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THE INFLUENCE OF CORPORATE GOVERNANCE PRACTICE TOWARDS CREDIT AND BOND YIELDS[1]

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ABSTRACT

The purpose of this study is to investigate whether there is a relationship between corporate governance practices and credit risk and bond yields. This study takes sample from companies that published bonds in 2006.

First, we investigate the relationship between corporate governance practices and credit risk. Credit risk (default risk) can be measured by bond ratings (Billings, 1999). Using ordered probit regressions, we find evidence that the quality of transparency and financial information disclosure that proxied by big-4 auditors and audit committee have significant influence on bond ratings, but the relationship between block holders and institutional ownership is not significant on bond ratings.

Second, we investigate the relationship between corporate governance practice and bond yields. Using multiple regressions, we find that corporate governance practices is not significant on bond yields. Then we put bond ratings in the equation, we find that bond ratings give incremental effect to the evidence. This evidence is consistent to Bradley et.al, (2007), that bond ratings are the prominent determinant for bond yields. Together with the bond ratings, the corporate governance practices (block holders, institutional ownership, big-4 auditors) have significant influence on bond yields.

Keywords: *bond ratings, bond yields, corporate governance, credit risk, default risk*

INTRODUCTION

This research is aimed to test whether there is a correlation between corporate governance practice with a default risk and bond yields. Eventhough researches about corporate governance in Indonesia have been in a great number, the researcher was encouraged to do this research due to the fact that those connecting with the impacts of corporate governance towards the quality of credit (debt) and the perception upon default risk were few. A default risk can be measured by using bond ratings and debt equity ratio (DER) (Billings, 1999). The default risk used in this research was measured with the bond ratings issued by an independent government institution (Pefindo).

There are many factors influencing the bond rating of certain companies. The main factor influencing the bond rating is the financial condition of the company; nevertheless the corporate governance practice may help explain the distinctive bond rating among companies in which it is not seen

[1] This article was once presented in National Symposium of Accounting XI Pontianak

within the financial condition of the companies (Bradley *et al.*., 2007).

The research of Bhoraj and Sengupta (2003) found that there was a correlation between the mechanism of corporate governance and the bond rating and bond yields. They said that the mechanism of corporate governance could reduce the default risk by means of reducing the agency cost through monitoring the management performance and reducing imbalanced information between companies and creditors. They also found out that companies with a big institutional ownership and independent commissioners had high bond rating and low bond yields. However, a concentrated institutional ownership had a bad impact towards ratings and yields.

The research of Asbaugh *et al.*. (2004) found that the bond rating had (1) negative correlation with blockholders in companies, (2) positive correlation with the weakening rights of the stock holders in takeover defenses, (3) positive correlation with the level of transparency of financial report, (4) positive correlation with the independence of board of commissioners, board of stake holders, and board mastery, (4) negative correlation with the power of CEO towards the board.

The research of Bradley *et al.*. (2007) found (1) that with a constant company's financial condition, there was a positive correlation between the bond rating and takeover defenses at investment companies, and negative correlation with speculative companies; (2) positive correlation between the bond rating and the tenure of the board on duty; (3) negative correlation between the bond rating and the tenure of the executive management on duty; (4) that corporate governance practice having positive correlation with the bond rating had negative correlation with spread (the gap between yields and risk free) because the bond rating was the main determinant of spread (the higher the rank, the lower the spread); (5) that the variable of the governance having impact towards the bond rating and yields, did not correlate with the measurement of the company's value (Tobin's Q), this fifth discovery explained that the governance factor significant to creditors was not relevant for the stakeholders, and thus there could be different perceptions between the creditors and the stakeholders about the structure and mechanism of corporate governance.

The research conducted by Setyaningrum (2005) in Indonesia using 213 samples during 2002-2004 observation found that the bond rating had significant correlation with several aspects, as the following: (1) negative correlation with blockholders, (2) positive correlation with the percentage of institutional ownership, (3) positive correlation with the transparency and the quality of financial information disclosure having proxy from big-4 auditor and audit committee. However, there was insignificant correlation with (1) the percentage of insider ownership, (2) the measurement of the commissioners board, (3) the percentage of independent commissioners.

The samples used in this research were 51 observations in 2006 to test the correlation between the bond rating and corporate governance practice. The result of this research has shown that the transparency and the quality of financial information disclosure measured by using big-4 auditors and the existence of the auditing committee have a significantly positive correlation with the bond rating. This discovery is consistently in line with both Setyaningrum (2005) and Asbaugh *et al.*. (2004). Somehow, the other independent variables were not significant; there was only a direction of the correlation which had similarity with the previous researches. In this research, the direction of the correlation between the bond ratings with the blockholders 5% was negative, yet the correlation between the bond ratings and institutional ownership was positive but insignificant, neither was the controlling variable.

