The Impacts of Income Smoothing Toward Bond Ratings

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Abstract

Bond rating is important for investors to invest in a company, because the bond rating illustrates the company performance. In order to get maximum funds, the company seeks to obtain a high bond rating by making the company's performance look better by implementing income smoothing. The purpose of this study is to determine whether the company that doing the income smoothing will get a higher bond rating than the companies that do not perform income smoothing. The samples are 99 bonds of 47 companies listed on the Indonesia Stock Exchange in the year 2008 to 2012 by using ordinal logistic regression. The other variables that tested are participating ROA, leverage ratio and growth companies. The results of this study is the income smoothing does not affect the bond ratings. Rating Agency Securities rank the bonds obtained a firm does not see only with a stable financial condition indicated by the small changes in profit every year but changes in income each year also showed that the greater the increase in the company's performance will also improve the bond rating.

Keywords: *Bond Rating, smoothing earnings, growth, ROA, leverage ratio*.

Introduction

Bond is an investment option that provide a relatively fixed income each year. Companies will pay interest coupons on a regular basis to the investors, so that these bonds are safe investments alternative (Yasa, 2010). Nevertheless, the bond is still not fully safe investment alternatives; investors still may experience losses due to some factors beyond the company's performance as well as internal factors, such as risk-maturity funds that are not paid on time (Brigham et al, 1999). To minimize the risk of losses, investors can use the information provided by the agency debt securities. In carrying their duties to rank the bonds, debt security agency requires information related to the company. This information is a general description about the company, the activities undertaken by the company, the company's financial projections, and financial statements of the company. In order to make financial statements look good and stable, there is a possibility that the management of a company does an income smoothing. The settings of profit from year to year in the financial statements are of course arranged neatly, so that they do not arouse any suspicions by all parties in order to give confidence to the bond rating agencies that the company could be trusted, and enter to *investment grade.* By entering to *the investment grade* zone*,* the investor will believe and invest to the company maximally.

Several studies that discuss the factors that were thought to affect the bond rating *of corporate governance* (Rinaningsih, 2008; Setyapurnama and Norpratiwi, 2007; Aldo and Restuti, 2012), the growth of the company (Restuti, 2007), and disclosure (Restuti and Kusumadewi, 2011). Studies that discussed the income smoothing are usually associated with the market reaction to corporate governance mechanism and CSR *Disclosure* (Restuningdiah, 2011), but there are also some of them which discussed the factors that affect the income smoothing (Mila and Supatmi, 2012). There are several

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studies which discussed about the profit management practices towards bond ratings, such as Profit Management Practice Toward Bond Ratings (Sari and Bandi, 2010) and The Ranking of The Premium Bonds as The Trigger of Profit Management (Yasa, 2010).

Studies which have attempted to discuss the relation between income smoothing and bond ratings are still limited in Indonesia. Therefore, this study will try to see if the company which is doing income smoothing, its profit will look stable, so that it has ability to pay the bond capital and coupon on time, the company's default risk is low, and its bond ratings will be higher.

Literaturel Review

Signaling Theory

Signaling theory explains the reason why companies provide information to the capital markets. The signaling theory indicates the asymmetry of information between management with the parties that have interests in such information. Signaling theory suggests about how the company should provide signals to the users of financial statements.

The quality of investors' decisions is influenced by the quality of the disclosed information in the company's financial statements. The quality of the information is intended to reduce the information asymmetry that arises when a manager knows better about the company's internal information and prospects for the future rather than external parties. The information in the form of provision of corporate bond ratings are expected to be published in the company's financial condition signal and illustrates the possibilities associated with the debt owned.

Bond ratings are expected to provide guidance to investors about the quality of bond investmentwhich they are interested in. Rating is a statement about the state of the debtor and the possibility of what can and will be done related to debt which is owned, so it can be said that the rankings attempt to measure the risk of *default*, that is a chance that the borrower will not be able to meet the conditions of his/her financial obligations (Restuti, 2007)

Income Smoothing

Income smoothing is a deliberate attempt to smooth the rate of profit, so that at the present time is deemed normal for a company according to Beidelman in Utomo and Siregar (2008). In this case, income smoothing shows an attempt of a management of a company to reduce the variation of abnormal earnings within the limits permitted in the practice of accounting and management principles which are reasonable. Meanwhile, according to Koch in Utomo and Siregar (2008), income smoothing is defined as a management tool used to reduce the variability of reported earnings numbers flow relatively to the flow that is the target of management by manipulating the artificial variables and real variables.

