



The influence of profitability and liquidity to bond rating and the impact on the bond yield

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ABSTRACT

The capital market has an important role in the economy of a country, as it serves as a source of funds for the company as well as a source of investment for the community. Bonds are financial instruments or securities that show that bond issuers have the obligation to pay the coupons and pay off the underlying debt at the appointed time. This research focuses on financial risk that is a financial ratio consisting of profitability and liquidity. This research aims to determine the impact of profitability and liquidity on bond rating and the impact on the bond yield on non-financial companies listed on the Indonesia Stock Exchange (IDX) period 2014-2018. The methods used are descriptive and verificative. The sampling technique used in this study was Purposive Sampling. The number of companies being sampled in this study was 33 companies. This study uses the path analysis method to determine which variables have an influence on bond ratings and their impact on bond yield. The results showed that the variable profitability had a significant effect on bond ratings, liquidity had no significant effect on bond ratings, and bond ratings were significantly influential on bond yield.

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Introduction

During the Central Statistics agency through the official website released the economic growth of Indonesia up 4.21 percent compared to the quarter I 2018 (Q Toq) and grew 5.27 percent compared to the same period last year (YoY). Economic growth of this period has been the highest since 2014. In the last five years, since the quarter I 2014, economic growth is at an average range of 4.7 to a high of 5.21 percent. In 2017 precisely the quarter I economic growth increased by 5.01 percent, quarter II was numbered at 5.01 percent, quarter III rises at 5.06 percent and continues to experience good in the fourth quarter with a recorded economic growth of 5.19 percent. In 2018 economic growth decreased in the quarter I and the rise in the quarter II was numbered at 5.27 percent. Internal and external factors have been determining the economic growth of Indonesia, as are the internal factors such as unemployment rate, foreign exchange reserves, inflation rate, infrastructure, and others. While the external factors consist of investment, export – Import, exchange rate, and others. In addition, the growth of capital markets in Indonesia continues to increase annually.

The capital market has an important role in the economy of a country, because the capital market has functions as a means for the company to get funding from investors to be used for business development, expansion, and the addition of working capital and as a means for the community to invest in financial instruments. One of the financial instruments sold in the capital market is bonds. Bonds are a non-transferable long-term debt letter indicating that bond issuers borrow a certain amount of funds to investors by having an obligation to pay interest at a certain period and settle the underlying debt at the appointed time to the bondholders. Bonds are issued by governments and corporations. Corporate bonds are rated more profitable than government bonds, this is seen from the higher corporate bond yield compared to state bonds. In addition, corporate bonds are dominated by domestic investors who tend to pay more attention to domestic economic indicators different from country bonds, as 38% of the Outstander is owned by foreigners, making it more sensitive to global issues.

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This research focuses on financial risk that is a financial ratio consisting of profitability and liquidity. This research aims to determine the impact of profitability and liquidity on bond rating and the impact on bond yield on non-financial companies listed on the Indonesia Stock Exchange (IDX) period 2014-2018. The methods used are descriptive and verificative. The sampling technique used in this study was Purposive Sampling. The number of companies being sampled in this study was 33 companies. This study uses the path analysis method to determine which variables have an influence on bond ratings and their impact on bond yield.

This study organizes as follows: literature review section, research and methodology, findings and conclusions.

Literature Review

Bond Yield is the most important factor for investor consideration in purchasing bonds as its investment instrument. Yield is the advantage of investment bonds expressed in percentages. Yield bonds are also the interest rate that equates the present value of all interest receipts and the nominal value of bonds, with the price of bonds. One of the most frequently used methods of investors to measure the yield in investing in bonds is the yield to maturity. Yield to maturity is a compound return rate that investors will receive when investors purchase bonds at the current market price and hold them to the bonds. The Yield bond becomes the size of the bond income that the investor will receive, which tends to be non-permanent. According to the Tandelilin (2010) There are 5 (five) bond yield sizes that can be used by investors, namely: Nominal yield, Current yield, Yield to call, Realized (Horizon) yield, and Yield to maturity.

Investing in investor bonds certainly expects the benefit of interest and the underlying loan to be paid at the specified time but in fact there is a risk to be faced is the risk of failing to pay (default risk) whereby the issuer is unable to pay the principal of loans and interest in accordance with the specified time period. To conduct risk assessment the bond can use bond rating. Bond rating is the symbol of the character given by the rating agent to measure the risk of failing to pay by the issuer as the debtor in paying the coupon and the underlying loan at the appointed time. Bond rating is very important because it is used to measure the level of risk and return on an investment. The lower the bond rank the higher the risk the investor will face (Susanti and Permana, 2017). The factors used in this study to know the influence on bond ratings are financial factors that include profitability and liquidity.

