THE IMPACT OF SPECIFIC ESG INDICATORS ON FIRM VALUE, INVESTMENT, AND COST OF CAPITAL IN ASIA-PACIFIC: A COMPARATIVE STUDY BETWEEN DEVELOPED AND DEVELOPING COUNTRIES

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BOGOR
2026

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SUMMARY

AULIYAH RIZKY SUHASMORO. The Impact of Specific ESG Indicators on Firm Value, Investment, and Cost of Capital in the Asia-Pacific Region: A Comparative Study of Developed and Developing Countries. Supervised by TANTI NOVIANTI, NOER AZAM ACHSANI and TRIAS ANDATI.

This study is driven by the growing importance of Environmental, Social, and Governance (ESG) factors in assessing corporate performance and supporting investment decisions. In modern capital markets, traditional financial indicators are no longer sufficient to explain a firm's long-term value, risk profile, and sustainability. Investors and stakeholders increasingly consider how firms manage environmental risks, social responsibilities, governance quality, and controversies that may affect reputation and market confidence.

Although ESG has become increasingly relevant, previous studies on the relationship between ESG and financial performance have produced mixed findings. One possible explanation is the use of aggregate ESG scores, which combine various environmental, social, and governance indicators into a single measure. This approach may obscure the different effects of individual ESG indicators, even though each indicator has different levels of materiality, implementation costs, time horizons, and economic implications.

This issue is particularly important in the Asia-Pacific context because the region is characterized by substantial differences between developed and developing countries in terms of institutional quality, ESG regulation, market transparency, and capital market maturity. In addition, ESG controversies may weaken the credibility of ESG signals, as they reflect inconsistencies between sustainability commitments and actual corporate practices.

This study aims to examine the impact of specific ESG indicators on the performance of publicly listed firms in the Asia-Pacific region. Firm performance is measured using Tobin's Q as a proxy for firm value, Total Return as a measure of stock investment performance, and Weighted Average Cost of Capital (WACC) as a measure of financing costs. This study also compares the effects of ESG indicators between developed and developing countries and investigates the moderating role of ESG Controversies Score. The data are obtained from Refinitiv/LSEG and include environmental, social, and governance indicators, firm-level financial data, and ESG Controversies Score. ESG indicators are analyzed separately to identify which indicators are financially relevant. The empirical analysis employs panel data regression using fixed effects and random effects models, with time horizons from t to t+3 to capture short- and medium-term ESG effects.

The findings show that ESG does not operate as a homogeneous construct. The effect of ESG on firm performance depends on the type of indicator, ESG pillar, time horizon, and country context. Environmental indicators tend to show stronger and more consistent effects, particularly in relation to higher Total Return and lower WACC. This suggests that environmental practices related to resource efficiency, emissions management, and waste reduction are more likely to be perceived by the market as economically valuable.

In the social pillar, the effects are more selective and context-dependent. Social practices may help firms strengthen legitimacy, maintain stakeholder relationships, and reduce reputational risk, but their financial benefits are not always immediately reflected in firm value or stock performance. In the governance pillar, the results also show mixed effects. Formal governance structures do not automatically improve firm value unless they are supported by effective and credible implementation.

The comparison between developed and developing countries indicates that the impact of ESG is not universal. In developed countries, ESG information tends to be processed more effectively by the market due to stronger regulation, better disclosure quality, and more mature institutional settings. In developing countries, the effects of ESG are more varied because some ESG practices may still be perceived as costs before being recognized as sources of value.

The findings also confirm that ESG Controversies Score plays an important role in explaining ESG credibility. ESG controversies can weaken the positive effects of ESG indicators by increasing perceived risk and reducing investor confidence. Therefore, ESG should not only be assessed based on formal scores or policies, but also on the consistency of corporate behavior in implementing sustainability practices. Overall, this study concludes that an indicator-level approach provides a more accurate explanation of the relationship between ESG and firm performance than aggregate ESG scores. ESG can generate financial benefits when the indicators are material, credible, relevant to firm risk, and supported by consistent implementation.

This study offers several contributions. For academics, it extends ESG literature by providing empirical evidence based on specific ESG indicators and also advancing the understanding of the relationship between ESG and corporate financial performance. Unlike previous studies, which generally treat ESG as a single construct through the use of aggregate ESG scores, this research demonstrates that individual ESG indicators represent distinct value-creation mechanisms affecting firm value, stock returns, and the cost of capital. Furthermore, this study extends the perspectives of Stakeholder Theory, Legitimacy Theory, Signaling Theory, and Institutional Theory by demonstrating that the effectiveness of ESG depends not only on the quality of ESG practices but also on cross-country institutional contexts and the credibility of ESG implementation, as reflected in ESG Controversies.

