



**THE EFFECT OF BUSINESS RISK, PROFITABILITY, AND
LIQUIDITY ON CAPITAL STRUCTURE IN MINING COMPANIES IN
THE COAL SUB-SECTOR LISTED ON THE INDONESIA STOCK
EXCHANGE IN 2019-2022**

Hari Frasetio 1*, Edyanus Herman Halim², Fitri³

¹²³ Faculty of Economics and Business Riau University Pekanbaru, Indonesia

[*hari.frasetio2084@student.unri.ac.id](mailto:hari.frasetio2084@student.unri.ac.id)

ARTICLE INFO	ABSTRACT
<p>Accepted: 27 July 2024 Revised: 28 July 2024 Approved: 01 October 2024</p> <p>Keywords: Degree of Operating Leverage (DOL), Return on Equity (ROE), Current Ratio (CR), Debt to Equity Ratio (DER).</p>	<p>This study aims to determine the influence of business risk, profitability, and liquidity on capital structure in Mining Sector companies in the Coal sub-sector listed on the Indonesia Stock Exchange in 2019-2022. The potential implications of this research could significantly impact the strategies and decisions of these companies. The population in this study is 29 companies in the mining sector of the coal sub-sector listed on the Indonesia Stock Exchange from 2019 to 2022. The sample selection was carried out based on the thorough and rigorous purposive sampling method, ensuring the validity of the results. So, the sample in this study is made up of 22 companies. The study employs the use of multiple linear regression analysis, a scientifically rigorous method, to analyze the relationships between variables. The results show that the degree of operating leverage does not significantly affect the Debt to Equity Ratio. Return On Equity significantly negatively impacts the debt-to-equity ratio. The Current Ratio significantly negatively affects the debt-equity ratio.</p>

INTRODUCTION

The mining sector is one of the pillars of a country's economic development because it provides energy resources that are indispensable for the growth of a country's economy. The rich potential of natural resources will foster the openness of companies to explore mining these resources.

Coal is one of the mines that has the potential to be further utilized by the government in addition to oil and gas. Based on calculations, Indonesia's coal reserves are estimated at 42.6 billion tons and still have the potential to be produced in the next 80 years. Coal production in Indonesia began to increase in 1993 and is expected to increase in line with the decreasing petroleum production in Indonesia. Coal is currently more widely used as an alternative fuel and fuel for power plants. Coal also benefits several sectors, including household, industrial, and transportation.

Coal has become Indonesia's mainstay commodity, generating a considerable income for the country. With the wealth of natural resources owned by Indonesia, one of which is coal, Indonesia has always occupied a position as one of the largest coal-producing countries in the world. Coal is one of the mining commodities with promising prospects in the international market and makes a considerable contribution to the Indonesian economy (Maulidina, 2021). The following is coal export data by leading destination countries in 2017-2021.

Table 1 Coal Exports by Main Destination Country 2017-2021 (Net Weight: 000 Tons)

Destination Country	2017	2018	2019	2020	2021
India	98.553,5	110.378,2	121.692,5	98.243,3	70.779,2
Tiongkok	48,167,4	48.135,7	65.670,5	62.492,5	108.487,2
Jepang	31.421,4	28.722,9	28.436,4	26.965,1	22.978,4
Korea Selatan	38.075,1	37.150,9	29.550,0	24.831,9	21.011,2
Taiwan	18.187,7	17.935,1	19.061,2	17.603,0	16.291,6
Malaysia	21.189,9	22.045,4	25.323,5	26.706,8	25.497,2
Philipina	18.977,9	22.595,0	27.450,8	28.060,9	30.085,8
Thailand	16.374,7	19.964,1	17.600,4	16.624,8	15.150,7
Hongkong	8.449,8	9.028,4	7.876,8	3.863,5	5.269,9
Spanyol	3.232,2	2.463,9	684,6	0,0	77,2
Lainnya	16.468,8	24.704,7	31.589,1	36.155,8	29.824,8
Total	319.098,4	343.124,3	374.935,8	341.547,6	345.453,2

Source: International_Energy_Agency (2023)

The data above shows that it fluctuates every year in the range of 2017-2021. Indonesia's coal has been included as the mainstay commodity in Indonesia's export activities. This proliferates the growth of coal mining companies in Indonesia. Coal mining by manufacturing companies continues to experience development from year to year. In general, mining companies aim to profit from mining activities that are eventually sold to customers and earn profits. The economic purpose of establishing a company is related to the company's efforts in gaining customers, developing products, and creating profits.