In testing the correlation between yields and corporate governance practice, the samples used were 35 observations due to the provision of the market price. There were only few active bond traded, so the number on the samples on the first test was reduced because there was no transaction. We found negative but insignificant correlation between yields and corporate governance practice. After adding the variable of bond rating into the correlation, we found out that the result turned to become significant. Corporate governance practice having positive correlation with the bond rating had negative correlation with yields because the bond rating was the determinant of the yields (the higher the rank, the lower the yields). This result was consistently in line with one found by Bhoraj and Sengupta (2003) and Bradley *et al.* (2007) stating that the higher the bond rating, the lower the yields (negative correlation).

This research is expected to give some contributions to the literature of corporate governance practice. First, it is expected that this research will enrich the researches on corporate governance practice focusing on the correlation between not only governance and the value of company, but also the quality of the credit and corporate governance. In fact, corporate governance practice (having proxy with the transparency and the quality of financial information disclosure [big-4 auditors and with auditing committee] influenced the quality of the credit (bond rating). Second, corporate governance practice together with bond rating could influence bond yields of a company.

This research, moreover, consists of literature review and hypothesis development, theoretical framework, research design, results, and conclusion.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

1. Corporate Governance

Corporate governance is a way or mechanism to convince the investors of companies' capital to have a benefit in return for their investment (Sheifer & Vishny, 1997). According to Cadbury (1992) in Setyaningrum (2005), corporate governance is a system to direct and control a company or corporation. Forum for Corporate Governance in Indonesia (FCGI, 2000) stated that CG is a set of rules establishing the correlation between stakeholders, management, creditors, government, employees, and other internal and external interest holders in relation to their rights and duties, in other words, a system that directs and controls a corporation.

Recently, most countries (including Indonesia) have established agencies/organisations/institutions functioned to create corporate governance principles adjusted to the business condition in each country. Organisation for Economic Cooperation and Development (OECD) in Krismantoro (2004) has developed a set of principles of Good Corporate Governance applied in accordance with every country's condition. The basic principles are fairness, transparency, accountability, and responsibility.

2. Default Risk

A default risk can be measured by using bond rating and Debt Equity Ration (DER) (Billings, 1999). In this research, a default risk can be measured with bond rating. An bond rating issued by an independent ranking organisation gives an image of the emitents' ability to pay in time both the debt and its interest as the amount required.

In Indonesia, an independent ranking organisation i.e. Pefindo explains in its web-site that the ranking methodology emphasizes in industrial risk, business risk, and financial risk. Industrial risk covers up stability and growth level of industry, structure of income and expenses, competition level and barrier to entry, rules and regulations, and financial profile of industry. Financial risk of each corporation is based on the policy of each corporation covering up criteria of profitability, capital structure, cash flow, and financial flexibility. Business risk depends on the key success factor of each corporation (www.pefindo.com).

This research uses bond rating issued by Pefindo with 9 classifications i.e. $_{id}$AAA, idAA, $_{id}$A, $_{id}$BBB, $_{id}$BB, $_{id}$B, $_{id}$CCC, $_{id}$SD, $_{id}$D.

3. Bond Yields

Price and bond yields are two very important variables in bond transaction for investors. Investors always ask the yields they are about to gain when buying bond in certain price. Price and bond yields are connected to each other, and it is a negative one. This negative position means that the bond price gets decreased when the bond yields get increased, and vice-versa.

There are some ways used by dealers and managers' portfolios to measure bond yields i.e. (a) current yields. Current yields are yields counted based on the number of coupons accepted for a year towards the price of the bond, (b) yields to maturity, and (c) yields to call, meaning yields to buy back.

Those three yields are often used to select the bond coming into the portfolios of investment managers or to other parties to buy bond.

This research will use current yields. Current yields are yields resulted by current bond related to annual coupons and market price of the bond. The formula of current yields is:

Current yields = annual coupon / market price of bond

4. Hypothesis Development

The number of blockholders refers to those possessing 5% or more of the circulating stocks of a company. The previous researches found out that the association between bond rating and blockholders was not consistent. Bhoraj and Sengupta (2003) discovered that there was a positive correlation between blockholders and bond rating, while Asbaugh *et al*. (2004) found that bond rating had negative correlation with blockholders. Setyaningrum (2005) also discovered that there was negative correlation between bond rating and blockholders.

Schleifer & Vishny (1997) stated that blockholders investing in the form of both debt and stocks were concerned about good governance. It is because they had personal interests on financial affairs, rights to acknowledge the policies and the management performance, and power to push or prevent the management conducting hazardous actions. Thus, the first formulation of the hypothesis is:

Hypothesis 1: there is a negative correlation between blockholders (those possessing 5% or more of the circulating stocks) and the company's bond rating.

Institution ownership shows the percentage of stocks possessed by institutional investors from financial sectors such as banking, stock exchange companies, insurances, and finance companies. Bhoraj & Sengupta (2003) and Setyaningrum (2005) discovered that there was positive correlation between bond rating and institutional ownership. Schleifer and Vishny (1997) stated that institutional ownership having big possession had incentive to monitor the management's performance because they gained big profit and had big voting power that made them easier to make improvement. Thus, with the existence of

institutional ownership having the same concern as do the blockholders towards the application of good governance in their corporations, it is expected that they can prevent the management to commit hazardous actions or they can immediately make improvement that results in increasing the corporation performance and the bond rating. From the above statement, then the hypothesis is:

Hypothesis 2: there is a positive correlation between institutional ownership and the company's bond rating.