Future research may extend this study by conducting sectoral analysis, applying stronger causal methods, separating the cost of capital into cost of equity and cost of debt, and incorporating institutional quality or regulatory enforcement as additional moderating variables. A longer observation period would also be useful to capture the long-term effects of ESG on corporate financial performance.

Keywords: asia-pacific, cost of capital, ESG controversies score, ESG indicators, firm value.

RINGKASAN

AULIYAH RIZKY SUHASMORO. Dampak Indikator ESG Spesifik terhadap Nilai Perusahaan, Investasi, dan Biaya Modal di Kawasan Asia-Pasifik: Studi Komparatif antara Negara Maju dan Negara Berkembang. Dibimbing oleh TANTI NOVIANTI, NOER AZAM ACHSANI dan TRIAS ANDATI.

Penelitian ini dilatarbelakangi oleh meningkatnya peranan *Environmental, Social, and Governance* (ESG) dalam penilaian kinerja perusahaan dan pengambilan keputusan investasi. Dalam pasar modal modern, indikator keuangan tradisional tidak lagi cukup untuk menjelaskan nilai jangka panjang, risiko, dan keberlanjutan perusahaan. Investor dan pemangku kepentingan semakin memperhatikan bagaimana perusahaan mengelola risiko lingkungan, sosial, tata kelola, serta kontroversi yang dapat memengaruhi reputasi dan kepercayaan pasar.

Meskipun ESG semakin banyak digunakan, hasil penelitian sebelumnya mengenai hubungan ESG dan kinerja keuangan masih belum konsisten. Salah satu penyebabnya adalah penggunaan skor ESG agregat yang menggabungkan berbagai indikator ke dalam satu ukuran. Pendekatan tersebut berpotensi menyembunyikan perbedaan pengaruh antarindikator, padahal setiap indikator ESG memiliki tingkat materialitas, biaya implementasi, dan dampak ekonomi yang berbeda.

Permasalahan ini menjadi penting dalam konteks Asia-Pasifik karena kawasan ini memiliki perbedaan besar antara negara maju dan negara berkembang, baik dari sisi kualitas institusi, regulasi ESG, transparansi pasar, maupun kematangan pasar modal. Selain itu, keberadaan *ESG controversies* dapat melemahkan kredibilitas ESG karena menunjukkan adanya ketidaksesuaian antara komitmen keberlanjutan dan praktik aktual perusahaan.

Penelitian ini bertujuan untuk menganalisis pengaruh indikator ESG secara spesifik terhadap kinerja perusahaan publik di Asia-Pasifik. Kinerja perusahaan diukur melalui Tobin's Q sebagai proksi nilai perusahaan, *Total Return* sebagai ukuran kinerja investasi saham, dan *Weighted Average Cost of Capital* (WACC) sebagai ukuran biaya modal. Penelitian ini juga membandingkan pengaruh ESG antara negara maju dan negara berkembang, serta menguji peran *ESG Controversies Score* sebagai variabel moderasi.

Data penelitian bersumber dari Refinitiv/LSEG dan mencakup indikator *environmental, social, governance*, data keuangan perusahaan, serta *ESG Controversies Score*. Indikator ESG dianalisis secara terpisah agar dapat diketahui indikator mana yang benar-benar relevan secara finansial. Metode yang digunakan adalah regresi data panel dengan pendekatan *fixed effects* dan *random effects*, serta horizon waktu t sampai t+3 untuk melihat pengaruh ESG dalam jangka pendek dan menengah.

Hasil penelitian menunjukkan bahwa ESG tidak bekerja sebagai satu konstruk yang homogen. Pengaruh ESG terhadap kinerja perusahaan bergantung pada jenis indikator, pilar ESG, horizon waktu, serta konteks negara. Indikator environmental cenderung memiliki pengaruh yang lebih kuat dan lebih konsisten, terutama terkait peningkatan *Total Return* dan penurunan WACC. Hal ini menunjukkan bahwa praktik lingkungan yang berkaitan dengan efisiensi sumber

daya, pengelolaan emisi, dan pengurangan limbah lebih mudah dipersepsikan pasar sebagai faktor yang bernilai secara ekonomi.

