



Valuation and Financial Performance Analysis of Pt. Indika Energy

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ABSTRACT: According to a coal market update study by the International Energy Agency, coal prices have been highly volatile during the previous five years, significantly influencing Indonesian coal companies' operations and substantially impacting income and stock values. Furthermore, the increased global attention to addressing climate change is anticipated to lead to stricter enforcement of carbon emissions laws by 2030. PT. Indika Energy is an energy company that highly relies on coal prices, accounting for 75% to 88% of its revenue. Indika has stated four strategies, two of which are Efficiency and Synergy Optimization, and Prudent management. However, the result of profitability performance is not aligned with the company strategy. This research proposes to evaluate the comprehensive financial performance, assess the intrinsic value using the DCF-FCFF approach, and estimate PT's price-to-earnings (P/E) ratio and Market to Book (M/B) ratio. Indika Energy. This study uses several ratios, including liquidity, profitability, activity, and leverage ratio. The study revealed that the company demonstrates the worst liquidity performance and is the least profitable among its peers. However, the company has managed to maintain the most significant leverage ratio. According to the DCF valuation, the company appears to be undervalued, with an intrinsic value of IDR 3,247, while the market value is IDR 1,540. The company is also undervalued based on its relative valuation metrics. It has a price-to-earnings ratio (PER) of 1.06 and a price-to-book value (PBV) of 0.45, compared to the industry average PER of 5.15 and PBV of 5.27. Hence, the company should minimize its reliance on subcontractors by optimizing its cost structure.

KEYWORDS: Absolute Valuation, Business Performance, Discounted Cashflow, Intrinsic Value, Relative Valuation.

INTRODUCTION

Despite being the most carbon-intensive fossil fuel, coal supplies account for just over a third of global power production. Without regard for the external costs associated with a coal power station, coal is an affordable energy source that supports Indonesia's economic growth [1] (EISR, 2019). According to Statista, coal plays a significant role in Indonesia's GDP. In 2022, Coal mining comprised around 6.6% of Indonesia's gross domestic product (GDP), positioning it as one of its essential commodities. Indonesia is among the leading global coal exporters, and coal export generates significant foreign exchange earnings for the country. According to the Institute for Essential Services Reform (IESR) [1], coal contributed to around 3.6% of the national GDP, accounted for 11.4% of the overall value of exports, generated 1.8% of the national state income, and employed 0.2% of the population.

For the past five years, the Price of coal has experienced volatility; according to a coal market update report made by the International Energy Agency[2], in Q3 2022, coal prices soared two times higher in mid-2022, reaching a new all-time high at 431 USD/tonnes Exceeding above 8.3 billion tonnes (bt). Despite a weakened global economy, its increase was primarily attributable to the fact that it was more accessible and comparatively less expensive than gas in many regions. The rising commodity prices, mainly led by energy, have driven global inflation to a level not seen in decades. Several factors contributed to this event. The rapid economic rebound after the outbreak exceeded the existing energy capacity. This came mainly around 2022 when China had a 4.6% rise in coal demand, hitting a new all-time high. China's coal consumption accounts for 53% of world consumption. In comparison, Indonesia witnessed a significant growth of about 36% in coal consumption, reaching a total of 201 Mt. This surpasses the 200 Mt make for the first time in history, positioning Indonesia as the fifth most significant consumer of coal globally, behind China, India, the United States, and Russia. This economic activity increased the demand for electricity and heat, boosting demand for coal as an energy source. Furthermore, the Russia-Ukraine conflict significantly impacted the coal market, as Russia is one of the world's top coal exporters. This war disrupted gas supplies to Europe, resulting in heightened global competition for energy resources. As a result of the geopolitical turbulence, European countries actively sought to lessen their dependency on Russian energy sources, worsening the problem.

As seen in Figure 1, The fluctuation in coal prices has impacted Indonesian coal companies, resulting in significant effects on income and stock values. Indonesia's coal sector, which has a significant position in the international coal market, is exceptionally

responsive to changes in coal prices. These companies witnessed an upsurge in revenue and profitability as coal prices climbed since higher prices led to augmented profits. The prospects of coal companies will be closely connected to the trend of coal prices. Despite its ongoing importance as an energy source globally, the Price of coal remains highly volatile due to market conditions.

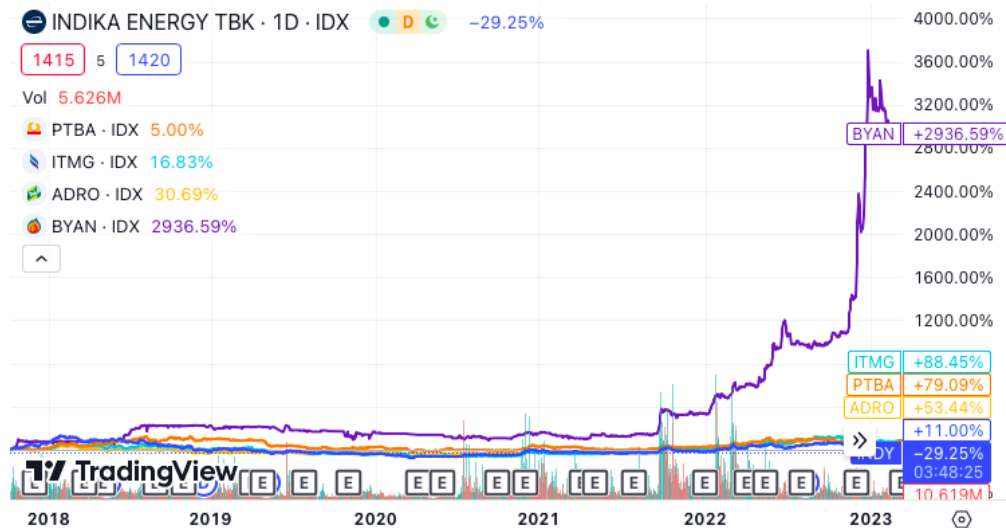


Figure 1. Trend of stock of Indonesia coal company (ADRO, INDY, ITMG, BYAN, and PTBA)

Furthermore, the anticipated acceleration of international dedication to addressing climate change is projected to lead to the regulation of stricter carbon emissions limits by the year 2030. This will significantly affect the coal sector since it will result in a decrease in demand and an increase in costs due to several countries shifting towards cleaner and more sustainable energy sources. Therefore, investors and stakeholders must conduct an in-depth analysis of the long-term profitability and risk associated with coal enterprises, particularly in a changing energy environment.

COMPANY PROFILE

Indika Energy is one of the largest mining companies in Indonesia. Founded in 2000, this company has become a leading Indonesian and global energy industry player. In 2008, it became a public company on the Indonesia Stock Exchange, which was one of Indika Energy's milestones. This step shows that the company's investors and stakeholders must conduct an in-depth analysis of the long-term profitability and risk associated with coal enterprises, particularly in a changing energy environment, to transparency and its commitment to responsibility to stakeholders in Indonesia. Based on Indika Energy Annual Report [3], the company has implemented four fundamental strategies to improve its performance. The first approach is to maximize efficiency and Synergy Optimization, emphasizing improving operational efficiency, reducing costs, exploiting intra-group cross-selling opportunities, and centralizing certain functions to improve the integration of capabilities across the business and increase profitability. The second strategy is diversification, which aims to increase the contribution of income from non-coal businesses, including from the renewable energy sector and services not related to the energy sector. The third strategy is Focus and Commitment to ESG by prioritizing environmentally friendly green initiatives being at the forefront in providing benefits to the surrounding community through education, health, safety, and community empowerment initiatives. The fourth strategy, Prudent Management, focuses on maintaining responsible financial practices. Emphasizes prudent financial management, maintaining healthy operating cash flow, and a target ratio of total debt to EBITDA. Selective in the use of cash and spending capital costs. The energy business pillar mainly focuses on the exploration, production, and processing of coal and other energy sources, as well as related services and infrastructure. With a strong emphasis on sustainability, Indika diversified the business into minerals, green business, venture digital, and others.

