

Study of Bond Issuer Companies Listed on IDX and on PT Pefindo Rating List: The Effect of Financial and Non-Financial Factors on Bond Rating

Dewi Kusumowati*, Lebrina Lorince Tangpen

Fakultas Ekonomi dan Bisnis, Universitas Merdeka Malang,

Jl Terusan Raya Dieng No. 62-64 Malang, Indonesia

*dewi.kusumowati@unmer.ac.id

Abstract

The aim of this study is to determine the effect of liquidity, leverage, profitability, bond securities, and maturity variables on bond ratings of entities that issue bonds on the Indonesia Stock Exchange and PT Pefindo's rating list for the period 2019 - 2021. The objects used in this study are all bond issuer companies that have been recorded in PT Pefindo and have complete financial reports on the Indonesia Stock Exchange for 2019 - 2021. There are 11 bond issuer companies used as samples with 3 years of observation so that a sample of 33 is obtained. Sampling is determined by using a purposive sampling, while the insightful strategy utilized is calculated relapse examination. The result shows that liquidity (CR), leverage (DER), profitability (ROA), bond securities and maturity affect on the bond rating. This shows that liquidity, leverage, profitability, bond securities, and maturity have an impact on bond ratings for bond issuer's entities.

Keywords: Bond Rating, Bond Securities, Leverage, Liquidity, Maturity, Profitability

INTRODUCTION

When an organization needs sufficient funds to carry out its business activities, the capital market can be used as a link between parties with large reserves (financial sponsors) and parties who need reserves (guarantors). In the capital market, there are two types of goods that are in the greatest demand, namely stocks and securities. Bonds are more attractive to investors in terms of security than stocks (Purwaningsih, 2008). Investors in bonds need good quality financial information about the company to be used as a reference in investment decisions by the contribution reservation board.

For financial backers who intend to buy bonds, the main thing that is used to gauge the quality and dangers that financial backers will face when assuming they invest resources in bonds is attention to bond ratings, which can provide information and signals to investors. There are 2 factors associated with bond ratings, namely financial, such as liquidity, leverage, and profitability, and non-financial, such as the age of bonds and guarantees.

This study aims to analyze the influence of financial and non-financial variables on bond

valuation with two practical benefits, namely as a reference in making bond quality valuation decisions before investing and understanding the various factors that affect bond ratings to compete in the capital market.

LITERATURE REVIEW

Bonds and Bond Rating

According to the idx.co.id website, the bond is an adjustable medium-term liability protection that contains a guarantee from the backer to pay the difference to the buyer of the bond in interest within a specified time period and a credit principle at a later date. According to Jogiyanto (2015), bonds are personas used by ratings organizations to describe bond betting.

Signaling Theory

Signaling theory explains how signals management success or failure is communicated to the owner. Signal theory related to information asymmetry. The positive thing in signaling theory is where companies that provide good information will set them apart with companies that do not have good

news by informing to the market about their condition, a signal of good future performance the future provided by companies whose past financial performance is not good will not be trusted by the market (Wolk & Tearney, 1997).

The signal is interpreted as a signal made by the company (manager) to outside parties (investors). These signals can take the form of various forms, both those that can be directly observed, or which must be studied more deeply to be able to find out. Regardless of the form or type of signals issued, they are all intended to imply something in the hope that the market or external parties will make a change in the valuation of the company. That is, the selected signal must contain the power of information (information content) to be able to change the assessment of the company's external parties.

Signaling theory briefly explains that the company's management, as a signaling party, provides the company's financial statements and non-financial information to the selected rating agency. The bond rating agencies then carry out the rating process in accordance with the procedures so that they can issue bond ratings and make them public. This bond rating serves as a signal that a company is defaulting on debt repayments (Widowati et al., 2013). Information in the form of published bond ratings is expected to signal a company's financial health and illustrate the opportunities associated with its indebtedness (Sari, 2007). Due to the rating of the bonds, potential investors can make the right decision to buy or refuse the company's bonds.

PT Pemeringkat Efek Indonesia (PEFINDO)

The main goal of PT PEFINDO is an objective, impartial and credible public assessment of the credit risk of liability protection. PEFINDO uses a rating denoted by the letters idAAA, which means the highest risk on bonds, and idBBB, which means the lowest risk on bonds.

