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Comparative Analysis of the Financial Performance of Coal Mining Business License (IUP) and Mining Services Business License (IUJP) Companies from 2018 - 2024

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Abstract

The coal mining sector is a key contributor to Indonesia's economy, significantly impacting state revenue and exports. According to Law No. 3 of 2020, mining business licenses are divided into two categories: Mining Business License (IUP) for exploration and production, and Mining Services Business License (IUJP) for supporting services such as contracting, transportation, and technical operations. These license types create distinct operational characteristics and risk profiles, warranting comparative financial analysis. This study analyzes the financial performance of IUP and IUJP companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2024, focusing on liquidity, profitability, solvency, activity, and growth ratios. Using a quantitative approach with purposive sampling, six IUP and four IUJP companies with complete annual financial reports were examined. Data were analyzed through financial ratios and tested with normality, homogeneity, Mann–Whitney, and two-way ANOVA tests. The findings indicate significant differences in ROA, ROE, DER, DAR, ARTO, EPS, and PER between IUP and IUJP companies, reflecting disparities in capital efficiency, capital structure, and growth potential. In contrast, liquidity ratios (Current Ratio and Quick Ratio), asset efficiency (TATO), and inventory turnover (ITO) showed no significant differences, suggesting similar short-term solvency and asset management across the two groups. This study contributes theoretically by expanding the literature on financial performance in the mining sector based on license types. Practically, it offers guidance for investors in decision-making, supports management in financial strategy formulation, and provides regulators with insights for developing effective policies in the coal mining industry.

Keywords: IUP; IUJP; Coal Mining; Financial Ratios; Financial Performance; Liquidity.

INTRODUCTION

In today's era of globalization, businesses face increasingly competitive environments, requiring companies to enhance performance and implement strategic policies to mitigate bankruptcy risks. Investment requires adequate capital, and the capital market serves as a primary channel for investors to allocate funds and gain future returns (Herdjiono & Jumiati, 2022). The stock market acts as an intermediary between investors and companies or government institutions in trading long-term instruments such as stocks and bonds (cimbniaga.co.id, 2024).

Previous studies have shown that stock price movements reflect company performance, with the Indonesia Stock Exchange Composite Index (IDX Composite) serving as a benchmark for assessing market trends (Cahyono et al., 2023). The mining industry is considered one of the highest-risk sectors due to its high capital requirements and long-term return horizon. In 2019, the mining sector index was among the factors that constrained the movement of the IDX Composite (Rachma & Rahman, 2022).

Technological innovations enable companies to reduce operational costs and improve financial management. Efficient financial systems, including digital technology for payments,

funding, and capital management, can enhance mining companies' financial performance and support more effective managerial decision-making (Widyastuti et al., 2024). Moreover, sound financial management and fintech adoption can directly influence company performance, which in turn affects stock returns.

High-risk factors, such as commodity price fluctuations and large capital requirements, necessitate effective financial management to maintain optimal investor returns. In this context, the risk-return trade-off principle applies, where higher risks require higher expected returns (Gunawan & Soma, 2025). Stock returns are influenced not only by market conditions but also by corporate performance, profitability, liquidity, leverage, and company size (Lisandri et al., 2023). In 2024, there were 88 companies listed on the Indonesia Energy Stock List, with 24 companies classified under A121 and 20 companies under A132, representing half of the total energy stocks (market.bisnis.com, 2024). Despite fluctuations in global coal prices in previous years, prices in 2024 remained relatively stable. According to the Reference Coal Price issued by the Directorate General of Mineral and Coal, coal prices have shown fluctuations, with the highest levels recorded between mid-2022 and mid-2023, as illustrated in the figure below:

