

How liquidity, profitability, and leverage ratios influence financial distress: A study on Indonesian mining firms

Arifuddin* ; Erwin Hadisantoso; Ika Mayasari; Annisa Fitrah Yulianti

Department of Accounting, Faculty of Economics and Business, Universitas Halu Oleo, Indonesia

**To whom correspondence should be addressed: desi_sia@yahoo.co.id*

DOI: 10.22437/ppd.v11i3.27470	Received: 25.07.2023	Revised: 23.08.2023	Accepted: 28.08.2023	Published: 30.08.2023
----------------------------------	-------------------------	------------------------	-------------------------	--------------------------

Abstract

This study investigates the impact of liquidity, profitability, and leverage ratios on financial distress in mining companies listed on the Indonesia Stock Exchange. It posits that higher liquidity in a company correlates with reduced financial distress. The research encompasses eight mining companies observed from 2016 to 2020. Purposive sampling was employed to select a sample of eight companies meeting specific criteria. The study utilizes multiple linear regression analysis as its analytical approach. The findings, significant at the 5% level, reveal that liquidity, profitability, and leverage ratios collectively exert a substantial influence on financial distress, accounting for 85.3% of the variance in the dependent variable. Specifically, the study concludes that: 1) Liquidity has a significant negative effect on financial distress, 2) Profitability also demonstrates a significant negative impact on financial distress, and 3) Leverage exhibits a significant positive effect on financial distress.

Keywords: *Financial distress, Financial ratio, Leverage, Liquidity, Profitability.*

JEL Classification: G32, G33, Q31

INTRODUCTION

In the dynamic and competitive global market, companies must innovate and adapt continuously to maintain their viability and profitability. The capacity of a company to produce market-competitive products is fundamental to its competitiveness. A failure in this regard can lead to financial losses and, in extreme cases, severe financial distress. Financial distress manifests in various forms, from short-term liquidity challenges to insolvency, where liabilities exceed assets (Bushashe, 2023). Plat & Platt (2002) defines financial distress as a condition in which the company's finances are in trouble, unhealthy situation, or circumstances. The company is experiencing difficulties finances in meeting its debts. The repercussions of such financial challenges have been particularly pronounced in recent years, especially in the volatile Indonesian economy. Despite its critical role in the national economy, the mining sector has not been exempt from these challenges.

As noted by Jock O'Callaghan, PwC's Global Mining leader in 2015 (Soda, 2016), the mining sector faced significant challenges, including a 25% decline in commodity prices from the previous year. This decline pushed numerous mining companies towards financial distress, leading some to the verge of closure and necessitating the

disposal of assets. To mitigate these financial challenges, companies have adopted various tools and techniques to monitor and manage their financial health. Among these, the analysis of financial ratios has proven to be particularly valuable.

Financial statements are crucial tools, providing a comprehensive view of a company's financial status and operational performance. These documents are invaluable to stakeholders, including internal parties like management and owners, and external entities such as investors, creditors, and regulatory bodies. They offer insights into the financial health of a company.

Key metrics within these financial statements, such as liquidity, profitability, and leverage ratios, are essential in evaluating a company's financial stability. Liquidity ratios, calculated by dividing current assets by current liabilities, assess a company's ability to meet short-term obligations. Profitability ratios, which involve dividing after-tax profit by total assets, offer insights into the company's financial performance. Leverage ratios, calculated by dividing total liabilities by total assets, indicate the extent of a company's reliance on debt financing. Additionally, tools like the Z-score are employed to evaluate the likelihood of financial distress.

This study aims to provide a comprehensive analysis of these financial aspects, offering deeper insights into the financial health of companies and their implications for sustaining business operations. Understanding these critical ratios enables stakeholders to make informed decisions, enhancing company performance and ensuring financial stability in an ever-changing market.

Table 1 presents the net profit of various companies in the coal mining sub-sector over five years (2016-2020).