The profitability ratio is a ratio that measures the company's ability to generate profit or profit. According to Malia (2015) The higher the profitability level of the company then the lower the risk of paying inability (default), so the better the rankings are given against the company. According to Fahmi (2014) profitability is a ratio that measures the effectiveness of the company as a whole indicated by the big small gains gained in its relationship with sales or investment. In this study, the benchmark used to measure profitability is by using Return On Equity (ROE). The higher the return on asset means the higher the amount of net profit generated from each rupiah of funds embedded in the total assets. The return on Equity is the ratio to measure net profit after tax with its own capital (Brav et al, 2000). On average profitability in 2014-2015 is experiencing a decline in developments, while in the year and 2016-2018 have increased.

The liquidity ratio is a ratio that illustrates the company's ability to meet short-term obligations. According to Hani (2015) liquidity is the ability of a company to fulfill all financial obligations that can immediately be disbursed or are already due, specifically the liquidity reflects the availability of funds owned by the company to meet all the debts that will be due. High liquidity level will show the company's strong financial condition, the higher the liquid level the better the bond rank. In this study the benchmark used to measure liquidity is to use the current ratio. The current ratio is the ratio for measuring the company's ability to pay for short-term or debt obligations that are immediately due at the time of being billed as a whole. On average the liquidity in 2014-2016 increased, then in the year 2017 decreased but in the year 2018 experienced an increase in return.

Previous research results, such as those conducted by Phety and Oktarina (2018), have stated that profitability has a significant impact on bond ratings inversely with Martinus and Suryaningsih (2014) research which shows that profitability has no significant effect on bond ratings. The results of the research of Chaterine Tan (2018) stated that the liquidity has an effect on bond ratings, inversely proportional to the research conducted by Kurniawan and Suwarti (2017) that liquidity has no effect on bond ratings. Based on the background that has been elaborated and the presence of previous research conditions are inconsistent, the authors are interested to do this research.

Methodology

The research object is a scientific target for obtaining data with certain objectives and usability about something objective, valid, and reliable about a particular variable (Sugiyono, 2017). In this research the object to be researched is the profitability that is prokated using return on equity (ROE), the liquidity that is prokated using the current ratio (CR), then analyzed the effect on the bond rating and the impact on the yield on bonds in non-financial companies listed on the Indonesia Stock Exchange period 2014-2018. The method used in this research is a descriptive method of analysis with a quantitative approach. The data sources used in this research are secondary data, secondary data is data obtained indirectly or through other sources, e.g. through the publication of the company's financial statements, annual reports, Exchange info and so forth (Zulganef, 2018). The secondary data sources used in this research are obtained from the Indonesian Stock exchange and the official Pefindo website. The population in this research is a non-financial company listed on the Indonesia Stock Exchange period 2014-2018. The population number in this study is 201 companies. Sampling is done by purposive sampling method, so as many as 33 companies meet the specified criteria. The analytical technique to be used

in this study is to use multiple linear regression analysis technique expanded with a pathway analysis method to obtain a comprehensive picture of the relationship between variables one and another variable. In a regression analysis will be searched for each regression equation (regression coefficient) and the value of its coefficient of determination to prove the result and know the influence of each of the variables.

Research Design

Bond yield are the revenue or return of an investment that will be obtained by an investor who buys a letter of debt or bond for a certain period of time (Bernoth & Erdogan, 2012). The results of the research of Susanti and Permana (2017) bond ratings have significant effect on bond yield, inversely proportional to the research conducted by Bushman and Smith (2001). Bond rating can be predicted by the factors that affect them that are used in the study is profitability and liquidity. Bond rating is very important because it is used to measure the level of risk and return on an investment. If the company provides positive information it will be positively responded by the investor, the positive information is when the company's reported bond rating increases. The results of research conducted by Susanti and Permana (2017) stated that bond ratings have an influence on bond yield, inversely proportional to Indarsih research (2013).

Profitability is the ratio used to measure the company's ability to generate profit. The higher the profitability level of the company then the lower the risk of inability to pay (default), so the better the ranking is given against the company (Malia, 2015). The results of the research of Phety and Oktarina (2018) stated that profitability has significant effect on bond ratings, inversely proportional to the research of Martinus and Suryaningsih (2014). Liquidity is a ratio that measures the company's ability to meet short-term obligations. High liquidity level will show the company's strong financial condition, the higher the liquid level the better the bond rating. The results of the research of Chaterine Tan (2018) stated that the liquidity has an effect on the rank of bonds, inversely proportional to the research conducted by Kurniawan and Suwarti (2017).