Pada pilar sosial, pengaruh ESG lebih selektif dan bergantung pada konteks. Praktik sosial dapat membantu perusahaan membangun legitimasi, menjaga hubungan dengan pemangku kepentingan, dan mengurangi risiko reputasi, tetapi manfaat finansialnya tidak selalu langsung terlihat. Pada pilar tata kelola, hasil penelitian juga menunjukkan pengaruh yang beragam. Struktur tata kelola formal tidak selalu otomatis meningkatkan nilai perusahaan apabila tidak didukung oleh implementasi yang efektif dan kredibel.

Perbandingan antara negara maju dan negara berkembang menunjukkan bahwa pengaruh ESG tidak bersifat universal. Di negara maju, informasi ESG cenderung lebih mudah diproses oleh pasar karena dukungan regulasi, transparansi, dan kualitas institusi yang lebih baik. Sementara itu, di negara berkembang, pengaruh ESG lebih bervariasi karena pasar masih dapat memandang sebagian praktik ESG sebagai biaya sebelum melihatnya sebagai sumber nilai.

Hasil penelitian juga menunjukkan bahwa *ESG Controversies Score* berperan penting dalam menjelaskan kredibilitas ESG. Kontroversi ESG dapat melemahkan manfaat positif dari indikator ESG karena meningkatkan persepsi risiko dan menurunkan kepercayaan investor. Dengan demikian, ESG tidak hanya dinilai dari skor atau kebijakan formal, tetapi juga dari konsistensi perilaku perusahaan dalam menjalankan praktik keberlanjutan.

Secara keseluruhan, penelitian ini menyimpulkan bahwa pendekatan indikator-level lebih mampu menjelaskan hubungan ESG dan kinerja perusahaan dibandingkan pendekatan ESG agregat. ESG dapat memberikan manfaat finansial apabila indikator yang diterapkan bersifat material, kredibel, relevan dengan risiko perusahaan, dan didukung oleh implementasi yang konsisten.

Penelitian ini memberikan beberapa kontribusi. Bagi kalangan akademisi, penelitian ini memperluas literatur ESG dengan menyediakan bukti empiris berdasarkan indikator-indikator ESG yang spesifik serta memperdalam pemahaman mengenai hubungan antara ESG dan kinerja keuangan perusahaan. Berbeda dengan penelitian sebelumnya yang umumnya memperlakukan ESG sebagai satu konstruk tunggal melalui penggunaan skor ESG agregat, penelitian ini menunjukkan bahwa setiap indikator ESG memiliki mekanisme penciptaan nilai (value creation mechanism) yang berbeda dalam memengaruhi nilai perusahaan, return saham, dan biaya modal (cost of capital). Selain itu, penelitian ini juga memperluas perspektif Stakeholder Theory, Legitimacy Theory, Signaling Theory, dan Institutional Theory dengan menunjukkan bahwa efektivitas implementasi ESG tidak hanya ditentukan oleh kualitas praktik ESG itu sendiri, tetapi juga oleh konteks kelembagaan (institutional context) lintas negara serta kredibilitas implementasi ESG yang tercermin melalui ESG Controversies.

Penelitian selanjutnya dapat mengembangkan analisis ini dengan melakukan kajian sektoral, menggunakan metode kausal yang lebih kuat, memisahkan *cost of capital* menjadi *cost of equity* dan *cost of debt*, serta menambahkan variabel kelembagaan atau kualitas regulasi sebagai faktor moderasi.

Kata kunci: asia-pasifik, biaya modal, *ESG controversies score*, indikator ESG, nilai perusahaan.

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A Dissertation
Submitted in partial fulfillment of requirements for
Doctoral Degree in
Management and Business Study Program

DOCTORAL PROGRAM IN MANAGEMENT AND BUSINESS
SCHOOL OF BUSINESS
IPB UNIVERSITY
BOGOR
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Exam Date: Closed Examination Date : 22 July 2026. Graduation Date:
Open Promotion Date : 7 August 2026

FOREWORD

All praise and gratitude are due to Allah subhanahu wa ta'ala for His blessings and grace, which have enabled the author to complete this dissertation. This dissertation is submitted as one of the requirements for obtaining a Doctoral Degree from the Doctoral Program in Management and Business, School of Business, IPB University. The study was conducted in the field of Financial Management and Sustainability and is entitled "The Impact of Specific ESG Indicators on Firm Value, Investment, and Cost of Capital in the Asia-Pacific Region: A Comparative Study of Developed and Developing Countries."