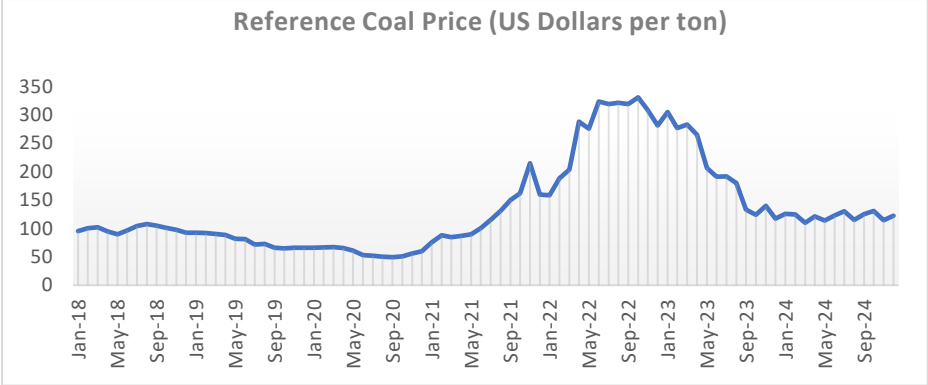
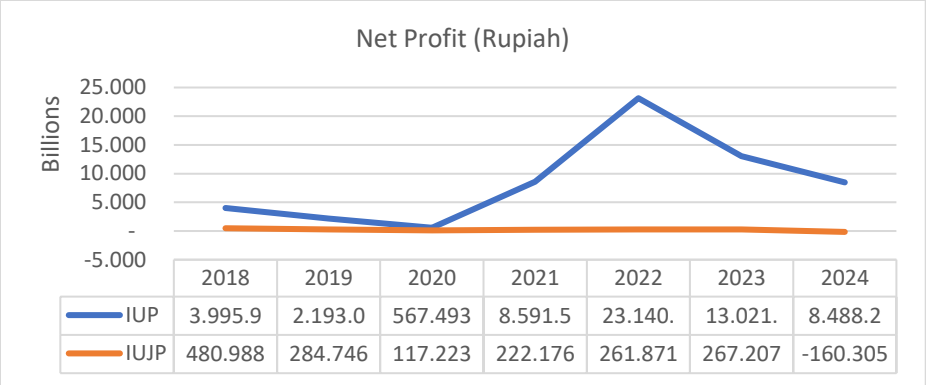


Figure 1. Coal Price Chart January 2018 – December 2024
Source: minerba.esdm.go.id (2024)

The lowest coal price was USD 49.42 in September 2020, and the highest was USD 330.97 in October 2022, reflecting the volatility of the commodity market. Firli et al. (2021) note that higher risk tolerance enhances investment decision-making and can improve performance and returns.

During the 2018–2024 period, the financial performance of IUJP companies remained relatively stable and was less affected by commodity price fluctuations. In contrast, IUP companies were directly impacted by coal price volatility, as changes in prices significantly influence their revenues and profits due to their mining-based business model. Meanwhile, IUJP companies, which provide mining services, generally operate under long-term contracts and project-based payment systems, making them more resilient to global coal price changes.



	2018	2019	2020	2021	2022	2023	2024
IUP	3.995.9	2.193.0	567.493	8.591.5	23.140.	13.021.	8.488.2
IUJP	480.988	284.746	117.223	222.176	261.871	267.207	-160.305

Figure 2. Net Profit of IUP and IUJP Companies
Source: Author's Work (2025)

Figure 2 illustrates that the profitability of IUJP companies is relatively lower than that of IUP companies. Net profits of IUP companies (A121) increased significantly from 2021 to 2022, while IUJP companies (A132) remained stable, unaffected by coal price fluctuations. Kusmayadi et al. (2022) argue that Indonesia's abundant mining resources attract many oil, gas, and coal companies; however, intense competition requires both IUP and IUJP companies to innovate and maintain sustainable financial performance. Additionally, with rising risks from price volatility, policymakers need to consider how financial interventions may influence corporate performance (Peh, 2020).

These dynamics underscore the importance of a comparative study to empirically examine the differences in financial performance between IUP and IUJP companies in the coal sector. Previous studies, such as Azis et al. (2020) and Nugraha & Putri (2024), indicate that coal price fluctuations significantly affect mining companies' financial performance, particularly in profitability and operational efficiency. A company's financial performance is often reflected in its stock price movements, which represent market expectations of profitability and growth, serving as a key consideration for investors (Ariawan, 2023).

Financial performance is an indicator of a company's financial health and ability to generate profits, typically measured using return on assets (ROA), return on equity (ROE), and other financial ratios (Hapsari & Pratomo, 2020). Kurniasari & Rahadian (2019) further note that financial performance involves comparing actual results with established company standards, usually assessed quantitatively based on financial statements. Liquidity ratios measure a company's ability to use current assets to meet short-term obligations and manage working capital effectively (Syahputra & Ningsih, 2024; Reza et al., 2023). Profitability ratios reflect the company's capacity to generate earnings from sales, assets, and equity, while high solvency ratios indicate greater financial risk (Edgar & Nurbaiti, 2020).

