Al-Kharaj: Journal of Islamic Economic and Business
Volume 8 (2), 2026
P-ISSN: 2686-262X; E-ISSN: 2685-9300

Stock Valuation of IDX ESG Leaders Constituents and Its Implications for Sustainable Economic Development in Indonesia (2020–2024)

Judandi Rizky Pratomo[1], Moh. Huzaini[2], Muhamad Bai'ul Hak[3]
[123]University of Mataram, Indonesia
Email: tjrp9business@gmail.com

Keywords:
Relative valuation; PER; PBV; ESG; IDX ESG Leaders

Abstract

This study assesses the fairness of stock prices for issuers that consistently remained constituents of the IDX ESG Leaders (ESGL) during 2020-2024 and examines indications of an ESG premium. The method applies relative valuation based on five-year averages of Price-to-Earnings (P/E) and Price-to-Book Value (P/B). Fair value is estimated as the five-year average P/E multiplied by the latest EPS and the five-year average P/B multiplied by the latest BVPS, then consolidated as the base scenario. The sample comprises 17 issuers with normalized official data. The results show that all issuers are classified as undervalued under the base scenario, indicating multiple compressions and no systematic ESG premium. The findings confirm the usefulness of a concise, transparent, and replicable five-year P/E-P/B framework, while highlighting the need to standardize ESG-financial linkages and strengthen historical multiple data infrastructure. ESG issuers contribute to structural transformation through energy efficiency, low-carbon innovation, and stronger governance that enhances competitiveness and attracts sustainable financing. This study is descriptive and point-in-time; further research is recommended to add non-ESG benchmarks, extend the horizon, and explore alternative multiples.

INTRODUCTION

In the past five years, the number of Indonesian retail investors has increased rapidly; as of the end of January 2025, Single Investor Identification (SID) has surpassed 15 million according to the official press release of the Indonesia Stock Exchange, marking the expansion of the public participation base in the national capital market (IDX, 2025). In line with the expansion of participation, the theme of sustainability (ESG) is increasingly prominent in investment decision-making, with IDX ESG Leaders (ESGL) often used as a reference for the top ESG-rated issuers and minimal material controversy; the selection criteria, weighting, and schedule of index reviews are published periodically through the IDX's official Index Fact Sheet (IDX, 2020). In addition to being an investment reference, ESGL is used as a capital market instrument that helps the national development agenda through strengthening governance, social protection, and improving environmental performance in public companies (Delgado-Ceballos et al., 2023). By encouraging capital allocation to issuers that are better prepared to face climate risks, global supply chain compliance, and transparency demands, ESG indices have the potential to accelerate the green economy transition, improve industry competitiveness, and strengthen economic resilience. In this context, the assessment of the fairness of ESGL issuers' prices is important not only for investment decisions, but also to ensure that the sustainable development financing process is efficient and not driven solely by label sentiment (Fichtner et al., 2024). However, the existence of an ESG label does not necessarily guarantee that the stock price has reflected its fair value, so a concise and

replicative valuation framework is needed to assess the fairness of the price in a disciplined manner. In market practice, market-based (relative) valuation using price multiples, especially Price-to-Earnings (P/E) and Price-to-Book (P/B) is considered the most familiar and widely used tool because it is able to link prices to fundamentals per share quickly and consistently across companies/sectors when historical benchmarks are applied correctly (Koller et al., 2020; Morgan Stanley Investment Management, 2024).

Further, the literature and practitioner guidance emphasize that multiples are essentially the "shorthand" of the cash flow-based valuation process is useful because it is time-saving, but it needs cross-cycle normalization so that the signals are not biased by short-term volatility; The application of multi-year historical averages for P/E and P/B is one of the commonly used ways to improve the stability of fair value estimates (Morgan Stanley Investment Management, 2024; Koller et al., 2020). In the context of emerging markets, the sensitivity and informative power of multiples can differ from developed markets, so the use of adequate historical horizons and methodological discipline is a prerequisite for reliable interpretations, especially when evaluating ESG-labeled issuers that have the potential to obtain a "premium" of market perception (Akhtar, 2021).

In the midst of the expansion of the retail investor base, literacy inequality is still evident SNLIK 2024 recorded literacy of 65.43% and inclusion of 75.02%, leaving room for novice investors to make sub-optimal decisions when dealing with complex market information (OJK, 2024). A number of recent findings in the Indonesian market confirm the dominance of behavioral bias, especially herding in the volatile phase, investors tend to follow the flow without considering the fair price triggered by information cascades and socio-information dynamics (Pranata et al., 2024; Singh et al., 2024). Experiments on novice investors also show an interaction between information types and overconfidence that reinforces herd behavior, making decisions more vulnerable to fundamentals (Kresnawati et al., 2024; Trisno & Vidayana, 2023).

On the other hand, recent international systematic review evidence places retail overconfidence as one of the main determinants of mispricing, as it fuels overly optimistic expectations, overtrading, and risk abandonment patterns that become increasingly relevant as young investor participation increases (Singh et al., 2024). Recent domestic findings also confirm the role of behavioral bias (overconfidence, mental accounting) in investment decisions in Indonesia, reinforcing the need for simple but disciplined assessment method intervention (Budiman et al., 2025). In the context of ESG themes, the risk of "premium ESG-label" is magnificent: without a concise, replicative, and standardized valuation framework, the perception of sustainability reputation can shift prices away from fair value. At the macro level, strengthening ESG practices in public issuers is intertwined with the needs of transition financing, such as energy efficiency, low-emission production process innovation, more sustainable resource management, and improving work quality and occupational safety. Therefore, the evaluation of the potential of "ESG-label premium" needs to be placed within the framework of sustainable development, i.e. whether the premium reflects fundamental improvements that support the structural transformation of the economy, or simply a bias in market perception (Wang, 2025). Therefore, the application of a base scenario based on a transparent 5-year average P/E & P/B is a practical necessity for this method to be in line with market valuation guidelines (CFA Institute, 2025a), professional practice (Koller et al., 2020b), and recommendations for cross-cycle normalization in the use of multiples while remaining based on the definition and criteria of the ESGL index officially published by the IDX (IDX, 2020).