The quality of auditing shows the companies' accountability and financial information transparency (Sengupta, 1998). Public Accounting Firms (PAF) Big-4 gives better auditing quality than PAF non Big-4. Consequently, auditing conducted by PAF Big-4 is expected to give higher bond rating than that conducted by PAF non Big-4. PAF Big-4 has already got international standard procedure, by which it is expected that the resulted opinion will be independent, so that it will reduce agency risk, and decrease default risk that in turn will increase the companies' bond rating.

Hypothesis 3: the company's bond rating audited by PAF Big-4 is higher that that audited by PAF non Big-4.

The Commissioners Board of a public corporation is pushed to create an auditing committee as required by the regulation of Stock Exchange. One of the duties of auditing committee is to watch the process of the company's financial reports and has regular meeting with both internal and external auditors to professionally give their opinions about the company's financial reports, auditing process, and internal watch. Therefore, the existence of an auditing committee will encourage a company to issue a more accurate financial report in that this will reduce the default risk and increase the company's bond rating. Then, the hypothesis is:

Hypothesis 4: A company having Auditing Committee will acquire higher bond rating than that not having Auditing Committee.

Bhoraj & Sengupta (2003) discovered that there was a correlation between corporate governance mechanism and bond rating and bond yields. They found negative correlation between institutional ownership and a big composition of independent commissioners with bond yields.

Bradley et. el. (2007) discovered that corporate governance practice having positive correlation with bond rating had negative correlation with spread (a gap between a yield and risk free) because bond rating was the main determinant of spread (the higher the rank, the lower the spread).

Based on the above explanation, a hypothesis is made:

Hypothesis 5: There is positive correlation between the number of blockholders (those possessing 5% or more of circulating stocks) and bond yields.

Hypothesis 6: There is negative correlation between institutional ownership and bond yields.

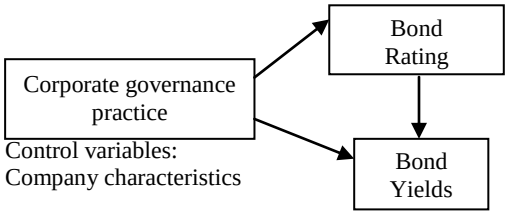
Hypothesis 7: Bond yields audited by PAF Big-4 is smaller than those audited by PAF non Big-4

Hypothesis 8: Corporations having Auditing Committee will have higher bond yields than those not having Auditing Committee.

THEORETICAL FRAMEWORK

Theoretical framework is a schematic chart abstracting correlation among research variables. Based on the explanation on

literature review and hypothesis development, a theoretical framework is constructed as follows:



Source: Author

Figure 1. Theoretical Framework

RESEARCH DESIGN

1. Research Data and Samples

This research uses bond data taken from the stocks selling companies listed in Indonesian Stock Exchange (ISE/BEI) on 31 December 2006. The researcher chose the year 2006 because this year is considered as having the most complete financial report of the bond sellers. The data were acquired from Pefindo, while the financial reports of the stocks selling companies were from www.idx.co.id Daily transaction data of 31 March 2007 were gained from the daily data center of Bisnis Indonesia. Based on the data of the year 2006, there were 76 companies with 236 bonds, and thus on average a company issued 3,11 bonds.

Because of the limited data, the research samples were divided into two groups, samples I for testing hypotheses 1-4 and samples II for testing hypotheses 5-8.

For samples I, of 236 circulating bonds we took 1 bond from each company. We selected the biggest bond of each company (Bradley *et al..*, 2007). Then we removed 3 companies issuing bond in USD currency. Next, we put outside 4 companies having financial reports in USD currency. 18 stocks selling companies' incomplete financial reports such as short forms without notes on financial reports were also discharged. Finally, samples I for testing hypotheses 1-4 contained 51 observations.

For testing hypotheses 5-8, the bonds chosen were those traded on 31 March 2007 so that there could be data obtained to count the current yields. There were only 35 bonds traded on 31 March 2007.

Yields counting was conducted at the first quarter as done by Bradley *et al.*. (2007). It was assumed that on that date the financial reports and bond rating had already been published, so that investors might know the structure of corporate governance companies' financial reports. There were 35 companies used as the samples to test hypotheses 5-8.

2. Research Model

To test hypotheses 1-4, equation model 1 was used.

Bond rating = f (CG practice, company characteristics)

Equation 1:

$$= {}_0 + {}_1 + {}_2 + {}_3\% + {}_4 + {}_5 + {}_6 + {}_7 + {}_8 \text{FIN\_UTILITY} +$$

To test hypotheses 5-8, equation models 2 and 3 were used.

Bond yield = f (CG practice, company characteristics)

Equation 2:

$$\text{YIELD} = {}_0 + {}_1\text{BLOCK} + {}_2\text{INST} + {}_3\text{AUDIT} + {}_4\text{KOMDIT} + {}_5\text{LEV} + {}_6\text{ROA} + {}_7\text{SIZE} + {}_8\text{FIN\_UTILITY} + e$$

Bhoraj & Sengupta (2003) found correlation between CG mechanism and bond rating and bond yields. They found negative correlation between institutional ownership and a big composition of independent commissioners with bond yields.

