Company Performance and Bond Rating: Evidence from Property, Real Estate dan Construction Companies in Indonesia

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Abstract

This study aimed to examine the effect of company performance proxied by ratios of liquidity, leverage, and asset growth on bond ratings of property, real estate, and construction companies listed in the Indonesia Stock Exchange during 2016-2019. The data were acquired from 40 financial reports of Ten Indonesian Companies in the property, real estate, and construction sectors and the bond rating issued by the Indonesian Securities Rating Agency, PT Pemeringkat Efek Indonesia (Pefindo).

The data analysis technique was using the regression balanced panel data analysis. The results show that the company's liquidity had an insignificant negative effect on the bond rating; the company's leverage had an insignificant positive effect on the bond rating, while company growth had a significant negative effect on the bond rating.

Keywords*: bond rating, liquidity, leverage, asset growth*

Introduction

One of the possible funding schemes to finance company operation and investment is by issuing bonds. Bonds are transferable medium-long term debt securities that contain a promise by the issuing party to pay interest in a certain period and pay off the principal amount at maturity time to the buyer of the bond. (www.idx.com [1]

Bonds are relatively safer than stocks; however, bonds also have a default risk of paying interest and principal. Therefore, investors should observe the bond rating to prevent risk from occurring[2]. Bond-rating is a risk scale that shows the level of security in paying interest and repayment of principal at maturity time. The bond rating provides an informative statement about the likelihood of non-payment of interest and principal[3]. Therefore, investors can decide on bonds based on the bond's rating[4].

In general, bond rating in the capital market is determined by an independent or bond rating agency. Regarding Indonesia, one of the independent institutions that determine the bond rating is PT. Pemeringkat Efek Indonesia (Pefindo), which was established on December 21, 1993 based on the initiative of the Financial Services Authority, Otoritas Jasa Keuangan (OJK). In general, bond ratings are categorized into

two, i.e., the investment-grade category (codes: AAA, AA, A, and BBB), a category of companies considered to have sufficient ability to pay off their debts; and the non-investment-grade category (codes: BB, B, CCC, and D), a category of companies considered to have a high risk of failure to pay off their principal debt when it matures [5]

An interesting phenomenon related to bond rating issues in Indonesia occurred at PT Agung Podomoro Land Tbk (APLN) in 2019. APLN is a property company that is considered with investment grade. However, as time goes by, it has the potential to default on its debt by Rp 1.3 trillion. It is observed when one of the bank syndication members resigned from its participation as a syndicated credit provider. In addition, other contribution factors occurred due to the decline in sales of the property sector at the national level, which has led to poor liquidity and corporate leverage. (www.indopremier.com, 15/08/2019 and www.medcom.id, 09/09/2019).

Several previous studies have been conducted to examine the effect of company performance on bond ratings. However, inconsistent research results were found. A study conducted by [6], [7], [8] Luthfia (2018), and [9] revealed that a company's liquidity had a significant positive influence on the bond rating. However, research from [7, 10-13] discovered that liquidity did not significantly influence the bond rating.

Research results from [14], [2, 4]showed that the company's leverage had a significant negative influence on bond rating. However, research conducted by [5, 6, 8, 15]had an insignificant influence on bond rating.

Furthermore, research from [16-18]showed that company's growth had a significant positive influence on bond rating. In contrast, research from [19-21]found that company's growth did not significantly affect on bond rating.

Based on the phenomena and inconsistencies of previous research results, it has encouraged us to conduct replication research to examine the factors that affect bond ratings such as liquidity, leverage, and company growth in property, real estate, and construction companies that listed in Indonesia Stock Exchange from 2016 to 2019.

Research Framework and Hypothesis.

The Influence of Liquidity on Bond Rating

Liquidity is often referred to as the working capital ratio, which is a ratio that shows the company's ability to meet short-term obligations [16]. The liquidity ratio is calculated by comparing the components on the balance sheet, i.e., total current assets with total current passive (short-term debt). A high level of liquidity will indicate the company's strong financial condition so that financially it will affect the prediction of bond ratings.

Bonds in the capital market with a high level of liquidity tend to be offered at a higher price than bonds with a low level of liquidity. Investors see the high level of liquidity that the company will meet its obligations to pay interest and principal debt at maturity. Therefore, investor demand for bonds will increase, which will have an impact on high bond prices. In addition, a high level of liquidity indicates the stable financial condition of a company.