BUSINESS ISSUE

PT. Indika Energy primarily depends on coal prices for 75%–88% of its income. This makes the company vulnerable to commodity price fluctuations, especially coal. The volatility of coal prices significantly affects the financial stability of PT. Indika

Energy. Indika Energy has implemented a strategy called Efficiency and Synergy Optimization. This strategy aims to enhance operational efficiency, reduce costs, and maximize cross-selling opportunities within the company. Additionally, certain functions are centralized to improve the integration of capabilities across different business units, ultimately leading to greater profitability. The profitability ratio can measure whether the company has effectively executed this strategy.

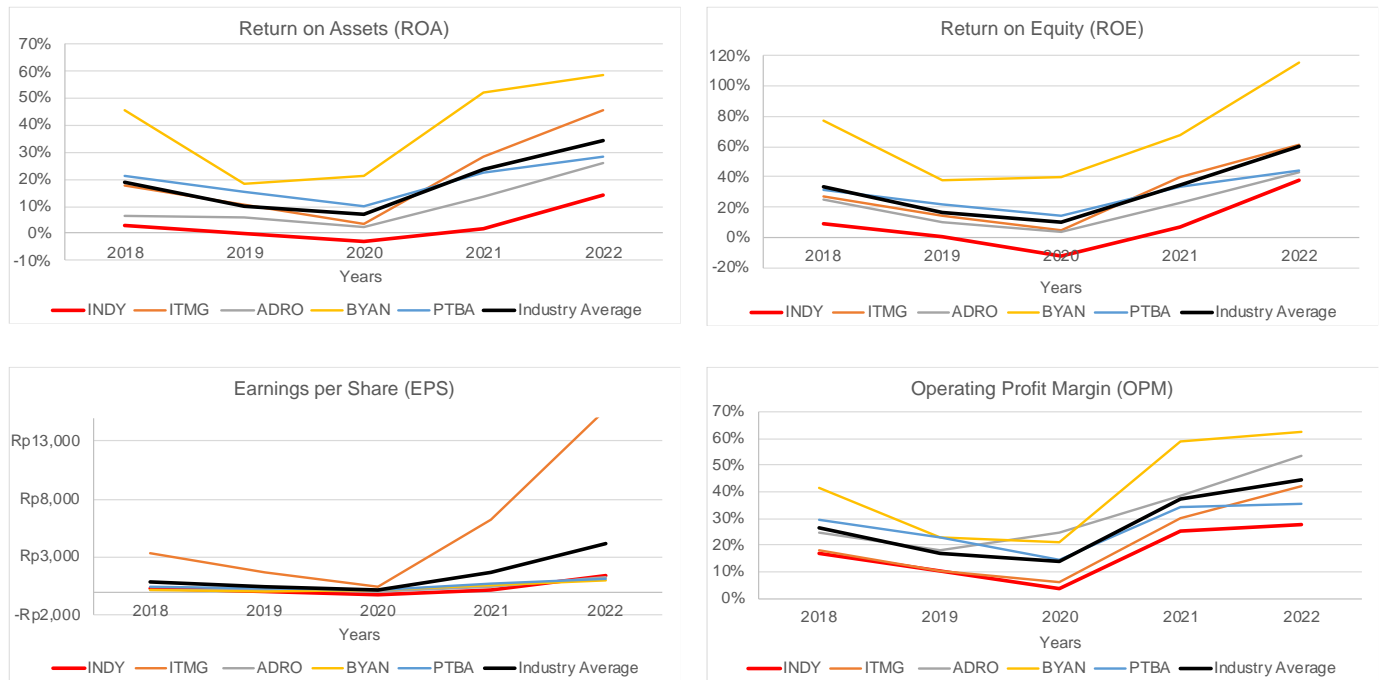


Figure 2. Profitability Ratio Performance

It can be seen from Figure 2 in the profitability performance, including ROA, ROE, EPS, and OPM; INDY, throughout the whole five years, consistently performed as the least profitable company among its competitors. Another strategy that Indika Energy has implemented is Prudent Management, which emphasizes healthy operating cash flows.

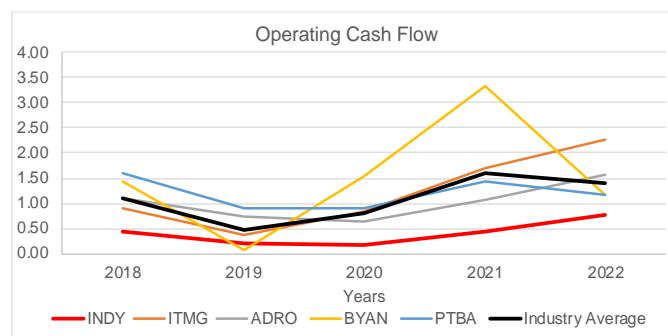


Figure 3. Operating Cash Flow Ratio

It can be seen from Figure 3 that Indika Energy's Operating Cash Flow performance also positions as the lowest among the industry peers. Both the profitability performance and operating cash flow performance results do not align with the purpose of strategy stated by the company on the annual report, which also negatively impacts the company's stock performance. Hence, conducting an in-depth analysis of the company's intrinsic value and overall financial performance is essential.

CONCEPTUAL FRAMEWORK

The conceptual framework stands at the central point of an empirical inquiry. The conceptual framework serves as a navigational tool, providing direction and a solid study foundation. It generates an integrated ecosystem which assists researchers in intentionally linking all study components. This method illustrates the interconnections between these elements by revealing gaps, overlaps, tensions, and contextual factors that influence the research context and the analysis of phenomena within the context [4].