Financial Factor

The predicted relationship between financial statement data is measured using financial ratios to provide more meaningful information. In this study, 3 financial factors are applied: liquidity, leverage and profitability.

Liquidity Ratio

Kasmir (2012) has shown, liquidity is a proportion that describes an item's ability to keep track of its immediate obligations (obligations). This statistic can show if a company is liquid by showing whether its current assets exceed its current liabilities. The current proportion is the share of liquidity used in this study.

Leverage Ratio

The share of influence indicates the ability of the organization to meet long-term obligations. The rate an organization must bear decreases as this ratio decreases. The debt-to-equity ratio, which compares equity and debt and indicates a company's ability to meet its obligations with current equity, is the leverage ratio used in this review.

Profitability Ratio

A company's ability to generate profits and the rate of return on investment are assessed using a rate of return. The ability of a business to make money using its resources is not entirely determined by the return on its resources. The share used in this study is the return on assets.

Non-Financial Factors

It consists of two non-financial elements that are considered in this study to assess whether a bond has a maturity in line with the age of the bond: the guarantee and the age of the bond.

Bond Securities

Bonds that include additional collateral from a third party or certain assets of the issuer are known as secured bonds. Compared to secured custody, unsecured custody will be more risky.

Bond Age (Maturity)

The age (maturity) of a bond is a non-monetary characteristic that indicates how long before the maturity date of the said bond, for example, until the day when the bond holder receives a new head or the estimated value of his bond.

Hypothesis

The liquidity ratio is the ability of a company to meet its short-term obligations on time (Fahmi, 2011). Liquidity is determined by the size of current assets, namely assets that can be easily converted into cash, liquid securities, receivables and inventories. The higher the company's liquidity, the better its ability to meet its short-term obligations. Borrowers (lenders) use the most liquid assets as the main source of payments and interest on securities in financed assets (Joseph, 2002). Thus, the more liquid assets a company has, the more indirectly it will affect the repayment of its long-term obligations (redemption of bonds), which is expected to reduce the risk of default, so that the likelihood of a company's bond rating will improve. The results of the study by Hafidania and Hakimian. (2020) argues that liquidity has a positive effect on bond ratings. The study by Sufiyanti & Wardani (2016) show that liquidity has a positive effect on bond ratings. Thus, this study proposes the following hypothesis:

H₁: liquidity affects bond ratings

The leverage ratio is a ratio that shows the level of the share of using debt in financing investments (Raharja, 2015). This ratio is measured using the debt-to-equity ratio. The higher the leverage ratio of the company, the greater the risk of bankruptcy of the company. The lower a company's leverage, the higher its rating (Burton, 1998). The lower the ratio, the smaller the assets financed by debt. A high level of leverage is not good because of the burden of interest on the debt. If a high level of leverage (extreme leverage) causes a company to be unable to pay all of its obligations (including bonds), the bond rating will be less good. Thus, the lower the leverage ratio (DER), the higher the rating of the bond. The results of the study by Widowati et al. (2013) stated that leverage has a negative effect on bond levels. Research by Novita (2018) shows that leverage has a negative impact on bond ratings. Thus, this study proposes the following hypothesis:
H₂: leverage affects bond ratings

Profit ratio is a ratio that measures a company's ability to generate profits (earnings) at a given level of sales, assets, and equity. This ratio uses the return on assets. Purwaningsih (2008) argues that the higher the level of profitability, the lower the risk of insolvency or default risk. The higher the profitability, the higher the rating allows the company. The results of the study by Widowati et al. (2013) stated that the yield ratio has a positive effect on bond ratings. The results of the Kurniawan and Suwarti (2017) stated that profitability has a positive effect on bond ratings. Thus, this study proposes the following hypothesis:
H₃: profitability affects bond ratings

Bond securities is one of the important aspects of bonds because the bonds are guaranteed, which means that the company can reduce the risk of default for bondholders. Bond securities is one of the important aspects of bonds because the bonds are guaranteed, which means that the company can reduce the risk of default for bondholders. Sumarto (2010) stated that a bond with a long maturity increases investment risk, since over a sufficiently long period there may be a risk of bad events or events that can lead to a decrease in the company's efficiency. Thus, bonds with shorter maturities are rated higher than bonds with longer maturities. The results of Magreta and Nurmayanti (2009) stated that bond securities has a positive effect on bond ratings. The results of the study by Sari and Sudjarni (2016) stated that bond securities has a positive effect on bond ratings. Thus, this study proposes the following hypothesis:
H₄: bond securities impacts bond ratings