The stronger the company's financial condition, it indicates that the company will have a low risk in fulfilling its obligations. The low risk of meeting the company's obligations will affect the company's bond rating. The lower the risk of the company to meet its obligations, the higher the bond rating. It is supported by the results of research conducted by [12, 13, 15, 16, 18, 21], demonstrating that liquidity had a statistically significant positive effect on bond ratings. Therefore, the research hypothesis is as follows:

H1: liquidity significantly affects bond ratings.

The Influence of Leverage on Bond Rating

The company's leverage shows the ability of a company to fulfill its obligations in paying debts on time. The higher the leverage, the greater the possibility that the company will not fulfill its obligations and result in a higher risk of bankruptcy. The high risk of corporate bankruptcy will impact corporate bonds because investors will judge that the company has a risk in paying interest and principal bonds at maturity. The higher the risk of the company in meeting its obligations, the lower the bond rating.

The statement is supported by the research of [12, 13, 15, 16, 18, 21]which revealed that leverage had a significant negative effect on bond ratings. Therefore, the research hypothesis is:

H2: leverage has a significant negative effect on bond ratings.

The Influence of Company's Growth on Bond Rating

The company's growth can be examined from the company's ability to increase the size of the company while showing the company's position in the macroeconomy in the same industry. [8, 22] stated that company growth is an accounting factor that influences bond rating predictions because positive company growth can indicate various financial conditions.

Companies with high growth rates from year to year are more likely to obtain high bond ratings than companies with low growth rates since the company will be more attractive to investors. In addition, the company's high growth rate indicates the company's sound financial condition. The better the company's financial condition, the lower risk of the company paying off its obligations. The lower risk of the company paying off its obligations, the higher the bond rating.

Research by [9, 16, 21] revealed that company growth had a significant positive effect on bond ratings. Therefore, the research hypothesis is as follows:

H3: the company growth has a significant positive effect on bond ratings.

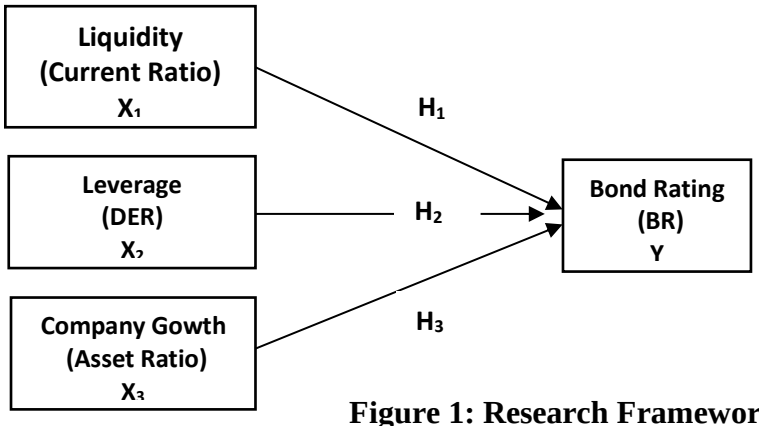

Figure 1: Research Framework

Research Methodology

Data

This research data related to company performance was obtained from 40 financial statements of ten property, real estate, and construction companies listed in the Indonesia Stock Exchange from 2016 to 2019. In addition, the data relates to the bond rating issued by PT Pemeringkat Efek Indonesia. The data sources were collected from the websites of the Indonesia Stock Exchange (www.idx.co.id) and PT Pemeringkat Efek Indonesia (www.pefindo.com).

Table 1

Research Population

No	Company Code	Company's Name
1	APLN	Agung Podomoro Land Tbk
2	DILD	Intiland Development Tbk
3	MDLN	Modernland Realty Tbk
4	BSDE	PT Bumi Serpong Damai Tbk
5	ADHI	PT. Adhi Karya (Persero) Tbk
6	PTPP	PP (Persero) Tbk
7	SSIA	PT. Surya Semesta Internusa Tbk
8	PPRO	PT. PP Properti Tbk
9	SMRA	PT. Summarecon Agung Tbk
10	WSKT	PT. Waskita Karya (Persero) Tbk
Source: The Indonesia Stock Exchange		

Operationalization Variables

The independent variables in this study were the company's performances which are proxied by the ratio of liquidity, leverage, and company's growth. The indicators of each ratio were the current ratio, debt to equity ratio, and asset growth, respectively. Meanwhile, the dependent variable was the bond rating that PT Pemeringkat Efek Indonesia issued with 17 indicators with the symbol rating D to AAA.

