

CHAPTER V

CONCLUSION

5.1. Conclusion

This study set out to investigate two empirical questions at the intersection of sustainable finance and financial reporting credibility in the context of Indonesia's non-financial corporate sector. The first question addressed whether firms with superior ESG performance enjoy a lower Weighted Average Cost of Capital (WACC); the second examined whether this relationship is amplified when the firm is audited by a Big 4-affiliated accounting firm operationalized as a proxy for high audit quality. Using a balanced panel of 77 non-financial firms listed on the Indonesia Stock Exchange (IDX) over the 2023-2024 fiscal years, yielding 154 firm-year observations, both questions were tested through Pooled Ordinary Least Squares (Pooled OLS) regression, estimated using EViews 12.

With respect to H1, that higher ESG performance is associated with a lower Cost of Capital for non-financial listed firms in Indonesia, the hypothesis is supported. The ESG composite score yields a coefficient of -0.000320 ($t = -1.7988$, $p = 0.0741$), which is statistically significant at the $\alpha = 0.10$ level, confirming that higher ESG performance is systematically associated with a lower WACC among Indonesian non-financial listed firms. This result is theoretically consistent with Signaling Theory, which holds that voluntary ESG disclosure functions as a credible, costly signal that reduces information asymmetry between the firm and its

capital providers, thereby compressing the risk premium embedded in both the cost of equity and the cost of debt. It is equally consistent with Agency Theory, which predicts that robust ESG frameworks attenuate the principal-agent conflict between management and external stakeholders by constraining managerial opportunism and imposing multi-dimensional accountability structures, both of which reduce the return demanded by capital providers. The finding is further reinforced by the Indonesian regulatory context: OJK Regulation No. 51/POJK.03/2017 has progressively elevated ESG disclosure from a voluntary corporate practice to an institutionally mandated governance requirement, strengthening the market's capacity to interpret ESG scores as verifiable and credible risk-reduction signals. On this basis, H1 is accepted.

With respect to H2, that audit quality moderates the relationship between ESG performance and the Cost of Capital, such that the ESG-WACC effect is stronger for firms audited by high-quality auditors, the hypothesis is not supported. The interaction term (ESG x AQ) yields a coefficient of -0.000342 ($t = -0.8405$, $p = 0.4020$), which fails to achieve statistical significance at any conventional inferential threshold. The standalone Audit Quality variable is likewise insignificant ($t = 0.576$, $p = 0.5657$). These results indicate that the engagement of a Big 4 auditor does not statistically condition or amplify the cost-reducing effect of ESG performance on WACC within this sample. Several factors contribute to this outcome. The confirmation of H1 suggests that ESG scores have already attained sufficient independent credibility in the Indonesian capital market, such

that the incremental verification premium historically associated with Big 4 auditing is statistically indistinguishable from zero. The sample composition further constrains detectability, given that 81.8% of sampled firms already engage Big 4 auditors, leaving insufficient variance in the audit quality variable to identify differential ESG-pricing effects across auditor tiers. From an Agency Theory perspective, ESG disclosure and Big 4 auditing may operate as governance substitutes rather than complements in this institutional setting, meaning that the agency cost-reducing function of external audit quality is largely pre-empted by the governance discipline already embedded in high ESG performance. Finally, the binary operationalization of audit quality captures only the reputational-tier dimension of the construct and leaves unobserved dimensions such as auditor industry specialization, partner tenure, and audit independence that may be more directly relevant to ESG disclosure credibility. On this basis, H2 is rejected.

5.2. Implications

The present study makes several contributions to the theoretical literature on ESG, audit quality, and corporate financing. First, it provides emerging market evidence in support of the core prediction of Signaling Theory: that voluntary, high-quality sustainability disclosures serve as credible risk-reduction signals in capital markets characterized by information asymmetry. The confirmation of H1 in the Indonesian context where institutional enforcement mechanisms and disclosure norms are still maturing relative to developed markets suggests that signaling efficacy is not strictly contingent upon the advanced institutional infrastructure of

developed economies, but can emerge in markets undergoing active regulatory formalization of disclosure standards.