Path analysis is a test that is used to analyse the pattern of relationships between variables. Path analysis is the use of a regression analysis to assess the relationship between variables (causal models) that are predetermined based on theory. The analysis of the pathway is conducted to determine the pattern of the relationship between three or more variables and cannot be used to confirm or reject the hypotasis of the imaginary kasuality (Ghozali, 2016). In this research the relationship between variables can be described in the Path Analysis equation model as shown in Figure 1.

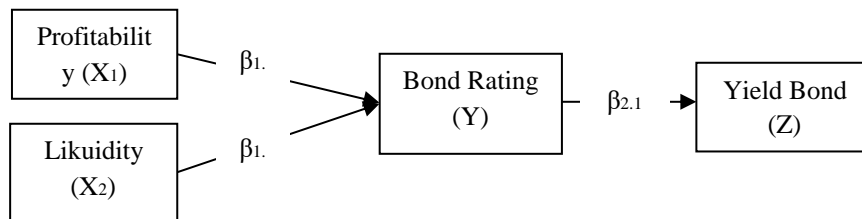


Figure 1: Path Analysis Estimation Model

Based on the foundation of theory, previous research, and Research Design then the hypothesis used in this research is as follows:

- H1 : Profitability has significant impact on bond ratings.
- H2 : Likuidity has a significant impact on bond ratings.
- H3 : Bond ratings have significant effect on Yield bonds.

Results

The test results of the instrument, proving that the indicators in the bond yield variable (Z), bond Rating (Y), profitability (X1) and liquidity (X2), have been declared valid and reliable, so that it can be used as a measuring instrument in subsequent tests. Bonds yield (Z), bond Rating (Y), profitability (X1) and liquidity (X2) in this research have also been distributed normally, there is no multicholinerity, and there is no heterokedastisity. The estimation of the model parameter of the data panel regression is done against the three types of model specifications, then the exact one used for this study was the Common Effect Model (CEM). Bond rating can be predicted by the factors that affect them that are used in the study is profitability and liquidity. Bond rating is very important because it is used to measure the level of risk and return on an investment. If the company provides positive information it will be positively responded by the investor, the positive information is when the company's reported bond rating increases. The results of research conducted by Susanti and Permana (2017) stated that bond ratings have an influence on bond yield, inversely proportional to Indarsih research (2013).

Table 1: Regression Results of Model I

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.027240	0.025569	40.17458	0.0000
ROE	0.296775	0.082623	3.591926	0.0004
CR	0.012871	0.013030	0.987819	0.0647
R-squared	0.577970	Mean dependent var		0.975758
Adjusted R-squared	0.516587	S.D. dependent var		0.154269
S.E. of regression	4.149045	Akaike info criterion		5.951129
Sum squared resid	3.598711	Schwarz criterion		5.894657
Log likelihood	81.46814	Hannan-Quinn criter		4.928205
F-statistic	6.849629	Durbin-Watson stat		2.938398
Prob(F-statistic)	0.001394			

The F hypothesis test result obtained the value of sig F $0.001 < 0.05$, meaning there is a significant influence between variabel profitability and liquidity together with the bond rating of the non-financial company listed on the Indonesia Stock exchange period of 2014-2018. The Adjusted value of R-Square is 0.517, meaning the bond rating can be explained by the profitability and liquidity of 51.7%, while the remainder of 48.3% is explained by other factors that do not enter into this research. Based on the resulting coefficient value can be formed an equation of path analysis in the first Model, namely

$$BR = 0.297ROE + 0.013CR$$

From table 1, there is a significant influence on the variable profitability of bond rating of 0.297, because the value of Sig t $0.000 < \alpha = 0.05$. While the liquidity variable has no significant effect on bond ratings, because the value of Sig t $0.064 > \alpha = 0.05$. This means that any increase in profitability will result in increased/lowering of bond ratings, as otherwise. While the decline or increase in liquidity in this study will not affect the rank of bonds. Path analysis on the first model as shown in Figure 2.