The data analysis technique in this study utilized balanced panel data regression analysis with employing the Eviews ten program as data processing software. Panel data is a form of data that combines data across time (time series) and individuals, in this case, the company (cross-section). The data obtained were the result of observations of several objects at a particular time.

The panel data regression equation in this study is:

$BRi.t = \beta 0 + \beta 1Liqi.t + \beta 2Levi.t + \beta 3CGi.t + \varepsilon i.t$ ...

Note:

BR = Bond Rating

B0 = Constant

Liq = Liquiditty with the proxy of current ratio

Lev= Leverage with the proxy of debt to equity ratio

CG = Company's Growth with the proxy of asset growth

β1; β2; β3 = Coefficient Regression

ε = Error terms

i = company

t = Time = year

This study determined the appropriate approach models for analysis panel data regression: a common effect model, a fixed-effect model, and a random effect model. The appropriate panel data regression models were determined by performing the Chow, Hausmann, and Lagrange Multiplier tests. In addition, this study also carried out

multicollinearity and heteroscedasticity tests in fulfilling the requirements of the best linear unbiased estimator [13, 17].

Findings

Statistic Descriptive

The descriptive statistics in this study are shown in the Table 2 below:

Table 2

Statistic Descriptive

	BR	Liq	Lev	CG
Mean	0.679000	1.643574	1.764023	0.294203
Median	0.650000	1.428428	1.530241	0.148185
Maximum	0.820000	3.938135	4.343026	1.283439
Minimum	0.530000	0.879054	0.572387	0.000000
Std. Dev.	0.076821	0.652538	0.963536	0.349755
Skewness	0.120427	1.680424	1.034772	1.243356
Kurtosis	2.661286	6.017023	3.270677	3.482215
Jarque-Bera	0.287897	33.99622	7.260469	10.69378
Probability	0.865932	0.000000	0.026510	0.004763
Sum	27.16000	65.74297	70.56094	11.76813
Sum Sq. Dev.	0.230160	16.60640	36.20763	4.770819
Observations	40	40	40	40

Table 2 shows the bond ratings (BR) of property, real estate, and construction companies issued by PT Pemeringkat Efek Indonesia for 2016–2019, with a mean value of 0.679000 and a standard deviation of 0.076821. The standard deviation value is higher than the mean value (0.076821 > 0.679000). It indicates that the data used for the bond rating had a large variation in data distribution. The maximum value was 0.820000 in 2016-2019 by PT. Bumi Serpong Damai (BSDE) and a minimum value was 0.530000 in 2016-2019 by PT. PP Property (PPRO) and in 2019 by PT. Intiland Development (DILD).

The variable liquidity (Liq) proxied by the current ratio for property, real estate, and construction companies was issued by PT Pemeringkat Efek Indonesia from 2016 to 2019 had a mean value of 1.643574 and a standard deviation of 0.652538. The standard deviation value is smaller than the mean value (0.652538 < 1.643574). It indicates that the data used in the liquidity variable had a small data variation in data distribution. The maximum value was 3.938135 in 2019 by the company PT. Bumi Serpong Damai (BSDE) and a minimum value was 0.879054 in 2017 by PT. Intiland Development (DILD).

Variable leverage (Lev) proxied by debt to equity ratio for property, real estate, and construction companies were issued by PT Pemeringkat Efek Indonesia from 2016 to 2019, showing that the mean value was 1.764023 and a standard deviation of 0.963536. The standard deviation value is smaller than the mean value (0.963536 < 1.764023). It indicates that the data had a small variation in data distribution. The maximum value was

4.343026 in 2019 by PT. Adhi Karya (ADHI) and the minimum score was 0.572387 in 2016 by PT. Bumi Serpong Damai (BSDE).

Company growth (CG) proxied by asset growth in property, real estate, and construction companies issued by PT Pemeringkat Efek Indonesia for 2016–2019 showed a mean value of 0.294203 and a standard deviation of 0.349755. The standard deviation value is higher than the mean value (0.349755 > 0.294203). It indicates that the data used in the company's growth variable had a large variance in data distribution. The maximum value was 1.283439 in 2019 by PT. PP Property (PPRO) and the minimum value was 0.000000 in 2016 by PT. Agung Podomoro Land (APLN), PT. Intiland Development (DILD), PT. Modern Land Realty (MDLN), PT. Bumi Serpong Damai (BSDE), PT. Adhi Karya (ADHI), PT PP (PTPP), PT. Surya Semesta Internus (SSIA), PT PP Property (PPRO), PT. Sumareccon Agung (SMRA) and PT. Waskita Karya (WSKT).