Activity ratios, including total asset turnover, inventory turnover, and accounts receivable turnover, assess operational efficiency (Limbong & Malau, 2022; Binsaddig et al., 2023). Stock return metrics, such as Price to Earnings Ratio (PER) and Earnings per Share (EPS), provide additional insight into market valuation and management effectiveness in delivering shareholder

value (Azis et al., 2024; Rahmanissa & Isynuwardhana, 2022). Collectively, these financial ratios offer a comprehensive view of a company's performance and are essential for investor decision-making in the coal sector.

Previous research by Azis, Hastriawan, and Kasuma (2020) found that coal prices significantly moderate the relationship between profitability and firm value in Indonesian coal firms, yet focused primarily on profitability and solvency without differentiating between IUP and IUJP company types. Mo Putra, Mulyantini, and Arieftiara (2021) explored how diversification affects financial performance indicators (ROE, EPS) and stock prices amidst coal price volatility but did not analyze service-contract (IUJP) companies separately or examine the interplay of financial performance and firm classification over time. These studies reveal a gap: while coal price fluctuations and firm performance have been explored, there is a lack of comparative analysis between IUP (mining license) and IUJP (mining service contract) companies over a common timeframe with integrated financial metrics and stock-market implications.

Despite extensive research on coal price fluctuations and financial performance, a direct comparative analysis of IUP and IUJP companies has not been conducted. Based on this research gap, this study aims to analyze and compare the financial performance of IUP and IUJP coal companies listed on the Indonesia Stock Exchange from 2018 to 2024. Its benefit lies in informing targeted investment strategies, regulatory oversight, and corporate governance improvements tailored to company classification and sectoral risk dynamics.

METHOD

This study employed a quantitative research method, widely used for analyzing financial performance (Sembiring et al., 2024). Financial performance was assessed using financial ratios derived from companies' published financial statements. The analysis included five categories of ratios: liquidity ratios (Current Ratio and Quick Ratio), profitability ratios (Return on Assets and Return on Equity), solvency ratios (Debt to Equity Ratio and Debt to Asset Ratio), activity ratios (Total Asset Turnover, Accounts Receivable Turnover, and Inventory Turnover), and growth ratios (Earnings Per Share and Price to Earnings Ratio).

The population consisted of all companies holding a Mining Business License (*IUP*) and Mining Services Business License (*IUJP*) listed on the Indonesia Stock Exchange with complete financial reports from 2018 to 2024. Purposive sampling was applied to select the sample.

Table 1. List of Coal Production Companies

No.	Nama Perusahaan	Website
1.	BYAN	https://www.bayan.com.sg/
2.	ADRO	https://adarominerals.id/
3.	BUMI	https://www.bumiresources.com/en
4.	ITMG	https://www.itmg.co.id/
5.	DSSA	https://dssa.co.id/id
6.	GEMS	https://www.goldenenergymines.com/id
7.	PTRO	https://petrosea.com/id/
8.	DOID	https://deltadunia.com/

No.	Nama Perusahaan	Website
9.	MYOH	https://samindoresources.com/
10.	DEWA	https://www.ptdh.co.id/

Source: Author's Work (2025)

Data analysis consists of both descriptive and inferential statistical methods. Descriptive statistics are presented through frequency distribution tables, histograms, stem-and-leaf diagrams, or box plots. Inferential analysis is conducted to test the research hypotheses (Sembiring et al., 2024). Normality testing is used to determine whether the data originate from a population with a normal distribution (Nuryadi, 2017). The Kolmogorov–Smirnov (KS) test, a commonly used Goodness-of-Fit method, is applied to assess the compatibility of the data distribution with a theoretical distribution, typically the normal distribution (Widyaningsih, 2021). Mathematically, the Kolmogorov–Smirnov test statistic is formulated as follows:

$$D = \max(F(zi) - F_{n\,(i-1)}(Xi),\ |\ F_{(zi)} - F_{ni}(Xi)\ |)$$

According to Ghozali (2018), the homogeneity of variance test is a classical assumption test used to determine whether two or more groups of data have equal variances. One commonly applied method is Levene's Test, which examines the null hypothesis that the variances across groups are equal. The Levene test statistic is mathematically formulated as follows:

$$W = \frac{(N-k)}{(k-1)} \cdot \frac{\sum_{i=1}^{k} ni\ (Zi. - Z..)^2}{\sum_{i=1}^{k} \sum_{j=1}^{ni} (Zij\ - Zi.)^2}$$