Second, the study contributes to the Agency Theory literature by demonstrating that ESG frameworks function as effective principal-agent conflict-reduction mechanisms in a concentrated ownership context. Indonesian listed firms are commonly characterized by significant family or state ownership concentration and relatively weaker minority investor protection mechanisms. The evidence that ESG performance nonetheless reduces WACC in this environment implies that sustainability frameworks are capable of attenuating agency costs even in institutional settings where formal governance protections are less comprehensive than in dispersed-ownership markets.

Third, the rejection of H2 contributes to the emerging sub-literature on governance mechanism substitution. The null moderation result is theoretically informative rather than merely negative: it provides evidence that, when one governance mechanism (ESG disclosure) operates with sufficient credibility, the capital market benefit of a supplementary mechanism (Big 4 audit quality) is diminished in an institutional dynamic consistent with the substitution hypothesis and consistent with the convergence of governance signaling in markets with rapidly advancing regulatory ESG frameworks.

5.3. Research Limitations and Recommendations

This study is subject to a number of limitations that should be acknowledged in interpreting its findings and in designing future empirical investigations.

First, the observation window is limited to two fiscal years (2023–2024). While this reflects the most contemporaneous post-compliance period under OJK Regulation No. 51/POJK.03/2017 and ensures regulatory homogeneity across observations, the short time dimension substantially constrains temporal variation and precludes the use of dynamic panel estimators. As mandatory ESG disclosure matures in Indonesia, future research extending the observation window to five or more years would enable the use of Fixed Effects and Generalized Method of Moments (GMM) estimators, providing more robust control for unobserved firm heterogeneity and potential endogeneity between ESG performance and capital market outcomes.

Second, the operationalization of audit quality as a binary Big 4 dummy variable, while consistent with the dominant approach in the extant literature (DeAngelo, 1981), necessarily simplifies a multidimensional construct. Future studies should explore continuous proxies for audit quality such as audit fees scaled by total assets, discretionary accruals, auditor tenure, and auditor industry specialization to obtain a more granular characterization of the credibility-enhancing function of external auditing. Such proxies may reveal conditional moderation effects that the binary specification is unable to detect.

Third, the sample is subject to a self-selection bias arising from the voluntary nature of ESG disclosure for smaller-scale issuers prior to the 2025 regulatory deadline. The resulting sample over-represents firms with established sustainability reporting infrastructure and governance maturity, which may compress the observable variance in both ESG performance and its capital market effects. Future research should explore whether the ESG–WACC relationship is heterogeneous across firm size categories, and should specifically incorporate smaller IDX-listed firms as ESG disclosure requirements are progressively extended to them.

Fourth, this study employs the composite Refinitiv ESG score as the primary independent variable, following prior studies that prefer the composite to reduce multicollinearity among the individual Environmental, Social, and Governance pillars. However, research suggests that the three ESG pillars may exert heterogeneous effects on financing costs, with the Governance pillar potentially exhibiting the strongest association with WACC in emerging markets where corporate governance standards are the primary differentiator of institutional credibility. Future studies should disaggregate the composite score and test the pillar-level ESG-WACC relationships independently.

Fifth, the Pooled OLS estimator does not control for potential endogeneity between ESG performance and WACC. Firms that already enjoy lower financing costs may have greater financial slack to invest in ESG improvements, creating a reverse causality concern. Future research should address this by employing

instrumental variable approaches, dynamic panel GMM estimation (Arellano & Bond, 1991), or Heckman two-stage selection models methodological commitments already anticipated in Chapter 3 but not yet empirically executed due to the data constraints of the present study. The application of these techniques to a richer and longer panel dataset would substantially strengthen causal inference regarding the ESG–WACC nexus in the Indonesian context.

Sixth and finally, future research should explore alternative moderating variables that may more effectively condition the ESG–WACC relationship in emerging market institutional contexts. Promising candidates include institutional ownership concentration, analyst forecast coverage intensity, board gender and independence composition, the presence of a dedicated sustainability committee, and the voluntary adoption of third-party ESG assurance standards. These variables target the credibility and governance dimensions of ESG signaling at a level of specificity that the Big 4 audit quality proxy cannot capture, and their investigation would substantially advance understanding of the institutional channels through which sustainability performance is priced into financing costs in markets at varying stages of capital market development.