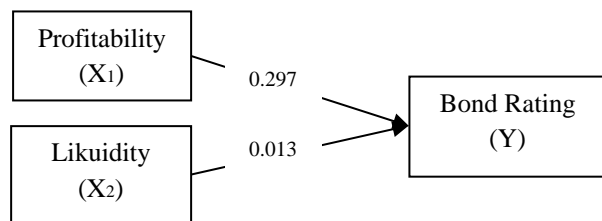


Figure 2: Result of Path Analysis First Model

Table 2: Regression Results of Model II

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.271494	0.317153	0.856036	0.0032
ROE	0.140541	0.321606	1.276537	0.0636
CR	0.293272	0.048958	5.990326	0.0785
BR	-0.370823	0.294325	-0.240630	0.0101
R-squared	0.790581	Mean dependent var		0.714975
Adjusted R-squared	0.675498	S.D. dependent var		0.614900
S.E. of regression	6.558342	Akaike info criterion		4.696253
Sum squared resid	50.19103	Schwarz criterion		4.771548
Log likelihood	-135.9408	Hannan-Quinn criter		4.726818
F-statistic	12.63601	Durbin-Watson stat		2.745416
Prob(F-statistic)	0.000000			

The F hypothesis test result obtained the value of sig F $0.000 < 0.05$, meaning there is significant influence of profitability, liquidity, and bond rating together against the yield bond on non-financial companies listed on the Indonesia Stock exchange period of 2014-

2018. R-Square Adjusted value of 0675, meaning bond yield can be explained by profitability, liquidity, and bond rating of 67.5%, while the remaining of 32.5% is explained by other factors that do not enter into this research. Based on the resulting coefficient value can be formed an equation of path analysis on the second Model, namely:

$$YB = 0.141ROE + 0.293CR - 0.371BR$$

From table 2, it is known that there is no influence of the profitability variable on bond yield, because the value of Sig t 0063 > $\alpha = 0.05$ Liquidity in this study also had no effect on yield bonds, because the value of Sig t 0078 > $\alpha = 0.05$. While the bond rating variable indicates there is a significant influence on the yield of bonds, because the value of Sig t 0.010 < $\alpha = 0.05$. This means that any increase in profitability will result in an increase/decrease in the yield bond value, as otherwise. Path analysis on the second model as shown in Figure 3.

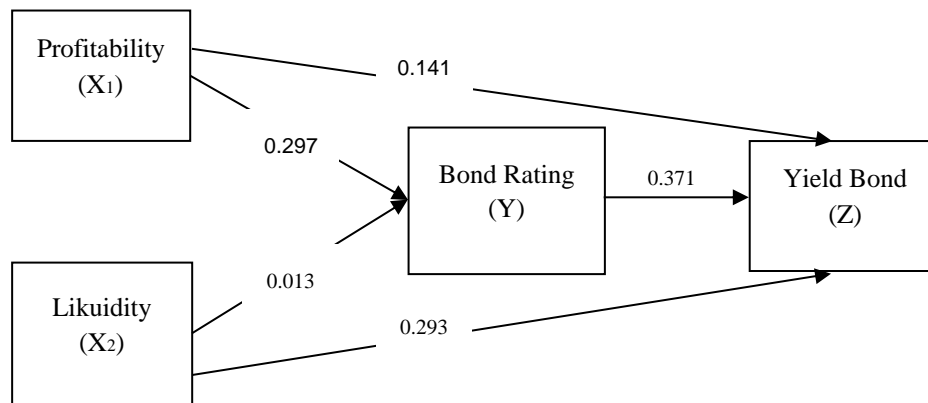


Figure 3: Result of Path Analysis Second Model

Discussion

Based on the results of the research data, shows that the profitability has significant effect on the bond ratings so that the hypothesis is accepted which means that the small profitability gained will affect the bond rating issued by the rating Company (Pefindo). So if the profitability of large companies then the bond ratings are included in the investment grade category and the risk of bonds are assessed low because the company is able to fulfill its long term obligations under the Agreement. Whereas if the profitability of small companies then bond ratings are included in the category of non-investment grade and the risk of high-rated bonds due to the company's ability to fulfill their long term weak obligations so as to fail to pay (default risk). The results of this study are aligned with Phety and Oktarina (2018) stating that profitability has significant effect on bond ratings.

Based on the results of the research data, shows that liquidity has no significant effect on the bond ratings so that the hypothesis is rejected which means that the small liquidity of the company will not affect the bond ratings issued by the rating companies (Pefindo). Liquidity is used to measure the company's ability to pay off its short-term obligations while bonds are included in long-term instruments, but high liquidity is not necessarily good because it shows a lot of idle company funds which in turn can reduce the company's profit and the company's manager is judged not to use the current asset properly and effectively (Fahmi, 2014). The results of this research are aligned with Kurniawan and Suwarti (2017) stating that liquidity has no significant effect on bond ratings.