If the data do not meet the normality assumption, a non-parametric alternative, the Mann–Whitney U Test, is used (Nuryadi et al., 2017). Muhid (2019) argues that the Mann–Whitney U test is applied to test comparative hypotheses for two independent samples when the data are ordinal, the test statistic is formulated as follows:

$$U_1 = n_1 n_2 + \frac{n_2(n_2+1)}{2} - R_1$$

RESULT AND DISCUSSION

A comparative analysis of the financial performance of coal companies holding Mining Business Licenses (IUP) and Mining Services Business Licenses (IUJP) listed on the Indonesia Stock Exchange (2018–2024) was conducted by calculating the average financial ratios of the sample. Comparisons were tested using parametric or non-parametric methods depending on data distribution (Nuryadi et al., 2017). Normal data with homogeneous variance were analyzed using the Independent Sample t-test, while non-normal data were tested using the Mann–Whitney U Test.

Widyaningsih (2021) suggests that data normality can be tested using various methods, including Chi-Square, Kolmogorov-Smirnov, Shapiro-Wilk, Skewness-Kurtosis, Lilliefors, Anderson-Darling, and visual approaches like QQ-Plot and PP-Plot. The Kolmogorov-Smirnov

test is widely used due to its simplicity and objective results, reducing subjective interpretation often found in graphical methods (Astuti, 2016). In this study, the Kolmogorov-Smirnov test was applied to ensure the data met the normality assumption before further analysis.

Table 2. Normality Test

	Group	Statistic	Description
Current Ratio	IUP	.010	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.017	
Quick Ratio	IUP	.006	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.013	
ROA	IUP	.057	The Sig. value of one group is < 0.05, so the data does not meet the normality test.
	IUJP	.005	
ROE	IUP	<.001	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.43	
DER	IUP	<.001	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.004	
DAR	IUP	.046	The Sig. value of one group is < 0.05, so the data does not meet the normality test.
	IUJP	.131	
TATO	IUP	.056	The Sig. value of one group is < 0.05, so the data does not meet the normality test.
	IUJP	.018	
ARTO	IUP	<.001	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	<.001	
ITO	IUP	.016	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.001	
EPS	IUP	<.001	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.024	
PER	IUP	<.001	The Sig. value of both groups is < 0.05, so the data does not meet the normality test.
	IUJP	.002	

Source: Author's Work (2025)

The Kolmogorov-Smirnov test indicates that all variables (CR, QR, ROA, ROE, DER, DAR, TATO, ARTO, ITO, EPS, PER) are not normally distributed (Sig. < 0.05). Therefore, the Mann–Whitney U Test was used for comparisons, while the parametric Independent Sample t-Test was not applied.

Homogeneity can be tested using various methods, such as the Harley-Pearson, Bartlett, Levene, or Cochran tests, each employing a different approach to assess equality of variances across groups (Fitri et al., 2023). In this study, the Levene test was used because it is considered more robust to violations of the normality assumption than other homogeneity tests.

Table 3. Homogeneity Test

		Levene Statistic	Description
Current Ratio	Based on Mean	.009	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
Quick Ratio	Based on Mean	.028	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
ROA	Based on Mean	<.001	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
ROE	Based on Mean	.022	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
DER	Based on Mean	.581	Sig. Value Based on Mean > 0.05 then the data meets the homogeneity test.
DAR	Based on Mean	.097	Sig. Value Based on Mean > 0.05 then the data meets the homogeneity test.
TATO	Based on Mean	<.001	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
ARTO	Based on Mean	.327	Sig. Value Based on Mean > 0.05 then the data meets the homogeneity test.
ITO	Based on Mean	.618	Sig. Value Based on Mean > 0.05 then the data meets the homogeneity test.
EPS	Based on Mean	.003	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.
PER	Based on Mean	<.001	Sig. Value Based on Mean < 0.05 means the data does not meet the homogeneity test.

Source: Author's Work (2025)

Levene's Test shows that DER, DAR, ARTO, and ITO have homogeneous variances (Sig. > 0.05), while CR, QR, ROA, ROE, TATO, EPS, and PER exhibit heterogeneous variances (Sig. < 0.05). For variables violating normality, the Mann–Whitney U test was used instead of the t-test.