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APPENDICIES

APPENDIX 1: Research Sample List

Stock Code	Company Name
AALI	Astra Agro Lestari Tbk PT
ABBA	Mahaka Media Tbk PT
ABMM	ABM Investama Tbk PT
ACES	Aspirasi Hidup Indonesia Tbk PT
ACST	Acset Indonusa Tbk PT
ADES	Akasha Wira International Tbk PT
ADHI	Adhi Karya (Persero) Tbk PT
ADRO	Alamtri Resources Indonesia Tbk PT
AKRA	AKR Corporindo Tbk PT
AMMN	Amman Mineral Internasional Tbk PT
AMRT	Sumber Alfaria Trijaya Tbk PT
ANTM	Aneka Tambang Tbk PT
ASII	Astra International Tbk PT
ASRI	ALAM SUTERA REALTY Tbk PT
ASSA	Adi Sarana Armada Tbk PT
AVIA	Avia Avian PT Tbk
BMTR	Global Mediacom Tbk PT
BRMS	Bumi Resources Minerals Tbk PT
BRPT	Barito Pacific Tbk PT
BSDE	Bumi Serpong Damai Tbk PT
BUKA	Bukalapak.com Tbk PT
BUMI	Bumi Resources Tbk PT
BYAN	Bayan Resources Tbk PT
CMRY	Cisarua Mountain Dairy Tbk PT
CPIN	Charoen Pokphand Indonesia Tbk PT
CTRA	Ciputra Development Tbk PT
CUAN	PT Petrindo Jaya Kreasi Tbk
EMTK	Elang Mahkota Teknologi Tbk PT
ESSA	ESSA Industries Indonesia Tbk PT
EXCL	XLSMART Telecom Sejahtera Tbk PT
GGRM	Gudang Garam Tbk PT

GJTL	Gajah Tunggal Tbk PT
GOOD	Garudafood Putra Putri Jaya Tbk PT
GOTO	GoTo Gojek Tokopedia PT Tbk
HEAL	Medikaloka Hermina Tbk PT
HMSP	Hanjaya Mandala Sampoerna Tbk PT
ICBP	Indofood CBP Sukses Makmur Tbk PT
INCO	Vale Indonesia Tbk PT
INDF	Indofood Sukses Makmur Tbk PT
INKP	Indah Kiat Pulp & Paper Tbk PT
INTP	Indocement Tunggal Prakarsa Tbk PT
ISAT	Indosat Tbk PT
ITMG	Indo Tambangraya Megah Tbk PT
JPFA	Japfa Comfeed Indonesia Tbk PT
JSMR	Jasa Marga (Persero) Tbk PT
KLBF	Kalbe Farma Tbk PT
KREN	Quantum Clovera Investama Tbk PT
LINK	Link Net Tbk PT
LPKR	Lippo Karawaci Tbk PT
LPPF	Matahari Department Store Tbk PT
LSIP	Perusahaan Perkebunan London Sumatra Indonesia Tbk PT
MAPI	Mitra Adiperkasa Tbk PT
MDKA	Merdeka Copper Gold Tbk PT
MEDC	Medco Energi Internasional Tbk PT
MNCN	Media Nusantara Citra Tbk PT
MTDL	Metrodata Electronics Tbk PT
MTEL	PT Dayamitra Telekomunikasi Tbk
MYOR	Mayora Indah Tbk PT
NCKL	PT Trimegah Bangun Persada Tbk
PGAS	Perusahaan Gas Negara Tbk PT
PGEO	Pertamina Geothermal Energy PT Tbk
POWR	Cikarang Litrindo Tbk PT
PTBA	Bukit Asam Tbk PT
PWON	Pakuwon Jati Tbk PT
SCMA	Surya Citra Media Tbk PT
SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk PT
SMGR	Semen Indonesia (Persero) Tbk PT