Bradley et. el. (2007) discovered that corporate governance practice having positive correlation with bond rating had negative

correlation with spread (a gap between a yield and risk free) because bond rating was the main determinant of spread (the higher the rank, the lower the spread).

Then in the hypotheses 5-8 testing, bond rating was added as an independent variable of the above equation 2.

Bond yield = f (CG practice, company characteristics)

Equation 3:

$$YIELD = {}_0 + {}_1RATE + {}_2BLOCK + {}_3INST + {}_4AUDIT + {}_5KOMDIT + {}_6LEV + {}_7ROA + {}_8SIZE + {}_9FIN\_UTILITY + e$$

3. Dependent Variable

The dependent variables for testing hypotheses 1-4 were the bond ratings from Pefindo. In this research, bond ratings were divided into seven classifications (table 1) as done by Setyaningrum (2005). In the researches of Asbaugh *et al.*. (2004) and Bradley (2007), bond ratings were divided into two categories i.e. speculative category and investment category. Speculative category was the bonds ranked 1-3 which were relatively fragile towards the economic condition and default risk, while investment category was the bonds ranked 4-7 which were relatively stable towards the economic condition and the default risk was relatively minor.

The dependent variables for testing hypotheses 5-8 were bond yields as done in the researches of Bradley (2007) and Bhoraj & Sengupta (2003). The yields data taken from trading transaction on 31 March 2007 were obtained from the daily data center of Bisnis Indonesia. The yields used are quarter 1, because it is assumed that at that time the financial reports and bond rating for the fiscal year 2006 were already issued, so that investors might know the structure of corporate governance and the financial condition of the companies issuing bonds (Bradley *et al.*. 2007).

Current Yields = Annual Coupons / market price bond

Table 1. Bond rating

Bond rating	Classification	Category
$_{id}$AAA	7	*Investment*
$_{id}$AA+	6	*Investment*
$_{id}$AA	6	*Investment*
$_{id}$AA-	6	*Investment*
$_{id}$A+	5	*Investment*
$_{id}$A	5	*Investment*
$_{id}$A-	5	*Investment*
$_{id}$BBB+	4	*Investment*
$_{id}$BBB	4	*Investment*
$_{id}$BBB-	4	*Investment*
$_{id}$BB+	3	*Speculative*
$_{id}$BB	3	*Speculative*
$_{id}$BB-	3	*Speculative*
$_{id}$B+	2	*Speculative*
$_{id}$B	2	*Speculative*
$_{id}$B-	2	*Speculative*
$_{id}$CCC+	1	*Speculative*
$_{id}$CCC	1	*Speculative*
$_{id}$D or $_{id}$SD	1	*Speculative*

Source: www.pefindo.com

4. Independent and Control Variables

Independent variables consist of proxies of corporate governance practice and the company characteristics become the control variables. The control variables applied for this research were also used in the researches of Asbaugh (2004), Setyaningrum (2005), and some other previous researchers such as Horrigan (1996), Kaplan & Urwitz (1979).

The following is the application of both independent and control variables as seen in table 2.

5. Analysis Method

To test hypotheses 1-4, equation 1 is used along with using ordered probit model statistic. Logit model is a regression model used to do qualitative analysis in which the dependent variables are in the forms of dummies. Probit model is the advancement of logit model (Winarno, 2007). Ordered logit/ probit models are used because the dependent variables of this research are ordered qualitative variables. From the above explanation on dependent variables (table 2), the composition of this research's dependent variables is as follows:

1 = R ≤idCCC+;2 = idCCC+ < R≤$_{id}$B+; 3 = $_{id}$B+ < R≤$_{id}$BB+; 4 = $_{id}$BB+ < R ≤$_{id}$BBB+; 5 = ^{id}BBB+ R ≤$_{id}$A+; 6 = $_{id}$A+ R ≤$_{id}$idAA+; 7 = $_{id}$AAA.

Therefore, other logit models such as multidimentional logit ot binary logit cannot be apllied. To test hypotheses 5-8, equation 2 and 3 are used along with using Ordinary least square (double regression model).

RESULTS

1. The Result of choosing samples

As explained in the previous part, the sample used for testing hypotheses 1-4 is sample 1, and sample II is used to test hypotheses 5-8. Meanwhile, the descriptive statistics for each sample can be seen in tables 4 and 5.

It is obviously seen within table 4 that the bonds listed in sample 1 had on average ranked 4.94. It means that the bonds were in the range of $_{id}$BB+ < R ≤$_{id}$BBB+. In sample II (table 5), the average rank was 5.11. It means that the actively traded bonds had higher rank at about $_{id}$BBB+ R ≤$_{id}$A+ with average yield 13,50%. From the whole data population of the year 2006, the bond rating was in the range of 4-7.