The age of a bond (maturity) is the date that the owner of the bond will receive payment of the principal or face value of the bond and the periodic

interest it holds. Investors generally dislike bonds with longer maturities because the risk associated with them will also be higher. The results of Sufiyanti and Wardani (2016) study show that maturity has a positive effect on bond ratings. The results of the study by Arisanti et al. (2013) stated that maturity has a positive effect on bond ratings. Thus, this study proposes the following hypothesis:
H₅: maturity affects bond ratings

METHOD

This study focuses on financial accounting, which leads to financial variables such as liquidity (current ratio), leverage (debt to equity), profitability (return on assets) and non-financial aspects such as guarantees when valuing bonds using cash and non-financial indicators. Monetary variables: monetary as valuation (bond securities) and age of bonds (maturity). Data was collected by visiting www.idx.co.id and www.pefindo.co.id. The study was conducted on bond issuers listed on the Indonesian Stock Exchange and on the PT Pefindo rating list that published financial statements for 2019-2021.

All bond issuers that have registered their bonds with PT PEFINDO and have complete financial statements on the Indonesian Stock Exchange for the period 2019-2021 constitute the aggregate of this review. To determine the sample, this review uses targeted sampling, a low-probability sampling method that uses specific criteria for sampling. The source of the research data is secondary data from previously posted financial statements on the official website. Quantitative data in a numerical scale is the type of data used. The official website of the Indonesian Stock Exchange www.idx.co.id is used for the data collection methods in this study, namely the documentation methods. The data is presented in the form of an annual report prepared by the bond issuer for the period 2019–2021.

Data Analysis Technique

This study uses logistic regression analysis. This analysis is used because the dependent variable is a dummy variable

Descriptive Statistical Analysis

To determine the summary information used and processed in this review, including the amount of information processed, typical information, and the standard deviation of the information variables, broken down by the dimensions involved. In addition, it is possible to view the minimum and maximum scores of the data.

Multicollinearity Test

Multicollinearity is a condition in which independent factors are related to each other. The provisions required to test for multicollinearity are

as follows: If $VIF > 10$, multicollinearity occurs. If $VIF < 10$, then multicollinearity does not occur. For stability > 0.10 , there is no multicollinearity. When stability < 0.10 , multicollinearity occurs.

Logistic Regression Analysis

The dependent variable was a dummy and an analytical tool was used to determine the degree of influence of the independent factor on the dependent variable calculated during the repeated study (somewhere between 0 and 1). In this review, the logistic regression test includes 3 analyses, namely the Hosmer-Lemeshow Test, which checks for incorrect assumptions that the correct information fits the model, tests the fit determined based on the chi-square value used to estimate the likelihood of the recursive model (there is no contrast between the model and the information so that the model can be considered appropriate).

To show that the regression model fits the information, model fit and overall model fit were evaluated. The -2 log probability end value will decrease in the admissible regression model, or the -2 log probability start value is higher than the -2 log probability end value. To determine the value of the coefficient of determination of the logistic regression model, the Nagelkerke R-squared test was performed.

Hypothesis Testing

Test of importance of synchronous models. The Omnibus Trial of Model Coefficients (L-R Insights) table is used to view the effects of logistic regression testing, especially to observe the synchronous impact of the standalone variable on the dependent variable. Partial test of model significance. The probability value method (prob.) can be used with options when testing partial effects, the condition for accepting or rejecting the hypothesis is that H_0 is accepted at a significance value > 0.05 and H_a is accepted at a significance value of 0.05.