Hence, to integrate the ESG with national development, this study places ESG issuers as actors financing structural transformation, namely a shift towards more productive, competitive, and low environmental risk economic activities. In this context, the market valuation of these ESG-compliant firms is more than just a metric of financial health; it actually serves as a barometer for how well the domestic capital market can mobilize funding for Indonesia's broader sustainability goals. When the market assigns a fair or premium valuation to these firms, it effectively lowers their cost of capital. This financial breathing room is exactly what companies need to accelerate critical investments in energy transition and green infrastructure. The CIGXM framework maps how credible ESG practices affect demand and supply flows at the macro level which in turn go to the company's fundamentals (EPS, BVPS) as an anchor for PER/PBV in relative valuations. On the C (Consumption) side, consumer preference for sustainable products is getting stronger: the Asia-Pacific region survey shows a willingness to pay above the average price for sustainable products, with Indonesia being the highest; cross-country experimental evidence also links ESG cues to increased brand attitude/loyalty, which ultimately underpins volume and revenue margins (Gomes et al., 2023; Puriwat & Tripopsakul, 2023; PwC, 2024). In component I (Investment), the latest literature shows that good ESG performance/disclosure lowers the cost of equity capital through lower risk perception and stronger governance signals; These findings are consistent across markets and are a key channel for how ESG impacts valuation through cost of equity and access to funding (Chen et al., 2023). The G (Government) element operates through government regulation and spending: Indonesia updates the Sustainable Finance Taxonomy (TKBI v2, 2025) to become the main reference for green disclosure and financing, while the practice of green public procurement is becoming more common in OECD countries, creating demand pull for ESG-compliant suppliers and strengthening income certainty for issuers that meet standards (OJK, 2024; Shrestha et al., 2025).

On the external side of X (Exports), companies are facing increasingly stringent target market standards, especially the EU CBAM which requires embedded emissions reporting since the transitional phase of October 1, 2023 and moves towards full financial obligations by 2026 so that ESG performance affects access and export costs to high-carbon markets; Greener companies have the potential to have lower barriers and reputation premiums in destination markets (Giovannini & Delille, 2025). Finally, M (Imports) relates to the dependence on inputs that can change when companies adjust their supply chains to align with global sustainability standards, encourage more efficient material/technology substitution, reduce import costs and supply compliance risks; This dynamic is driven by the harmonization of trade policies and increasingly broad cross-border sustainability initiatives (Balaban et al., 2025; Schmidt & Steingress, 2022). Implicitly, the CIGXM framework provides a macro-to-micro bridge: C pushes the top-line through green preferences; I lower To and improve investment feasibility; G increase certainty of demand and access to financing; X lowers export friction for low-carbon actors; and M reducing input costs through sustainable supply chains across these channels leads to stronger and more stable EPS/BVPS, so that the 5-year average PER/PBV becomes a relevant benchmark for assessing the fairness of ESG-themed stock prices on the IDX (Mauboussin & Callahan, 2024; Ould Daoud Ellili, 2020).

Although ESG-themed research in Indonesia is growing, the corpus is still dominated by causal studies that test the influence of ESG scores/disclosures on company value or stock prices with a regression approach, instead of assessing fair value through operational relative valuations for market practices (Alfarizzi et al., 2024). In the context of issuers that are members of the ESG

index, some studies link ESG disclosure to PBV/firm value in the domestic sample, but still focus on the correlation coefficient (direction-significance) rather than the calculation of fair value based on historical multiples that can be replicated by retail investors (Ardhani et al., 2024; Simatupang & Puspitasari, 2023).

At the cross-country level, recent reviews and evidence confirm that the impact of ESG on performance/valuation varies across market regimes, reinforcing the need for standardized valuation procedures for emerging markets, but the literature rarely downgrades it to a 5-year average-based PER–PBV protocol as a transparent baseline scenario (Biju et al., 2025; Shrestha et al., 2025). In addition, methodological gaps are visible in three aspects: (i) the consistency of the minimal sample of studies that explicitly limit the consistent ESGL constituents of 2020–2024; (ii) the operational rules of classification rarely have a practical threshold (e.g. ±5%) to establish over/under/fair, beyond statistical significance; and (iii) handling of special cases such as negative EPS (meaningless PER) or BVPS/negative equity (meaningless PBV), which are important for retail replication (Alfarizzi et al., 2024). Thus, the main gap that this study aims to fill is a two-track relative valuation framework (PER and PBV) based on a 5-year average on a consistent ESGL sample for 2020–2024, complete with operational classification rules and outlier/negative case handling protocols, so that findings on the possibility of "premium ESG" can be weighed at the level of price fairness, rather than just a correlation coefficient (Biju et al., 2025).

This research offers four main complementary contributions. First, (empirical), this study maps the price fairness of IDX ESG Leaders issuers directly in the 2020–2024 period with a base scenario based on 5-year average P/E and P/B, thus presenting an undervalued/fair/overvalued map that is measured on a consistent five-year ESGL sample, instead of simply testing the causal ESG–valuation relationship coefficient (Koller et al., 2020). Second, (methodological), the study presents a concise and replicative two-track relative valuation procedure: the formulation of company-specific P/E and 5-year P/B, Fair Price (PER) and Fair Price (PBV) estimates, consolidation into one main fair value, special case rules (negative EPS/BVPS), and a practical threshold of ±5% for status determination in line with market-based valuation practices and cross-cycle normalization rules on the use of multiples (Morgan Stanley Investment Management, 2024). Third, the results are compiled as an operational framework that can be used directly by novice investors and analysts: a standard formula, sequence of steps, and an input-output template that is easy to re-audit, thus helping to reduce behavioral bias and focus decisions on transparent fundamental figures (CFA Institute, 2025) Fourth (conceptual), the research bridges micro-macro with the CIGXM framework: channels C, I, G, X, M are described as mechanisms that trickle into EPS/BVPS as well as explain how ESG issuers can contribute to the green economy transition and sustainable development through strengthening competitiveness, governance quality, and value chain resilience, so that the potential for "premium ESG" if it arises can be read as an economic consequence based on fundamental changes, is not merely a label effect, and is therefore relevant to be evaluated using a 5-year P/E–P/B average in emerging markets (Akhtar, 2021; Mauboussin & Callahan, 2024).

