

# THE INFLUENCE OF INCOME SMOOTHING TOWARD STOCK PRICE CHANGES ON THE BANKING COMPANIES IN INDONESIA STOCK EXCHANGE

Sendi Gusnandar Arnan  
Accounting Department, Widyatama University Bandung, Indonesia  
[sendi.gusnandar@widyatama.ac.id](mailto:sendi.gusnandar@widyatama.ac.id)

## ABSTRACT

For investors, the financial statements are the basis to analyze stocks as well as to predict an important prospect for future earnings. In general, companies with earnings growth rates that are stable and do not fluctuate, are more of interest among investors. Companies tend to make the practice of income smoothing, which aims to minimize risk and enhance shareholder value. The practice of income smoothing can be done with the hope of providing a beneficial effect of share value and performance of managers. This study aims to determine the influence of income smoothing towards stock price changes in the banking industry in the Indonesian Stock Exchange. The sample data was taken from financial statements of banks listed in the Indonesian Stock Exchange for the period of 2004 to 2009. This research uses descriptive analytical methods and inferential methods whereby the inferential methods used are correlation and regression. Results show that income smoothing did not have a significant effect on stock price changes in the banking industry in the Indonesian Stock Exchange.

**KEYWORDS:** income smoothing, stock price change

## 1. INTRODUCTION

Competitive in the business becomes a powerful trigger for management companies to display their best performance of the companies they lead, for good or poor performance will affect the company's investors to invest or withdraw its investment from a company. Management is also responsible for providing financial reports to all interested parties with information on company accounting. For investors, accounting information is a basic data to analyze stocks as well as to predict future earnings prospects. Attention investors often focus on income information regardless of the procedures used to generate such profits information (Beattie *et al.*, 1994). Earnings have the potential information that is essential for internal and external parties. Markets have a tendency to interact on any information relating to corporate issuers because it will affect the value of their investments in these companies. Based on the fact, often the attention of users of financial statements only to gain information, regardless of how profits are generated. Earning Information is a component of the company's financial statements to assess management performance, to help estimate the earnings capacity of representative in the long term and estimating the risk of the investment or lending (Kirschenheiter, 2002). Formation of stock prices is due to supply and demand for the shares. In other words, stock prices are formed by demand and supply of such shares. This has encouraged corporate management to take some action which called earnings management. According Beidleman (1973) on (Belkaoui, 2000), one of the reasons for management to smooth reported earnings, is the assumption that a stable income stream capable of supporting a higher dividend rate than a variable income stream, and has a favorable influence in the company's stock value because of the risk companies that reduced. In general, companies that earnings growth rates are not volatile, more interest among investors, because the company's stock has low risk and potentially provide a stable return. There are

several reasons for management to manage earnings, but most are associated with stock and increase corporate value (Poll, 2004). Management will conduct a variety of strategies to enhance shareholder value and company stock value. However, management strategies are limited by regulations.

## 2. LITERATURE REVIEW

Income smoothing can be viewed as deliberate attempts to normalize the earnings trend in order to achieve the desired or the level of income.

Beidleman (1973) (Belkaoui 2000): smoothing reported earnings that can be defined as a deliberate attempt to minimize or fluctuations in income level that are considered normal for a company. In this sense, smoothing is a part of corporate management efforts to reduce abnormal variations in earnings at the level permitted by the principles of sound accounting and management.

Stice, Stice, Skousen (2003) : The practice of carefully timing the recognition of revenues and expenses to event out the amount of reported earnings from one years to the next is called income smoothing.

Poll (2004) : Smoothing of income is a way of removing volatility in earnings by levelling off the earnings peaks over a number of years and raising the valleys over the same period.

Gordon (1964) (Michelson et al. 1995 and Nasir et al. 2002) states that the satisfaction of the shareholders to increase due to growth in earnings and profits tend to be stable.

Michelson et al. 1995 (Nasir et al. 2002). Income smoothing can indirectly expand the market share and there should be a good influence on the value of company shares.

Andriyani (2009), shows that the change in earnings is positive and significant effect on stock price movements.

Hermansyah, Ariesanti (2008), shows with high levels of income will likely be more interested investors to invest their capital so that the stock will likely demand stronger than supply. This situation will cause the company's stock price will likely increase.

