Accounting Research Festival 2025

P-ISSN: XXXX-XXXX, E-ISSN: XXXX-XXXX
Website: https://publikasiilmiah.unwahas.ac.id/fra4
Redefining Accounting Education: Balancing Technological Innovation with Ethics and Sustainability

Beyond Compliance: The Synergy of ESG and Green Process Innovation as Determinants of Firm Value

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ABSTRACT
This study aims to examine the impact of ESG Disclosure (X1), Green Process Innovation (GPI) (X2), and Company Size (X3) on Company Value (Y) in the energy sector on the Indonesia Stock Exchange for the period 2021-2024. The method used in this study is quantitative by utilizing secondary data from 144 samples analyzed through purposive sampling. For data analysis, panel data regression with a Random Effects Model (REM) was used. The research findings indicate that all proposed hypotheses are rejected. Through the t-test (partial), the variables ESG Disclosure, Green Process Innovation, and Company Size do not show a significant impact on their respective Company Values. The results of the F-test (simultaneous) also support that the three independent variables do not have a significant effect when tested simultaneously on Company Value.

Keywords: ESG1, Innovation2, Green Process Innovation3. Corporate Values4. Energy Sector5

INTRODUCTION

The growing global awareness of sustainability issues has made it imperative for companies worldwide to adopt responsible business practices, both environmentally and socially. In this context, *Environmental, Social, and Governance* (ESG) disclosure has become a crucial factor that not only influences reputation but also directly impacts a company's market value [1] . The transparency provided by ESG information can increase trust among investors and consumers, which in turn contributes positively to financial performance.

ESG disclosure serves as a strategic signal *that* confirms a company's commitment to sustainability. This transparent reporting is crucial for increasing stakeholder trust and reducing information asymmetry between management and investors [2] . Companies with superior ESG performance will choose to make more comprehensive disclosures as an indication of better and longer-term risk management [3] . This positive and credible signal ultimately contributes positively to the company's market value.

In addition to the communication function through disclosure (X-1), commitment to sustainability must be realized through concrete actions, namely Green Process Innovation. Investment in GPI (such as the adoption of environmentally friendly technologies or recycling processes) serves as a costly signal *to* the market that the company has superior management quality and the ability to create operational excellence and cost efficiency in the future [3] . Empirical evidence confirms these economic benefits; for example, the use of renewable energy or recycling processes has been shown to reduce energy costs and increase competitiveness [4] . In Indonesia, the energy transition practices carried out by PT Pertamina show that GPI is a tangible signal of the company's commitment to ensuring compliance with environmental regulations while strengthening the signal of competitiveness in the eyes of investors [5] .

It is important to consider the intrinsic factor of the company, namely Company Size (X_3), because it acts as a signal of credibility and stability for ESG and GPI signals. Large companies are inherently perceived by the market as more stable, liquid, and better resourced entities to bear *signaling costs* (such as GPI investment costs and ESG disclosure) than smaller companies. [6] . In addition, due to the high level of

scrutiny by regulators and the public [7] , large companies are forced to send more comprehensive transparency signals, which further strengthens the Company's Value in the capital market.

Although awareness and recognition of the significance of ESG Disclosure practices have increased globally, the empirical relationship between ESG disclosure and Company Value in the capital market still leaves inconsistent results (*research gap*), especially in the context of developing countries such as Indonesia. Previous research shows inconsistent results regarding the influence of ESG on Company Value in Indonesia, such as the results between findings that show no influence [8] and positive influence.

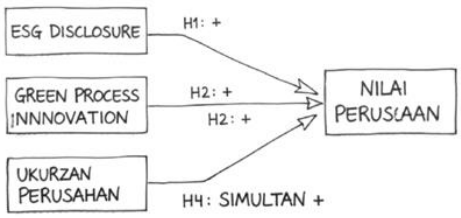
Furthermore, the findings [7] indicate that corporate environmental commitment needs to be mediated by Green Innovation. This strengthens the argument that GPI (X_2) is very important as a signal of real actions that are valued by the market.

No research has simultaneously examined the three variables of ESG Disclosure, Green Process Innovation, and Company Size on Company Value in the Indonesian energy sector during the 2021-2024 period. The energy sector, which is highly vulnerable to environmental issues, provides an ideal context for examining how sustainability signals translate into market valuations. Therefore, this research seeks to fill this gap.

The study aims to analyze the influence of ESG Disclosure (X-1), Green Process Innovation (GPI) (X-2), and Company Size (X-3) on the Company Value of the energy sector on the Indonesia Stock Exchange in 2021-2024.

This research has practical and theoretical benefits, where the theoretical benefits contribute to the development of Signaling Theory in emerging markets and the practical benefits provide practical guidance for energy sector company management to prioritize investments that are proven to increase Company Value in the eyes of investors.

This study tests four main hypotheses developed from the Signaling Theory framework. Partially, it is hypothesized that ESG Disclosure has a significant effect on firm value (H-1), Green Process Innovation has a significant effect on firm value (H-2), and Firm Size has a significant effect on firm value (H-3). In addition, the simultaneous hypothesis (H_4) states that the three independent variables together will have a significant effect on Firm Value. This hypothesis testing will be conducted using empirical data from energy sector company reports on the Indonesia Stock Exchange (IDX) by applying multiple linear regression analysis methods.



