still rely on accounting numbers. Investors also response and apreciate companies with the negative earnings.

4.6. Result Hypothesis 6

The previous hypothesis tested the decline of value relevance of book value of equity and the increase of value relevance of earnings during the observation periods. This hypothesis is tested to observe the impact of negative earnings to the pattern of value relevance between earnings and book value of equity.

Table 15. Model Summary (DV:RTOT)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.913(a)	0.833	0.786	0.13348	1.936

a Predictors: (Constant), LOSS, TIME
b Dependent Variable: RTOT

Table 16. Hypothesis 6 Testing (DV:RTOT)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.724	0.245		2.955	0.021		
	TIME	0.042	0.021	0.444	1.979	0.088	0.472	2.119
	LOSS	-1.039	0.434	-0.537	-2.393	0.048	0.472	2.119

a Dependent Variable: RTOT

Table 17. Model Summary (DV:INCEPS)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.751(a)	0.565	0.740	0.10997	1.823

a Predictors: (Constant), LOSS, TIME
b Dependent Variable: INCEPS

Table 18. Hypothesis 6 Testing (DV:INCEPS)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	0.647	0.202		3.203	0.015		
TIME	-0.053	0.018	-1.094	-3.013	0.020	0.472	2.119
LOSS	-0.778	0.358	-0.790	-2.177	0.066	0.472	2.119

a Dependent Variable: INCEPS

Table 19. Model Summary (DV:INCEKU)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.780(a)	0.608	0.496	0.19364	1.974

a Predictors: (Constant), LOSS, TIME
b Dependent Variable: INCEKU

Table 20. Hypothesis 6 Testing (DV:INCEKU)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	0.051	0.355		0.143	0.890		
TIME	0.068	0.031	0.752	2.183	0.065	0.472	2.119
LOSS	-0.070	0.630	-0.038	-0.110	0.091	0.472	2.119

a Dependent Variable: INCEKU

The Table shows that R^2 incremental earnings is 74% and R^2 incremental book value of equity is 49,6%. The regression coefficient of LOSS variable for earnings and book value of equity are -0,778 and -0,070 respectively. The probability values are 0,066 for incremental earnings and 0,091 for incremental book value of equity, significant statistically in the level of 10%. These results shows that the increase of value relevance of earnings and the decrease of value relevance of book value of equity could be explained by the earnings frequencies during the periods. Therefore, the hypothesis which state that the negative earnings frequencies are associated with the chnage of value relevance of earnings and book value of equity is supported.

The interesting finding is that eventhough there is an opposite movement between the earnings movement and book value of equity, but during the negative earnings, the explanatory of earnings do not decrease as well as the incerase of book value of equity. Some preliminary studies which find that negative earnings which contain transitory earnings were not supported. This does not align with the study done by Collins et.al (1997) who implies that the negative earnings would increase the value relevance of book value of equity. Hayn (1995) also found that the frequencies of negative earnings has increased and the explanatory power of earnings has been replaced by book value of equity. Some factors have been investigated to support this finding. Firstly, investors ni Indonesia still rely on earnings to support their decision making compared to other acoounting numbers such as book value of equity and cash flow. Secondly, negative earnings are not considered as negative signal or financial distress for investor, as negative earnings could happen during the expansion or any other reasons.

4.7. Conclusion and Recommendation

This research has provided evidences that earnings and book value of equity have value relevance, During the negative earnings, the value relevance of book value of equity is not higher compared to earnings and the negative earnings frequencies is associted with the change of value elevance of earnings and book value of equity. This support the provious studies that earnings and book value of equity influence the investor behavior. Further studies need to induce other variabel such as cash and market risk and also controll the test by earnings attributes such as conservatism and earnings management.

Further studies also suggested to test the the effect of negative earnings because this study fail to prove that during the negative earnings periods, the velue relevance of book value of equity is not higher than earnings.

References

Amir, E., and B. Lev, 1996, Value-Relevance of Nonfinancial Information: The Wireless Communications Industry, *Journal of Accounting and Economics*, 22/1-3, 3-30.

Basu, S., 1997, The Conservatism Principle and The Asymetric Timeliness of Earnings, *Journal of Accounting and Ecconomic*, 24, 3—37.

Beaver, S., 1968, Value-Relevance of Annual Earnings Announcements, *Journal of Accounting Research/Supplement*, 67—76.

Collins, D.W., Maydew, E.L., and Weiss, I.S., 1997, Changes in the Value-Relevance of Earnings and Book Values Over the Past Forty Years, *Journal of Accounting and Economics*, 24/1, 39-67.

Elliott, J.A. and D.J. Hanna, 1996, Repeated Accounting Write-offs and The Information Content of Earnings', *Journal of Accounting Research*, 34, 135-155.

Ely, Kirsten and Waymire, Gregory, 1999, Accounting Standard-Setting Organizations and Earnings Relevance: Longitudinal Evidence From NYSE Common Stocks, 1927-93, *Journal of Accounting Research*, 37/2, 293-317.

FASB., 1996, *Statement of Financial Accounting Concepts*, John Wiley and Sons Inc.

Feltham, J. and J. Ohlson, 1995, Valuation of Clean Surplus Accounting for Operating and Financial Activities, *Contemporary Accounting Research*, 11, 689-731.

Francis, J. and K. Schipper, 1999, Have Financial Statements Lost Their Relevance, *Journal of Accounting Research*, 37, 319-352.

Graham, R.C., Lefanowicz, G.C., Petroni, K.R., 1998, Value Relevance of Fair Value Disclosures for Investments in Securities Accounted for Under The Equity Method, *Unpublished Working Paper*, Michigan State University.

Harris, T., M. Lang, and H. Möller, 1994, The Value Relevance of German Accounting Measures: An Empirical Analysis, *Journal of Accounting Research*, 32, 187-209.

Hayn, C., 1995, The Information Content of Losses, *Journal Accounting and Ecconomics*, 20, 125-153.

Lev, B. and P. Zarowin, 1999, The boundaries of financial reporting and how to extend them. *Journal of Accounting Research*, Autumn, 353-385.

Ohlson, J., 1995, Earnings, Book Values, and Devidens in Security Valuation, *Contemporary Accounting Research*, Spring, 661-688.

Rees, W.P., 1999, Influences on the Value Relevance of Equity and Net Income in the U.K., *Managerial Finance*, 25/12, 58-65.

Appendixes

Appendix 1

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	0.156	1860	0.000	0.731	1860	0.000

a Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Unstandardized Residual	0.139	1432	0.068	0.879	1432	0.073

a Lilliefors Significance Correction

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.249(a)	0.062	0.061	1306.77259	1.946

a Predictors: (Constant, EKU, EPS
b Dependent Variable: PRICE

	Coefficients(a)	
Model	Collinearity Statistics	
	Tolerance	VIF
EPS	1.000	1.000
EKU	1.000	1.000