THREE ESSAYS ON THE IMPACT OF ESG FACTORS ON CORPORATE PERFORMANCE, INVESTOR PORTFOLIOS, AND FINANCIAL MARKET STABILITY: A CASE STUDY OF INDONESIA

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RINGKASAN

KIKI NINDYA ASIH. Tiga Esai tentang Dampak Faktor ESG bagi Kinerja Perusahaan, Portofolio Investor, dan Stabilitas Pasar Keuangan: Studi Kasus Indonesia. Dibimbing oleh NOER AZAM ACHSANI, TANTI NOVIANTI, dan ADLER HAYMANS MANURUNG.

Semakin pentingnya faktor Lingkungan, Sosial, dan Tata Kelola (ESG) telah memicu minat periset global untuk memahami dampaknya terhadap profitabilitas perusahaan, portofolio investor, dan stabilitas pasar keuangan. Perusahaan ditekan untuk mengadopsi praktik ESG karena pemangku kepentingan menuntut transparansi dan tanggung jawab lebih besar. Faktor ESG diyakini meningkatkan kinerja keuangan jangka panjang dengan mengurangi risiko dan meningkatkan reputasi. Bagi investor, aset berbasis ESG menawarkan diversifikasi portofolio dan mitigasi risiko khususnya saat pasar volatil. Regulator dan pembuat kebijakan melihat ESG sebagai alat untuk menstabilkan pasar keuangan, karena perusahaan dengan skor ESG tinggi kemungkinan kurang terpapar risiko pasar, membantu menciptakan sistem keuangan yang lebih tangguh.

Namun, pemahaman terhadap dampak ESG di pasar keuangan negara berkembang seperti Indonesia masih terbatas. Penelitian umumnya berfokus pada pasar negara maju, menciptakan kesenjangan pemahaman tentang pengaruh ESG terhadap kinerja perusahaan, optimalisasi portofolio, dan risiko pasar keuangan di negara berkembang. Hubungan kuadratik antara ESG dan kinerja perusahaan, khususnya terkait metrik seperti *Risk-Adjusted Return on Capital* (RAROC), masih minim dieksplorasi. Selain itu, klaster ESG dalam mengurangi risiko pasar selama volatilitas, seperti pandemi COVID-19, belum diteliti dalam konteks Indonesia.

Disertasi ini terdiri dari tiga esai yang berupaya mengatasi kesenjangan tersebut. Esai pertama meneliti dampak skor ESG terhadap *Return on Assets* (ROA), RAROC, dan Tobin’s Q, menggunakan data dari 37 perusahaan non-keuangan di Bursa Efek Indonesia (2018–2022). Studi ini mengungkap hubungan kompleks antara skor ESG dan kinerja keuangan. Ditemukan hubungan kuadratik berbentuk U antara skor ESG (pilar lingkungan dan sosial) dan ROA, menunjukkan manfaat finansial baru terjadi setelah skor ESG melampaui ambang batas tertentu. Pilar lingkungan dan tata kelola menunjukkan hubungan linear positif dengan RAROC, sementara pilar sosial menunjukkan hubungan kuadratik U terbalik mengindikasi terdapatnya *diminishing returns* pada ambang tertentu dari investasi tersebut. Tobin’s Q memiliki hubungan negatif dengan skor ESG, mengindikasikan skeptisisme pasar terhadap investasi ESG. Temuan ini berimplikasi perusahaan perlu menyelaraskan inisiatif ESG dengan tujuan keuangan untuk mengoptimalkan profitabilitas dan manajemen risiko.