METHODS

This study was prepared as a quantitative-descriptive study to assess the fairness of the stock prices of IDX ESG Leaders (ESGL) constituents using a market-based/relative valuation

approach that relies on price multiples Price-to-Earnings (P/E) and Price-to-Book (P/B); From a development economics perspective, the assessment of the fairness of stock prices serves as a market discipline mechanism to ensure that capital allocation towards productive and sustainable companies is efficient, thereby supporting capital accumulation, increased productivity, and long-term economic resilience (Neuhann & Sockin, 2024). In other words, valuation not only reflects investor preferences, but also becomes a signal of fundamental qualities (earnings and equity) that are relevant to financing structural transformation, including low-carbon investments, improved governance, and quality of work. Therefore, the selection of a multiples-based relative approach is positioned as an operational tool to read whether market prices are in line with the issuer's capacity to support the sustainable development agenda (Goldstein, 2023). To build on this quantitative baseline, our study goes a step further by interpreting what these valuations actually mean in a macroeconomic setting. We specifically look at how a firm's market pricing directly shapes its real-world capacity to finance green projects and drive Indonesia's shift toward a low-carbon economy This approach was chosen because it is efficient, easy to replicate across sectors, and valid as long as historical benchmarks are set consistently to mitigate the effects of cycles and outliers, so that it does not require causal or regression modeling for the purpose of determining the fairness of the base price (Akhtar, 2021; CFA Institute, 2025; Koller et al., 2020).

As a preposition test to enforce the consistency of ESG character in the study object, the sample is limited to issuers that are successively constituents of ESGL during 2020–2024, namely ACES, AKRA, BBCA, BBNI, BMRI, BSDE, CTRA, ERAA, JSMR, MAPI, MNCN, PWON, SCMA, TBIG, TLKM, TOWR, and UNVR. Restrictions on ESGL constituents that are consistent are also interpreted as a proxy of "market confidence" for issuers that are considered the most credible in sustainability and governance practices. With this proxy, valuation analysis does not stop at investment issues alone, but assesses whether the trust is reflected in a reasonable price and aligned with fundamentals, not just a label premium (Barontini & Gioja, 2025; Lin et al., 2023). So that the noise in and out of the index (rebalancing) is reduced and the stable profile of "leaders" is better represented according to the ESGL methodology and fact sheet (IDX, 2024).

All secondary data are obtained from the official publications of issuers and exchanges: market price at the end of 2024 (or explicitly stated reference date), the latest EPS and BVPS (2024), as well as the annual series of P/E and P/B of each issuer for 2020–2024; All metrics are normalized on a per-sheet basis and adjusted for corporate actions (e.g., stock splits, rights issues, buybacks), while a five-year horizon is chosen to increase the representativeness of historical multiples as a fair value comparator (Koller et al., 2020; Morgan Stanley Investment Management, 2024).

1) P/E (Price/Earnings) Approach:

$PERt = \frac{Pt}{EPSt}$ and $Fair\ Price\ (PER) = PERrelative \times EPScurrent$

with PER_relative is a 5-year average PER (2020–2024) and EPS_current is 2024 EPS; This formulation links prices to the earnings per share anchor that is prevalent in corporate valuation and market analysis practices (Koller et al., 2020).

2) P/B (Price/Book) Approach:

$PERt = \frac{Pt}{BVPStt}$ and $Fair\ Price\ (PER) = PERrelative \times BVPScurrent$

with PBV_relative is the average 5-year PBV (2020–2024) and BVPS_current is the BVPS of 2024; This path links the price to a relatively stable book value per share, especially relevant for asset-dense issuers (CFA Institute, 2025).

To obtain the main fair value as a single reference (base scenario), the two estimates are consolidated through arithmetic means:

$Fair\ Price\ (Avg) = \frac{\{\text{Fair price (PER)} + \text{Fair price (PBV)}\}}{2}$; The consolidation of these two paths is used so that price signals are not biased to one fundamental source only, so that it is more in line with development goals that demand a balance between profit performance (value creation capacity) and balance sheet strength (resilience and long-term investment space). If one of the lines is meaningless e.g. negative EPS (irrelevant P/E) or negative BVPS/equity (irrelevant), then the primary fair value is taken from a valid method, with documentation of the reasons for exclusion to maintain accountability and ease of replication (CFA Institute, 2025; Koller et al., 2020).

As a final decision for the determination of operational price fairness status and consistent with market-based valuation practices, a practical threshold of ±5% to Fair Price (Avg) is used. This operational threshold was chosen to maintain a stable interpretation for retail investors and stakeholders, so that the classification results can be used as preliminary information on whether the market gives a proportionate valuation to the issuer that is perceived to support sustainable development: overvalued if the Market Price > Fair Price (Avg) × (1 + 0.05); fair value when |Market Price − Fair Price (Avg)| ≤ 0.05 × Fair Price (Avg); and undervalued when the Market Price < Fair Price (Avg) × (1 − 0.05), so that this tolerance absorbs the noise of data source differences and short-term volatility without the need for a separate deviation formula (CFA Institute, 2025; Morgan Stanley Investment Management, 2024).

RESULTS AND DISCUSSION

This study applies relative valuations based on price multiples Price-to-Earnings (PER) and Price-to-Book (PBV) in a quantitative-descriptive design to assess the fairness of the stock prices of IDX ESG Leaders (ESGL) constituents that are consistent during 2020–2024; This approach was chosen because it is efficient, standardized, easy to replicate across sectors, and valid when normalized with a historical average of five years to mitigate the effects of cycles and outliers (Akhtar, 2021; CFA Institute, 2025; Koller et al., 2020).

Operationally, two paths of fair value estimation are used:

1) First path: PER is defined as $\mathrm{PER}_t = \frac{P_t}{EPS_t}$ with fair price based PER $\hat{P}_{PER} = \bar{\mathrm{PER}}_{5\mathrm{T}} \times EPS_{\text{latest}}$.
2) Second path: PBV is defined as $\mathrm{PBV}_t = \frac{P_t}{BVPS_t}$ with fair price based PBV $\hat{P}_{PBV} = \bar{\mathrm{PBV}}_{5\mathrm{T}} \times BVPS_{\text{latest}}$.

Furthermore, the main fair value (basic scenario) is determined as the arithmetic average of the two paths: $\hat{P} = \frac{\hat{P}_{PER} + \hat{P}_{PBV}}{2}$ (CFA Institute, 2025; Koller et al., 2020).