In general, the public at large measures a company's success based on the company's ability, as seen from management's performance, to generate future profits (Rokhmawati, 2016, Rokhmawati, 2020). According to Rokhmawati (2016), whether a company can be measured by financial or non-financial information. According to (Rokhmawati, 2016), financial ratio analysis connects various estimates in financial statements as financial ratios. The results of this ratio calculation can be used to measure the company's financial performance for a certain period. They can be used as a benchmark to assess the company's health level during the financial period. Financial performance assessment can be analyzed using ratio analysis that focuses on factors such as capital, quality of

productive assets, management, profitability, business risk, solvency, activity, profitability, and liquidity (Ridoan et al., 2023).

The company's capital structure is essential to finance the company's operational activities. According to Hamidah (Rokhmawati, 2016) "capital structure is a permanent expenditure that reflects the consideration between long-term obligations and own capital,"—according to Alipour et al. (2015), factors that affect the capital structure include company size, asset structure, profitability, liquidity, and company growth.

Business risk refers to the inherent risks a company faces in its daily operations, regardless of its financial structure or debt levels. (Brigham and Houston, 2013). According to Ross et al. (2014). Business risk refers to a company's uncertainties in maintaining a competitive position and adapting to market changes. This risk involves the possibility that external and internal factors, such as market competition, regulatory changes, technological advancements, and economic conditions, could negatively impact the company's revenue and growth prospects. Business risk is independent of financial risk and pertains to the company's operations, products, or services and its ability to adapt to market dynamics.

In addition to business risks, profitability can affect the capital structure. Profitability shows the ability of a company to earn profits and measures the level of efficiency and operational effectiveness in using its assets. Profitability measures a company's ability to generate income relative to its revenue, assets, equity, and other resources over time. It reflects how effectively a company utilizes its capital, sales activities, operational efficiency, workforce, and distribution network to achieve sustained profit margins. Profitability ratios such as net profit margin, return on assets, and return on equity are commonly used to assess this ability (Cho and Lee, 2019).

Another factor that can affect the capital structure in addition to business risk and profitability, namely liquidity, is one of the ratios that affect the capital structure. Liquidity is the ability of a company to fulfill its financial obligations immediately or its ability to fulfill its financial obligations at the time of being billed. A company with high liquidity means it has enough internal financing to pay its obligations so that the capital structure is reduced (Rokhmawati, 2019).

The latest research by (Deswendra, 2020) on the influence of company size, business risk, and profitability on capital structure in manufacturing companies in the consumer goods industry sector found on the IDX states that partially business risk and profitability have a positive effect on the capital structure, while simultaneously company size, business risk, and profitability have a positive effect on the capital structure.

According to Bhawa (2015), regarding the influence of company size, liquidity, profitability, and business risk on the capital structure of pharmaceutical companies on the IDX in 2009-2012, partial profitability has a negative and insignificant effect on the capital structure. Business risk has a positive and insignificant effect on the capital structure, while simultaneously, company size, liquidity, profitability, and business risk have a negative effect on capital structure. Then, according to Rifqi (2019) about the influence of profitability, liquidity, solvency, nondebt tax shield, and asset structure on capital structure states that

partially profitability has a negative effect on capital structure, solvency has a positive effect on capital structure, while simultaneously profitability, liquidity, solvency, nondebt tax shield, and asset structure have a positive effect on capital structure.