Esai kedua menganalisis peran aset berbasis ESG dalam mencapai diversifikasi portofolio optimal, dengan fokus pada ekuitas berbasis ESG Indonesia (ETF SRI-KEHATI) dan interaksinya dengan aset konvensional, aset *safe-haven* seperti emas, dan aset digital seperti *Bitcoin*. Esai ini menggunakan data harian dari Januari 2018 hingga Desember 2023 serta menerapkan model DCC-GARCH dan algoritma optimasi. Studi ini menemukan bahwa aset ESG mengurangi risiko investasi dan bahkan meningkatkan kinerja investasi ketika dikombinasikan dengan

beragam jenis aset di luar aset ESG saat pandemi. Strategi *rebalancing* portofolio secara aktif menjadi kunci untuk beradaptasi dengan fluktuasi pasar dan mengoptimalkan *return*. Temuan ini mendorong manajer investasi untuk memperluas penawaran produk ESG dan menerapkan strategi alokasi aset dinamis untuk mengoptimalkan manfaat lindung nilai dan diversifikasi dari ESG.

Esai ketiga menganalisis volatilitas dan interkoneksi berbagai klaster ESG perusahaan selama pandemi COVID-19. Esai ini menggunakan model GARCH dan metode Diebold-Yilmaz, dimana ditemukan bahwa perusahaan dengan skor ESG lebih rendah mengalami volatilitas lebih tinggi dan koneksi lebih lemah terhadap faktor pasar domestik dan global dibandingkan dengan mereka yang memiliki skor ESG lebih tinggi. Hal ini menekankan pentingnya bagi investor, regulator, dan pembuat kebijakan untuk memahami volatilitas dan risiko pasar yang terkait dengan berbagai klaster ESG untuk menjaga stabilitas pasar.

Secara keseluruhan, isu ESG mencakup berbagai dimensi, selaras dengan beragam kepentingan pemangku kepentingan seperti yang diuraikan dalam *Stakeholder Theory* (Freeman 1984). Pilar lingkungan, sosial, dan tata kelola masing-masing memiliki nilai unik bagi perusahaan, investor, dan pembuat kebijakan dalam mendukung pertumbuhan berkelanjutan dan berkontribusi dalam ekosistem keuangan yang saling terhubung.

Dari perspektif manajerial, disertasi ini menekankan pentingnya upaya mengintegrasikan ESG ke dalam strategi korporat. Perusahaan yang mengintegrasikan ESG tidak hanya berpotensi mencapai kinerja keuangan yang lebih baik tetapi juga membangun hubungan lebih kuat dengan pemangku kepentingan sehingga meningkatkan daya saing. Bagi regulator, hasil studi ini merekomendasikan perlunya perusahaan melakukan pengungkapan ESG yang lebih masif serta mendorong perusahaan untuk mengintegrasikan ESG ke dalam tata kelola dan strategi operasional. Studi ini memiliki keterbatasan seperti periode dataset yang pendek dan kurangnya perbandingan antar sektor atau wilayah. Ke depan, penelitian selanjutnya dapat mengeksplorasi analisis spesifik sektor dan lintas negara, serta menerapkan model ekonometrik yang lebih maju untuk memahami hubungan kuadratik antara ESG dan kinerja keuangan dan efek perkembangan regulasi global terhadap praktik ESG perusahaan.

Kata kunci: Covid-19, ESG, Kinerja Perusahaan, Portofolio Dinamis, Volatilitas

SUMMARY

KIKI NINDYA ASIH. Three Essays on the Impact of ESG Factors on Corporate Performance, Investor Portfolios, and Financial Market Stability: A Case Study of Indonesia. Supervised by NOER AZAM ACHSANI, TANTI NOVIANTI, and ADLER HAYMANS MANURUNG.

The increasing importance of Environmental, Social, and Governance (ESG) factors has sparked global interest in understanding their impact on corporate profitability, investor portfolios, and the stability of financial markets. Companies are pressured to adopt ESG practices as stakeholders demand greater transparency and accountability. ESG factors are believed to enhance long-term financial performance by reducing risks and improving reputation. For investors, ESG-based assets offer portfolio diversification and risk reduction, especially during market volatility. Regulators and policymakers view ESG as a tool to stabilize financial markets because companies with high ESG scores may be less exposed to market risks, creating a more resilient financial system.