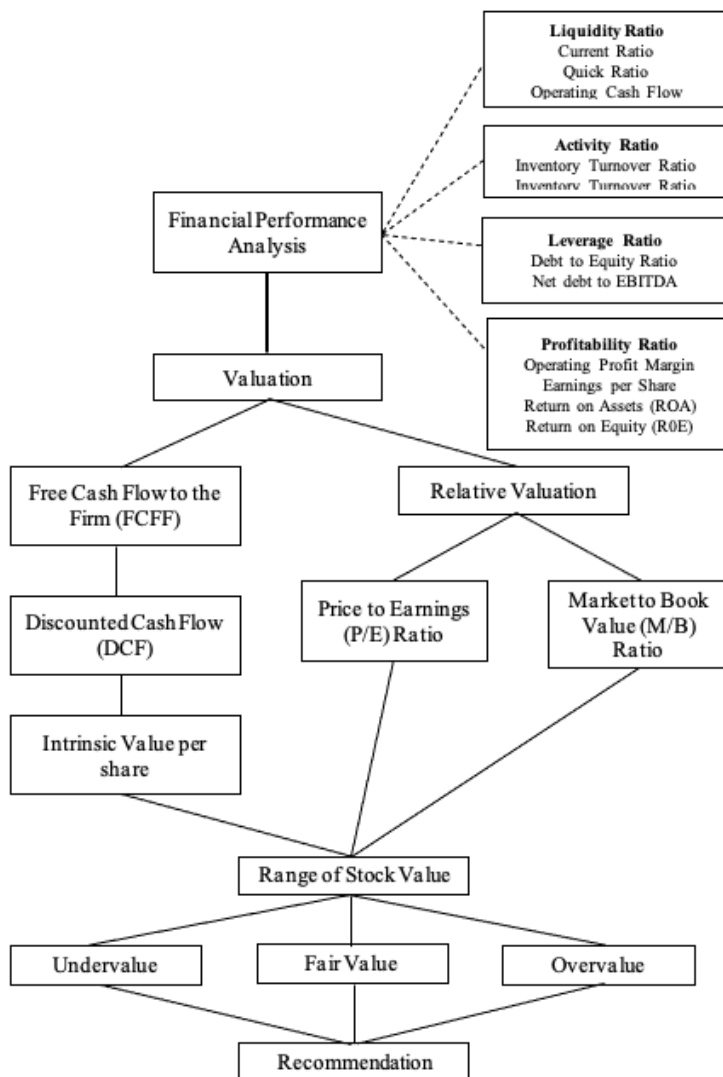


Figure 4. Conceptual Framework

In this study, after learning about the business issue at PT, Indika Energy Tbk. INDY, the first step is to determine the company's overall financial performance and compare it with other companies within the industry to assess the internal condition of the company. The author used selected ratios representing the industry based on the literature review. The next step is to conduct a stock valuation using the DCF valuation FCFF approach and relative valuation with a price-to-earnings ratio and market-to-book value ratio. After the stock value from both methods has been found, whether the stock is undervalued, fair value, or overvalued can be determined. Then, based on the result of the analysis, the author will give a recommendation.



RESEARCH METHODOLOGY

This study uses PT. Indika Energy was selected as the research object based on the phenomenon and research objectives. This research only gathers secondary data, which consists of information obtained from pre-existing sources. According to Kabir (2016) [5], secondary data is valuable, especially in the literature review section, and acts as a foundation for the study. This existing data can offer historical context and background information essential for the research process. Secondary data sources include an extensive range of publicly available data, including e-journals, e-books, companies' annual reports, financial statements, Indonesian Stock Exchange (IDX) data, and official company websites. This research consists of four data analysis methods: PESTLE analysis, financial performance analysis, absolute valuation, and relative valuation.

RESULT AND DISCUSSION

A. PESTLE Analysis

1) Political

The political dynamics in Indonesia significantly influence the country's energy policies, particularly in the coal sector. This industry is deeply involved with political interests, creating a complex relationship between the government, political figures, and coal companies. Government Regulation No. 15 of 2022 outlines taxation policies for entities holding mining business licenses and special mining business licenses, including those continuing operations under previous coal work contracts. Moreover, the Indonesian government has established comprehensive guidelines for the taxation of the coal mining industry. These encompass income tax, value-added tax (VAT), land and building tax, carbon tax, stamp duties, excise, customs duties, and regional taxes and retributions. Consequently, coal mining companies in Indonesia are experiencing increasing operational costs. Other than that, there is growing pressure on these companies to mitigate their environmental footprint, aligning with global environmental standards and sustainability goals [6] (KPMG, 2022).

Governments globally are intensifying efforts to support climate change and greenhouse gas emissions. This trend is putting significant pressure on the coal mining and energy sectors, given that coal is a major contributor to greenhouse gas emissions. In this context, the Indonesian government has committed to attaining a 23% share of renewable energy in its total energy mix by 2025 [9]. In September 2020, the President of Indonesia signed a regulation supporting the early discontinuation of coal-fired power plants and implemented a prohibition on constructing additional coal-fired power facilities after 2030. This regulation is a fundamental element of the Just Energy Transition Partnership (JETP), a strategic attempt to guide Indonesia toward a more sustainable energy. This proposal was submitted in August 2023 to the Indonesian government and its financial partners [10]. The preventive strategy for reducing greenhouse gas emissions indicates a high probability of implementing more taxes and regulations specially designed for the coal mining and energy production industries in the future. These initiatives are expected to align with worldwide environmental goals and Indonesia's commitment to a more sustainable and environmentally friendly energy framework.

2) Economic

The global coal market is highly sensitive to the fluctuation of coal capacity and production output. This is mainly driven by the economic growth of both domestic and international. Economic growth is linked to energy demand, with coal serving as a primary source of electricity generation. The coal mining industry has significantly contributed to Indonesia's development and economy. According to the Institute for Essential Services Reform (IESR)[1], the coal industry alone contributes approximately 3.6% to the nation's GDP.

In 2019, an ongoing trade war between the United States and China and other geopolitical events negatively impacted global commerce and investment. Consequently, both emerging and developing countries experienced a significant economic slowdown, making the overall global growth decline to only 2.4% from 3% in 2018. Moreover, the coal price steadily declined throughout the year, driven by this geopolitical event, the new policies that Europe implemented to reduce carbon emissions, and China's restriction of coal import as the country's rising reliance on domestic coal. In 2020, the COVID-19 pandemic spread to nearly 178 countries, precipitating an economic crisis and exacerbating poverty. The global economy faced unavoidable challenges due to mobility restriction policies implemented to curb the spread of COVID-19. This led to a sharp decline in global economic activities, encompassing consumption, production, trade in goods and services, and investment. Consequently, the coal market experienced a downturn, further aggravated by the pandemic's impact. However,



towards the end of 2020, coal prices began to recover, showing significant improvement in 2021 and 2022, as noted in the INDY Financial Statement of 2022[3].

2021 marked a recovery phase in the global economy, fuelled by accelerated vaccination efforts and substantial policy. This global recovery positively influenced Indonesia's national economy, which also experienced a rebound with maintained stability. The reduced spread of COVID-19 in 2021 and the implementation of a vaccination program enabled the Indonesian government to gradually relax the Community Activity Restrictions (PPKM) in several regions, as detailed in the INDY Annual Report of 2021. 2022 witnessed a substantial surge in energy prices, with coal prices reaching a record all-time high. This increase proved beneficial for Indonesia, a major coal exporter. The dynamics of the global economy, along with the resolution of ongoing crises, significantly influenced coal market prices. Geopolitical tensions, especially the conflict between Russia and Ukraine, disrupted supply chains, increased transportation costs, and added to the volatility of the coal market. These geopolitical tensions led to a spike in commodity prices, driving global inflation to levels not seen in decades, as reported in the INDY Financial Statement of 2022[3].

3) *Social*

Coal mining operations were often connected with various environmental and health issues, such as air and water pollution, land degradation, noise pollution, and rising greenhouse gas emissions. Several issues have been raised within the industry, especially issues that heavily impact the land, such as loss of agricultural land and habitat destruction. That issue often leads to conflicts between the mining companies and the local communities [8]. The public perception towards coal companies and energy production has also shifted in recent years toward an opposing viewpoint, mainly due to the spread of awareness of cleaner energy resources. This transition highlights the immediate need for improving social development programs, especially in areas impacted by coal mining operations.

To overcome these challenges, coal companies should apply Good Manufacturing Practices (GMP). This practice is essential to ensure the manufacture of high-quality products and limit any adverse effects on the environment and human health. Furthermore, adopting GDP is a strategic approach to ensure the local nearby derive concrete benefits. The Corporate Social Responsibility (CSR) program is one of the critical elements of the GMP; it is essential to understand that CSR is not only an act of charity of public relations but also a legal requirement. This requirement is explicitly outlined in the UU PT Article 74, paragraph (1) of Law Number 40 of 2007. By recognizing and addressing the broader cultural and ecological impacts, coal mining activities could contribute to a more sustainable and cooperative cohabitation with those impacted.