The sample selection follows a preposition test to enforce ESG quality consistency: only issuers that have successively become ESGL constituents throughout 2020–2024 are included. The data includes the latest EPS and BVPS (in 2024), the annual PER and PBV series for 2020–2024, and the benchmark market price at the end of 2024; All metrics are normalized on a per-sheet basis and adjusted based on corporate actions to maintain comparability (IDX, 2024; Koller et al., 2020). The classification of fairness status is carried out with an operational threshold of ±5% against $\hat{P}$: overvalued if $P_{\text{market}} > \hat{P} \times (1 + 0{,}05)$, fair value if $| P_{\text{market}} - \hat{P} | \leq 0{,}05\, \hat{P}$, dan undervalued if $P_{\text{pasar}} < \hat{P} \times (1 - 0{,}05)$. If EPS is negative (PER is meaningless) or BVPS/negative equity (PBV is meaningless), then consolidation uses a valid path with documentation of the reason for the exclusion; The results section does not contain transaction recommendations, but rather a determination of fairness status (CFA Institute, 2025; Morgan Stanley Investment Management, 2024)

Relative valuations view price multiples as a "DCF summary": price is linked to fundamentals per share so that PER represents earnings power and PBV is anchored to equity/book value strength; Five-year historical average usage normalizes cycles and dampens outliers (CFA Institute, 2025; Koller et al., 2020). The PER–PBV combination was chosen to reduce sectoral bias from a single multiple, with the consolidation of the two resulting in a more stable estimate across industries (CFA Institute, 2025; Skočir & Lončarski, 2024). In the context of emerging markets, multiples sensitivity to volatility and risk regimes is higher, so historical normalization and operational discipline are prerequisites for the interpretation of price fairness (Akhtar, 2021a). At the macro level, the CIGXM framework describes the C–I–G–X–M channels that lead to EPS and BVPS as the main anchors for PER/PBV and justifies the use of two multiples channels in ESGL issuers that meet the methodology and definition of the official index (IDX, 2024; OJK, 2024; Skočir & Lončarski, 2024).

The scope of the sample is limited to consistent ESGL issuers during 2020–2024 so that it has the potential to cause survivorship bias and limit generalization to the entire population of ESG and non-ESG issuers; In addition, the use of the 2024 end-time point price does not capture the intrayear dynamics and changes in market regimes that may affect multiples (IDX, 2024; Skočir & Lončarski, 2024). In terms of measurement, the determination of the 5-year historical average as an anchor is highly dependent on the selection of estimators (mean vs median/harmonic mean) and outlier treatment; These differences in options have the potential to shift the fair value estimate, while changes in accounting policies, impairments, and corporate actions (e.g., splits, rights, buybacks) require adjustments to maintain year-to-year comparability (CFA Institute, 2025; Koller et al., 2020).

Functional limitations also arise in special cases: negative EPS makes the PER path meaningless and the BVPS/negative equity makes the PBV path irrelevant; In such conditions, consolidation must rest on a valid path that adds to the uncertainty of the estimate (CFA Institute, 2025). The band-based reasonableness classification ±5% is operational to absorb noise and is not a test of statistical significance, so the results are not intended as causal evidence; descriptive research design without an econometric model also does not identify the influence of ESG on price structurally (Akhtar, 2021; Skočir & Lončarski, 2024).

Table 1. Company List

No	Code	Company Name
1	ACES	PT Ace Hardware Indonesia Tbk.
2	AKRA	PT AKR Corporindo Tbk.
3	BBCA	PT Bank Central Asia Tbk.
4	BBNI	PT Bank Negara Indonesia (Persero) Tbk.
5	BMRI	PT Bank Mandiri (Persero) Tbk.
6	BSDE	PT Bumi Serpong Damai Tbk.
7	CTRA	PT Ciputra Development Tbk.
8	ERAA	PT Erajaya Swasembada Tbk.
9	JSMR	PT Jasa Marga (Persero) Tbk.
10	MAPI	PT Mitra Adiperkasa Tbk.
11	MNCN	PT Media Nusantara Citra Tbk.
12	PWON	PT Pakuwon Jati Tbk.
13	SCMA	PT Surya Citra Media Tbk.
14	TBIG	PT Tower Bersama Infrastructure Tbk.
15	TLKM	PT Telkom Indonesia (Persero) Tbk.
16	TOWR	PT Sarana Menara Nusantara Tbk.
17	UNVR	PT Unilever Indonesia Tbk.

Source: www.idx.co.id Access Date September 30, 2024

The selection of samples followed a preposition test to ensure ESG quality consistency: only issuers that were successively listed as constituents of the IDX ESG Leaders (ESGL) during 2020–2024 were included, so that noise due to the entry and exit of the index (rebalancing) was reduced and comparability over time was increased (IDX, 2024). The data used includes the latest EPS and BVPS (2024), the annual series of PER and PBV for 2020–2024, and the reference market price at the end of 2024; All metrics are normalized on a per-share basis and adjusted for corporate actions (e.g., stock splits, rights issues, buybacks) to maintain comparability (Koller et al., 2020). The feasibility of the valuation path is determined a priori: PER is not used when EPS is negative and PBV is not used when BVPS/equity is negative; Fair value consolidation using a valid path with documentation of reasons for exclusion to maintain transparency and replicability (CFA Institute, 2025). This approach is in line with market-based valuation practices in emerging markets, prioritizing normalized multiples to mitigate cyclical volatility and relevant to the evaluation of ESG-labeled issuers (Ardhani et al., 2024).

The research sample includes 17 ESGL issuers that meet the 2020–2024 consistency criteria, namely ACES, AKRA, BBCA, BBNI, BMRI, BSDE, CTRA, ERAA, JSMR, MAPI, MNCN, PWON, SCMA, TBIG, TLKM, TOWR, and UNVR; The complete list along with the identity of the issuer (code, name, and, if necessary, sector) is presented in Table 1 as the basis for processing fair value through the PER, PBV, and consolidation lines for the fair price classification (IDX, 2024).

