

# *Sustainable Finance*

*A Systematic Literature Review of Trends,  
Challenges, and Opportunities*

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# Sustainable Finance

## A Systematic Literature Review of Trends, Challenges, and Opportunities

by

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# Preface

*Sustainability has always been a subject close to my heart. From my early academic days during my bachelor's, exploring green innovations in metal extraction to this thesis on sustainable finance, the desire to contribute to a more responsible and forward-looking world has driven much of my learning journey. The topic of sustainable finance captivated me because it sits at the intersection of my values and practical impact, where financial tools and strategies can support broader sustainability goals.*

*I moved away from home 2 years ago in pursuit of a better life here in the Netherlands and have since been studying my master's and building a future for myself. The biggest and most impactful part of my experience was finalizing this thesis, which was not the most linear. Finding the right topic was a long and difficult journey. Along the way, I navigated personal challenges, moments of doubt, and the heavy emotional weight of experiencing war back in Iran. Yet, each obstacle deepened my commitment to this work, making the completion of this thesis not only an academic milestone but also a deeply personal one.*

*I owe heartfelt thanks to many people who helped me reach this point. I am sincerely grateful to my supervisors, Aleksandrina Ralcheva and Victor Scholten, for their guidance, insight, and constructive feedback. They helped me sharpen my thinking, look more critically at my work, and grow both intellectually and personally. My parents, cheering me on from afar, were my constant source of support and positive energy, especially during my lowest moments. Their encouragement carried me through times when I felt overwhelmed or uncertain. To my friends who stood by me throughout the process- thank you for the hope, the honest conversations, and the sense of companionship.*

*What I found most rewarding in this journey was realizing the value of the research and how identifying potential areas for development could lead to meaningful contributions. While I began this work viewing concepts like ESG through a highly optimistic lens, the research process taught me to approach the field with greater nuance and a more critical perspective. I came to understand that even widely praised frameworks can have overlooked shortcomings, and that critical inquiry is essential in advancing any field. Over time, both the structure of the work and my perspective developed significantly. What started as an enthusiastic dive into a promising field gradually transformed into a more measured and thoughtful examination of its complexities and limitations.*

*As I conclude this chapter of my academic journey, I carry forward not just a deeper understanding of the subject but also a renewed commitment to contribute meaningfully to the field of sustainable finance. It is my hope that this work, in its small way, adds value to the ongoing efforts toward a more equitable and sustainable future.*

**Ziba Kashefi**  
**Delft, August 2025**

# *Executive Summary*

This thesis undertakes a Systematic Literature Review (SLR) to explore the evolution, scope, and future directions of sustainable finance, with particular attention to the interconnected roles of Environmental, Social, and Governance (ESG), Corporate Social Responsibility (CSR), and related theoretical frameworks. As global challenges such as climate change intensify, aligning financial practices with environmental and social goals has become increasingly critical. Sustainable finance plays a pivotal role in advancing long-term value creation and supporting international objectives such as the UN Sustainable Development Goals (SDGs). Therefore, understanding this matter is of primary importance.

Despite its growing relevance and the significant capital being funneled into sustainability-linked investments, the research in the field remains paradoxical and conceptually ambiguous. Although academic research has experienced exponential growth in publications over recent years, there remains potential for continued development, with inconclusive and conflicting findings, as well as underexplored areas. While many studies have examined sustainable finance, ESG, and CSR in relation to other factors, the full interconnection between these pillars remains largely overlooked, contributing to contradictory findings. Even though the field plays a key role in the transition to a sustainable economy, the literature highlights its shortcomings as much as its contributions. This creates confusion among many stakeholders, such as researchers, investors, regulators, and managers, who struggle to effectively engage with, integrate, and advance sustainable finance practices.

Therefore, to address these issues, a SLR method along with a thematic analysis were applied guided by the main research question: *“What does the existing literature reveal about the evolution, scope, and the future of sustainable finance?”* to extensively and systematically identify, analyze and synthesize the 103 peer-reviewed studies used in this thesis, to get a comprehensive view of sustainable finance. This approach reveals how themes like green finance, impact investing, CSR, and ESG performance have evolved over time and are conceptually linked with each other, yet often studied in isolation. It also highlights ongoing challenges, including data inconsistency, rating divergence, ideological preferences, inconclusive link to performance, and greenwashing, which undermine the credibility of ESG and CSR disclosures as measurements of sustainable finance.

Accordingly, this study identifies key areas for future research, particularly the need for more robust, integrated theoretical models and standardized ESG/CSR scores, regulatory frameworks, stricter measures to address greenwashing, deeper analysis of investor behavior, and the exploration of alternative metrics for assessing sustainability performance. Given the growing importance of sustainable finance, there is an urgent need for future research to address these theoretical and methodological gaps, better align financial decision-making with sustainability goals, and avoid repetitive studies later on. Therefore, the combination of an SLR and a thematic analysis enables the thorough and systematic identification of these patterns, gaps, and opportunities in the literature.

This thesis also contributes by developing both a network analysis that maps the field's key constructs and a conceptual framework that organizes them into a causal, theory-driven model, together providing a structured foundation for future research and practice. The analysis shows that while ESG and CSR have become central pillars, there remains room for development with more focus needed on critical topics such as greenwashing, rating divergence, reliability issues, and theoretical frameworks rather than areas that have been explored well through research over time. The conceptual framework highlights how ESG/CSR practices influence sustainable finance through mediators such as investor behavior, ESG ratings, cost of capital, and corporate reputation, moderated by firm-specific contexts. Future work must move beyond repetitive ESG/CSR–performance correlations and instead prioritize improving measurement, comparability, and transparency to ensure credible links between outcomes and real sustainability impact.

Ultimately, this review contributes to a more cohesive understanding of sustainable finance and serves as a foundation for scholars, investors, managers, and policymakers aiming to promote credible, transparent, and impactful sustainability practices within the financial sector. For academics, the implication is to move beyond repetitive research and correlations with performance and develop more credible, standardized, and causally robust measures. For managers, there is a strong message that sustainability should not be pursued merely to maximize ESG/CSR scores, but integrated authentically into strategy to secure trust, resilience, and long-term value. For policymakers and regulators, the study highlights the risks of over-reliance on ESG/CSR disclosures in order to be compliant with sustainability measures and urges a shift toward holistic sustainability reporting and stronger auditing mechanisms. Collectively, the findings stress that sustainable finance must evolve from score-keeping to genuine impact. Nonetheless, there are some limitations such as peer-reviewed English-language articles and constrained by data availability, especially regarding disclosures in SMEs and emerging markets. These factors restrict full robustness and have also been highlighted in the future research agenda to be further explored.

In sum, this thesis not only consolidates the sustainable finance research but also offers new tools to navigate it by providing both a descriptive mapping of the field and a theory-driven framework for understanding its dynamics. By clarifying where knowledge is well established and where critical gaps remain, it equips scholars, practitioners, and policymakers with a clearer agenda for advancing credible and impactful sustainable finance and helps answer the sub-research questions and the main research question in the conclusion. The central message is that the field must move decisively beyond fragmented, score-driven approaches toward frameworks and practices that genuinely align financial systems with long-term social and environmental sustainability. Only through such a shift can sustainable finance deliver on its promise to support both financial stability and the transition to a more sustainable global economy.

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# *Abbreviations*

**AuM:** Assets under Management  
**CAPM:** Capital Asset Pricing Model  
**CEO:** Chief Executive Officer  
**CFP:** Corporate Financial Performance  
**CO2:** Carbon dioxide  
**CSR:** Corporate Social Responsibility  
**DEI:** Diversity, Equity, and Inclusion  
**ECPI:** Ethical & Conventional Portfolio Intelligence  
**ESG:** Environmental, Social, and Governance  
**ESRS:** The European Sustainability Reporting Standards  
**FTSE Russell:** Financial Times Stock Exchange Russell  
**GSIA:** Global Sustainable Investment Alliance  
**IF:** Impact Factor  
**IFC:** International Finance Corporation  
**ISSB:** International Sustainability Standards Board  
**ISS-Oekom:** Institutional Shareholder Services - Oekom  
**KLD:** Kinder, Lydenberg, Domini  
**MOT:** Management of Technology  
**MSCI:** Morgan Stanley Capital International  
**NLP:** Natural Language Processing  
**PRISMA:** Preferred Reporting Items for Systematic Reviews and Meta-Analyses  
**RBV:** Resource-Based View  
**ROA:** Return on Assets  
**ROE:** Return on Equity  
**ROI:** Return on Investment  
**ROS:** Return on Sales  
**S&P:** Standard & Poor's  
**SDGs:** United Nations Sustainable Development Goals  
**SLR:** Systematic Literature Review  
**SME:** Small and Medium-sized Enterprises  
**SRI:** Socially Responsible Investing  
**UN:** United Nations  
**UN PRI:** United Nations Principles for Responsible Investment

# *Introduction*

Today, sustainable finance stands as both a rapidly expanding field and one marked by paradoxes and ambiguity. While subtopics such as Environmental, Social, and Governance (ESG) and Corporate Social Responsibility (CSR) have also become recognized concerns for institutional investors, there remains little consensus around key definitions, reporting standards, or performance metrics (Chatterji et al., 2016; Berg et al., 2022; Edmans & Kacperczyk, 2022). Over the past decade, sustainability has moved to the forefront of global policy and economic discourse. Initiatives such as the United Nations Sustainable Development Goals (SDGs) and the European Green Deal emphasize the urgent need for environmental management, social responsibility, and strong governance, given the fact that one of the major problems facing the world today is climate change (United Nations, 2023). Climate change creates long-term environmental, economic, and social risks for businesses, including physical threats to operations and transitional challenges from evolving policies and market expectations (Rudebusch, 2021).

In response, sustainable finance has emerged as a key driver for aligning financial flows with the SDGs, as aforementioned, which aim to eradicate poverty, reduce inequality, and safeguard the planet by 2030 (United Nations, 2023). This transition marks a clear shift from short-term profit maximization toward creating integrated, long-term value that balances financial, environmental, and social objectives (Fatemi & Fooladi, 2013). ESG investing, once considered a niche, now accounts for over \$100 trillion in assets under management globally (Berg et al., 2022), reflecting its mainstream integration into corporate strategy and risk assessment.

In 2020 alone, over \$400 billion was raised through capital markets, with sustainability and green bonds accounting for this amount (Kumar et al., 2025). However, definitions of sustainable finance vary across the literature. Edmans and Kacperczyk (2022) define it as the integration of ESG factors into financial decision-making, whereas Kumar et al. (2025) argue that it should encompass all activities and considerations that contribute to making finance sustainable and advancing broader sustainability goals. A broader explanation and understanding are needed that includes all financial practices contributing to long-term sustainability and value creation. This comprehensive and all-inclusive view can incorporate climate finance, CSR, ESG, and carbon disclosures, green bonds, and socially responsible investing, and help better capture this landscape.

In parallel, the global financial sector is transforming as well, now committed to factors like CSR and ESG integration (Berg et al., 2022). ESG investing and responsible investing, as part of the broader sustainable finance topic, are no longer emerging or new; it is a core component of risk assessment, long-term value creation, and corporate strategy (Edmans, 2023). Aligning investments with sustainability is essential, as ignoring climate-related risks can destabilize markets and misprice assets (Monasterolo, 2020). ESG provides criteria to evaluate corporate responsibility across environmental, social, and governance dimensions (Gillan et al., 2021).

Sustainability factors are also increasingly recognized as influential in firm performance, capital raising, and investor appeal. The social dimension emphasizes ethical labor practices, community engagement, and stakeholder satisfaction, while governance focuses on transparency, accountability, and board diversity (Khaw et al., 2024). Rising global awareness of responsible business conduct has fueled interest in sustainable finance and its subtopics, with integration seen as key to enhancing reputation, improving financial outcomes, and attracting investment (Shan et al., 2024; Al Azizah & Haron, 2025). As challenges like climate change and inequality grow, understanding the drivers of performance becomes essential. Moreover, transparent disclosures help mitigate legal, operational, and reputational risks, supporting sound decision-making and long-term competitiveness (Khaw et al., 2024; Bissoondoyal-Bheenick et al., 2023).

In recent years, the landscape of sustainable finance research has evolved significantly. While earlier studies primarily concentrated on ethical investing and its impact on financial performance (Friede et al., 2015), the field has broadened to encompass ESG scoring, climate risk integration, carbon disclosure, CSR disclosure, and different theories (United Nations, 2023; Matsumura et al., 2014; Edmans & Kacperczyk, 2022). Interdisciplinary contributions from economics, governance, finance, and environmental studies have further enriched the literature. Systematic Literature Reviews (SLRs) have generally examined sustainable finance, ESG, or CSR either as standalone topics or with a specific thematic emphasis. Some reviews focus exclusively on sustainable finance (Kumar et al., 2025; Edmans & Kacperczyk, 2022; Singhania et al., 2024; Popoescu et al., 2021), others on ESG (Martiny et al., 2024; Khaw et al., 2024; Tsang et al., 2023) or CSR (Frynas & Yamahaki, 2016; Fatima & Elbanna, 2023; Velte, 2022). Additionally, select studies delve into particular aspects such as financial performance (Devie et al., 2020; Friede et al., 2015), rating divergence (Berg et al., 2022), theoretical frameworks (Xie et al., 2019; Christensen et al., 2021), disclosure practices (Bucaro et al., 2020), or greenwashing (Dhaliwal et al., 2011; Pollman, 2024).

Accordingly, studying sustainable finance with major attributes is critical as it lies at the intersection of global efforts to address climate change, promote inclusive economic development, and reform financial systems toward long-term sustainability in alignment with sustainability goals (Bissoondoyal-Bheenick et al., 2023). The current global economy remains deeply rooted in unsustainable models, and the financial sector plays a pivotal role in either perpetuating or transforming this trajectory (Yesuf & Aassouli, 2020). Climate change poses not only environmental but also systemic economic and social risks for businesses, from physical disruptions to operations to transitional pressures arising from shifting policies, regulations, and market expectations (Rudebusch, 2021).

The rapid increase of sustainability-themed funds, ratings, and disclosures has outpaced the development of coherent frameworks, creating a fragmented and often contradictory ESG landscape (Macey, 2022; Pollman, 2024; Edmans, 2023). A central challenge is the divergence in ESG ratings, which undermines comparability and confuses investors (Berg et al., 2022). At the same time, reliance

on voluntary, unaudited disclosures in both CSR and ESG enables greenwashing, where firms may selectively or misleadingly portray their sustainability performance (Christensen et al., 2021; Dhaliwal et al., 2011). Despite mounting regulatory pressure, the absence of standardized reporting frameworks results in incomplete and opaque ESG data. These issues threaten the credibility and effectiveness of sustainable finance and highlight the urgent need for further academic research.

Although sustainable finance has gained substantial attention in recent years, the field still exhibits signs of conceptual and methodological immaturity. Despite its expanding literature base, foundational frameworks remain fragmented, and research often follows repetitive patterns. While sustainable finance has long intersected with related domains such as ESG and CSR, it continues to be treated as an emerging topic by both scholars and practitioners. This recurring tendency underscores the need for more diversified approaches and deeper methodological rigor in future studies.

Moreover, ESG and CSR should not be seen merely as aligned instruments of sustainable finance, but rather as part of a contested terrain. While often grouped under the same umbrella, ESG (with its focus on measurable, risk-based metrics) and CSR (with its roots in voluntary ethics and social responsibility) reflect different logics, priorities, and actor interests (LoPucki, 2021; Cabolis et al., 2023; Pollman, 2024). Their convergence in literature and practice obscures the underlying tensions between these approaches. This thesis acknowledges these conceptual frictions and highlights them where relevant in the literature (particularly in relation to inconsistency issues).

The urgency of studying sustainable finance today consequently arises from a confluence of regulatory, environmental, and societal pressures. The topic is not merely an academic concern; it is a foundational element in the transition to a resilient, low-carbon economy. The accelerating impacts of climate change, mounting demands for corporate accountability, and a shift in investor expectations have created a unique inflection point. Global initiatives have also made sustainability a policy imperative, not an option (United Nations, 2023; Gonzalez, 2021). At the same time, the financial sector has the leverage to accelerate or hinder this transition as financial institutions are being called upon to reallocate capital in alignment with long-term environmental and social goals. These forces collectively heighten the need for robust academic insight that can inform timely and evidence-based financial and policy decisions, and understanding how sustainable finance functions, both in theory and practice, is essential to ensure that financial systems do not continue to perpetuate environmental degradation or social inequality.

Additionally, during the initial stages of this study, the sheer volume of literature on sustainable finance, ranging in diverse industries, methodologies, and findings, presented a significant challenge in narrowing down a focused research topic. The field's rapid growth, combined with contradictory results and numerous emerging areas of interest, made it difficult to commit to a single angle without excluding other relevant perspectives. These sub-topics and concepts are all correlated to each other, and with unresolved tensions, there is a need to synthesize all of the research in a single holistic review to grasp what actually sustainable finance entails and how to move forward in the future.

Given this complexity, an SLR becomes not only appropriate but essential as it enables a transparent, rigorous synthesis of a diverse and expanding body of research (Clarke & Braun, 2017) to avoid repetition in future research and encourage the exploration of novel directions. As sustainability pressures mount, which are driven by regulatory reforms like the EU Green Deal, investor activism, the SDGs, etc. (United Nations, 2023), the financial industry increasingly demands structured,

evidence-based guidance (Edmans, 2023). This review responds to that demand by systematically analyzing the literature to provide a more coherent foundation for future research and corporate action.

By synthesizing the evolution of sustainable finance research and critically assessing its core themes, such as ESG and CSR, this study contributes by offering a comprehensive and integrative synthesis of the full landscape of sustainable finance research. This facilitates a comprehensive mapping of the field's evolution by identifying thematic and methodological gaps across subdomains, while also highlighting emerging trends, scholarly inconsistencies, and the industry's pressing need for conceptual clarity. It highlights where conceptual overlaps hinder progress, where research remains inconclusive, and where promising new directions are emerging; unlike prior reviews that isolate these topics or examine narrow dimensions such as ideological preferences, disclosure, or financial performance. Ultimately, this SLR serves as a roadmap for aligning academic insight with real-world applications such as investment portfolios, policies, managerial decisions, etc., ensuring that finance can support sustainability not only as an ethical imperative but as a strategic necessity.

This study extends reviews by Kumar et al. (2025) and Mukhtar et al. (2025) by uncovering cross-sectional insights, clarifying performance drivers, revealing inconsistencies in conceptual frameworks, and highlighting new, unreplicated directions for future research, challenges, and opportunities. In doing so, it also provides practical implications for scholars, policymakers and managers seeking to navigate and shape the future of sustainable finance. Therefore, the main research question leading this study is:

### **What does the existing literature reveal about the evolution, scope, and future of sustainable finance?**

The sub-questions defined below will help dissect and analyze the broad field of sustainable finance and relevant research to be able to systematically investigate all the relevant domains, such as ESG, CSR, and their attributes. The sub-questions systematically guiding this thesis are also as follows:

1. *What are the most notable themes and trends of the sustainable finance landscape?*

Identifying key themes and trends helps clarify what issues have dominated scholarly attention, and reveals how priorities have shifted in response to global crises, policy changes, and market dynamics. This analysis is crucial for mapping the intellectual terrain and ensuring that emerging challenges are appropriately addressed in future research and practice.

2. *How has the concept and scope of sustainable finance, along with its associated themes, evolved in the academic context over time?*

Exploring how the concept and scope of sustainable finance have evolved reveals the changing values, assumptions, and methodologies guiding research in this domain. It especially uncovers how subfields like ESG and CSR have been incorporated, redefined, or challenged, which is critical for resolving inconsistencies in definitions, measurements, and frameworks and enhancing conceptual clarity across disciplines.

3. *What are the most influential articles, journals, and authors in sustainable finance research and its subtopics?*

Identifying key contributions allows for the recognition of foundational theories, methodologies, and turning points in the literature. Highlighting influential scholars and journals also guides new researchers toward credible sources and helps build upon the most impactful knowledge in the field.

4. *What areas remain open for further exploration and future research within sustainable finance and its related subfields?*

Pinpointing areas of development in research is vital for directing scholarly and practical efforts toward unresolved questions, such as the impact of sustainable finance on firm performance, the standardization of metrics, or the ethics of greenwashing, and even the intersection of all these topics. This forward-looking inquiry ensures the academic field remains responsive to real-world demands and evolving sustainability challenges.

This thesis then employs a Systematic Literature Review (SLR) in combination with thematic analysis to examine academic research on sustainable finance. Following PRISMA guidelines, relevant literature was identified using predefined keywords and Boolean operators shown in Chapter 2. Studies were screened through multiple stages based on language, peer-reviewed status, disciplinary scope, journal quality, citation count, and publication date. The final articles were coded and analyzed following Clarke & Braun's (2017) six-phase thematic analysis framework, allowing for the systematic identification and categorization of recurring concepts, theoretical approaches, and methodological patterns in the literature.

Results and Findings follow in Chapter 3 which discusses the descriptive analysis of the literature, highlighting publication trends, impactful journals, impactful authors, previous SLRs, and most cited articles in the field. The second section in the results showcases themes identified through the thematic analysis such as *Evolution and Scope of Sustainable Finance*, *ESG/CSR for Investment Analysis and Risk Management*, *ESG/CSR and Theoretical Frameworks*, *Firm Financial Performance and Outcomes*, *Disclosure and Greenwashing*, and *Measurement and Rating Divergence*. Each theme is explained based on findings and shows that sustainable finance research is structured around these main pillars. While great advancements have been made, there are gaps and inconsistencies identified that require future research to address.

As a great contribution, a network diagram and conceptual framework are also developed based on the findings that address these gaps by explaining how ESG and CSR practices affect financial performance and sustainable finance integration through mediators such as ratings, credibility, investor behavior, and reputation. The key takeaway from here is that future progress depends on strengthening disclosure quality, standardizing metrics, and linking sustainability practices more directly to measurable societal and environmental impacts. While these improvements are being made, there should be a fundamental assessment on how sustainable finance is measured as well as ESG and CSR are shown to be flawed and unreliable at times.

The findings of this thesis translate directly into practical implications and future directions discussed in detail in Chapter 4 for key stakeholders (academics, managers, and policymakers) each of whom plays a central role in shaping the credibility and future of sustainable finance. Academics are urged to critically reassess existing measures and contribute new, more reliable frameworks. Managers must embed sustainability into the core of business strategy rather than treating it as a reputational or compliance exercise. Policymakers should expand disclosure requirements beyond ESG/CSR scores, ensuring transparent and verifiable sustainability reporting. Together, these implications underscore

that advancing sustainable finance requires shifting from symbolic measures to credible, multidimensional practices that create both financial and societal value.

Lastly, the thesis concludes in Chapter 5 that while sustainable finance has become a central pillar in aligning financial systems with global sustainability goals, it remains challenged. ESG and CSR frameworks are widely adopted but insufficiently robust, calling for more credible, standardized, and context-sensitive measures. The main contributions of this research are the results, themes, development of a network analysis and a conceptual framework, which together provide a structured understanding of how sustainable finance is organized, highlight its dominant themes, reveal critical gaps and help answer the main and sub research questions. Practical implications are emphasized, some limitations are acknowledged (e.g., methodological limitations, resource and time constraints, data limitations) to be addressed by future research, and the link to the master's program MOT is explained. Ultimately, advancing sustainable finance requires a shift from symbolic measures toward multidimensional practices that generate both financial and societal value.