Table 2. Independent Variables and Control Variables

Independent Variables	Operational Definitions *Corporate Governance*
BLOCK	The number of blockholders having more than 5% possession
%INST	Stock percentage owned by institutional ownership from financial sectors (banks, insurances, corporations, stock exchanges, and other non bank finance institutions)
AUDIT	Dummy, 1 when audited by PAF Big-4 and 0 when others.
KOMDIT	Dummy, 1 when the company has auditing committee as required by regulations of BEI and 0 when others.
Control Variables	Company Characteristics
LEV	Total debt divided by total assets
ROA	Nett profit prior to extraordinary post divided by total assets
SIZE	Natural logarithm of total assets
FIN-UTILITY	Dummy, 1 when a company is financial institution or utility, 0 when others

Source: Author

Table 3. Summary of Samples

Sample I	
The biggest bond of each company	76
Bond in USD	(3)
Financial report in USD	(4)
Incomplete financial report	(18)
Sum of Sample I	51
Sample II	
Bond having data on market price on 31 March 2007	35

Note:
Sample I for hypotheses 1-4 testing
Sample II for hypotheses 5-8 testing

Source: Author's Own Calculation

Table 4. Descriptive Statitic – Sample 1

	RATE	BLOCK	INST	AUDIT	KOMDIT	LEV	ROA	SIZE	F_U
Mean	4.9412	2.2941	0.1997	0.6667	0.5686	0.6883	0.0315	15.4392	0.4901
Median	5.0000	2.0000	0.0000	1.0000	1.0000	0.6870	0.02800	15.2400	0.0000
Max	7.0000	9.0000	0.9600	1.0000	1.0000	0.9740	0.1600	19.3300	1.0000
Min	4.0000	1.0000	0.0000	0.0000	0.0000	0.1290	-0.201	8.2500	0.0000
Std.Dev	0.6453	1.7354	0.2885	0.4761	0.5002	0.1928	0.0552	1.7515	0.5048
Skewness	0.5024	2.0668	1.2391	-0.707	-0.2771	-0.6943	-1.3488	-0.8373	0.039
Kurtosis	4.0154	7.3660	3.1322	1.5000	1.0768	3.1716	8.8492	7.3063	1.001
Jarque-Berra	4.3364	76.8186	13.0880	9.0312	8.5125	4.1601	88.169	45.3672	8.5000
Prob	0.1143	0.0014	0.0014	0.0109	0.0142	0.1250	0.0000	0.0000	0.0142
Observ	51	51	51	51	51	51	51	51	51

Rate=1-7. BLOCK= The number of blockholders having 5% possession or more, INST=Stock percentage owned by institutional ownership from financial sectors (banks, insurances, corporations, stock exchanges, and other non bank finance institutions), AUDIT=1 whenby PAF Big-4 and 0 when others, KOMDIT=1 when having auditing committee and 0 when others, LEV=Total debt divided by total assets, ROA= Nett profit prior to extraordinary post divided by total assets, SIZE=Natural logarithm of total assets, F_U=1 when financial institution or utility, 0 when others

Source: Processed Data

The independent variables belonging to the category of the ownership's structure and influence i.e. blockholders had average of 2.29 (table 4) and 2.40 (table 5). It means that on average the number of stock holders, which was 2.4, holding more than 5% stocks traded on 31 March 2007 was bigger than that, which was 2.29, on 31 December 2006. The average percentage of institutional ownership was 19.97% (table 4) and 26.52% (table 5). It means that investors from institutions of financial sectors possessed a relatively big number of stocks of companies issuing bonds.

The independent variables belonging to the category of transparency and financial information disclosure i.e. Audit had average of 0.67 (table 4) and 0.71 (table 5). Therefore, more than 50% bond sellers were audited by PAF big-4. In average, more than 50% stocks selling companies audited by PAF big-4 already had auditing committee (on average of 0.568 [table 4] and 0.57 [table 5]).

Table 5. Descriptive Statitic – Sample 2

	Mean	Deviation Std	N
YIELD	.1350	.01542	35
RATE	5.1143	.71831	35
BLOCK	2.4000	1.41837	35
INST	.2652	.33787	35
AUDIT	.7143	.45835	35
KOMDIT	.5714	.50210	35
LEV	.7096	.15570	35
ROA	.0397	.05648	35
SIZE	15.0371	2.10538	35
FIN_UTILITY	.5143	.50709	35

Yield=annual coupons / bond market price, Rate=1-7. BLOCK=The number of blockholders having 5% possession or more, INST=Stock percentage owned by institutional ownership from financial sectors (banks, insurances, corporations, stock exchanges, and other non bank finance institutions), AUDIT=1 whenby PAF Big-4 and 0 when others, KOMDIT=1 when having auditing committee and 0 when others, LEV= Total debt divided by total assets, ROA=Nett profit prior to extraordinary post divided by total assets, SIZE=Natural logarithm of total assets, F_U=1 when financial institution or utility, 0 when others.