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Table 1. Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Dev
Bond Rating (Y)	33	.000	1.000	.81818	.391675
Liquidity (X ₁)	33	.120	2.250	1.25030	.415921
Leverage (X ₂)	33	.800	10.540	4.10364	2.734646
Profitability (X ₃)	33	-.016	.344	.03855	.060065
Bond securities (X ₄)	33	.000	1.000	.63636	.488504
Maturity (X ₅)	33	.000	1.000	.54545	.505650
Valid N (listwise)	33				

The dependent variable (Y) has a minimum value of 0.000, in Mandal Multifinance for 3

consecutive years from 2019 to 2021, it received an idBBB rating and a maximum value of 1.000, in Astra Sedaya Finance for three consecutive years from 2019 for 2021, and it has received an idAAA rating. The explanatory variables consist of 5: (X1) obtaining a minimum value of 0.120 Adhy Kaya (Persero) for the period 2019 and a maximum value of 2.250, in Mandal Multifinance for the period 2020. (X2) obtaining a minimum value of 0.800, in Mandala Multifinance for the period 2020 period 2020 and the maximum value of BJBR 10,540 for the period 2021 (X3) received a minimum value of -0.016, in PT Mandiri Tunas Finance for 2020 and a maximum value of 0.344, in PT Astra Sedaya Finance for 2021 (X4) has a minimum value of 0.000 at 5 companies and a maximum value of 1000 at 5 companies. The variable Maturity (X5) has a minimum value of 0.000 in 4 companies and a maximum value of 1.000 in 6 companies.

Simultaneous Model Significance Test

Table 2. Simultaneous Models

	Chi – square	Dev	Sig
Step	31.293	5	.000
Block	31.293	5	.000
Model	31.293	5	.000

The results showed that the model Chi-squared value was 31,293 with a significance level of $0.000 > 0.05$. This shows that the consequences of the logistic regression testing that are calculated affect both the dependent variable and the independent factor at the same time.

Partial Model Significance Test

Table 3. Partial Model

Variable	B	Sig.
Liquidity (X ₁)	-92.068	.010
Leverage (X ₂)	-9.422	.004
Profitability (X ₃)	-45.653	.025
Bond securities (X ₄)	51.481	.007
Maturity (X ₅)	41.332	.008
Constant	132.607	.057

Liquidity has a partial effect on bond ratings, as evidenced by the first hypothesis, according to which the Wald value is 0.000 at a significance level of $0.010 < \alpha$ (0.05). According to the second hypothesis, if the Wald value is 0.000 and the threshold of significance is $0.004 < \alpha$ (0.05), then leverage partially affects the bond's rating. According to the third hypothesis, if the Wald value is equal to 0.000, and the threshold of significance is $0.025 < \alpha$ (0.05), then the profitability can influence bond ratings. According to the fourth theory, if the Wald value is 0.000 and the threshold of significance is set at $0.007 < \alpha$ (0.05), then partial bond securities affects the rating of the bond. Based on the fifth hypothesis, if the Wald value is 0.000

and α (0.05) has a significance level of 0.000, then the maturity partly affects the bond rating.

Logistic Regression Test

Table 4. Logistic Regression

Variable	B	Sig.
Liquidity (X ₁)	-92.068	.010
Leverage (X ₂)	-9.422	.004
Profitability (X ₃)	-45.653	.025
Bond securities (X ₄)	51.481	.007
Maturity (X ₅)	41.332	.008
Constant	132.607	.057

The resulting logistic regression equation is described as follows:

$$\text{Bond Rating} = 132.607 - 92.068X_1 - 9.422X_2 - 45.653X_3 + 51.481X_4 + 41.332X_5$$

Effect of Liquidity on Bond Ratings

The results of this study show that liquidity affects bond ratings. Where, with an increase in liquidity by 1 unit, the rating of the bond will decrease by -92,068. In this case, liquidity is measured by the current liquidity ratio. The results show that the liquidity variable which is measured by CR affects bond ratings. That is, the higher the CR owned by a company, the lower the bond rating will receive. Liquidity can show how a company is able to repay its short-term debt. But companies with high liquidity will not necessarily be able to repay their obligations on time. This is because CR calculates a company's liquidity, including inventory that cannot actually be cashed out immediately, so there is a possibility that there are current assets held by loss-making companies, for example, there are inventory whose turnover is not smooth and leads to stockpiling.

The results of this study are consistent with those by Widiowati et al. (2013), Arisanti et al. (2013), Kurnia et al. (2016), Novita (2018), Sari and Sudjarni (2016), also Siagian (2016), which shows that liquidity affects bond ratings. However, this study contradicts the results of the study by, Magreta and Nurmayanti (2009), Septyawanti (2013), also Kurniawan and Suwarti (2017), which shows that liquidity does not affect bond ratings.