The author would like to express sincere gratitude and appreciation to the supervisory committee: Dr. Tanti Novianti, S.P., M.Si., as Chair of the Supervisory Committee; Prof. Dr. Ir. Noer Azam Achsani, M.S.; and Dr. Ir. Trias Andati, M.Sc., M.M., as members of the Supervisory Committee, for their guidance, valuable insights, constructive feedback, and continuous support throughout the preparation of this dissertation.

The author also extends sincere gratitude and appreciation to Prof. Ir. H. M. Roy Sembel, MBA, Ph.D., and Prof. Dr. Ir. Dedi Budiman Hakim, M.Ec., as the dissertation examiners, for their time, thorough evaluation, constructive criticism, and valuable suggestions, which have contributed significantly to the improvement and refinement of this dissertation.

Sincere appreciation is also extended to the Head of the Doctoral Program in Management and Business, all lecturers, and the academic community of the School of Business, IPB University, for their knowledge, assistance, and support throughout the author's doctoral studies. Special gratitude is addressed to the author's family, friends, colleagues, and all parties who have offered prayers, encouragement, and support throughout the completion of this dissertation.

The author acknowledges that this dissertation has certain limitations. Nevertheless, it is expected that the findings of this study will contribute to the advancement of knowledge, particularly in the areas of ESG, financial management, investment, and sustainability, and serve as a useful reference for academics, investors, corporate managers, and policymakers.

Bogor, August 2026

Auliyah Rizky Suhasmoro

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GLOSSARY

This glossary provides brief, non-technical definitions of key terms used throughout the dissertation, intended to assist readers who are not specialists in corporate finance or sustainability research. Terms are listed alphabetically.

Agency Theory. A theory explaining conflicts of interest between managers (agents) and shareholders (principals), used here to interpret governance-related ESG indicators such as board composition and shareholder rights.

Cost of Capital (WACC). The Weighted Average Cost of Capital: the blended required rate of return demanded by a firm's debt and equity providers, used in this study as the proxy for financing cost.

Disaggregated ESG. An analytical approach that examines individual Environmental, Social, and Governance indicators separately, rather than combining them into a single aggregate ESG score.

Endogeneity. A statistical condition in which an explanatory variable is correlated with the model's error term (e.g., due to reverse causality or omitted variables), which can bias regression estimates if not addressed.

ESG. Environmental, Social, and Governance: a set of non-financial criteria used to assess a firm's sustainability practices and their potential financial relevance.

ESG Controversies Score. A Refinitiv/LSEG score capturing a firm's exposure to negative ESG-related media coverage, litigation, or public controversy, used in this study as a proxy for the credibility of ESG signals.

Fixed Effects (FE) Model. A panel-data estimation technique that controls for all time-invariant, firm-specific characteristics by allowing each firm its own intercept, isolating within-firm variation over time.

GMM (Generalized Method of Moments). An econometric estimator, applied here in its two-step system form, used as a robustness check against dynamic endogeneity and reverse causality in panel-data models.

Institutional Theory. A theory holding that firms conform to the regulatory, normative, and cognitive expectations of the environments in which they operate, used here to explain cross-country differences between developed and developing markets.

Legitimacy Theory. A theory proposing that firms must align their behavior with social norms and expectations to secure and maintain their social license to operate.

Materiality. The degree to which a specific ESG issue is financially relevant to a firm's operations, risk profile, or valuation.

Panel Data. A dataset that combines observations across multiple firms (cross-section) and multiple time periods, allowing analysis of both between-firm and within-firm variation.

Random Effects (RE) Model. A panel-data estimation technique that treats firm-specific effects as random and uncorrelated with the explanatory variables, offering greater efficiency than fixed effects when this assumption holds.

Resource-Based View (RBV) / Natural Resource-Based View (NRBV). Strategic management theories proposing that firms build sustainable competitive advantage through valuable, rare, and difficult-to-imitate internal resources and capabilities, including environmentally oriented capabilities.

Signaling Theory. A theory explaining how firms convey otherwise unobservable information (such as quality or managerial credibility) to outside parties through observable actions or disclosures, such as ESG performance.

Stakeholder Theory. A theory holding that firms create value by managing relationships with, and being accountable to, a broad set of stakeholders beyond shareholders alone.

Tobin's Q. A market-based measure of firm value, calculated as the ratio of a firm's market value to the replacement value of its assets, used in this study as the proxy for firm valuation.

Total Return. The percentage change in a stock's value over a given period, including both capital appreciation and dividends, used in this study as the proxy for stock investment performance.