# 2

## *Methodology and Design*

This chapter outlines the research design and methodology adopted for the study. Section 2.1 presents the rationale for using an SLR in combination with thematic analysis. Section 2.2 details the data collection process, including article selection, screening procedures, and inclusion/exclusion criteria, followed by the steps taken in the thematic analysis. Finally, Section 2.3 outlines the methodological limitations encountered during the research process.

### 2.1 Research Design and Methods

In this study, an SLR was selected as the most appropriate method due to the broad and often contradictory literature on sustainable finance, ESG, and CSR. The large body of literature made it challenging to narrow the focus and avoid redundancy. Therefore, a systematic approach provides a transparent and replicable process for selecting and analyzing literature, enabling a comprehensive synthesis of the field (Massaro et al., 2016).

This approach was preferred over traditional or narrative reviews, which are often criticized for arbitrary and selective processes that introduce sample bias (Cabrera & Cabrera, 2023; Poyser & Daugaard, 2023). Previous systematic reviews have typically focused on isolated aspects, such as sustainable finance, ESG, or CSR, or specific issues like financial performance or greenwashing. Building on that, this study was based on the structured review methodology outlined by Tranfield et al. (2003), applying predefined protocols to systematically identify, screen, and synthesize literature across disciplines. This broader scope allows for a more comprehensive understanding of the interrelationships among key sustainability concepts. This method supports the identification of recurring themes, conceptual gaps, and methodological inconsistencies. It also clarifies how sustainable finance is defined, measured, and applied, thereby addressing the research questions and informing future research directions.

The SLR followed three core stages: searching, screening, and analysis (Tranfield et al., 2003). Using keywords and search terms (see Section 2.2) and clear inclusion/exclusion criteria, relevant studies were identified, critically assessed, and included in the review.

To complement the SLR and deepen the analysis, a thematic analysis was conducted as a qualitative method to identify, interpret, and synthesize recurring patterns within the selected literature. This approach was carried out manually, where key codes and keywords were extracted from the full texts and grouped iteratively into broader themes. To ensure internal consistency and coherence, the coded segments were revisited multiple times, and categories were refined based on their frequency, conceptual alignment, and relevance to the research questions. Thematic analysis, known for its methodological flexibility, is particularly well-suited for systematic reviews involving broad and heterogeneous bodies of literature (Clarke & Braun, 2017). In the context of sustainable finance, where research varies significantly in focus and approach, this method facilitates the identification of underlying concepts, thematic trends, and ongoing scholarly debates across ESG and CSR studies.

## 2.2 Data Collection and Selection

Two primary academic databases, Google Scholar and Scopus, were used to identify relevant literature for this study. The selection process followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Figures 2.1 and 2.2) and was based on the structured review methodology outlined by Tranfield et al. (2003), promoting transparency in the review’s rationale, methods, and outcomes.

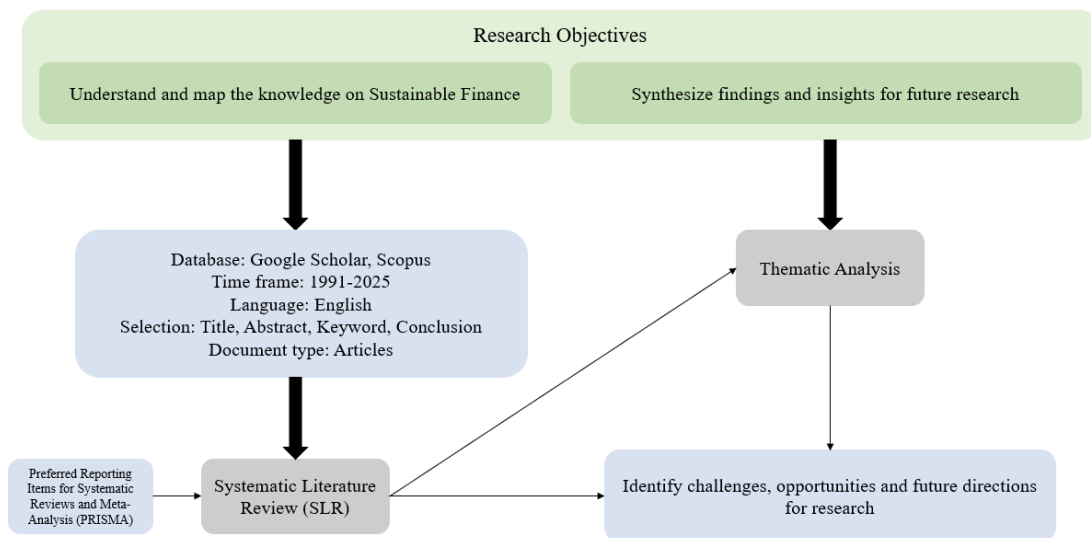
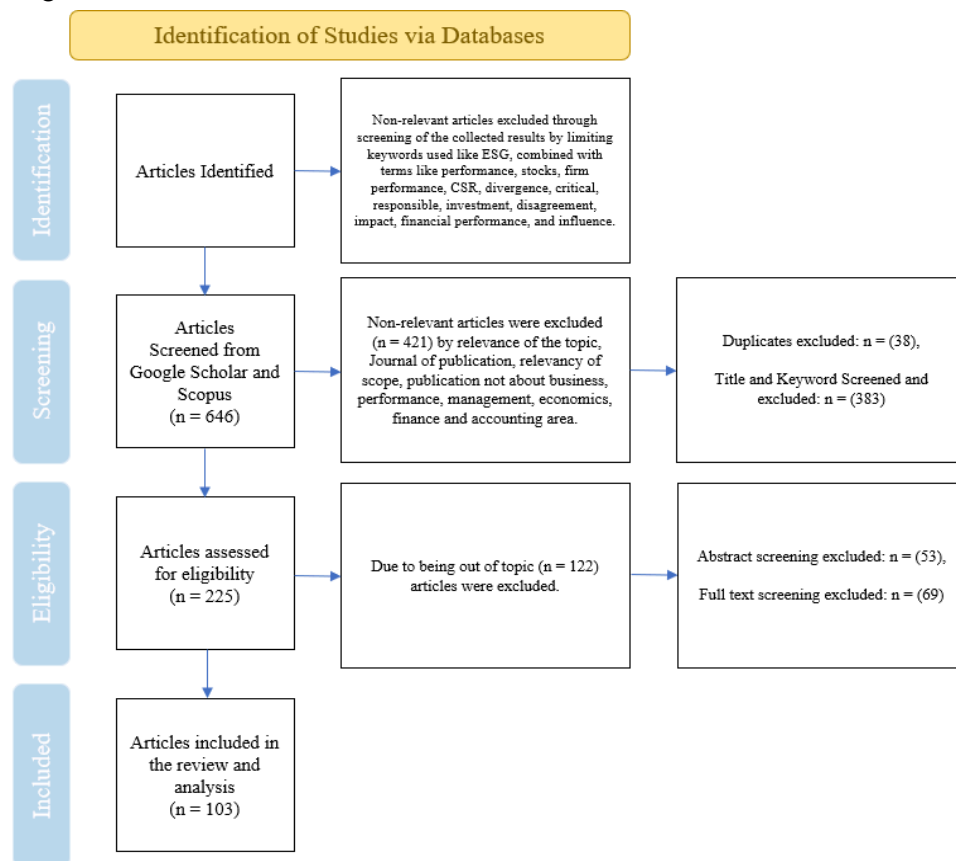


Figure 2.1: Research methodology (Source: Author’s own creation)

Relevant literature from multiple academic sources was identified to support this review. Using the databases mentioned, the study utilized terms this research focused on such as Sustainable finance, ESG (Environmental, Social, and Governance) and CSR (Corporate Social Responsibility). Initially, papers were generally found through looking for these major concepts and then read through to get an understanding of the domain (Kumar et al., 2025; Pollman, 2024; Fatima & Elbanna, 2023). This helped get a general idea of what attributes, themes, topics, concerns, trends, etc. have been associated with ESG, CSR and sustainable finance and was a great starting point to then go through the literature and try to refine keywords and search terms for further identifying papers for this SLR.

By doing that, key terms and words were initially recognized such as “Performance,” “Stocks,” “Firm performance,” “Divergence,” “Critical,” “Responsible,” “Investment,” “Disagreement,” “Impact,” “Financial Performance,” and “Influence,” “Sustainable Development Goals,” “Socially Responsible Investing,” “Climate Financing,” “Green financing,” “Impact Investing,” “Carbon Financing,” “Energy Financing,” and “Governance.” Additional connecting words like “or,” “and,” “Factor,” “Driver,” etc. which were then used along with the major concepts aforementioned to find, expand, and refine the article search. These keywords appeared in diverse areas of the focus of research and helped dive into many different research areas related to ESG, CSR and sustainable finance. Following the approach of Clement et al. (2025) and Mukhtar et al. (2025), the review adhered to four core PRISMA stages: (1) identification, (2) screening, (3) eligibility, and (4) inclusion.

Reference lists of articles and where articles were cited in other publications were also examined to identify additional suitable studies with a relevant scope and expand the dataset based on title, keywords and abstract. The initial search yielded 646 articles, based on the search strings outlined in *Figure 2.2*. This broad search laid the foundation for the review process, ensuring comprehensive initial coverage of the literature.



*Figure 2.2: PRISMA flow diagram (Source: Author's own creation)*

Articles were screened based on predefined inclusion criteria. Only English-language, peer-reviewed journal articles were retained to ensure accessibility and relevance. The disciplinary scope was narrowed to Business, Management, Accounting, Economics, and Finance, as these fields are most closely aligned with sustainable finance research. Additional filters excluded articles from low-ranking journals (e.g., an Impact Factor (IF) of less than 5) to ensure the credibility of the publications. Only studies with at least one citation were included which showed other researchers have also found the study relevant and the work is integrated or getting integrated in ongoing academic discussions. To

include all studies considered insightful, no time frame was set, and articles were published between 1991 and 2025 and selected to thoroughly understand the evolution over time in the findings. These inclusion/exclusion criteria also ensured that a broad yet reliable selection of literature was captured, covering a wide temporal and topical scope.

Next, 38 duplicate entries were removed. Title and keyword screening resulted in the exclusion of 421 additional articles, leaving 225 for further analysis. In this step, titles were reviewed to determine whether they addressed the scope of this research; studies with an unrelated population, focus, or field were excluded. Author-provided keywords were examined to identify the major topics and key concepts, assessing whether they aligned with the inclusion criteria. This process reduced the need to review full texts at an early stage and ensured that only studies with a reasonable likelihood of relevance progressed to the next stage of the review.

Abstract and full-text screening of the remaining papers was conducted to fully understand their content and confirm that the keywords and phrases relevant to this study were genuinely addressed in the publications. Abstract reading helped identify the problem, goal, hypothesis, methods and the results of the research which aided in getting a general idea of what the research entails and if it is relevant to this thesis's agenda. However, as it is evidently challenging and time consuming to fully read 225 papers, it should be acknowledged that NotebookLM was used to help in this step. To ensure the reliability of its outputs, validation prompts were used to cross-check the tool's responses against a source material, which was the articles that were fully read initially to build domain familiarity, confirming its accuracy before broader use. Once validated, the same structured prompts were applied to part of the 225 shortlisted articles to facilitate efficient review. This included assistance in understanding the main points addressed in the research, a summary, extracting key concepts, clarifying methods, summarising findings and results, highlighting relevance, identifying limitations and comparisons across papers. Although time-consuming, this screening process improved the review's comprehensiveness and reliability, ultimately narrowing the dataset to the final 103 articles and excluding 122 publications.

Additionally, a thematic analysis was explicitly performed on the final set of 103 articles, following the six-phase framework proposed by Clarke & Braun (2017). This qualitative method enabled the identification, interpretation, and synthesis of recurring patterns across studies with diverse focuses, contexts, and methodologies. This process involved 1. Familiarisation with the Data: starting with a thorough reading of the literature, including articles that were part of the review, in order to get a general understanding of the content, important ideas, conclusions, and theoretical viewpoints. In step 2. Generating Initial Codes: similar textual elements were manually coded by identifying and grouping related concepts and terminology.

The next step was 3. Searching for Themes: codes were clustered into broader themes based on frequency and relevance to the research questions. This was followed by step 4. Reviewing Themes: themes were refined by re-examining the data, consolidating overlaps, and ensuring each theme accurately reflected the scope of the literature. Then step 5. Defining and Naming Themes: each theme was clearly defined and labeled to encapsulate its key content. Lastly is step 6. Producing the Code and Theme Report: the final themes were synthesized and presented using supporting studies and citations, with an emphasis on their implications for future research.

Internal validity of this study is supported by its rigorous and transparent research design, particularly the use of an SLR combined with thematic analysis, as mentioned. By following the established

protocols and frameworks outlined in this section, the study minimizes bias in article selection and increases replicability. The inclusion and exclusion criteria were clearly defined and consistently applied to ensure credibility, academic value, and relevance of the articles, while the use of two major databases ensured a comprehensive and systematic search. Furthermore, the six-step thematic analysis allowed for consistent interpretation of findings across the selected studies. These structured procedures contribute to the study's internal validity and reduce the risk of subjective interpretation or selection bias, enhancing the overall reliability of its findings.

Moreover, the external validity is demonstrated through its comprehensive coverage of sustainable finance literature across multiple subfields, time periods, and research contexts. By incorporating a wide range of peer-reviewed studies and by including literature from disciplines such as finance, economics, accounting, and management, the review captures a diverse set of theoretical and empirical perspectives. This broad scope enhances the generalizability of the findings to various stakeholders, including academics, investors, practitioners, and policymakers interested in ESG, CSR, and sustainable finance. The study's thematic diversity and temporal breadth support the transferability of its conclusions to broader academic and professional contexts.

### 2.3 Limitations

It is important to acknowledge the methodological constraints encountered during this study. First, the review was limited to English-language publications. This decision was primarily due to time and resource constraints, which made it unfeasible to analyze non-English literature reliably and consistently. Furthermore, preliminary examination revealed that such studies were few and often country-specific, covering themes already well-represented in the English-language literature. In addition, these non-English sources typically lacked citation impact, failing to meet the inclusion criteria of this study, which emphasized peer-reviewed and cited academic work.

Second, although Google Scholar and Scopus offer broad academic coverage, other databases may also contain relevant literature. To mitigate this limitation, backward reference searching was used, as outlined in Section 2.2. This strategy ensured that key studies, particularly those aligning closely with the research scope, were not overlooked. Additionally, the keyword strategy was refined iteratively throughout the search process to ensure comprehensive thematic coverage.

Lastly, access limitations occasionally prevented the retrieval of full-text versions of certain articles. In such cases, additional efforts were made to locate the publications through alternative sources, including open-access platforms and academic repositories.

# *Results and Findings*

This chapter presents the performance analysis of the 103 peer-reviewed articles included in this systematic literature review. The aim is to first evaluate publication trends over time, highlight the most influential journals and studies, and provide an overview of prior SLRs and publication patterns in Section 3.1. Additionally, in Section 3.2, the combination of the findings along with the results of the thematic analysis helps establish the trajectory and current maturity of research on sustainable finance and its related domains (ESG and CSR). This further helps answer the research question and subquestions while identifying the possible development areas for the future.

## 3.1 Performance Analysis

The publication trend over the years, impactful journals, influential publications, previous similar SLRs, and word cloud are analyzed in this section. *Figure 3.1* illustrates the annual distribution of the selected articles from 1991 to 2025. The data reveal that research on sustainable finance and its associated themes has grown substantially over the past three decades. Early literature (1991-2000) was relatively limited and largely exploratory, often outlining future research needs. From 2000 to 2013, research activity began to increase, particularly in response to global financial crises that raised questions around long-term corporate sustainability and investments. The first article included in this review appeared in 2003 (Orlitzky et al., 2003).

Before 2004, topics like ESG were not often studied independently; instead, they were embedded within broader discussions of sustainable development or CSR (Mukhtar et al., 2025). This made finding articles solely under that keyword slightly challenging. The term ESG gained formal traction after the release of the UN-backed report “Who Cares Wins” (IFC, 2004), while global frameworks like the Sustainable Development Goals (SDGs), launched in 2015, further accelerated interest in the field.

Notably, 65% of the reviewed articles were published between 2015 and 2021, underscoring 2015 as a turning point marked by the Paris Agreement and SDGs. Publication counts peaked in 2021 with 12 articles, rising from just a single publication in 2003. The decline in articles analysed in this thesis from 2022 to 2025 does not reflect decreasing academic interest, but is largely due to exclusion criteria, such as low citation counts and journal ranking. Another reason is that the literature

identification process was conducted in early 2025, which inevitably excluded the newly published articles from this thesis.

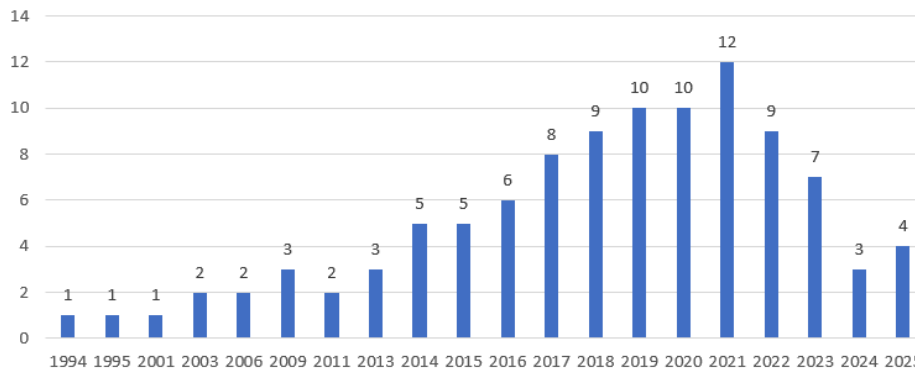


Figure 3.1: Publication Trends

Table 3.1 presents the distribution of articles across journals, highlighting only those that contributed two or more studies. The 103 articles span across 42 journals, reflecting the interdisciplinary nature of sustainable finance.

“The Accounting Review” led with 7 articles, followed by “Review of Finance” (6 articles), “Journal of Cleaner Production,” and “Journal of Business Ethics” (5 each). Several journals contributed four articles each, including “The International Journal of Business in Society,” “Journal of Corporate Finance,” and “Business Strategy and the Environment.” Other notable contributors with three articles include “Sustainability Accounting, Management and Policy Journal,” “Financial Management,” “Accounting & Finance,” “California Management Review,” and “Financial Review.”

The prominence of financial journals such as The Accounting Review and Review of Finance indicates a strong academic focus on integrating sustainability within traditional financial frameworks. Meanwhile, the inclusion of ethics- and environment-oriented journals highlights growing attention to the social and ecological dimensions of finance. However, the relatively even distribution across 42 journals, with few contributing multiple articles, suggests that sustainable finance research remains somewhat spread out across disciplines. This variation underscores the opportunity for more cohesive dialogue and collaboration across academic fields.

Table 3.1: Most impactful Journals

Sources (Journals)	Total Citations	NP
The Accounting Review	11376	7
Review of Finance	9500	6
Journal of Cleaner Production	896	5
Journal of Business Ethics	3040	5
The International Journal of Business in Society	1061	4
Journal of Corporate Finance	4680	4
Business Strategy and the Environment	2718	4

Sustainability Accounting, Management and Policy Journal	136	3
Financial Management	2356	3
Accounting & Finance	1545	3
Financial Review	760	3
California Management Review	4912	3
Corporate Social Responsibility and Environmental Management	933	2
International Review of Economics & Finance	7	2
International Journal of Business and Social Science	85	2
Journal of Business Economics and Management	196	2
Strategic Management Journal	6218	2
Global Finance Journal	2014	2
Social Responsibility Journal	3244	2
Review of Accounting Studies	1387	2
Journal of Financial Economics	5219	2
Journal of Business Finance & Accounting,	638	2
The Review of Financial Studies	1709	2
Journal of Accounting and Public Policy	681	2
Journal of Banking and Finance	689	2
Contemporary Accounting Research	727	2
Journal of Accounting, Auditing and Finance	530	2
Journal of Applied Corporate Finance	1102	2
Academy of Management Review	28864	2

To identify the most influential contributions in the field, *Table 3.2* presents the top 15 globally cited articles related to sustainable finance, summarizing their objectives, findings, methodologies, and observed effects. This analysis not only highlights key academic outputs but also provides insight into the conceptual and empirical foundations that have shaped the field.

It is important to note that citation rankings may vary depending on the specific research framework applied. For example, while Dhaliwal et al. (2011) lead with 5,312 citations for their work on voluntary CSR reporting and cost of equity capital, Bhattacharya and Sen (2004) follow closely with 4,304 citations, examining consumer responses to corporate social initiatives (CSIs). Following this influential publication list, the third most cited is the article by Delmas and Burbano (2011), who identified the drivers of greenwashing and when firms misled stakeholders about their environmental practices, with 3956 citations in total. And followed in fourth place by Berg et al. (2022), who

investigated why ESG ratings from different agencies diverge and identified the main sources of this divergence.

Next on the citation ranking in fifth place is a paper by Lindblom (1994) with 2481 citations, which investigated how organizational legitimacy influences corporate social/environmental performance and disclosure, using a legitimacy theory lens. Collectively, these top 15 articles account for a remarkable 90,936 citations, underscoring their significant influence on the development of sustainable finance scholarship.

The analysis of the 15 most-cited articles also reveals a field that is both empirically robust and conceptually diverse. While the dominant focus remains on how ESG performance and CSR disclosure affect financial outcomes, a significant body of work highlights methodological inconsistencies, rating divergences, and the risks of greenwashing.

The mixed findings across studies underscore the complexity of the topic with different constructs and their dependency on contextual factors. Moreover, the high citation volume and the longevity of certain foundational works suggest that the field is both a mature and evolving research frontier.