Effect of Leverage on Bond Ratings

The results of this study show that debt-to-equity ratio (DER) leverage has an impact on bond ratings. Where, if the leverage increases by 1 unit, the rating of the bond will decrease by -9,422. The leverage ratio shows the company's ability to meet long-term obligations, the lower this ratio, the less risk the company must bear. Leverage measures the share of debt used in financing investments, which is determined by the debt-to-equity ratio (DER). If the proportion of debt owned by a company is higher than equity, then the company generally has a low ability to meet its obligations. High leverage in

a company indicates that the risk of a company's financial default is high.

The results of this study are consistent with those of Widowati et al. (2013), Sari et al. (2016), Kurniawan and Suwarti (2017), also Novita (2018), which shows that leverage affects bond ratings. However, this study is in conflict with the results of the study by Magreta and Nurmayanti (2009) who show that leverage does not affect bond ratings.

Effect of Profitability on Bond Ratings

The results of this study show that profitability affects bond ratings. Based on the results obtained, the profitability variable has a negative impact on bond ratings, which means that if the variable profitability increases by 1 unit, the bond rating will decrease by -45,653. Based on the results of the profitability hypothesis test, the impact on bond ratings is that that profitability results are much better measured using ROE, since it is more likely that a company will receive a high bond rating, since the ROE calculation shows the company's ability to make a profit. Based on equity, where the company's ability to generate net income from capital is relatively high, while ROA has only a small impact and even adds value, that is, no matter the value of ROA, whether small or large, it will have no effect on rating of bonds issued by rating companies Hasan and Dana (2018). The reason that supports this result is that measuring profitability based on ROA is not practical. This is due to the fact that ROA shows the results (profitability) from the use of the company's assets, and the assessment of bond rating agencies is based on the results of the company's activities related to its core business.

The results of this study are consistent with those of Widowati et al. (2013), Septyavanti (2013), Magreta and Nurmayanti (2009), Siagian (2016), also Kurniawan and Suwarti (2017), which shows that profitability affects bond ratings. However, this study conflicts with the results of a study by Novita (2018), which shows that profitability does not affect bond ratings. Impact of profitability on bond ratings Test results show that profitability has an impact on bond ratings.

Effect of Security on Bond Ratings

Test results show that bond securities has an impact on bond ratings. If the bond securities variable increases by 1 unit, the bond's rating increases by 51,481. Bond securities affecting bond ratings indicate that high bond securities affect the assigned ratings of bonds. This is due to the fact that the level of risk contained in a bond is affected by the bond securities. Unsecured bonds carry a higher risk than guaranteed bonds. The increase in bond securities is supported by the collateral value used by the company to bond securities the issued bonds,

as the collateral value used exceeds the value of the issued bonds.

The results of this study are consistent with those by Arisanti et al. (2013), Magreta and Nurmayanti (2009), Siagian (2016), also Sari and Sudjarni (2016), which shows that the results provide a significant positive impact on bond ratings. However, this study contradicts the results of the study by Widowati et al. (2013), which shows that bond securities does not affect bond ratings.

Effect of Maturity on Bond Ratings

Test results show that maturity affects bond ratings. If the maturity variable is increased by 1 unit, the bond's rating will increase by 41,332. The purpose of influencing changes in maturities, whether the bond is long or not, will have no real impact on the bond's rating. A bond's age (maturity) is the maturity level of a bond, more specifically, maturity is the period of time it takes for a bond holder to typically receive the principal or face value of the bond they hold. Bonds with shorter maturities are considered less risky than long-term bonds and this is reflected in the bond's ratings.

The results of this study are consistent with those by Arisanti et al. (2013), Kurniawan and Suwarti (2017), also Siagian (2016), which show that maturity affects bond ratings. However, this study contradicts the results of the study by Widowati et al. (2013), Magret et al. (2009) and Sarifuddin et al. (2012), who show that maturity does not affect bond ratings.

Conclusion

Bond ratings are significantly affected by liquidity (CR), leverage (DER) and profitability (ROA) results, together with financial variables. The ratings of the bonds are highly dependent on the results of the evaluation of the bond securities and the maturity of the bonds for non-financial elements.