SMRA	Summarecon Agung Tbk PT
TBIG	Tower Bersama Infrastructure Tbk PT
TKIM	Pabrik Kertas Tjiwi Kimia Tbk PT
TLKM	Telkom Indonesia (Persero) Tbk PT
TOWR	Sarana Menara Nusantara Tbk PT
TPIA	Chandra Asri Pacific PT Tbk
UNTR	United Tractors Tbk PT
UNVR	Unilever Indonesia Tbk PT
WSKT	Waskita Karya (Persero) Tbk PT
WTON	Wijaya Karya Beton Tbk PT

APPENDIX 2: Research Sample Data

CODE	Year	WACC	ESG Score	ROA	SIZE	LEV
BRMS	2023	0.169	56.40	5.14%	28.2446	36.65%
BRMS	2024	0.171	60.86	5.66%	28.3824	39.34%
WTON	2023	0.126	48.09	2.57%	29.5487	43.12%
WTON	2024	0.134	57.89	2.11%	29.5672	44.16%
MDKA	2023	0.102	48.84	-0.42%	31.9805	44.32%
MDKA	2024	0.110	58.42	-1.07%	32.0537	44.31%
AVIA	2023	0.086	68.94	13.60%	30.123	20.89%
AVIA	2024	0.089	69.65	12.76%	30.1968	22.60%
ANTM	2023	0.113	74.10	7.16%	31.388	27.27%
ANTM	2024	0.116	76.55	8.62%	31.427	27.68%
BRPT	2023	0.123	50.67	0.93%	32.9383	55.30%
BRPT	2024	0.127	54.57	1.50%	32.9637	52.27%
INCO	2023	0.127	86.00	3.44%	31.3201	15.03%
INCO	2024	0.125	80.58	2.41%	31.4027	13.39%
INKP	2023	0.119	42.30	7.65%	32.6147	35.90%
INKP	2024	0.121	46.91	4.10%	32.6997	37.12%
INTP	2023	0.111	63.70	5.94%	30.7771	9.78%
INTP	2024	0.116	65.00	7.17%	30.8319	9.93%
SMGR	2023	0.110	65.60	1.73%	31.9969	41.31%

SMGR	2024	0.114	68.09	1.36%	32.0235	40.87%
TKIM	2023	0.120	40.51	7.20%	32.5195	35.67%
TKIM	2024	0.122	53.55	2.29%	32.6603	38.61%
TPIA	2023	0.116	67.46	-2.09%	32.3504	60.21%
TPIA	2024	0.119	70.95	-2.77%	32.3812	59.95%
NCKL	2023	0.145	42.71	44.30%	31.6452	41.13%
NCKL	2024	0.151	43.43	4.43%	31.722	36.12%
AMMN	2023	0.113	54.53	17.22%	32.376	46.52%
AMMN	2024	0.117	54.50	18.04%	32.4529	42.03%
ABBA	2023	0.115	37.32	3.45%	27.9603	20.86%
ABBA	2024	0.119	38.28	1.63%	27.9311	22.22%
ACES	2023	0.114	35.52	10.16%	29.6892	13.18%
ACES	2024	0.118	53.15	10.33%	29.7641	13.52%
BMTR	2023	0.122	44.62	1.86%	30.749	44.69%
BMTR	2024	0.126	49.04	1.65%	30.7709	44.59%
GJTL	2023	0.109	41.09	1.96%	30.6981	61.36%
GJTL	2024	0.113	40.37	1.45%	30.7266	60.63%
LPPF	2023	0.107	55.91	8.16%	29.1955	66.53%
LPPF	2024	0.114	54.41	8.57%	29.2445	65.14%
MAPI	2023	0.112	44.45	5.40%	30.7401	61.61%
MAPI	2024	0.117	44.77	5.61%	30.8338	61.38%
MNCN	2023	0.119	30.91	6.76%	30.6466	35.29%
MNCN	2024	0.123	31.84	6.27%	30.6317	35.32%
SCMA	2023	0.119	53.10	5.00%	30.0106	34.26%
SCMA	2024	0.123	51.17	4.69%	29.9776	33.97%
EMTK	2023	0.123	88.16	1.90%	31.1153	25.77%
EMTK	2024	0.127	88.92	1.82%	31.0905	25.16%
ICBP	2023	0.090	54.02	8.94%	31.9903	43.09%
ICBP	2024	0.094	56.44	8.60%	32.0414	42.65%
CMRY	2023	0.104	40.16	9.07%	29.2038	35.68%
CMRY	2024	0.109	48.36	9.33%	29.3062	34.46%
GOOD	2023	0.101	42.17	6.02%	29.8058	56.82%
GOOD	2024	0.106	43.44	6.17%	29.8717	55.32%