*Table 3.2: Literature Overview of Most Cited Articles*

<b>Authors (Year)</b>	<b>Objective</b>	<b>Research Method</b>	<b>NC</b>	<b>Summary</b>	<b>Effect</b>
Dhaliwal et al. (2011)	Examined whether initiating voluntary CSR reporting lowers a firm's cost of equity capital.	Regression analysis	5312	Firms that start CSR reporting experience a significant drop in the cost of equity capital. The effect is stronger for firms with high analyst following or greater information asymmetry.	Positive
Bhattacharya & Sen (2004)	Explored when, why, and how consumers respond to corporate social initiatives (CSIs), and what makes these efforts effective in building consumer support.	Conceptual model and framework development	4304	Consumers respond positively to CSIs when initiatives align with their personal values, are credible, and are well-communicated. But poorly executed CSIs can backfire.	Positive
Delmas & Burbano (2011)	Identified the drivers of greenwashing, when firms mislead stakeholders about their environmental practices.	Conceptual/Theoretical analysis	3956	Drivers of greenwashing fall into three categories: 1- External pressures (regulations, media, NGOs). 2- Organizational factors (structure, incentives, communication gaps). 3- Individual motivations (executive values, image concerns).	Negative
Berg et al. (2022)	Investigated why ESG ratings from different agencies diverge and identified the main sources of this divergence	Cross-sectional quantitative analysis with variance decomposition	3201	This paper examines why ESG ratings from different providers often disagree, meaning agencies often assess different things and use different methods, which reduces the reliability and comparability of ESG scores and identifies the sources of that divergence using data from six major ESG rating agencies.	Negative
Lindblom (1994)	How organizational legitimacy influences corporate social/environmental performance and disclosure, using a legitimacy theory lens.	Theoretical/conceptual analysis	2481	Firms use social disclosures in response to threats to legitimacy. Identified 4 strategies for managing legitimacy.	Positive

Fatemi et al. (2018)	ESG performance and its disclosure effect on firm value, focusing on the moderating role of disclosure	Regression analysis	1726	The study investigates the impact of ESG strengths and weaknesses on firm value and how ESG disclosure moderates these relationships.	Mixed
Chatterji et al. (2016)	Assessed the consistency among major corporate social responsibility (CSR) ratings and evaluated their reliability for stakeholders	Statistical analysis of rating correlations	1407	The study examines the level of agreement among CSR ratings from six well-known agencies, finding significant discrepancies that raise concerns about their validity and usefulness for decision-making.	Negative
Richardson & Welker (2001)	Examined how social and financial disclosure affects a firm's cost of equity capital.	Regression analysis and content analysis	1380	Level of social disclosure and cost of capital have a negative relationship, and firms with greater social disclosure tend to have a lower cost of equity, and that transparency reduces information asymmetry, risk, and return.	Negative
Velte (2017)	Assessed how ESG performance, including its individual components, affects financial performance	Correlation and regression analysis	1227	ESG scores and financial metrics found that overall ESG, especially governance, positively influences accounting performance (ROA), but has no impact on market value (Tobin's Q).	Mixed
Duque-Grisales and Aguilera-Caracuel (2021)	Examined how ESG performance affects the financial performance of companies with the moderating roles of geographic diversification and financial slack.	Linear regression	1166	ESG performance is found to have a positive effect on return on assets (ROA), while showing no significant impact on Tobin's Q. Among the individual ESG components, governance is found to have the strongest influence on financial performance.	Mixed
Aouadi and Marsat (2018)	Investigated the impact of ESG controversies on firm market value across a global sample of companies.	Statistical analysis, including regression models	1119	ESG controversies are associated with greater firm value. But no direct effect on corporate social performance.	Positive
Xie et al. (2019)	Assessed how ESG activities and their disclosure levels impact corporate financial performance, including efficiency, profitability, and market value	Data Envelopment Analysis (DEA) and regression analysis	1117	ESG activities are generally associated with non-negative effects on corporate financial performance.	Positive
Alareeni et al. (2020)	Investigated the relationship between ESG disclosures and financial performance metrics (ROA, ROE, and Tobin's Q)	Panel regression analysis	970	Overall ESG disclosure positively correlates with firm performance metrics. Environmental and Social disclosures are negatively associated with ROA and ROE but positively related to Tobin's Q.	Positive
Gibson et al. (2021)	Investigated whether discrepancies in ESG ratings among different providers influence stock returns	Quantitative panel data analysis & Regression analysis	835	Firms with higher ESG rating disagreement tend to have higher stock returns, indicating a risk premium associated with such disagreement.	Positive
Kotsantonis & Serafeim (2019)	To expose major limitations and inconsistencies in ESG data that affect its reliability for investors and decision-makers	Qualitative Analysis	635	The paper outlines four core issues with ESG data: inconsistent metrics, rating agency disagreement, disclosure-related confusion, and the urgent need for standardized reporting.	Negative

Among the reviewed publications, Edmans, A. stands out as the most prolific author, contributing three articles. Eight other scholars, including Khan, M.; Bissoondoyal-Bheenick, E.; Berg, F.; Clément, A.; Dhaliwal, D.; Fatemi, A.; Donaldson, T.; and Lindgreen, A., contributed two articles each. Collectively, these nine authors account for 19 publications and 22,577 citations, indicating their central role in advancing the discourse on sustainable finance.

In addition to primary studies, several recent SLRs have played a significant role in consolidating knowledge within the sustainable finance domain as well. *Table 3.3* provides an overview of these reviews, highlighting their authorship, methodological approaches, and citation impact. These SLRs reflect the field’s maturation and growing interdisciplinary focus. For instance, Martiny et al. (2024) combined systematic review methods with panel data regression to assess the impact of ESG performance and disclosure on firm value across various international contexts. Khaw et al. (2024) integrated bibliometric analysis into their review to examine how CEO power moderates the relationship between ESG practices and financial performance. Tsang et al. (2023) conducted a comprehensive review of ESG disclosure literature, identifying key themes and research gaps through both bibliometric and qualitative content analysis of over 500 articles.

Other notable contributions include Fatima and Elbanna (2023), who synthesized CSR implementation literature and proposed a future research agenda, and Frynas and Yamahaki (2016), who offered a theoretical roadmap for CSR research development. Broader reviews have also emerged, such as Jayaram and Singh (2020), who explored thematic patterns and research gaps within sustainable finance, and Kumar et al. (2025), who adopted big data analytics and machine learning to map trends and forecast future directions in the field. Collectively, these reviews underscore the increasing methodological diversity and complexity of sustainable finance research, while also highlighting persistent challenges such as data inconsistency, limited theoretical integration, and regional disparities.

Collectively, these reviews yet again emphasize the maturation of sustainable finance as a research domain, marked by increasing methodological diversity and interdisciplinary integration. While earlier reviews primarily focused on theoretical foundations and CSR implementation, more recent contributions have adopted bibliometric techniques, machine learning, and cross-regional empirical designs, signaling a shift toward data-intensive and comparative approaches. Another takeaway from this table, which has been seen in different forms throughout this study, is that the previous reviews have focused on only one subtopic, such as CSR or ESG, or solely the evolution of sustainable finance. None of them shows the interrelated connection of these domains, which is why this thesis is a great contribution to the field and brings integrated insights.

*Table 3.3: Previous Relevant Systematic Literature Reviews*

Author	Summary	Research Method	NC
Frynas & Yamahaki (2016)	Reviewed theoretical perspectives used in CSR research and provided a roadmap for future theoretical development.	SLR	776
Fatima & Elbanna (2023)	Reviewed the literature on CSR implementation and developed a future research agenda toward building an integrative framework.	SLR	570
Tsang et al. (2023)	Reviewed the existing literature on ESG disclosure, identified key themes, trends, and gaps in the field, and provided future research directions by analyzing over 200 peer-reviewed articles published from 2001 to 2022.	SLR & Bibliometric Analysis & Qualitative Content Analysis	535

Kumar et al. (2025)	Investigated the progression, emerging patterns, and future pathways of sustainable finance research through the application of big data analytics and machine learning.	SLR & Bibliometric & ML analysis	451
Clément et al. (2025)	Systematically reviewed ESG scores in academic research and how they are shown, classified their application contexts, and highlighted methodological trends and research gaps in the ESG literature.	SLR & Bibliometric Analysis & Qualitative Content Analysis	140
Martiny et al. (2024)	Empirically examined the impact of ESG performance and ESG disclosure on firm value, using a large international sample of publicly listed companies, and how these effects vary across different regions and firm-specific characteristics.	SLR & Panel Data Regression Analysis	93
Khaw et al. (2024)	Examined the relationship between ESG performance and financial performance in firms, with a specific focus on how CEO power moderates this relationship.	SLR & Bibliometric Analysis	28
Jayaram & Singh (2020)	Conducted a systematic review of the literature on sustainable finance, identifying key themes, gaps, and future research directions.	SLR	16
Mukhtar et al. (2025)	Conducted a comprehensive systematic literature review of ESG-related academic research, aiming to uncover research trends, key contributors, thematic areas, and potential future research directions.	SLR & Bibliometric Analysis & Qualitative Content Analysis	3

*Figure 3.2* presents a word cloud that visually represents the most frequently occurring keywords within the analyzed dataset, with word size indicating relative frequency (Mukhtar et al., 2025). As expected, “ESG” appeared most frequently (over 400 times), followed by terms such as “performance,” “corporate,” “social,” “corporate social responsibility,” “financial,” “environmental,” “governance,” “CSR,” “ratings,” and “sustainability.” This distribution highlights a strong academic focus on ESG and CSR practices, particularly in relation to firm-level financial performance. The frequent appearance of terms like “disclosure,” “ratings,” and “governance” also reflects increasing scholarly attention to issues of measurement credibility and transparency.

The word cloud further illustrates a predominant emphasis on corporate-level analysis, with relatively limited representation of systemic or policy-oriented terms. This suggests potential gaps in the literature, particularly regarding macro-level impacts and institutional frameworks. Overall, the visualization reaffirms the multidisciplinary nature of sustainable finance research while signaling key areas for future exploration, namely, enhanced governance mechanisms, broader societal implications, and more robust methodological frameworks.



to answering the research questions posed in this review. Going through these themes, synthesizing and analysing the literature to identify potential development areas and future directions is what follows here on.

*Table 3.4: Thematic Analysis*

<b>Theme</b>	<b>Description</b>	<b>Example Codes</b>	<b>Key Findings</b>	
<b>Evolution and Scope of Sustainable Finance</b>	Traces the evolution of sustainable finance from ethical investing to a strategic necessity, driven by environmental agreements and linked to ESG and CSR- contributing to sustainable development and enhancing the well-being of employees, communities, and society.	climate emergence, disclosure, SDGs, Paris Agreement, development, strategy, well-being	finance, carbon, historical, ethical, employee	Sustainable finance has moved from ethics-driven to strategy- and risk-oriented with global milestones growing with topics like SDGs and environmental agreements, nurturing topics like ESG and CSR.
<b>ESG and CSR for Investment Analysis and Risk Management</b>	How ESG and CSR factors are embedded into business strategies and their effects on risk management and investment strategies.	ESG performance, firm value, ESG integration, stakeholder model, long-term value creation, socially responsible investing, risk management		ESG and CSR are essential for sustainable and profitable business and integration often correlates with improved accounting and market-based performance metrics; portfolio management and risk management as part of effective investment measures.
<b>ESG, CSR and Theoretical Frameworks</b>	The role, influence and relation of different theories with ESG, CSR and sustainable finance.	Legitimacy Theory, Stakeholder Theory, Agency Theory, the development of theories		Theoretical frameworks explain different aspects of CSR/ESG motives and their outcomes which are also correlated to creating sustainable, long-term competitive advantage and value. This also closely relates to legitimacy, governance and incentives.
<b>Firm Financial Performance and Outcomes</b>	The role of ESG and CSR in affecting firm performance and whether financial outcomes influence ESG/CSR choices or if they are influenced by them.	firm performance, ROI, sustainable financial impact	financial ROE, Q, CAPM,	Findings in this regard are found to be mixed. Many articles find a positive relationship, many negative and many neutral. Given the credibility of ratings as well, it is hard to say if the impact is clearly there or not.
<b>Disclosure, Greenwashing &amp; Reporting Integrity</b>	Examines the role of voluntary/nonfinancial disclosures which could lead to information asymmetry and risks of greenwashing and credibility of sustainability measures.	voluntary disclosure, information asymmetry, credibility, assurance, greenwashing, ideological preferences		Transparency improves investor trust and reduces the cost of capital, but a lack of standardization creates risks for credibility and greenwashing. Regulated reports tend to be more credible and valued. Yet credibility remains a concern.

<b>Measurement and Rating Divergence</b>	Challenges stemming from differences mostly in ESG rating methodologies and data inconsistencies.	Rating divergence, inconsistent scores, data quality, multiple rating agencies, non-standardized framework	Rating inconsistencies create uncertainty for investors and hinder comparability. This creates issues with trusting ratings and requires a standardized framework.
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### 3.2.1 Evolution and Scope of Sustainable Finance

Sustainable finance has developed from a marginal ethical concern into a central strategic and financial priority within global business and investment systems. This shift has been driven by growing environmental problems, rising social expectations, and increasing awareness that the financial system itself must be reshaped to support long-term sustainability (Edmans & Kacperczyk, 2022). The pressing issues of climate change, loss of biodiversity, and increasing social inequality have put the financial sector under greater scrutiny (Kumar et al., 2025). As a result, sustainable finance has gained strong momentum in academic, regulatory, and institutional spheres, moving beyond its ideological beginnings in ethical investing to become a more structured field, supported by policies, data, and international standards.

Central to this transformation are two interlinked frameworks: Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG). These two paradigms have matured, interwoven, and shaped how sustainability is measured, communicated, and operationalized in financial and corporate decisions. The literature highlights that although CSR and ESG have distinct historical origins, they have increasingly converged in both theory and practice, particularly under the broader umbrella of sustainable finance (Shen, 2023; Yoon & Chung, 2018; Verheyden, 2016; Lokuwaduge & Heenetigala, 2017). Their integration signals a shift away from traditional corporate finance focused on short-term shareholder value toward a more stakeholder-centric model of value creation that prioritizes ethical responsibility, environmental stewardship, and social equity.

Historically, sustainable finance was rooted in socially responsible investing (SRI), with early works by Ferris and Rykaczewski (1986) laying the foundation for incorporating social factors into portfolio management. Originally framed as an ethical alternative to profit-maximizing finance, SRI focused on excluding harmful sectors (e.g., tobacco) and prioritizing investments aligned with moral or religious values (Archer, 2022; Pointner, 2019). Over time, this approach matured into more sophisticated, data-driven models of sustainable finance, with CSR offering a broader framework for corporate responsibility, and ESG translating those principles into financially material indicators that could be incorporated into mainstream investment strategies (Tai & Chuang, 2014). The period from the late 1990s to early 2000s saw an expansion of literature comparing the performance of SRI funds with traditional investments, suggesting that ethical considerations could coexist with strong financial returns (Guerard Jr, 1997; Hutton et al., 1998). This evolved into a broader movement toward integrating sustainability into mainstream finance, accelerated by global events and policy mechanisms.

Two landmark global initiatives, the United Nations Sustainable Development Goals (SDGs) and the Paris Agreement, played a pivotal role in elevating sustainable finance to the center of financial, corporate, and policy agendas. The SDGs, adopted in 2015 by all UN member states, provided a comprehensive, globally endorsed blueprint for sustainable development, comprising 17

interconnected goals aimed at ending poverty, reducing inequality, addressing climate change, and fostering inclusive economic growth (United Nations, 2023). By establishing clear targets for 2030, the SDGs created a shared language and investment rationale that guided businesses, investors, and governments toward aligning capital with long-term social and environmental outcomes. This framework redefined the role of finance, not as neutral capital allocation, but as an active enabler of sustainability transitions (Su et al., 2024; Hu & Gan, 2025).



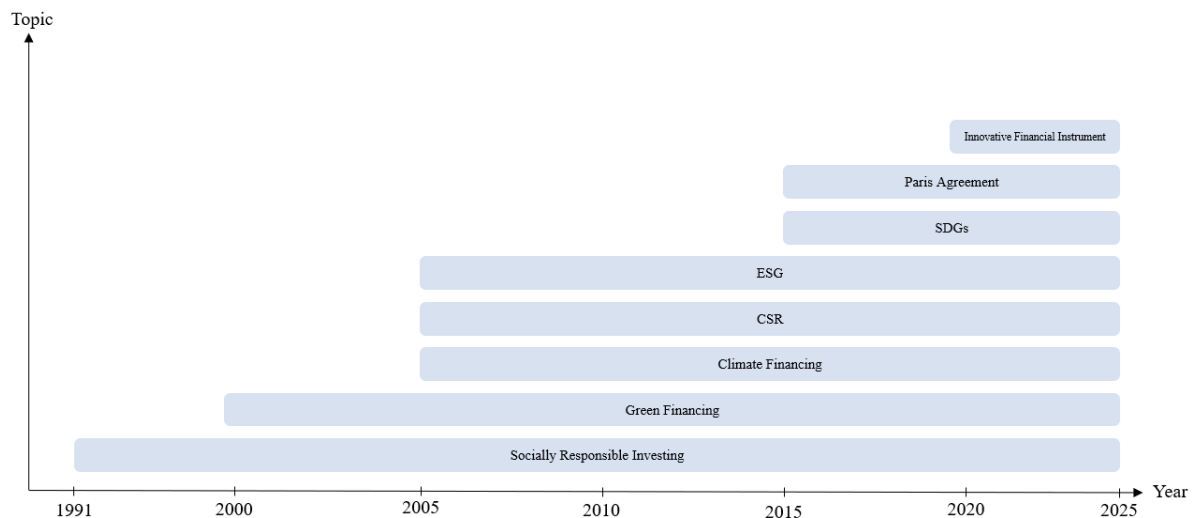
Figure 3.4: Sustainable Development Goals (United Nations, 2023)

Simultaneously, the Paris Agreement, also signed in 2015, institutionalized climate action as a global priority by setting commitments to limit global warming. It emphasized the critical need for financial flows to become “consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.” (United Nations, 2023). This clause directly linked climate goals to financial system reform and catalyzed the growth of climate finance, green bonds, and carbon-related risk disclosures (Oehmke & Opp, 2025; Yu et al., 2021). The Paris Agreement’s emphasis on nationally determined contributions (NDCs) placed pressure on national regulators and financial institutions to redirect investment patterns and integrate climate risk into decision-making.

Together, these global frameworks provided not only direction and legitimacy but also the impetus for regulatory development, financial innovation, and scholarly engagement in sustainable finance (Edmans & Kacperczyk, 2022). They transformed sustainability from a normative concern into a structured, measurable, and urgent financial agenda, driving forward the integration of environmental and social priorities into corporate governance, investment strategy, and public policy (Su et al., 2024; Hu & Gan, 2025).

Governments responded by introducing legislation and regulatory initiatives aimed at steering capital toward more sustainable outcomes. Policies such as the European Union’s “Fit for 55” package and the increased role of central banks and financial supervisors in assessing climate-related risks have formalized the expectation that firms and financial institutions integrate sustainability into their core decision-making frameworks (Pointner, 2019; European Commission, 2023; Edmans, 2012).

These developments have elevated CSR and ESG from corporate side projects to central pillars of corporate strategy, compelling firms to align operations, reporting, and governance with sustainability imperatives. Where CSR historically emphasized voluntary initiatives to improve social and environmental outcomes, ESG has become a financial language for assessing how companies manage these concerns in a measurable, comparable, and investor-relevant way (Devie et al., 2020; Wang et al., 2016; Gillan et al., 2021).



*Figure 3.5: Evolution of Sustainable Finance research (Source: Author's own creation)*

CSR itself has undergone significant conceptual development. Frederick (1986, 1994) outlines three progressive stages of CSR: CSR1, focused on moral obligations; CSR2, centered on corporate responsiveness; and CSR3, which integrates ethical reasoning into managerial decisions. Scholars such as Moir (2001) and Brammer (1991) further emphasize the ethical responsibilities of corporations and the accountability of executives in managing societal impact. Over time, CSR has evolved into a strategic tool for firms to build trust, attract stakeholders, and signal long-term vision and resilience (Tai & Chuang, 2014; Lindgreen & Swaen, 2010).

Modern CSR involves deliberate and structured efforts by companies to address the needs and concerns of stakeholders (including employees, customers, communities, and investors). CSR disclosures serve as signals of ethical leadership and long-term orientation (Dai et al., 2021), reducing information asymmetry and enhancing corporate reputation. These disclosures are most effective when they are voluntary, independently audited, and integrated into core financial and strategic reports rather than being standalone, performative documents (Attig et al., 2013; Dhaliwal et al., 2011). Furthermore, shareholder pressure has intensified, with investors demanding transparent, authentic, and material CSR practices (Christensen et al., 2021). Successful CSR initiatives can mitigate regulatory risk, enhance brand loyalty, and deliver financial benefits such as increased customer satisfaction and retention (Aouadi & Marsat, 2018).

Emerging alongside this topic in the early 2000s, ESG built on CSR's foundations but repositioned sustainability as a core financial concern. The United Nations' "Who Cares Wins" report (IFC, 2004) played a pivotal role in defining ESG not as a moral obligation, but as a strategic framework for long-term financial value creation (Pollman, 2024), which will be discussed further in the next themes. ESG framed environmental, social, and governance issues as material risks and opportunities, thus



critical conceptual, practical, and empirical gaps. It is presumed that this is due to this praise that these gaps are overlooked rather than tackled. Much of the existing literature also treats ESG, CSR, and sustainable finance as separate silos, resulting in a disjointed understanding. The number of comprehensive reviews that integrate these elements holistically is low, limiting the field’s coherence and applicability (Edmans & Kacperczyk, 2022; Berg et al., 2022). Furthermore, while regions like the EU lead with stringent policies, global regulatory fragmentation persists. Most of the research identified on environmental policies are focused on China (Chen et al., 2023; Chu et al., 2023) and specific policies (Shu & Tan, 2023). Comparative research on policy impacts and regulatory harmonization is needed to ensure coherent international standards.

Another notable gap is the geographic bias in existing research. The majority of studies in sustainable finance, ESG, and CSR have been conducted in Western and high-income countries, often focusing on well-established capital markets, corporations, and regulatory environments (Chen et al., 2023; Bax et al., 2023). In contrast, developing countries remain significantly underrepresented. This limits the generalizability of findings and overlooks the unique sustainability challenges and institutional contexts of low- and middle-income nations where issues like informal economies, weak governance structures, and infrastructure deficits intersect sharply with climate vulnerability and social inequality. Inclusion of these geographies should be prioritized to build a more globally relevant and equitable body of knowledge in sustainable finance.

### 3.2.2 ESG/CSR for Investment Analysis and Risk Management

As ESG considerations increasingly shape capital allocation and corporate strategy, the literature has shifted toward examining how these factors function as tools for investment analysis and financial risk management. This evolution has been marked by a growing alignment between investor priorities and long-term sustainability outcomes (Finance S. S., 2020). The Global Sustainable Investment Review (GSIA, 2022) highlights that, despite a recent decline in reported sustainable assets under management (AUM) in the U.S. due to stricter classification standards, global ESG investing still accounted for over \$30 trillion in assets in 2022 (Finance S. S., 2020). This shift reflects a maturation of ESG integration practices, where strategies like exclusionary screening, impact investing, ESG integration, and shareholder engagement are increasingly differentiated and operationalized (Naughton et al., 2019).