4) *Technology*

The rapid technology transition in the coal mining industry has positive and negative impacts on the company. On the positive side, the technological advancement has not only significantly improved the efficiency of the operations, which provides a cost reduction opportunity, but also enabled the company to minimize its environmental footprint [11]. These technical advancements enable the strict regulation and supervision of air and water pollution and the effective management of waste and by-products generated by mining operations. Other than that, automation and remote control have led to significantly improved productivity and safety standards. Technological advancement also negatively impacts coal companies, especially digitalization, making the company's operation increasingly dependent on technology and increasing cybersecurity risk. Consequently, developing and implementing risk mitigation strategies become crucial to protect the company from these threats. Such risk will also heavily impact the company's financial performance.

5) *Legal*

The legal framework regulating mineral and coal mining in Indonesia is principally outlined in Law No. 4 of 2009 on Mineral and Coal Mining, later modified by Law No. 3 of 2020. This law is designed considering various aspects such as the issuance of mining licenses, measurement of safeguarding the environment, and requirements for engaging with local communities, making this law crucial. In order to enhance and put into effect the rules and regulations of this legislation, Government Regulation No. 96 of 2021 was issued, providing comprehensive operational instructions for mineral and coal mining companies [12]. This regulation clarifies and maintains the concepts stated in the fundamental law, ensuring that mining operations comply with national interests and international standards of excellence. A significant change in this regulatory framework is the implementation of Indonesian Government Regulation No. 25 of 2023. This rule was introduced in early 2023, representing substantial progress in the Indonesian mining industry. This presents an innovative regulation for



the identification and categorization of mining areas. Indonesia's consistent dedication to improving and updating its ways of managing the mining sector is demonstrated by this development. Indonesia's objective in implementing these revised laws is to achieve an optimal balance of economic progress, environmental preservation, and social responsibilities, ultimately promoting a more integrated and ethical mining sector.

6) *Environment*

Coal mining has been recognized as one of the most ecologically damaging industries known for its harmful effects on ecosystems through water pollution, land degradation, and air contamination. The growing awareness toward cleaner energy sources, along with the environmental commitment stated in the Paris Agreement, has led to more intense attention from coal mining businesses, with companies aggressively pursuing and implementing inventive approaches and technology to minimize the ecological footprint. Environmentally friendly methods of handling carbon, like carbon taxes and pollution trade plans, are becoming more popular due to the urgent need for sustainable practices. These actions are specifically designed to enforce financial penalties on greenhouse gas emissions, notably those emitted by coal combustion. These carbon pricing systems successfully encourage a transition from coal by increasing the cost of coal relative to cleaner energy sources. Implementing such mechanisms signifies a crucial step in aligning the coal industry with global efforts to mitigate climate change and promote ecological balance.

B. Financial Performance Analysis

1) *Liquidity Ratio*

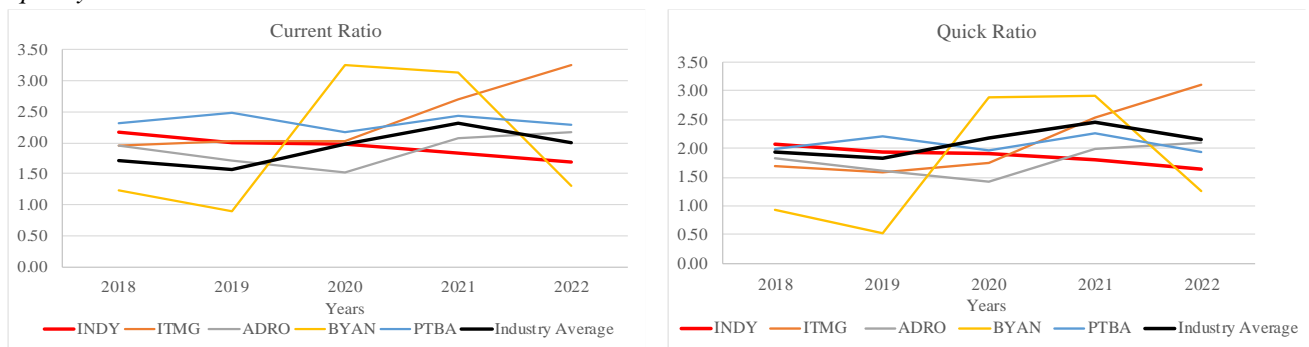


Figure 5. Current Ratio and Quick Ratio

Figure 5 illustrates the current and quick ratio performance of coal mining companies in Indonesia. Three out of five companies can manage the current ratio performance throughout five years. INDY has started its position as the first and second-highest performance. However, INDY cannot maintain its position as its performance constantly declines, averaging 6% to 10% throughout the five years. This is mainly due to the fluctuation in the cash and cash equivalent and the decrease in operations, which is impacted by the Kideco Average Selling Price (ASP). In 2019, the company had a rise in its current liabilities due to its subsidiary's expanded operations. This led to higher trade account payables and an increased part of long-term syndicated bank loans for the Exxon project ("Emily Project"). INDY's current assets and liabilities increased significantly in 2021. The company's Petrosea divestment plan is expected to sell a non-current asset; consequently, liabilities exceeded assets. This imbalance further declines the current ratio position INDY below the industry average. The performance continues to decline because of a decrease in Petrosea and increased taxes and trade accounts payable.

In contrast, BYAN has the most noticeable fluctuation; it is the only company that performed below 1.5. In 2020, the company experienced a significant surge while the others still experienced a decline. Similarly, PTBA experienced fluctuation between 0.9 and 2.3 throughout for five years. However, at the end of the period, BYAN's performance dropped to the lowest, and PTBA back to its initial position. ADRO initially experienced a decline yet showed a remarkable recovery in its current ratio performance, with a significant rise of almost 40% from 1.51 to slightly above 2, followed by an additional 5% rise in 2022, placing the company above the industry average. ITMG consistently maintained a current ratio above the industry average, except for 2020. It showed significant improvement in 2021 and 2022, leading to the most excellent



liquidity status among its peers. This was shown by a current ratio of 3.26. Meanwhile, ITMG's quick ratio shares a similar trend as its current ratio; however, its quick ratio started as the second lowest and then began to improve significantly in 2021 and was also positioned as the highest in 2022.

According to Figure 3, which demonstrates the operating cash flow performance of coal mining companies in Indonesia, INDY consistently performed the worst throughout the five years. In the initial two years, all companies experienced a decline due to decreasing coal prices and consequently reduced revenue generated by the companies. BYAN obtained a conservative \$100 million short-term bank loan in 2018. Nevertheless, the OCF ratio observed a significant decline in 2019 due to reduced revenue, considerable income tax payments, and a raised short-term bank loan amounting to \$300 million. The absence of dividend payments in 2021 drove BYAN's small current liabilities, which led to a favourable performance. In contrast, BYAN's OCF ratio significantly declined in 2022 due to a dividend distribution of \$1 billion.