Based on the background of the above problems, the researcher conducted a study entitled "The Influence of Business Risk, Profitability and Liquidity on Capital Structure in Mining Companies in the Coal Subsector Listed on the Indonesia Stock Exchange for the 2019-2022 Period".

LITERATURE REVIEW

Packing Order Theory

Packing Order Theory is a sequence of funding sources from internal (retained earnings) and external (new equity issuance). Pecking order theory states that companies with fast growth rates must rely more on external capital. Thus, companies with high growth rates tend to use debt more (Rokhmawati, 2019). The internal funds come from retained earnings from the company's operational activities. Internal funding has advantages; it does not require the company's financial condition. This theory originated from asymmetric information between external shareholders and company insiders who have better information about the actual condition of the company and market imperfections that affect the supply and funding side, such as the availability and different costs of various funding sources (Rifqi, 2019).

Trade-off Theory

The Trade Off Theory was first introduced in 1963 by Modigliani and Miller in an article in the American Economic Review 53 (1958) titled Corporate Income Taxes on the Cost of Capital: A Correction (Ai et al., 2020). This theory explains how much the company owes and how much the company's equity is so that there is a balance between the costs incurred and the profits. The essence of the trade-off theory in capital structure is to balance the benefits and sacrifices of using debt. If the benefits are more significant, then additional debt is still allowed. If the sacrifice due to the use of debt is already more significant, then additional debt is not allowed. This theory explains that a company whose capital structure does not use debt as a whole using debt is a company that is in bad shape (Suchandiko et al., 2021).

Capital Structure

According to Dovita et al. (2019), capital structure is a comparison or balance between foreign and its capital. In this case, foreign capital is long-term and short-term debt, while capital is divided into retained earnings and ownership participation. The greater the risk the company bears, the more debt it bears to carry out its operational activities, and vice versa. The issue of capital structure is significant for companies because good or bad capital structure will have a direct effect on the company's financial position (Fiqri et al., 2024).

Business Risk

According to Rokhmawati (2020), risk is defined as uncertainty about a situation that will occur in the future, with decisions made based on various current considerations. Business risk is a company's uncertainty in carrying out its business activities. These business risks include intrinsic business risk, financial leverage risk, and operating leverage risk. In companies, business risk will increase if you use high debt. This will also increase the likelihood of bankruptcy (Efni, 2017). The results of the study prove that companies with high risk should use less debt to avoid the possibility of bankruptcy.

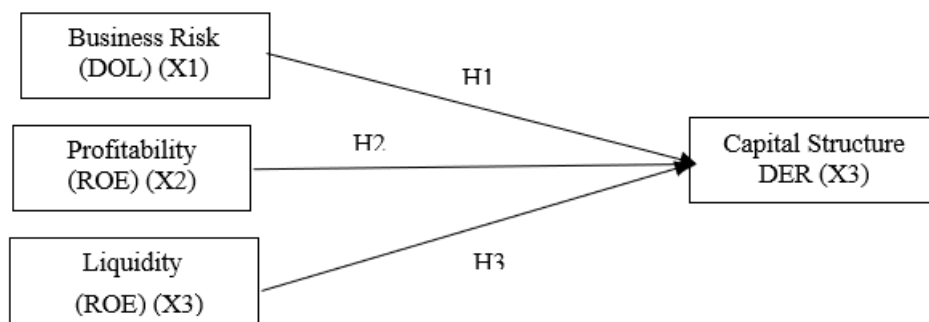
Profitability

Profitability influences the size of a company's capital structure. Companies with high profitability tend to have low levels of debt (Agustiawan et al., 2021). Profitability is a company's ability to measure management effectiveness calculated by the profit generated from the company's sales and investments. Profit and loss calculation helps users use financial statements to forecast future cash flows. The assessment of a company's achievements can be seen from the company's ability to generate profits. Corporate profit is not only an indicator of the company's ability to fulfill its obligations to funders but also an element of company value creation that shows the company's prospects in the future (Hamidy et al., 2015).