Income smoothing can be divided into two; income smoothing that occurs naturally and deliberate income smoothing which is done by the management (Utomo and Siregar, 2008). Income smoothing naturally is a process undertaken by the management directly without any manipulation. Deliberate income smoothing occurs because of interference from management; income smoothing can be in the form of real or *artificial* income smoothing. Real income smoothing is a management action to control economic events that directly affect the company's profit in the future. *Artificial* income smoothing is an effort done by the management to smooth the income by doing a manipulation. According to

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Yulianto in Mila and Supatmi (2012), the reason for the first income smoothing is done in purpose to reduce profits and leveling costs in the current period may reduce the tax payable.

Second, the action of income smoothing can increase investors' confidence because it supports stability in earnings and dividend policies as expected. Third, the action of income smoothing can strengthen the relationship between the manager and the employee because it can avoid the demand for higher wages / salaries by the employees. Fourth, the income smoothing has a psychological impact toward the economy, in which the progress and drawback can be compared to and the waves of optimism and pessimism funds can be suppressed.

Bond Ratings

Bond rating is a statement about the state of the borrower and the possibilities of what can and will be done related to the debt owned (Sari, 2010).Bonds usually will get ranking periodically issued by rating agencies. The bond ranking is conducted to estimate the ability of the bond issuer to pay interest and capital debt based on financial analysis and the ability to pay the loan. The higher the bond ratings, the higher the bond issuer's ability to pay his/her debts.

PT. PEFINDO as a local rating agency that provides a rating of the debt securities of various companies in Indonesia which have rating level that can be seen in Table 2.1.

Based on the ranking, bonds are divided into 2 groups, as follows:

a. Investment Grade Bonds: the minimum rating of BBB- is the bonds which are eligible to be used as an investment and have a risk that is not too big.
b. Non Investment grade Bonds: with rank of CC or speculative and D or *junk bonds* are bonds that are rated below investment grade. It is called junk bonds because these bonds are more risky than *investment grade* category.

Table 1: **Bond Ratings**

AAA	Debt securities with AAA ratings is the Debt Security with the highest ranking from Pefindo which is supported by the relatively superior ability of debtors compared to other Indonesian entities to meet long-term financial obligations in accordance with the agreement.
AA	Debt Securities with AA ratings have credit qualities slightly below the highest rating, supported by the ability of the debtors which are very strong to meet the long-term financial obligation, based on the agreement relatively compared to the other Indonesian entities.
A	Debt Securities with A rating have supports from the debtors' strong abilities compared to other Indonesian entities to meet the long-term financial obligation based on the agreement, but sensitive enough toward disadvantageous changes.
BBB	Debt Securities with BBB rating are supported by the debtors' abilities which are relatively adequate compared to other Indonesian entities to meet their financial obligation, but those abilities can be weakened by the changes of business and economic disadvantageous conditions.

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BB	Debt Securities with BB ratings show the supports of debtors' abilities which are quite weak relatively compared to other entities to meet their long-term financial obligation based on the agreement, and also sensitive toward business and economic unpredictable conditions.
B	Debt Securities with B ratings show the parameters of the very weak protection. Although the debtors still have abilities to meet their long-term financial obligations, but the existence of changes in disadvantageous business and economic conditions will worsen the debtors' abilities to meet their financial obligations.
CCC	Debt securities with CCC ratings showed Debt Securities which are no longer able to meet their financial obligations, and only depend on the improvement of the external circumstances.
D	Debt securities with D ratings indicate the effect of bad Debt Securities. The issuing companies have stopped striving.

Source : PT. PEFINDO

Previous Research

According to Manurung, Haymans, Silitonga, and Tobing (2008), who did a research about bond ratings and financial ratios, the *current ratio, total of turnover asset,* and ROA significantly affect the bond ratings. Raharja and Sari (2008) also did a research about bond ratings and financial ratios, the results were that the ratios of *leverage,* liquidity, solvability, profitability, and productivity had abilities to form a prediction model of bond ratings. Similar research was also done by Linandarini (2010) about the ability of financial ratio in predicting bond ratings in Indonesian companies which produced significance if the financial ratio can predict the bond ratings.