Signal Theory

Signaling Theory , proposed by Ross (1977) , provides a foundation for analyzing how firm value is determined in situations *of* information asymmetry . This condition occurs when management has superior access to information regarding the company's internal conditions, quality, and prospects compared to investors. Therefore, management is motivated to send convincing positive signals to the market to reduce uncertainty. In the context of sustainability, ESG disclosure and investment in Green Process Innovation serve as strong non-financial signals regarding this prospective quality. Transparent ESG reporting demonstrates to investors sound risk management and a company's commitment to long-term stability and good governance [9] . Meanwhile, green process innovation signals increased operational efficiency and sustainable competitive advantage , as it has the potential to reduce production costs while ensuring compliance with increasingly stringent environmental regulations [10] . Because of

these quality signals, investors are expected to place a higher value on the company. However, the effectiveness of these signals is influenced by company size . Larger companies have higher visibility , making the signals they send more readily accepted by the market. In addition, signals from large entities are considered more credible because they are assumed to have sufficient financial resources (*deep pockets*) to carry out large investments in ESG and innovation, so their promises of sustainable performance are more trustworthy [11] .

RESEARCH METHOD

This study uses a quantitative method. Quantitative research is research to examine the relationship of one variable with another variable [12] . The data analyzed is secondary data sourced from official documents, financial reports, and sustainability reports of Energy Sector Companies for 2021-2024 and has complete data for variable measurement needs. This study will use two types of variables: independent variables and dependent variables. The independent variables in this study are ESG Score, Green Process Innovation, and Company Size. The dependent variable is company value, which is obtained through the Indonesia Stock Exchange website and the website.

Data collection was conducted by thoroughly examining the report's contents, particularly the sections containing disclosures related to ESG, Green Process Innovation, and company size. This study aimed to determine the influence of ESG disclosure (H1), Green Process Innovation (H2), company size (H3), and all X variables (H4) on company value (Y).

The population of this study is all energy companies listed on the Indonesia Stock Exchange (IDX) for the period 2021-2024. This study selected companies in the energy sector (including coal, oil, and gas), which has the most significant environmental impact and is the largest contributor to carbon emissions. This sector combines the highest environmental pressures with the need for large capital innovation amidst the acceleration of global sustainability trends and the enforcement of OJK Regulation (POJK) No. 51/POJK.03/2017. Therefore, researchers are relevant to accurately measure whether ESG Disclosure practices, Green Process Innovation (GPI), and company size truly impact company value in the energy sector.

The sample in this study used a purposive sampling method, a technique for selecting samples based on specific criteria tailored to the research objectives. The criteria used in this study were:

Table 1. Population and Sample

Criteria	Amount			
Publishing financial reports	74	74	74	74
Incomplete data on ESG, GPI, Company Size	42	40	32	38
Number of sample data used	32	34	42	36
Total sample	144			

ESG Disclosure

ESG disclosure is a strategic management action to communicate internal quality (risk management, long-term commitment, superior performance) to the market, thereby improving investor perception and logically increasing company value. To measure ESG Disclosure, we refer to research [1] , [6] , and [3] . This measuring tool is measured using the Eikon Revinitiv score by assigning a score of 0 to undisclosed GRI items and a score of 1 to disclosed items.

ENV = Total items disclosed by the company / Total GRI disclosure items

Social = Total items disclosed by the company / Total GRI disclosure items

GVN = Total items disclosed by the company / Total GRI disclosure items

Green Process Innovation

Green innovation is an effort made by an organization to demonstrate environmental commitment through the development and implementation of better processes, techniques, and management systems [13] . To measure Green Process Innovation we refer to research [7] . This measurement is carried out using the method [14] dummy variables give a score of 0 if they do not have an ISO 14001 certificate and give a score of 1 if they have an ISO 14001 certificate. This is also explained by Qi et al., (2012) that previous studies used ISO 14001 as evidence of a company's commitment to environmental management practices into the company's operational activities. Waste, emissions, material use, energy use and noise pollution were reduced after ISO 14001 certification.

Company Size

Company size is the size of the company. Sujarweni, 2015, said that company size is a reflection of the total amount of assets controlled by the entity to run its daily operations. Simply put, the higher the value of the company's assets, the larger the scale of its size. Company size refers to research [15] with the method [14] of total assets/size of company assets by using the calculation of the value of the logarithm of total assets (or Natural Logarithm/Ln Total Assets).

$$UK = LN\ (Total\ Assets)$$

Company Values

In financial literature, Firm Value (Y) is a representation of the success and prospects of an entity in the eyes of the public, which is reflected by its stock market price [13] . This value is formed by investor perceptions of the company's ability to achieve long-term success [16] . The measurement of this variable refers to research (Zulfikar et al., 2025) using the PBV method as a tool to measure firm value, as disclosed [14] which states that the measurement of the Firm Value (Y) variable often refers to the Price to Book Value (PBV) ratio, because PBV effectively reflects the market's assessment of the company's equity.

$$PBV = Closing\ Stock\ Price\ /\ Book\ Value\ of\ Stock$$

Research methods

This study applies a quantitative method with a panel data regression approach to examine the impact of independent variables on the dependent variable. The selection of the most appropriate model and hypothesis testing are carried out through a series of statistical tests supported by EViews 13 software [15] . The regression equation can be formulated as follows:

Information :

Y = Company Value

C(1) = Constant

C(2) = Regression coefficient for ESG Disclosure

X1 = ESG Disclosure

C(3) = Regression coefficient for Green Process Innovation

X2 = Green Process Innovation

C(4) = Regression coefficient for Firm Size

X3 = Company Size

[CX=R] = Specific error component for the Random Effects model

The data was tested using classical assumption tests, including tests for normality (residual distribution), multicollinearity (correlation between independent variables), and heteroscedasticity (uniform residual variance). Once the classical assumptions were met, model selection was performed using the Chow and Hausman tests to determine the most appropriate panel data model.