## 3. DATA AND METHODOLOGY

### 3.1. Data

Data used in this study is based on the company's financial statements were taken from the Indonesian Capital Market Directory IDX year 2004-2009, the data rate of daily stock price movements, throughout the study period from 2004 until 2009, and other information sources related to research such as textbooks, journals, articles, and so forth. Based on the study population consisted of 29 listed banks, which meet all the criteria in this study as a sample of 25 banks.

#### 3.1.1 Determinant of sample

Determination of the sample in this study using purposive sampling method. In general, the criteria used by researchers to select samples are as follows:

1. Registered as a member of the Indonesia Stock Exchange.
2. Moving in the same industry.
3. Provide periodic financial reports to the Indonesia Stock Exchange and issued financial statements until the year 2006.

The steps undertaken by the authors in this study are:

1. Obtain data related to variables associated among net income after tax, total assets, total sales, and other data that support for the years 2004 to 2009.

2. Calculate the average sales and average net income, standard deviation of sales, standard deviation of net income, and coefficient of variation sales and coefficient of variation of net income for the period from 2004 to 2009.
3. Calculates the smoothing index based on Eckel index for classifying the sample into group leveler of nonprofit and profit. If the coefficient of variation Sales is greater than the variation coefficient of net income, the companies include to the company's earnings smoothing.  
The Company is classified as a leveler of company profits if:

$$CV_{\Delta I} < CV_{\Delta S}$$

Where:

$CV_{\Delta S}$  : Coefficient of variation for the change in sales.

$CV_{\Delta I}$  : Coefficient of variation for the change in earnings.

$$CV_{\Delta S} = \frac{\sigma_{i \text{ sales}}}{X_{i \text{ sales}}} \quad \text{and} \quad CV_{\Delta I} = \frac{\sigma_{i \text{ earnings}}}{X_{i \text{ earnings}}}$$

Where :

$\sigma_{i \text{ sales}}$  : standard deviation of sales

$\sigma_{i \text{ earning}}$  : standard deviation of earnings

$X_{i \text{ sales}}$  : Average of sales

$X_{i \text{ earning}}$  : Average of earnings

4. Calculating the change in stock price, as can be seen on the following formula:

$$Y = \frac{Y_a - Y_b}{Y_b}$$

Y : Changes in the level of stock prices before and after the report  
Publicized corporate financial

$Y_a$  : Average level of share prices five days after the Financial  
Statements

published company.

$Y_b$  : Average rate of stock price five days prior to the Financial  
Statements

published company.

5. Statistical test to hypothesis and interpret and analyze the results of hypothesis testing.
6. Draw conclusions based on results from statistical tests.

### 3.1.2. Variable Operational

The variables consisted of two groups, namely:

1. Independent variable (X)  
the independent variables (X) is the index of earnings smoothing.
2. The dependent variable (Y).  
the dependent variable (Y), is stock price changes

### 3.2. Methodology

#### 3.2.1. Regression

In accordance with the forecasting model used, the form of regression equations as follows:  $\hat{Y} = a + bX$

Description:

$\hat{Y}$  = Stock price Change

a = constant

$b_1$  = Coefficient of regression for each variable

X = Income Smoothing

### 3.2.2. Correlation

To measure relationship strength, the correlation coefficient values are -1 and +1. To shape or direction of the relationship, the correlation coefficient is expressed in positive (+) and negative (-), or  $(-1 \leq r \leq +1)$

- If the correlation coefficient is positive, then the variables are positively correlated, meaning that if one variable increases or decreases, the other variable also increase or decrease. if the correlation coefficient closed to +1, the positive correlation is strong.
- If the correlation coefficient is negative, then the variables are negatively correlated, meaning that if one variable increases or decreases, the other variable also increase or decrease. if the correlation coefficient closed to -1, the negative correlation is strong.
- If the correlation coefficient value of 0 (zero), the variables showed no correlation.
- If the correlation coefficient value of +1 or -1, the variables indicate positive or negative correlation is perfect.

### 3.2.3. Coefficient Determination

Another way to measure the usefulness of regression models to calculate the contribution of X (independent variables) in predicting Y (dependent variable), this method is also called the coefficient of determination.

Equation: The coefficient of determination (D) =  $r^2$

The coefficient of determination ranged from:  $-1 \leq r^2 \leq 1$

Results of coefficient determination expressed as a percent. The coefficient of determination means the variation of one variable caused by changes in other variables, or how strong the influence of X (independent variable) on Y (dependent variable).