Liquidity

Liquidity shows the ability to meet financial obligations, which is one of the ratios that affect the capital structure—stating that liquidity indicates a company's ability to meet financial obligations that must be fulfilled immediately, the company's ability to meet financial obligations that must be fulfilled immediately or the company's ability to fulfill financial obligations at the time of being billed. Liquidity in this study uses the current ratio. The current ratio is the amount of current assets compared to the overall current debt; this describes the availability of excess cash as a result of obtaining income in the form of investments (Rokhmawati et al., 2022, Widayanti et al., 2016)

Research Model and Hypothesis



- H1: DOL Affects Capital Structure
 H2: ROE Affects Capital Structure
 H3: CR Affects Capital Structure

METHOD

This research was conducted on the Indonesia Stock Exchange (IDX) because the dependent variable in this study is Capital Structure. The independent variables in this study are business risk, profitability, and liquidity. The object of this research is a coal subsector mining company listed on the Indonesia Stock Exchange for the 2019-2022 period. The data is the annual report of mining subsector companies obtained from www.idx.co.id. The population in this study is mining companies in the coal subsector listed on the Indonesia Stock Exchange for the 2019-2022 period. The number of coal subsector mining companies listed on the Indonesia Stock Exchange during the study period was 29 companies. The technique used in determining the sample in this study is the purposive sampling method, namely by selecting companies in specific ways and criteria (Sugiyono, 2018).

The criteria for sampling in this study are as follows:

1. Mining sector companies in the coal sub-sector listed on the Indonesia Stock Exchange for 2019-2022.
2. Companies in the mining sector of the coal sub-sector that reported consecutive financial statements in the 2019-2022 period.

Capital Structure

The debt-to-equity ratio is the ratio used to assess debt-to-equity. This ratio helps find out the amount of funds provided by the borrower (creditor) with the company's owner (Kasmir, 2018).

$$\text{Debt to Equity Ratio (DER)} = \frac{\text{Total Liability}}{\text{Total Equity}}$$

Business Risk

Business risk is one of the risks companies face when carrying out their operations, with the possibility of the company's inability to fund its business operations (Gitman, 2015).

$$\text{Degree Of Operating Leverage (DOL)} = \frac{\% \text{ Growth EBIT}}{\% \text{ Growth Sales}}$$

Profitability

Profitability is a ratio used to assess a company's ability to seek profits that can provide a measure of the level of effectiveness of a company's management, namely profits generated from sales and investment (Kasmir, 2018)

$$\text{Return On Equity (ROE)} = \frac{\text{Earning After Tax}}{\text{Total Equity}}$$

Liquidity

Liquidity is a measure of how easy and feasible it is for a company to meet its short-term obligations (Rokhmawati, 2016)

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liability}}$$

Data Analysis Methods

Quantitative data analysis is used to see how variables are independent of dependent variables using the SPSS (Statistical et al.) program. It is one of the computer applications used to analyze statistical data; the analysis includes descriptive statistical analysis, classical assumption test, multiple linear regression analysis, and hypothesis test.

Hypothesis Test Result

Coefficient Determination Test

Table 2 Coefficient Determination Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.644 ^a	.415	.393	.90357
a. Predictors: (Constant), CR, DOL, ROE				
b. Dependent Variable: DER				

Source: processed data, 2024

From Table 2, the value of the determination coefficient is 0.393. This figure means that the influence of business risk, profitability, and liquidity on capital structure is 39.3% simultaneously. In comparison, the remaining 60.7% can be influenced by other variables not included in this model.

Simultaneous Test

Table 3 Simultaneous Test

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46,280	3	15,427	18,895	.000 ^b
	Residual	65,315	80	.816		
	Total	111,595	83			
a. Dependent Variable: DER						
b. Predictors: (Constant), CR, DOL, ROE						

Sources: Processed data, 2024

From Table 3, it is known that F calculated 18.895 with a significance of 0.000. Sig. (0.000) < 0.05. Business risk, profitability, and liquidity variables significantly affect the capital structure.