Then, a Model Test (F-Test) is conducted to verify the model's collective feasibility. The final step is a Hypothesis Test (t-Test), which aims to measure the specific and individual contribution of each independent variable to the dependent variable, allowing the decision to accept or reject the research hypothesis based on its significance level.

RESULTS AND DISCUSSION

Chow Test Results

Table 2. Chow Test

Effects Test	Statistics	df	Prob.
Cross-section F	3.776147	(73,219)	0.0000
Cross-section Chi-square	241.179721	73	0.0000

Based on the results of the Chow Test presented in Table 2, the Cross-section F probability value is 0.0000. This probability value is smaller than the significance level (a) of 0.05 (0.0000 < 0.05). In accordance with the Chow Test decision-making criteria, if the probability value is < 0.05, then the null hypothesis (H0) stating that there are differences in effects between individuals (companies/regions) is rejected. Therefore, a more appropriate and efficient model to use in panel data regression analysis in this study is *the Fixed Effect Model (FEM).*

Hausman Test Results

Table 3. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	1.119738	3	0.7723

Based on the results of data processing in table 3, the Random Cross-Section Probability value is 0.4898, this value is significantly greater than the significance level of 0.05. In accordance with the decision-making criteria, because the Prob. value (0.7723) > (0.05), then H_0 fails to be rejected, this indicates that the Random Effect Model (REM) is more appropriate to use.

Lagrange Multiplier Test Results

Table 4. Lagrange Multiplier Test

	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	73.29361 (0.0000)	0.142436 (0.7059)	73.43605 (0.0000)
Honda	8.561169 (0.0000)	-0.377407 (0.6471)	5.786794 (0.0000)
King Wu	8.561169 (0.0000)	-0.377407 (0.6471)	1.331049 (0.0916)
Standardized Honda	8.894922 (0.0000)	-0.029358 (0.5117)	0.247587 (0.4022)
Standardized King Wu	8.894922 (0.0000)	-0.029358 (0.5117)	-1.240723 (0.8926)
Gourieroux, et al.	--	--	73.29361 (0.0000)

Based on the data processing results in table 4, the Breusch-Pagan Cross-section probability value is 0.0000. This value is significantly smaller than the significance level (a) of 0.05. In accordance with the decision-making criteria, because the probability value (0.0000) <0.05, the null hypothesis (H0) is rejected. Based on these three tests, the most appropriate and selected model for use in the panel data regression analysis in this study is *the Random Effect Model (REM).*

Descriptive Statistical Test

Table 5. Descriptive Statistical Test

	Y	X1	X2	X3
Mean	94044298	0.798581	0.780405	2.31E+08
Median	4705.500	1,000,000	1,000,000	4578758.
Maximum	4.08E+09	1,000,000	1,000,000	7.51E+09
Minimum	-204097.0	0.000000	0.000000	0.000000
Std. Dev.	5.01E+08	0.334195	0.320097	8.40E+08
Skewness	6.242298	-1.494593	-1.159845	7.099892
Kurtosis	42.50328	3.773042	3.191495	56.83162
Jarque-Bera	21168.61	117.5715	66.81742	38226.88
Probability	0.000000	0.000000	0.000000	0.000000
Sum	2.78E+10	236.3800	231,0000	6.82E+10
Sum Sq. Dev.	7.40E+19	32.94740	30.22635	2.08E+20
Observations	296	296	296	296

Based on the results of the descriptive test in table 5, it shows that the number of valid data for each variable is 296 originating from energy sector companies listed on the Indonesia Stock Exchange for the 2020-2024 period. The results of the descriptive statistical test for the ESG variable show a minimum value of 0.0000, including PT. BYAN 2021, and a maximum value of 1.0000, one of which is at PT. ABMM 2021, a mean (average) of 0.798 and a standard deviation of 0.3341. The results of the descriptive statistical test for the Green Process Innovation variable show a minimum value of 0.000 in several companies including PT. MCOL 2023, 2024 and PT. RMKE 2021, a maximum value of 1.00, one of which is at PT. ABMM 2021-2024, a mean (average) of 0.780 and a standard deviation of 0.377. The results of the descriptive statistical test of the Company Size variable show a minimum value of 0.00 at PT. SUNI 2021 and PT. CUAN 2021, a maximum value of 7,510 at PT. PGAS 2021, a mean of 2,310, and a standard deviation of 8,400. For the final statistical results, namely the Company Value variable, which shows a minimum value of -204097.0 at PT. SURE 2022, a maximum value of 4,080 at PT. UNIQ 2024, a mean of 9,404,4298, and a standard deviation of 5,010.