Table 2. 5-Year Average Calculation Results of PER & PBV

Ticker	EPS	BVPS_t (IDR)	Avg PER 5	Avg PBV 5	Fair Price (PER)	Fair Price (PBV)	Fair Price (Avg)	Market Price (IDR)	Potential Upside	Status
ACES	47.85	361.49	23.45	2.95	1122	1066	1094	790	38.5%	Undervalued
AKRA	119.67	585.65	13.33	2.23	1595	1306	1451	1120	29.5%	Undervalued
BBCA	462.19	2122.05	26.01	4.73	12022	10037	11029	9675	14.0%	Undervalued
BBNI	559.45	4299.74	16.07	1.15	8990	4945	6968	4350	60.2%	Undervalued
BMRI	575.2	2858.88	12.28	1.98	7064	5661	6362	5700	11.6%	Undervalued
BSDE	156.54	2099.9	15.64	0.63	2448	1323	1886	945	99.5%	Undervalued
CTRA	125.83	1222.11	11.31	1.06	1423	1295	1359	980	38.7%	Undervalued
ERAA	67.54	529.33	9.23	1.2	623	635	629	404	55.8%	Undervalued
JSMR	559.36	4792.34	22.07	1.26	12345	6038	9192	4330	112.3%	Undervalued
MAPI	110.19	228.64	38.36	2.56	4227	585	2406	1410	70.6%	Undervalued
MNCN	59.82	1472.09	5.45	0.58	326	854	590	276	113.7%	Undervalued
PWON	49.1	440.27	14.68	1.29	721	568	644	398	61.9%	Undervalued
SCMA	7.95	89.92	23.24	3.2	185	288	236	167	41.5%	Undervalued
TBIG	64.15	434.85	37.77	5.38	2423	2339	2381	2100	13.4%	Undervalued
TLKM	230.79	1332.92	15.79	2.94	3644	3919	3781	2710	39.5%	Undervalued
TOWR	57.23	335.44	15.38	3.83	880	1285	1082	655	65.3%	Undervalued
UNVR	80.15	67.4	27.12	31.87	2174	2148	2161	1885	14.6%	Undervalued

Fair price calculation based PBV $\hat{P}_{PBV} = P\bar{B}V_{5T} \times BVPS_t$ shows the composition of the classification as follows: 14 undervalued issuers, 2 fair issuers (BBCA and BMRI are in the ±5% band), and 1 overvalued issuer (MAPI). In aggregate, the average difference $(\hat{P}_{PBV} - P_{\text{market}})/P_{\text{market}}$ ≈39.4%, indicating re-rating space which means that the 5-year average anchor is considered representative of current fundamental conditions (CFA Institute, 2025; Koller et al., 2020). The PBV difference distribution stands out in some cases: MNCN $(854 \text{ vs } 276) \approx +209\%$ against the market price; TOWR $(1.285 \text{ vs } 655) \approx +96\%$; SCMA $(288 \text{ vs } 167) \approx +72\%$; ERAA $(635 \text{ vs } 404) \approx +57\%$; and TLKM $(3.919 \text{ vs } 2.710) \approx +44{,}6\%$. The two issuers that are close to normal are BBCA $(10.037 \text{ vs } 9.675;\ -3{,}6\%)$ and BMRI $(5.661 \text{ vs } 5.700;\ +0{,}7\%)$, while MAPI was recorded as overvalued on the PBV route $(585 \text{ vs } 1.410;\ +141\%)$. All figures are presented in rupiah per share according to the results table (IDX, 2024).

Interpretively, the strong PBV undervaluation signal on the tower/network (e.g. TOWR, TLKM) and certain media (e.g. SCMA) consistent with the asset-dense character of tangible book value becomes an informative anchor when cash flows are relatively stable and productive assets are dominant in the balance sheet structure (CFA Institute, 2025; Skočir & Lončarski, 2024). On the other hand, MAPI anomalies in the PBV path are common in more

asset-light business models with lower equity than market capitalization which reflects future growth/ROE expectations, so PBV appears high even though the PER path may give different readings (Koller et al., 2020). These PBV findings confirm the function of two-path triangulation: PBV anchors valuations to equity strength and balance sheet resilience, while PER captures normalized earnings strength; The consolidation of the two in the following sections ensures a more stable fair value estimate across sectors and reduces the specific bias of the multiple (Akhtar, 2021; CFA Institute, 2025).

Fair price estimation based PER $\hat{P}_{PER} = P\bar{E}R_{5T} \times EPS_t$ shows that all 17 sample issuers are undervalued to the benchmark market price, indicating a fairly wide earnings multiple compression at the observation point (Akhtar, 2021; CFA Institute, 2025). Examples of main cases: MAPI $(4.227$ vs $1.410) \approx$ +199,8%; JSMR $(12.345$ vs $4.330) \approx$ +185,1%; BSDE $(2.448$ vs $945) \approx$ +159,0%; BBNI $(8.990$ vs $4.350) \approx$ +106,7%; PWON $(721$ vs $398) \approx$ +81,2%. The issuer that is closest to its fair value on the PER line is SCMA $(185$ vs $167) \approx$ +10,8%, TBIG $(2.423$ vs $2.100) \approx$ +15,4%, and UNVR $(2.174$ vs $1.885) \approx$ +15,3% (all figures in rupiah per share).

Sectorally, property and infrastructure/toll (e.g. BSDE, PWON, JSMR) stands out on the PER path illustrating that the earnings power represented by the 5-year average PER is higher than that reflected in the point price point of time, in line with the cyclical nature of the sector's earnings recognition (Akhtar, 2021; Koller et al., 2020). In large banks (e.g. BBNI) and certain consumption issuers (e.g. UNVR), the PER > PBV pattern indicates that the market is still discounting earnings growth/risk normalization, while PBV tends to be conservative towards listed equity; this emphasizes the need for PER-PBV triangulation so that the estimate is more stable across the character of the business model (CFA Institute, 2025; Skočir & Lončarski, 2024). Overall, the results of the PER pathway corroborate the findings that in the 2020–2024 period there was an emphasis on profit-based valuation in the ESGL basket; The use of a five-year historical benchmark serves to normalize the cycle and improve the reliability of the fairness reading before consolidating with the PBV path in the following sections (CFA Institute, 2025; Koller et al., 2020).

The consolidation of the two valuation lines is carried out by setting an average fair value $\hat{P} = \frac{\hat{P}_{PER} + \hat{P}_{PBV}}{2}$ and compare it with market prices using an operational band of ±5%, so that the final fair price classification for all ESGL issuers is obtained that is consistent for 2020–2024 (CFA Institute, 2025b; Koller et al., 2020a). In aggregate, all 17 issuers are undervalued, with an average potential of ≈51.8%, median 41.5%, minimum 11.6% (BMRI), and maximum 113.7% (MNCN), which shows a wide re-rating space on the observation horizon based on a 5-year average (Akhtar, 2021; CFA Institute, 2025).