However, understanding of ESG's impact in emerging financial markets like Indonesia remains limited. Research generally focuses on developed markets, creating a knowledge gap about the influence of ESG on corporate performance, portfolio optimization, and financial market risks in developing countries. The quadratic relationship between ESG and corporate performance, particularly related to metrics like Risk-Adjusted Return on Capital (RAROC), has been minimally explored. Additionally, the role of ESG clusters in reducing market risk during volatility, such as the COVID-19 pandemic, has not been studied in the Indonesian context.

This dissertation consists of three essays that seek to address these gaps. The first essay examines the impact of ESG scores on Return on Assets (ROA), RAROC, and Tobin's Q, using data from 37 non-financial companies on the Indonesia Stock Exchange (2018–2022). The study reveals a complex relationship between ESG scores and financial performance. A U-shaped quadratic relationship was found between ESG scores (environmental and social pillars) and ROA, indicating that financial benefits occur after ESG scores surpass a certain threshold. Environmental and governance pillars show a positive linear relationship with RAROC, while the social pillar shows an inverted U-shaped quadratic relationship indicating diminishing returns on investment in that particular pillar. Tobin's Q has a negative relationship with ESG scores, indicating market skepticism toward ESG investments. These findings imply that companies need to align ESG initiatives with financial objectives to optimize profitability and risk management.

The second essay analyzes the role of ESG-based assets in achieving optimal portfolio diversification, focusing on Indonesian ESG-based equities (ETF SRI-KEHATI) and their interactions with conventional assets, safe-haven assets like gold, and digital assets like Bitcoin. This essay uses data from January 2018 to December 2023 and applies the DCC-GARCH model and optimization algorithms. The study finds that ESG assets reduce investment risk and even enhance investment performance when combined with other asset classes during pandemic episodes. Actively rebalancing portfolio strategies is key to adapting to market fluctuations and optimizing returns. These findings encourage investment managers to expand ESG product offerings and implement dynamic asset allocation strategies to optimize the hedging and diversification benefits of ESG.

The third essay analyzes the volatility and interconnections of various ESG clusters of companies during the COVID-19 pandemic. This essay uses the GARCH model and the Diebold-Yilmaz method, finding that companies with lower ESG scores experience higher volatility and weaker connections to domestic and global market factors compared to those with higher ESG scores. This emphasizes the importance for investors, regulators, and policymakers to understand the volatility and market risks associated with various ESG clusters to maintain market stability. All in all, ESG encompasses multiple facets that align with the diverse interests of stakeholders as outlined in Freeman's (1984) Stakeholder Theory. The environmental, social, and governance pillars each bring unique value to corporations, investors, and policymakers in supports for sustainable, responsible growth in an interconnected financial ecosystem.

From a managerial perspective, this dissertation emphasizes the importance of integrating ESG into corporate strategies. Companies that incorporate ESG not only potentially achieve better financial performance but also build stronger relationships with stakeholders, thereby enhancing competitiveness. For regulators, the results of this study recommend the need for companies to conduct more extensive ESG disclosures and encourage integrating ESG into governance and operational strategies. This study has limitations such as a short dataset period and sector-specific biases. Future research can explore sector-specific and cross-country analyses and apply advanced econometric models to understand the quadratic relationship between ESG and financial performance and the effects of global regulatory developments on corporate ESG practices.

Keywords: Covid-19, dynamic Portfolio, ESG, Firm Performance, Volatility Connectedness.

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FOREWORD

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This dissertation is a product of collective efforts, and it is my sincere hope that it provides valuable insights, benefits, and knowledge for all who engage with it—both now and in the future. I trust that this work will not only contribute to the academic community but also inspire continuous learning and innovation in the fields of sustainability and Environment, Social, and Governance (ESG).

May this dissertation serve as a beacon of knowledge and a source of inspiration for those who seek to contribute positively to a better world.

Bogor, January 2025

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