Asean International Journal of Business
Vol.5 No.1 (2026)
e-ISSN: 2809-6673
pp.75-90

Stock Valuation on Energy Sector Companies within IDX High Dividend 20 Index Year 2025

Argari Alpharianto[1] & Dadan Rahadian[2]
1,2 Faculty of Economics and Business, Telkom University, Bandung, Indonesia
Email: [1] argari.alpharianto@gmail.com, [2]dadanrahadian@telkomuniversity.ac.id

DOI: https://doi.org/10.54099/aijb.v5i1.1455

ARTICLE INFO

Research Paper

Article history:
Received: 10 July 2025
Revised: 15 August 2025
Accepted: 19 November 2025

Keywords: Valuation; Energy Sector; Dividend Discount Model; Relative Valuation

ABSTRACT

The energy sector constitutes one of the largest component of the IDX High Dividend 20 Index for 2025, comprising five companies such as ADRO, AKRA, ITMG, PGAS, and PTBA. Over the past three years, this sector has exhibited the strongest upward trajectory, achieving a cumulative growth rate of 136% and an average annual return of 18,52% among these companies, thereby underscoring its appeal to dividend-seeking investors. This study examines the intrinsic value of five said companies using the Dividend Discount Model (DDM) and two relative valuation metrics (EV/EBITDA and Price to Earnings Ratio or PER). Under the DDM framework, ADRO, ITMG, and PTBA appear as undervalued relative to their intrinsic value, while AKRA and PGAS appear overvalued. When benchmarked against the sector's mean EV/EBITDA and PER, all five companies register as undervalued. However, comparing company multiples to the sector median EV/EBITDA recasts AKRA as overvalued, PTBA as fairly valued, and the remaining three as undervalued. A parallel comparison using the sector median PER identifies AKRA as overvalued, with the other four companies maintaining undervalued status. On the basis of these findings, investors may prioritize acquisitions of ADRO and ITMG shares, given their consistent undervaluation across all models. AKRA and PGAS warrant caution due to overvaluation in at least one metric. PTBA merits continued monitoring, as it is fairly valued on an EV/EBITDA basis yet undervalued when assessed by PER and DDM valuation.

INTRODUCTION

On 24 January 2025, the IDX completed its major evaluation of the High Dividend 20 Index, with the new companies list becoming effective from 5 February 2025 through 3 February 2026. This major review added and removed seven companies in total. Concurrently, the IDX employs an eleven-sector classification system known as the IDX Industrial Classification (IDX-IC) to group listed companies by the ultimate products or services they supply. The sectors in this taxonomy include Energy; Basic Materials; Industrials; Consumer Non-Cyclicals; Consumer Cyclicals; Healthcare; Financials; Property and Real Estate; Technology; Infrastructure; and Transportation & Logistics. Following the January 2025 evaluation, eight of these eleven sectors are represented within the High Dividend 20 Index. Energy and Financials each account for 25 percent of the index or five companies apiece making them the most heavily weighted. Consumer Non Cyclicals follow at 20 percent (four companies), while

the remaining sectors such as Basic Materials, Consumer Cyclicals, Healthcare, and Infrastructure each hold a single seat under the "Others" category. Industrials command the remaining share, representing just 10 percent (two companies) of the index composition.

The prominence of the energy sector within the index is further underscored by its performance record. Historical data reveal that over the most recent one, three, and five year intervals, the energy sector index advanced by 28,01 percent, 136,00 percent, and 226,51 percent, respectively consistently exceeding the IHSG's corresponding returns. This sustained outperformance, coupled with its dominant representation in the High Dividend 20 Index, signals both the sector's resilience and its appeal to investors. Within the 2025 index lineup, five energy sector companies consisted of PT Adaro Energy Tbk (ADRO), PT AKR Corporindo Tbk (AKRA), PT Indo Tambangraya Megah Tbk (ITMG), PT Perusahaan Gas Negara Tbk (PGAS), and PT Bukit Asam Tbk (PTBA) have demonstrated uninterrupted dividend distributions over the preceding three years. Their average yields range from a low of 6,12 percent (AKRA) to a high of 24,35 percent (ADRO), underscoring the sector's capacity to generate attractive income streams. Yet, dividend consistency alone does not guarantee that share prices reflect fair value. Given the inherent price fluctuations in equity markets, investors must also ascertain each stock's intrinsic value to determine whether its current market quotation is overvalued, undervalued, or fairvalued. Drawing on Sulistyastuti's definition (as cited in Royda & Riana, p. 101), we understand intrinsic value as the price level at which a share precisely embodies its true economic worth, thus ensuring it is not overpriced. Quantifying this intrinsic value involves discounting to present value the entire stream of expected future cash flows, whether distributed as dividends or realized through capital gains.

This study applies two complementary valuation frameworks to the five energy stocks in question. First, the Discounted Cash Flow (DCF) approach specifically the Dividend Discount Model (DDM) for firms with stable dividend histories and the Free Cash Flow (FCF) model for companies at any life-cycle stage translates projected cash flows into today's values. A stock is deemed overvalued when its market price exceeds its DCF derived intrinsic value, implying a sell recommendation or overvalued; undervalued when the market price falls below intrinsic value, suggesting a buy and fairvalued when price and intrinsic value converge, warranting a hold (Sukamulja, 2021). Considering that each of the five firms under investigation has maintained a stable, uninterrupted record of dividend distributions, the Dividend Discount Model (DDM) was adopted as the primary discounted cash flow (DCF) valuation technique.