REFERENCES

Arisanti, I., Fadah, I., & Puspitasari, N. (2013). Analisis Faktor Keuangan Dan Non Keuangan Yang Mempengaruhi Prediksi Peringkat Obligasi Syariah (Studi Empiris Pada Perusahaan Penerbit Obligasi Syariah Yang Terdaftar Di Bursa Efek Indonesia Periode 2010-2012). *Jurnal Ekonomi Akuntansi dan Manajemen*, 13(2), 1-13

Burton, B. M. (1998). The Determinants of Credit Ratings in United Kingdom Insurance Industry. *The Journal of Risk and Insurance*. .

Fahmi, I. (2011). *Analisis Laporan Keuangan*. Bandung: Alfabeta.

Hafidania, R., & Hakimian, H. (2020). Determinants of bond rating (Case study on consumer finance companies of Indonesia Stock Exchange in 2018 period). *Dinasti*

International Journal of Digital Business Management, 1(5), 670-679.

Joseph, R. V. (2002). Determining debt capacity. *Commercial Lending Review*, 9(2).

Kasmir. (2012). *Analisis Laporan Keuangan*. Jakarta: Rajawali.

Kurniawan, A. T., & Suwarti, T. (2017). Pengaruh profitabilitas, leverage, likuiditas dan produktifitas terhadap peringkat obligasi.

Magreta, M., & Nurmayanti, P. (2009). Faktor-faktor yang Mempengaruhi Prediksi Peringkat Obligasi ditinjau dari Faktor Akuntansi dan Non Akuntansi. *Jurnal Bisnis dan Akuntansi*, 11(3), 143-154.

Novita, N. (2018). Pengaruh Rasio Keuangan terhadap Peringkat Obligasi pada Perusahaan Non Keuangan di BEI Tahun 2013-2016. *Jurnal Ekobis Dewantara*, 1(1), 85-95.

Purwaningsih, A. (2008). Pemilihan Rasio Keuangan Terbaik untuk Memprediksi Peringkat Obligasi: Studi pada Perusahaan Manufaktur yang Terdaftar di BEJ. *Jurnal Kinerja*, 12(1),85-99.

Raharja. (2015). Perbandingan Alat Analisis (Diskriminan dan Regresi Logistik) terhadap Peringkat Obligasi (PT. PEFINDO). *Jurnal Maksi*, 8(1).

Sari, N. K. D. P., & Sudjarni, L. K. (2016). Pengaruh Likuiditas Obligasi, Waktu Jatuh Tempo, Dan Kupon Obligasi Terhadap Perubahan Harga Obligasi Korporasi Berperingkat Tinggi Di Bursa Efek Indonesia *Doctoral Dissertation*. Udayana University.

Sari, M. P. (2007). Kemampuan Rasio Keuangan sebagai Alat untuk Memprediksi Peringkat Obligasi (PT Pefindo). *Jurnal Bisnis dan Ekonomi*.

Siagian, E. (2016). Analisis Faktor Keuangan dan Non Keuangan yang Berpengaruh terhadap Peringkat Obligasi pada Perusahaan Manufaktur di Bursa Efek Indonesia.

Sufiyanti, F., & Wardani, D. K. (2016). Dampak Rasio Keuangan terhadap Peringkat Obligasi pada Perusahaan yang Terdaftar di Bursa Efek Indonesia.

Sumarto, S. (2010). Memprediksi Tingkat Obligasi Perusahaan Manufaktur yang Listing di BEI. *Jurnal Mitra Ekonomi dan Manajemen Bisnis*, 1(2).

Widowati, D., Nugrahanti, Y., & Kristanto, A. B. (2013). Analisis Faktor Keuangan dan Non Keuangan yang Berpengaruh pada Prediksi Peringkat Obligasi di Indonesia (Studi pada Perusahaan Non Keuangan yang Terdaftar si BEI dan di Daftar Peringkat PT Pefindo 2009-2011). *Jurnal Manajemen Maranatha*, 13(1), 35-54 <https://doi.org/10.28932/jmm.v13i1.141>

Wolk, H. I., & Tearney, M. G. (1997). *Accounting theory: A conceptual and institutional approach*.