The study conducted the Chow and Hausmann tests in determining an appropriate panel data regression model. The results of the Chow test are shown in Table 3 below:

Table 3

Chow Test Result

Redundant Fixed Effects Tests Equation: Untitled Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	18.460584	(9,27)	0.0000
Cross-section Chi-square	78.704227	9	0.0000

The results in Table 3 show that the chi-square probability was 0.0000, lower than 0.05. The result determined that the appropriate model was the fixed effect model, then further testing should be performed with the Hausman test to determine whether to use the fixed effect or random-effect model. The results of the Hausman test are shown in Table 4 below:

Table 4

Hausman Test Result

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.144621	3	0.0431

The results in Table 4 show that the probability of the chi-square of 0.0431, less than 0.05. Hence, the suitable model to use was the fixed-effect model. Therefore, the Chow and Hausman tests indicated that the fixed effects model is appropriate for the panel data balanced regression analysis. There is no need for further testing with the Lagrange multiplier test.

The fixed-effect model assumed that there are different effects between individuals in this study, and these differences can be accommodated through differences in the intercepts. In order to the model can distinguish one subject from another by using a dummy variable.

In addition, the results of the multicollinearity test show that the correlation coefficient of liquidity (Liq), leverage (Lev), and company growth (CG) is less than 0.8. It can be concluded that there was no multicollinearity in the regression model used. Furthermore, the results of the heteroscedasticity test by using the Glejser test show that the

probability of the liquidity variables (Liq), leverage (Lev), and company growth (CG) was higher than the significant level (0.05). It can be concluded that there was no heteroscedasticity problem in the regression model used.

Panel data regression analysis in this study using the fixed-effect method is shown in Table 5 below:

Table 5

Result Panel Data Regression Test with Fixed Effect Model

Dependent Variable: Y Method: Panel Least Squares Date: 07/14/20 Time: 07:14 Sample: 2016 2019 Periods included: 4 Cross-sections included: 10 Total panel (balanced) observations: 40				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.339141	0.024378	13.91191	0.0000
Liq	-0.017467	0.025541	-0.683887	0.4999
Lev	0.068443	0.033703	2.030750	0.0522
CG	-0.089503	0.027966	-3.200452	0.0035
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.906160	Mean dependent var		0.330343
Adjusted R-squared	0.864453	S.D. dependent var		0.015638
S.E. of regression	0.005757	Akaike info criterion		-7.219757
Sum squared resid	0.000895	Schwarz criterion		-6.670871
Log likelihood	157.3951	Hannan-Quinn criter.		-7.021297
F-statistic	21.72698	Durbin-Watson stat		1.403947
Prob(F-statistic)	0.000000			

BRit = 0.339141 + (-0.017467) Liqit + 0.068443 Lev2it + (-0.089503) CGit + εit

Table 5 describes that the correlation coefficient (R2) was 0.906160, meaning that 90.62% of the bond rating variable (BR) can be explained by the variable liability (Liq), leverage (Lev), and company growth (CG). Meanwhile, 9.38% is explained by other variables from outside the model

Based on Table 5 above, the liquidity variable proxied by the current ratio had a coefficient value of -0.017467, with a probability value of 0.4999 (higher than a significant value of 0.05). It shows that liquidity had an insignificant negative effect on bond ratings for property, real estate, and construction companies issued by PT Pemeringkat Efek Indonesia from 2016 to 2019.

Based on Table 5 above, it can be shown that the leverage variable proxied by the debt to equity ratio had a coefficient value of 0.068443 with a probability value of 0.0522 (higher than a significant value of 0.05). It means that leverage had no significant positive effect on bond ratings in property, real estate companies, and construction that PT Pemeringkat Efek Indonesia issued from 2016–2019.

Based on Table 5 above, it can be seen that the company growth variable proxied by asset growth had a coefficient value of -0.089503 with a probability value of 0.0035 (smaller than the significant value is 0.05). It means that company growth had a significant negative effect on bond ratings for property, real estate, and construction companies listed at PT Pemeringkat Efek Indonesia from 2016–2019.