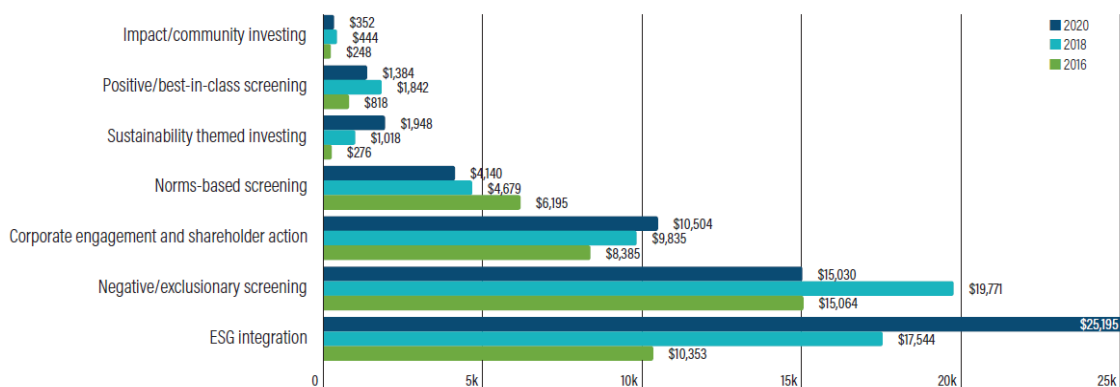


Figure 3.7: Global Growth of Sustainable Investing Strategies 2016-2020, USD Billions (GSIA, 2020)

The literature identifies three key drivers behind investors' growing interest in ESG integration (Edmans & Kacperczyk, 2022). First is financial relevance: firms that proactively manage ESG risks (such as climate exposure, regulatory compliance, and workforce stability) may achieve superior risk-adjusted returns by avoiding fines, reputational harm, or disruptions (Naughton et al., 2019). Second are non-financial objectives, particularly among institutional investors like pension funds, which reflect the values and preferences of beneficiaries who seek both financial returns and societal progress. Third is investor preference or ethical alignment. Some investors prefer to avoid "brown" assets even when returns are equal, driven by disutility or moral discomfort. Importantly, this preference operates differently from strategic ESG investing, as it may not aim to change corporate behavior or capital costs directly (Pollman, 2024; Cabolis et al., 2023; Edmans & Kacperczyk, 2022).

This transition in ESG's role was seeded by the "Who Cares Wins" (IFC, 2004) report, which was part of shaping ESG as a whole as well, which advocated for incorporating ESG factors into investment research not for moral reasons but because they materially affect valuation and shareholder returns (Pollman, 2024; Cabolis et al., 2023). Since then, ESG has been embedded in mainstream investing as a tool for identifying risks and opportunities across environmental, social, and governance dimensions. For instance, the "S" in ESG includes workforce management, reputational risk, and community conflict; factors that, if overlooked, can lead to operational and financial volatility (Williams & Gelli, 2022). Consequently, ESG has shifted from a branding exercise to a forward-looking approach to risk identification and management.

Numerous studies support ESG's utility as a risk management tool. ESG practices have been shown to mitigate litigation risk, enhance brand loyalty, and improve firms' resilience during crises (Gillan et al., 2021). Integration of ESG factors has also been associated with lower capital costs, better credit ratings, and improved access to financing; although findings can be context-dependent, especially regarding the "S" dimension, where outcomes are harder to quantify and vary across regions (Saini et al., 2023). Empirical evidence also finds that ESG reporting is linked to reduced tax avoidance (Lin et al., 2019), lower stock price crash risk (Feng et al., 2021), and stronger supply chain risk mitigation (Ferri & Pedrini, 2018). Firms with higher financial risk may also use ESG strategically to lower perceived risk and attract more favorable financing (Dunn & Sainty, 2009; Charlo et al., 2015).

Despite this theoretical and empirical foundation, practical challenges persist. Implementing ESG across asset classes, industries, and geographies involves complex trade-offs among stakeholder interests such as between labor, consumers, and environmental outcomes (Pérez et al., 2022). This complexity often leads to strategic tensions without clear optimal paths. In addition, investor engagement has produced mixed results. While studies like Dimson et al. (2015) show that targeted engagements can improve firm value, governance, and stock performance, such successes often depend on the sophistication and persistence of the investor, limiting generalizability.

The link between ESG and credit market outcomes also presents a nuanced picture. Research shows ESG performance can lower bond yields and borrowing costs (Oikonomou et al., 2014; Bauer & Hann, 2014), particularly for firms with strong environmental or governance practices. Yet some studies, like Menz (2010), find modest credit spread increases for responsible firms, and country-level sustainability indicators can outweigh firm-level ESG performance in influencing loan pricing (Hoepner et al., 2016). Possible causes could be firm characteristics such as size, geographical location, and industry characteristics. Governance, while helpful for aligning shareholders and managers, can sometimes disadvantage bondholders unless supported by strong ESG performance

(Gerard, 2019). These findings point to inconsistencies in how ESG affects financing costs, influenced by methodology, sample size, geography, and varying stakeholder expectations.

The performance of ESG-integrated bond funds remains under investigation. While Derwall & Koedijk (2009) and Henke (2016) found that socially responsible bond funds perform comparably or better than peers, especially during downturns, these studies are limited by small sample sizes and regional scope. Leite & Cortez (2018) also attribute this outperformance partly to lower exposure to high-risk sovereign debt, yet further research is needed to isolate ESG as a distinct performance driver. This under development in the literature may stem from the relative novelty of ESG integration in fixed income markets and the methodological challenges in isolating ESG effects from broader portfolio characteristics. For ESG integration in finance to be more robust and reliable, especially in bond markets, the field needs larger, cross-market studies that use standardized metrics and transparent methodologies. Without this, inconsistencies will persist, limiting our ability to draw clear conclusions about ESG's true financial impact.

Collectively, the literature demonstrates that ESG factors are no longer treated as externalities or ethical concerns but as material, measurable dimensions of corporate value and risk. ESG has become institutionalized as part of mainstream investment analysis, underpinned by stakeholder, legitimacy, and signaling theories which connect to the next theme 3.2.3 *ESG, CSR and Theoretical Frameworks*. Its adoption is driven by both financial incentives and normative pressures, reflecting a hybrid logic that combines returns with responsibility.

However, debates continue to challenge the field. Some scholars argue that ESG's expanding role stretches beyond risk and valuation, entering the territory of public policy. Pollman (2024) cautions that ESG's conceptual ambiguity, balancing financial outcomes with societal goals, can weaken its effectiveness. Edmans (2023) adds that investors are not always best positioned to manage environmental externalities, which are better addressed through regulation. From a risk management standpoint, this raises questions about ESG's scope and where investor responsibility should end and government action should begin.

This body of literature confirms ESG's ascendance as a core component of sustainable finance, used not only for aligning capital with ethics but for identifying risks, signaling firm quality, and managing long-term value creation. Yet, its effectiveness, credibility, and clarity of purpose remain contested. Going forward, the challenge will be to reconcile ESG's multiple identities as a valuation tool, ethical compass, and policy proxy through more consistent frameworks, transparent implementation, and a better understanding of investor behavior research.

### *3.2.3 ESG, CSR and Theoretical Frameworks*

Behind every corporate sustainability initiative lies a story not just of strategy, but of theory: how firms are expected to behave, why they choose to act responsibly, and how society interprets those actions. After systematically analyzing the literature on the theoretical foundations of CSR and ESG, it becomes clear that a diverse range of theories (including stakeholder theory, legitimacy theory, agency theory, resource-based view, and signaling theory) have informed how scholars and practitioners conceptualize corporate responsibility and sustainability. This theoretical plurality has enriched the field, but also contributed to fragmentation and conceptual ambiguity (Lindgreen & Swaen, 2010).

A central insight is that CSR and ESG are shaped by a blend of ethical imperatives, strategic considerations, and stakeholder dynamics, creating a spectrum between normative (principle-driven) and instrumental (performance-driven) motivations (Donaldson & Preston, 1995; Moir, 2001). Stakeholder theory, in particular, dominates both CSR and ESG discussions, positioning firms as entities embedded in a broader network of relationships, where long-term success depends on managing expectations across diverse stakeholder groups (Santamaria et al., 2021; Freeman, 1984). Studies show that aligning with stakeholder interests can generate tangible benefits, such as reduced capital costs, better access to financing, and stronger competitive positioning (Saini et al., 2023). Even so, there is increasing acknowledgment of the complementary roles of legitimacy and signaling theories in explaining sustainability behavior and outcomes as well. Legitimacy theory further suggests that firms seek to align with societal norms and maintain their “social license to operate,” often using reporting as a mechanism to gain or protect public trust (Suchman, 1995; Lindblom, 1994). Meanwhile, signaling theory frames ESG disclosure as a response to information asymmetry, where transparent communication reduces uncertainty and enhances credibility (Saini et al., 2023).

When viewed collectively, the literature reveals that CSR and ESG frameworks are not just reactive tools for reputation management but strategic mechanisms for long-term value creation, grounded in broader societal expectations (Tsang et al., 2023). However, these benefits are context-dependent, and the relationship between CSR/ESG activities related to these theories and performance remains inconclusive in some settings. While many studies focus on firm-level outcomes and investor reactions, fewer have examined the perspectives of non-investor stakeholders or how different theories intersect in practice.

It should be noted that treating ESG and CSR as completely unified or interchangeable theoretical tools can be misleading. Scholars increasingly argue that ESG and CSR reflect fundamentally different ideologies and implementation logics: ESG is rooted in quantifiable, investor-oriented risk assessment, whereas CSR traditionally stems from voluntary ethical commitments and stakeholder accountability (Mukhtar et al., 2025). These tensions suggest that ESG and CSR occupy a contested conceptual terrain shaped by power, signaling, and competing institutional logics. Recognizing this distinction is crucial for interpreting how theoretical frameworks such as legitimacy theory, stakeholder theory, and agency theory apply, sometimes in conflicting ways, across the sustainable finance literature.

Despite this growing theoretical richness, the literature exhibits important gaps and areas for further development. First, the overreliance on stakeholder theory may oversimplify the diverse motivations and pressures firms face in different institutional contexts. More integrative models that combine multiple theoretical perspectives could offer a more holistic understanding of CSR and ESG strategies. Second, the applicability of these theories in non-Western and developing countries is underexplored, which is also identified in the theme of *Evolution and Scope of Sustainable Finance*, something research in general needs to explore more.

Third, a valuation framework that incorporates environmental cleanup costs, community rebuilding, and broader social impacts, highlighting the need to rethink how value is defined under Value Creation Theory needs to be explored more. Such integrative approaches remain largely underutilized in both research and practice. ESG and CSR continue to be treated as supplementary rather than foundational to firm valuation and strategy, underscoring the need for deeper theoretical reform in how financial performance and accountability are conceptualized within sustainable finance. Finally, more work is needed to evaluate how firms operationalize these theories in day-to-day decision-making and whether theory-informed practices lead to sustained competitive advantage across sectors and regions.

Addressing these gaps will be essential to advancing a more cohesive and globally relevant understanding of sustainable corporate behavior.

### *3.2.4 Firm Financial Performance and Outcomes*

There is a substantial, yet complex and evolving body of research examining the relationship between corporate social responsibility (CSR), environmental, social, and governance (ESG) performance, and corporate financial performance (CFP). While a significant number of studies suggest a generally positive association between CSR/ESG initiatives and firm value (Raza et al., 2012; Al-Shammari et al., 2022; Zhu et al., 2014), the findings remain highly context-dependent. Variability in results is influenced by differences in measurement approaches (Cho & Park, 2015; Huang, 2021), industry-specific characteristics (Bissoondoyal-Bheenick et al., 2023; Secinaro et al., 2020), firm size (Khan, 2022; Minutolo et al., 2019), geographical location (Velte, 2017; Ting et al., 2020), and the specific ESG dimensions under examination (Berg et al., 2021; Chen et al., 2023). This is something that was also seen in the previous theme of *ESG/CSR for Investment Analysis and Risk Management* about contradictory findings on the relationship between ESG and financing costs, which shows correlation across themes as well. The complexity of these relationships points to a dynamic research field that continues to be shaped by theoretical debates, empirical refinements, and real-world developments in corporate practice and investment expectations (Friede et al., 2015; Gillan et al., 2021; Devie et al., 2020).

Theoretically, the debate about CSR's impact on shareholder value can be traced back to foundational disagreements in economic and business ethics literature. On one side, neoclassical economists such as Friedman (1970) argue that CSR introduces costs and inefficiencies that detract from a firm's primary obligation to maximize shareholder wealth. From this perspective, CSR activities are seen as misallocations of capital without justifiable financial returns. On the other hand, the strategic view of CSR (grounded in stakeholder theory and more recent sustainability frameworks) proposes that CSR, when implemented effectively, can serve as an investment in stakeholder trust, brand equity, customer satisfaction, and employee loyalty, all of which ultimately contribute to firm profitability (Radhakrishnan et al., 2018; Devie et al., 2020).

Empirical research increasingly supports the latter view, with many studies linking CSR and ESG activities to improved financial performance (Aboud & Diab, 2019). Stakeholder theory, in particular, with correlation to the previous section, provides a theoretical foundation for these findings, suggesting that firms that address the interests and concerns of a broad range of stakeholders, beyond just shareholders, are more likely to achieve sustainable long-term success and profitability (Secinaro et al., 2020). Studies utilizing accounting-based financial performance metrics such as return on assets (ROA), return on equity (ROE), and return on sales (ROS) tend to show more consistent and robust positive relationships compared to those relying on market-based measures like Tobin's Q or stock price movements (Raza et al., 2012; Huang, 2021). For example, Tsang et al. (2021, 2023) demonstrate that CSR initiatives related to environmental performance, employee relations, community involvement, and diversity are more strongly associated with firm value than product-related CSR, which may yield weaker effects due to competitive sensitivities and proprietary information concerns.

Furthermore, the positive CSR-CFP relationship appears to strengthen over time. Longitudinal analyses reveal that firms maintaining consistent CSR efforts tend to outperform peers in the long run,

supporting the notion that the benefits of CSR manifest more clearly when viewed from a strategic, rather than short-term, lens (Friede et al., 2015; Buchanan, 2018; Devie et al., 2020). Firms with greater R&D and operational capabilities also seem to amplify these benefits, suggesting that internal competencies mediate the effectiveness of sustainability strategies (Al-Shammari et al., 2022).

Despite this general trend toward positive findings, the literature is far from unanimous. Several studies report neutral, inconsistent, or even negative relationships between CSR/ESG activities and firm performance (Margolis et al., 2007; Flammer, 2015; Velte, 2017; Nelling & Webb, 2009; Junius et al., 2020). These discrepancies often stem from methodological challenges. Measurement variability remains one of the most significant barriers to establishing generalizable conclusions (Berg et al., 2022). CSR and ESG scores differ across rating agencies and may conflate operational performance with social outcomes. This issue of measurement bias affects several key findings in the literature and will be discussed further in theme 3.2.6 *Measurement and Rating Divergence*. Cho and Park (2015), for instance, find that when CSR scores are adjusted to exclude indicators that overlap with firm performance, the apparent strength of the CSR-CFP relationship diminishes significantly, raising concerns about endogeneity and overestimation in earlier studies.

Another key area of debate centers on causality. While many studies assume that ESG practices enhance financial performance, others argue that financially healthy firms are simply more capable of investing in sustainability, thus reversing the direction of influence (Gillan et al., 2021). This creates a feedback loop in which financial and ESG performance reinforce one another, complicating attempts to determine ESG's independent effect (Friede et al., 2015). In a comprehensive meta-analysis of over 2,200 studies, it was found that approximately 90% report non-negative relationships between ESG and financial performance, particularly in emerging asset classes like green bonds and sustainable real estate (Friede et al., 2015). Yet even this strong trend is tempered by studies like Velte (2017) and Junius et al. (2020), which reveal that ESG may enhance operational efficiency without significantly affecting market valuation, especially in contexts where market actors prioritize short-term gains or lack reliable ESG data.

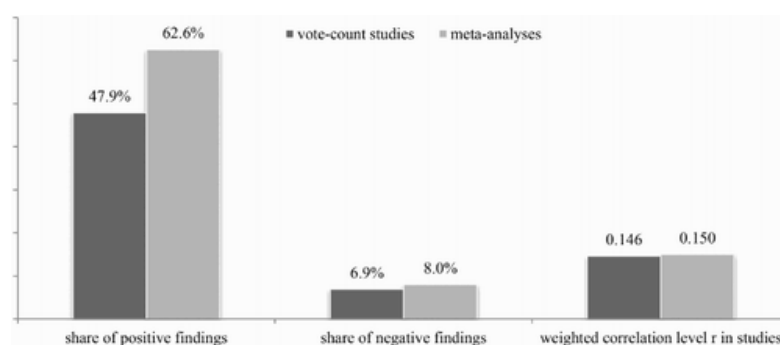


Figure 3.8: Overall summary results of ESG-CFP relationship (Friede et al., 2015)

Industry-specific and regional factors also shape the observed impact of ESG and CSR on financial outcomes. Bissoondoyal-Bheenick et al. (2023) show that all three ESG pillars contribute positively to performance in sectors like retail. In contrast, mining and construction firms benefit primarily from environmental initiatives due to heightened regulatory scrutiny, while firms in the financial and service sectors often report weaker or even negative ESG impacts. Similarly, Secinaro et al. (2020) report that environmental innovation in industries such as oil, gas, banking, and technology can reduce

production costs and enhance profitability. These findings suggest that the materiality of specific ESG activities depends heavily on the sectoral and institutional context in which firms operate.

Firm size and visibility also appear to influence the relationship. Larger firms tend to engage more in ESG initiatives due to greater public visibility, stronger stakeholder pressure, and better access to resources needed for implementation and reporting (Khan, 2022; Minutolo et al., 2019). This introduces a structural bias in the literature toward large, publicly traded firms, while small and medium-sized enterprises (SMEs), which may face different cost-benefit calculations and stakeholder dynamics, are underrepresented.

Despite the dominance of ESG-CFP research in the context of public firms, evidence from the private equity (PE) sector paints a contrasting picture. ESG practices in PE appear largely symbolic, with adoption significantly lagging behind that of publicly listed firms. Over half of top PE firms provide no ESG information (Markarian et al., 2023). Importantly, financial performance, measured by internal rates of return (IRRs), does not predict overall performance even though a limited link exists with social factors. Instead, ESG engagement is more common among larger, publicly listed firms, suggesting it is driven by visibility rather than value creation. The widespread adoption of low-accountability ESG frameworks further undermines the credibility of ESG as a performance-enhancing strategy in PE. As a result, the generalizability of ESG-CFP findings across firm types remains limited and warrants more inclusive research approaches.

Investor behavior further complicates the picture. Social norms, ethical preferences, and reputational concerns shape how ESG factors are valued in capital markets (Crisóstomo et al., 2011). For instance, “sin stocks” in controversial industries such as tobacco or gambling often exhibit strong returns despite low ESG scores, indicating that traditional valuation models and ESG-based screening may yield divergent investment outcomes (Crisóstomo et al., 2011). Similarly, sustainable capital asset pricing models (Zerbib, 2022) suggest that investors’ exclusion preferences and ESG tastes influence risk premia and expected returns, contributing materially to asset pricing beyond pure financial fundamentals.

Nevertheless, studies warn that without clearer evidence linking ESG practices to superior financial outcomes, ESG risks will become a corporate trend driven more by marketing than by value creation (Pérez et al., 2022). ESG’s positive financial impact is often most visible in accounting metrics, such as improved cash flows, reduced financing costs, and operational efficiency. Market-based metrics, on the other hand, tend to show greater variability, and in some contexts, no effect at all (Huang, 2021). The discrepancy suggests that while ESG may influence firm fundamentals, translating these gains into investor perceptions and stock prices remains uneven and uncertain.

Several recent studies have explored the channels through which ESG creates value. ESG engagement has been found to reduce systematic risk, lower exposure to litigation and regulatory penalties, and improve internal governance structures (Aboud & Diab, 2019; Gillan et al., 2021). Firms in carbon-intensive or highly scrutinized sectors may benefit disproportionately from environmental improvements, while service industries may realize more value through governance and social initiatives (Friede et al., 2015; Bissoondoyal-Bheenick et al., 2023; Zerbib, 2022). Still, the aggregation of environmental, social, and governance factors into a single ESG score can obscure important nuances, making it difficult to determine which dimensions are driving performance gains (Aboud & Diab, 2019).

When it comes to studying the role of ESG and CSR as strategic levers for long-term financial performance and risk management, the relationship remains multifaceted, sector-specific, and influenced by numerous internal and external variables. There is still room for development in this area of research. Clarification on the causal relationship between ESG/CSR engagement and corporate financial performance is needed. Current studies often face endogeneity issues, making it difficult to determine whether CSR and ESG drives financial success or simply reflects it. Addressing this requires more rigorous methodologies, such as longitudinal designs, instrumental variables, or quasi-experimental approaches.

Additionally, how ESG performance impacts firms across different sectors, ownership structures, and sizes should be explored. The current literature is heavily skewed toward large, publicly traded firms in developed markets, leaving private firms and SMEs underexamined. Understanding ESG's role in firm value across these diverse contexts is essential for generalizability.

Finally, the individual financial effects of the E, S, and G components should be unpacked rather than relying on composite scores. This would help identify which ESG dimensions most materially influence financial outcomes and how they vary by industry and stakeholder priorities.

### *3.2.5 Disclosure, Greenwashing & Reporting Integrity*

In today's business landscape, where climate change dominates headlines, consumer activism is on the rise, and ethical investing reshapes financial markets, companies are increasingly expected to prove they are more than profit-seeking entities. This was also seen in previous themes such as *Evolution and Scope of Sustainable Finance, ESG/CSR for Investment Analysis and Risk Management* and *ESG, CSR and Theoretical Frameworks*. As firms race to present themselves as socially and environmentally responsible, the credibility of their CSR and ESG efforts has become a critical focal point (Dhaliwal et al., 2011, 2012). This increasing pressure has given rise to a dual narrative: one of genuine corporate transformation and another of superficial compliance and greenwashing (Davis et al., 2016; Khan et al., 2016).

Stakeholders (including consumers, investors, and regulators) are increasingly making decisions based on companies' sustainability claims. To maintain legitimacy, firms have embraced green marketing and voluntary CSR reporting, often guided by standards such as ISO 26000 (Aggarwal & Kadyan, 2014). These disclosures are intended to signal transparency and align corporate behavior with stakeholder expectations (Reid et al., 2024). However, studies show that these reports often lack reliability and are susceptible to manipulation. Despite strong CSR ratings, some companies engage in greenwashing, meaning misleading the public about their environmental impact (Aggarwal & Kadyan, 2014; Delmas & Cuerel Burbano, 2011; Dhaliwal et al., 2011, 2012).

In fact, greenwashing has emerged as a particularly salient issue in this discourse and can occur even among firms with seemingly robust CSR scores, suggesting that reputational strategies often mask underlying operational shortcomings (Gibson Brandon et al., 2022). Greenwashing risk related to unique incidents can also be seen in *Figure 3.9*. De Freitas Netto et al. (2020) conceptualize greenwashing as a form of "decoupling," where firms symbolically engage with environmental causes without making meaningful changes. Such behavior can help companies delay regulation, manage stakeholder expectations, and preserve legitimacy, but at the cost of stakeholder trust.