Source: Processed Data

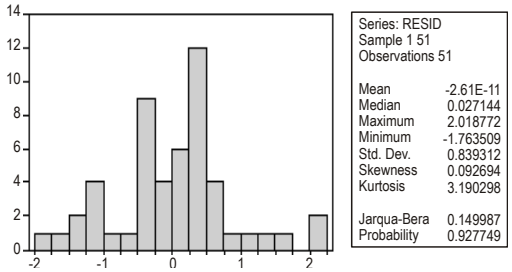
2. Testing Assumption

A. Assumption Testing for Hypothesis 1-4

Equation 1 used ordered probit model, and the assumption testing used histogram normality test to see the normality of the model tested. The result obtained from the test is shown in figure 2.

The error of logit/probit model, as the criterion required, should be normally distributed. Figure 2 shows that the probability value is p=0.928>α=5%. It means that the hypothesis, saying that the error is normally distributed, is accepted. Therefore, the criterion is fulfilled. It is obtained from the correlation matrix (the table is not provided) that the correlation among independent variables is < 80%, which means that there is no a serious multicorrelation, and thus testing hypotheses 1-4 can be proceeded.

Histogram Normality Test



Source: Processed Data

Figure 2 . Histogram Normality Test

B. Assumption Testing for Hypothesis 5-8

Equation 2 and 3 used a double regression statistic method; hence a classic assumption testing (normal test, multicolinear, homo-schedastic, and multicorrelation) was needed. The result (see the attachment) complied, thus testing hypotheses 5-8 could be proceeded.

3. Results of Hypotheses Testing

The results of ordered probit model regression on equation 1 can be seen in the following table 6.

Table 6. Ordered Probit Regression of Bond rating Towards Corporate Governance Practice, and Control Variables

$$= {}_0 + {}_1 + {}_2\% + {}_3 + {}_4 + {}_5 + {}_6 + {}_7 + {}_8\,\text{FIN\_UTILITY} +$$

Dependent Variable: RATE
Method: ML - Ordered Probit (Quadratic hill climbing)
Date: 06/05/08 Time: 17:22
Sample: 1 51
Included observations: 51
Number of ordered indicator values: 4
Convergence achieved after 5 iterations
Covariance matrix computed using second derivatives

	Coefficient	Std. Error	z-Statistic	Prob.
BLOCK	-0.107944	0.113542	-0.950694	0.3418
INST	0.276031	0.628095	0.439473	0.6603
AUDIT	.738483	0.387402	1.906244	0.0566*
KOMDIT	0.838850	0.401613	2.088700	0.0367**
LEV	-0.221981	1.048399	-0.211734	0.8323
ROA	4.816212	3.347862	1.438593	0.1503
SIZE	-0.080538	0.110112	-0.731418	0.4645
FIN_UTILITY	0.330833	0.425883	0.776817	0.4373
		Limit Points		
LIMIT_5:C(9)	-1.266611	1.757841	-0.720549	0.4712
LIMIT_6:C(10)	1.019507	1.788398	0.570067	0.5686
LIMIT_7:C(11)	2.244429	1.737285	1.291918	0.1964

Akaike info criterion	1.993553	Schwarz criterion	2.410222
Log likelihood	-39.83561	Hannan-Quinn criter.	2.152775
Restr. log likelihood	-48.01095	Avg. log likelihood	-0.781090
LR statistic (8 df)	16.35068	LR index (Pseudo-R2)	0.170281
Probability(LR stat)	0.037627		

Rate=1-7. BLOCK= The number of blockholders having 5% possession or more, INST= Stock percentage owned by institutional ownership from financial sectors (banks, insurances, corporations, stock exchanges, and other non bank finance institutions), AUDIT=1 when by PAF Big-4 and 0 when others, KOMDIT=1 when having auditing committee and 0 when others, LEV= Total debt divided by total assets, ROA= Nett profit prior to extraordinary post divided by total assets, SIZE= Natural logarithm of total assets, F_U=1 when financial institution or utility, 0 when others.

**significant to α = 5%, *significant to α = 10%

Source: Processed Data

Through table 6, it is known that the value of *Pseudo-R^2* is 17.03% in which it shows that 17.03% of the bond rating can be explained by using independent variables of corporate governance practice and company characteristics. These data also mean that there are a lot of other variables, as many as 83%, that are not utilised. It is understandable realizing that there are a lot of variables influencing the bond rating. Factors influencing ranks are for

instances industrial risk, market position and operational neighborhood, cash flow and financial flexibility, the importance of industry/corporations for the government/ economy, and other factors (www.pefindo.com). Thence, corporate governance practice is only one aspect influencing rank.

From the previous tests, it is obviously seen that only hypothesis 3 and hypothesis 4 which were significant. The results of hypothesis 1 (BLOCK) and hypothesis 2 (INST) were not significant although the direction was in line with the prediction. The results show that the correlation between bond ratings and corporations audited by PAF big-4 was positive and significant to α = 10% (prob. 0.056). It means that companies audited by PAF Big-4 had higher bond rating than those audited by PAF non Big-4. This result might reduce bondholders' feeling doubt upon the quality of the financial reports in that this would decrease the default risk seen from the increase of the bond rating. This shows that PAF big-4 was reliable to give qualified financial reports. It happens the same to the correlation between auditing committee and bond rating which is positive and significant to α=5% (prob. 0.0367). This shows that auditing committee gave positive and significant influence towards the companies' bond ratings. It means that companies having auditing committee would have higher bond rating than those not having auditing committee. This result supports the idea that auditing committee has run its function in giving opinions to commissioners especially related to the transparency of financial reports, so that the existence of auditing committee could bring more qualified financial reports.