The studies which discussed about the factors that affect the bond ratings are the growth company (Restuti, 2007), *corporate governance* (Rinaningsih, 2008; Setyapurnama and Norpratiwi, 2007; Aldo and Restuti, 2012), and disclosure (Restuti and Kusumadewi, 2011). Those studies discussed the income smoothing and bond ratings which had ever been done in Brazil (Martinez and Castro, 2011). The results of this study indicated that income smoothing factor is a decisive factor in bond ratings issued in Brazil by three agencies; *Fitch, Moody's,* and S & P. The study also found that companies that perform more aggressive income smoothing increase their probabilities of obtaining better ratings. Bonds which gain maximum ratings in this study are indicated to perform income smoothing.

Hypothesis Development

Information which is related to the bond ratings is needed by the investors. Investors will use this information to make decisions to invest in the company or not. Bond rating describes the risk of a bond. The higher the bond rating, the lower the default risk would be. Sari and Bandi (2010) mentioned that the management which was suspected of doing earnings management in the period around the issuance of bonds in order to make the performance of the company look good, will have an impact on the acquisition of bond ratings, so that it would attract the investors. It is also related to the provisions of the Securities and Exchange Commission (BAPEPAM) that the companies which are registered in the Securities and Exchange Commission, at least get bond rating of BBB- (Yasa, 2010). In

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order to make the bond rating become below BBB-, the company's management will conduct profit/earnings management, one of them with income smoothing.

According to Martinez and Castro (2011), investors will look at the high variation in earnings as a measure of risk, so the higher the company's profit variation from year to year, the higher the risk of the corporate bonds will be. Therefore, companies perform income smoothing; so that the profit variations will be seen to be lower, that attract investors and can get loans with lower prices.

Bond ratings largely determine an investor's decision making. It results in the company trying to get a good rating. To get a good rating, the rating agencies will assess a number of factors, and one of them is a factor of the company's financial condition. Good and stable financial condition become very important factors in this assessment because the better and more stable financial condition of the company, the more the company is considered to be able to pay the capital and interest of the bonds regularly. The managements of the companies are encouraged to perform income smoothing, so that the financial condition of the company will look stable and the bond ratings obtained will be higher, so that the bond risk is seen to be low and attractive to the investors. The research hypothesis is as follows:
H1: The more companies do income smoothing, the higher the bond rating of the company that will be acquired.

Factors Affecting Bond Ratings

Several factors which affect the main bond ratings are the *leverage* ratio (Sari, *2008),* the profitability ratio (Linandarini, 2010), and the growth of the company (Restuti, 2007). These factors have been shown to affect the bond ratings that will be used as control variables in this study.

Research Methods

Population and Sample

The population used in this research was all of the companies which published bonds and were listed in Indonesian Stock Exchange during 2008 until 2012. The samples were taken by using *purposive* sampling method with the criteria as follows:

a. Bonds issued by companies listed on the Indonesia Stock Exchange in the period January 1, 2008 until December 31, 2012.
b. Bonds issued not including banking, finance, and insurance companies.
c. Bonds that have bond ratings during the period of the observation
d. Companies that published the audit of financial statements completely during the observation
e. Companies that were listed in the de-listing list and were stopped from trading by the Securities and Exchange Commission (BAPEPAM) were not included.

Dependent Variables

The dependent variables in this study were bond ratings which were measured by using codes 1 until 7. The smaller the code which was given, the lower the rank obtained (Setyaningrum, 2005).