Discussions

The Influence of Liquidity on Bond Rating

Based on the hypothesis testing (see Table 5), it was discovered that the liquidity variable had an insignificant negative effect on the bond ratings of property, real estate, and construction companies listed at PT Pemeringkat Efek Indonesia for the 2016–2019 period. The results of this study support the results of research conducted by [5, 12, 14, 16, 21, 22]However, the results of this study contrast the statement of Adams, Mike, Burton & Bruce (2000), arguing that a high level of liquidity will indicate the strength of the company's financial condition so that financially it will affect the prediction of bond ratings. It means that the higher the liquidity, the higher the rating of the company's bonds. According to [1], the effect of a negative liquidity ratio is not significant on bond ratings, indicating that PT Pemeringkat Efek Indonesia may overestimate the management of current assets and liabilities based on a cash flow statement, which provides more detailed information.

It happens because of the possibility of companies with high liquidity but is in an inefficient condition. The company carries out a financing scheme through bonds even though the company has large internal funds and tends to choose to use internal funds first compared to financing sources from bond issuance. It causes the value of the company to decrease and affects the bond rating.

The Influence of Leverage on Bond Rating

Based on the hypothesis testing (see Table 5),, the leverage variable had no significant positive effect on the bond ratings of property, real estate, and construction companies listed at PT Pemeringkat Efek Indonesia for the 2016–2019 period. The results of this study support the results of research conducted by [6, 16, 18].

The results of this study contradict the theory of [23], asserting that the greater the company's assets funded by debt, it indicates that the risk of the company not being able to pay off its debts (default risk) becomes higher, and this can affect the rating of bonds. The higher the leverage, the lower the bond rating.

According to [21], not all companies with a high level of leverage will fail to pay because the company may manage the funds it borrows properly so that the company can generate profits. For example, the company uses the debt to add new products or open a new factory so that debt can generate profits..

The Influence Company’s Growth on Bond Rating

Based on the hypothesis testing (see Table 5),, the company's growth variable had a significant negative effect on the bond ratings of property, real estate, and construction companies listed at PT Pemeringkat Efek Indonesia for the 2016–2019 period. The results of this study reinforce the results of research conducted by [4, 10, 13, 15, 21].

The results of this study do not support the theory of Fahmi (2012), which stated that a high growth ratio also indicates that the company's financial condition is getting better, affecting bond ratings. The higher of growth ratio, the higher the bond rating.

According to [1], it is indicated by the factors used by PT Pemeringkat Efek Indonesia in assessing corporate bonds; one of which is industry competition, industry prospects & market share, and does not assess company growth based on the company's investment ability as well as asset management. Increased company growth in the form of assets can occur because the company acquires assets through debt. The

more assets obtained by way of debt will result in the company having large obligations to external parties, and large liabilities can put the company in a state of default risk or the risk of not paying debts on time.

Conclusions

This study aimed to examine the effect of liquidity, leverage, and company growth on bond ratings listed at PT Pemeringkat Efek Indonesia from 2016-2019. The results showed that only company growth had a significant negative effect on bond ratings from the three factors. Meanwhile, the company's liquidity and leverage had no significant effect on bond ratings based on the results of the study as follows:

Further research is expected to be carried out over an extended period and conducted on different companies other than the property, real estate, and construction sectors. However, because this study found contradictory results with the theoretical basis, it is recommended to re-test with a longer research period,

This study also suggests that investors and potential investors in bonds should pay attention to the company's growth in making their decisions. It happens because the company's growth in this study proved to have a significant negative effect on bond ratings.