ITMG overtook PTBA at the end of the period with 2.26, after PTBA started with 1.59. In 2019, all firms dropped 50% on average. PTBA was the most liquid, while BYAN fell 94% to almost zero. ITMG and BYAN rebounded, climbing to 0.83 and 1.53, respectively, whereas INDY, ADRO, and PTBA's OCF ratios declined 21%, 14%, and 1% until 2020. In 2021, all companies increased their OCF ratios, led by BYAN at 3.33, followed by ITMG, PTBA, ADRO, and INDY at 0.43. This is mainly attributed to increased revenue from higher ASP and sales volume. In 2022, the trend continued positively for most companies, with a notable near doubling of operating cash flow from the previous year, and even INDY, despite being the weakest, showed a substantial improvement with an 84% increase in its OCF ratio, only slightly impacted by a 4% rise in current liabilities. In 2022, most companies experienced a near doubling of operating cash flow, and even INDY, the weakest, saw an 84% increase in its OCF ratio, only slightly affected by a 4% rise in current liabilities. Most corporations performed stronger in 2022 than in 2021.

2) Profitability Ratio

According to Figure 2, INDY and ADRO continuously underperformed in ROA, consistently falling below the industry average. This occurs to INDY due to the company's high COGS, accounting for 78% of its revenue on average for five years, mostly allocated to subcontractor expenses, resulting in a minimal net income. In contrast, BYAN has consistently performed the best in the industry since the beginning of the period. This remarkable achievement is mainly attributable to the company's ability to generate net income that accounts for 33% of its revenue over five years. This sets it apart from its competitors, such as ITMG, ADRO, and PTBA, whose net income ranges between 10% and 20%. While PTBA, this company had the second-highest performance throughout the first three years. However, its ROA experienced a gradual fall annually, decreasing from 21% in 2018 to 10% in 2020. Although in 2021, the company showed an improvement with a peak of 28%, PTBA's ROA remained lower than the average for the industry. ITMG's performance for the initial two years is similar to the industry average, followed by a sharp decline in 2020, making it fall under the industry average. However, the company's performance began to surpass the industry average in 2021 and will continue to exceed the industry average in 2022.

In terms of ROE, INDY also consistently lagged behind its industry peers. In 2020, INDY faced significant challenges in managing its ROE performance, resulting in a negative ROE performance. Even so, INDY improved its performance within the next two years, showing significant improvement but still positioned as the lowest in the industry. This happened as the company heavily relied on debt, severely impacting its equity. Overall, all companies experience the same trend, declining from 2019 to 2020 and a rebound from 2021 to 2022. ADRO, the company, consistently performed as the second lowest, with its performance doubling in the last two years. Both PTBA and ITMG perform similarly to the industry average. PTBA performed below the industry average at the end of the period. BYAN is the only company to continually manage its ROE performance, the greatest and twice the industry average during the period.

Regarding EPS, ITMG stood out in its industry as its performance consistently outperformed its peers. Even though it experienced a decline in 2019 and 2020, ITMG experienced an increase in 2021 and notably doubled its earnings per share in 2022. Other companies, including PTBA, INDY, and BYAN, share a similar trend as ITMG; however, in 2021, these companies will only gradually recover.

Regarding Operating Profit margin, BYAN maintained its status as the most efficient entity in generating profits from its core business operations, while INDY consistently exhibited the least favourable performance. INDY's substantial expenditure on Cost of Goods Sold (COGS) has caused NDY to be in the lowest position, primarily attributed to its



subsidiaries' reliance on subcontractors for most mining, transportation, and barging operations. The INDY COGS accounts for 78% to 90% of its revenue.

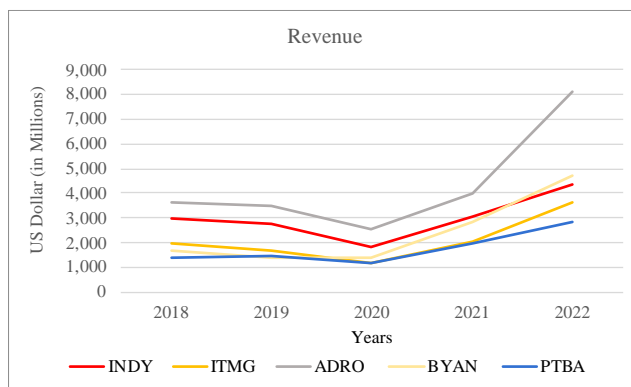


Figure 6. Revenue Trend

As seen in Figure 6, Each company had similar revenue trends over five years, driven by coal prices. In 2019, performance declined across the industry, with PTBA falling 20% and ADRO 30%. INDY, ITMG, and BYAN fell over 40%. In 2020, the only time INDY had an unfavourable ratio of -1%, as INDY allocated 90% of sales to COGS. PTBA, ITMG, and ADRO fell 40% this year, while BYAN's OPM fell 8%. As a result of simultaneous reductions in both COGS and Selling, General, and Administrative (SG&A) expenditures, BYAN was able to achieve an outstanding recovery in 2021, increasing its OPM from 20% to a remarkable 58%, which enabled the company to reach a double drop in comparison to its competitors. There was also a significant rise in OPM in INDY, ITMG, and PTBA, which accounted for an increase of at least 20% more than before. However, only ADRO saw the lowest growth, from 24% to 38%. In 2022, ADRO and ITMG's OPM performance of ADRO and ITMG significantly improved by more than 10%. This improvement was primarily due to decreases in COGS and SG&A accounts. INDY also reduced its COGS by 4%, but its SG&A expenditures remained similar to the previous year. Although the improvement this year is not as significant as the previous year, the company's operation is stabilizing instead of showing significant improvement.

3) Activity Ratio

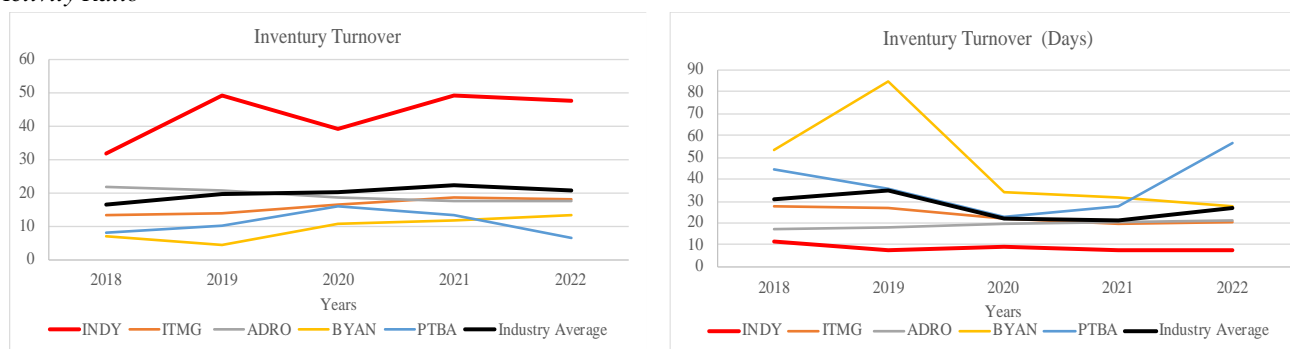


Figure 7. Activity Ratio

Figure 7 represents the activity ratio, including inventory and inventory turnover (days). It shows that INDY continuously performed the highest in the industry over the past five years. INDY's substantial allocation for COGS is mainly the reason it can perform the best in both ratios. INDY has consistently excelled in managing an inventory turnover ratio between 7 and 11 days, considerably lower than the industry average. INDY's inventory levels remained steady, averaging around 3% throughout five years. On the other hand, ADRO's trend has roughly remained stable throughout the period. Beginning positioned as the second-highest inventory turnover and began to perform nearly similar to the industry average



for the rest of the period. ITMG, on the other hand, showed a consistent increase in inventory turnover but remained below the industry average. Its performance fluctuated between 10 and 20, closely aligning with ADRO in the last two years.