The extremes and proximity to fair value are illustrated as follows: JSMR ≈ 9,192 vs market 4,330 (+112.3%), BSDE 1,886 vs 945 (+99.5%), MNCN 590 vs 276 (+113.7%), while the closest to fair value is BMRI 6,362 vs 5,700 (+11.6%), TBIG 2,381 vs 2,100 (+13.4%), BBCA 11,029 vs 9,675 (+14.0%), and UNVR 2,161 vs 1,885 (+14.6%), all of which remain above the threshold ±5% so that they are classified as undervalued in the base scenario$\hat{P}$ (IDX, 2024; Skočir & Lončarski, 2024).

Interpretively, the consolidated results do not reflect a systematic "ESG premium" price on the ESGL basket; Instead, it reads compression multiples that keep market prices below the

historical average fair value, a pattern consistent with emerging market dynamics and the importance of cross-cycle normalization in multiples readings (Akhtar, 2021; CFA Institute, 2025). This widespread undervaluation, along with the glaring absence of an 'ESG premium', carries a profound structural implication for Indonesia's sustainable economic development. From a macroeconomic standpoint, it reveals a frustrating reality: the domestic stock market has not yet fully internalized the long-term value of sustainability. As a result, companies that have poured heavy investments into green transitions are not being rewarded with a cheaper cost of equity. If left unaddressed, this lack of market appreciation could seriously disincentivize the private sector from pushing forward with low-carbon initiatives. Bridging this valuation gap isn't just a market issue—it requires targeted regulatory interventions to direct better liquidity toward high-performing ESG issuers and to improve green investment literacy among retail investors.

These findings are descriptive, not intended as causal evidence, and still require sensitivity tests (e.g., median/harmonic mean, winsorizing) in further development so that the stability of the estimates is confirmed across aggregation methods and sectors (Koller et al., 2020; Skočir & Lončarski, 2024). In aggregate, the 5-year PER–PBV consolidation shows the absence of a systematic "ESG premium" price in the ESGL basket; The entire sample is below average fair value, indicating compression multiples over the 2020–2024 horizon as well as the opportunity for re-rating if historical normalization assumptions apply (Akhtar, 2021; CFA Institute, 2025). The asymmetry of the PER ≫ PBV on the property/infrastructure and the ≥ PER PBV on the tower/network reflects the fundamental anchor difference (earnings vs. equity) across business models; on average the two lines effectively neutralize sectoral bias and produce more stable estimates (Koller et al., 2020; Skočir & Lončarski, 2024).

The macro-to-micro reading remains consistent: the C–I–G–X–M channel (green preferences, capital costs, regulations, export standards, and import efficiency) boils down to EPS/BVPS on which multiples are based; the absence of a price premium signifies that ESG benefits have not been fully capitalized in point prices or are covered by cyclical phases and emerging market uncertainty (IDX, 2024; Skočir & Lončarski, 2024). Methodologically, the findings confirm the usefulness of the 5-year historical anchor for concise and replicative reasonableness evaluations, while opening up a sensitivity test space (median/harmonic mean, winsorizing outlier, cycle adjustment) for confirmed estimation stability across aggregation alternatives (CFA Institute, 2025; Koller et al., 2020).

The follow-up to the development agenda of these findings is to strengthen the transmission of ESG practices towards improving the company's real fundamentals, so that the capital market plays a more effective role as a financing engine for Indonesia's structural transformation (Trinks et al., 2020). First, ESG issuers need to direct their ESG agenda on productive projects that are measurable and relevant to national energy transition priorities, such as energy efficiency, emission intensity reduction, process electrification, and the integration of renewable energy into operations, as these channels most quickly affect costs, risks, and earnings power reflected in EPS (Fan et al., 2017). Second, for resource-based sectors and manufacturing value chains, the green downstream agenda needs to be linked to increasing domestic added value through clean technology, waste management, and improving environmental standards, so that BVPS and balance sheet quality reflect long-term productive investments, not just asset expansion (Xu et al., 2024). Third, to strengthen export competitiveness in the face of

increasingly stringent global carbon standards, issuers need to improve their readiness for emissions reporting and supply chain compliance, because strengthening carbon performance and governance will reduce market access friction and reduce the risk of compliance costs that can erode margins (Jia et al., 2025). Fourth, in terms of job quality, ESG needs to be translated into improving work safety, skills training, and workforce productivity, so that social benefits are internalized in operational performance and ultimately reflected in more consistent valuation (Hosen et al., 2024). In policy, the findings of undervaluation in the ESGL basket signal the need for standardization of ESG metrics that are more linked to real economic performance indicators and the strengthening of market data infrastructure (clean and auditable historical multiples), so that market confidence in sustainable development does not stop at the label, but is reasonably capitalized through fundamentals (Berg et al., 2022).

The practical implications for investors are the need for market-based valuation discipline to avoid label/narrative-driven decisions; for ESGL issuers, strengthening fundamental disclosures (earnings quality, book value reconciliation, operational metrics) can accelerate the transmission of fundamentals to price; For policymakers, consistency of index methodology and retail valuation literacy are important to reduce behavioural bias amid increased investor participation (CFA Institute, 2025; IDX, 2024). Findings are descriptive and do not imply causality; expansion to non-ESG peer groups, different periods, and integration of other relative methods (e.g. EV/EBITDA) will enrich generalizations and examine the sustainability of undervaluation patterns beyond the ESGL survivor sample (Akhtar, 2021; Skočir & Lončarski, 2024).

CONCLUSION

The findings of this study confirm that the relative valuation framework based on the five-year average of PER and PBV is effective as a concise and replicative baseline scenario for assessing the fairness of the prices of issuers of IDX ESG Leaders. The consolidation of the two paths shows the absence of systematic ESG price premiums; Market prices tend to be below the normalized fair value, so the main signal is a compression of multiples, not a doubling of valuation due to sustainability labels. The asymmetry between sectors can be explained by differences in fundamental anchors—the PER reflects the more cyclically sensitive earnings strength, while the PBV is anchored to the resilience of the balance sheet—and on average both provide more stable estimates across business models. The results are descriptive and are not intended as causal evidence, but provide operational tools that can be used directly for fundamental-based evaluation. The policy implications put market regulators as the main lever. Capital market authorities and stock exchange operators need to strengthen the standardization and assurance of ESG-financial linkages, provide an open data center that contains historical series of valuation multiples and estimator selection guidelines, and incorporate relative valuation modules into literacy programs so that investor decisions are not driven solely by narrative. The central government and technical ministries can accelerate the adoption of a sustainable finance taxonomy in budgeting and public procurement to create credible demand for green products, along with pilot simple climate resilience tests in affected sectors to make policy transmission to corporate financial performance more measurable and auditable.