The literature further underscores the tension between voluntary disclosure and credibility. Voluntary CSR reports offer flexibility, but also invite skepticism, especially when they are unaudited or lack standardized metrics (Pérez et al., 2022; Edmans, 2023). Discrepancies between reported ESG performance and actual outcomes raise questions about managerial discretion, disclosure bias, and symbolic compliance (Dai et al., 2021; Michaels & Grüning, 2017). For example, Pinnuck et al. (2021) highlight how even audited CSR reports are frequently restated, undermining their credibility. While mandatory disclosures may reduce these risks, they sometimes lower firm value or prompt box-ticking behavior unless they focus on material issues (Khan et al., 2016). Assured and externally audited reports tend to be viewed as more trustworthy, helping mitigate stakeholder lawsuits and enhancing brand reputation (Christensen et al., 2021; Bartov et al., 2021).

As firms increasingly rely on ESG and CSR disclosures to communicate sustainability commitments, the motivations, mechanisms, and limitations of these disclosures have become a central focus in the literature. While transparency is a key objective, the voluntary nature of most CSR reporting raises questions about strategic intent and credibility. Several underlying drivers that shape why and how companies disclose CSR-related information have been identified:

First, many firms view disclosure as a strategic positioning tool, using CSR to signal long-term competitiveness and firm-specific capabilities (Truong et al., 2021). From a resource-based perspective, credible CSR commitments may function as intangible assets that build brand equity and stakeholder trust (McWilliams & Siegel, 2011; DesJardine et al., 2021). Second, disclosures are often used as a reputation management mechanism, helping firms safeguard legitimacy during periods of scrutiny or crisis (Christensen et al., 2021). Third, firms aim to enhance transparency by narrowing information asymmetries between themselves and key stakeholders, which may in turn reduce financing costs and increase investor confidence (Naughton et al., 2023). Fourth, executive influence plays a nontrivial role: CEO characteristics such as risk tolerance or personal values can affect both the tone and content of disclosures (Davidson et al., 2019). Finally, disclosure decisions often reflect stakeholder expectations and perceived costs, such as fears of disclosing sensitive information or being exposed to reputational risk (Henriques, 2022).

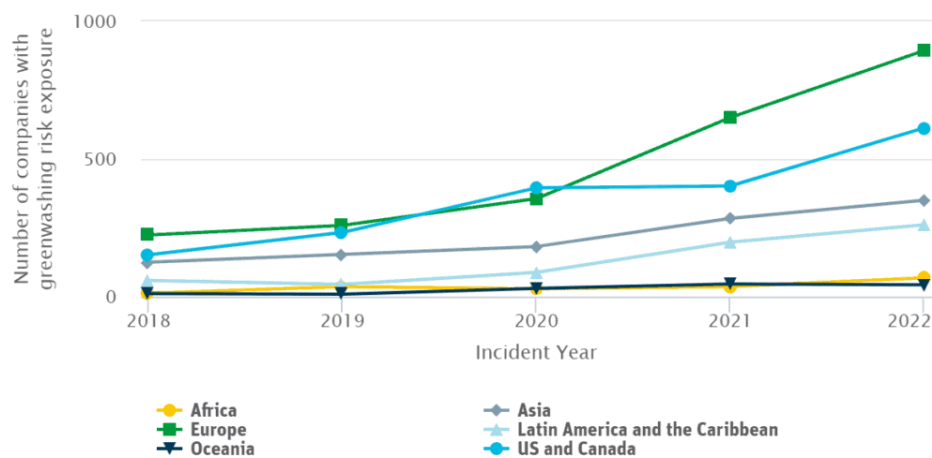
Despite these strategic motivations, disclosure quality remains uneven. Many reports lack third-party assurance or rely on qualitative language, making them vulnerable to manipulation and symbolic compliance. Scholars have developed various ways to measure CSR disclosure, including binary indicators (e.g., whether a firm issues a standalone CSR report), net positive/negative disclosure balances, or counts of issue-specific references (e.g., Superfund site mentions) (Dhaliwal et al., 2011; Hoi et al., 2013; Davis et al., 2016). However, methodological inconsistencies across studies and the endogeneity of disclosure decisions limit causal inferences. To address this, researchers increasingly employ advanced econometric techniques such as regression discontinuity and difference-in-differences models (Attig et al., 2013; Christensen et al., 2021).

As debates around voluntary disclosure continue, a growing body of work has turned to the systemic consequences of mandating ESG transparency, both in financial markets and real investment decisions. Recent studies offer complementary yet contrasting insights into the impact of mandatory ESG disclosure. Krueger et al. (2024), using a global empirical dataset, find that such mandates significantly enhance capital market efficiency. Their results show that mandatory ESG reporting reduces bid-ask spreads by 8.4% and reduces the number of zero-return days. These improvements in market liquidity are strongest when disclosure requirements are government-mandated, fully binding (rather than “comply-or-explain”), and reinforced through informal societal norms. Importantly, firms

starting from weaker information environments appear to benefit the most (Krueger et al., 2024; Cho & Park, 2015; Michaels & Grüning, 2017). This evidence supports the idea that ESG disclosure regulation strengthens the information environment and should be considered in markets that have yet to adopt such mandates.

In contrast, Aghamolla and An (2024) approach the issue from a theoretical perspective, focusing on the real economic efficiency implications of mandatory ESG disclosure. They argue that while disclosure increases transparency and leads to more sustainable investing, it can also distort managerial decision-making. Specifically, managers may over-invest in sustainable technologies that are not aligned with shareholder preferences, especially when disclosure removes their ability to strategically withhold negative ESG information. This unintended consequence suggests that under certain conditions (such as when the proportion of socially motivated shareholders is low or when managers hold a high information advantage) voluntary ESG disclosure may lead to more efficient outcomes than mandatory frameworks. Together, these studies highlight a critical trade-off: mandatory ESG disclosure can enhance capital market functioning but may also lead to misaligned real investment decisions and reduced shareholder welfare.

The blurring of CSR and ESG objectives which were discussed in previous themes as well, compounds this problem. While CSR traditionally reflects a firm’s internal culture and ethical orientation, ESG has evolved into an externally focused performance and disclosure framework (Gillan et al., 2021). As these two models increasingly overlap, it becomes difficult for stakeholders to distinguish between values-driven commitment and strategically curated appearances.



*Figure 3.9: Greenwashing Risk - unique incident count linked to both environmental footprint and misleading communication in a given year for companies headquartered in Europe and North America (Reprisk, 2023)*

This ambiguity is further amplified by the politicization of ESG. While originally framed as a strategy to align corporate behavior with long-term shareholder value (IFC, 2004), ESG has since also been co-opted into political debates. Critics label it “woke capitalism,” accusing firms of using ESG to advance ideological agendas (Pollman, 2024), while others view ESG as an opportunity for firms to address systemic externalities such as climate risk and inequality. Political backlash, particularly in the United States, has fueled legislative efforts aimed at restricting ESG-aligned investments (Pollman, 2024; Michaels & Grüning, 2017). These developments risk undermining the coherence and neutrality of ESG as a corporate and investment tool.

Managerial discretion also plays a significant role in shaping ESG outcomes. CEOs' traits (such as materialism or frugality) can influence ESG strategy and tone (Dai et al., 2021; Flammer et al., 2019). Without oversight, this discretion may lead to strategic manipulation of ESG narratives. The literature has also highlighted "sustainability arbitrage," where firms offset weaknesses in one ESG domain by highlighting strengths in another (Pollman, 2024), creating an illusion of overall sustainability. Additionally, tensions between environmental and social goals such as decarbonization efforts leading to job losses, further complicate the path toward holistic sustainability (Macey, 2022; Pérez et al., 2022).

Despite these challenges, disclosure remains one of the most powerful tools for fostering credibility. Fatemi et al. (2018) show that transparent ESG communication can reduce negative perceptions and investor uncertainty. However, the effectiveness of disclosure hinges on authenticity and material relevance. Excessive, immaterial, or poorly framed reporting, as aforementioned, can dilute transparency and create doubt (Dhaliwal et al., 2011). This underscores the need for firms to focus on reporting ESG indicators that are predictive of long-term performance (Edmans, 2023), rather than disclosing information for compliance or reputational purposes.

As ESG disclosures become more mainstream, a key concern is the gap between what companies report and what they substantively implement. Voluntary reporting may be strategically used to "signal virtue" and avoid structural changes. This performative compliance not only undermines stakeholder trust but also introduces reputational and regulatory risks (McClelland, 2023; Al-Tuwaijri et al., 2004). Future research should examine how firms' disclosure strategies influence both stakeholder perception and capital market outcomes, and how third-party assurance, standardization, and stakeholder engagement might distinguish symbolic from substantive ESG practices.

Additionally, research falls short on how stakeholders including consumers, employees, and local communities actually interpret and respond to CSR and ESG communications. Most existing studies focus on investor reactions, leaving other stakeholder responses underexplored. There is also a need to assess the efficacy of disclosure formats (qualitative vs. quantitative) and communication channels in shaping perceptions of authenticity and accountability.

Standardization remains a critical area for future inquiry. The lack of consistent ESG measurement frameworks complicates cross-firm comparisons and enables selective disclosure. Studies should assess how emerging global standards (e.g., International Sustainability Standards Board (ISSB), The European Sustainability Reporting Standards (ESRS)) affect the quality and comparability of ESG information. Moreover, research could explore how regulatory frameworks, industry-specific materiality maps, and incentive structures influence ESG outcomes.

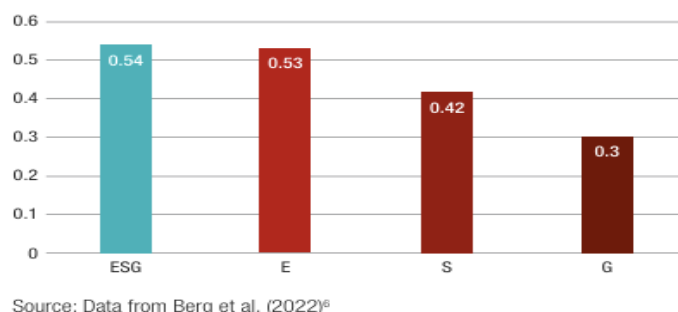
A key dilemma was also identified: while mandatory ESG disclosure can improve capital market efficiency, it may also prompt misaligned investment choices that undermine shareholder value. Future policy design must therefore balance the benefits of transparency with the potential risks of managerial distortion, especially in settings where stakeholder priorities and information asymmetries vary widely.

Finally, how governance structures and executive compensation models affect ESG performance should be investigated as well. Macey (2022) notes that traditional profit-based incentives may conflict with ESG objectives, allowing firms to espouse sustainability goals while preserving short-term financial motivations. Unpacking this paradox could help identify governance models that align fiduciary responsibilities with long-term sustainability outcomes.

### 3.2.6 Measurement and Rating Divergence

As ESG investing matures into a dominant paradigm in capital markets, one of the most persistent and complex challenges to its legitimacy is the lack of consensus among ESG rating agencies. Scholars and practitioners alike have increasingly flagged ESG rating divergence as a fundamental obstacle to sustainable finance, transparency, and informed decision-making (Pollman, 2024; Berg et al., 2021). With over 600 different ESG rating organizations worldwide each deploying distinct methodologies, proprietary frameworks, and prioritization schemes, the ESG scores assigned to the same firm can differ dramatically depending on the rater (Berg et al., 2022; Billio et al., 2021). These discrepancies undermine the credibility of ESG assessments, cast doubt on their comparability, and call into question their usefulness as a basis for allocating capital or measuring sustainability outcomes (Chatterji et al., 2016).

A growing literature has sought to identify the root causes of rating divergence, revealing a set of structural issues that are embedded within ESG data collection, processing, and interpretation. The most widely accepted framework divides divergence into three primary sources: scope divergence, or differences in which ESG issues are covered; measurement divergence, referring to how these issues are quantified or assessed; and weight divergence, which captures how heavily each dimension is emphasized in the final score (Berg et al., 2022). Among these, scope and measurement divergence are the most significant. Berg et al. (2022) show that across dozens of indicators, only 10 out of 70 ESG metrics are commonly shared across major rating agencies. This lack of commonality highlights the fragmented nature of ESG evaluation and underscores the difficulty of establishing a single, reliable ESG score for a given firm.



*Figure 3.10: Average of correlations between Sustainalytics, RobecoSAM, Vigeo Eiris, Asset4, KLD and MSCI's ESG ratings (Berg et al., 2022)*

More critically, these rating discrepancies are not just academic artifacts but carry serious implications for investment outcomes, corporate strategy, and market fairness. For instance, Tesla has been simultaneously praised for environmental innovation and criticized for poor labor practices, leading to its exclusion from the S&P ESG Index while being retained in other ESG funds (Roosevelt & Mitchell, 2022). A similar case is Nissan, which received dramatically different scores across ESG raters depending on whether the agency emphasized governance controversies or cleantech innovation (Billio et al., 2021). These examples illustrate how the multidimensional nature of ESG allows strong performance in one pillar to obscure weaknesses in another, enabling what Pollman (2024) describes as "sustainability arbitrage", which was explained in the previous theme 3.2.5 *Disclosure, Greenwashing & Reporting Integrity*.

*Table 3.5: Example of divergence in ESG ratings for different companies (Billio et al., 2021)*

Company	Sustainalytics	RobecoSAM	Refinitiv	MSCI
Nissan Motor Co., Ltd	6	77	72	CCC
Verizon Communications Inc.	91	20	67	BB
Oracle Corp. Jpn	78	8	63	BB
Goodman Group	86	21	58	AA

Additionally, ESG scores tend to privilege large, resource-rich companies with the capacity to manage disclosure processes and interact with rating agencies (Khan, 2022). Small and medium-sized enterprises (SMEs), by contrast, are often left out of ESG databases or are penalized for lack of disclosure (Clément et al., 2025). Moreover, the environmental pillar typically dominates ESG scoring due to data availability and regulatory focus, as also seen in *Figure 3.10*, while social and governance aspects remain inconsistently measured, voluntary in nature, and more prone to subjective interpretation (Clément et al., 2025; Kotsantonis & Serafeim, 2019).

The situation is further complicated by differences in data collection methods and indicator definitions. For example, while some agencies like ISS-Oekom gather data via firm interviews and questionnaires, others like Thomson Reuters rely exclusively on public disclosures (Billio et al., 2021). The number of indicators used ranges from under 40 (MSCI) to over 300 (FTSE Russell), and the definition of key terms varies widely. In one study, Kotsantonis & Serafeim (2019) observed over 20 different definitions of “employee health and safety” metrics among a sample of 50 large companies, ranging from injury rates to total lost days. These inconsistencies impair cross-company comparisons and limit the effectiveness of ESG ratings as a reliable input for analysts, investors, or regulators.

Surprisingly, more disclosure does not necessarily reduce divergence. In relation to the previous theme, Christensen et al. (2021) find that more extensive ESG reporting increases disagreement, particularly among firms with higher average ESG performance. This counterintuitive result suggests that unless disclosure frameworks are standardized, greater transparency may generate more confusion, not less. To bridge data gaps, many rating agencies resort to imputation models using statistical estimations. Yet these models are prone to substantial errors. For example, Lufthansa's actual employee turnover rate was 12.9%, while imputed estimates from different models ranged from +7.1% to -8.9% (Kotsantonis & Serafeim, 2019), illustrating the volatility introduced by such approximations.

Adding to the complexity, recent studies have documented systematic biases in ESG assessments, including conflicts of interest where agencies allegedly inflate scores for firms they share institutional ties with or retroactively adjust ratings to strengthen back-tested correlations with firm performance (Berg et al., 2021; Gillan et al., 2021). These practices raise concerns over the objectivity and accountability of ESG raters. Furthermore, low correlations between providers persist across the industry. Berg et al. (2022) report that the average correlation between major raters such as MSCI and Refinitiv is only 38%, with an industry average of around 60% which is far below the 99% seen in credit ratings. Such variance severely limits the effectiveness of ESG ratings as benchmarking tools or inputs into quantitative ESG investment strategies.

Despite these shortcomings, some scholars argue that rating divergence may reflect the diversity of stakeholder values, preferences, and time horizons. Edmans (2023), for example, frames ESG ratings more like equity analyst forecasts than credit scores and argues that subjective variation is a natural outcome of assessing forward-looking, qualitative, and intangible factors. From this perspective, divergence is not a flaw but a feature, enabling a more nuanced interpretation of ESG risks and opportunities. However, this argument only holds if rating methodologies are fully transparent and users are equipped to interpret underlying assumptions which are conditions rarely met in practice.

Given the pivotal role ESG ratings play in capital markets, corporate governance, and public policy, resolving rating divergence, or at least making it more intelligible to users, is a critical research priority. Research should look into developing standardized ESG taxonomies, especially concerning scope and measurement definitions. Initiatives like the ISSB and ESRS offer promising foundations, but their real-world impact on reducing divergence remains empirically underexplored.

The economic implications of divergence should also be examined, asking: How do variations in ESG scores affect firm valuation, investment flows, and risk assessments? Are firms with highly inconsistent ratings subject to greater volatility or uncertainty? Can investors exploit these inconsistencies as alpha-generating opportunities? Similarly, stakeholder responses to rating divergence including how asset managers, proxy advisors, and retail investors interpret or discount conflicting scores remain under-investigated. Such behavioral insights could inform better communication and labeling practices.

In parallel, methodological innovations are needed to address rating subjectivity. Tools such as machine learning, natural language processing (NLP), and causal inference techniques could help identify systematic rater biases, evaluate scoring rationale, or test the robustness of ESG scores under varying assumptions. This can help distinguish between disagreement driven by meaningful pluralism versus noise and inconsistency.

Finally, the effects of peer group benchmarking, industry context, and firm characteristics on ESG evaluations should be further researched. The choice between universal and industry-specific comparators, for instance, has significant effects on ratings. Energy firms may be penalized when compared to banks, but not when evaluated within their sector (Kotsantonis & Serafeim, 2019). Clarifying how contextual variables shape ESG scores could lead to more nuanced, fair, and actionable assessments.

### *3.2.7 Network Diagram and Conceptual Framework*

To visualize the diverse topics and attributes examined in this review, *Figure 3.11* synthesizes the literature by showcasing a network of interconnections among core constructs in sustainable finance, including ESG and CSR. The diagram is derived from the 103 articles identified, screened, and included via the PRISMA protocol described in Chapter 2. From these articles, keywords were extracted that stemmed from the thematic analysis and the results, which were then mapped according to their relationship and co-occurrence using VOSviewer. Example key terms that were derived from the thematic analysis include sustainable finance, CSR, ESG, policies and regulations, the Paris Agreement, the SDGs, stakeholder theory, legitimacy theory, green bonds, SRIs, etc. which were each counted using Excel on the textual data. The radius of the nodes presented in the figure reflects the count of the term through the 103 articles and the width of the linkages shows the significance of it.

These terms and keywords were then put in VOSviewer entry format along with links, the significance of the term based on the count, and the significance of the link identified through the results.

In the VOSviewer diagram, the colors typically represent clusters of concepts that co-occur more frequently with each other than with those in other clusters. The red cluster centers on Sustainable Finance, closely tied to policies, regulations, and global frameworks such as the Paris Agreement and SDGs, highlighting the policy-driven nature of the field which is closely tied to the theme *Evolution and Scope of Sustainable Finance*. The green cluster, built around ESG, connects to stakeholder theory, risk management, and investor behavior as also seen in theme *ESG/CSR for Investment Analysis and Risk Management*, emphasizing firm-level practices and investment decisions. The yellow/orange clusters around CSR and Governance underscore corporate accountability and legitimacy concerns. In contrast, the purple/blue clusters on Disclosure highlight challenges of transparency, including rating divergence, credibility, and greenwashing, closely related to the remaining themes in Section 3.2. Finally, the light blue cluster links Financial Performance with innovation and firm characteristics, as also thoroughly discussed in *Firm Financial Performance and Outcomes*, reflecting ongoing debates about the financial impacts of sustainability practices. Collectively, these clusters show how the field is structured around policy frameworks, firm-level practices, accountability, disclosure, and financial outcomes.

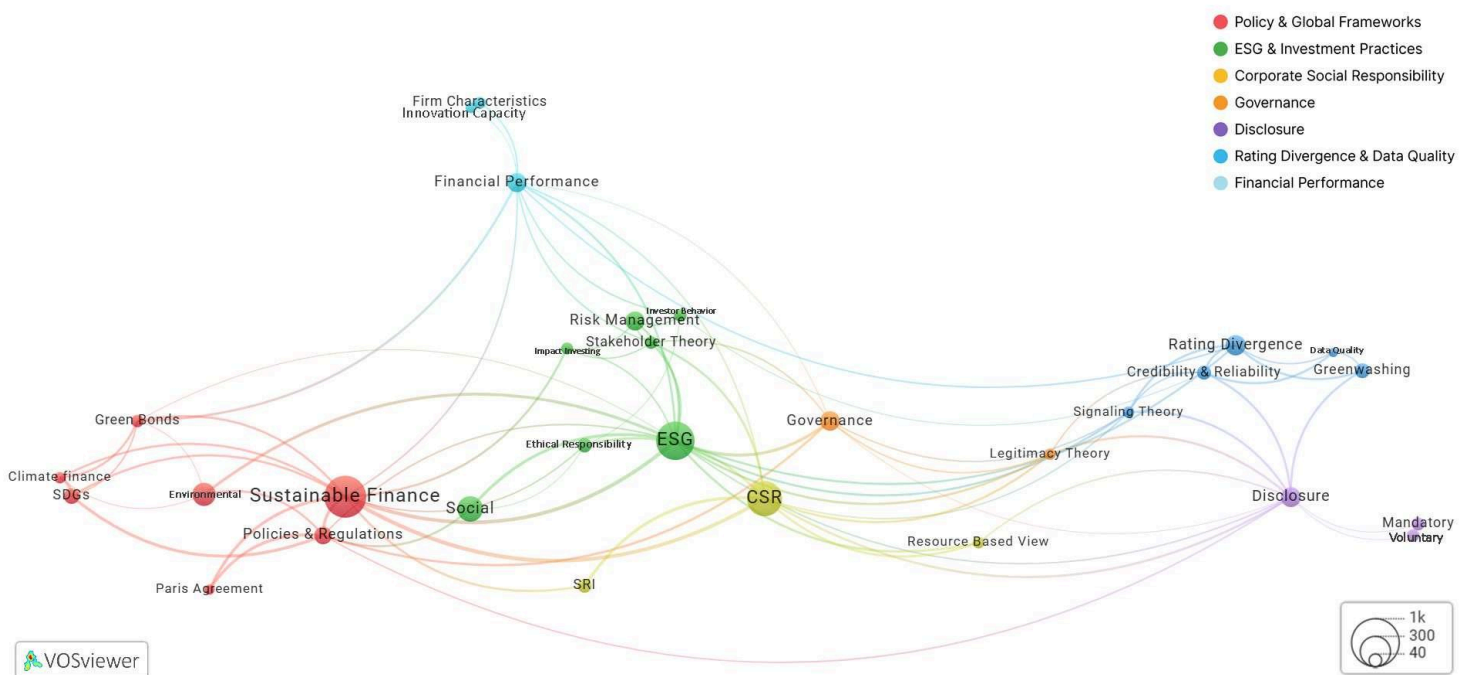


Figure 3.11: Network Diagram

The network visualization itself highlights several central constructs shaping the sustainable finance literature. Among them, Sustainable Finance, ESG, CSR, Disclosure, and Financial Performance emerge as the most prominent nodes, reflecting their central role in scholarly debates and empirical studies. With the biggest circle on the left being Sustainable finance with over 1500 mentions across 103 articles, in a red color cluster, it stands out as a dominant cluster, strongly linked to themes such as policies and regulations, the Paris Agreement, SDGs, and climate-related instruments like green bonds. This illustrates how sustainable finance is framed within the broader context of global policy

commitments and environmental imperatives, emphasizing its role in aligning financial systems with sustainability transitions.