Table 1. Net profit report of coal mining sub-sector companies (2016-2020)

Companies Code	Year				
	2016	2017	2018	2019	2020
ADRO	340,686	536,438	477,541	435,000	158,500
ARII	- 25,482	-16,717	-28,258	-5.537	-16,405
BSSR	27,421,577	82,816,929	69,063,191	30,467,639	30,520,269
EARTH	120,255,710	242,746,183	158,218,349	9,470,482	-337,350,969
BYAN	18,015,433	338,017,199	524,309,273	234.211277	344,459,870
DOID	37,089,185	46,747,301	75,643,300	20,480,591	- 24362.484
GEMS	34,988,248	120,106,040	100,548,578	66,765.857	95,856,553
GTBO	- 5,200,467	33,438	2,322,380	4,035,422	639,643
HRUM	29,391,728	55,748,0001	40,205.422	20,122,589	60,292,315
KKGI	10,324,405	13,439,975	475,600	5,414,352	- 8,668,015
MBAP	27,113,735	58,635,700	50,310,702	35,287,557	27,467,486
MYOH	21,258,853	12,114,486	29,539,410	26,098,429	22,533,662
TOBA	14,585,772	41,369,891	68,089,796	43,745,700	35,803,866

Source: Indonesia Stock Exchange (2022)

An analysis of Table 1 reveals a significant upward trend in net profits for the mining companies over the past four years. However, 2020 marked a notable shift in the industry's performance. Several companies experienced a drastic decline in net profit, with some incurring losses. This downturn in 2020 may be attributed to various external factors, including changes in commodity prices, the impact of the COVID-19 pandemic, and other economic influences.

During this period, specific events and factors significantly impacted the financial performance of the mining industry. For example, the profit for the year of several companies listed on the Indonesia Stock Exchange in the coal mining sector decreased sharply. This decline in net profit can be attributed to unfavorable global and sectoral

economic conditions, underscoring the mining industry's susceptibility to external economic factors.

Moreover, financial distress is a critical concern in this context. Various methods are used to predict financial difficulty that occurs within an organization. One of the main ones is using ratio analysis based on financial data provided in the company's balance sheet. Studies conducted by Altman (1968) are preliminary studies that support using a ratio analysis of exchange rates as a tool for estimating the financial health of businesses. This study investigates the relationship between financial distress and key financial indicators, including liquidity, profitability, and leverage. Liquidity, as defined by Prastowo (2015), refers to a company's ability to meet its short-term debt obligations. As Sudana (2015) described, profitability measures a company's efficiency in generating profits from its resources. The leverage ratio, another predictor of financial distress, will also be examined. This research aims to determine the individual and combined effects of liquidity, profitability, and leverage on financial distress, particularly in the context of the mining industry's challenges during this period.

METHODS

This study examines the influence of liquidity, profitability, and leverage ratios as independent variables on financial distress, the dependent variable, in mining companies listed on the Indonesia Stock Exchange (IDX) during the 2016-2020 period. The population for this study comprises all mining companies listed on the IDX within this timeframe, totaling 41 companies.

The sample selection was conducted using purposive and simple random sampling methods. This approach resulted in a sample of 8 mining companies, yielding 40 valid observations that met the established criteria. The criteria for sample selection were as follows: (1) continuous listing on the IDX during the study period, (2) provision of complete financial reports throughout the study period, and (3) preparation of financial statements in Indonesian Rupiah (IDR). The study utilized secondary data from the mining companies obtained from the IDX website (www.idx.com).

The study used Multiple Linear Regression Analysis to examine the data. The following equation represents the relationship among the variables:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y represents financial distress,

X1 represents liquidity,

X2 represents profitability,

X3 represents leverage,

RESULTS AND DISCUSSION

Descriptive analysis

The descriptive analysis in this study provides an overview of the development of liquidity (CR), profitability (ROA), and leverage (DAR) in relation to financial distress in mining companies listed on the Indonesia Stock Exchange. Based on Table 2, the Current Ratio (CR) has a mean of 2.3950 and a standard deviation of 0.55696 across 40 observations. The highest CR was recorded by PT Harum Energy (HRUM) in 2020, and the lowest by PT Bayan Resources, Tbk (BYAN) in 2018. The Rate of Return on Assets (ROA) has a mean of 13.1843 and a standard deviation of 10.95856, with 40 observations. The highest ROA was by Bayan Resources, Tbk (BYAN) in 2018, and the lowest was by PT Cita Mineral Investindo Tbk (CITA) in 2016. The Debt to Total Asset Ratio (DAR) has a mean of 43.9930 and a standard deviation 20.13399. The highest