Table 4. Mann–Whitney U test

Variables	Sig.	Value	Description
Current Ratio	Asymp. Sig. (2-tailed)	.291	Sig. value > 0.05 means there is no significant difference between the two groups.
Quick Ratio	*Asymp. Sig. (2-tailed)*	.226	Sig. value > 0.05 means there is no significant difference between the two groups.
ROA	*Asymp. Sig. (2-tailed)*	<.001	Sig. value < 0.05 means there is a significant difference between the two groups.
ROE	*Asymp. Sig. (2-tailed)*	<.001	Sig. value < 0.05 means there is a significant difference between the two groups.
DER	*Asymp. Sig. (2-tailed)*	.037	Sig. value < 0.05 means there is a significant difference between the two groups.

Variables	Sig.	Value	Description
DAR	*Asymp. Sig. (2-tailed)*	.037	Sig. value < 0.05 means there is a significant difference between the two groups.
TATO	*Asymp. Sig. (2-tailed)*	.701	Sig. value > 0.05 means there is no significant difference between the two groups.
ARTO	*Asymp. Sig. (2-tailed)*	<.001	Sig. value < 0.05 means there is a significant difference between the two groups.
ITO	*Asymp. Sig. (2-tailed)*	.164	Sig. value > 0.05 means there is no significant difference between the two groups.
EPS	*Asymp. Sig. (2-tailed)*	<.001	Sig. value < 0.05 means there is a significant difference between the two groups.
PER	*Asymp. Sig. (2-tailed)*	.025	Sig. value < 0.05 means there is a significant difference between the two groups.

Source: Author's Work (2025)

The Mann–Whitney U test results indicate that liquidity ratios, including Current Ratio (CR) and Quick Ratio (QR), do not differ significantly between IUP and IUJP companies (Sig. > 0.05), suggesting comparable short-term financial capacity and liquidity management. Both groups maintain similar efficiency in managing cash, receivables, and current assets (Firli et al., 2021; Peh, 2020; Kusmayadi et al., 2022). Despite IUJP companies showing slightly higher liquidity ratios on average, the 2021 coal price increase enabled IUP companies to improve asset values, affecting the current ratio and quick ratio profitability.

Profitability ratios, such as Return on Assets (ROA) and Return on Equity (ROE), differ significantly (Sig. < 0.001), with IUP companies demonstrating superior returns. This reflects differences in asset utilization, operational efficiency, capital structure, and managerial strategies (Widodo, 2021; Fikri & Firmansyah, 2024; Cahyono et al., 2023). The rise in coal prices in 2021 further amplified these profitability differences.

Solvency ratios, including Debt to Equity Ratio (DER) and Debt to Asset Ratio (DAR), also show significant differences (Sig. = 0.037), indicating varied financing structures, leverage strategies, and reliance on external funding (Edgar & Nurbaiti, 2020; Rachma & Rahman, 2022; Lisandri et al., 2023; Izuddin, 2020). IUP companies generally manage debt more efficiently, using increased profits from higher coal prices for debt restructuring, improving financial stability.

Activity ratios, such as Total Asset Turnover (TATO) and Inventory Turnover (ITO), show no significant differences, indicating similar efficiency in asset utilization and operational management across both groups (Syahputra & Ningsih, 2024; Azis et al., 2020; Fikri & Firmansyah, 2024; Peh, 2020). Account Receivable Turnover (ARTO), however, differs significantly (Sig. < 0.05), reflecting better receivables management and liquidity in IUP companies (Binsaddig et al., 2022; Ariawan, 2023).

Growth ratios, including Earnings per Share (EPS) and Price-to-Earnings Ratio (PER), also differ significantly. IUP companies achieve higher EPS, indicating stronger profitability, whereas

PER differences reflect market valuation influenced by investor perception and corporate market power (Wood et al., 2021; Rahmanissa & Isynuwardhana, 2022).

Overall, the findings show that IUP companies outperform IUJP companies in profitability, leverage management, and receivables efficiency, while liquidity and asset utilization remain comparable. This suggests that business license type (IUP vs. IUJP) impacts financial performance primarily through profitability and capital structure strategies rather than liquidity or operational efficiency.