Based on the results of research data, shows that bond ratings are significant to the yield bond. The results of this study are in accordance with the signal theory stating that How should the company's management provide signals (information) to the users of financial statements. Bond rating is an information that reflects the risk of failure to pay from a bond as a consideration for investors to determine the amount of risk that will be faced and the amount of yield expected when investing. Companies with low bond ratings will offer higher yield compared to companies that have a high bond rating. Based on that it can be concluded that high low bond rank will affect the low yield to maturity bonds. The results of this research are aligned with Susanti and Permana (2017) stating that bond ratings have significant effect on yield bonds.

Conclusions

Based on the results of the research conducted on the non-financial companies listed on the Indonesia Stock Exchange period 2014-2018 listed on the Indonesia Stock exchange with the title influence of profitability and liquidity of bond rating and its impact on yield bonds, it can be concluded that based on the results of the research data, indicating that the profitability of significant impact on bond ratings, liquidity has no significant effect on bond ratings , and bond ratings have significant effect on bond yield. This research has limitations that can be used as consideration materials for subsequent research in order to get better results from this study such as the craving of variable leverage and activity. Based on the results of the discussion and some conclusions and constraints

on this research, it is expected that this research can help investors to minimize the risk before investing in the form of bonds to non-financial companies, so that investors can consider the default risk.

References

- Bernoth, K., & Erdogan, B. (2012). Sovereign bond yield spreads: A time-varying coefficient approach. *Journal of International Money and Finance*, 31(3), 639-656. <https://doi.org/10.1016/j.jimonfin.2011.10.006>
- Brav, A., Geczy, C., & Gompers, P. A. (2000). Is the abnormal return following equity issuances anomalous?. *Journal of financial economics*, 56(2), 209-249. [https://doi.org/10.1016/S0304-405X\(00\)00040-4](https://doi.org/10.1016/S0304-405X(00)00040-4)
- Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of accounting and Economics*, 32(1-3), 237-333. [https://doi.org/10.1016/S0165-4101\(01\)00027-1](https://doi.org/10.1016/S0165-4101(01)00027-1)
- Chaterine Tan, S. (2018). Empirical Evidence of The Role of Accounting Policy on Bond Rating to Financial Companies Listed in Indonesia Stock Exchange. *Accounting Research Media, Auditing & Information* 18(1), 35-48. <http://dx.doi.org/10.25105/mraai.v18i1.2855>
- Fahmi, I. (2014). *Analysis of Financial Statements*. Bandung: Alfabeta.
- Ghozali, I. (2016). *Multivariate Analysis Application With IBM SPSS 23 Program*. Semarang: The Publishing Agency of Diponegoro University.
- Hani, S. (2015). *Analysis Techniques of Financial Statements*. Medan: Umsu Press.
- Indarsih, N. (2013). The Influence of The SBI Rate, Liquidity and Maturity of The Yield to Maturity Bonds [Effect of Interest Rates, Liquidity and Maturity of The Yield to Maturity of Bonds]. *Journal of Management Sciences*, 1(1), 125-136.
- Kurniawan, A. T., & Suwanti, T. (2017). The Effect of Profitability, Leverage, Liquidity and Productivity Against Bond rating. *The proceedings of The national Seminar on Multi-Disciplinary Science & Call For Papers Unisbank 3rd (SENDI_U 3) ISBN: 9-789-7936-499-93*.
- Malia, L. (2015). Influence of Financial Ratio on Sukuk Ranking. *Journal of Science & Research Accounting* 4(11), 12-21.
- Martinus., & Suryaningsih, R. (2014). Influence Company Size, Debt To Equity Ratio, Return On Equity, Productivity, and Current Ratio to Bond Rating. *Ultima Accounting*, 6(2), 56-76. <http://dx.doi.org/10.22515/shirkah.v4i1.265>
- Phety., & Oktarina, D. T. (2018). The Effect of DER, CAR, and ROE on The Banking Bonds Rating Listing At Indonesia Stock Exchange Period 2008-2013. *Organum: Scientific Journals Management and Accounting*, 1(2), 32-45.
- Susanti, N., & Permana, R. (2017). Influence of Ranking, Liquidity, Coupons and Maturity of The Yield Bond on The Indonesia Stock Exchange (IDX) Period 2013-2014. *Journal of Muara Economics and Business Sciences*, 1(1), 1-10.
- Sugiyono. (2017). *Business Research Methods*. Bandung: Alfabeta.
- Tandelilin, E. (2010). *Investment Analysis and Portfolio Management*. Yogyakarta: BPFE
- Zulganef. (2018). *Business and Management Research Methods*. Bandung: PT Refika Aditama