Second, we employ Relative Valuation or often called the "comparable multiples" method to estimate stock values between peer groups. Under this paradigm, firms sharing similar business risk profiles should trade at analogous multiples. We calculate price based multiples such as Price to Earnings Ratios (PER) and enterprise value multiples such as EV/EBITDA. By benchmarking each stock's multiples against sector averages and medians, we classify shares as overvalued, undervalued, or fairvalued relative to their energy sector cohort. The research problems consist of theoretical and practical. The theoretical research problem concerns the estimation of intrinsic values for energy sector firms included in the 2025 IDX High Dividend 20 by applying three valuation frameworks: DDM, EV/EBITDA multiple, and PER multiple. The practical research problem addresses the classification of stocks as undervalued, overvalued, or fairly valued based on the foregoing valuation results and examines the consequent implications for actionable investment recommendations. Through this analysis, the specific objectives of the study are to determine the intrinsic value of the energy sector companies in the 2025 IDX High Dividend 20 Index by applying the Dividend Discount Model (DDM) framework, Enterprise Value to EBITDA (EV/EBITDA) multiple, and the Price Earnings Ratio (PER) multiple and to classify each energy sector company of the 2025 IDX High Dividend 20 Index as undervalued, fairvalued, or overvalued, and thereby derive appropriate buy, hold, or sell recommendations.

This study addresses several notable gaps in the literature on equity valuation within the Indonesian capital market, with a particular focus on energy-sector firms characterized by high dividend payouts. First, despite the IDX High Dividend 20's emphasis on dividend consistency, empirical assessments of the Dividend Discount Model (DDM) for Indonesian energy companies remain scarce, this research evaluates the DDM's capacity to generate intrinsic value for energy sector firms stock with high dividend. Second, although financial analysts favored valuation using EV/EBITDA in the energy sector (Olbert, 2024), comparative evidence on the relative performance of EV/EBITDA for high dividend firms in Indonesia is limited, previous studies that utilize EV/EBITDA for valuation has been conducted by Tu (2024), Su (2023), and Liu (2023) and none of them conduct research in Indonesian market, the present study addresses this gap through a systematic method comparison.

LITERATURE REVIEW

Intrinsic Value

The intrinsic value of any asset is the value of the asset given a hypothetically complete understanding of the asset's investment characteristics. For any particular investor, an estimate of intrinsic value reflects his or her view of the "true" or "real" value of an asset (Pinto, et al., 2010). According to Sukamulja (2021), intrinsic value is the expected value or theoretical value of a stock assessed based on valuation approaches such as discounted cash flow, economic value added, or real option. On the other hand, Bodie, et al (2021) defines intrinsic value as the present value of expected future cash flows the firm will provide shareholders on a per share basis. Another perspective, as articulated by Sulistyastuti (cited in Royda & Riana, 2022), defines intrinsic value as the price level at which a share precisely embodies its true economic worth, thus ensuring it is not overpriced. Quantifying this intrinsic value involves discounting to present value the entire stream of expected future cash flows, whether distributed as dividends or realized through capital gains.

Valuation

Valuation is the estimation of an asset's value based on variables perceived to be related to future investment returns, on comparisons with similar assets, or, when relevant, on estimates of immediate liquidation proceeds (Pinto, et al., 2010). According to Magni (2020), Valuation is meant to lead to an economically rational decision, one which is capable of increasing the wealth of the firm's shareholders and Sukamulja (2021) express that valuation is used to calculate intrinsic value.

According to Damodaran (2015), there are three approaches to valuation. The first approach to valuing a firm is discounted cash flow valuation, which extends the present value principles that we developed to analyze projects to value a firm. The value of any firm is determined by four factors: its capacity to generate cash flows from assets in place, the expected growth rate of these cash flows, the length of time it will take for the firm to reach stable growth, and the cost of capital. Consequently, to increase the value of a firm, we have to change one or more of these variables. The second way of valuing a firm or its equity is to base the value on how the market is valuing similar or comparable firms; this approach is called relative valuation or pricing. This approach can yield values that are different from a discounted cash flow valuation, and we will look at some of the reasons these differences occur. The third approach to valuing a firm applies for highly levered firms, where the equity acquires the characteristics of a call option. In this special case, equity becomes more valuable, as debt maturity increases and the volatility in asset value goes up. Equity investors, in effect, derive their value from the expectation (or hope) that asset value will increase over time.

Dividend Discount Model

According to Pinto, et al. (2010), Dividend Discount Model (DDM) is a present value model that views the intrinsic value of a stock as the present value of the stock's expected future dividends. We take the perspective that dividends distributions to shareholders authorized by a company's board of directors are an appropriate definition of cash flows. The basic objective of any DDM is to value a stock. According to Sukamulja (2021), the DDM is most appropriately applied to firms that exhibit stable dividend distributions, typically those in the mature or saturated growth phases of their lifecycle. Consequently, this study adopts the DDM as one of its principal valuation frameworks, given that the sample companies have demonstrably consistent dividend-payment histories.