## 4. FINDINGS AND DISCUSSION

From the beginning of the calculation of income smoothing index conducted on twenty five companies listed on the Stock Exchange Banking and shows that there are eight companies that have a banking income smoothing index value greater than one and seventeen banking companies that have a value of income smoothing index smaller than one. This means that out of twenty five banking companies and listed on the IDX is a sample of the research proved that there are eight companies categorized banking practice income smoothing and there are seventeen banking company which is categorized as a company that does not make the practice of income smoothing. To the eight companies can be seen in table 1 following :

**Table 1. Banking Company's Income Smoothing**

No.	Emiten	<i>Cvsales</i>	<i>CVearning</i>	IS	Stock Price Change
1	BBCA	0.24679351	0.235784011	1.04669315	0.1514
2	BBKP	0.26598899	0.215800659	1.23256803	0.0107
3	BBNP	0.26423414	0.047388094	5.57596054	0.1639
4	BBRI	0.31417887	0.286196711	1.09777248	0.4637
5	BDMN	0.32765967	0.230455946	1.42178875	0.2846
6	BNGA	0.55952306	0.464631024	1.20423095	2.2096
7	BVIC	0.45329081	0.349391901	1.29737070	0.2516
8	MAYA	0.53188843	0.364664876	1.45856776	0.8415

Source : IDX, reprocessed

From this table, known amount of income smoothing index value obtained by companies that are categorized to the practice of smoothing earnings is between 1.04669315 to 5.57596054.

Based on the results of the above calculation, we can find the relation between income smoothing with stock price. To test the linearity of regression testing is done by using statistical parameters r distribution with a significance level of 5%.

**Table 2. Counting Result**

Variable	Coefficient regression	Sig	Durbin Watson	VIP
Constant	.724	.142		
Income Smoothing	-.099	.616	2.376	1.000

Dependent variable : stock price change

Correlation (R) : -0.211

R Square : 0.045

Adjusted R<sup>2</sup> : -0.115

significant at the 0.05 level

#### *Regression Assumption Testing Results*

To analyze it can be used regression analysis to these data are representative of the preliminary test should be conducted using the method of least squares (OLS). Such data should be qualified that there is no multicollinearity and autocorrelation.

#### *Multicollinearity test*

Multicollinearity is to have a perfect relationship or perfect detect among some or all of the variables that describe the regression model. How to detect the multicollinearity is to look at the VIF value (Variance Inflation Factor). Good data have small VIF. The results obtained the following values:

VIF value for the variable income smoothing is 1.000

Because the above values smaller than 10 we can conclude that there is no multicollinearity among the independent variables.

#### *Autocorrelation test*

To detect autocorrelation, the statistical test used is the Durbin Watson test with the hypothesis:

Ho:  $\rho = 0$  there is no positive or negative autocorrelation

Ha:  $\rho \neq 0$  There is a positive or negative autocorrelation

By looking at the Durbin Watson value of 2.376 with  $\alpha = 0.05$  and the number of variable  $k = 1$ , then got in table  $dl = 1.08$  or can be seen from the rate of change  $f$  sig amounted to 0.616, it can be summarize as follows:

Since the DW value  $>$  value table ( $dl$ ), then Ho is accepted

Value  $2.376 > 1.08$  then Ho is rejected or there is no autocorrelation

based on the above statement can be concluded that the absence of autocorrelation.

#### *4.1 Regression*

Based on table 1. data processing, the value of the constant ( $a$ ) for the simple regression equation is 0.724, while the slope value of the variable  $X$  is -0.099, the data obtained by the simple regression equations as follows:

$$\hat{Y} = 0.724 - 0.099X$$

#### *4.2 Correlation*

In general, the results of the correlation between ratios of assets to the profit that is worth -0.211. This means that every increase of one unit of the income smoothing, would lead to decreased stock price of 0.211.

#### *4.3 Coefficient Determination*

R square value amounted to 0.045, its mean stock Price Change is explained by income smoothing amounted to 4,5 percent and the rest explained by other variables.

#### *4.4 Hypothesis Testing*

initial hypothesis and alternative hypothesis are as follows:

Ho: Income smoothing has not a significantly affect to stock price change of banking companies.

H<sub>1</sub>: Income smoothing has a significantly affect to stock price change of banking companies.

significant value for the regression equation amounts to 0.142. Since the number 0.142 is greater than 0.05, then Ho is accepted, it means that variable are not significant at  $\alpha = 0.05$ , but significant at  $\alpha = 0.142$ .