The results of data processing using a double regression model for equation 2 and equation 3 are presented in table 7.

Equation 3 shows a better result than equation 2. It is shown by the increase of adjusted R^2 value from 27.5% into 76.4% with adding bond rating variable. On the result of equation 1, there could not be obtained any single main independent variable that was significant, eventhough the sign was in line with the prediction. Instead, only the size control variable that was positive and significant.

Actually the bond rating improved the correlation between corporate governance practice and yield considering that its becoming a variable in the correlation made the adjusted R^2 increase relatively highly and the corporate governance practice variable in equation 3 turned to be significant. However, the auditing committee was still insignificant in which it is assumed to be absorbed by the bond rating.

This test has proven that bond rating is a main determinant of spread (a gap between a yield and risk free). It means that the higher the rank, the lower the spread (the smaller the yield, risk free *ceteris paribus*).

The correlation between BLOCK and yield in equation 3 is positive and significant. The more the number of the blockholders increase, the higher the yield results. Blockholders refer to those possessing company's stocks of more than 5%. The increasing number of blockholders leads to the increasing percentage of stocks owning of more than 5%. Hence it gives blockholders power to push the management to make decision benefiting those blockholders. Blockholders can thus force the management to invest on a project having high return but highly risky (using fund from bondholders). If the project succeeds, the stockholders will benefit from the raising price of the stocks, but bondholders cannot enjoy this profit. Nevertheless, if the project fails and the company is not able to pay both the interest and the debt, bondholders will share the burdens bearing this bad risk.

Institutional ownership has a negative and significant correlation with yield. The bigger

Table 7. Yield Regression Towards Bond rating, Corporate Governance Practice, and Control Variables

Equation 2:

YIELD = + BLOCK + INST + AUDIT + KOMDIT + LEV + ROA + SIZE + FIN_UTILITY + e

Equation 3:

YIELD = + RATE + BLOCK + INST + AUDIT + KOMDIT + LEV + ROA + SIZE + FIN_UTILITY + e

	Expected	Equation 2		Equation 3	
Variables	Signs	Coefficient	p-value	Coefficient	p-value
C		0.073	0.010	0.172	0.0000
RATE	-	-	-	-0.019	0.0000***
BLOCK	+	0.000	0.882	0.005	0.002***
INST	-	-0.007	0.517	-0.026	0001***
AUDIT	-	-0.008	0.351	-0.026	0.503
KOMDIT	-	-0.007	0.189	0.002	0.049**
LEV		-0.005	0.868	-0.034	0.060*
ROA		-0.028	0.647	0.074	0.000***
SIZE		0.005	0.005***	0.005	0.012**
FIN_UTILITY		-0.001	0.954	0.016	
N		35		35	
Adjusted R2		0.275		0.764	
F-statistic		2.615		13.250	
p-value (F-statistic)		0.030		0.000	

Yield=annual coupons/bond market price, BLOCK= The number of blockholders having 5% possession or more, INST= Stock percentage owned by institutional ownership from financial sectors (banks, insurances, corporations, stock exchanges, and other non bank finance institutions), AUDIT=1 whenby PAF Big-4 and 0 when others, KOMDIT=1 when having auditing committee and 0 when others, LEV= Total debt divided by total assets, ROA= Nett profit prior to extraordinary post divided by total assets, SIZE= Natural logarithm of total assets, F_U=1 when financial institution or utility, 0 when others.

*significant to α 10%, **significant to α 5%, *** significant to α 1%

Source: Processed Data

the institutional ownership of finance sectors has the percentage of stocks, the smaller the bond produces yields. This shows that the existence of institutional investor from financial sectors will increase their monitoring the management performance. This benefits all of the stakeholders including bondholders in that it intuitively increases the price of the bond but in turn it will decrease yields. From the point of view of transparency and the quality of financial report, it is only the auditor's proxy from PAF big-4 that has negative and significant correlation with yield, while the auditing committee is not significant. The correlation between bond rating and yield is negative and significant. The correlation between bond rating and auditors of PAF big-4 is positive and significant (table 6). Therefore as already explained in table 6, with such a quality of auditing report, the bond rating increases but of course the yield decreases.

CONCLUSION AND RECOMMENDATION

This research has found that corporate governance practice can be used to explain the default risk having proxy with bond rating eventhough the ability to explain is relatively low and there are many other factors influencing bond rating. The positive and significant correlation between bond rating and corporate governance practice occured on the point of transparency and the quality of financial report i.e. PAF big-4 auditors and auditing committee.

Another finding was that the correlation between yield and corporate governance practice was not significant. Nevertheless, when bond rating was included in that correlation model, there was an incremental impact. The correlation between yield and corporate governance practice was significant on the number of stakeholders owning minimum 5% of the company's stocks (positive and significant), institutional ownership (negative and significant), and PAF big-4 auditors (negative and significant).

