Volatility and Risk-Adjusted Returns of ESG Indices

Subjects: Business, Finance
Contributor: Hemendra Gupta, Rashmi Chaudhary

The importance of Environmental, Social, and Governance (ESG) aspects in investment decisions has grown significantly in today's volatile financial market. Environmental, Social, and Governance (ESG) investing has emerged as a prominent investment strategy, garnering widespread attention.

Keywords: ESG investing ; downside risk ; asymmetric volatility ; risk-adjusted returns

1. Introduction

As investors increasingly recognize the importance of these elements for long-term profitability and sustainability, the popularity of environmental, social, and governance (ESG) investing has surged (Park and Jang 2021; Van Duuren et al. 2016). ESG investing offers investors the opportunity to align their financial interests with their ethical values, supporting companies committed to sustainability and ethical business practices (Brest et al. 2018). However, a crucial question arises: Does ESG investing truly offer a favorable risk–reward ratio, or is it merely a form of "greenwashing" and a marketing gimmick?

Previous research has delved into the connection between ESG performance and financial results, but the findings have frequently been inconclusive, with some indicating a positive impact while others show no discernible influence on performance (Naeem et al. 2022; Whieldon and Clark 2021; Sudha 2015; Jain et al. 2019; Ouchen 2022). One key challenge is the lack of standardized ESG principles, which makes it difficult for investors to compare companies and funds. Additionally, critics argue that ESG investing may limit investment opportunities and potentially result in lower returns, as even companies with subpar ESG performance can exhibit strong financial performance. The performance of ESG indices in terms of risk and return is a dynamic and evolving phenomenon influenced by various factors, including the maturity of the economy, the regulatory environment, and the commitment of companies to sustainability. In developed economies, ESG indices have demonstrated their ability to deliver competitive returns while managing risks effectively. In developing economies, ESG investments show promise, but challenges related to volatility and limited ESG disclosure must be considered (Al Amosh and Khatib 2023; Singhania and Saini 2023).

2. Environmental, Social, and Governance Investing

The popularity and growth of ESG (Environmental, Social, and Governance) investing globally are remarkable. Many studies have contrasted the traditional index with the ESG index for various geographical regions and looked at the connection between ESG and business financial performance. A set of studies has been carried out to compare the conventional portfolios with the ESG portfolios. One study conducted by Ouchen (2022) analyzed the performance of the MSCI USA ESG Select compared to the S&P 500 from 2005 to 2020. The study found a positive impact of ESG investments on performance and risk reduction. In the Indian context, Sudha (2015) found no statistical difference in the returns of ESG and broad-based indices but observed that the ESG India Index was less volatile from 2005 to 2012. Jain et al. (2019) compared the ESG and conventional index of developed and emerging markets as a whole and not country-specific, finding no significant difference in performance. Liu et al. (2023) assert that incorporating ESG indices into an investment portfolio offers the advantage of diversification, a principle aligned with modern portfolio theory that effectively lowers overall portfolio risk. ESG factors assume a pivotal role in diversification by mitigating idiosyncratic risks. Additionally, ESG factors may influence a company's systematic risk (beta). Companies with poor ESG practices may face higher systematic risks due to regulatory changes, climate-related events, or shifts in consumer preferences. Hartzmark and Sussman (2019) found that stocks with higher sustainability rankings had higher valuations, suggesting that investors consider ESG factors when pricing assets. Friede et al. (2015) found a positive correlation between ESG factors and financial performance in most cases. This suggests that integrating ESG considerations can lead to better risk-adjusted returns.

Several studies found that ESG investing can offer downside protection during market downturns, which is an important consideration for investors seeking to manage risk in their portfolios (Albuquerque et al. 2020; Broadstock et al. 2021; Engelhardt et al. 2021; Lau 2019). On the other hand, several studies indicate that ESG investment is not necessarily a surefire strategy to perform better during a crisis (Abedifar et al. 2023; Folger-Laronde et al. 2022). Also, Lashkaripour (2023) analyzed that high ESG stocks have higher tail risk compared to low ESG stocks during a market crash. Revelli and Viviani (2015), based on a meta-analysis of 85 studies and 190 tests, have suggested that incorporating corporate social responsibility into stock market portfolios does not confer a distinct advantage or disadvantage relative to traditional investments. Bannier et al. (2023) investigated the returns of US firms from 2003 to 2017 and discovered that the return decreased more strongly than the corresponding risk with increasing corporate social responsibility activity.