AALI	2023	0.120	49.73	9.68%	30.7037	32.87%
AALI	2024	0.124	50.64	10.22%	30.749	32.74%
ADES	2023	0.101	11.82	8.67%	28.5393	35.48%
ADES	2024	0.107	18.51	9.35%	28.6535	31.65%
ASII	2023	0.117	51.77	8.59%	33.4964	43.67%
ASII	2024	0.121	47.18	8.79%	33.5609	43.33%
CPIN	2023	0.468	24.97	8.92%	30.9879	29.97%
CPIN	2024	0.122	25.68	10.49%	31.0487	26.56%
GGRM	2023	0.109	23.68	5.36%	31.9967	25.92%
GGRM	2024	0.112	28.14	5.35%	31.9826	25.39%
HMSP	2023	0.108	75.07	22.78%	31.0154	14.92%
HMSP	2024	0.111	78.02	23.04%	30.9739	14.49%
INDF	2023	0.094	66.12	5.79%	32.3889	49.18%
INDF	2024	0.098	64.26	6.06%	32.4359	50.78%
JPFA	2023	0.106	55.01	3.16%	30.9416	54.74%
JPFA	2024	0.111	56.62	4.26%	31.0018	53.26%
LSIP	2023	0.121	40.94	8.96%	30.1567	27.20%
LSIP	2024	0.125	43.12	8.14%	30.1882	24.81%
MYOR	2023	0.112	20.52	9.39%	30.685	44.34%
MYOR	2024	0.117	29.36	10.30%	30.7709	41.99%
UNVR	2023	0.061	79.44	50.36%	29.9175	79.67%
UNVR	2024	0.062	78.13	42.68%	29.8371	80.18%
AMRT	2023	0.094	37.22	3.96%	31.1515	65.68%
AMRT	2024	0.098	36.36	4.17%	31.2527	64.71%
ABMM	2023	0.109	74.50	5.71%	30.5434	72.28%
ABMM	2024	0.115	81.38	5.96%	30.6167	71.21%
ESSA	2023	0.113	21.52	5.10%	30.8618	62.06%
ESSA	2024	0.119	30.53	5.17%	30.9157	61.80%
AKRA	2023	0.108	54.04	7.88%	30.7923	52.54%
AKRA	2024	0.114	48.68	8.37%	30.8814	51.94%
BUMI	2023	0.104	74.92	1.86%	31.9683	83.27%
BUMI	2024	0.108	74.41	2.00%	32.0005	82.91%
ITMG	2023	0.140	83.52	19.58%	30.9591	35.32%