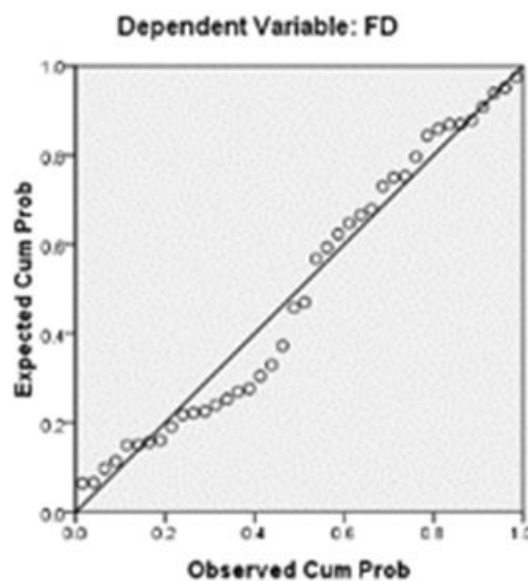
DAR was by PT Tambang Batubara Bukit Asam (PTBA) in 2020, and the lowest was by PT Harum Energy (HRUM) in 2020. The Financial Distress (FD) variable has a mean of 1.8617 and a standard deviation of 0.75366.

Table 2. Descriptive statistical test

	N	Mean	Std. Deviation
CR	40	2.3950	0.55696
ROA	40	13.1843	10.95856
DAR	40	43.9930	20.13399
FD	40	1.8617	0.75366
Valid N (listwise)	40		

Classical assumption tests

The objective of the data normality test is to ascertain whether the data distribution within the regression model adheres to a normal distribution.



Graph 1. Normal PP plot of regression standardized residual-normal

The analysis of the profitability graph in Figure 1 suggests that the data distribution is normal, as evidenced by the alignment of the residual data distribution with the diagonal line (normal line). Additionally, the Kolmogorov-Smirnov (KS) test was employed to validate the research data's normality quantitatively. According to the KS test, data is normally distributed if the Asymptotic Significance (Asymp. Sig.) value in a two-tailed test exceeds 0.05. Conversely, a value less than 0.05 indicates a deviation from normal distribution.

Multicollinearity in a regression model refers to a situation with a perfect or near-perfect correlation among the independent variables.

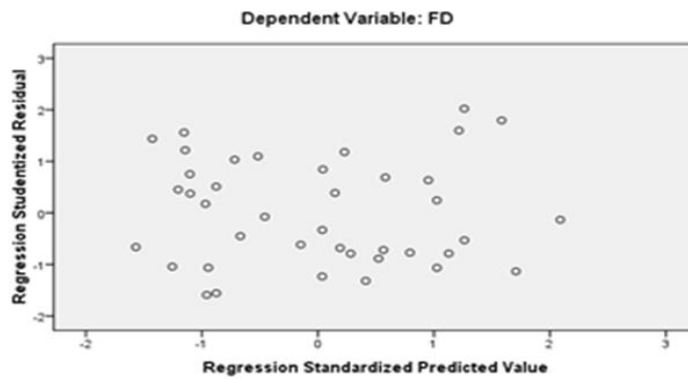
Table 3. Multicollinearity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	CR	.419	2,386
	ROA	.730	1.370
	DAR	.372	2,688

a. *Dependent Variable: FD*

As shown in Table 3., the Variance Inflation Factor (VIF) values indicate that multicollinearity is absent in the model. This conclusion is drawn from the fact that the tolerance values for all independent variables are greater than 0.1, and the VIF values are less than 10.

The heteroscedasticity test examines whether there is a variance inequality in the residuals across different observations within the regression model.



Graph 2. Graph of heteroscedasticity test scatterplots

The scatterplot illustrates that the data points are randomly dispersed, both above and below the zero point on the Y-axis and to the right and left of the zero point on the X-axis, without forming any discernible pattern. Based on this observation, it is concluded that heteroscedasticity is not present in the model.

Autocorrelation refers to the correlation between time-sequenced observations in a regression model. In simpler terms, it implies that the previous year's observation error may influence the error associated with the current year's observation.

This study calculated the Durbin-Watson (DW) statistic to be 1.867. This value is assessed against the Durbin-Watson table values, determined at a 5% significance level, with a sample size of 40 and three independent variables. The critical values from the Durbin-Watson table $dL = 1.338$ and $dU = 1.659$.