Damodaran (2015) asserts that because we cannot estimate dividends in perpetuity, we generally allow for a period where dividends can grow at extraordinary rates, but we allow for closure in the model by assuming that the growth rate will decline to a stable rate that can be sustained forever at some point in the future. By assuming stable growth at some point in the future, we can stop estimating annual dividends and estimate what we think the stock will be worth at the end of the extraordinary growth period. The Gordon growth model, developed by Gordon and Shapiro (1956) and Gordon (1962), assumes that dividends grow indefinitely at a constant rate. This assumption, applied to the general dividend discount model, leads to a simple and elegant valuation formula that has been influential in investment practice. The simplest pattern that can be assumed in forecasting future dividends is growth at a constant rate (Pinto, et al., 2010).

EV/EBITDA

Enterprise Value (EV) constitutes a comprehensive assessment of a company's total valuation, aggregating the market values of its debt, common equity, and preferred equity, and subsequently netting out cash and short-term investments. Correspondingly, Earnings Before Interest, Taxes, Depreciation, and Amortisation (EBITDA) serves as a widely adopted cash-flow proxy in valuation multiples, isolating operating performance by excluding financing costs, tax effects, and non-cash accounting charges. According to Pinto, et al. (2010), because EBITDA is a flow to both debt and equity, as noted, defining an EBITDA multiple by using a measure of total company value in the numerator, such as EV, is appropriate. Recall that enterprise value is total company value (the market value of debt, common equity, and preferred equity) minus the value of cash and short term investments. Thus, EV/EBITDA is a valuation indicator for the overall company rather than solely its common stock. If, however, the analyst can assume that the business' debt and preferred stock (if any) are efficiently priced, the analyst can use EV/EBITDA to draw an inference about the valuation of common equity. Such an inference is often reasonable.

Olbert (2024) examines the stock valuation methodologies favored by financial analysts across Global Industry Classification Standard (GICS) sectors. His findings indicate that, for energy sector companies, the EV/EBITDA multiple predominates. He attributes this preference to the industry's inherently high leverage, energy firms typically incur substantial debt to fund exploration, production, and infrastructure development rendering a metric that incorporates both debt and equity essential. By normalizing for capital structure differences, EV/EBITDA offers a more encompassing assessment of firm value than measures relying solely on equity. In addition, its exclusion of non-cash charges sharpens insight into operational performance and enhances comparability among peer companies within the sector.

PER

Price to Earnings Ratio (PER) is the ratio of the current stock price to last year's earnings per share. The P/E ratio tells us how much stock purchasers must pay per dollar of earnings that the firm generates (Bodie, et al., 2021). According to Pinto, et al. (2010), the multiple's numerator, market price, is (as in other multiples) definitely determinable; it presents no special problems of interpretation. But the

denominator, EPS, is based on the complex rules of accrual accounting and presents significant interpretation issues.

METHOD

Research Design

This study employs a descriptive quantitative design, utilising purposive sampling to select the energy-sector companies of the 2025 IDX High Dividend 20 Index as its analytical sample. Quantitative inquiry aims to elucidate phenomena holistically and contextually through data gathered in naturalistic settings, with the researcher functioning as the principal instrument. The objectives of this investigation align with the descriptive research paradigm, which systematically and accurately documents characteristics, facts, or events pertaining to a defined population or domain.

Population and Sample

Sampling for this study was conducted via purposive sampling, a nonprobability sample that conforms to certain criteria is called purposive sampling (Cooper & Schindler, 2014). The inclusion criteria were defined to capture energy-sector companies with consistent dividend distributions and comprised:

1. Companies listed on the Indonesia Stock Exchange that form part of the IDX High Dividend 20 Index for 2025.
2. Companies operating within the sector(s) that dominate the 2025 High Dividend 20 Index by accounting for 50 percent of its constituent weight.
3. Companies belonging to sectors that have demonstrated the strongest historical performance, as measured by three-year price movements.

From those criteria, we then got the sample of five companies such as ADRO, AKRA, ITMG, PGAS, and PTBA

Techniques of Data Collection and Analysis

DDM Valuation

Calculating Stocks' Beta

As an initial procedure, we estimate the beta coefficient for each selected sample. Beta represents the measure of the systematic risk of a security. The tendency of a security's returns to respond to swings in the broad market (Bodie et al., 2021). For the purposes of this study, we employ the adjusted beta, computed according to the following expression:

$$\beta_i = \frac{Cov(r_i, r_m)}{Var(r_m)} \quad (1)$$

$$adjusted\ beta = \frac{2}{3}\ x\ \beta_i + \frac{1}{3}\ x\ 1 \quad (2)$$

In this analysis, stock return (r_i) and market return (r_m) is operationalized as the sequence of monthly returns for the sample and Composite Stock Price Index (IHSG) over the January 2020 to December 2024 period, calculated by the successive differences in the stock and index's monthly closing quotations obtained from yahoo finance. The value of the market variance is 0,16%

Calculating the Required Rate of Return on the Stock (r)

The next step is to determine the required rate of return on the stock or the expected return required by investors. In this analysis, r is derived using the Capital Asset Pricing Model (CAPM), as defined by the following equation:

$$r = risk\ free\ rate + adjusted\ beta\ x\ equity\ risk\ premium \quad (3)$$

In this study the risk-free rate was taken from BI Rate of Bank Indonesia for the period of December 2024, with a value of 6,00% and The equity risk premium in this study was taken from research conducted by Damodaran (2025), where the latest equity risk premium value for Indonesia is 6,87%.

