



Sustainable Investing in Asset Management: A Review of Current Trends and Future Directions

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Abstract

Sustainable investing, a paradigm shift in asset management, has gained significant momentum in recent years as investors increasingly recognize the importance of integrating environmental, social, and governance (ESG) factors into their decision-making processes. This review provides a comprehensive review of current trends and outlines potential future directions in sustainable investing within the asset management industry. The current landscape of sustainable investing is characterized by a growing awareness of the impact that companies have on the environment, society, and corporate governance. Investors are increasingly demanding transparency and accountability from corporations, driving the integration of ESG criteria into investment strategies. This shift is evident in the proliferation of ESG-themed funds and the incorporation of sustainability metrics into traditional financial analysis. Moreover, the evolution of sustainable investing goes beyond mere risk management, with evidence suggesting that companies with strong ESG performance often outperform their counterparts over the long term. This has led to a broader acceptance of sustainable investing as a viable strategy for achieving both financial and non-financial objectives. Looking ahead, future directions in sustainable investing are likely to involve further refinement of ESG metrics and methodologies, enhanced standardization and disclosure practices, and increased collaboration among stakeholders to establish a common framework. The role of technology, particularly artificial intelligence and machine learning, is also expected to play a crucial role in advancing sustainable investing by facilitating data analysis and decision-making processes. Sustainable investing has become a cornerstone of modern asset management, driven by the recognition of its potential to deliver financial returns while aligning with broader societal and environmental goals. As the field continues to evolve, a proactive and collaborative approach is essential to navigate emerging trends and shape the future of sustainable investing in asset management.

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1. Introduction

Sustainable investing in asset management has gained significant attention in recent years due to the growing emphasis on environmental, social, and governance (ESG) factors in investment decisions. Sustainable investing, also known as socially responsible investing or ESG investing, refers to an investment approach that considers not only financial returns but also the impact of investments on society and the environment (Pimentel & Hunter, 2021; Ilugbusi *et al.*, 2020).

This approach aligns with the principles of sustainable development, aiming to address current needs without compromising the ability of future generations to meet their own needs (Busch *et al.*, 2015). The significance of sustainable investing in asset management lies in its potential to drive positive change by directing capital towards companies and projects that demonstrate strong ESG performance, thereby promoting sustainable business practices and addressing global challenges such as climate change, social inequality, and corporate governance issues (Folque *et al.*, 2022; Vincent *et al.*, 2021). As a result, the purpose of this review is to examine current trends in sustainable investing and predict future directions in asset management, considering the increasing integration of ESG factors into investment strategies and the evolving regulatory landscape (Ridzak & Žigman, 2020).

2. Sustainable investing in asset management

Sustainable investing in asset management has gained significant attention in recent years, with a growing focus on integrating environmental, social, and governance (ESG) criteria into investment decisions (Escrig-Olmedo *et al.*, 2017). This approach aligns with the concept of sustainable investment, which aims to have a positive impact on sustainable development while considering financial concerns and long-term ESG criteria (Escrig-Olmedo *et al.*, 2017). In fact, sustainable investments accounted for a substantial portion of professionally managed assets globally, amounting to US\$ 23 trillion in 2016 (Cunha *et al.*, 2019). Furthermore, the asset management industry plays a crucial role in contributing to sustainable development through sustainable investment practices (Folque *et al.*, 2022). The relationship between sustainable investment and firm value has also been explored, with evidence suggesting that sustainable investment in intangible assets can enhance firm value (Perwito *et al.*, 2021). Additionally, the effectiveness of investment in human capital within the context of sustainability has been highlighted as a means to increase enterprise performance and competitiveness (Kucharčíková *et al.*, 2018). Moreover, the importance of asset management in achieving bank profitability underscores the significance of optimal investment choices and risk reduction (Al-Sadi & Mamouri, 2022; Adeleke *et al.*, 2019).

In the context of sustainable finance, asset managers' motivations to conform to ESG criteria have been examined, shedding light on the interplay between external ESG pressures and sustainable investment practices (Sakuma-Keck & Hensmans, 2013). This aligns with the broader goal of integrating multiple ESG investors' preferences into sustainable investment decisions, emphasizing the need to consider diverse ESG criteria in the investment process (Sakuma-Keck & Hensmans, 2013).