Independent Variables

The independent variable in this study was income smoothing. The practice of income smoothing was measured by using *Eckel index. Eckel index* would distinguish between

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companies that performed income smoothing and those which did not perform income smoothing. The company is said to perform income smoothing if:

$$CV\ \Delta\ \%\ Net\ Income \leq CV\ \Delta\ \%\ Sales$$

Δ % *Net Income*	: Annual income changes
CV Δ % *Sales*	: Changes in annual sales

$$CV\ (x) = \sigma(x)/\mu(x)$$

CV (x)	: coefficient of *random* variables variation
σ (x)	: the standard deviation of *random* variables
μ (x)	: the mean of *random* variables

Martinez and Castro (2011) stated that the measurement of income smoothing in the form of a non-dimensional index is obtained by distributing the results of the coefficient of variation as follows:

$$IS = \frac{CV\ \Delta\ \%\ net\ income}{CV\ \Delta\ \%\ sales}$$

Martinez and Castro (2011) assumed that the index with the absolute value of less than one indicated the presence of income smoothing. Martinez and Castro made modifications by expelling companies with the income smoothing index (absolute) of 0.90 and 1.10. This procedure was done to reduce the classification error.

$$0.90 \leq \left[\left|\frac{CV\ \Delta\ \%\ net\ income}{CV\ \Delta\ \%\ sales}\right|\right] \leq 1.10$$

Income Smoothing ≤ |Grey Area| ≤ Non Income Smoothing

Variable Control

Control variables were added in this study to include other variables that affect bond ratings. The variables used are:

a. *Leverage* ratio. This ratio is obtained by calculating the total debt divided by total equity
b. Profitability ratios. In this study, the company's profitability ratios are obtained with the calculation of ROA, which is net income divided by the total assets of the company
c. Growth. In this study, the growth was obtained with the calculation of *market value to book value of equity,* i.e. by multiplying the number of shares with the stock's closing price and dividing them with the total equity.

Tests

The tests were conducted to test the hypothesis. They were performed by using *ordinal logistic regression* models. This model was used as the dependent variables of this study were in categorical forms.

The research model is as follows:

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Logit (p1+ p2+ …..pk) = a 1+ β'X1 + β'X2 + β'X3 + β'X4 + ε

P: Probability of Bond Rating

P1 = idD-idCCC +
P2 = idB- - idB +
P3 = idBB-- idBB +
P4 = idBBB- -idBBB +
P5 = idA- -idA +
P6 = idAA- -idAA +
P7 = idAAA

a : Constants
β : the Coefficient of Regression
X1 : Income smoothing
X2 : *Leverage*
X3 : ROA
X4 : Growth

Analysis and Discussion

The Results of Sample Selection

Based on the results of the sample selection criteria, there were 99 samples, with the selection procedure as in the following table:

Table 2: The Results of Sample Selection

Bonds that were traded on the Indonesia Stock Exchange in 2008-2012		429
Bonds that did not meet the criteria		
Bonds of banking, finance, and insurance companies	153	
Bonds that had not rating during the observation period	114	
The number of bonds that did not meet the criteria		-267
Bonds that met the criteria		162
Bonds to be issued because of incomplete data		-63
The number of samples		99

Sources: Secondary data, processed

Descriptive Statistics

Descriptive statistics were shown in this study to provide information related to the characteristics of the independent variables of bond ratings. Income smoothing with code 1 as a company that had a smoothing percentage of 38.4% with a frequency of 38 from 99 numbers of corporate bonds listed on the Indonesia Stock Exchanges became the research sample. Code 0 as a company which did not do any smoothing had a percentage of 61.6% with the number of frequency of 61 of 99 from corporate bonds that were used as the samples of this study. It shows that the number of companies which did income smoothing was less than companies that performed income smoothing. Meanwhile, for the other independent variables, the average for the growth of the companies that were provided as

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the research sample of 2.3085 with the minimum value of 0.0164, maximum value of 8.0042, and a standard deviation of 1.1314. While the profitability of a company which was calculated by its *return on assets* had an average of 0.049 with a minimum value of 0.00, the maximum value of 0.2220, and a standard deviation of 0.0448. For the last independent variable, that is *the leverage* ratio of the company had an average of 0.546 with a minimum value of 0.0010, maximum value of 0.9930, and has a standard deviation of 0.3001.

From 99 corporate bonds which were used as the samples, 6 of them got the first rating (idD-idCCC+), 2 companies got the second rating (idB- -idB+), 2 companies got the third rating (idBB- - idBB+), 12 company got the fourth rating (idBBB- -idBBB+), 41 company got the fifth rating (idA- -idA+), 35 companies got the sixth rating (idAA- -idAA+) and finally there was one company who got the seventh rating (idAAA).