Calculating the Dividend Growth Rate (g)

To derive the company's projected dividend growth rate for 2025, we first calculate its sustainable growth rate over the preceding five-year period and then compute the arithmetic average of those annual rates. The sustainable growth rate (g) employed in this study is defined by the following formula:

$$g = retention\ rate\ x\ return\ on\ equity \quad (4)$$

Calculating Dividend Projections for 2025

Upon estimating the sustainable growth rate for each firm, the Gordon growth model is employed to project dividends for 2025, as expressed by the following equation:

$$D_t = D_{t-1}(1 + g) \quad (5)$$

Calculating the Intrinsic Value of Shares

Having established the dividend growth rate, projected dividends, and required rate of return, the intrinsic share value under the Dividend Discount Model framework is subsequently determined by the following equation:

$$V_0 = \frac{D_1}{r - g} \quad (6)$$

Comparing between Intrinsic Value and Market Price

The subsequent phase in the DDM valuation process involves juxtaposing the calculated intrinsic value against the stock's prevailing market price. If the intrinsic value exceeds the current market price, the stock is classified as undervalued; if it lies below the market price, the stock is deemed overvalued; and if it coincides with the market price, the stock is regarded as fairvalued.

EV/EBITDA Valuation

Calculating the Enterprise Value (EV)

In applying the EV/EBITDA valuation approach, the initial step involves computing each sample's Enterprise Value for the most recent reporting period, Q1 2025, which constitutes the numerator of the multiple. This calculation is performed using the following formula:

$$EV = market\ value\ of\ common\ stock + market\ value\ of\ preffered\ stock + market\ value\ of\ debt - cash\ \&\ short\ term\ investment \quad (7)$$

Calculating EBITDA

Next, the trailing twelve months (TTM) EBITDA value of the sample for performance up to the first quarter of 2025 is calculated as the denominator in the calculation using the formula:

$$EBITDA = net\ income + interest + tax + depreciation\&amortization \quad (8)$$

Calculating EV/EBITDA

After obtaining the numerator and denominator, the next step is to divide EV by EBITDA to obtain the EV/EBITDA ratio, which will later be used for comparison with the sector to determine the valuation of the sample in the study.

Calculating the Mean and Median EV/EBITDA of the Sector

At this stage, the mean and median EV/EBITDA for the energy sector are calculated using the data sources we gathered from tradingview.com

Comparing the Sample EV/EBITDA with the Sector

The final step in performing EV/EBITDA valuation is to compare the sample EV/EBITDA obtained with the mean and median EV/EBITDA of the energy sector. If the EV/EBITDA is below the mean and median of the energy sector, the stock is undervalued. If the EV/EBITDA is above the mean and median EV/EBITDA of the energy sector, the stock is overvalued. If the EV/EBITDA is equal to the mean and median EV/EBITDA of the energy sector, the stock is fairvalued.

PER Valuation

Calculating the PER

In applying the PER valuation technique, the preliminary step involves deriving each sample's trailing twelve months (TTM) PER through the end of Q1 2025, calculated in accordance with the following expression:

$$PER = \frac{Market\ Price\ per\ Share}{Earning\ per\ Share} \tag{9}$$

Calculating the Mean and Median PER of the Sector

At this stage, the mean and median PER for the energy sector are calculated using the data sources we gathered from tradingview.com

Comparing the Sample PER with the Sector

The final step in performing PER valuation is to compare the sample PER obtained with the mean and median PER of the energy sector. If the PER is below the mean and median of the energy sector, the stock is undervalued. If the PER is above the mean and median PER of the energy sector, the stock is overvalued. If the PER is equal to the mean and median PER of the energy sector, the stock is fairvalued.

RESULT AND DISCUSSION

Result

DDM Valuation Result

The valuation outcomes derived from the dividend discount model, utilizing the Gordon growth framework, have been calculated and are presented in Table 1 below:

Table 1. DDM Valuation Result

Ratio	ADRO	AKRA	ITMG	PGAS	PTBA
required return (r)	15,08%	15,48%	15,44%	18,80%	12,77%
average g (g)	0,43%	3,55%	6,62%	2,40%	3,65%
outstanding shares 2024	30.758,67	20.073,47	1.129,93	24.241,51	11.520,66
average dividend payment 2020 - 2024	$1.095,27	Rp1.239.553,81	$319,96	$181,09	Rp5.908.536,20
average DPS 2020 - 2024 (D0)	$0,0356	Rp61,75	$0,28	$0,0075	Rp512,86
DPS 2025 (D1)	$0,0358	Rp63,94	$0,30	$0,0076	Rp531,59
V0	$0,2442		$3,43	$0,0467	
USD to IDR	16.233		16.233	16.233	
V0	**Rp3.963,44**	**Rp535,80**	**Rp55.627,29**	**Rp767,28**	**Rp5.827,04**
stock price (26 Jun'25)	**Rp1.790**	**Rp1.190**	**Rp22.025**	**Rp1.550**	**Rp2.400**