Furthermore, the role of asset management in addressing climate risk and contributing to low-carbon investment has been a subject of research, highlighting the need for climate risk management techniques and organizational behaviors to support sustainable finance (Greenwood & Warren, 2022; Hassan *et al.*, 2024). This underscores the importance of integrating sustainability considerations into asset management practices to address environmental challenges and promote sustainable investment strategies.

In summary, sustainable investing in asset management encompasses the integration of ESG criteria, the contribution to sustainable development, and the impact on firm value,

highlighting the multifaceted nature of sustainable investment practices within the asset management industry.

2.1 Historical context of sustainable investing

The evolution of sustainable investing has been influenced by various factors and has seen significant milestones in the integration of environmental, social, and governance (ESG) factors. The search for a relation between ESG criteria and corporate financial performance can be traced back to the beginning of the 1970s (Friede *et al.*, 2015). The historical development of sustainable investment has been shaped by factors such as the growing awareness of the social, environmental, and ethical consequences of business practices and their financial impact (Dziawgo, 2021). Additionally, the integration of ESG-criteria into investment decisions of asset managers is considered a key factor in sustainable economic development in modern conditions (Ovechkin *et al.*, 2021).

Key milestones in the integration of ESG factors include the increasing prevalence of ESG discretion on stock market investment decisions following the global financial crisis (Sultana *et al.*, 2018). Furthermore, there has been a significant increase in attention on sustainable and responsible investments and the need to integrate ESG factors in recent years (Zaccone & Pedrini, 2020). The integration of ESG information into individual investors' corporate investment decisions has also been highlighted as an important aspect of sustainable and responsible investment (Park & Oh, 2022; Abrahams *et al.*, 2023).

Societal and environmental concerns have had a profound influence on investment practices, leading to the mainstreaming of environmental, social, and governance integration in investment practices in various regions, such as South Africa (Marais *et al.*, 2022). The influence of sustainability on the value of market companies has been a subject of analysis, with a growing interest in corporate social responsibility and sustainability by managers over the past decade (Landi & Sciarelli, 2019). Additionally, the influence of the level of sustainability on the market value of a set of companies has been a focus in the European context (Arceiz *et al.*, 2020; Adaga *et al.*, 2024).

In conclusion, the historical context of sustainable investing has been shaped by the evolution of ESG factors, key milestones in their integration, and the influence of societal and environmental concerns on investment practices. These aspects have been influenced by a growing awareness of the impact of business practices, the need for sustainable economic development, and the increasing attention on sustainable and responsible investments.

2.2 Current trends in sustainable investing

The current trends in sustainable investing are characterized by the proliferation of ESG-themed funds, the integration of ESG criteria in investment strategies, and the adoption of sustainability metrics in financial analysis. ESG-themed funds have gained significant traction, with a growing number of studies highlighting their performance and impact on investment strategies. Friede *et al.* (2015) aggregated evidence from over 2000 empirical studies, demonstrating promising results for ESG investing, particularly in emerging markets and corporate bonds. This indicates the increasing popularity and potential of ESG-themed funds in diverse investment landscapes.

The integration of ESG criteria in investment strategies has

been a focal point, with successful case studies showcasing its impact on risk management and financial performance. Dikolli *et al.* (2022) documented that U.S. mutual funds designated as "Sustainable Investment Overall" by Morningstar are more likely to support environmental, social, and governance shareholder proposals, emphasizing the alignment of ESG integration with responsible investment practices. Additionally, Gupta (2022) examined the growth and performance measurement of ESG-themed mutual funds in India, shedding light on the potential risks and returns associated with sustainable funds. These studies underscore the significance of ESG integration in shaping investment decisions and outcomes.

The adoption of sustainability metrics in financial analysis has also been a key area of focus, with a range of commonly used metrics and associated challenges and opportunities. Halid *et al.* (2023) highlighted the uncertain link between ESG and company value, emphasizing the influence of measurement methodologies and the evolving nature of ESG investing practices among investors. Furthermore, Rahman & Lau (2023) discussed the impact of ESG investing on investment portfolios, providing insights into the evolving landscape of sustainable investment practices. These researches collectively underscore the evolving nature of sustainability metrics and the need for robust frameworks to assess ESG performance effectively.