Given that the calculated DW value (1.867) is greater than the upper limit ($dU = 1.659$) and less than $4 - dU$ (which is $4 - 1.659 = 2.341$), the condition $dU < DW < 4 - dU$ is satisfied, specifically $1.659 < 1.867 < 2.341$. Therefore, it can be concluded that autocorrelation is not present in the model.

Multiple linear regression analysis

The analysis, as presented in Table 4, reveals that the F-statistic for the variables Liquidity (Current Ratio, X1), Profitability (Rate of Return on Assets, X2), and Leverage (Debt to Total Asset Ratio, X3) in relation to Financial Distress (Y) is 76.378, which is greater than the critical F-value of 2.87. With a significance level of 0.000, which is less than the threshold of 0.05, the null hypothesis (H0) is rejected, and the alternative hypothesis (Ha) is accepted. This indicates that Liquidity, Profitability, and Leverage have a significant simultaneous impact on Financial Distress.

Table 4. Simultaneous Testing (F Test)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	716603.373	3	238867,791	76,378	.000a
	Residual	11235.280	36	312,091		
	Total	727838.653	39			

Predictors: (Constant), DAR, ROA, CR; Dependent Variable: FD

The coefficient of determination, as shown in Table 5, assesses the extent of the relationship between the independent variables (liquidity, profitability, and leverage)

and the dependent variable (financial distress). The R-Square value of 0.957 indicates that these independent variables can explain 95.7% of the variation in financial distress. The remaining 4.3% is attributed to other factors not included in this study.

Table 5. Coefficient of determination test (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992a	.957	.958	17.66610

Predictors: (Constant), DAR, ROA, CR; Dependent Variable: FD

The t-test was employed to examine the regression coefficients of each independent variable with the dependent variable, as detailed in Table 6.

Table 6. Partial test (t-test)

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	21,733	17.008		1,278	.210
	CR	1.021	.203	.260	2.370	.032
	ROA	4.052	.319	.306	12,705	.000
	DAR	5.926	.229	.673	25,909	.000

a. Dependent Variable: FD

From Table 6, the results of the t-test are as follows:

1. Liquidity (CR): With a t-statistic of 2.370 and a significance level of 0.032, it is indicated that liquidity has a significant positive impact on Financial Distress.
2. Profitability (ROA): Exhibiting a t-statistic of 12.705 and a significance level of 0.00, it is evident that profitability significantly and positively affects Financial Distress.
3. Leverage (DAR): The t-statistic of 25.909 and a significance level of 0.00 confirm that Leverage significantly and positively influences Financial Distress.

Discussion

Effect of liquidity on financial distress

Liquidity significantly and positively influences financial distress. Represented by the current ratio, liquidity reflects a company's capacity to meet short-term obligations using its current assets (Titto, 2013). A higher current ratio implies a greater volume of current assets, enhancing the company's ability to cover current liabilities swiftly. This, in turn, reduces the potential for financial distress. Liquidity indicates a company's capability to fulfill short-term financial obligations (Sartono, 2001) timely. This study corroborates the findings of Subramanyam & Wild (2011), demonstrating liquidity as a critical measure of a company's ability to meet short-term obligations. Kasmir (2010) describes that the liquidity ratio indicates a company's capability to fulfill short-term debts. However, this study's findings contrast with previous research by Kartika & Hasanudin (2019), Nurhamidah & Kosasih (2021), Sutra & Mais (2019), Setiyawan & Musdholifah (2020), Asmarani & Purbawati (2020), Carolina et al. (2017), Liana & Sutrisno (2014), Hapsari (2012), Fitriyah & Haryati (2013), which state that the liquidity ratio, using the current ratio indicator, does not influence financial distress.

Effect of profitability on financial distress

Profitability significantly and positively influences financial distress prediction. As a ratio, profitability measures a company's ability to generate profits relative to a certain level of sales, assets, and share capital (Indarti & Sapari, 2020). Derived from

sales and investment income, profitability assesses a company's efficiency in using assets to generate profit. This study finds a correlation between higher profitability ratios and a reduced likelihood of financial distress, suggesting effective overall management. These findings support the traditional financial theory (Trade-off Theory), positing profitability as a key factor in achieving an optimal balance in a firm's capital structure (Said, 2022; Yakubu et al. 2021). This study is in alignment with the research conducted by Yanti and Darmayanti (2019), Muflihah (2017), Saleem et al. (2020), Kalbuana et al. (2022), and Ayu et al. (2017), which collectively demonstrate a positive influence of profitability on financial distress prediction.