This node is followed by majorly discussed and closely related constructs such as ESG in green, and CSR in yellow, respectively with over 1200 and 900 mentions. ESG shows to be closely tied to stakeholder theory, risk management, and investor behavior. This cluster reflects the growing consensus that ESG practices serve as both a mechanism for risk mitigation and a strategic tool for enhancing firm reputation and long-term value. Its linkages to ethical responsibility and impact investing further underscore the normative and values-driven aspects of ESG integration. CSR, while conceptually overlapping with ESG, forms its own distinct hub, strongly connected to governance and legitimacy theory. This suggests that CSR remains rooted in discussions about corporate accountability and legitimacy, particularly in relation to societal expectations and regulatory pressures. The clustering highlights CSR's continuing role as a bridge between traditional corporate responsibility debates and newer ESG-driven investment logics.

Finally, Disclosure emerges as a critical node in the network, associated with issues such as credibility, rating divergence, data quality, and greenwashing. This underlines the importance of transparency and standardization in sustainable finance, where inconsistent or unreliable disclosures pose a significant barrier to market efficiency and stakeholder trust. The strong linkages here point to disclosure as both a challenge and a key lever for advancing sustainable finance.

Taken together, the visualization demonstrates that the sustainable finance literature is structured around interconnected but distinct clusters: the interconnections of constructs that are often studied in isolation, a significant focus on attributes like firm performance with less focus on critical directions such as greenwashing or rating divergence, policy-driven sustainable finance, performance-oriented ESG, accountability-focused CSR, and transparency-centered disclosure. These clusters reveal the field's multidimensionality and highlight the key contributions and future directions. Looking ahead, future iterations of this network should not only reinforce the established clusters around sustainable finance, ESG, CSR, disclosure, and performance, but also visibly integrate emerging themes and theories that are currently underdeveloped. In particular, climate-related financial risks, digitalization of sustainable finance (e.g., fintech, blockchain, tokenized green assets), and the standardization of metrics are expected to grow into distinct and influential nodes, reflecting ongoing regulatory and technological shifts.

Likewise, the social dimension of sustainability (including just transition, inequality, and labor rights) should gain stronger visibility, bridging the gap between financial practices and societal outcomes. A key development will also be a transition from process-oriented clusters (e.g., disclosure practices) toward impact-oriented nodes focused on measurable environmental and social outcomes. At the same time, smaller nodes such as greenwashing, data quality, and rating divergence require more scholarly attention to address critical blind spots. Rather than reproducing what is already well-established in the literature, future research should expand and deepen these emerging areas, ensuring the network reflects both the maturity of the field and its evolving frontiers.

The network diagram presented in *Figure 3.11* provided a data-driven foundation for identifying the core constructs and thematic clusters that dominate the sustainable finance literature, such as ESG, CSR, disclosure, and performance. While the network map illustrates how these concepts co-occur and form distinct communities of research, the conceptual framework presented in *Figure 3.12* builds on this by organizing the relationships into a structured, theory-driven model. In particular, the framework

translates frequently co-occurring constructs (e.g., ESG performance, impact investing, governance practices) into inputs, and maps their influence through mediating mechanisms (ratings, investor behavior, cost of capital, corporate reputation, disclosure) which in turn connect to dependent variables sustainable finance integration and firm financial performance. In this way, the framework advances beyond descriptive mapping by proposing causal pathways and boundary conditions through which practices influence integration and outcomes.

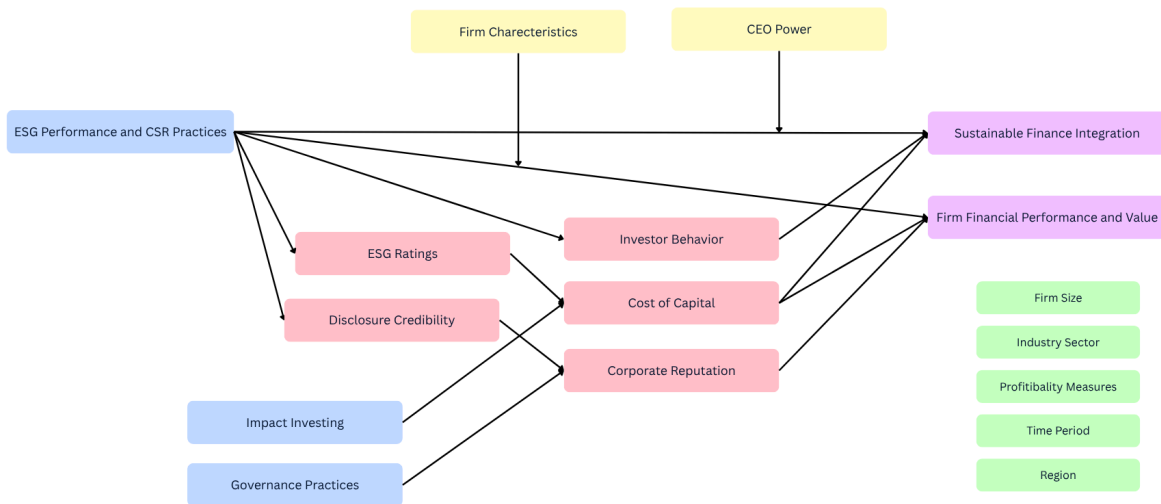


Figure 3.12: Conceptual Framework

The independent variables in this case consist of first: "ESG Performance and CSR Practices" which act as drivers influencing several key mediators such as ESG Ratings, Disclosure Credibility, Investor Behavior, Cost of Capital, and Corporate Reputation. These mediators, in turn, shape dependent variables "Sustainable Finance Integration" and "Firm Financial Performance and Value". The framework incorporates moderating variables such as firm characteristics and CEO power, which can affect the strength of these relationships. Other independent variables such as "Impact Investing" and "Governance Practices" affect respectively Cost of Capital and Corporate Reputation, which then affect the dependent variables of this framework. Additionally, control variables like firm size, industry sector, profitability measures, time period, and region are highlighted, suggesting that external and internal contexts influence how ESG/CSR activities, governance practices and impact investing affect integration and outcomes. The framework illustrates the interconnectedness of sustainability practices with strategic, financial, and organizational dimensions, emphasizing both direct and indirect pathways of influence.

There remains room for development in strengthening underexplored mediators such as disclosure credibility, ESG ratings, and greenwashing, as these issues remain critical yet insufficiently addressed. Future research should also deepen the role of contextual moderators like region, industry sector, and firm size, moving beyond surface-level comparisons. Moreover, the framework could be expanded to connect financial outcomes with real-world sustainability impacts, ensuring relevance beyond performance metrics alone. These measures would further advance the framework and reflect the evolving priorities of sustainable finance.

Overall, looking at the descriptive analysis, results, findings, and frameworks together, a fundamental re-evaluation of how sustainable finance is measured is necessary as well, given the evident limitations of widely adopted frameworks such as ESG and CSR whose attributes fall as mediating variables.

While these metrics have become standard benchmarks, numerous studies and real-world cases have revealed inconsistencies, a lack of transparency, and reliability. This calls into question their credibility and effectiveness in truly capturing sustainable impact. Therefore, it is crucial to not only critically assess the continued use of ESG and CSR but also to identify and develop alternative or complementary frameworks that address these shortcomings. Without such reform, the credibility and long-term viability of sustainable finance remain at risk.

# *Practical Implications and Future Directions*

This study has thoroughly examined the evolution, scope, and future directions of sustainable finance, including the interconnected roles of ESG and CSR. The findings highlight both the significant progress made and the persistent challenges within this rapidly evolving domain, offering crucial insights for academics, managers and policymakers to guide their future strategies, initiatives, and research endeavors.

## *4.1 Implications for Academics*

Scholars play a pivotal role in resolving persistent challenges in ESG research (including inconclusive findings, inconsistent metrics, and weak theoretical grounding) through empirical rigor, methodological innovation, and conceptual refinement. This chapter identifies key domains where academic inquiry can meaningfully advance the field. The main takeaway and implication of this thesis for academics is that research on sustainable finance has long praised ESG and CSR as effective measures, but a more critical lens is required.

While much of the literature has sought to establish links between ESG/CSR and financial performance, recent studies show mixed and often inconclusive results. Many findings rely on inconsistent metrics and are vulnerable to flaws such as greenwashing and rating divergence. This repetition in research, trying to find ways to establish positive correlations with performance has produced diminishing returns. The real contribution of this thesis is to show that these measures, while widely adopted, are far from reliable. Instead of continuing this repetitive pattern, scholars must acknowledge the shortcomings of ESG and CSR more directly and work toward either developing alternative, more robust measures of sustainable finance, and in the meantime, improving the credibility and comparability of the tools we currently have.

Another area of development is to build on the conceptual framework. The network diagram and conceptual framework together reveal how sustainable finance research is structured, what is well established, and where critical development areas remain. The network analysis in *Figure 3.11* highlights dominant clusters around policy and global frameworks, ESG practices, CSR, disclosure,

governance, and financial performance, while also exposing underexplored but crucial areas such as disclosure credibility, greenwashing, and rating divergence. Building on this, the conceptual framework in *Figure 3.12* advances beyond descriptive mapping by proposing a theory-driven model in which ESG and CSR practices, impact investing and governance practices shape firm-level outcomes and sustainable finance integration through mediators such as investor behavior, ESG ratings, cost of capital, disclosure quality and corporate reputation, all influenced by contextual moderators like firm characteristics and CEO power. Together, these frameworks demonstrate that sustainable finance is now institutionalized but disjointed: while ESG and CSR are central pillars, their credibility and long-term impact depend on addressing weaknesses in measurement, comparability, and transparency. The key finding is that future work should move beyond repeatedly testing performance correlations and instead focus on strengthening disclosure quality, mitigating greenwashing, and developing more robust and context-sensitive measures of sustainable finance that connect integration and outcomes with real-world sustainability impact and expand both frameworks through this stream of research.

This study highlights several other critical avenues for future academic inquiry in sustainable finance. A central challenge remains establishing causal links between ESG/CSR practices and financial outcomes. While many studies report correlations, robust causal evidence is scarce. Future research should employ advanced econometric methods to control for endogeneity and sectoral heterogeneity, while expanding beyond large firms in developed markets to include SMEs and firms in the Global South, where dynamics may differ substantially.

Another pressing issue is the inconsistency of metrics and rating divergence, which undermines empirical clarity and investor confidence. Scholars should work toward developing unified, transparent, and theoretically grounded frameworks that balance sector-specific materiality with cross-sector comparability. Investigating how methodological differences drive rating divergence, and advancing new metrics less prone to inconsistency, will significantly improve both academic and practical insights.

Technological innovation represents a promising solution. The use of AI, big data, and blockchain could enhance the accuracy, transparency, and auditability of ESG/CSR data. Future work should assess their potential for creating standardized, dynamic, and verifiable sustainability indicators that move beyond static or symbolic reporting.

The role of policy and regulation in shaping sustainable finance also remains underexplored. Comparative studies on instruments such as carbon pricing, disclosure mandates, and sustainability-linked finance are needed to evaluate how firms and investors respond across different contexts. Research should also examine the impacts of emerging global standards (e.g., ISSB, ESRS) on disclosure quality, comparability, and investor trust.

Greenwashing is another priority area. Scholars should develop more rigorous methods to detect and measure greenwashing and examine how disclosure regimes and third-party assurance influence stakeholder perceptions and actual sustainability outcomes. Similarly, the private equity sector requires greater scrutiny, as current ESG/CSR adoption there often appears symbolic, with little evidence of measurable impact.

From a conceptual standpoint, the field requires stronger theoretical foundations. While stakeholder, legitimacy, and signaling theories dominate, they remain fragmented and often Western-centric. Future research should pursue integrated frameworks (e.g., value creation theory) that account for

multidimensional financial, social, and environmental value, and test their applicability across diverse global contexts. In parallel, scholars must revisit foundational concepts of performance, value, and accountability, particularly as firms assume quasi-public roles.

Additional gaps include understanding the drivers of ESG investment (value-driven vs. reputation-driven behavior), the effectiveness of active investor engagement, and the distinct financial effects of the individual E, S, and G pillars rather than aggregated scores. Larger, cross-market studies with standardized measures will be critical to advancing this agenda.

Finally, given the increasing politicization of ESG/CSR, research should assess the appropriate balance between government regulation and investor-driven oversight in advancing sustainability goals. Collaboration with policymakers will be essential in this regard which is also an implication for policymakers and regulators as further explained in Section 4.3.

#### *4.2 Implications for Managers*

The global shift toward sustainability has repositioned sustainable finance from a peripheral concern to a central pillar of corporate strategy, risk management, and long-term value creation. For managers, this transformation requires a fundamental reorientation of strategic priorities. Sustainability must be embedded at the core of business operations, not as a compliance exercise, but as a driver of resilience, competitiveness, and legitimacy in an era defined by ecological and socio-economic transformation.

A key implication for managers is the need to move beyond the narrow pursuit of short-term profit maximization. Firms are increasingly expected to deliver integrated long-term value that balances financial, environmental, and social outcomes. Failure to do so carries significant risks, including reduced access to capital, reputational erosion, and ultimately, strategic obsolescence. In contrast, organizations that meaningfully integrate sustainability into their strategies are more likely to build enduring trust among stakeholders, secure investor confidence, and maintain competitiveness in volatile markets.

At present, ESG ratings and CSR frameworks remain the dominant tools guiding sustainable finance. While these frameworks provide useful benchmarks, the results of this research show that they are imperfect, prone to methodological inconsistencies, and increasingly vulnerable to accusations of greenwashing. Managers must therefore engage with these tools critically: ESG and CSR scores should be viewed as byproducts of genuine sustainable practices, rather than as end goals in themselves. When sustainability becomes performative, as in being focused on maximizing metrics rather than achieving substantive change, firms risk eroding legitimacy and stakeholder trust.

Instead, managers should adopt a qualitative and holistic approach to sustainability. This involves integrating sustainability principles into the very fabric of business models, investment strategies, and decision-making processes. Rather than selectively prioritizing one pillar of ESG while neglecting others, managers must pursue balanced progress across environmental, social, and governance dimensions. A truly sustainable strategy will, over time, be reflected positively in ESG scores without the need for manipulation or sustainability arbitrage.

Moreover, managers must recognize that sustainability initiatives such as SDGs exist to guide firms toward meaningful change, not merely to provide reporting frameworks. Compliance should not be interpreted as satisfying disclosure requirements or optimizing scores, but as aligning business

practices with global sustainability objectives. By internalizing these principles, firms can ensure that their operations remain future-proof as regulatory and stakeholder pressures intensify in the lead-up to 2030 and beyond.

Crucially, managers should resist the temptation to treat sustainability as a reputational instrument. Greenwashing may provide temporary image benefits but carries long-term risks, including loss of customer loyalty, investor disengagement, and reputational collapse once discrepancies between reported performance and actual practices become visible. By contrast, firms that invest authentically in sustainable practices, even at the expense of short-term profitability, are more likely to secure durable competitive advantage, attract committed investors, and strengthen long-term financial performance.

Ultimately, the most important practical implication for managers is: sustainability should not be pursued for the sake of ESG or CSR scores, but as a strategic imperative in its own right. When sustainability is embedded authentically and strategically, metrics will follow, stakeholders will reward transparency, and firms will position themselves as leaders in a rapidly evolving global economy. Managers must therefore cultivate a mindset that views sustainability not as a cost, but as an investment in long-term resilience, profitability, and legitimacy.

Beyond this overarching imperative, this study also identifies several other operational implications for managers. They should proactively assess climate-related and social risks to meet evolving regulations and ensure long-term operational viability, recognizing that markets increasingly penalize unsustainable business models. Greenwashing risks demand that ESG and CSR claims be backed by substantive operational change, with transparent, credible reporting aligned to recognized standards and preferably assured by third parties. Disclosure strategies should be intentional and stakeholder-focused, avoiding both superficial “box-ticking” and over-disclosure that obscures material issues.

ESG ratings should be used critically, given significant divergence among providers; internal, industry-specific assessments should complement external scores to avoid flawed decisions and sustainability “arbitrage.” Firms should align internal practices with emerging global standards (e.g., ISSB, ESRS) to improve comparability, credibility, and transparency. Integrating ESG/CSR considerations into governance structures, executive incentives, and board oversight will enhance accountability and trust.

Managers must also navigate differing regional regulations and stakeholder expectations, tailoring strategies rather than applying one-size-fits-all solutions. In private equity, ESG/CSR integration should span the full investment lifecycle, with consistent KPIs, robust governance, and credible disclosure practices to strengthen value creation and mitigate reputational risks.

### *4.3 Implications for Policymakers and Regulators*

The findings of this research suggest some important implications for policymakers and regulators tasked with guiding the transition toward a sustainable economy. Current regulatory efforts, particularly the increasing reliance on ESG and CSR disclosures as mandatory requirements, have been valuable in encouraging transparency and accountability. However, the evidence indicates that an excessive emphasis on these scores as the primary benchmark for sustainability risks, narrows

corporate strategies to “score-keeping,” rather than fostering genuine, multidimensional contributions to sustainability.

While environmental and social initiatives set by regulators are necessary and justified, the exclusive reliance on ESG/CSR reporting as a compliance tool may inadvertently incentivize firms to optimize their metrics rather than meaningfully embed sustainability across their operations. This not only reduces the richness of corporate sustainability efforts but also perpetuates the risk of greenwashing, as companies learn to present strong scores without addressing deeper structural issues.

To address this, policymakers should consider shifting the focus from ESG/CSR metrics alone toward broader sustainability reporting frameworks. Mandatory disclosures could move beyond narrow score-based reporting to include more holistic sustainability accounts, such as those aligned with measures like sustainable revenue, climate commitments, sustainable investments, worker pay, energy/water productivity, carbon productivity, or other integrated sustainability indices. Firms should be required to demonstrate their contributions to sustainability across diverse activities and strategic initiatives, rather than being evaluated solely on ESG or CSR metrics and reports. This would provide a more accurate representation of their role in advancing sustainable finance and reduce the risk of metric-driven compliance cultures.

In parallel, regulators should strengthen auditing mechanisms to ensure that sustainability claims are credible, verifiable, and accessible to the public. Transparent and publicly available audit information would enhance accountability, empower stakeholders, and create greater trust in sustainability disclosures. This would also help bridge the credibility gap identified in current ESG/CSR assessments.

Finally, policymakers and regulators should collaborate more closely with academics and researchers to advance the development of new, robust measurement tools. Such collaboration would help avoid over-reliance on ESG/CSR disclosures and support the creation of more nuanced, reliable, and multidimensional sustainability indicators. By doing so, regulators can better align corporate reporting with the real objective: accelerating the transition toward an environmentally sustainable and socially responsible global economy.

# *Conclusion*

As this study reaches its final stage, it is valuable to reflect on its core purpose: to critically examine the evolution, scope, and future trajectory of sustainable finance, with particular attention to the roles of subtopics such as ESG and CSR collectively. In the face of accelerating climate risks, regulatory pressure, and societal expectations, sustainable finance has transformed from a niche ethical concern into a central driver of strategic and financial decision-making. Today, it stands as a key determinant of long-term corporate value, resilience, and reputation in global markets.

Guided by the central question: “What does the existing literature reveal about the evolution, scope, and future of sustainable finance?”, this thesis employed an SLR and thematic analysis to synthesize insights from 103 peer-reviewed academic sources. This methodological combination enabled both a panoramic view and a deep dive into the field’s intellectual roots, current debates, practical implications, and unresolved tensions.

Previous reviews have often focused narrowly on ESG, CSR, or isolated outcomes and attributes like financial performance or measurement divergence. In contrast, this thesis provides a holistic synthesis that connects diverse strands of literature, reveals conceptual and methodological gaps, and maps the influence of global frameworks such as the UN SDGs and the Paris Agreement. It identifies persistent challenges, namely inconclusive findings, greenwashing, rating divergence, and inconsistent metrics, while highlighting foundational theories like stakeholder, legitimacy, and agency theory that shape both research and practice.

A key insight is the paradoxical nature of sustainable finance research: while the field continues to expand, its lack of interconnectedness and coherence often adds to its complexity and ambiguity. Through the process of conducting this review, it became evident that many of the issues hindering progress, such as conceptual fragmentation and recurring research patterns, stem from the absence of an integrated, cross-cutting understanding. This thesis responds to that gap by offering a synthesized framework that reconnects perspectives and identifies emerging pathways for novel future developments. In doing so, it moves beyond mapping the literature to actively proposing a more unified foundation for future exploration.

Ultimately, the central finding of this thesis is that sustainable finance, despite its rapid growth and integration into global financial systems, cannot achieve its transformative potential while relying on fragmented, inconsistent, and score-driven approaches. To be credible and impactful, the field must

shift toward standardized, transparent, and conceptually robust frameworks that move beyond symbolic ESG and CSR metrics and instead create genuine, measurable links between finance, environmental sustainability, and social value.

Therefore, a core contribution of this research is its ability to clarify a disjointed domain. By translating technical language and complex debates into accessible insights, it offers a coherent narrative that can serve students, researchers, policymakers, and corporate leaders. Even readers unfamiliar with the field can develop a structured understanding of what sustainable finance is, why it matters, how it creates value, and where it is heading. By treating ESG and CSR as part of a contested terrain rather than a cohesive construct, this review provides a more critical perspective on the conceptual and methodological tensions shaping the field. Acknowledging these tensions enhances both academic and practical relevance, particularly concerning policy design, rating systems, and investment strategies.

*Answering The Research Questions* The thesis was structured around one main research question and four sub-questions. Below is a summary of how each was addressed:

**Sub-Research Question 1:** *What are the most notable themes and trends in the sustainable finance landscape?*

The thematic analysis revealed six dominant themes and trends:

1. **Evolution and Scope of Sustainable Finance:** The field has transitioned from being primarily ethics-driven to becoming a strategic imperative, supported by global policy frameworks and investor expectations.
2. **ESG/CSR for Investment Analysis and Risk Management:** These considerations are now embedded in investment strategies and risk frameworks. Studies show growing investor preference for sustainability-aligned assets.
3. **ESG, CSR and Theoretical Foundations:** The application of stakeholder theory, legitimacy theory, and agency theory has enriched our understanding of why and how firms adopt ESG/CSR practices.
4. **Firm Financial Performance and Outcomes:** The link between ESG/CSR and CFP remains mixed, with context-dependent results that highlight the need for further empirical validation.
5. **Disclosure, Greenwashing and Reporting Integrity:** Voluntary sustainability disclosures are widespread but plagued by credibility issues and information asymmetry, leading to potential greenwashing.
6. **Measurement and Rating Divergence:** There is significant inconsistency in ESG ratings across agencies, raising questions about data reliability and the validity of composite ESG scores.