Multicollinearity Test

Table 6. Multicollinearity Test

	X1	X2	X3
X1	1,000,000	0.261831693 1448549	0.071783087 33739949
X2	0.261831693 1448549	1,000,000	0.144006706 8204016
X3	0.071783087 33739949	0.144006706 8204016	1,000,000

Based on the guidelines proposed by Napitupulu et al. (2021: 141), if the correlation coefficient value between independent variables is less than 0.85, then the regression model can be concluded to be free from multicollinearity problems. These correlation coefficient values (0.261831693, 0.071783087, 0.244006706) are smaller than the specified limit of 0.85. Thus, it can be concluded that there is no serious multicollinearity problem between variables X1 and X2 in this research's regression model. These results indicate that the regression model has passed the multicollinearity test and is suitable for use in further analysis.

Heteroscedasticity Test

Table 7. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.21E+08	60545937	2.002294	0.0462
X1	10329833	46982565	0.219865	0.8261
X2	-44079146	51594277	-0.854342	0.3936
X3	-0.021456	0.035276	-0.608220	0.5435

The results of the heteroscedasticity test show that Prob. X1: 0.8261, Prob. X2: 0.3936 and Prob. X3: 0.5435. Because all Prob. values are > (0.05), then H_0 fails to be rejected. This indicates that the variance of the residuals is constant (homoscedastic), so the model is free from heteroscedasticity problems.

Panel Data Regression Equation

The panel data regression equation in this study aims to test the influence of ESG variables, Green Process Innovation and Company Size on ethical decision making, so that the multiple linear regression equation model can be formulated as:

Based on the results of the panel data regression analysis above, it is distributed in the following equation model:

Y = C(1) + C(2)*X1 + C(3)*X2 + C(4)*X3

Y = 54913031.3484 - 11717692.3874*X1 + 60627844.9496*X2 + 0.00509518200497*X3

It can be concluded that:

1. Constant (183,823,630.863): This is the predicted value of Y if all independent variables (X1, X2, and X3) are zero.

2. Coefficient X1 (-11717692.3874): Indicates a negative relationship between X1 and Y. Every 1 unit increase in X1 will predict a decrease in the value of Y by 11717692.3874 units, assuming variables X2 and X3 are constant (ceteris paribus)

3. X2 coefficient (+ 60627844.9496): Indicates a positive relationship between X2 and Y. Every 1 unit increase in X2 will predict a decrease in the value of Y by 60627844.9496 units, assuming variables X1 and X3 are constant (ceteris paribus)

4. X3 coefficient (+ 0.00509518200497): Indicates a positive relationship between X3 and Y. Every 1 unit increase in X3 will predict an increase in the value of Y by 0.00509518200497 units, assuming variables X1 and X2 are constant (ceteris paribus)

Determinant Coefficient Test

Table 8. Determinant Coefficient Test

R-squared	0.001200
Adjusted R-squared	-0.009062
SE of regression	3.86E+08
F-statistic	0.116934
Prob(F-statistic)	0.950130

Table 8 shows that the Adjusted R-squared is -0.009062 <0.5, indicating that the model is not optimal, leaving ample room for improvement. Model strengthening can be achieved through refinement of variable selection, exploration of additional variables, or model restructuring.

F Test (Simultaneous)

Table 9. F Test

R-squared	0.001200
Adjusted R-squared	-0.009062
SE of regression	3.86E+08
F-statistic	0.116934
Prob(F-statistic)	0.950130

Based on the results of the F test in table no. 9 with an F-statistic value of 0.116934, this means that all independent variables (X1, X2, X3) tested simultaneously do not have a significant influence.

Partial T-Test

Table 10. Partial T-Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	54913031	1.11E+08	0.494379	0.6214
X1	-11717692	99414800	-0.117867	0.9063
X2	60627845	1.07E+08	0.565638	0.5721
X3	0.005095	0.051409	0.099110	0.9211

Based on the results of the partial T test in Table 10, Based on the results of the T test in table no. 10 it can be explained that the X1 coefficient is -11,717,692 (negative) Probability 0.9063 so that the Prob. value (0.9063) > 0.05, then H0 fails to be rejected. The X1 variable has no significant effect on Y. Academically, the negative coefficient cannot be interpreted because it is not statistically significant.

Coefficient 60,627,845 (positive) Probability: 0.5721, because the value of Prob. (0.5721) > 0.05, then H_0 fails to be rejected. Variable X2 has no significant effect on Y. Coefficient: 0.005095 (positive) probability: 0.9211, because the value of Prob. (0.9211) > 0.05, then H_0 fails to be rejected. Variable X3 has no significant effect on Y.

References and Use of Reference Management Software

In this study, the data processing process took place in stages using a combination of two main software tools. The first was Microsoft Excel, which was used in the initial stage as a tool to search, extract, and organize secondary data (financial reports and sustainability reports) from a sample of companies in the energy sector. Excel played a crucial role in structuring the panel data and initial variable calculations, such as measuring Company Size using the Natural Logarithm of Total Assets and the Firm Value ratio using the Price to Book Value (PBV) method. The structured data was then imported into EViews 13 (Econometric Views). EViews 13 serves as the primary software for more complex econometric analyses, including selecting the most appropriate panel data regression model (using the Chow, Hausman, and LM tests), checking classical assumptions (multicollinearity and heteroscedasticity), and finally, estimating the selected regression model (REM) and testing hypotheses (F-test and t-test) to reach statistical conclusions. In this way, MS Excel supported the data preparation phase, while EViews 13 supported the statistical inference and hypothesis validation phases.