Although BYAN's inventory turnover ratio exhibited a general upward trend, it tended to decrease daily. BYAN maintained lesser COGS expenditures, with a minimum of 33% in the final year and a zenith of 67% in 2022. BYAN encountered a significant rise in the initial year, from 53 to 85 days. However, the company experienced a substantial improvement in 2020, reducing its turnover period to 34 days; by 2022, this figure had skyrocketed to a remarkable 28 days. As for PTBA, it demonstrated volatility, beginning with a surge from 2018 to 2020 and subsequently declining until 2022. PTBA's performance shows a contrasting trend, with the company being able to reduce it to less than one month during the first three years. However, the company experienced a gradual increase in inventory turnover days, teaching 28 days in 2021, then rising to almost two months by 2022, surpassing its initial performance in 2018.

4) Leverage Ratio

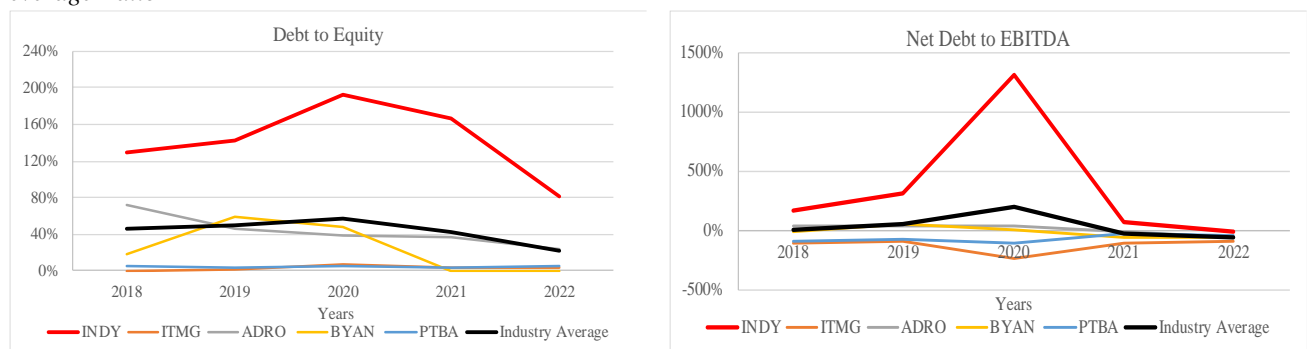


Figure 8. Leverage Ratio

Based on Figure 8, which represents the DER and Net Debt to EBITDA ratio performance of coal companies, INDY started the year 2018 with a DER of 130%, which then increased to 142% in the following year and reached a high of over 200% in 2020. The peak demonstrated a significant increase in financial leverage, mainly attributed to the maturity of debts in 2022 and 2023, including a massive bond of US\$575 million due in 2024. The bonds were used to purchase further shares in Kideco and support other company needs. INDY issued a US\$675 million five-year bond with an 8.25% yield in October 2020 to refinance the 2022 and 2023 notes. INDY reduced its DER to 82% and almost 0% of net debt to EBITDA at the end of the period, although it still had the highest DER among its peers, regularly surpassing the industry average.

ADRO, on the other hand, showed a decreasing trend in its performance. Initially positioned as the second-highest, with a DER of 72%, the business maintained a position below the industry average for three consecutive years until it eventually equalled the industry average at the end of the period. BYAN significantly increased its performance from 19% to 60% in 2019. However, the company reduced its performance to 21% in 2020. Furthermore, BYAN maintained a 0% DER in both 2021 and 2022, which is outstanding. This position by BYAN is far below the industry average, following ITMG and PTBA, which have maintained the position since the beginning of the period. In contrast, ITMG has maintained a low net debt to EBITDA ratio, frequently showing negative values for the entire period. PTBA also showed a mostly negative net debt to EBITDA ratio, suggesting a cautious attitude toward debt. Meanwhile, BYAN and ADRO demonstrated a more outstanding balance in their net debt to EBITDA performance, lying close to the industry average.

C. Absolute Valuation

1) Cost of Debt

According to Figure 2, INDY and ADRO continuously underperformed in ROA, consistently falling below the industry average. This occurs to INDY due to the company's high COGS, accounting for 78% of its revenue on average for five years, mostly allocated to subcontractor expenses, resulting in a minimal net income. In contrast, BYAN has consistently performed. To determine the pre-tax cost of debt, the author calculated the average interest rate from the company's Senior Notes and loans.



Table 1. Calculation of Average Pre-tax Cost of Debt

Pre-Tax Cost of Debt		Sources
Senior Notes VI	5.88%	Financial Statement 2022
Senior Notes VII	8.25%	p.144 -146
Interest Rate per Aunumn US Dollar	3.47%	p.141
Medium-term note Rupiah	8.57%	p.98
Average Pre-tax Cost of Debt	6.54%	

The analysis presented in Table 4.1 yields an average Pre-tax cost of debt at 6.54%. Having determined this figure, the subsequent step involves calculating the cost of debt. This calculation is outlined below:

Table 2. Calculation of Cost of Debt

Pre-tax Cost of Debt	6.54%
Tax Rate (T)	22%
Kd = Pre-tax Cost of Debt x (1-T)	5.10%

2) *Cost of Equity*

In this analysis, the author selected a 10-year government bond as the basis for the risk-free rate, referencing the World Government Bonds and determining a value of 6.725%. The beta stock for INDY was derived from the adjusted beta stock calculated by the Pefindo website. The Country Risk Premium was also incorporated based on Aswath Damodaran's [7] July 2023 update, which accounted for a 7.89% premium. The Cost of Equity is outlined below:

Table 3. Calculation of Cost of Equity

Cost of Equity (Ke)	
Risk-Free Rate	6.73%
Beta	2.618
Market Risk Premium (rm)	7.89%
Ke = rf + beta x rm	27.4%

3) *Discount Rate*

The step involves calculating the WACC upon determining the cost of debt and equity. The calculation is outlined below:

Table 4. Calculation of WACC

Weighted Average Cost of Capital (WACC)	
Market Value of Debt	\$ 1,099,682,045
Market Value of Equity	\$ 1,340,173,963
Total Value of Capital	\$ 2,439,856,008
Debt to Total Capital Ratio (Wd)	45%
Equity to Total Capital Ratio (We)	55%
WACC = (kd x Wd) + (ke x We)	17.34%

4) *Financial Projection Assumption*

Projecting the financial statement is proposed to offer an informed estimate of the company's financial outcomes within this timeframe. The income statement projection is essential, covering a variety of accounts that are essential for an in-depth understanding of the company's financial dynamics. The following accounts are included:



- a. Revenues
- b. Cost of Contract and Goods Sold
- c. Equity in Net Profit of Associates
- d. Investment Income
- e. Selling, General, and Administrative Expense
- f. Depreciation and Amortization
- g. Finance Costs
- h. Final Tax
- i. Fair Value Changes on Contingent Consideration Obligation
- j. Others – Net
- k. Income Tax Expense

Indika Energy's revenue was divided into two segments: coal and non-coal. This specific breakdown of the revenue percentages is presented below:

Table 5. Revenue Breakdown Coal vs. non-Coal year 2018 – 2022

	2018	2019	2020	2021	2022
Coal	88.2%	75.3%	76.2%	87.1%	88.4%
Non-Coal	11.8%	24.7%	23.8%	12.9%	11.6%

Based on Table 4.5, Indika Eneqy's revenue was mainly derived from the coal business throughout the whole five years. Hence, the growth of coal is critical in determining the company's revenue stream. The author will use the coal market's Compound Annual Growth Rate (CAGR) as a fundamental assumption for revenue projection. Based on reports from Mordor Intelligence and Statista, the coal market is projected to grow at an annual rate of 6%. For projecting the company's cost of contract and goods sold (COGS), selling, general and administrative (SG&A) expenses, depreciation and amortization (D&A), and equity in net profit of associates, the author assumes this account growth as a function of revenue. Historical data over the past five years reveals that, on average, these expenses constitute 78%, 5%, 0.18%, and 1% of revenue, respectively. This provides a structured basis for future projections.