ITMG	2024	0.144	82.58	16.04%	31.0546	32.63%
MEDC	2023	0.096	53.99	2.84%	32.3306	75.98%
MEDC	2024	0.101	63.68	2.94%	32.382	75.71%
PTBA	2023	0.129	81.42	19.34%	30.8215	25.10%
PTBA	2024	0.133	78.36	16.67%	30.7965	24.89%
UNTR	2023	0.118	66.61	11.20%	32.4375	37.61%
UNTR	2024	0.124	63.15	11.57%	32.5093	37.14%
ADRO	2023	0.123	62.81	11.52%	33.0298	52.22%
ADRO	2024	0.133	59.29	8.88%	32.7174	51.55%
BYAN	2023	0.130	63.10	30.81%	31.6113	45.19%
BYAN	2024	0.143	55.61	22.89%	31.8009	45.85%
CUAN	2023	0.133	17.53	13.17%	30.2843	52.11%
CUAN	2024	0.141	23.75	13.41%	30.4464	51.50%
SIDO	2023	0.106	56.53	22.56%	29.0123	4.52%
SIDO	2024	0.110	55.13	22.55%	29.085	4.21%
HEAL	2023	0.095	45.10	5.65%	30.2557	66.67%
HEAL	2024	0.097	43.83	5.71%	30.3783	66.67%
KLBF	2023	0.114	59.80	13.78%	30.7221	3.26%
KLBF	2024	0.118	59.34	15.49%	30.7825	2.49%
ASSA	2023	0.098	28.31	2.58%	30.1487	68.55%
ASSA	2024	0.101	36.26	2.84%	30.2263	67.16%
WSKT	2023	0.086	40.10	-3.19%	32.2201	88.21%
WSKT	2024	0.083	48.75	-4.56%	32.1485	90.72%
ACST	2023	0.096	47.58	-4.48%	29.3889	79.31%
ACST	2024	0.097	40.04	-5.82%	29.3358	80.00%
ADHI	2023	0.095	40.17	-1.05%	30.8736	75.00%
ADHI	2024	0.097	41.40	-1.65%	30.8419	75.00%
JSMR	2023	0.087	62.78	1.52%	32.3966	66.86%
JSMR	2024	0.100	69.40	2.34%	32.5168	56.54%
ASRI	2023	0.103	22.57	2.15%	31.012	67.01%
ASRI	2024	0.106	31.83	0.19%	31.0188	67.23%
CTRA	2023	0.113	45.73	4.60%	31.5937	50.19%
CTRA	2024	0.117	47.14	4.70%	31.6599	49.11%

LPKR	2023	0.113	46.96	1.24%	31.6949	63.23%
LPKR	2024	0.116	35.37	1.27%	31.722	63.04%
PWON	2023	0.117	46.76	8.39%	30.9596	31.55%
PWON	2024	0.123	58.52	8.75%	31.0222	30.30%
SMRA	2023	0.103	40.65	2.78%	30.9668	65.12%
SMRA	2024	0.107	42.79	2.93%	31.012	64.63%
BSDE	2023	0.120	49.25	4.28%	31.7153	41.58%
BSDE	2024	0.125	47.58	4.36%	31.7646	40.38%
TBIG	2023	0.068	46.66	2.60%	31.496	89.94%
TBIG	2024	0.069	47.11	2.82%	31.5064	89.21%
LINK	2023	0.091	37.53	5.37%	30.0106	68.52%
LINK	2024	0.093	35.67	5.42%	30.0991	68.64%
GOTO	2023	0.184	53.10	-4.43%	31.8781	45.74%
GOTO	2024	0.184	52.78	-3.20%	31.7905	48.49%
BUKA	2023	0.182	53.44	-4.81%	31.0785	19.45%
BUKA	2024	0.186	65.47	-2.02%	30.9907	17.68%
MTEL	2023	0.106	45.41	2.55%	31.8176	48.63%
MTEL	2024	0.110	58.50	2.65%	31.8564	49.71%
EXCL	2023	0.093	61.28	0.99%	31.8881	67.99%
EXCL	2024	0.096	65.10	0.72%	31.9445	69.08%
ISAT	2023	0.086	49.47	1.29%	32.4135	75.80%
ISAT	2024	0.088	61.98	1.91%	32.4625	75.92%
KREN	2023	0.127	24.79	3.89%	29.6051	47.22%
KREN	2024	0.133	23.51	4.10%	29.6851	47.44%
MTDL	2023	0.100	28.14	6.47%	29.9534	54.90%
MTDL	2024	0.106	27.76	6.70%	30.0469	54.46%
TLKM	2023	0.101	61.60	7.63%	33.3711	58.47%
TLKM	2024	0.106	61.39	7.53%	33.3953	55.48%
TOWR	2023	0.071	48.78	3.45%	31.8781	86.27%
TOWR	2024	0.073	51.88	3.62%	31.8965	85.81%
POWR	2023	0.085	59.74	2.58%	31.4553	72.93%
POWR	2024	0.087	64.92	2.65%	31.4939	72.48%
PGEO	2023	0.096	57.92	3.68%	31.7582	53.87%