Analysis

The tests in this study used *ordinal logistic regression*
Used 5% alpha with the following results:

Table 3: results of the ordinal logistic regression

	Estimates (β)	Sig
Threshold [bond rating = 1]	-2,930	,000
[bond rating = 2]	-2,621	,000
[bond rating = 3]	-2,361	,000
[bond rating = 4]	-1,291	,001
[bond rating = 5]	0,727	,036
[bond rating = 6]	4,863	,000
Income Smoothing	-0,041	,919
Leverage	-0,119	,044*
Return On Asset	11,026	,006*
Groth	4,240	,048*
Final Fitting Model		,000
	R-square	
McFadden	,213	

Based on the results of the ordinal logistic regression in the table above, the equation model which was obtained is as follows:

Logit(p1+p2+....+p6) = 4,863 - 0,041X1 – 0,119X2 + 11,026X3 + 4,24 X4

R-Square Mc. Fadden was used to see how much the influence which was generated by variables related to the research with other variables which were not related to the research by looking at the value of *R-Square Mc. Fadden*, i.e. 0.213 or 21.3%. This value means that the variation of bond ratings could be explained by the independent variables in the study, namely income smoothing, ROA, *leverage,* and company's growth of 21.3%, while the remaining 78.7% was explained by other variables which were not related to this study.

Discussion

The results showed that the significance of income smoothing was 0.919 and if it was compared to an alpha of 0.05, the significance of income smoothing would be greater. It means that the initial hypothesis that stated the more companies did income smoothing, the higher the bond ratings earned by the companies was not supported because income smoothing did not affect the bond ratings. Variations of corporate profits from year to year could not be used as a measurement of bond risk. Indeed, to obtain a good rating, the rating

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agencies will look at the financial condition of the company, but the financial situation cannot be seen only with a stable financial condition indicated by the small changes in profit each year. Changes of greater profits could also positively affect the change in the company's profit as long as the bigger companies make profits every year. The profits which were greater in every year show an increase of the company's performance over the years, that even though there were high variations in the annual profits, the financial condition in the company would be better.

According to Sari and Bandi (2010), the management of the company usually do income smoothing in the period around the issuance of bonds that the company's performance look better. The company performance which looks good will also increase the bond rating. Thus, if the company has been getting good ratings, then the company will only keep and maintain the bond ratings and will not do income smoothing.

As an additional analysis to support the research, the researchers also did different tests to test whether bond ratings which were obtained by companies that performed different income smoothing with bond ratings obtained by companies that did not perform income smoothing. Different test results can be seen in the table.

The results of the different test show that the significance was greater than alpha, thus it can be concluded that the results are not significant, which means that the bond ratings obtained by the companies that performed and did not perform income smoothing were relatively the same or not different. It is also possible that the Securities Agencies could assess the companies that performed income smoothing or not, so the companies that performed income smoothing would have bond ratings which really described the condition of the company.

The control variables in this study are ROA, *leverage* ratio, and company's growth were proved to be influential toward the bond ratings. Based on the results of the study, ROA significantly affected the bond ratings, in accordance to the research held by Manurung, Haymans, Silitonga, and Tobing in 2008. *Leverage* ratio also affected the bond ratings in accordance with research held by Raharja and Sari in 2008. For the last control variable was the growth of the company as well, according to a research held by Restuti in 2007.

Conclusion

This study was conducted to determine whether the company which performs income smoothing will get a higher bond rating compared to companies that do not perform income smoothing. The results of this study are income smoothing does not affect the bond ratings because profit variations from year to year cannot be used as a measurement of bond risk. Securities Rating Agencies which decide the bond rating obtained by a corporate bond do not look at only with a stable financial condition indicated by the small changes in profit every year but from the annual profits that change more greatly, it also shows the increase in company performance that will also increase the bond rating. This study also uses different tests as additional tests to test whether the bond rating which is earned by the company that performs income smoothing is different with those which are obtained by the bond rating of the companies that do not perform income smoothing, and the results obtained are the bond ratings obtained by companies that perform different income smoothing and bond ratings which are obtained by companies that do not do the relatively similar or not different smoothing.

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