The effect of leverage on financial distress

Leverage significantly and positively influences financial distress prediction. As Rahma (2020) defined, the leverage ratio determines how much a company funds its assets and business activities through debt. Representing the ratio of a company's debt to its equity, leverage indicates its capacity to meet long-term obligations. The study reveals that significant interest payments from high leverage or substantial debt increase financial distress. This finding aligns with the Trade-off Theory, which suggests that companies must balance debt and equity to mitigate financial distress risks. The study's results are consistent with Satria (2020) and are further supported by Putri & Erinos (2020), highlighting the risks associated with high leverage and its impact on financial distress. Conversely, the study's findings differ from those of Septiani et al. (2021), Nugraha & Nursito (2021), Faldiansyah et al. (2020), Saputra & Salim (2020), Dirman (2020), Atina & Rahmi (2019).

Effect of liquidity, profitability, and leverage on financial distress

The simultaneous analysis of liquidity, profitability, and leverage as independent variables suggests a collective impact on financial distress. The research implications indicate that high liquidity is essential for a company's financial stability, as greater liquidity typically equates to a reduced risk of financial distress. A company is deemed liquid if it can efficiently meet its short-term debts. Thus, a high liquidity value is crucial for avoiding financial distress, particularly in the mining sector, where enhancing liquidity is imperative.

Profitability reflects a company's capability to utilize its assets effectively. Optimal asset utilization generates substantial profits, while inefficient use leads to suboptimal earnings. A continuous decline in profitability, particularly into negative figures, escalates financial distress. Therefore, it is vital for companies, especially in the mining sector, to maintain or increase their profitability to avoid financial distress.

Leverage measures a company's ability to fulfill its long-term obligations. This ratio compares the company's debt to its equity. A higher leverage ratio, indicating debt exceeding equity, increases the risk of financial distress due to substantial debt and interest payments. However, maintaining a low leverage ratio is essential for averting financial distress. High leverage does not necessarily pose a problem in the mining sector, as it does not significantly impact financial distress.

These findings demonstrate that the independent variables of liquidity, profitability, and leverage collectively explain the dependent variable of financial distress. Therefore, it is concluded that these factors simultaneously influence financial distress in the context of Indonesian mining firms.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The following conclusions are drawn from the research and discussions: The study demonstrates that liquidity, profitability, and leverage collectively impact

financial distress in mining companies listed on the Indonesia Stock Exchange during the 2016-2020 period.

As measured by the Current Ratio, liquidity significantly and positively affects financial distress in these mining companies. Similarly, profitability, indicated by the Rate of Return on Assets, and leverage, represented by the Debt to Total Asset Ratio, significantly and positively impact financial distress for the same period.

These findings have substantial implications for the Indonesian mining industry. Enhancements in liquidity, profitability, and leverage management can be crucial in mitigating the risk of financial challenges that mining companies may face. This contributes to maintaining financial stability and reducing the risk of bankruptcy. Furthermore, a deeper understanding of how these factors interact with financial distress provides valuable insights for decision-makers in the industry, laying the groundwork for more effective financial management strategies within mining companies. Consequently, these insights are invaluable for mining companies, regulators, and other stakeholders, improving financial performance and stability in Indonesia's mining sector.

Recommendations

The findings suggest that mining companies listed on the Indonesian Stock Exchange should prioritize effective liquidity management, operational efficiency, and cautious leverage use. Collaboration with regulators is key to identifying and mitigating potential risks. Stakeholders, including regulatory bodies, are advised to enhance their monitoring of these companies, focusing on liquidity, profitability, and leverage. Education in financial risk management, improved reporting standards, and cooperation with various stakeholders are crucial. These measures aim to create a stable and sustainable business environment for the mining sector.

For future research, it is recommended to broaden the scope of the study by including additional years and incorporating other variables that may influence financial distress, such as company size, managerial ownership, audit committee effectiveness, and alternative proxies for financial distress conditions.