References

1. Weniasti, A. and B.S. Marsoem, *The Effect of Bonds Rating, Profitability, Leverage, and Firm Size on Yield to Maturity Corporate Bonds.* International Journal of Innovative Science and Research Technology, 2019. **4**(8): p. 286-295.
2. Febriani, I., H.S. Nugraha, and S. Saryadi, *Analysis of Factors Affecting Bond Ratings at Bank Financial Institutions Listed on the Indonesia Stock Exchange.* Jurnal Ilmu Administrasi Bisnis, 2013. **1**(1): p. 181-188.
3. Boguslauskas, V., R. Mileris, and R. Adlytė, *The selection of financial ratios as independent variables for credit risk assessment.* Economics and management, 2011. **16**(4): p. 1032-1040.
4. Lewis, C.C., et al., *Implementing measurement-based care in behavioral health: a review.* JAMA psychiatry, 2019. **76**(3): p. 324-335.DOI: https://doi.org/10.1001/jamapsychiatry.2018.3329.
5. Tandelilin, E., *Fundamentals of Investment Management.* Taken from http://repository. ut. air conditioning. en/3823/1/EKMA5312-M1. pdf, 2010.
6. Rusfika, R. and W. Wahidahwati, *Ability of Accounting and Non-Accounting Factors in Predicting Bond Ratin.* EQUITY (Journal of Economics and Finance), 2017. **1**(1): p. 85-103.DOI: https://doi.org/10.24034/j25485024.y2017.v1.i1.2049.
7. Butt, S., Z.A. Khan, and B. Nafees, *Static Trade-off theory or Pecking order theory which one suits best to the financial sector. Evidence from Pakistan.* European Journal of Business and Management, 2013. **5**(23): p. 131-140.
8. Suharmadi, S. and S. Suripto, *Effect of Liquidity, Productivity and Firm Size on Bond Ranking.* International Journal of Environmental, Sustainability, and Social Science, 2021. **2**(2): p. 79-87.DOI: https://doi.org/10.38142/ijesss.v2i2.77.
9. Munawar, A. *Determinants of Corporates Leverage in Indonesia*. Atlantis Press.
10. Utami, E.S., D. Anitasari, and T. Endhiarto, *Determinants of Corporate Bond Rating in Indonesia: Additional Evidence.* Review Of Management And Entrepreneurship, 2017. **1**(2): p. 27-33.
11. Whited, T.M., *Debt, liquidity constraints, and corporate investment: Evidence from panel data.* The Journal of Finance, 1992. **47**(4): p. 1425-1460.DOI: https://doi.org/10.1111/j.1540-6261.1992.tb04664.x.
12. Chen, L., D.A. Lesmond, and J. Wei, *Corporate yield spreads and bond liquidity.* The Journal of Finance, 2007. **62**(1): p. 119-149.DOI: https://doi.org/10.1111/j.1540-6261.2007.01203.x.
13. Ericsson, J. and O. Renault, *Liquidity and credit risk.* The Journal of Finance, 2006. **61**(5): p. 2219-2250.DOI: https://doi.org/10.1111/j.1540-6261.2006.01056.x.
14. Saputri, D.P.O.S. and I.B.A. Purbawangsa, *The Effect of Leverage, Profitability, Company Growth, and Guarantees on the Rating of Service Sector Bonds on the Indonesia Stock Exchange.* 2016.

15. Sari, N.M.S.K. and I.B. Badjra, *Pengaruh likuiditas, ukuran perusahaan, leverage dan jaminan terhadap peringkat obligasi pada sektor keuangan.* 2016.
16. Dewi, M.S. and E.M. Utami, *The influence of profitability and liquidity to bond rating and the impact on the bond yield.* International Journal of Research in Business and Social Science (2147-4478), 2020. **9**(4): p. 214-219.
17. Melzatia, S., R.F.R. Badaruddin, and Z. Hammat, *Sukuk Rating, the Involvement of Agency Theory.* International Journal of Innovation, Creativity and Change, 2019. **6**(8): p. 139-155.
18. Michaelas, N., F. Chittenden, and P. Poutziouris, *Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data*. Small business economics, 1999. **12**(2): p. 113-130.DOI: https://doi.org/10.1023/A:1008010724051.
19. Holthausen, R.W. and R.W. Leftwich, *The effect of bond rating changes on common stock prices.* Journal of Financial Economics, 1986. **17**(1): p. 57-89.DOI: https://doi.org/10.1016/0304-405X(86)90006-1.
20. Crabtree, A.D. and J.J. Maher, *Earnings predictability, bond ratings, and bond yields.* Review of Quantitative Finance and Accounting, 2005. **25**(3): p. 233-253.DOI: https://doi.org/10.1007/s11156-005-4766-2.
21. Huang, B., et al., *The impact of bond rating downgrades on common stock prices in China.* Economic and Political Studies, 2018. **6**(2): p. 209-220.DOI: https://doi.org/10.1080/20954816.2018.1463602.
22. Lal, J. and M. Mitra, *Effect of bond rating on share prices: A study of select Indian companies.* Vision, 2011. **15**(3): p. 231-238.DOI: https://doi.org/10.1177/097226291101500303.
23. Satoto, S.H., *Analisis Faktor-faktor yang Mempengaruhi Bond Rating [English: An Analysis of Factors that Influence Bond Rating]*. Jurnal Karisma, 2011(2): p. 104-115.