In the perspective of development economics, the role of the state is important to correct market failures that make the social benefits of green investments (positive externalities) not fully

internalized to the prices and fundamentals of the company, while climate and pollution risks are often negative externalities that are not adequately reflected in the cost of production. Therefore, fiscal policy can be used to improve price signals through a combination of green incentives (e.g. tax allowances or tax holidays for energy efficiency and clean technology capital expenditures, super-deductions for green R&D, and interest subsidies or credit guarantees for transition projects) and disincentive instruments (e.g. emission taxes or carbon pricing schemes) to better reflect environmental impacts. These interventions help accelerate capital reallocation towards low-carbon productive activities, increase long-term productivity, and make ESG–financial linkages more measurable so that they are more easily capitalized reasonably in the capital markets.

For issuers, the priority is to improve the quality of disclosures that bridge ESG initiatives with core financial metrics—earnings per share, return on equity, margin, and asset turnover—as well as clarify capital allocation and book value reconciliation policies so that readers can assess the consistency between sustainability narratives and cash flow capabilities. The next direction of research should include a non-ESG benchmark group, sensitivity testing of estimators and outlier handling, exploration of alternative multiples such as EV/EBITDA, as well as a study of events around the review of index constituents. The approach will enrich generalizations, assess the sustainability of valuation compression patterns, and deepen the mapping of macro–micro channels as formulated in the CIGXM framework.

Ultimately, this study highlights a critical misalignment between sustainability efforts and market valuation in Indonesia. While the constituents of the IDX ESG Leaders have consistently demonstrated robust fundamentals and a clear commitment to the green transition, prevailing market dynamics continue to price them at a discount rather than a premium. Moving forward, realizing Indonesia's sustainable economic development agenda will require more than just corporate ESG compliance. It demands a concerted effort from policymakers, market regulators, and the broader investor community to properly recognize and financially reward long-term sustainability. Without a tangible 'ESG premium' to effectively lower the cost of capital, the momentum for financing structural transformations and low-carbon innovations may ultimately be constrained.

.

REFERENCE

Akhtar, T. (2021). Market multiples and stock returns among emerging and developed financial markets. *Borsa Istanbul Review*, *21*(1), 44–56. https://doi.org/10.1016/j.bir.2020.07.001

Alfarizzi, M. A., Purnamasari, I., & Abidin, Z. (2024). The effect of ESG score, valuation, and earning on stock price. *Kompartemen : Jurnal Ilmiah Akuntansi*, *22*(2), 316–328. https://doi.org/10.30595/KOMPARTEMEN.V22I2.23828

Ardhani, I. R., Rahmawati, P. D., & Ariyanto, N. F. (2024). ANALYSIS OF GREEN ACCOUNTING IMPLEMENTATION, ESG DISCLOSURE, PRICE TO BOOK VALUE AND THEIR IMPACT ON COMPANY PERFORMANCE IN THE MINING SECTOR FOR THE PERIOD 2022-2023. *Strategic of Behaviour Accounting*.

Balaban, C., Boulonnois, E., Cai, M., Fiorini, M., Miroudot, S., & García, I. O. (2025). Towards more environmentally sustainable supply chains: The role of trade agreements and sustainability initiatives. *OECD Trade Policy Papers, OECD Trade Policy Papers*. https://doi.org/10.1787/8BF5CB62-EN

Barontini, R., & Gioja, L. (2025). The market power of ESG index providers: The effects of rebalancing ESG-themed indices. *Research in International Business and Finance*, *77*, 102902. https://doi.org/10.1016/J.RIBAF.2025.102902

Berg, F., Kölbel, J. F., & Rigobon, R. (2022). Aggregate Confusion: The Divergence of ESG Ratings. *Review of Finance*, *26*(6), 1315–1344. https://doi.org/10.1093/rof/rfac033

Biju, A. V. N., Geetha, S., Prasad, S., Sasidharan, A., & Jayachandran, A. (2025b). ESG-Firm Performance Nexus: Evidence From an Emerging Economy. *Business Strategy and the Environment*, *34*(3), 3469–3496. https://doi.org/10.1002/bse.4152

Budiman, J., Yodiputra, J., Candy, C., & Agustin, I. N. (2025). How overconfidence and mental accounting influence investments? The moderating role of financial literacy. *Asian Management and Business Review*, 1–18. https://doi.org/10.20885/AMBR.vol5.iss1.art1

CFA Institute. (2025). *Equity Valuation 2025 Level II Topic Outlines LEARNING OUTCOMES Equity Valuation: Applications and Processes*.

Chen, Y., Li, T., Zeng, Q., & Zhu, B. (2023). Effect of ESG performance on the cost of equity capital: Evidence from China. *International Review of Economics & Finance*, *83*, 348–364. https://doi.org/10.1016/j.iref.2022.09.001

Delgado-Ceballos, J., Ortiz-De-Mandojana, N., Antolín-López, R., & Montiel, I. (2023). Connecting the Sustainable Development Goals to firm-level sustainability and ESG factors: The need for double materiality. *BRQ Business Research Quarterly*, *26*(1). https://doi.org/10.1177/23409444221140919

Fan, L. W., Pan, S. J., Liu, G. Q., & Zhou, P. (2017). Does energy efficiency affect financial performance? Evidence from Chinese energy-intensive firms. *Journal of Cleaner Production*, *151*, 53–59. https://doi.org/10.1016/j.jclepro.2017.03.044

Fichtner, J., Jaspert, R., & Petry, J. (2024). Mind the ESG capital allocation gap: The role of index providers, standard-setting, and "green" indices for the creation of sustainability impact. *Regulation and Governance*, *18*(2), 479–498. https://doi.org/10.1111/REGO.12530;JOURNAL:JOURNAL:17485991;WGROUP:STRING:PUBLICATION

Giovannini, V., & Delille, T. (2025). *EU's carbon cost rules are changing: how companies can prepare for CBAM*.