Partial Test

Table 4. *t*-test result

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.558	.151		3.707	.000
	DOL	-.001	.002	-.049	-.574	.568
	ROE	-.644	.263	-.210	-2.452	.016
	CR	-.356	.051	-.595	-6.942	.000

a. Dependent Variable: DER

Source: processed data, 2024

RESULTS AND DISCUSSION

Business Risks to Capital Structure

The results of the tests that have been carried out show that business risk does not affect the capital structure. The lack of effect of business risk on capital structure is due to high business risk, which can be caused by low sales or revenue, not due to the use of high debt so that it does not affect the determination of capital structure (DER). Business risk is the primary risk owned by the company in addition to financial risk due to using debt. Based on the trade-off theory, companies with a high probability indirectly have a considerable business risk and will make efforts to reduce their taxes by increasing their debt ratios.

Profitability to Capital Structure

The results of the tests that have been carried out show that profitability has a negative and significant effect on the capital structure. This shows that profitable companies tend to use relatively lower debt levels. In contrast, less profitable companies use debt to meet their capital needs. This is because companies with high rates of return generate enough retained earnings to finance the company's operations. Therefore, a profitable company does not need much additional capital from outside. The higher the profitability, the more influential the company is in generating net profit from the company's assets and the smaller the capital structure. This study's results align with the pecking order theory developed by Myers (1984), which states that the profitability level of high-yield companies has less debt because the company has more internal funding sources.

Liquidity to Capital Structure

The study results show that liquidity variables negatively and significantly affect capital structure. This shows that highly liquid companies tend to borrow relatively less because the company's current assets can cover the company's

funding needs. The higher the liquidity, the smaller the company's capital structure. This is because the company uses internal funds first rather than using external capital. Based on the pecking order theory, companies with relatively high liquidity mean that companies are more likely to rely on internal funding and use less external funding. This is because the company has enough funds within the company to fund its investments.

CONCLUSIONS

Based on the results of data analysis and discussion in the previous chapter, it can be concluded that business risk variables do not affect the capital structure. This means that the value of business risk does not significantly impact the value of the company's capital structure. The profitability variable has a negative and significant effect on the capital structure. This means that every increase in the value of profitability will also decrease the value of the company's capital structure and vice versa. Liquidity variables have a negative and significant effect on capital structure. This means that any increase in liquidity value will also decrease the value of the company's capital structure and vice versa. The variables of business risk, profitability, and liquidity simultaneously have a significant effect on capital structure.

REFERENCES

- (1) AGUSTIAWAN, D., EFNI, Y. & GUSNARDI, G. 2021. Struktur modal dan nilai perusahaan: dipengaruhi oleh uniqueness, tangibility dan financial flexibility. *Current*, 2, 278-301.
- (2) AI, H., FRANK, M. Z. & SANATI, A. 2020. The trade-off theory of corporate capital structure.
- (3) ALIPOUR, M., MOHAMMADI, M. F. S. & DERAKHSHAN, H. 2015. Determinants of capital structure: an empirical study of firms in Iran. *International Journal of Law and Management*, 57, 53-83.
- (4) BHAWA, I. B. M. D. 2015. Pengaruh Ukuran Perusahaan, Likuiditas, Profitabilitas, Dan Risiko Bisnis Terhadap Struktur Modal Perusahaan Farmasi. Udayana University.
- (5) BRIGHAM, E. F. & HOUSTON, J. F. 2013. *Fundamentals of financial management*, South-Western Cengage Learning.
- (6) CHO, S. Y. & LEE, C. 2019. Managerial efficiency, corporate social performance, and corporate financial performance. *Journal of Business Ethics*, 158, 467-486.
- (7) DESWENDRA, Y. 2020. Pengaruh Likuiditas, Ukuran Perusahaan, Struktur Aktiva Dan Pertumbuhan Perusahaan Terhadap Struktur Modal Pada Perusahaan Manufaktur Sektor Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- (8) DOVITA, Y. G., ROKHMAWATI, A. & FATHONI, A. F. 2019. The Effect of Sales Growth, Capital Expenditure, and Working Capital Efficiency on Indonesian-Listed-Consumer-Goods Firms' Financial Performance with Capital Structure as Moderating Variable. *Indonesian Journal of Economics, Social, and Humanities*, 1, 1-15.