**Sub-Research Question 2:** *How has the concept and scope of sustainable finance evolved over time?*

From its early days of SRI focused on ethical exclusions, sustainable finance has evolved into a multifaceted, data-driven discipline. The integration of CSR and ESG metrics into financial decision-making marked a turning point, particularly after milestone events such as the publication of the "Who Cares Wins" report (2004), the launch of the SDGs (2015), and the adoption of the Paris Agreement (2015). This marked a shift from short-term profit maximisation to creating integrated, long-term value that balances financial, environmental, and social objectives; linking financial markets with sustainability. The scope has since expanded to include scoring, climate risk integration, green

bonds, disclosure, carbon disclosure, and impact investing, although much of the literature remains Western-centric.

**Sub-Research Question 3:** *What are the most influential articles, journals, and authors in the field?*

Citation analysis identified key academic contributors: Journals *The Accounting Review*, *Review of Finance*, *Journal of Business Ethics*, and *Journal of Cleaner Production* are among the most cited. Articles include landmark studies such as Dhaliwal et al. (2011) on voluntary CSR reporting, Delmas and Burbano (2011) on greenwashing, and Berg et al. (2022) on ESG rating divergence. Authors and notable contributors include Alex Edmans, whose work spans governance, responsible investing, criticism of ESG and other scholars Khan, M.; Bissoondoyal-Bheenick, E.; Berg, F.; Clément, A.; Dhaliwal, D.; Fatemi, A.; Donaldson, T.; and Lindgreen, A., with multiple influential publications.

**Sub-Research Question 4:** *What areas remain open for future research?*

The thesis identified several pressing gaps: 1- Causality between ESG/CSR and financial outcomes remains inconclusive and underexplored. 2- Private firms, SMEs, and firms in emerging economies are significantly underrepresented. 3- There is a lack of unified, theory-driven ESG scoring systems, which hampers comparability and reliability. 4- The role of regulation versus investor activism needs deeper analysis. 5- There is a need for robust methods to detect and prevent greenwashing. 6- Greater attention must be given to investor psychology and behavioral finance in the relevant contexts. 7- Financial effects of the individual E, S, and G components to be identified rather than relying on composite scores. 8- More research is needed on how governance structures and executive compensation models impact ESG performance. 9- Finally, future efforts should aim to develop more transparent, reliable, and comprehensive frameworks for measuring sustainability in finance, beyond improving the existing ESG and CSR paradigms, to address their current shortcomings and restore trust in sustainable finance metrics.

**Main Research Question:** *What does the existing literature reveal about the evolution, scope, and future of sustainable finance?*

The literature shows that sustainable finance has evolved from a marginal ethical concept into a central strategic and financial priority. Its scope now includes aligning capital with global goals promoting long-term value creation, and embedding ESG considerations into risk and investment decisions. This shift has been driven by landmark agreements and growing recognition of climate change as a systemic risk.

Yet, despite its rapid growth, the field remains conceptually fragmented and empirically mixed. ESG and CSR are widely applied, but their effectiveness is not always supported by consistent evidence, with persistent issues around data reliability, rating divergence, and greenwashing. Therefore, looking ahead, sustainable finance requires deeper academic inquiry to close theoretical and methodological gaps. Standardised metrics, stronger regulatory frameworks, and more integrated models are essential to build a credible, transparent, and effective system that meaningfully connects finance with sustainability outcomes. If possible, other effective systems should be looked into to transform the now mainstream. There is a need to move beyond labels and work towards the ultimate goal which is sustainability.

*Practical Implications* Having addressed the research questions, it is essential to now consider the practical implications of these findings for academic inquiry, corporate strategy and regulatory measures. For academics, it is important to move beyond repetitive ESG/CSR-performance correlations and in the meantime address the shortcomings of current measures by developing more

reliable, transparent, and context-sensitive frameworks that mitigate issues like greenwashing, rating divergence, and inconsistent metrics. This is important in order to have metrics that are accurate and reliable for sustainable finance. The network diagram and conceptual framework presented in this study can also be expanded further to capture evolving dynamics. Critically, advancing the field requires a more reflexive and skeptical lens to move beyond current frameworks while addressing and overcoming their inherent limitations.

For managers, the key takeaway is that sustainability must be embedded authentically into strategy and operations, not pursued as a compliance or reputational exercise; ESG and CSR scores should be treated as outcomes of genuine practices, not end goals as they are no longer peripheral concerns but essential elements of long-term strategy and value creation. Governance structures and executive compensation systems must evolve to align with ESG and CSR goals and long-term accountability in order to enhance sustainable finance integration. Firms, particularly in sectors like PE, must improve transparency and adopt standardized frameworks to meet rising investor expectations and contribute meaningfully to the global sustainability transition.

For policymakers and regulators, the study highlights the risks of over-reliance on ESG/CSR disclosures as a measure of compliance with sustainability initiatives and in turn sustainable finance. This urges a shift toward broader sustainability reporting, stronger auditing mechanisms, and collaboration with scholars to build more credible, multidimensional indicators.

Collectively, these implications stress that advancing sustainable finance requires a transition from symbolic score-keeping to substantive practices that create both financial and societal value. To achieve this, stakeholders must work toward a more cohesive, credible, and actionable approach to sustainable finance. Doing so will support the development of more responsible financial systems and enable organizations to better navigate the sustainability challenges of the future.

*Relevance to Management of Technology* This thesis also sits at the intersection of sustainability, strategic management, and technological innovation which are core pillars of the Management of Technology (MOT) programme. Sustainable finance is not just about aligning capital with environmental and social goals; it requires the strategic management of technological capabilities to drive systemic change. The study highlights a pressing need for innovation in data transparency, measurement, and reporting. Technologies such as AI, blockchain, and big data are identified as critical enablers for improving ESG/CSR assessment, standardisation, and verification, demonstrating MOT principles in action.

Organisational transformation, central to the sustainability transition, is also a key MOT focus. This involves redefining governance, performance metrics, and business strategies to integrate non-financial factors. The programme equips professionals to lead such complex, cross-functional initiatives, balancing innovation, feasibility, and responsibility.

Risk management, particularly in addressing climate-related financial risks, emerges as another major theme. As these risks grow more material, the need for predictive tools and analytical models that incorporate sustainability data becomes urgent. MOT provides the foundation to design and manage such tools using engineering thinking. Ultimately, this thesis aligns with MOT's interdisciplinary mission: connecting engineering, management, and policy to tackle real-world, system-level challenges in sustainable finance. Courses that were particularly helpful and informative were

*Limitations* While this research offers a comprehensive synthesis of the sustainable finance literature, several limitations should be acknowledged. First, the review focused solely on peer-reviewed, English-language academic articles, potentially excluding valuable insights from grey literature, policy documents, and non-English sources, especially from emerging markets where ESG practices may differ. Second, despite using databases like Scopus and Google Scholar, the final selection was shaped by keyword choices, reference checking, filters, and access constraints, meaning some relevant studies may have been missed. The final sample size, limited by time and resource constraints, also restricted the breadth of themes explored.

A third key limitation is the inconsistency and general lack of data in the field, especially reliable data such as ESG data across firms, particularly for private companies, SMEs, and those in the Global South. This undermines both empirical robustness and the credibility of ratings. Furthermore, the research relied primarily on qualitative thematic analysis; while effective for conceptual exploration, it did not incorporate quantitative methods such as bibliometric analysis for most parts of the thesis that could yield additional insights. The network analysis and the conceptual framework included may have unintentionally missed linkages or additional constructs given the complexity of the field. Additionally, as sustainable finance is historically rapidly evolving and has many different areas of information, themes may have been potentially excluded from this review due to time and resource constraints. Lastly, newer studies published after early 2025, which is when the data for this thesis was collected, may not be reflected in the results, requiring future updates to maintain relevance.

*Future Directions* Numerous promising avenues for future research that could significantly advance the field of sustainable finance have been identified through this research as well. First, more rigorous empirical studies using longitudinal designs, instrumental variables, or natural experiments are needed to clarify the causal link between ESG/CSR practices and financial performance. Second, future work should expand beyond large, listed firms in developed economies to include SMEs, PE, and organisations in emerging markets, which face unique ESG/CSR challenges. They should address the lack of reliable data and make it a research priority. Third, technological innovation must play a central role; tools like machine learning, blockchain, and satellite data offer potential to improve measurements, transparency, and reduce rating divergence. Interdisciplinary collaboration with technologists and data scientists will be vital.

Fourth, as regulatory requirements around ESG grow, comparative research is needed to evaluate how different mandates shape corporate behavior and sustainability outcomes. Tackling greenwashing also remains a priority; research should aim to develop detection frameworks and assess the effectiveness of enforcement mechanisms. Additionally, studies should disaggregate the financial impacts of the individual E, S, and G components and examine how governance structures and executive incentives influence ESG performance as well. Greater insight into investor psychology, particularly the balance between values-driven and reputation-driven behavior, could further deepen understanding of sustainable investment.

Additionally, a fundamental reassessment of sustainability metrics is needed. Current frameworks like ESG and CSR, while widely used, suffer from well-documented issues including inconsistency and greenwashing. Future research must focus on developing more transparent, reliable, and theoretically grounded alternatives to ensure the credibility and long-term impact of sustainable finance.

Finally, to address the specific limitations of this study, future research can consider broadening the scope by including grey literature, policy reports, and non-English sources particularly from emerging

markets. Employing advanced bibliometric techniques or NLP to conduct more exhaustive and replicable searches across a wider array of sources along with quantitative techniques will also be valuable in quantifying conceptual overlaps, assessing citation networks, and identifying influential research clusters. There is also certainly room to expand the frameworks provided in this thesis by identifying linkages for the network diagram or other variables in the conceptual framework. These limitations can be worked on by future researchers in the field to bring more visibility, insights and developments.

In conclusion, this thesis offers a comprehensive and integrated perspective on the current state and future trajectory of sustainable finance. It addresses an urgent and timely issue by critically synthesising insights across disciplines, highlighting key challenges, and offering practical guidance for scholars and practitioners alike. Over the past two decades, the field has evolved from marginal ethical debates into a central theme in global finance. Yet, as this research shows, sustainable finance remains a work in progress; conceptually disjointed, empirically inconsistent, and methodologically diverse.

The true promise of sustainable finance lies not in the proliferation of scores or sustainability reports, but in the creation of credible, consistent, and actionable systems that meaningfully link financial decisions to long-term environmental and social outcomes. Realising this promise will require coordinated efforts among researchers, policymakers, business leaders, and technologists. Looking ahead, the future of this field depends on greater interdisciplinarity, methodological innovation, and global inclusivity. Emerging voices and contexts must be integrated into the evolving discourse. Equally, the field must embrace technological transformation as both a challenge and an opportunity and look beyond for better and novel solutions.

Grounded in the principles of the MOT, this thesis reflects where sustainable finance stands today and outlines where it needs to go. By clarifying complexity and pointing toward new directions, it seeks to support a more informed, impactful, and responsible evolution of finance in the service of global sustainability. Along this academic journey, my perspective has also evolved. What began as an optimistic exploration has matured into a more critical, yet balanced understanding of both the potential and the limitations of sustainable finance. I hope that this work, even in a modest way, contributes to building a more credible, inclusive, and forward-looking financial system.

# References

- Aboud, A., & Diab, A. (2019). The financial and market consequences of environmental, social and governance ratings: The implications of recent political volatility in Egypt. *Sustainability Accounting, Management and Policy Journal*, 10(3), 498-520.
- Aggarwal, P., & Kadyan, A. (2014). Greenwashing: The darker side of CSR. *Indian Journal of Applied Research*, 4(3), 61-66.
- Aghamolla, C., & An, B. J. (2023). Mandatory vs. voluntary ESG disclosure, efficiency, and real effects. *Nanyang Business School Research Paper*, (22-41).
- Aglietta, M., Hourcade, J. C., Jaeger, C., & Fabert, B. P. (2015). Financing transition in an adverse context: Climate finance beyond carbon finance. *International environmental agreements: politics, law and economics*, 15, 403-420.
- Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of management*, 38(4), 932-968.
- Al-Shammari, M. A., Banerjee, S. N., & Rasheed, A. A. (2022). Corporate social responsibility and firm performance: A theory of dual responsibility. *Management Decision*, 60(6), 1513-1540.
- Al-Tuwaijri, S. A., Christensen, T. E., & Hughes II, K. E. (2004). The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach. *Accounting, organizations and society*, 29(5-6), 447-471.
- Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society*, 20(7), 1409-1428.
- Al Azizah, U. S., & Haron, R. (2025). The sustainability imperative: evaluating the effect of ESG on corporate financial performance before and after the pandemic. *Discover Sustainability*, 6(1), 529.
- Aouadi, A., & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of business ethics*, 151, 1027-1047.
- Archer, M. (2022). The ethics of ESG: Sustainable finance and the emergence of the market as an ethical subject. *Focaal*, 2022(93), 18-31.
- Arouri, M., Gomes, M., & Pukthuanthong, K. (2019). Corporate social responsibility and M&A uncertainty. *Journal of Corporate Finance*, 56, 176-198.
- Attig, N., El Ghouli, S., Guedhami, O., & Suh, J. (2013). Corporate social responsibility and credit ratings. *Journal of business ethics*, 117, 679-694.
- Bartov, E., Marra, A., & Momenté, F. (2021). Corporate social responsibility and the market reaction to negative events: Evidence from inadvertent and fraudulent restatement announcements. *The Accounting Review*, 96(2), 81-106.
- Battiston, S., Dafermos, Y., & Monasterolo, I. (2021). Climate risks and financial stability. *Journal of Financial Stability*, 54, 100867.
- Bauer, R. & Hann, D. (2014) Corporate Environmental Management and Credit Risk. Working paper, *Maastricht University*. URL: <https://ssrn.com/abstract=1660470>. doi: 10.2139/ssrn.1660470.

- Bax, K., Bonaccolto, G., & Paterlini, S. (2023). Do lower environmental, social, and governance (ESG) rated companies have higher systemic impact? Empirical evidence from Europe and the United States. *Corporate Social Responsibility and Environmental Management*, 30(3), 1406-1420.
- Berg, F., Fabisik, K., & Sautner, Z. (2021). Is history repeating itself? The (un) predictable past of ESG ratings. *SSRN Electronic Journal*, 1-59.
- Berg, F., Kölbl, J. F., & Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. *Review of Finance*, 26(6), 1315-1344.
- Bhattacharya, C. B., & Sen, S. (2004). Doing better at doing good: When, why, and how consumers respond to corporate social initiatives. *California management review*, 47(1), 9-24.
- Billio, M., Costola, M., Hristova, I., Latino, C., & Pelizzon, L. (2021). Inside the ESG ratings: (Dis) agreement and performance. *Corporate Social Responsibility and Environmental Management*, 28(5), 1426-1445.
- Bissoondoyal-Bheenick, E., Brooks, R., & Do, H. X. (2023). ESG and firm performance: The role of size and media channels. *Economic modelling*, 121, 106203.
- Bissoondoyal-Bheenick, E., Bennett, S., Lehnerr, R., & Zhong, A. (2024). ESG rating disagreement: Implications and aggregation approaches. *International Review of Economics & Finance*, 96, 103532.
- Borghesi, R., Houston, J. F., & Naranjo, A. (2014). Corporate socially responsible investments: CEO altruism, reputation, and shareholder interests. *Journal of Corporate Finance*, 26, 164-181.
- Bose, S., Podder, J. and Biswas, K. (2017), "Philanthropic giving, market-based performance and institutional ownership: evidence from an emerging economy", *The British Accounting Review*, Elsevier, Vol. 49 No. 4, pp. 429-444.
- Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial management*, 35(3), 97-116.
- Bucaro, A. C., Jackson, K. E., & Lill, J. B. (2020). The influence of corporate social responsibility measures on investors' judgments when integrated in a financial report versus presented in a separate report. *Contemporary Accounting Research*, 37(2), 665-695.
- Buchanan, B., Cao, C. X., & Chen, C. (2018). Corporate social responsibility, firm value, and influential institutional ownership. *Journal of Corporate Finance*, 52, 73-95.
- Cabolis, C., Lavanchy, M., & Schmedders, K. (2023). The fundamental problem with ESG? Conflicting letters. *Journal of Financial Transformation* 57.
- Cabrera, D., & Cabrera, L. L. (2023). The steps to doing a systems literature review (SLR). *Journal of Systems Thinking Preprints*.
- Cek, K., & Eyupoglu, S. (2020). Does environmental, social and governance performance influence economic performance?. *Journal of Business Economics and Management*, 21(4), 1165-1184.
- Chatterji, A. K., Durand, R., Levine, D. I., & Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic management journal*, 37(8), 1597-1614.
- Charlo, M. J., Moya, I., & Muñoz, A. M. (2015). Sustainable development and corporate financial performance: A study based on the FTSE4Good IBEX Index. *Business Strategy and the Environment*, 24(4), 277-288.
- Chava, S. (2014). Environmental externalities and cost of capital. *Management science*, 60(9), 2223-2247.
- Chen, L., Srinidhi, B., Tsang, A., & Yu, W. (2016). Audited financial reporting and voluntary disclosure of corporate social responsibility (CSR) reports. *Journal of Management Accounting Research*, 28(2), 53-76.

- Chen, D., Hu, H., & Chang, C. P. (2023). Green finance, environment regulation, and industrial green transformation for corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 30(5), 2166-2181.
- Chen, S., Song, Y., & Gao, P. (2023). Environmental, social, and governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance. *Journal of environmental management*, 345, 118829.
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic management journal*, 35(1), 1-23.
- Cho, E., & Park, H. (2015). Is CSR really profitable? Evidence from Korea. *Journal of Applied Business Research*, 31(6), 2167.
- Chollet, P., & Sandwidi, B. W. (2018). CSR engagement and financial risk: A virtuous circle? International evidence. *Global Finance Journal*, 38, 65-81.
- Chouaibi, S., & Affes, H. (2021). The effect of social and ethical practices on environmental disclosure: evidence from an international ESG data. *Corporate Governance: The International Journal of Business in Society*, 21(7), 1293-1317.
- Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and sustainability reporting: Economic analysis and literature review. *Review of accounting studies*, 26(3), 1176-1248.
- Chu, H., Yu, H., Chong, Y., & Li, L. (2023). Does the development of digital finance curb carbon emissions? Evidence from county data in China. *Environmental Science and Pollution Research*, 30(17), 49237-49254.
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The journal of positive psychology*, 12(3), 297-298.
- Clément, A., Robinot, É., & Trespeuch, L. (2025). The use of ESG scores in academic literature: a systematic literature review. *Journal of Enterprising Communities: People and Places in the Global Economy*, 19(1), 92-110.
- Corrado, C., Haskel, J., Jona-Lasinio, C., & Iommi, M. (2022). Intangible capital and modern economies. *Journal of Economic Perspectives*, 36(3), 3-28.
- Crisóstomo, V. L., de Souza Freire, F., & De Vasconcellos, F. C. (2011). Corporate social responsibility, firm value and financial performance in Brazil. *Social responsibility journal*, 7(2), 295-309.
- Dai, R., Liang, H., & Ng, L. (2021). Socially responsible corporate customers. *Journal of Financial Economics*, 142(2), 598-626.
- de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., & Soares, G. R. D. L. (2020). Concepts and forms of greenwashing: A systematic review. *Environmental Sciences Europe*, 32, 1-12.
- Davidson, R. H., Dey, A., & Smith, A. J. (2019). CEO materialism and corporate social responsibility. *The Accounting Review*, 94(1), 101-126.
- Davis, A. K., Guenther, D. A., Krull, L. K., & Williams, B. M. (2016). Do socially responsible firms pay more taxes? *The accounting review*, 91(1), 47-68.
- Dejan, A., Hassan, M.K., Siraj, I. and Turunen-Red, A. (2022), "On the relation between credit market disruption and corporate social responsibility", *International Journal of Business and Emerging Markets*, Vol. 14 No. 2, pp. 107-141.
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1), 64-87.
- Derwall, J., & Koedijk, K. (2009). Socially responsible fixed-income funds. *Journal of Business Finance & Accounting*, 36(1-2), 210-229.
- DesJardine, M. R., Marti, E., & Durand, R. (2021). Why activist hedge funds target socially responsible firms: The reaction costs of signaling corporate social responsibility. *Academy of Management Journal*, 64(3), 851-872.

- Devie, D., Liman, L. P., Tarigan, J., & Jie, F. (2020). Corporate social responsibility, financial performance and risk in Indonesian natural resources industry. *Social Responsibility Journal*, 16(1), 73-90.
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The accounting review*, 86(1), 59-100.
- Dhaliwal, D. S., Radhakrishnan, S., Tsang, A., & Yang, Y. G. (2012). Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. *The accounting review*, 87(3), 723-759.
- Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *The Journal of Finance*, 46(4), 1325-1359.
- Dimson, E., Karakaş, O., & Li, X. (2015). Active ownership. *The Review of Financial Studies*, 28(12), 3225-3268.
- Donaldson, T., & Dunfee, T. W. (1999). When ethics travel: The promise and peril of global business ethics. *California Management Review*, 41(4), 45-63.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, 20(1), 65-91.
- Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, social and governance (ESG) scores and financial performance of multinationals: Moderating effects of geographic international diversification and financial slack. *Journal of Business Ethics*, 168(2), 315-334.
- Dunn, P., & Sainty, B. (2009). The relationship among board of director characteristics, corporate social performance and corporate financial performance. *International Journal of Managerial Finance*, 5(4), 407-423.
- Dunphy, D. (2003). Corporate sustainability: Challenge to managerial orthodoxies. *Journal of Management & Organization*, 9(1), 2-11.
- Eccles, R. G., Lee, L. E., & Stroehle, J. C. (2020). The social origins of ESG: An analysis of Innovest and KLD. *Organization & Environment*, 33(4), 575-596.
- Edmans, A. (2011). Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics*, 101(3), 621-640.
- Edmans, A. (2023). The end of ESG. *Financial Management*, 52(1), 3-17.
- Edmans, A., & Kacperczyk, M. (2022). Sustainable finance. *Review of Finance*, 26(6), 1309-1313.
- Elliott, W. B., Jackson, K. E., Pecher, M. E., & White, B. J. (2014). The unintended effect of corporate social responsibility performance on investors' estimates of fundamental value. *The Accounting Review*, 89(1), 275-302.
- European Commission. (2023). Delivering the European Green Deal. European Commission. Retrieved February 15, 2025, from [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal/fit-55-delivering-proposals\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal/fit-55-delivering-proposals_en).
- Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global finance journal*, 38, 45-64.
- Fatemi, A. M., & Fooladi, I. J. (2013). Sustainable finance: A new paradigm. *Global Finance Journal*, 24(2), 101-113.
- Fatima, T., & Elbanna, S. (2023). Corporate social responsibility (CSR) implementation: A review and a research agenda towards an integrative framework. *Journal of Business Ethics*, 183(1), 105-121.
- Feng, J., Goodell, J. W., & Shen, D. (2022). ESG rating and stock price crash risk: Evidence from China. *Finance Research Letters*, 46, 102476.