The correlation between yield and bond rating was negative and significant, so that in general, the data processing on equation 1, equation 2, and equation 3 resulted in inverted coefficient signs, eventhough it was insignificant. This research can be a reference for investors, in this case are bondholders or those who will be bondholders, to pay attention to corporate governance practice in stocks selling companies to select the bond. The weakness of this research is on the data taken. The number of data taken was relatively few and the observation was conducted only during a year. Thus, it is assumed that the result would perhaps be different if the observation were conducted longer and more data were taken.

The few data can also be an obstacle. The number of bond sellers were not many (there were only 76 companies in 2006). Besides, Pefindo graded them relatively high. Rarely were they given ranks under 3 (under $_{id}$BB+). There could be a possibility that either the companies were good or Pefindo was not really critical in grading.

For future research, it is suggested to utilize more complete components for Corporate Governance by adding for instance a more comprehensive Corporate Governance index. With more comprehensive components of Corporate Governance, it is expected that the value of adjusted R^2 increases and the result will be more significant, so that the ability of corporate governance practice in explaining bond rating can also increase.

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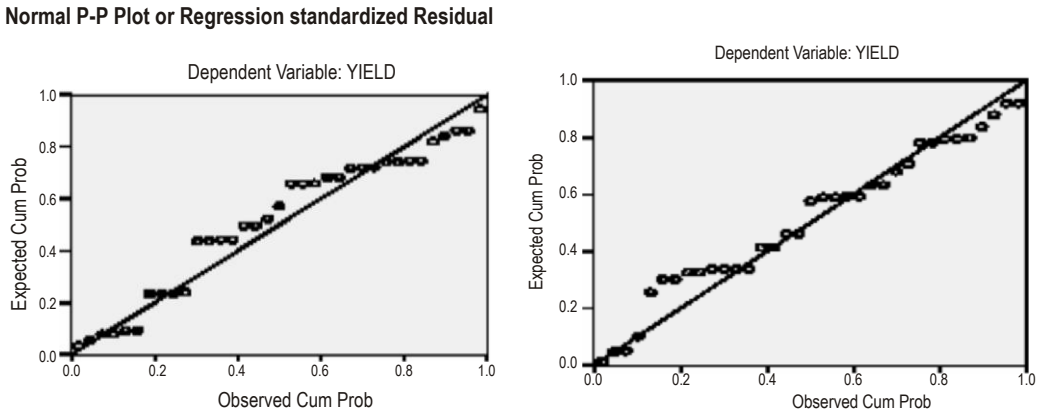
APPENDIX 1

Classic Assumption Test

A. Normality Test

1. Sample 1 **2. Sample 2**



B. Multi-colinearity Test

VIF <10, shows that there is no multi-colinearity

1. Sample 1

Coefficients [a]

Model		Unstandardised Coefficients		Standardised Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.073	.026					
	BLOCK	.000	.002	-.033	-.150	.882	.454	2.200
	INST	-.007	.011	-.159	-.657	.517	.362	2.760
	AUDIT	-.008	.008	-.234	-.951	.351	.353	2.837
	KOMDIT	-.007	.006	-.243	-1.349	.189	.658	1.520
	LEV	-.005	.028	-.047	-.168	.868	.268	3.732
	ROA	-.028	.061	-.104	-.463	.647	.424	2.361
	SIZE	.005	.002	.726	3.089	.005	.386	2.590
	FIN_UTILITY	-.001	.010	-.018	-.059	.954	.213	4.687

a. Dependent Variable: YIELD

Coefficients [a]

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.172	.020		8.594	.000		
	RATE	-.019	.003	-.890	-7.412	.000	.481	2.080
	BLOCK	.005	.002	.479	3.388	.002	.346	2.888
	INST	-.026	.007	-.571	-3.830	.001	.312	3.204
	AUDIT	-.010	.005	-.292	-2.075	.048	.351	2.846
	KOMDIT	.002	.003	.076	.680	.503	.560	1.786
	LEV	-.034	.016	-.343	-2.067	.049	.252	3.961
	ROA	.074	.038	.271	1.971	.060	.366	2.730
	SIZE	.005	.001	.672	5.004	.000	.385	2.597
	FIN_UTILITY	.016	.006	.528	2.709	.012	.183	5.470

a. Dependent Variable: YIELD

C. Uji Homoskedastis dan Autokorelasi

Nilai Durbin-Watson mendekati 2 artinya tidak terjadi autokorelasi, data homoskedastis.

1. Sample 1

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.668(a)	.446	.275	.01313	1.880

a Predictors: (Constant), FIN_UTILITY, INST, SIZE, ROA, KOMDIT, BLOCK, AUDIT, LEV
b Dependent Variable: YIELD

2. Sample 2

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.909(a)	.827	.764	.00749	2.568

a Predictors: (Constant), FIN_UTILITY, INST, SIZE, ROA, RATE, KOMDIT, BLOCK, AUDIT, LEV
b Dependent Variable: YIELD