- (9) EFNI, Y. 2017. The mediating effect of investment decisions and financing decisions on the effect of corporate risk and dividend policy against corporate value. *Journal of Advanced Research in Law and Economics (JARLE)*, 8, 40-51.
- (10) FIQRI, N. I., ROKHMAWATI, A. & RAHMAYANTI, E. 2024. The Influence of Liquidity and Profitability on Firm Value with Capital Structure as The Intervening (Study on Mining Sector Listed on IDX 2016-2020). *Jurnal Bisnis Strategi*, 33, 35-43.
- (11) HAMIDY, R. R., WIKSUANA, I. G. B. & ARTINI, L. G. S. 2015. Pengaruh struktur modal terhadap nilai perusahaan dengan profitabilitas sebagai variabel intervening pada perusahaan properti dan real estate di bursa efek Indonesia. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 4, 665-682.
- (12) INTERNATIONAL_ENERGY_AGENCY 2023. *Coal Information Overview*, Paris, IEA Publications.
- (13) MAULIDINA, R. S. 2021. Analisis Pengaruh Volume Produksi Batubara, Nilai Tukar, Inflasi Dan Produk Domestik Bruto Terhadap Volume Ekspor Batubara Indonesia Tahun 1996-2019. S1, UII.
- (14) RIDOAN, A., ROKHMAWATI, A. & RASULI, M. 2023. Pengaruh Ukuran Perusahaan, Likuiditas, Leverage Terhadap Cash Effective Tax Rate dengan Risiko Bisnis Sebagai Moderasi pada Perusahaan Terindeks LQ45 di Bursa Efek Indonesia. *Jurnal EMT KITA*, 7, 1220-1232.
- (15) RIFQI, E. 2019. Pengaruh Profitabilitas, Likuiditas, Solvabilitas, Non-Debt Tax Shield, Dan Struktur Aktiva Terhadap Struktur Modal. Universitas Airlangga.
- (16) ROKHMAWATI, A. 2016. *Manajemen Keuangan*, Yogyakarta, Deepublish.
- (17) ROKHMAWATI, A. 2019. The Effect of Firm Cash Flow on Investment Decision Moderated by Financial Constraint and Mispricing. *Indonesian Journal of Economics, Social, and Humanities*, 1, 77-90.
- (18) ROKHMAWATI, A. 2020. Profit decomposition: analyzing the pathway from carbon dioxide emission reduction to revenues and costs. *International Journal of Energy Economics and Policy*, 10, 150-160.
- (19) ROKHMAWATI, A., DESY, D. & HERMAN HALIM, E. 2022. Does Spin-off Obligation of Sharia Business Units from its Parent Commercial Banks Enhance Their Performance? *Iranian Economic Review*, 26, 819-832.
- (20) ROSS, S. A., WESTERFIELD, R. & JORDAN, B. D. 2014. *Fundamentals of corporate finance*, Irwin New York, NY, USA.
- (21) SUCHANDIKO, E., EFNI, Y. & ROKHMAWATI, A. 2021. The Effect of Diversification and Funding Decisions on Company Performance and Corporate Value with Good Corporate Governance (GCG) as Moderated Variable. *International Journal of Economic, Business & Applications*, 6, 19-30.
- (22) WIDAYANTI, L. P., TRIARYATI, N. & ABUNDANTI, N. 2016. Pengaruh profitabilitas, tingkat pertumbuhan perusahaan, likuiditas, dan pajak terhadap struktur modal pada sektor pariwisata. Udayana University.