CONCLUSION

Based on the results of panel data regression research on energy sector companies listed on the IDX for the 2021-2024 period, where the Random Effects Model (REM) was selected, it was found that all proposed hypotheses were rejected, indicating that the independent variables did not have a significant influence on Company Value. Partially, ESG Disclosure (X1) was insignificant because, in the context of a fossil fuel-dominated sector, investors tend to be skeptical and view ESG reports as greenwashing or merely regulatory compliance, so this information fails to be an effective quality signal to increase value in the eyes of the market. The insignificance of Green Process Innovation (GPI) (X2) indicates that investments in decarbonization and energy efficiency projects undertaken during this period likely still require a long period of time to be reflected as an increase in value (PBV), or the innovation is still small-scale and has not had a substantive impact on the company's core financial performance. Furthermore, Company Size (X3) is also insignificant, implying that amidst the disruption of the energy transition, the size of company assets in the energy sector can actually be considered a liability due to the risk of stranded assets (potentially obsolete assets), which negates the traditional advantages of business scale. Collectively, these findings (F-test insignificant) indicate that in the 2021-2024 IDX energy industry, Company Value is still dominated by macroeconomic and non-model factors, such as global commodity price fluctuations, domestic energy policies, and short-term market sentiment, rather than the internal efforts related to sustainability and innovation studied.

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APPENDIX

	A	B	C	D	E	F
1	KODE	TAHUN	X1	X2	X3	Y
2	ABMM	2021	1	1	1.036.704	16.053.308,00
3	ABMM	2022	0,35	1	1.362.576,00	53.818.413,00
4	ABMM	2023	0,35	1	2.156.687,00	41.331.101,00
5	ABMM	2024	1	1	2.095.451,00	41.004.765,00
6	ADRO	2021	1	1	7.505.935,00	3.320.055,00
7	ADRO	2022	0,86	1	14.302.307,00	5.908.671,00
8	ADRO	2023	0,31	1	10.472.711,00	2.582.786,00
9	ADRO	2024	0,35	1	5.702.127,00	368.646,00
10	AKRA	2021	1	1	23.508.585,00	2,00
11	AKRA	2022	1	1	27.187.608,00	2,00
12	AKRA	2023	1	1	30.236.571,00	2,00
13	AKRA	2024	1	1	27.187.608,00	2,00
14	BUMI	2021	0,73	1	5.758.230,00	241,00
15	BUMI	2022	0,41	1	3.215.925,00	21.211,00
16	BUMI	2023	0,35	1	3.467.732,00	11.642,00
17	BUMI	2024	1	1	3.687.015,00	12.316,00
18	BYAN	2021	0	1	3.369.634,00	50,00
19	BYAN	2022	0	1	4.496.165,00	37,00
20	BYAN	2023	1	1	5.745.557,00	35,00
21	BYAN	2024	1	1	5.907.358,00	31,00
22	DEWA	2021	0	1	571.570.833,00	4.035,00
23	DEWA	2022	0,35	1	547.971.275,00	4.562,00
24	DEWA	2023	1	1	8.137.619,00	338,00
25	DEWA	2024	1	1	8.806.355,00	732,00
26	DOID	2021	0,31	1	1.635.958,00	8.567,00
27	DOID	2022	1	1	1.571.087,00	10.229,00
28	DOID	2023	0,35	1	1.874.539,00	11.173,00
29	DOID	2024	1	1	1.587.043,00	48.307,00
30	DSSA	2021	0	0,5	3.081.120,00	1.485,00
31	DSSA	2022	0,86	0,5	6.437.181,00	589,00
32	DSSA	2023	0,89	0,5	3.063.273,00	2.852,00
33	DSSA	2024	0,35	0,5	3.695.071,00	8.958,00
34	ELSA	2021	0	1	7.234.857,00	843.572,00
35	ELSA	2022	0,31	1	8.836.089,00	1.330.237,00
36	ELSA	2023	0,35	1	9.601.482,00	641.484,00
37	ELSA	2024	1	1	10.628.300,00	643.213,00
38	ENRG	2021	1	0,5	1.064.042,00	4.849,00
39	ENRG	2022	1	0,5	1.194.330,00	12.310,00
40	ENRG	2023	1	0,5	1.368.757,00	8.327,00
41	ENRG	2024	1	0,5	1.583.253,00	7.818,00
42	GEMS	2021	0,31	1	629.026,00	148,00
43	GEMS	2022	0,35	1	1.129.086,00	75,00
44	GEMS	2023	0,31	1	1.312.042,00	52,00
45	GEMS	2024	1	1	1.233.571,00	36,00
46	HITS	2021	0,35	1	223.583,00	40,00
47	HITS	2022	1	1	229.320,00	17,00
48	HITS	2023	0,35	1	2.718.204,00	16,00
49	HITS	2024	1	1	296.641,00	18,00
50	HRUM	2021	0,86	0,5	8.746.215,00	60,00
51	HRUM	2022	0,31	0,5	1.278.805,00	30,00
52	HRUM	2023	1	0,5	1.633.107,00	20,00
53	HRUM	2024	1	0,5	2.574.539,00	15,00
54	INDY	2021	0,86	0,5	3.631.477,00	10.545,00
55	INDY	2022	0,35	0,5	3.593.872,00	11.960,00
56	INDY	2023	1	0,5	3.113.102,00	6.065,00
57	INDY	2024	1	0,5	2.362.763,00	6.461,00
58	ITMG	2021	0,31	1	1.666.239,00	13.061,00
59	ITMG	2022	0,35	1	2.640.177,00	22.554,00
60	ITMG	2023	1	1	2.187.847,00	16.213,00
61	ITMG	2024	1	1	2.406.544,00	15.647,00
62	KKGI	2021	0	0,5	132.182.307,00	13.404,00
63	KKGI	2022	0,77	0,5	170.184.630,00	16.379,00
64	KKGI	2023	0,31	0,5	200.536.560,00	13.277,00
65	KKGI	2024	1	0,5	208.367.020,00	16.354,00
66	MBSS	2021	0	0,5	77.633.085,00	12.183,00
67	MBSS	2022	0,31	0,5	210.933.872,00	12.183,00
68	MBSS	2023	1	0,5	247.068.111,00	11.306,00
69	MBSS	2024	1	0,5	33.340.586,00	1,00
70	MEDC	2021	1	0,5	56.838.841,00	14.031,00
71	MEDC	2022	1	0,5	69.319.058,00	20.704,00
72	MEDC	2023	1	0,5	74.683.162,00	20.240,00
73	MEDC	2024	1	0,5	79.268.903,00	22.378.850,00
74	MYOH	2021	0	1	163.363.576,00	27.468,00
75	MYOH	2022	1	1	169.488.235,00	24,00
76	MYOH	2023	0	1	236.712.430,00	24,00
77	MYOH	2024	1	1	224.114.274,00	20,00
78	PGAS	2021	1	1	7.510.948.302,00	18,00
79	PGAS	2022	1	1	7.194.853.382,00	23,00
80	PGAS	2023	1	1	6.533.238.463,00	11,00
81	PGAS	2024	1	1	6.415.343.730,00	22,00
82	PTBA	2021	0,35	1	36.123.703,00	40,00
83	PTBA	2022	1	1	45.353.207,00	17,00
84	PTBA	2023	1	1	38.765.183,00	16,00
85	PTBA	2024	1	1	41.785.576,00	18,00
86	PTRO	2021	0,35	0,5	532.726,00	0,60
87	PTRO	2022	0,31	0,5	536,42	0,10
88	PTRO	2023	0,31	0,5	727.345,00	1.500,00
89	PTRO	2024	1	0,5	867.265,00	7.087,00
90	RAJA	2021	0,72	1	245.586.152,00	6.148.864,00
91	RAJA	2022	0,86	1	260.504.575,00	33.198.904,00
92	RAJA	2023	0,82	1	328.648.128,00	43.335.126,00
93	RAJA	2024	1	1	331.350.653,00	84.501.543,00
94	SOCI	2021	0,82	1	623.210.003,00	1,00
95	SOCI	2022	0,86	1	633.353.347,00	1,00
96	SOCI	2023	0,82	1	604.303.565,00	1,00
97	SOCI	2024	1	1	602.681.935,00	0,00
98	TOBA	2021	0	1	858.101.884,00	18.538.000,00
99	TOBA	2022	0,53	1	833.323.557,00	8.736.791,00
100	TOBA	2023	0,83	1	347.837.728,00	2.285.480,00
101	TOBA	2024	0,53	1	893.736.128,00	7.426.058,00
102	WINS	2021	0,41	1	196,10	26.392,00
103	WINS	2022	0,41	1	189,40	11.032.680,00
104	WINS	2023	0,41	1	194.800,00	12.032.670,00
105	WINS	2024	0,5	1	232,50	13.334.123,00
106	SHIP	2021	1	1	325,47	25.031,00
107	SHIP	2022	1	1	379,31	19.591.360,00