Furthermore, this research considers other income and expenses, such as investment income, depreciation and amortization, finance costs, final tax, and fair value changes on contingent consideration obligations. These are assumed based on their historical five-year average growth rates. The study applies a corporate income tax rate of 22% in terms of taxation, in line with Indonesian tax regulations.

Donnelly (2023), Lee (2023), Tarway (2023), and Nachimow (2023), in projecting the cash flow statement, have highlighted the significance of revenue as a critical indicator of financial health and performance; hence the cash flow statement projection will be as a function of revenue. The difference between current assets and liabilities determines a change in net working capital. To evaluate temporal changes, the study calculates this by subtracting the prior period's net working capital from the current period's. Regarding capital expenditures, the projection aligns with the revenue growth rate, assuming that Indika Energy will maintain a proportional level of investment relative to its earnings.

5) *FCFF (Free Cash Flow to the Firm)*

In this comprehensive valuation study of Indika Energy, the Free Cash Flow to the Firm (FCFF) method is a pivotal analytical tool. This approach focuses on determining the company's intrinsic value by assessing its ability to generate cash flows independent of its financing structure. The variables critical for calculating FCFF are:

- a. Earnings Before Interest and Tax (EBIT)
- b. Net Operating Profit After Tax (NOPAT)
- c. Depreciation and Amortization (D&A)
- d. Capital Expenditure (Capex)



These variables are intricately derived from the company's projected financial statements. Then, FCFE is calculated, and its result is discounted, reflecting the present value of these future cash flows, which this step considers as the core of the valuation analysis—followed by calculating the terminal value, applying a perpetual growth rate of 2%. This assumption ensures a realistic and sustainable valuation, aligning with broader economic expectations.

Table 6. FCFE Calculation of Indika Energy (in Million USD)

DCF Valuation											
Year	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	Terminal Value
EBIT	441.99	475.01	510.01	547.10	586.40	628.05	672.19	718.96	768.53	821.07	
NOPAT	344.75	370.51	397.81	426.74	457.39	489.88	524.31	560.79	599.46	640.43	
D&A	5.84	6.19	6.56	6.96	7.37	7.82	8.29	8.78	9.31	9.87	
Capex	190.33	201.75	213.86	226.69	240.29	254.71	269.99	286.19	303.36	321.57	
Change in NWC	18.40	29.85	34.08	38.97	44.61	51.13	58.67	67.38	77.45	89.09	
FCFE	141.86	145.10	156.43	168.03	179.86	191.85	203.93	216.00	227.95	239.64	1559.16
Future Value	120.55	104.78	95.99	87.62	79.70	72.24	65.26	58.74	52.68	47.06	306.17

6) *Intrinsic Value*

After TV has been found, the future value is calculated by summing all future values. This total future value is then used to calculate the intrinsic value by subtracting the net debt and dividing it by the number of outstanding shares.

Table 7. Intrinsic Value Calculation of Indika Energy

Total Future Value	\$	1,090,789,953
Net Debt	\$	(71,888,382)
Number of Shares Outstanding	\$	5,210,192,000
Intrinsic Value per Share	\$	0.22
Intrinsic Value per Share	IDR	3,274

Based on the calculation of intrinsic value using the DCF valuation, it results in IDR 3,274. Meanwhile, the market accounted for IDR 1,540. Hence, the stock is considered undervalued and has a potential upside of IDR 1,734 or 113%.

D. Relative Valuation

1) *Price to Earnings (PE) Ratio*

In the following analysis, the Price-to-Earnings (P/E) ratio of PT. Indika Energy and its industry counterparts are outlined below; the market price used in this calculation is the market price on November 24th 2023.

Table 8. Price to Earnings Ratio of INDY, ITMG, ADRO, PTBA, and BYAN

Company	Market Price (24 Nov 2023)	Earnings per share	Price-to-earnings ratio
INDY	1,540	1,456	1.06
ITMG	25,400	15,760	1.61
ADRO	2,540	1,314	1.93
BYAN	19,400	1,025	18.92
PTBA	2,460	1,109	2.22
Average Price to Earnings Ratio			5.15



As shown in Table 8, a thorough analysis reveals that PT. Indika Energy has the lowest Price-to-Earnings (P/E) ratio among its competitors, with the industry average P/E ratio at 5.15. This shows that the company is undervalued. Such a lower P/E ratio can be a potential underestimation by the market. This indicates that investors pay less for each dollar of Indika Energy's earnings than its peers.

2) Price to Book Value (PBV) Ratio

Prior to the determination of the Price-to-Book (P/B) value ratio. The book value calculation is outlined below:

Table 9. Book Value Calculation of INDY, ITMG, ADRO, PTBA, and BYAN

Company	Equity	Share Outstanding	Book Value per share	Book Value per share
INDY	1,189,283,697	5,210,192,000	\$ 0.23	IDR 3,389
ITMG	1,955,058,000	1,129,925,000	\$ 1.73	IDR 25,69
ADRO	6,024,600,000	31,985,962,000	\$ 0.19	IDR 2,797
BYAN	1,894,546,941	33,333,333,500	\$ 0.06	IDR 844
PTBA	1,933,261,584	11,520,659,250	\$ 0.17	IDR 2,492

After the book value has been obtained, the next step involves the calculation of the Price-to-Book (P/B) value ratio. The market price employed in this calculation is specifically taken from the closing price on November 24th, 2023, ensuring a relevant and timely assessment. The calculation of the Price to book value will be outlined below.

Table 10. Price to Book Value Calculation of INDY, ITMG, ADRO, PTBA, and BYAN

Company	Market Price (24 Nov 2023)	Book Value per share	Price-to-Book Value ratio
INDY	IDR 1,540	IDR 3,389	0.45
ITMG	IDR 25,400	IDR 25,69	0.99
ADRO	IDR 2,540	IDR 2,797	0.91
BYAN	IDR 19,400	IDR 844	22.99
PTBA	IDR 2,460	IDR 2,492	0.99
Industry Average			5.27

Based on the calculation of PBV presented in Table 10, Indika Energy has the lowest PBV ratio in its sector. The industry's average PBV ratio is 5.27, placing Indika Energy's ratio notably below this average.

E. Summary of Analysis

Indika Energy's financial performance analysis indicates that the company is experiencing severe liquidity, caused mainly by cash and cash equivalent fluctuations, driven by variables such as the decline in Kideco ASP in 2019 and the effect of COVID-19. Liabilities have been raised due to operational expenditures and divestment plans from Petrosea. Additionally, the global economic downturn in 2020 worsened the company's position by resulting in a fall in coal prices and, hence, the company's revenue. Indika Energy also continuously places in the lowest position in terms of profitability among firms, primarily due to its COGS, which amounted to a 78% average throughout the five years, outperforming industry competitors by a substantial margin. Consequently, the company's net income has reached its lowest point, amounting to just 12% of its most significant sales.