*outstanding shares and average dividend payment are represented in millions

Source: data processed by researchers (2025)

As shown in Table 1, for this analysis, the US dollar to Indonesian rupiah exchange rate was based on the Jakarta Interbank Spot Dollar Rate (JISDOR) in 26 June 2025 where the valuation occured, resulting a conversion rate of Rp16.233 per USD. As shown in Table 1, the average dividend per share (DPS) for ADRO over the 2020 – 2024 period is calculated at $0,0356. The expected dividend for 2025 (D_1) is projected at $0,0358, which, when incorporated into the DDM using the Gordon growth model, produces an intrinsic share value of $0,2442. The price per share of ADRO in 26 June 2025 is Rp1.790. Upon translating the USD based intrinsic value into Indonesian Rupiah at the prevailing exchange rate, ADRO's intrinsic value corresponds to Rp4,470.15, indicating that the market price remains below its intrinsic value. Therefore, based on valuation using the DDM with the Gordon growth model, ADRO shares are undervalued.

The average dividend per share (DPS) for AKRA over the 2020 – 2024 period is calculated at Rp61,75. The expected dividend for 2025 (D_1) is projected at Rp63,94, which, when incorporated into the DDM using the Gordon growth model, produces an intrinsic share value of Rp535,80. The price per share of AKRA in 26 June 2025 is Rp1.190, which is still above the intrinsic value. Therefore, based on valuation using the DDM with the Gordon growth model, AKRA shares are overvalued.

The average dividend per share (DPS) for ITMG over the 2020 – 2024 period is calculated at $0,28. The expected dividend for 2025 (D_1) is projected at $0,30, which, when incorporated into the DDM using the Gordon growth model, produces an intrinsic share value of $3,43. The price per share of ITMG in 26 June 2025 is Rp22.025. Upon translating the USD based intrinsic value into Indonesian Rupiah at the prevailing exchange rate, ITMG's intrinsic value corresponds to Rp55.627,29, indicating that the market price remains below its intrinsic value. Therefore, based on valuation using the DDM with the Gordon growth model, ITMG shares are undervalued.

The average dividend per share (DPS) for PGAS over the 2020 – 2024 period is calculated at $0,0075. The expected dividend for 2025 (D_1) is projected at $0,0076, which, when incorporated into the DDM

using the Gordon growth model, produces an intrinsic share value of $0,0467. The price per share of PGAS in 26 June 2025 is Rp1.550. Upon translating the USD based intrinsic value into Indonesian Rupiah at the prevailing exchange rate, PGAS' intrinsic value corresponds to Rp767.28, indicating that the market price remains above its intrinsic value. Therefore, based on valuation using the DDM with the Gordon growth model, PGAS shares are overvalued.

The average dividend per share (DPS) for PTBA over the 2020 – 2024 period is calculated at Rp512,86. The expected dividend for 2025 (D_1) is projected at Rp531,59, which, when incorporated into the DDM using the Gordon growth model, produces an intrinsic share value of Rp5.827,04. The price per share of PTBA in 26 June 2025 is Rp2.400, which is still below the intrinsic value. Therefore, based on valuation using the DDM with the Gordon growth model, PTBA shares are undervalued.

EV/EBITDA Valuation Result

The calculation of each sample trailing twelve months Q1 EV/EBITDA presented in Table 2 below:

Table 2. EV/EBITDA Valuation Result

Ratio	ADRO	AKRA	ITMG	PGAS	PTBA
stock price 31 Mar 2025	1.845	1.095	22.950	1.555	2.520
outstanding shares 2025	30.758,67	20.073,47	1.129,92	24.241,51	11.520,66
market cap Q1 2025 (Rp)	56.749.738,58	21.980.454,69	25.931.778,75	37.695.545,24	29.032.061,30
USD to IDR 31 Mar 2025	16.556,00	-	16.556,00	16.556,00	-
market cap Q1 2025 ($)	3.427,74	-	1.556,31	2.276,85	-
preferred stock market price	-	-	-	-	-
debt Q1 2025	1.206,47	17.372.731,99	457,89	2.777,05	19.187.614,00
cash & investment Q1 2025	1.405,92	5.065.379,44	1.062,50	1.546,48	4.869.845,00
Enterprise Value Q1 2025	**2.979,16**	**34.287.807,23**	**961,69**	**3.507,42**	**43.349.830,30**
net income TTM Q1 2025	1.082,36	2.194.870,80	377,48	280,30	4.704.259,00
interest expense TTM Q1 2025	79,29	85.688,35	4,48	73,76	298.901,00
tax expense TTM Q1 2025	355,30	459.143,54	120,84	114,31	973.471,00

depreciation & amortization TTM Q1 2025	262,60	499.838,47	45,07	407,51	1.870.072,00
EBITDA TTM Q1 2025	**1.779,56**	**3.239.541,16**	**547,87**	**875,89**	**7.846.703,00**
EV/EBITDA TTM Q1 2025	**1,67**	**10,58**	**1,76**	**4,00**	**5,52**
Total of energy sector companies			**90**		
Total of EV/EBITDA comparable companies			**71**		
Mean EV/EBITDA energy sector			**10,77**		
Median EV/EBITDA energy sector			**5,52**		