CONCLUSION

Liquidity ratios showed no significant differences between IUP and IUJP companies, indicating similar short-term solvency and current asset management. However, profitability ratios (ROA and ROE) and solvency ratios (Debt to Equity and Debt to Asset) displayed significant differences, with IUP companies generally outperforming IUJP firms due to greater operational efficiency and distinct capital structures. Activity ratios were mixed: Total Asset Turnover and Inventory Turnover were similar, but Accounts Receivable Turnover differed significantly, reflecting variations in receivables management. Growth ratios (EPS and PER) also revealed significant differences, highlighting divergent earnings growth and market perceptions. Overall, seven of eleven financial variables differed significantly, illustrating clear operational and structural distinctions. Future research could explore the underlying factors driving these disparities, including management practices and external market conditions, to provide deeper insights into sector-specific strategies for improving financial performance.

REFERENCES

Ariawan, A. (2023). *Profitability, liquidity, and financial performance: Implications for company value in Indonesia's mining industry*. [Article]. Retrieved from https://www.semanticscholar.org/paper/Profitability-Liquidity-and-Financial-Performance-Ariawan

Astuti, M., A. (2016). *Statistika Penellitian*. Mataram: Insan Madani Publishing Mataram

Azis, M., Hastriawan, H., Kasuma, J., & Darma, D. C. (2020). *Coal prices and financial performance toward coal mining company value*. *International Journal of Psychosocial Rehabilitation, 24*(4), 4177–4185. https://doi.org/10.37200/IJPR/V24I4/PR201358

Azis, M., Anwar, A., & Yoshita, R. (2024). *The Effect of Profit Growth and Price Earnings Ratio on Stock Return in Property and Real Estate Companies Listed on the Indonesia Stock Exchange for the 2020-2022 Period. AKUNSIKA : Jurnal Akuntansi dan Keuangan*, 5(1), 70-78. ISSN: 2722-3701 (Print) 2722-3590 (Online)

Cahyono, S., Fernando, H. A., & Primasatya , R. D. . (2023). *The Nexus between Corporate Financial Ratio and Price Earnings Performance: Evidence from President Election Period in Indonesia*. Jurnal Akuntansi Dan Keuangan, 25(2), 101–116. https://doi.org/10.9744/jak.25.2.101-116

Cimbniaga.co.id. (2024). Ulasan Pasar Modal: Pengertian, Sejarah, dan Manfaatnya [online]. Tersedia: https://www.cimbniaga.co.id/id/inspirasi/perencanaan/ulasan-pasar-modal [6 Maret 2025]

Edgar, S., & Nurbaiti, A. (2020). Pengaruh Ukuran Perusahaan, Profitabilitas Dan Solvabilitas Terhadap Audit Delay (Studi Empiris pada Perusahaan Sub Sektor Makanan dan Minuman yang terdaftar di Bursa Efek Indonesia Periode 2014-2018). *e-Proceeding of Management*, 7(2), 3284-3289.

Firli, A., Khairunnisa, S. & Rahadian, D. (2021). *The Influence of Financial Stressors, Financial Behavior, Risk Tolerance, Financial Solvency, And Financial Knowledge on Financial Satisfaction of Working Age Population*. Jurnal Manajemen Indonesia, 21(3), 228-237.

Fitri, A., Rahim, R., Nurhayati, N., Azis, A., Pagiling, S. L., Natsir, I., Munfarikhatin, A., Simanjuntak, D. N., Hutagaol, K., & Anugrah, N. E. (2023). *Dasar-dasar statistika untuk penelitian*. Yayasan Kita Menulis.

Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.

Gunawan, I. & Soma, A. M. (2025). *Why do bank risks affect stock returns? Examining the mediating role of profitability in Indonesia's tier-1 banks. Journal of Islamic Economics Lariba*, 11(1), 815-846. https://doi.org/10.20885/jielariba.vol11.iss2.art7

Hapsari, D., W., & Pratomo, D. (2020). *Sustainability Report: Financial Performance and Environmental Performance. Advances in Natural and Applied Sciences*, 14(2), 107-113. DOI: 10.22587/anas.2020.14.2.14

Herdjiono, I., & Jumiati. (2022). *Factors that influence the interest in becoming an investor in the capital market*. Jurnal Economia, 18(2), [halaman artikel]. https://doi.org/10.21831/economia.v18i2.48184