It turned out that after carefully conducted study that income smoothing did not significantly affect the stock price changes. This can be seen when the F test was done where:

F calculated  $<$  F table  $0.280 < 10.1$  then Ho accepted

Based on the above statements, we can conclude that there is no significant effect between income smoothing on stock price movements.

## 5. CONCLUSIONS AND IMPLICATIONS

### 5.1. Conclusion

After doing the calculation, analysis and discussion about the effect of income smoothing (income smoothing) on stock price movements, then from this research can be concluded as follows:

1. From twenty five Banking Companies listed on the stock exchanges of Indonesia 2004-2009 period studied by Eckel index, only eight companies that make the practice of income smoothing while seventeen other companies do not engage in the practice of income smoothing.
2. The test results by using simple linear regression with a significance level of 5% was obtained t value of -0.529 with a t table value of 2.3646 where t count < t table. Thus, the research hypothesis was Income smoothing has a significantly affect to stock price change of banking companies cannot be accepted.
3. Based on research that has been done on the banking companies listed in Indonesia Stock Exchange in the period 2004-2009 with the support to the theory obtained through references, it can be concluded that not a significant affect between income smoothing to stock price change.

### 5.2. Suggestion

Based on research results and conclusions that have been described previously, the authors provide some suggestions as follows:

1. Suggestions for companies  
Company is expected to provide financial statement information objectively, reliable, relevant, and presented honestly. So that income smoothing can be directed to the selection of generally accepted accounting method only and not intended to manipulate earnings.
2. Advice for investors  
To make decisions in investing, investors need to understand and properly analyze the conditions that occur in companies where investors to invest. Investors are expected to not only consider income information regardless of how profits are generated in view of the action that allowed the manipulation of accounting earnings as income smoothing.
3. Suggestions for further research
  - Further research should use samples of one type or the company in areas such as food and beverage, manufacturing and so forth so that more accurate testing results.
  - The use of other index to identify the company's profits and not leverer of income, such as michelson index
  - Further research should examine other factors that may affect such income smoothing practices, business groups, operating leverage and debt equity ratio.

## REFERENCES

- Andriyani, (2009) 'The Influence of Changes in Income on Stock Price change'. Universitas Muhammadiyah Surakarta. Available form URL <http://etd.eprints.ums.ac.id/3125/>
- Beattie, V. et al. (1994) 'Extraordinary items and income smoothing: a positive accounting approach', *Journal of Business Finance & Accounting*, September 21(6).
- Beidleman, C.R. (1973) 'Income Smoothing : The Role Of Management'. *The accounting Review*, Vol. XLVII, October, No. 4 Page.653-667
- Belkaoui. A.R. (2000) *Accounting Theory* 4<sup>th</sup> ed. Australia: Thomson Learning.
- Hasanah. N. (2007) 'The Influence of income smoothing toward reaction on the Market of the earnings announcement Information'. Universitas Islam Indonesia. Available from URL <http://rac.uui.ac.id/server/document/Public/2009032009424899312011.pdf>
- Hermansyah, I. & Arisanti, E.(2008) 'The influence of earnings toward stock price', *Journal of accounting economics Faculty University of Siliwangi*, Vol. 3, No. 1. Available at <http://imanph.files.wordpress.com/2009/02/>
- Jatiningrum (2000) 'Analysis of Influential Factors toward income smoothing on Companies Listed on the Jakarta Stock Exchange', *Journal of accounting & Business UNS*. Vol 2, No 2: 145-155
- Nasir, M. & Arifin, A.S. (2002) 'Analysis of the effect on income smoothing Stock Market Risk and Return of Shares of Public Companies on the Jakarta Stock', *Kompak*, May, No 5: 139-157
- Salno, H.M. & Baridwan, Z. (2000) 'Analysis Income Smoothing: Factors Affecting the Performance Shares and the Relation to the Public Company in Indonesia', *The Indonesian Journal of Accounting Research*, Vol 3. No 1: 17-34.
- Santoso, S. (2000) *SPSS Statistical Data Processing Version Professionally*. PT. Elex Press. Jakarta.
- Sekaran, U. (2002) *Research Method for Business : A Skill-Building Approach*. 3<sup>rd</sup> ed.USA: John Willey & Sons, Inc.
- Stice, J.D., Stice E.K., and Skousen, F.(2003) *Intermediate Accounting*. Thomson. South-Western.