*ADRO, ITMG dan PGAS using USD currency

*all ratios are represented in millions except stock price, USD-IDR conversion, and EV/EBITDA

Source: data processed by researchers (2025)

According to Table 2, the US dollar to Indonesian rupiah exchange rate was based on the Jakarta Interbank Spot Dollar Rate (JISDOR) in 31 March 2025, yielding a conversion rate of Rp16.556 per USD. The enterprise value to EBITDA (EV/EBITDA) multiple for each of the five samples was computed using the valuation formula detailed above. These results indicate that AKRA exhibits the highest EV/EBITDA multiple at 10,58x, whereas ADRO records the lowest multiple at 1,67x. In the subsequent phase of the analysis, the arithmetic mean and the median of EV/EBITDA multiples for the broader energy sector are calculated to serve as comparative benchmarks, against which the relative valuation of each sample will be assessed.

A total of ninety companies are classified within the energy sector. Nineteen of these were excluded from the EV/EBITDA analysis because they reported either negative enterprise values or negative EBITDA, or because their financial data were deemed obsolete. This exclusion was implemented to ensure that the calculated mean and median EV/EBITDA multiples more accurately represent sector fundamentals when employing the EV/EBITDA comparative valuation approach for the selected sample. The calculation results show that the mean EV/EBITDA of the energy sector is 10,77x and the median EV/EBITDA of the energy sector is 5,52x.

When benchmarked against the energy sector's mean EV/EBITDA multiple, all five samples register as undervalued. However, when the sector's median EV/EBITDA is employed as the comparative measurement, a more differentiated picture emerges: ADRO, ITMG, and PGAS continue to exhibit undervaluation; AKRA is identified as overvalued; and PTBA aligns with its fairvalued assessment.

PER Valuation Result

The calculation of each sample trailing twelve months Q1 PER presented in Table 3 below:

Table 3. PER Valuation Result

Ratio	ADRO	AKRA	ITMG	PGAS	PTBA
stock price 31 Mar 2025	1.845	1.095	22.950	1.555	2.520
net income TTM Q1 2025 ($)	1.082,36	-	377,48	280,30	-
USD to IDR 31 Mar 2025	16.556,00	-	16.556,00	16.556,00	-
net income TTM Q1 2025 (Rp)	17.919.634,94	2.194.870,80	6.249.608,59	4.640.736,20	4.704.259,00
outstanding shares 2025	30.758,67	20.073,47	1.129,92	24.241,51	11.520,66
earning per shares TTM Q1 2025	582,59	109,34	5.530,99	191,44	408,33
PER TTM Q1 2025	**3,17**	**10,01**	**4,15**	**8,12**	**6,17**
Total of energy sector companies			**90**		
Total of PER comparable companies			**64**		
Mean PER energy sector			**42,81**		
Median PER energy sector			**9,93**		

*all ratios are represented in millions except stock price, USD-IDR conversion, earning per share and PER

Source: data processed by researchers (2025)

According to Table 3, the US dollar to Indonesian rupiah exchange rate was based on the Jakarta Interbank Spot Dollar Rate (JISDOR) in 31 March 2025, yielding a conversion rate of Rp16.556 per USD. The price to earnings ratio (PER) multiple for each of the five samples was computed using the valuation formula detailed above. These results indicate that AKRA exhibits the highest PER multiple at 10,01x, whereas ADRO records the lowest multiple at 3,17x. In the subsequent phase of the analysis, the arithmetic mean and the median of PER multiples for the broader energy sector are calculated to serve as comparative benchmarks, against which the relative valuation of each sample will be assessed.

A total of ninety companies are classified within the energy sector. Twenty six of these were excluded from the PER analysis because they reported either negative net income, or because their financial data were deemed obsolete. This exclusion was implemented to ensure that the calculated mean and median PER multiples more accurately represent sector fundamentals when employing the EV/EBITDA comparative valuation approach for the selected sample. The calculation results show that the mean PER of the energy sector is 42,81x and the median EV/EBITDA of the energy sector is 9,93x.

Benchmarking the samples against the energy sector's mean PER indicates that all five companies are trading below their peer group average, thereby exhibiting undervaluation. In contrast, employing the sector's median PER as the comparative benchmark reveals a bifurcated outcome: AKRA registers as overvalued, while the other four companies continue to display undervalued valuations.

Discussion

ADRO and ITMG consistently register as undervalued across all applied valuation frameworks including the DDM and relative comparisons of both EV/EBITDA and PER against the sector's mean and median multiples under the assumptions and parameterizations outlined in the preceding subsection. In contrast, AKRA produces mixed valuation signals. The DDM analysis and the comparison to the sector's median EV/EBITDA and PER multiples both classify AKRA as overvalued. PGAS exhibits a valuation discrepancy: the DDM indicates overvaluation, while relative valuation metrics EV/EBITDA and PER imply undervaluation. Finally, PTBA is deemed undervalued by the DDM and by comparisons to the sector mean for both EV/EBITDA and PER, yet its EV/EBITDA multiple against the sector median yields a fairvalued assessment.

The DDM calculations in this article follow the approach used by Anggita et al. (2022), in which historical dividends are averaged over a five year period to estimate a sustainable growth rate; this rate is then applied to project next year dividends under a constant growth assumption, although the research was applied in Pulp & Paper sub sector firms. Another study employing the constant-growth DDM was conducted by Ganefi et al. (2023), who applied the constant-growth DDM framework to value firms in the banking sector.