REFERENCES

- Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and The Prediction of Corporate Bankruptcy. *The Journal of Finance*, 23 (4), 589-609.
- Asmarani, S. A., & Purbawati, D. (2020). Analisis Pengaruh Likuiditas, Leverage dan Profitabilitas Terhadap Financial Distress (Studi Kasus Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar di BEI Pada Periode Tahun 2014-2018). *Jurnal Administrasi Bisnis*, 9(3), 369-379.
- Atina, & Rahmi, E. (2019). Analisis Rasio Keuangan dan Ukuran Perusahaan Terhadap Kondisi Financial Distress Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2015-2017. *EcoGen*, 2(3), 387–398.
- Ayu, A. S., Handayani, S. R., & Topowijono. (2017). Pengaruh Likuiditas, Leverage, Profitabilitas, Dan Ukuran Perusahaan Terhadap Financial Distress (Studi pada Perusahaan Manufaktur Sektor Industri Dasar dan Kimia yang Terdaftar di Bursa Efek Indonesia tahun 2012-2015). *Jurnal Administrasi Bisnis (JAB)*, 43(1).
- Bushashe, M.A. (2023) Determinants of private banks performance in Ethiopia: A partial least square structural equation model analysis (PLS-SEM). *Cogent Business & Management*, 10(1).
- Carolina, V., Marpaung, E. I., & Derry Pratama. (2017). Analisis Rasio Keuangan untuk Memprediksi Kondisi Financial Distress (Studi Empiris pada Perusahaan

- Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2014-2015). *Jurnal Akuntansi Maranatha*, 9(2), 137–145.
- Dirman, A. (2020). Financial Distress: The Impacts Of Profitability, Liquidity, Leverage, Firm Size, And Free Cash Flow. *International Journal of Business, Economics and Law*, 22(1), 17–25.
- Faldiansyah, A. K., Arrokhman, D. B. K., & Shobri, N. (2020). Analisis Pengaruh Leverage, Ukuran Perusahaan, Dan Arus Kas Terhadap Financial Distress. *Jurnal Bisnis Net*, 3(2), 90–102.
- Fitriyah, I. & Hariyati. (2013). Pengaruh Rasio Keuangan Terhadap Financial Distress pada Perusahaan Properti dan Real Estate. *Jurnal Ilmu Manajemen*, 1(3), 760-773
- Hapsari, E.I. (2012). Kekuatan Rasio Keuangan dalam Memprediksi Kondisi Financial Distress Perusahaan Manufaktur di BEI. *Jurnal Dinamika Manajemen (JDM)*. 3(2), 101-109.
- Indarti, P.L., & Sapari. (2020). Pengaruh Profitabilitas, Likuiditas Dan Leverage Terhadap Financial Distress. *Jurnal Ilmu Dan Riset Akuntansi*, 9(8), 1–14.
- Kalbuana, N., Taqi, M., Uzliawati, L. & Ramdhani, D. (2022) The Effect of Profitability, Board Size, Woman on Boards, and Political Connection on Financial Distress Conditions. *Cogent Business & Management*, 9(1)
- Kartika, R., & Hasanudin, H. (2019). Analisis Pengaruh Likuiditas, Leverage, Aktivitas, Dan Profitabilitas Terhadap Financial Distress Pada Perusahaan Terbuka Sektor Infrastruktur, Utilitas, Dan Transportasi Periode 2011-2015. *Jurnal Ilmu Manajemen*, 15(1), 1–16.
- Kasmir. (2010). *Analisis Laporan Keuangan*. Jakarta: Rajawali Press
- Liana, D. & Sutrisno, S. (2014). Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan Manufaktur. *Jurnal Studi Manajemen dan Bisnis*, 1(2), 52-62.
- Muflihah, I.Z. (2017). Analisis Financial Distress Perusahaan Manufaktur Di Indonesia Dengan Regresi Logistik. *Majalah Ekonomi*, 22(2), 254–269.
- Nurhamidah, C., & Kosasih, K. (2021). Pengaruh Likuiditas, Leverage, Dan Profitabilitas Terhadap Financial Distress. *Jurnal Riset Akuntansi Aksioma*, 20(2), 81–90.
- Nugraha, D. A., & Nursito. (2021). Pengaruh Current Ratio, Debt To Equity Ratio, Dan Return On Equity Terhadap Financial Distress. *Costing: Journal of Economic, Business and Accounting*, 4(2), 591–600.
- Platt, H.D. & Platt, MB. (2002). Predicting Corporate Financial Distress: Reflections on Cchoice-Based Sample Bias. *Journal of economics & finance*, 26(2), 184-199.
- Prastowo, D. (2015). *Analisis Laporan Keuangan*. Yogyakarta: Unit Penerbit dan Percetakan Sekolah Tinggi Ilmu Manajemen YKPN.
- Putri, D.S. & Erinos, N.R. (2020). Pengaruh Rasio Keuangan, Ukuran Perusahaan dan Biaya Agensi terhadap Financial Distress. *Jurnal Eksplorasi Akuntansi*, 2(1), 2083-2098.
- Said, H.B. (2022). Determinants of capital structure of French SBF 120 listed companies: A comparison between trade-off theory and pecking order theory. *Corporate Ownership & Control*, 19(4), 55–65. <https://doi.org/10.22495/cocv19i4art5>
- Sartono, A. (2001). *Manajemen Keuangan Teori dan Aplikasi*, Edisi Keempat. Yogyakarta: BPF.
- Satria, V.F. (2020). *Pengaruh Profitabilitas, Likuiditas, Dan Leverage Terhadap Financial Distress Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia*. Available at: <http://repository.stiemahardhika.ac.id/1690/>. (Accessed March 2021).