108	SHIP	2023	1	1	432,18	20.658.120,00
109	SHIP	2024	1	1	483.413,00	18.116,00
110	PSSI	2021	0,27	1	161,24	1,86
111	PSSI	2022	0,18	1	173,36	2,19
112	PSSI	2023	0,55	1	203,87	1,63
113	PSSI	2024	1	1	183.581,00	1,38
114	TEBE	2021	0	0,5	383,06	1.174,00
115	TEBE	2022	0,5	0,5	1.302,51	1
116	TEBE	2023	0,45	0,5	1.184,00	0,81
117	TEBE	2024	0	1	1.130,00	0,85
118	UNIQ	2021	0,36	0,5	516,02	813.566.142,00
119	UNIQ	2022	0,36	0,5	581,52	515.761.073,00
120	UNIQ	2023	0,36	0,5	726.266,00	13.313.394,00
121	UNIQ	2024	0,32	0,5	730.155,00	4.082.650.181,00
122	MCOL	2021	0,32	1	1.380,79	0,00
123	MCOL	2022	0,41	1	2.119.830,00	0,00
124	MCOL	2023	0,41	0	2.129.080,00	744.880,00
125	MCOL	2024	0	0	2.151,30	759.220,00
126	RMKE	2021	0	0	2.373,57	1.400,00
127	RMKE	2022	0,55	0	3,00	1.676.840,00
128	RMKE	2023	0,64	1	1.307.367,00	2.371,00
129	RMKE	2024	0	0	1.610,00	2.209,00
130	ADMR	2021	0,36	1	365.702.525,00	0,00
131	ADMR	2022	0,41	1	1.286.624.764,00	123.640,00
132	ADMR	2023	0,55	1	1.635.413.616,00	56.347.860,00
133	ADMR	2024	0,5	1	2.073.594.757,00	34.761.080,00
134	SUNI	2021	0	1	0,00	3.002.664,00
135	SUNI	2022	0,32	1	0,32	3.716.608,00
136	SUNI	2023	0,45	1	0,45	5.741.808,00
137	SUNI	2024	0,5	1	0,50	7.635.492,00
138	HILL	2021	0,32	0	0,32	2.360.672,00
139	HILL	2022	0,36	1	0,36	293.681,00
140	HILL	2023	0,45	1	0,45	267.331,00
141	HILL	2024	0,5	1	0,50	2.890.372,00
142	CUAN	2021	0	0,5	0,00	0,00
143	CUAN	2022	0,45	1	110,69	0,00
144	CUAN	2023	0,55	1	230.062,00	90.237,00
145	CUAN	2024	0,5	1	1.777.736,00	16.873,00
146	MAHA	2021	0	1	1.606.542,00	0,00
147	MAHA	2022	0	1	2.553.935,00	0,00
148	MAHA	2023	0,55	1	2.703.403,00	173.566.901,00
149	MAHA	2024	0,64	1	0,00	123.273.656,00
150	ALII	2021	0	0,5	1.216.383,00	0,00
151	ALII	2022	0	0,5	1.404.650,00	0,00
152	ALII	2023	0	0,5	1.313.516,00	0,00
153	ALII	2024	0,64	0,5	2.577.888,00	33.184.636,00
154	AADI	2021	1	1	6.191,00	3.672.318,00
155	AADI	2022	1	1	7.366,00	4.738.053,00
156	AADI	2023	1	1	7.063,00	4.382.439,00
157	AADI	2024	1	1	5.393,00	4.853.005,00
158	APEK	2021	1	1	357.749.355,00	32.432,00
159	APEK	2022	1	1	262.366.788,00	48.018,00
160	APEK	2023	1	1	257.247.263,00	57.773,00
161	APEK	2024	1	1	250.333.750,00	70.462,00