For the Relative Valuation approach (EV/EBITDA and PER), several studies conduct comparative analyses against industry level averages, exemplified by Hong (2024), Tu (2024), Su (2023) and Liu (2023), who identify a set of peers with business models analogous to the target firm, compute the average EV/EBITDA and/or PER, and derive a comparable valuation by benchmarking the sample firm's value against that peer average. This study therefore compares each samples PER and EV/EBITDA to the Indonesian energy sector average and additionally references the median PER benchmarks as mentioned in Pinto et al (2010) book to mitigate the influence of outliers and provide a complementary valuation perspective.

CONCLUSION

Research Conclusion

This study employs the DDM with the Gordon growth model alongside relative valuation metrics of EV/EBITDA and PER to assess five energy sector companies within the 2025 IDX High Dividend 20 Index. Firstly, intrinsic values estimated via the DDM are Rp3.963,44 for ADRO, Rp535,80 for AKRA, Rp55.627,29 for ITMG, Rp757,28 for PGAS, and Rp5.827,04 for PTBA. Secondly, the EV/EBITDA multiples for the sample companies are 1,67x for ADRO, 10,58x for AKRA, 1,76x ITMG, 4,00x for PGAS, and 5,52x for PTBA, benchmarked against a sector mean of 10,77x and a median of 5,52x. Thirdly, PER valuations yield ratios of 3,17x for ADRO, 10,01x for AKRA, 4,15x for ITMG, 8,12x for PGAS, and 6,17x for PTBA, compared to a sector mean of 42,81x and a median of 9,93x. Finally, the valuation from the three methods resulted in undervalued, fairly valued, and overvalued conditions for the five sample stocks, where the valuation using the EV/EBITDA and PER comparison of the sample with the mean EV/EBITDA and PER of the energy sector resulted in an undervalued condition for all samples. On the other hand, valuation using the Dividend Discount Model with the Gordon Growth Model resulted in undervalued conditions for ADRO, ITMG, and PTBA and overvalued conditions for AKRA and PGAS. Valuation by comparing the EV/EBITDA of the sample with the median EV/EBITDA of the energy sector resulted in undervalued conditions for ADRO, ITMG, and PGAS, overvalued conditions for AKRA, and fairvalued conditions for PTBA. Valuation by comparing the sample PER with the median PER of the energy sector results in undervalued conditions for ADRO, ITMG, PGAS, and PTBA and overvalued conditions for AKRA.

ADRO and ITMG are that are undervalued in all valuation methods, whether through the Dividend Discount Model with the Gordon growth model, EV/EBITDA comparison with the mean and median of the energy sector, or PER comparison with the mean and median of the energy sector.

Suggestion

Future research should investigate additional valuation methodologies to enhance the analytical precision of studies on companies listed on the Indonesia Stock Exchange. Specifically, employing discounted cash flow analysis based on free cash flows, alongside relative valuation measures such as price-to-book value (PBV), price-to-cash flow (P/CF), and price-to-sales (P/S) ratios may yield more nuanced insights.

Suggestion for Investors

The present analysis, under its stated assumptions, yields actionable insights for equity investors in the Indonesian market. ADRO and ITMG emerged as top-performing companies, exhibiting consistent undervaluation across the DDM, EV/EBITDA, and PER frameworks that investors may consider buy these companies. In contrast, AKRA was deemed overvalued by the DDM and by relative EV/EBITDA and P/E ratios benchmarked to the energy sector median. Similarly, PGAS appeared overvalued under the DDM but undervalued on relative EV/EBITDA and P/E measures. Accordingly, investors may consider deferring acquisitions of AKRA and PGAS. PTBA's valuation was mixed: undervaluation was indicated by the DDM, EV/EBITDA (sector mean), and P/E (sector mean and median), while the median-based EV/EBITDA ratio suggested fair valuation; thus, a neutral stance may be warranted. It is also advisable to undertake further analysis and to employ the most current data when conducting companies valuations.

Suggestion for Companies

Companies may adopt the present study's framework to integrate comparative assessments of intrinsic valuation, employing the DDM alongside EV/EBITDA and PER benchmarked against industry averages and medians in their investor relations materials. To enhance clarity, these metrics can be visualized through valuation-position diagrams that classify equities as undervalued, fairvalued, or overvalued, thereby providing stakeholders with a structured appraisal of corporate market standing. Furthermore, management teams can incorporate these analytical insights into internal performance measurement systems to evaluate the effectiveness of dividend growth policies, operational efficiency initiatives, and capital structure strategies.

Suggestion for Regulators

Regulators may leverage the present research framework to design comprehensive financial literacy programs for retail investors. These programs should elucidate the theoretical foundations of the DDM, EV/EBITDA, and PER framework, demonstrate benchmarking techniques against industry averages and medians. Integrating case studies of domestic companies will enable participants to engage in practical valuation simulations. Such an approach is expected to enhance financial literacy and cultivate a deeper understanding of equity valuation methodologies among retail market participants.