Most studies that have looked at the connection between ESG and corporate financial performance have discovered a positive correlation, though the strength of this correlation varies depending on the ESG factors considered, industry sector, and geographic location of the companies (Suresha et al. 2022; Kim and Li 2021; Dalal and Thaker 2019; Zhao et al. 2018).

Edmans (2023) mentioned in his research that ESG is both extremely important and nothing special. It is important not to excessively applaud companies solely for enhancing their ESG performance, as compared to other intangible aspects. ESG factors play a crucial role in determining a company's long-term financial value. Evaluating a company's long-term prospects and considering various factors beyond short-term financial gains is not exclusive to ESG investing; rather, it constitutes fundamental investing practices. The term "ESG investing" can be misleading, as it is more accurate to describe it as "ESG analysis." The process involves thoroughly assessing Environmental, Social, and Governance factors to gain a comprehensive understanding of a company's overall performance and potential risks and opportunities.

Singhania and Saini (2023) highlight that ESG disclosure in both developed and emerging markets is driven by a combination of voluntary and mandatory codes, with an emphasis on environmental commitment. Their study suggests that comprehensive governance measures, including sustainability reporting and integrated reporting, are crucial to uplift ESG practices. These practices, when adopted, can bridge the gap between unsustainability and sustainability, potentially impacting risk-adjusted returns positively by reducing information asymmetry and enhancing resilience in business operations.

With inconclusive results and limited exploration of all geographies, there is a need to understand the risk and return dynamics between sustainable and conventional indices. The variation in ESG disclosures may result in differing performance outcomes for ESG-focused companies in developed and emerging markets. Thus, this research aims to assess the performance of ESG indices in comparison to broad-based indices investments across different geographical regions, encompassing both developed and emerging markets with significant GDP. Researchers conduct a comprehensive analysis of the performance of ESG indices relative to broad-based indices investments in key countries, including the United States, Germany, and Japan, representing the developed economies, and India, Brazil, and China, representing emerging economies. This research uses various risk-adjusted measures and captures downside volatility for evaluating the performance of ESG indices with respect to the broad market indices of that respective country. The conditional volatility of indices is measured through ARCH-GARCH analysis. The impact of news on ESG indices as compared to market indices is also captured in both developed and emerging markets. Through this comprehensive examination across different geographies, researchers aim to provide a thorough understanding of the risk–return profile of ESG investments relative to broad-based indices investments in both developed and emerging markets.

References

1. Park, So Ra, and Jae Young Jang. 2021. The impact of ESG management on investment decision: Institutional investors' perceptions of country-specific ESG criteria. International Journal of Financial Studies 9: 48.
2. Van Duuren, Emiel, Auke Plantinga, and Bert Scholtens. 2016. ESG integration and the investment management process: Fundamental investing reinvented. Journal of Business Ethics 138: 525–33.
3. Brest, Paul, Ronald J. Gilson, and Mark A. Wolfson. 2018. Essay: How investors can (and can't) create social value. The Journal of Corporation Law 44: 205.
4. Naeem, Muhammad Abubakr, Thomas Conlon, and John Cotter. 2022. Green bonds and other assets: Evidence from extreme risk transmission. Journal of Environmental Management 305: 114358.
5. Whieldon, Esther, and Robert Clark. 2021. ESG Funds Beat Out S&P 500 in 1st Year of COVID-19: How 1 Fund Shot to the Top. S&P Global Market Intelligence, April 6.