In conclusion, the current trends in sustainable investing reflect the increasing prominence of ESG-themed funds, the integration of ESG criteria in investment strategies, and the adoption of sustainability metrics in financial analysis. These trends are supported by a growing body of empirical evidence, case studies, and literature reviews, highlighting the multifaceted nature of sustainable investing and its implications for investment decision-making.

2.3 Drivers of sustainable investing

Investor demand for transparency and accountability is a key driver of sustainable investing. Stakeholders' pressure and corporate financial performance significantly influence the transparency of sustainability reports, which in turn affects investors' trust in a company's sustainability (Nilawati *et al.*, 2019). Additionally, firm information transparency plays a transformative role in triggering retail investors' perceived financial well-being, highlighting the importance of transparency in meeting investor demands (Ezeigweneme *et al.*, 2024; Naveed *et al.*, 2021). Furthermore, transparency in the IPO mechanism, allowing investors to observe prior investors' participation, leads to concentrated demand at specific points of the offer price range, demonstrating the impact of transparency on investor behavior and decision-making (Neupane & Poshakwale, 2012).

Regulatory developments also shape sustainable investing practices. Fiscal transparency, particularly the availability of detailed cross-country comparable fiscal data, has been shown to increase foreign investors' willingness to hold sovereign debt in emerging markets, indicating the influence of regulatory transparency on investment decisions (Umoh *et al.*, 2024; Kemoe & Zhan, 2018). Moreover, the influence of corporate responsibility and ethical considerations is evident in the relationship between foreign ownership and information asymmetry. Foreign ownership may help improve the general information environment of public companies, reflecting the ethical considerations and responsible behavior of foreign investors in contributing to a

more transparent and efficient market (Abrahams *et al.*, 2024; Choi *et al.*, 2013).

In conclusion, sustainable investing is driven by investor demand for transparency and accountability, influenced by stakeholders' pressure and corporate financial performance. Regulatory developments, particularly fiscal transparency, also play a significant role in shaping sustainable investing practices. Additionally, the influence of corporate responsibility and ethical considerations, as seen in the impact of foreign ownership on information asymmetry, further underscores the importance of ethical behavior in sustainable investing.

2.4 Future directions in sustainable investing

The emerging trends in ESG measurement are crucial for the advancement of sustainable investing (Ukoba and Jen, 2023). Minkinen *et al.* (2022) highlight the potential domains in future ESG analyses, particularly the understanding of AI impacts and governance. This suggests that future ESG measurement will likely incorporate AI impacts and governance considerations to enhance the accuracy and relevance of ESG metrics. Gao *et al.* (2021) provide insights into the potential improvements and standardization efforts in ESG metrics and methodologies. Their bibliometric analysis using Scopus enables a better understanding of current trends and future research directions, which is essential for identifying areas for improvement and standardization in ESG measurement.

Linnenluecke (2022) emphasizes the role of reporting frameworks and industry standards in enhancing standardization and disclosure practices in sustainable investing. While acknowledging the challenges in achieving full convergence on ESG issues and measurements, the study underscores the importance of consolidating and standardizing ESG information to address discrepancies. Wang *et al.* (2023) provide empirical evidence from China, indicating that multiple large shareholders (MLS) are associated with significantly higher ESG disclosure. This suggests that addressing challenges related to global consistency in ESG disclosure practices may involve considering the influence of different shareholder structures on ESG reporting.

The integration of AI and machine learning in ESG analysis is a significant advancement in sustainable investing. Minkinen *et al.* (2022) contribute to the understanding of AI impacts and governance as potential domains in future ESG analyses, highlighting the increasing role of technology in refining ESG analysis methodologies. Samaniego *et al.* (2021) discuss new directions in the analysis of specific economic sectors and geographic areas, emphasizing the use of tech-driven solutions for data collection and decision-making in the context of CSR-ESG and CFP controversy. This suggests that technology will play a crucial role in addressing data collection challenges and enhancing decision-making processes in sustainable investing.