- Frederick, W. C. (1986). Toward CSR3: Why ethical analysis is indispensable and unavoidable in corporate affairs. *California management review*, 28(2), 126-141.
- Frederick, W. C. (1994). From CSR1 to CSR2: The maturing of business-and-society thought. *Business & Society*, 33(2), 150-164.
- Friedman, M. (2007). The social responsibility of business is to increase its profits. In *Corporate ethics and corporate governance* (pp. 173-178). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Ferri, L. M., & Pedrini, M. (2018). Socially and environmentally responsible purchasing: Comparing the impacts on buying firm's financial performance, competitiveness and risk. *Journal of Cleaner Production*, 174, 880-888.
- Ferris, S. P., & Rykaczewski, K. P. (1986). Social investing and portfolio management. *Business & Society*, 25(1), 1-7.
- Finance, S. S. (2020). What is sustainable finance. Sustainable Development. *Sustainable Development Goals, China*.
- Flammer, C. (2015). Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management science*, 61(11), 2549-2568.
- Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic management journal*, 40(7), 1097-1122.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of sustainable finance & investment*, 5(4), 210-233.
- Frynas, J. G., & Yamahaki, C. (2016). Corporate social responsibility: Review and roadmap of theoretical perspectives. *Business ethics: a European Review*, 25(3), 258-285.
- Gerard, B. (2019). ESG and socially responsible investment: A critical review. *Beta*, 33(1), 61-83.
- Guerard Jr, J. B. (1997). Is there a cost to being socially responsible in investing?. *Journal of forecasting*, 16(7), 475-490.
- Gibson Brandon, R., Krueger, P., & Schmidt, P. S. (2021). ESG rating disagreement and stock returns. *Financial analysts journal*, 77(4), 104-127.
- Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, 101889.
- Global Sustainable Investment Alliance. (2019). Home. Retrieved June 9, 2025, from <https://www.gsi-alliance.org/>
- Gonzalez, C. I. (2021). Overview of global and European institutional sustainable finance initiatives. *Banco de Espana Article*, 30, 21.
- Guerard Jr, J. B. (1997). Is there a cost to being socially responsible in investing?. *Journal of forecasting*, 16(7), 475-490.
- Guiral, A., Moon, D., Tan, H. T., & Yu, Y. (2020). What drives investor response to CSR performance reports?. *Contemporary Accounting Research*, 37(1), 101-130.
- Harrison, J. S., Phillips, R. A., & Freeman, R. E. (2020). On the 2019 business roundtable "statement on the purpose of a corporation". *Journal of Management*, 46(7), 1223-1237.
- Hazan, E., Smit, P. S., Woetzel, A. J., Biljana Cvetanovski, S., Mekala Krishnan, L., & Brian Gregg, B. (2021). Getting tangible about intangible.
- Hazen, T. L. (2020). Social issues in the spotlight: The increasing need to improve publicly-held companies' CSR and ESG disclosures. *U. Pa. J. Bus. L.*, 23, 740.
- Henke, H. M. (2016). The effect of social screening on bond mutual fund performance. *Journal of Banking & Finance*, 67, 69-84.
- Henriques, M. (2022). No good deed goes unpunished: Growing ESG litigation risks. *National Law Review*, 11(159), 53.

- Hoepner, A.G.F., Oikonomou, I., Scholtens, B. & Schröder, M. (2016) The Effects of Corporate and Country Sustainability Characteristics on the Cost of Debt: An International Investigation. *Journal of Business Finance & Accounting*, Vol. 43:158-90. doi: 10.1111/jbfa.12183.
- Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The accounting review*, 88(6), 2025-2059.
- Hogarth, R. J. (2012). The role of climate finance in innovation systems. *Journal of Sustainable Finance & Investment*, 2(3-4), 257-274.
- Huang, D. Z. (2021). Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting & finance*, 61(1), 335-360.
- Hughes, K. E. (2000). The value relevance of nonfinancial measures of air pollution in the electric utility industry. *The Accounting Review*, 75(2), 209-228.
- Hutton, R. B., D'Antonio, L., & Johnsen, T. (1998). Socially responsible investing: Growing issues and new opportunities. *Business & Society*, 37(3), 281-305.
- Hu, D., & Gan, C. (2025). Green finance development and its origin, motives, and barriers: an exploratory study. *Environment, Development and Sustainability*, 1-25.
- Idowu, S. O. (2012). Corporate social responsibility: A capitalist ideology?. *International Journal of Social Entrepreneurship and Innovation*, 1(3), 239-254.
- Impact, B. (2000). Winning with integrity: a guide to social responsibility. *Business in the Community, London*.
- International Finance Corporation (IFC) (2004). Who cares wins: Connecting financial markets to a changing world. *Washington, D.C.: World Bank Group*. Retrieved from <https://documents1.worldbank.org/curated/en/444801491483640669/pdf/113850-BRI-IFC-Breif-whocares-PUBLIC.pdf>
- Jabareen, Y. (2009). Building a conceptual framework: philosophy, definitions, and procedure. *International journal of qualitative methods*, 8(4), 49-62.
- Jayaram, R., & Singh, S. (2020). Sustainable finance: a systematic review. *International Journal of Indian Culture and Business Management*, 21(3), 317-339.
- Jensen, M. (2001). Value maximisation, stakeholder theory, and the corporate objective function. *European financial management*, 7(3), 297-317.
- Johnston, D., & Rock, S. (2005). Earnings management to minimize superfund clean-up and transaction costs. *Contemporary Accounting Research*, 22(3), 617-642.
- Jones, T. M. (1980). Corporate social responsibility revisited, redefined. *California management review*, 22(3), 59-67.
- Joyce, A., & Paquin, R. L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. *Journal of cleaner production*, 135, 1474-1486.
- Junius, D., Adisurjo, A., Rijanto, Y. A., & Adelina, Y. E. (2020). The impact of ESG performance to firm performance and market value. *Jurnal Aplikasi Akuntansi*, 5(1), 21-41.
- Khan, I., Jia, M., Lei, X., Niu, R., Khan, J., & Tong, Z. (2023). Corporate social responsibility and firm performance. *Total Quality Management & Business Excellence*, 34(5-6), 672-691.
- Khan, M. A. (2022). ESG disclosure and firm performance: A bibliometric and meta analysis. *Research in International Business and Finance*, 61, 101668.
- Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate sustainability: First evidence on materiality. *The accounting review*, 91(6), 1697-1724.
- Khaw, T. Y., Amran, A., & Teoh, A. P. (2024). Factors influencing ESG performance: A bibliometric analysis, systematic literature review, and future research directions. *Journal of Cleaner Production*, 448, 141430.

- Kikwiye, I.R. (2021), "Relevance of multinationals' involvement in corporate social responsibility practices in Tanzania", *African J. of Accounting, Auditing and Finance*, Vol. 7 No. 3, pp. 247-268.
- Kim, E. H., & Lyon, T. P. (2011). Strategic environmental disclosure: Evidence from the DOE's voluntary greenhouse gas registry. *Journal of environmental economics and management*, 61(3), 311-326.
- Kong, Y., Antwi-Adjei, A., & Bawuah, J. (2020). A systematic review of the business case for corporate social responsibility and firm performance. *Corporate Social Responsibility and Environmental Management*, 27(2), 444-454.
- Kotler, P., & Lee, N. (2005). Best of breed: When it comes to gaining a market edge while supporting a social cause, "corporate social marketing" leads the pack. *Social marketing quarterly*, 11(3-4), 91-103.
- Kotsantonis, S., & Serafeim, G. (2019). Four things no one will tell you about ESG data. *Journal of Applied Corporate Finance*, 31(2), 50-58.
- Krueger, P., Sautner, Z., Tang, D. Y., & Zhong, R. (2024). The effects of mandatory ESG disclosure around the world. *Journal of Accounting Research*, 62(5), 1795-1847.
- Kumar, S., Sharma, D., Rao, S., Lim, W. M., & Mangla, S. K. (2025). Past, present, and future of sustainable finance: insights from big data analytics through machine learning of scholarly research. *Annals of Operations Research*, 345(2), 1061-1104.
- Latapí Agudelo, M. A., Jóhannsdóttir, L., & Davídsdóttir, B. (2019). A literature review of the history and evolution of corporate social responsibility. *International journal of corporate social responsibility*, 4(1), 1-23.
- Leite, P., & Cortez, M. C. (2018). The performance of European SRI funds investing in bonds and their comparison to conventional funds. *Investment Analysts Journal*, 47(1), 65-79.
- Li, X., Tsang, A., Zeng, S., & Zhou, G. (2021). CSR reporting and firm value: International evidence on management discussion and analysis. *China Accounting and Finance Review*, Forthcoming.
- Liang, H., & Renneboog, L. (2017). On the foundations of corporate social responsibility. *The Journal of Finance*, 72(2), 853-910.
- Lin, X., Liu, M., So, S., & Yuen, D. (2019). Corporate social responsibility, firm performance and tax risk. *Managerial Auditing Journal*, 34(9), 1101-1130.
- Lindblom, C. K. (1994). The implications of organizational legitimacy for corporate social performance and disclosure. In *Critical Perspectives on Accounting Conference*, New York, 1994.
- Lindgreen, A., & Swaen, V. (2010). Corporate social responsibility. *International journal of management reviews*, 12(1), 1-7.
- Lindgreen, A., Swaen, V., & Johnston, W. J. (2009). Corporate social responsibility: An empirical investigation of US organizations. *Journal of business ethics*, 85, 303-323.
- Lokuwaduge, C. S. D. S., & Heenetigala, K. (2017). Integrating environmental, social and governance (ESG) disclosure for a sustainable development: An Australian study. *Business Strategy and the Environment*, 26(4), 438-450.
- LoPucki, L. M. (2021). Repurposing the Corporate through Stakeholder Markets. *UC Davis L. Rev.*, 55, 1445.
- Lu, W., Chau, K. W., Wang, H., & Pan, W. (2014). A decade's debate on the nexus between corporate social and corporate financial performance: a critical review of empirical studies 2002–2011. *Journal of cleaner production*, 79, 195-206.
- Macey, J. R. (2022). ESG Investing: Why Here? Why Now?. *Berkeley Bus. LJ*, 19, 258.

- Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (2007). Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance. *Ann Arbor*, 1001(48109-1234), 1-68.
- Markarian, G., Rakotobe, C., & Semionov, A. (2023). ESG in the top 100 US private equity firms. Available at SSRN 4503661.
- Martiny, A., Tagliatalata, J., Testa, F., & Iraldo, F. (2024). Determinants of environmental social and governance (ESG) performance: A systematic literature review. *Journal of Cleaner Production*, 456, 142213.
- Massaro, M., Dumay, J., & Guthrie, J. (2016). On the shoulders of giants: undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal*, 29(5), 767-801.
- Matsumura, E. M., Prakash, R., & Vera-Muñoz, S. C. (2014). Firm-value effects of carbon emissions and carbon disclosures. *The accounting review*, 89(2), 695-724.
- McClelland, J. (2023, October 4). Rise in ESG risks linked to greenwashing. *SustMeme*. Retrieved from: <https://sustmeme.com/2023/10/04/rise-in-esg-risks-linked-to-greenwashing/>
- McWilliams, A., & Siegel, D. S. (2011). Creating and capturing value: Strategic corporate social responsibility, resource-based theory, and sustainable competitive advantage. *Journal of management*, 37(5), 1480-1495.
- Menz, K. M. (2010). Corporate social responsibility: Is it rewarded by the corporate bond market? A critical note. *Journal of business ethics*, 96(1), 117-134.
- Michaels, A., & Grüning, M. (2017). Relationship of corporate social responsibility disclosure on information asymmetry and the cost of capital. *Journal of Management Control*, 28, 251-274.
- Minutolo, M. C., Kristjanpoller, W. D., & Stakeley, J. (2019). Exploring environmental, social, and governance disclosure effects on the S&P 500 financial performance. *Business Strategy and the Environment*, 28(6), 1083-1095.
- Moir, L. (2001). What do we mean by corporate social responsibility?. *Corporate Governance: The international journal of business in society*, 1(2), 16-22.
- Monasterolo, I. (2020). Climate change and the financial system. *Annual Review of Resource Economics*, 12(1), 299-320.
- Moser, D. V., & Martin, P. R. (2012). A broader perspective on corporate social responsibility research in accounting. *The accounting review*, 87(3), 797-806.
- Mukhtar, B., Shad, M. K., Ali, K., Woon, L. F., & Waqas, A. (2025). Systematic literature review and retrospective bibliometric analysis on ESG research. *International Journal of Productivity and Performance Management*, 74(4), 1365-1399.
- Naughton, J. P., Wang, C., & Yeung, I. (2019). Investor sentiment for corporate social performance. *The Accounting Review*, 94(4), 401-420.
- Nelling, E., & Webb, E. (2009). Corporate social responsibility and financial performance: The “virtuous circle” revisited. *Review of Quantitative finance and accounting*, 32, 197-209.
- Nilsson, J., Jansson, J., Isberg, S., & Nordvall, A. C. (2014). Customer satisfaction with socially responsible investing initiatives: The influence of perceived financial and non-financial quality. *Journal of financial services marketing*, 19, 265-276.
- Oh, W. Y., Cha, J., & Chang, Y. K. (2017). Does ownership structure matter? The effects of insider and institutional ownership on corporate social responsibility. *Journal of Business Ethics*, 146, 111-124.
- Oehmke, M., & Opp, M. M. (2025). A theory of socially responsible investment. *Review of Economic Studies*, 92(2), 1193-1225.

- Oikonomou, I., Brooks, C., & Pavelin, S. (2014). The effects of corporate social performance on the cost of corporate debt and credit ratings. *Financial Review*, 49(1), 49-75.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization studies*, 24(3), 403-441.
- Peet, J., & Bossel, H. (2000). An ethics-based systems approach to indicators of sustainable development. *International journal of sustainable development*, 3(3), 221-238.
- Petcharat, N. (2020), "Can an integrated reporting system in Thai context create sustainable value to users?", *International Journal of Monetary Economics and Finance*, Vol. 13 No. 3, pp. 253-259, doi: 10.1504/IJMEF.2020.108827
- Pérez, L., Hunt, V., Samandari, H., Nuttall, R., & Biniek, K. (2022). Does ESG really matter and why. *McKinsey Quarterly*, 60(1).
- Pineiro-Chousa, J. and Vizcaíno-Gonzalez, M. (2017), "Determinants of mandatory reporting: the influence of emerging markets", *International Journal of Business and Emerging Markets*, Vol. 9 No. 1, pp. 33-47.
- Pinnuck, M., Ranasinghe, A., Soderstrom, N., & Zhou, J. (2021). Restatement of CSR reports: Frequency, magnitude, and determinants. *Contemporary Accounting Research*, 38(3), 2376-2416.
- Pollman, E. (2024). The making and meaning of ESG. *Harv. Bus. L. Rev.*, 14, 403.
- Pointner, W., & Ritzberger-Grünwald, D. (2019). Climate change as a risk to financial stability. *Financial Stability Report*, 38, 30-45.
- Poyser, A., & Daugaard, D. (2023). Indigenous sustainable finance as a research field: A systematic literature review on indigenising ESG, sustainability and indigenous community practices. *Accounting & Finance*, 63(1), 47-76.
- Ramanathan, K. V. (1976). Toward a theory of corporate social accounting. *The accounting review*, 51(3), 516-528.
- Raza, A., Ilyas, M. I., Rauf, R., & Qamar, R. (2012). Relationship between corporate social responsibility (CSR) and corporate financial performance (CFP): Literature review approach. *Elixir Financial Management*, 46(9), 8404-8409.
- Reid, A., Ringel, E., & Pendleton, S. M. (2024). Transparency reports as CSR reports: motives, stakeholders, and strategies. *Social Responsibility Journal*, 20(1), 81-107.
- RepRisk. (2023, October 3). On the rise: Navigating the wave of greenwashing and social washing. *RepRisk*. Retrieved (Jun. 15, 2025) from <https://www.reprisk.com/>
- Richardson, A. J., & Welker, M. (2001). Social disclosure, financial disclosure and the cost of equity capital. *Accounting, organizations and society*, 26(7-8), 597-616.
- Roosevelt, M. & Mitchell, R., Black Tesla Employees Describe a Culture of Racism, *L.A. Times* (Mar. 25, 2022), <https://www.latimes.com/business/story/2022-03-25/black-tesla-employees-fremont-plant-racism-california-lawsuit>; *Dana Hull & Bloomberg, Tesla; Sued By More Women Alleging Sexual Harassment at Plant*, *Fortune* (Dec. 14, 2021), <https://fortune.com/2021/12/14/tesla-sued-sexual-harassment-fremont-plant/>
- Rudebusch, G. D. (2021). Climate change is a source of financial risk. *FRBSF Economic Letter*, 3, 1-6.
- Saini, M., Aggarwal, V., Dhingra, B., Kumar, P., & Yadav, M. (2023). ESG and financial variables: a systematic review. *International Journal of Law and Management*, 65(6), 663-682.
- Santamaria, R., Paolone, F., Cucari, N., & Dezi, L. (2021). Non-financial strategy disclosure and environmental, social and governance score: Insight from a configurational approach. *Business Strategy and the Environment*, 30(4), 1993-2007.

- Schuler, D. A., & Cording, M. (2006). A corporate social performance–corporate financial performance behavioral model for consumers. *Academy of management Review*, 31(3), 540-558.
- Secinaro, S., Brescia, V., Calandra, D., & Saiti, B. (2020). Impact of climate change mitigation policies on corporate financial performance: Evidence-based on European publicly listed firms. *Corporate Social Responsibility and Environmental Management*, 27(6), 2491-2501.
- Sendawula, K., Bagire, V., Mbidde, C. I., & Turyakira, P. (2021). Environmental commitment and environmental sustainability practices of manufacturing small and medium enterprises in Uganda. *Journal of Enterprising Communities: People and Places in the Global Economy*, 15(4), 588-607.
- Shan, X., Song, Y., & Song, P. (2024). How ESG performance impacts corporate financial performance: a DuPont analysis approach. *International Journal of Climate Change Strategies and Management*, (ahead-of-print).
- Shen, Y. (2023). ESG and firm performance: A literature review. *BCP Business & Management*, 46, 283-288.
- Shi, G. & Sun, J. (2015) Corporate Bond Covenants and Social Responsibility Investment. *Journal of Business Ethics* 131: 285. doi: 10.1007/s10551-014-2272-y. (<https://doi.org/10.1007/s10551-014-2272-y>)
- Singhania, M., Chadha, G., & Prasad, R. (2024). Sustainable finance research: Review and agenda. *International Journal of Finance & Economics*, 29(4), 4010-4045.
- Statman, M. (2000). Socially responsible mutual funds (corrected). *Financial Analysts Journal*, 56(3), 30-39.
- Stellner, C., Klein, C., & Zwergel, B. (2015). Corporate social responsibility and Eurozone corporate bonds: The moderating role of country sustainability. *Journal of Banking & Finance*, 59, 538-549.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of management review*, 20(3), 571-610. 28003
- Su, Y., Lucey, B. M., & Jha, A. K. (2024). Finance Research and the UN Sustainable Development Goals—an analysis and forward look. *Research in International Business and Finance*, 71, 102463.
- Tai, F. M., & Chuang, S. H. (2014). Corporate social responsibility. *Ibusiness*, 6(03), 117.
- Teichmann, F., Falker, M.C. and Sergi, B.S. (2020), “Gaming environmental governance? Bribery, abuse of subsidies, and corruption in European union programs”, *Energy Research and Social Science*, Vol. 66, p. 101481, doi: 10.1016/j.erss.2020.101481.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of management*, 14(3), 207-222.
- Truong, C., Nguyen, T. H., & Huynh, T. (2021). Customer satisfaction and the cost of capital. *Review of accounting studies*, 26(1), 293-342.
- Tsang, A., Frost, T., & Cao, H. (2023). Environmental, social, and governance (ESG) disclosure: A literature review. *The British Accounting Review*, 55(1), 101149.
- Tsang, A., Wang, K. T., Wu, Y., & Lee, J. (2024). Nonfinancial corporate social responsibility reporting and firm value: International evidence on the role of financial analysts. *European Accounting Review*, 33(2), 399-434.
- United Nations. (2023). Sustainable Development Goals: 17 Goals to Transform our World. Retrieved June 12, 2025, from <https://www.un.org/en/exhibits/page/sdgs-17-goals-transform-world>
- Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of global responsibility*, 8(2), 169-178.

- Velte, P. (2022). Meta-analyses on corporate social responsibility (CSR): a literature review. *Management Review Quarterly*, 72(3), 627-675.
- Verheyden, T., Eccles, R. G., & Feiner, A. (2016). ESG for all? The impact of ESG screening on return, risk, and diversification. *Journal of Applied Corporate Finance*, 28(2), 47-55.
- Wang, H., Lu, W., Ye, M., Chau, K. W., & Zhang, X. (2016). The curvilinear relationship between corporate social performance and corporate financial performance: Evidence from the international construction industry. *Journal of cleaner production*, 137, 1313-1322.
- Williams, M., & Geli, P. (2022, March 14). ESG is not enough. It's time to add an H. Fortune. Retrieved from <https://fortune.com/2022/03/14/esg-is-not-enough-time-to-add-health-wellbeing-csr-workers-pandemic-leadership-geli-williams/>
- Xie, J., Nozawa, W., Yagi, M., Fujii, H., & Managi, S. (2019). Do environmental, social, and governance activities improve corporate financial performance?. *Business Strategy and the Environment*, 28(2), 286-300.
- Yenneti, K., & Gamaralalage, P. J. D. (2012). Carbon finance and decentralized composting in Asia: Potential and future considerations. *Environment and Urbanization ASIA*, 3(2), 303-323.
- Yesuf, A. J., & Aassouli, D. (2020). Exploring synergies and performance evaluation between Islamic funds and socially responsible investment (SRIs) in light of the Sustainable Development Goals (SDGs). *Heliyon*, 6(8).
- Yoon, B., & Chung, Y. (2018). The effects of corporate social responsibility on firm performance: A stakeholder approach. *Journal of hospitality and tourism management*, 37, 89-96.
- Yu, C. H., Wu, X., Zhang, D., Chen, S., & Zhao, J. (2021). Demand for green finance: Resolving financing constraints on green innovation in China. *Energy policy*, 153, 112255.
- Yu, E. P. Y., Guo, C. Q., & Luu, B. V. (2018). Environmental, social and governance transparency and firm value. *Business Strategy and the Environment*, 27(7), 987-1004.
- Zerbib, O. D. (2022). A sustainable capital asset pricing model (S-CAPM): Evidence from environmental integration and sin stock exclusion. *Review of Finance*, 26(6), 1345-1388.
- Zhu, Y., Sun, L. Y., & Leung, A. S. (2014). Corporate social responsibility, firm reputation, and firm performance: The role of ethical leadership. *Asia pacific journal of management*, 31, 925-947.