112	[illegible]	2024	1	1	[illegible]	[illegible]
113	[illegible]	2021	0	0	[illegible]	[illegible]
114	[illegible]	2022	0	0	[illegible]	[illegible]
115	[illegible]	2023	0	0	[illegible]	[illegible]
116	[illegible]	2024	0	0	[illegible]	[illegible]
117	[illegible]	2021	0	0	[illegible]	[illegible]
118	[illegible]	2022	0	0	[illegible]	[illegible]
119	[illegible]	2023	0,55	0,5	[illegible]	[illegible]
120	[illegible]	2024	0,64	1	[illegible]	[illegible]
121	[illegible]	2021	1	1	[illegible]	[illegible]
122	[illegible]	2022	1	1	[illegible]	[illegible]
123	[illegible]	2023	1	1	[illegible]	[illegible]
124	[illegible]	2024	1	1	[illegible]	[illegible]
125	[illegible]	2021	1	0,5	[illegible]	[illegible]
126	[illegible]	2022	1	1	[illegible]	[illegible]
127	[illegible]	2023	1	1	[illegible]	[illegible]
128	[illegible]	2024	1	1	[illegible]	[illegible]
129	[illegible]	2021	1	1	[illegible]	[illegible]
130	[illegible]	2022	0,18	1	[illegible]	[illegible]
131	[illegible]	2024	0,64	1	[illegible]	[illegible]
132	[illegible]	2021	1	1	[illegible]	[illegible]
133	[illegible]	2022	1	1	[illegible]	[illegible]
134	[illegible]	2023	1	1	[illegible]	[illegible]
135	[illegible]	2024	1	1	[illegible]	[illegible]
136	[illegible]	2021	1	0,5	[illegible]	[illegible]
137	[illegible]	2022	1	0,5	[illegible]	[illegible]
138	[illegible]	2023	1	0,5	[illegible]	[illegible]
139	[illegible]	2024	1	0,5	[illegible]	[illegible]
140	[illegible]	2021	1	1	[illegible]	[illegible]
141	[illegible]	2022	1	0,5	[illegible]	[illegible]
142	[illegible]	2023	1	0,5	[illegible]	[illegible]
143	[illegible]	2021	1	1	[illegible]	[illegible]
144	[illegible]	2022	1	1	[illegible]	[illegible]
145	[illegible]	2023	1	1	[illegible]	[illegible]
146	[illegible]	2024	1	1	[illegible]	[illegible]
147	[illegible]	2021	1	0,5	[illegible]	[illegible]
148	[illegible]	2022	1	0,5	[illegible]	[illegible]
149	[illegible]	2023	1	0,5	[illegible]	[illegible]
150	[illegible]	2024	1	0,5	[illegible]	[illegible]
151	[illegible]	2021	1	1	[illegible]	[illegible]
152	[illegible]	2022	1	1	[illegible]	[illegible]
153	[illegible]	2023	1	1	[illegible]	[illegible]
154	[illegible]	2024	1	1	[illegible]	[illegible]
155	[illegible]	2021	1	0,5	[illegible]	[illegible]
156	[illegible]	2022	1	0,5	[illegible]	[illegible]
157	[illegible]	2023	1	0,5	[illegible]	[illegible]
158	[illegible]	2024	1	0,5	[illegible]	[illegible]
159	[illegible]	2021	1	1	[illegible]	[illegible]