2.5 Collaboration and stakeholder engagement

Collaboration and stakeholder engagement are crucial in sustainable investing within asset management. A common framework is essential to align the interests of various stakeholders (Hörisch *et al.*, 2014). Collaborative initiatives among asset managers, corporations, and regulators are vital for sustainable investing. Stakeholder engagement plays a central role in overcoming challenges through collective

action, such as in sustainable energy transition (Buana *et al.*, 2022), industrial engineering projects (Pauna *et al.*, 2023), and ecotourism governance (Sunkar *et al.*, 2022). Additionally, diverse perceptions of stakeholder engagement need to be considered (Allen *et al.*, 2013), and ethical dimensions in stakeholder interactions can generate collaborative meaning making (Gambetti *et al.*, 2017). Furthermore, collaboration in wildlife resource management can identify conflicts and opportunities for sustainable practices (Austin *et al.*, 2010). Stakeholder relationship capability has been found to positively impact investment efficiency (Valiyan *et al.*, 2021). Moreover, stakeholder engagement has been linked to the financial performance of firms (Dzomonda, 2020).

In conclusion, a common framework is necessary for sustainable investing, and collaborative initiatives among stakeholders are crucial for addressing challenges and achieving sustainable outcomes. Stakeholder engagement is a key driver in this process, influencing various aspects such as energy transition, industrial projects, ecotourism governance, and financial performance. Understanding diverse perceptions and ethical dimensions in stakeholder interactions is also essential for effective collaboration and sustainable investing.

3. Recommendation and Conclusion

In this comprehensive review of sustainable investing in asset management, several key findings have emerged. The evolution of sustainable investing, marked by a growing awareness of environmental, social, and governance (ESG) factors, has become a significant driver in the financial industry. The current trends showcase a surge in ESG-themed funds, successful integration of ESG criteria into investment strategies, and the incorporation of sustainability metrics into financial analysis. Investors are increasingly recognizing the potential for sustainable investments to not only manage risks but also outperform traditional counterparts over the long term.

Sustainable investing is not a static concept; rather, it is dynamic and continually evolving. The review highlights that the landscape is shaped by changing investor preferences, regulatory developments, and advancements in technology. The emphasis on ESG factors is not merely a trend but a paradigm shift in how investors perceive and evaluate financial opportunities. The dynamic nature of sustainable investing underscores its adaptability to address emerging challenges and capitalize on evolving market dynamics.

As we navigate the future of sustainable investing in asset management, a proactive and collaborative approach is essential. Stakeholders, including asset managers, corporations, regulators, and technology innovators, must unite to shape a sustainable and responsible financial landscape. This involves refining ESG metrics and methodologies, establishing standardized disclosure practices, and leveraging technology, such as artificial intelligence and machine learning, to enhance decision-making processes. Furthermore, collaboration is crucial for overcoming challenges, achieving global consistency, and establishing a common framework that fosters transparency and accountability.

In conclusion, the transformative power of sustainable investing cannot be understated. The review encourages a forward-looking mindset, urging all stakeholders to actively contribute to the ongoing evolution of sustainable investing.

By embracing a collaborative approach, we can collectively shape a future where financial success aligns seamlessly with positive societal and environmental impacts, creating a more resilient and responsible global financial ecosystem.