In comparison, rivals have achieved net income levels of over 30%. Additionally, Indika Energy maintains the highest leverage ratios, driven by financial leveraging through bond issuances with maturity dates in 2022 and 2023 and a substantial US\$575 million bond due in 2024. INDY issued a new bond due in 2025 aimed at refinancing the 2022 and 2023 bonds.

Based on the valuation that the author has computed, it may then be briefly summarised as follows :



Table 11. Summary of Valuation Result

DCF - FCFE		
Intrinsic Value	Market Value	Condition
IDR 3,274	IDR 1,540	Undervalued
Relative Valuation		
PER Company	PER Industry	
1.06	5.15	Undervalued
PBV Company	PBV Industry	
0.45	5.27	Undervalued

Based on the information shown in Table 11, it is evident that the INDY stock was found to be undervalued across all of the valuation methods. This undervaluation can be caused by several factors contributing to a lack of investor attraction. Poor financial performance also prevents the market from appreciating the company's stock. Another contributing aspect is that the company operates in the coal industry, which is cyclical. The sector is now experiencing a decline due to decreasing coal prices, which has the potential to influence investor sentiment towards INDY.

Indika Energy (INDY) has outlined a strategic plan in its annual report to improve operational efficiency and lower expenses. However, the company is encountering difficulties implementing this strategy, particularly evident in its consistent placement as the least profitable firm. The profitability ratio remains persistently low due to substantial expenditures on the Cost of Goods Sold (COGS), encompassing subcontractor payments, installation, communication supplies, and other direct costs specific to IINDY's operational structure over five years, amounting to 78%. This figure greatly exceeded the range of 51% to 68% seen among other companies in the same sector. Hence, IINDY's net income constitutes just 12% of its highest sales, which puts it at a significant disadvantage compared to rivals that achieve net income levels approaching 30%.

Moreover, executing the strategic effort known as "Prudent management" seems to encounter difficulties, as seen by the company's heavy dependence on debt to finance its activities. The operational cash flow, a crucial measure of a company's capacity to produce cash from its primary business operations, does not meet the criteria for a healthy operating cash flow compared to industry counterparts. Indika Energy's reliance on debt is emphasized by its consistently maintaining the highest leverage ratios throughout the five years. The company uses external finance to fund its operation through bond issuances with maturity dates in 2022 and 2023 and a substantial US\$575 million bond due in 2024. In 2020, the firm issued bonds due in 2025 aimed at refinancing the 2022 and 2023 bonds. However, the company's financial performance suggests that it is still facing difficulties in executing its goal of prudent management

CONCLUSION AND RECOMMENDATION

A. Conclusion

- 1) The financial performance analysis reveals that Indika Energy has the worst liquidity performance overall. This is primarily because of the cash and cash equivalents fluctuations, which were affected by the lower Kideco ASP in 2019 and during COVID-19. Additionally, operational expenses and plans to divest from subsidiaries have increased the company's liabilities. The global economic slowdown in 2020 facilitated IINDY's current position by influencing energy demand, which caused a decline in coal prices and, consequently, a reduction in revenue. The disposal in Petrosea has also bolstered the reduced Indian liquidity ratio.

Indika Energy consistently maintains its position as the least profitable firm. This is primarily attributable to substantial expenditures on the Cost of Goods Sold (COGS), which include payments for subcontractors, installation, communication supplies, and other direct costs specific to Indika Energy's operating structure. Over the five years, Indika Energy consistently recorded the highest percentage of COGS expenses at 78%, compared to counterparts ranging from 51% to 68%. Thus, INDY has the lowest net income as it only represents 12% of its revenue maximum, in contrast to rivals that achieve net income levels approaching 30%. This positioned INDY at a disadvantage regarding activity ratios since its cost of goods sold (COGS) is higher than its competitors, and it has the lowest inventory turnover.



Indika Energy has continuously maintained the most significant leverage ratios throughout the analysis. This is mainly due to INDY's financial leveraging, primarily driven by bonds maturing in 2022 and 2023, including a substantial US\$575 million bond due in 2024. The funds generated from these bond offerings, as explained in the 2021 and 2022 annual reports, were used to purchase more shares in Kideco and fund general corporate purposes. In October 2020, Indika Energy successfully issued a new bond for US\$675 million, with a maturity period of five years and a coupon rate of 8.25%. This issue aimed to strategically refinance the existing notes set to mature in 2022 and 2023, therefore strengthening Indika Energy's leverage position.

- 2) Based on the valuation using the DCF of FCFF methods, the terminal value of INDY results in an intrinsic value of IDR 3.274. Meanwhile, the market accounted for IDR 1,540. Hence, the stock potential upside of IDR 1,734. It is concluded that the INDY stock price based on FCFF valuation is undervalued.
- 3) The evaluation of relative valuation metrics, specifically the Price-to-price-earnings ratio (PER) and Price Book Value (PBV) ratio for INDY, reveals compelling insights. The determined PER of 1.06 and PBV of 0.45 position the stock significantly below the corresponding industry averages of 5.15 and 5.27, respectively. Both metrics indicate that INDY stock is considerably undervalued

B. Recommendation

1) For Companies

IINDY's main challenge is the significant allocation of funds towards the Cost of Contracts and Goods Sold. This significant expenditure is primarily directed towards subcontractors supporting most mining operations. To ensure optimal business operations, the firm must reduce its dependence on third-party subcontractors. Through the optimization of cost structures in this account, the firm has the potential to increase its profit margins, thus strengthening its overall profitability.

Moreover, a critical consideration for INDY is the necessity to manage its debt prudently. The corporation currently largely depends on debt to fund its operations. INDY needs to rapidly decrease its reliance on debt by improving its debt-to-equity ratio. This can be accomplished by carefully reducing the amount of debt or by implementing an efficient refinancing strategy that provides favourable terms. It is suggested that an extensive assessment of the company's capital structure be done to achieve a balance between debt and equity, which will encourage long-term financial stability and resilience. An organized approach would enhance IINDY's financial position and operational strength in the competitive business environment.

2) For Investor

According to the discounted cash flow (DCF) valuation, the INDY stock had a potential increase of 1,734, representing a 113% gain. The margin of safety is substantial. According to the relative valuation, the firm is undervalued compared to its competitors. Upon examining the firm's performance over the previous five years, it is evident that it has been positioned as the least profitable and liquid. These aspects have consistently declined, and the company has significantly relied on debt to fund its operations. Based on the analysis, the author does not recommend buying INDY stocks. However, the author does suggest that investors keep a close eye on INDY stock for the next two to five years. This is because the company has set a goal to generate fifty per cent of its revenue from sources other than coal by 2025. This aligns with the growing trend of renewable energy and makes the company less dependent on the volatility of the coal price.

3) For Future Research

For further research, utilizing the most recent and relevant data available is advisable, ensuring a comprehensive understanding of the current landscape. Furthermore, it is recommended that the range of comparisons be broadened by including a more extensive selection of competitors. This method will improve the study's comprehensiveness and provide a more nuanced viewpoint on the competitive landscape. To enhance the efficacy of the study, it is crucial to use advanced valuation methodologies and forecasting approaches to ensure the accuracy and relevance of the results, which accurately capture the dynamic nature of the subject matter. These methodologies may give the study a heightened degree of accuracy, significance, and overall influence.



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