- Septiani, N.M.I., & Dana, I.M. (2019). Pengaruh Likuiditas, Leverage, Dan Kepemilikan Institusional Terhadap Financial Distress Pada Perusahaan Property dan Real Estate. *E-Jurnal Manajemen*, 8(5), 3110–3137.
- Soda, E. (2016). PwC : Tahun 2015 Sebagai Tahun Terburuk Bagi Sektor Pertambangan. Available at: <https://www.tambang.co.id/pwc-tahun-2015-sebagai-tahun-terburuk-bagi-sektor-pertambangan>. (Accessed March 2021).
- Sudana, I. M. (2015). *Manajemen Keuangan Perusahaan Teori dan Praktik*. Jakarta: Erlangga.
- Setiyawan, E., & Musdholifah. (2020). Pengaruh Struktur Kepemilikan, Profitabilitas, Likuiditas, Leverage Dan Nilai Tukar Terhadap Financial Distress Pada Perusahaan Yang Terdaftar di IDX Tahun 2016-2017. *Jurnal Ilmu Manajemen (JIM)*, 8(1), 51–66.
- Rahma, A. (2020). Analisis Pengaruh Profitabilitas, Leverage, Dan Likuiditas Terhadap Financial Distress. *Jurnal Akuntansi Berkelanjutan Indonesia*, 3(3), 253-266.
- Saleem, R., Hussain, A., & Ibraheem, R. (2020). Banking Industry Specific Determinants of Financial Distress: Empirical Evidence from ASEAN Countries. *IRASD Journal of Economics*, 2(2), 113–123. <https://doi.org/10.52131/joe.2020.0202.0020>
- Saputra, A. J., & Salim, S. (2020). Pengaruh Profitabilitas, Leverage, Firm Size, Dan Sales Growth Terhadap Financial Distress. *Jurnal Multiparadigma Akuntansi Tarumanagara*, 2(1), 262-269.
- Subramanyam, S. & Jhon J.W. (2011). *Analisis Laporan Keuangan*. Edisi 10. Jakarta: Salemba Empat
- Sutra, F.M., & Mais, R.G. (2019). Faktor-Faktor Yang Mempengaruhi Financial Distress Dengan Pendekatan Altman Z-Score Pada Perusahaan Pertambangan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2015-2017. *Jurnal Akuntansi dan Manajemen*, 16(1), 35–72.
- Titto, V. (2013). Impact of working capital management on firm's profitability & liquidity: An empirical study of Coal India Ltd (CIL). *The Journal of Indian Management & Strategy*, 18(4), 57-64
- Yakubu, I.N., Kapusuzoglu, A. & Ceylan, N.B. (2021). Trade-Off Theory Versus Pecking Order Theory: The Determinants of Capital Structure Decisions for the Ghanaian Listed Firms, in Dinçer, H. and Yüksel, S. (Ed.) *Strategic Outlook in Business and Finance Innovation: Multidimensional Policies for Emerging Economies*, Emerald Publishing Limited, Bingley, pp. 111-122. <https://doi.org/10.1108/978-1-80043-444-820211011>
- Yanti, I.G.A.D.N., & Ni P.A. (2019). Darmayanti. Pengaruh Profitabilitas, Ukuran Perusahaan, Struktur Modal, dan Likuiditas terhadap Nilai Perusahaan Makanan dan Minuman. *E-Jurnal Manajemen*, 8(4), 2297-2324.