4. References

1. Abrahams TO, Ewuga SK, Kaggwa S, Uwaoma PU, Hassan AO, Dawodu SO. Review of strategic alignment: Accounting and cybersecurity for data confidentiality and financial security. *Computer Science & IT Research Journal*. 2023;5(1):120-140.
2. Abrahams TO, Ewuga SK, Kaggwa S, Uwaoma PU, Hassan AO, Dawodu SO. MASTERING COMPLIANCE: A comprehensive review of regulatory frameworks in accounting and cybersecurity. *Computer Science & IT Research Journal*. 2024;5(1):120-140.
3. Adaga EM, Egieya ZE, Ewuga SK, Abdul AA, Abrahams TO. Philosophy in business analytics: A review of sustainable and ethical approaches. *International Journal of Management & Entrepreneurship Research*. 2024;6(1):69-86.
4. Adeleke OK, Segun IB, Olaoye AIC. Impact of internal control on fraud prevention in deposit money banks in Nigeria. *Nigerian Studies in Economics and Management Sciences*. 2019;2(1):42-51.
5. Allen E, Kruger C, Leung F, Stephens J. Diverse perceptions of stakeholder engagement within an environmental modeling research team. *Journal of Environmental Studies and Sciences*. 2013;3(3):343-356. <https://doi.org/10.1007/s13412-013-0136-x>
6. Al-Sadi A, Mamouri A. The impact of asset management on achieving bank profitability (applied study within Al-Khaleej Commercial Bank). *Periodicals of Engineering and Natural Sciences (Pen)*. 2022;10(5):5. <https://doi.org/10.21533/pen.v10i5.3266>
7. Arceiz F, Aquilué R, Solano M. Sustainability for European investors: Evidence from a sustainable ranking. *Revista de Contabilidad*. 2020;23(2):148-166. <https://doi.org/10.6018/rcsar.369331>
8. Austin Z, Smart J, Yearley S, Irvine R, White P. Identifying conflicts and opportunities for collaboration in the management of a wildlife resource: A mixed-methods approach. *Wildlife Research*. 2010;37(8):647. <https://doi.org/10.1071/wr10057>
9. Buana Y, Mursitama T, Abdinagoro S, Pradipto Y. Stakeholder engagement by power system experts of Indonesia electricity sector for sustainable energy transition. *International Journal of Energy Sector Management*. 2022;17(3):474-488. <https://doi.org/10.1108/ijesm-05-2021-0021>
10. Busch T, Bauer R, Orlitzky M. Sustainable development and financial markets. *Business & Society*. 2015;55(3):303-329. <https://doi.org/10.1177/0007650315570701>
11. Choi J, Lam K, Sami H, Zhou H. Foreign ownership and information asymmetry. *Asia-Pacific Journal of Financial Studies*. 2013;42(2):141-166. <https://doi.org/10.1111/ajfs.12010>
12. Cunha F, Meira E, Orsato R, Klötzle M, Oliveira F, Caiado R. Can sustainable investments outperform traditional benchmarks? Evidence from global stock markets. *Business Strategy and the Environment*. 2019;29(2):682-697. <https://doi.org/10.1002/bse.2397>
13. Dikolli S, Frank M, Guo Z, Lynch L. Walk the talk: ESG