PGEO	2024	0.100	59.74	3.94%	31.8723	51.44%
PGAS	2023	0.098	67.81	3.96%	32.5641	58.07%
PGAS	2024	0.102	66.92	3.98%	32.5819	57.25%

APPENDIX 3: Results of Data Processing using Eviews 12

1. Statistic Descriptive

	WACC	ESG	AQ	ROA	SIZE	LEV
Mean	0.114916	51.78039	0.818182	0.067734	31.10418	0.481088
Median	0.113000	51.82500	1.000000	0.051550	31.01710	0.479650
Maximum	0.468000	88.92000	1.000000	0.503600	33.56090	0.907200
Minimum	0.061000	11.82000	0.000000	-0.058200	27.93110	0.024900
Std. Dev.	0.035412	16.23124	0.386953	0.081557	1.164196	0.205255
Skewness	6.616527	0.005492	-1.649916	2.519778	-0.372224	-0.060921
Kurtosis	65.67683	2.660625	3.722222	12.19547	2.898602	2.425400
Jarque-Bera	26330.78	0.739818	73.21734	705.5363	3.622111	2.213817
Probability	0.000000	0.690797	0.000000	0.000000	0.163482	0.330579
Sum	17.69700	7974.180	126.0000	10.43110	4790.044	74.08750
Sum Sq. Dev.	0.191868	40308.34	22.90909	1.017684	207.3688	6.445822
Observations	154	154	154	154	154	154

2. Multicollinearity Test

Covariance Analysis: Ordinary

Date: 05/07/26 Time: 19:53

Sample: 2023 2024

Included observations: 154

Correlation	ESG	AQ	ROA	SIZE	LEV
ESG	1.000000				
AQ	0.144805	1.000000			
ROA	0.191361	0.126057	1.000000		
SIZE	0.281614	0.483435	-0.149817	1.000000	
LEV	-0.124744	0.014603	-0.267317	0.216072	1.000000

3. Pooled Panel Least Square

Dependent Variable: WACC
Method: Panel Least Squares
Date: 05/01/26 Time: 17:50
Sample: 2023 2024
Periods included: 2
Cross-sections included: 77
Total panel (balanced) observations: 154

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.055400	0.261133	-0.212154	0.8323
ESG	-0.000320	0.000178	-1.798813	0.0741
LEV	-0.071499	0.013838	-5.166901	0.0000
ROA	-0.036540	0.034758	-1.051261	0.2948
LOG(SIZE)	0.065117	0.077148	0.844049	0.4000
Root MSE	0.032358	R-squared	0.159598	
Mean dependent var	0.114916	Adjusted R-squared	0.137036	
S.D. dependent var	0.035412	S.E. of regression	0.032897	
Akaike info criterion	-3.958963	Sum squared resid	0.161246	
Schwarz criterion	-3.860361	Log likelihood	309.8402	
Hannan-Quinn criter.	-3.918911	F-statistic	7.074006	
Durbin-Watson stat	1.507340	Prob(F-statistic)	0.000031	

4. Pooled Panel Least Square with Moderating

Dependent Variable: WACC
Method: Panel Least Squares
Date: 05/01/26 Time: 17:57
Sample: 2023 2024
Periods included: 2
Cross-sections included: 77
Total panel (balanced) observations: 154

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.141278	0.301646	-0.468356	0.6402
INTERACTION	-0.000342	0.000407	-0.840519	0.4020
ESG	-6.32E-05	0.000360	-0.175308	0.8611
AQ	0.012184	0.021167	0.575627	0.5657
LEV	-0.071781	0.013914	-5.158875	0.0000
ROA	-0.027338	0.036261	-0.753933	0.4521
LOG(SIZE)	0.087494	0.089785	0.974490	0.3314
Root MSE	0.032251	R-squared	0.165150	
Mean dependent var	0.114916	Adjusted R-squared	0.131075	
S.D. dependent var	0.035412	S.E. of regression	0.033010	
Akaike info criterion	-3.939618	Sum squared resid	0.160181	
Schwarz criterion	-3.801575	Log likelihood	310.3506	
Hannan-Quinn criter.	-3.883545	F-statistic	4.846594	
Durbin-Watson stat	1.518210	Prob(F-statistic)	0.000152	