Goldstein, I. (2023). Information in Financial Markets and Its Real Effects. *Review of Finance*, *27*(1), 1–32. https://doi.org/10.1093/ROF/RFAC052

Gomes, S., Lopes, J. M., & Nogueira, S. (2023). Willingness to pay more for green products: A critical challenge for Gen Z. *Journal of Cleaner Production*, *390*, 136092. https://doi.org/10.1016/J.JCLEPRO.2023.136092

Hosen, S., Hamzah, S. R. ah, Arif Ismail, I., Noormi Alias, S., Faiq Abd Aziz, M., & Rahman, M. M. (2024). Training & development, career development, and organizational commitment as the predictor of work performance. *Heliyon*, *10*(1), e23903. https://doi.org/10.1016/j.heliyon.2023.e23903

IDX. (2020). *IDX INDEX FACT SHEET IDX EGL*.

IDX. (2024). *Fact Sheet Indeks Bursa Efek Indonesia*. https://www.idx.co.id/id/data-pasar/laporan-statistik/fact-sheet-index/

IDX. (2025). *Early in 2025 Capital Market Investors Surpassed 15 Million*.

Jia, F., Hu, S., & Chen, L. (2025). Impact of carbon border adjustment mechanism on the stock market value of high-polluting firms in China: The role of supply chain risk management and internationalization capabilities. *Transportation Research Part E: Logistics and Transportation Review*, *197*, 104041. https://doi.org/10.1016/j.tre.2025.104041

Koller, T., Goedhart, M., & Wessels, D. (2020b). *Valuation: Measuring and Managing the Value of Companies* (7th ed.). McKinsey & Company Inc.

Kresnawati, E., Sofia, L., & Utami, E. R. (2024). Herding behavior, information type, and overconfidence bias: an experimental study on novice investors' investment decisions. *Journal of Accounting and Investment*, *25*(1), 369–386. https://doi.org/10.18196/jai.v25i1.14823

Lin, X., Zhu, H., & Meng, Y. (2023). ESG greenwashing and equity mispricing: Evidence from China. *Finance Research Letters*, *58*, 104606. https://doi.org/10.1016/J.FRL.2023.104606

Mauboussin, M. J., & Callahan, D. (2024). Valuation Multiples What They Miss, Why They Differ, and the Link to Fundamentals. *Morgan Stanley*.

Morgan Stanley Investment Management. (2024). *Valuation Multiples*. https://www.morganstanley.com/im/publication/insights/articles/article_valuationmultiples.pdf?

Neuhann, D., & Sockin, M. (2024). Financial market concentration and misallocation. *Journal of Financial Economics*, *159*, 103875. https://doi.org/10.1016/J.JFINECO.2024.103875

OJK. (2024). *SIARAN PERS BERSAMA OJK DAN BPS UMUMKAN HASIL SURVEI NASIONAL LITERASI DAN INKLUSI KEUANGAN TAHUN 2024*. https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Documents/Pages/OJK-dan-BPS-Umumkan-Hasil-Survei-Nasional-Literasi-dan-Inklusi-Keuangan-Tahun-2024/SP%20OJK%20dan%20BPS%20Umumkan%20Hasil%20Survei%20Nasional%20Literasi%20dan%20Inklusi%20Keuangan%20Tahun%202024.pdf

Ould Daoud Ellili, N. (2020). Environmental, Social, and Governance Disclosure, Ownership Structure and Cost of Capital: Evidence from the UAE. *Sustainability*, *12*(18), 7706. https://doi.org/10.3390/su12187706

Pranata, R. M., Waspada, I., Nugraha, N., & Purnomo, B. S. (2024). Herding Dynamics, Volatility, and Market Capitalization: Implications for Stock Returns in Indonesia. *JASF: Journal of Accounting and Strategic Finance*, *7*(2), 300–314. https://doi.org/10.33005/jasf.v7i2.532

Puriwat, W., & Tripopsakul, S. (2023). Sustainability Matters: Unravelling the Power of ESG in Fostering Brand Love and Loyalty across Generations and Product Involvements. *Sustainability 2023, Vol. 15, Page 11578*, *15*(15), 11578. https://doi.org/10.3390/SU151511578

PwC. (2024). *Voice of the Consumer Survey 2024 - Asia Pacific | PwC*. https://www.pwc.com/gx/en/about/pwc-asia-pacific/voice-of-the-consumer-survey-2024-asia-pacific.html

Schmidt, J., & Steingress, W. (2022). No double standards: Quantifying the impact of standard harmonization on trade. *Journal of International Economics*, *137*, 103619. https://doi.org/10.1016/J.JINTECO.2022.103619

Shrestha, C., Andrikopoulos, P., & Park, J. S. (2025). ESG rating and financial performance in the emerging markets: The moderating effects of cross-listing and industry type. *Research in International Business and Finance*, *77*, 102916. https://doi.org/10.1016/J.RIBAF.2025.102916

Simatupang, A., & Puspitasari, V. A. (2023). PENILAIAN HARGA WAJAR SAHAM MENGGUNAKAN METODE DISCOUNTED CASH FLOW. *Jurnal Sekretari Universitas Pamulang*, *10*(1), 130. https://doi.org/10.32493/skr.v10i1.28430

Singh, D., Malik, G., & Jha, A. (2024). Overconfidence bias among retail investors: A systematic review and future research directions. *Investment Management and Financial Innovations*, *21*(1), 302–316. https://doi.org/10.21511/imfi.21(1).2024.23

Skočir, M., & Lončarski, I. (2024). On the importance of asset pricing factors in the relative valuation. *Research in International Business and Finance*, *70*(1), 102366. https://doi.org/10.1016/j.ribaf.2024.102366

Trinks, A., Mulder, M., & Scholtens, B. (2020). An Efficiency Perspective on Carbon Emissions and Financial Performance. *Ecological Economics*, *175*(10), 106632. https://doi.org/10.1016/j.ecolecon.2020.106632

Trisno, B., & Vidayana. (2023). Understanding herding behavior among Indonesian stock market investors. *E3S Web of Conferences*, *426*, 01088. https://doi.org/10.1051/e3sconf/202342601088

Wang, K. (2025). The effect of transition finance on ESG performance: empirical evidence from China's high-carbon industries. *International Journal of Low-Carbon Technologies*, *20*, 1809–1817. https://doi.org/10.1093/IJLCT/CTAF113

Xu, W., Sun, Z., & Ni, H. (2024). Transparency pays: How carbon emission disclosure lowers cost of capital. *Economic Analysis and Policy*, *83*, 165–177. https://doi.org/10.1016/j.eap.2024.05.020