- mutual fund voting on shareholder proposals. *Review of Accounting Studies*. 2022;27(3):864-896. <https://doi.org/10.1007/s11142-022-09692-2>
14. Dziawgo D. Acceptance of sustainability concept by Polish individual investors. *European Research Studies Journal*. 2021;24(3):335-348. <https://doi.org/10.35808/ersj/2357>
 15. Dzomonda O. Stakeholder engagement and financial performance of firms listed on the Johannesburg Stock Exchange (JSE). *Journal of Reviews on Global Economics*. 2020;9:446-458. <https://doi.org/10.6000/1929-7092.2020.09.42>
 16. Escrig-Olmedo E, Rivera-Lirio J, Torres M, Izquierdo M. Integrating multiple ESG investors' preferences into sustainable investment: A fuzzy multicriteria methodological approach. *Journal of Cleaner Production*. 2017;162:1334-1345. <https://doi.org/10.1016/j.jclepro.2017.06.143>
 17. Ezeigweneme CA, Umoh AA, Ilojiana VI, Adegbite AO. Telecommunications energy efficiency: Optimizing network infrastructure for sustainability. *Computer Science & IT Research Journal*. 2024;5(1):26-40.
 18. Folque M, Escrig-Olmedo E, Santamaría M. Contribution of sustainable investment to sustainable development within the framework of the SDGs: The role of the asset management industry. *Sustainability Accounting Management and Policy Journal*. 2022;14(5):1075-1100. <https://doi.org/10.1108/sampj-01-2022-0044>
 19. Friede G, Busch T, Bassen A. ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*. 2015;5(4):210-233. <https://doi.org/10.1080/20430795.2015.1118917>
 20. Gambetti R, Melewar T, Martin K. Guest editors' introduction: Ethical management of intangible assets in contemporary organizations. *Business Ethics Quarterly*. 2017;27(3):381-392. <https://doi.org/10.1017/beq.2017.21>
 21. Gao S, Meng F, Gu Z, Liu Z, Farrukh M. Mapping and clustering analysis on environmental, social and governance field: A bibliometric analysis using Scopus. *Sustainability*. 2021;13(13):7304. <https://doi.org/10.3390/su13137304>
 22. Greenwood N, Warren P. Climate risk disclosure and climate risk management in UK asset managers. *International Journal of Climate Change Strategies and Management*. 2022;14(3):272-292. <https://doi.org/10.1108/ijccsm-09-2020-0104>
 23. Gupta S. Growth and performance measurement of ESG-themed mutual funds in India: An empirical investigation. *Orissa Journal of Commerce*. 2022;43(2):9-26. <https://doi.org/10.54063/ojc.2022.v43i02.02>
 24. Halid S, Rahman R, Mahmud R, Mansor N, Wahab R. A literature review on ESG score and its impact on firm performance. *International Journal of Academic Research in Accounting Finance and Management Sciences*. 2023;13(1). <https://doi.org/10.6007/ijarafms/v13-i1/15101>
 25. Hassan AO, Ewuga SK, Abdul AA, Abrahams TO, Oladeinde M, Dawodu SO. Cybersecurity in banking: A global perspective with a focus on Nigerian practices. *Computer Science & IT Research Journal*. 2024;5(1):41-59.
 26. Hörisch J, Freeman R, Schaltegger S. Applying stakeholder theory in sustainability management. *Organization & Environment*. 2014;27(4):328-46. <https://doi.org/10.1177/1086026614535786>
 27. Ilugbusi S, Akindejoye JA, Ajala RB, Ogundele A. Financial liberalization and economic growth in Nigeria (1986-2018). *International Journal of Innovative Science and Research Technology*. 2020;5(4):1-9.
 28. Kemoe L, Zhan Z. Fiscal transparency, borrowing costs, and foreign holdings of sovereign debt. *IMF Working Paper*. 2018;18(189):1. <https://doi.org/10.5089/9781484373835.001>
 29. Kucharčíková A, Mičiak M, Hitka M. Evaluating the effectiveness of investment in human capital in e-business enterprise in the context of sustainability. *Sustainability*. 2018;10(9):3211. <https://doi.org/10.3390/su10093211>
 30. Landi G, Sciarelli M. Towards a more ethical market: the impact of ESG rating on corporate financial performance. *Social Responsibility Journal*. 2019;15(1):11-27. <https://doi.org/10.1108/srj-11-2017-0254>
 31. Linnenluecke M. Environmental, social and governance (ESG) performance in the context of multinational business research. *Multinational Business Review*. 2022;30(1):1-16. <https://doi.org/10.1108/mbr-11-2021-0148>
 32. Marais F, Lugt C, Mans-Kemp N. Mainstreaming environmental, social and governance integration in investment practices in South Africa: a proposed framework. *Journal of Economic and Financial Sciences*. 2022;15(1). <https://doi.org/10.4102/jef.v15i1.787>
 33. Minkkinen M, Niukkanen A, Mäntymäki M. What about investors? ESG analyses as tools for ethics-based AI auditing. *AI & Society*. 2022. <https://doi.org/10.1007/s00146-022-01415-0>
 34. Naveed M, Farah M, Hasni M. The transformative role of firm information transparency in triggering retail investor's perceived financial well-being. *The International Journal of Bank Marketing*. 2021;39(7):1091-113. <https://doi.org/10.1108/ijbm-02-2021-0068>
 35. Neupane S, Poshakwale S. Transparency in IPO mechanism: retail investors' participation, IPO pricing and returns. *Journal of Banking & Finance*. 2012;36(7):2064-76. <https://doi.org/10.1016/j.jbankfin.2012.03.010>
 36. Nilawati Y, Purwanti E, Nuryaman F. The effect of stakeholders' pressure and corporate financial performance on transparency of sustainability report. *Jurnal Akuntansi Trisakti*. 2019;5(2):225-38. <https://doi.org/10.25105/jat.v5i2.4867>
 37. Ovechkin D, Reshetnikova L, Boldyreva N. Evaluating the effectiveness of the momentum strategy for responsible investment in the Russian stock market. *SHS Web of Conferences*. 2021;93:02020. <https://doi.org/10.1051/shsconf/20219302020>
 38. Park S, Oh K. Integration of ESG information into individual investors' corporate investment decisions: utilizing the UTAUT framework. *Frontiers in Psychology*. 2022;13. <https://doi.org/10.3389/fpsyg.2022.899480>
 39. Pauna T, Lehtinen J, Kujala J, Aaltonen K. The role of