	A	B	C	D	E	F
215	RUIS	2022	1	1	153.683.248,00	48.353,00
216	RUIS	2023	1	1	171.015.855,00	37.561,00
217	RUIS	2024	1	1	188.936.652,00	26.534,00
218	FIRE	2021	1	1	494.252.757,00	1.007,00
219	FIRE	2022	1	1	364.324.214,00	183,00
220	FIRE	2023	1	1	418.812.724,00	31,00
221	FIRE	2024	1	1	347.213.226,00	50,00
222	DWLLG	2021	1	0,5	1.245.705,00	12.808,00
223	DWLLG	2022	1	0,5	14.212.343,00	11.231,00
224	DWLLG	2023	1	0,5	18.442.394,00	6.862,00
225	DWLLG	2024	1	0,5	16.000.052,00	3.397.580,00
226	INPS	2021	1	0	4.155.038,00	18,00
227	INPS	2022	1	1	3.104.313,00	1.027,00
228	INPS	2023	0,73	0,5	2.932.860,00	737,00
229	INPS	2024	0	0	0,00	0,00
230	TCPI	2021	1	0,5	2.847.296,00	21.625.127,00
231	TCPI	2022	1	1	2.803.863,00	176.669.043,00
232	TCPI	2023	1	1	3.509.253,00	113.329.028,00
233	TCPI	2024	1	1	3.684.202,00	158.491,00
234	SURE	2021	1	1	997.439.630,00	130.996,00
235	SURE	2022	1	1	361.362.427,00	-204.097,00
236	SURE	2023	1	1	100.614.252,00	72.482.720,00
237	SURE	2024	1	1	0,00	0,00
238	BESS	2021	0,64	0,5	667.408.015,00	18.085,00
239	BESS	2022	0	0	77.266.644,00	203,00
240	BESS	2023	0	0	68.360.337,00	179,00
241	BESS	2024	0,59	0	66.228.732,00	462,00
242	SGER	2021	1	1	1.237.084,00	5,47
243	SGER	2022	1	1	3.370.435,00	2,46
244	SGER	2023	1	1	4.513.310,00	5,82
245	SGER	2024	1	1	4.638.206,00	2,80
246	BSML	2021	1	0,5	248.685.841,00	3,70
247	BSML	2022	1	0,5	270.288.041,00	5,76
248	BSML	2023	1	0	255.201.206,00	2,24
249	BSML	2024	1	0	247.610.258,00	1,86
250	SEMA	2021	1	1	190.073.229,00	3.727.487,00
251	SEMA	2022	1	1	233.256.398,00	3.343.893,00
252	SEMA	2023	1	1	285.132.935,00	1.159.520,00
253	SEMA	2024	1	1	268.072.344,00	8.905.285,00
254	SICO	2021	1	0	6.722.877,00	5.050.505,00
255	SICO	2022	1	1	13.596.214,00	1.314.038,00
256	SICO	2023	1	0,5	138.477.723,00	79.106.561,00
257	SICO	2024	1	0	150.785.311,00	16.743.198,00
258	RMKO	2021	1	0	0,00	0,00
259	RMKO	2022	1	0,5	0,00	0,00
260	RMKO	2023	1	1	535.183.223,00	1.360.406,00
261	RMKO	2024	1	1	550.332.964,00	0,81
262	HUMI	2021	1	0,5	0,00	0,00
263	HUMI	2022	1	0,5	0,00	0,00
264	HUMI	2023	0,59	1	271.732.438,00	0,46
265	HUMI	2024	0,59	1	300.533.332,00	0,00
266	RGAS	2021	1	0	18.338.039,00	0,00
267	RGAS	2022	1	0	47.143.276,00	0,00
268	RGAS	2023	1	1	30.238.503,00	1.772.315,00

	A	B	C	D	E	F
269	RGAS	2024	1	1	174.712.102,00	1.676.667,00
270	CGAS	2021	1	0,5	0,00	0,00
271	CGAS	2022	1	0,5	0,00	0,00
272	CGAS	2023	1	0,5	190.740.337,00	0,00
273	CGAS	2024	1	0,5	361.347.330,00	4.448.523,00
274	MKAP	2021	1	1	0,00	0,00
275	MKAP	2022	1	1	0,00	0,00
276	MKAP	2023	1	1	290.085.724,00	1.520.430,00
277	MKAP	2024	1	1	519.155.497,00	1.345.501,00
278	ATLA	2021	1	1	0,00	0,00
279	ATLA	2022	1	1	0,00	0,00
280	ATLA	2023	1	1	0,00	12,50
281	ATLA	2024	1	1	174.828.602,00	0,00
282	BOAT	2021	1	1	0,00	0,00
283	BOAT	2022	1	0,5	0,00	0,00
284	BOAT	2023	1	1	0,00	0,00
285	BOAT	2024	1	1	36.252.480,00	1.142.857,00
286	RATU	2021	1	1	0,00	13.545.347,00
287	RATU	2022	1	0,5	0,00	63.604.240,00
288	RATU	2023	1	0,5	57.474.857,00	7.093.425,00
289	RATU	2024	1	0,5	52.824.351,00	16.951.219,00
290	AIMS	2021	1	1	23.540.000,00	0,53
291	AIMS	2022	1	1	29.310.000,00	0,08
292	AIMS	2023	1	1	3.887.000,00	0,86
293	AIMS	2024	1	1	3.870.000,00	0,81
294	TPMA	2021	1	1	99.300,00	0,97
295	TPMA	2022	1	1	107.400,00	0,38
296	TPMA	2023	1	1	117.400,00	0,16
297	TPMA	2024	1	1	126.400,00	0,47
298						