6. Sudha, S. 2015. Risk-return and Volatility analysis of Sustainability Index in India. Environment, Development and Sustainability 17: 1329–42.
7. Jain, Mansi, Gagan Deep Sharma, and Mrinalini Srivastava. 2019. Can sustainable investment yield better financial returns: A comparative study of ESG indices and MSCI indices. Risks 7: 15.
8. Ouchen, Abdessamad. 2022. Is the ESG portfolio less turbulent than a market benchmark portfolio? Risk Management 24: 1–33.
9. Al Amosh, Hamzeh, and Saleh F. A. Khatib. 2023. ESG performance in the time of COVID-19 pandemic: Cross-country evidence. Environmental Science and Pollution Research 30: 39978–93.
10. Singhania, Monica, and Neha Saini. 2023. Institutional framework of ESG disclosures: Comparative analysis of developed and developing countries. Journal of Sustainable Finance & Investment 13: 516–59.
11. Liu, Dayong, Kaiyuan Gu, and Wenhua Hu. 2023. ESG Performance and Stock Idiosyncratic Volatility. Finance Research Letters 58: 104393.
12. Hartzmark, Samuel M., and Abigail B. Sussman. 2019. Do investors value sustainability? A natural experiment examining ranking and fund flows. The Journal of Finance 74: 2789–837.
13. Friede, Gunnar, Timo Busch, and Alexander Bassen. 2015. ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment 5: 210–33.
14. Albuquerque, Rui, Yrjo Koskinen, Shuai Yang, and Chendi Zhang. 2020. Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. The Review of Corporate Finance Studies 9: 593–621.
15. Broadstock, David C., Kalok Chan, Louis T. W. Cheng, and Xiaowei Wang. 2021. The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. Finance Research Letters 38: 101716.
16. Engelhardt, Nils, Jens Ekkenga, and Peter Posch. 2021. ESG ratings and stock performance during the COVID-19 crisis. Sustainability 13: 7133.
17. Lau, Chee Kwong. 2019. The economic consequences of business sustainability initiatives. Asia Pacific Journal of Management 36: 937–70.
18. Abedifar, Pejman, Kais Bouslah, Christopher Neumann, and Amine Tarazi. 2023. Resilience of Environmental and Social Stocks under Stress: Lessons from the COVID-19 Pandemic. Financial Markets, Institutions & Instruments 32: 23–50.
19. Folger-Laronde, Zachary, Sep Pashang, Leah Feor, and Amr ElAlfy. 2022. ESG ratings and financial performance of exchange-traded funds during the COVID-19 pandemic. Journal of Sustainable Finance & Investment 12: 490–96.
20. Lashkaripour, Mohammadhossein. 2023. ESG tail risk: The COVID-19 market crash analysis. Finance Research Letters 53: 103598.
21. Revelli, Christophe, and Jean-Laurent Viviani. 2015. Financial performance of socially responsible investing (SRI): What have we learned? A meta-analysis. Business Ethics: A European Review 24: 158–85.
22. Bannier, Christina E., Yannik Bofinger, and Björn Rock. 2023. The risk-return tradeoff: Are sustainable investors compensated adequately? Journal of Asset Management 24: 165–72.
23. Suresha, B., V. R. Srinidhi, Dippi Verma, K. S. Manu, and T. A. Krishna. 2022. The impact of ESG inclusion on price, liquidity and financial performance of Indian stocks: Evidence from stocks listed in BSE and NSE ESG indices. Investment Management and Financial Innovations 19: 40–50.
24. Kim, Sang, and Zhichuan Li. 2021. Understanding the impact of ESG practices in corporate finance. Sustainability 13: 3746.
25. Dalal, Karishma K., and Nimit Thaker. 2019. ESG and corporate financial performance: A panel study of Indian companies. IUP Journal of Corporate Governance 18: 44–59.
26. Zhao, Changhong, Yu Guo, Jiahai Yuan, Mengya Wu, Daiyu Li, Yiou Zhou, and Jiangang Kang. 2018. ESG and corporate financial performance: Empirical evidence from China’s listed power generation companies. Sustainability 10: 2607.
27. Edmans, Alex. 2023. The end of ESG. Financial Management 52: 3–17.