- governmental stakeholder engagement in the sustainability of industrial engineering projects. *International Journal of Managing Projects in Business*. 2023;16(8):77–99. <https://doi.org/10.1108/ijmpb-09-2022-0197>
40. Perwito P, Nugraha N, Gisman G, Gunardi G. Intangible asset moderation and the sustainable investment and firm value relation. <https://doi.org/10.4108/eai.18-11-2020.2311719>
 41. Pimentel B, Hunter G. Sustainable finance and its sustainability. *SSRN Electronic Journal*. 2021. <https://doi.org/10.2139/ssrn.3884907>
 42. Rahman M, Lau W. How has ESG investing impacted investment portfolios? A case study of the Malaysian civil service pension fund. *Asian Journal of Economic Modelling*. 2023;11(1):15–28. <https://doi.org/10.55493/5009.v11i1.4734>
 43. Ridzak T, Žigman A. Green finance for sustainable growth, the case of Croatia. *InterEULawEast Journal for the International and European Law Economics and Market Integrations*. 2020;7(2):131–50. <https://doi.org/10.22598/iele.2020.7.2.5>
 44. Sakuma-Keck K, Hensmans M. A motivation puzzle: can investors change corporate behavior by conforming to ESG pressures? *Advances in Sustainability and Environmental Justice*. 2013;367–93. [https://doi.org/10.1108/s2043-9059\(2013\)0000005023](https://doi.org/10.1108/s2043-9059(2013)0000005023)
 45. Samaniego J, Santillán-Salgado R, Saldivar L. The global automotive industry stock returns during the COVID-19 pandemic. *Revista Mexicana De Economía Y Finanzas*. 2021;17(4):1–21. <https://doi.org/10.21919/remef.v17i4.800>
 46. Sultana S, Zulkifli N, Zainal D. Environmental, social and governance (ESG) and investment decision in Bangladesh. *Sustainability*. 2018;10(6):1831. <https://doi.org/10.3390/su10061831>
 47. Sunkar A, Muntasib E, Rachmawati E, Haryoso A, Kristiawan R, Rushayati S, *et al.* Ecotourism hazards governance in disaster-prone area of Gunung Rinjani National Park. *IOP Conference Series: Earth and Environmental Science*. 2022;1109(1):012034. <https://doi.org/10.1088/1755-1315/1109/1/012034>
 48. Ukoba K, Jen TC. Thin films, atomic layer deposition, and 3D printing: demystifying the concepts and their relevance in Industry 4.0. CRC Press. 2023.
 49. Umoh AA, Adefemi A, Ibewe KI, Etukudoh EA, Ilojianya VI, Nwokediegwu ZQS. Green architecture and energy efficiency: a review of innovative design and construction techniques. *Engineering Science & Technology Journal*. 2024;5(1):185–200.
 50. Valiyan H, Abdoli M, Saghari M. Stakeholder relationship capability and investment efficiency: a mosaic theory test. *Measuring Business Excellence*. 2021;26(3):346–65. <https://doi.org/10.1108/mbe-01-2021-0009>
 51. Vincent AA, Segun IB, Loretta NN, Abiola A. Entrepreneurship, agricultural value-chain and exports in Nigeria. *United International Journal for Research and Technology*. 2021;2(8):1–8.
 52. Wang L, Fan X, Zhuang H. ESG disclosure facilitator: how do the multiple large shareholders affect firms' ESG disclosure? Evidence from China. *Frontiers in Environmental Science*. 2023;11. <https://doi.org/10.3389/fenvs.2023.1063501>
 53. Zaccone M, Pedrini M. ESG factor integration into private equity. *Sustainability*. 2020;12(14):5725. <https://doi.org/10.3390/su12145725>