REFERENCES

Anggita, S. D., Mai, M. U., & Hadiani, F. (2022). Stock valuation analysis using the dividend discounted model in pulp & paper sub-sector companies. *Journal of Economics and Management*. https://doi.org/10.35313/ijem.v2i3.3138

Bodie, Z., Kane, A., & Marcus, A. J. (2021). *Investments.* New York: McGraw-Hill Education.

Cahyono, A. D., & Hendrawan, R. (2019). Coal Mining Listed Companies and Their Value: Evidence from Indonesia Stock Exchange. *Proceedings of the 2nd International Conference on Inclusive Business in the Changing World - Volume 1*. https://doi.org/10.5220/0008427300350044

Cooper, D. R., & Schindler, P. S. (2014). *Business Research Methods.* New York: McGraw-Hill Companies.

Damodaran, A. (2015). *Applied Corporate Finance.* New Jersey: John Wiley & Sons.

Ganefi, H. S., Prasetyono, A., & Amalia, M. R. (2023). Penilaian saham secara fundamental menggunakan metode Dividend Discount Model dan Price Earning Ratio untuk keputusan investasi. *Jurnal Riset Ekonomi dan Bisnis*. https://doi.org/10.26623/jreb.v16i1.6367

Hong, X. (2024). Valuation of CATL Based on FCFF, Residual Income and Relative Valuation Model. *Dean & Francis Press Journal*. https://doi.org/10.61173/05yzva95

Hutagalung, J. N., & Alexandri, M. B. (2024). Analisis Penilaian Atas Harga Wajar Saham Menggunakan Metode Discounted Cash Flow (DCF) dan Dividend Discount Model (DDM) Untuk Pengambilan Keputusan Investasi (Studi pada Indeks LQ-45 Periode 2018-2022). *Jurnal Manajemen dan Sains Vol 9, No 2 (2024)*. https://doi.org/10.33087/jmas.v9i2.2069

Lestari, N. A., Antony, & Alhidayatullah. (2023). Evaluation of Stock Through Fundamental Analysis With The Dividend Discount Model (DDM) Approach. *International Journal of Indonesian Business Review, 2*, 77-87. https://doi.org/10.54099/ijibr.v2i1.499

Liu, Y. (2023). Analysis and Valuation of McDonald's— Multiple Valuation Method of P/E Ratio and EV/EBITDA Ratio. *BCP Business & Management*. https://doi.org/10.54691/bcpbm.v37i.3595

Magni, C. A. (2020). *Investment Decisions and the Logic of Valuation.* Switzerland: Springer Nature Switzerland.

Olbert, L. (2024). Financial analysts' use of industry specific stock valuation models. *Journal of Applied Accounting Research*. https://doi.org/10.1108/JAAR-11-2023-0365

Pinto, J. E., Henry, E., Robinson, T. R., & Stowe, J. D. (2010). *Equity Asset Valuation.* New Jersey: John Wiley & Sons, Inc.

Rahayu, T. Z., & Hendrawan, R. (2018). Valuasi Nilai Harga Wajar Saham Menggunakan Metode Free Cash Flow to Equity dan Dividend Discount Model pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia dan Buku 4. *Proceedings of the 3rd Global Conference On Business, Management, and Entrepreneurship (GCBME 2018)*. https://doi.org/10.2991/aebmr.k.200131.030

Royda, & Riana, D. (2022). *Investasi dan Pasar Modal.* Pekalongan: PT. Nasya Expanding Management.

Salim, M. R., Sumirat, E. A., & Sukarno, S. (2023). Stock Valuation of PT Indika Energy Tbk: Impact of Net Zero Emission Transition. *Journal Integration of Social Studies and Business Development*. https://doi.org/10.58229/jissbd.v1i2.121

Su, W. (2023). Analysis and Valuation of Toyota's— Multiple Valuation Method of PE Ratio and EV EBITDA Ratio. *BCP Business & Management*. https://doi.org/10.54691/bcpbm.v44i.4970

Sukamulja, S. (2021). *Manajemen Keuangan Korporat.* Yogyakarta: Penerbit ANDI.

Sunandar, A., & Salim, D. F. (2022). Comprehensive Analysis of Indonesian Retail Stocks Valuation in 2023. *Jurnal Finance & Banking Studies*. https://doi.org/10.20525/ijfbs.v12i3.2843

Susanto, B., & Rahadian, D. (2020). Stock Valuation of Animal Feed Companies Sub-Sector on Indonesia Stock Exchange in 2018 using Discounted Cash Flow Method Free Cash Flow to Firm and Relative Valuation Approach. *Synergizing Management, Technology and Innovation in Generating Sustainable and Competitive Business Growth*. https://doi.org/10.1201/9781003138914

Sutjipto, E., & Setiawan, W. (2020). Accuracy of dividend discount model and p/e ratio valuation in Indonesia. *The 3rd International Conference on Education and Social Science Research*. https://doi.org/10.2139/ssrn.3865915

Tu, X. (2024). Market Valuation Analysis of NVIDIA Stock. *Transactions on Economics, Business and Management Research*. https://doi.org/10.62051/v8b6zr85

Utomo, M. R., Damayanti, S. M., & Noveria, A. (2023). Stock Valuation and Dividend Policy Decision of PT ELSA INDONESIA, TBK. *International Journal of Current Science Research and Review*. https://doi.org/10.47191/ijcsrr/V6-i12-81