Kurniasari, D., A., & Rahadian, D. (2019). Analisis Kinerja Keuangan Perbankan Dengan Profit Sensitivity Analysis. *JASa (Jurnal Akuntansi, Audit dan Sistem Informasi Akuntansi)*, 3(1), 108-119. ISSN 2655-8319

Kusmayadi, D., Abudllah, Y., Firmansyah, I. (2022). Analysis of gas, oil, and coal company performance. [Conference paper/Report]. Semantic Scholar. https://www.semanticscholar.org/paper/Analysis-of-Gas%2C-Oil%2C-and-Coal-Company-Performance-Kusmayadi

Limbong, G., & Malau, G. (2022). Comparative Analysis Of Activity Ratio Before And During Pandemic (2019-2020) On The Food & Beverage Sector Listed On IDX. *JIMEA | Jurnal Ilmiah MEA (Manajemen, Ekonomi, dan Akuntansi)*, 4(2), 1372-1386. P-ISSN; 2541-5255 E-ISSN: 2621-5306

Lisandri, Boedi, S., Syam, A., Y., Aditiajaya, S., & Suriansyah. (2023). *Return* Saham Perusahaan Pertambangan pada Masa Pandemi Covid-19 di Indonesia. *Owner : Riset Dan Jurnal Akuntansi*, 7(2), 1782-1791. https://doi.org/10.33395/owner.v7i2.1381

Market.bisnis.com. (2024). Daftar 86 Saham Energi, Batu Bara, Minyak dan Gas di Pasar Modal 2024 [online]. Tersedia: https://market.bisnis.com/read/20240323/7/1687149/daftar-86-

saham-energi-batu-bara-minyak-dan-gas-di-pasar-modal-2024?utm_source=chatgpt.com [12 Maret 2025].

Muhid, A. (2019). *Analisis Statistik 5 Langkah Praktis Analisis Statistik dengan SPSS for Windows*. Sidoarjo: Zifatama Jawara.

Nugraha, P., S., & Putri, W., R., E. (2024). The Influence of Reference Coal Prices, Earnings per Share, and Dividend per Share on Stock Prices in Coal Industry Companies in 2017-2022. *International Journal of Advanced Multidisciplinary Research and Studies*, 4(3):1580-1586. https://doi.org/10.62225/2583049X.2024.4.3.2979

Nuryadi, Astuti, D., T., Utami, E., S., & Budiantara, M. (2017). *Dasar-Dasar Statistik Penelitian*. Yogyakarta: SIBUKU MEDIA.

Peh, G. (2020). *Indonesian coal: No bailout, don't throw good money after bad*. Institute for Energy Economics and Financial Analysis. Institute for Energy Economics and Financial Analysis. https://ieefa.org/resources/indonesian-coal-no-bailout-dont-throw-good-money-after-bad

Rachma, N., & Rahman, K., G. (2022). Arah Return Saham pada Perusahaan Pertambangan yangTerdaftar di Bursa Efek Indonesia. *Jurnal Manajemen STIE Muhammadiyah Palopo*, 8(2), 165-181. E-ISSN: 2684-7841 | P-ISSN: 2339-1510

Rahmanissa, L., A., & Isynuwardhana, D. (2022). Pengaruh *Earning Per Share, Price to Book Value, Volume* Perdagangan Saham, dan Nilai Kapitalisasi Pasar terhadap *Return* Saham, *SEIKO : Journal of Management & Business*, 4(3), 216-226. ISSN : 2598-831X (Print) and ISSN : 2598-8301 (Online)

Sembiring, T., B., Irmawati, Sabir, M., & Tjahyadi, I. (2024). *Buku Ajar Metodologi Penelitian (Teori dan Praktik)*. Karawang: CV Saba Jaya Publisher.

Syahputra, D., & Ningsih, S. (2024). Analysis of Financial Performance in Manufacturing Companies Using Financial Ratios. *IJEC: International Journal of Economics*, 3(1), 327-336. DOI: 10.55299/ijec.v3i1.797

Widyaningsih, D. (2021). *STATISTIKA BISNIS.* Semarang: Yayasan Prima AgusTeknik.

Widyastuti, U., Respati, D., K., Dewi, V., I. & Soma, A., M. (2024). The nexus of digital financial inclusion, digital financial literacy and demographic factors: lesson from Indonesia, Cogent Business & Management, 11:1, 2322778, DOI: 10.1080/23311975.2024.2322778