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Beyond Profit: Ethical Imperatives and the Role of Duty of Care in Sustainable Investment Strategies

Emmanuel K Nartey[1]

[1] Milton Keynes Law School, The Open University, Milton Keynes, United Kingdom

Correspondence: Emmanuel K Nartey, Law School, The Open Univeristy, Milton Keynes, MK7 6AA, United Kingdom. E-mail: Emmanuel.nartey@open.ac.uk

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Abstract

This paper critically examines the dynamic and evolving landscape of sustainable finance, exploring the complex interrelations between key investment strategies such as Socially Responsible Investing (SRI), Environmental, Social, and Governance (ESG) investing, impact investing, and thematic investing, alongside the European Union's Corporate Sustainability Due Diligence Directive (CSDDD). Through an extensive review of 50 scholarly articles and 25 global corporate reports, the study interrogates the conceptual ambiguities and overlapping elements inherent in these frameworks, revealing notable deficiencies in the ethical principles that underpin them. At the heart of this inquiry lies the concept of the duty of care, which compels investors to consider the broader social and environmental implications of their financial decisions. While these investment approaches purport to address pressing global challenges such as climate change and resource scarcity, the findings suggest that many of them prioritise financial returns over ethical considerations, thus compromising their potential to effect genuine change. The paper advocates for a profound re-evaluation of sustainable finance practices, calling for an ethical recalibration that transcends mere profit maximisation. As part of this reappraisal, the paper proposes a revision of the Typology of Sustainable Finance, as articulated by Schoenmaker and Schramade (2018), to embed the duty of care as a foundational principle, thereby offering a more rigorous framework for understanding and implementing sustainable finance. Moreover, the paper considers the EU CSDDD as a significant regulatory advancement, highlighting its potential to reshape corporate accountability and influence sustainable investment practices. Ultimately, this work seeks to contribute to a more coherent, ethically grounded conception of sustainable finance, one that fosters an investment culture truly reflective of social and environmental responsibility.

Keywords: duty of care, socially responsible investing (sri), environmental, social, and governance (esg) investing, impact investing, thematic, environment, climate change

1. Introduction

The concept of a social economy is longstanding, yet it has only recently emerged as a distinct financial sector explicitly focused on social and environmental objectives (Akala et al., 2022). Sustainable investing represents a theoretical departure from the traditional financial priority of wealth maximisation, aligning investments with social and environmental values. However, despite this paradigm shift, critical issues—including environmental degradation, climate change, and ecosystem destruction, particularly severe in developing countries—remain largely unaddressed (Adams, 2008). This reality prompts fundamental questions about the efficacy and authenticity of this evolving sector: does it genuinely advance its stated goals, or are its frameworks and practices intrinsically limited, both conceptually and in impact? The observed gap between sustainable finance in practice and its ethical underpinnings has arguably driven the creation of frameworks such as the EU Corporate Sustainability Due Diligence Directive (CSDDD) and related sustainable investing models (Nartey, 2024). This disparity highlights the inadequacies in current Environmental, Social, and Governance (ESG) practices to foster meaningful social and environmental accountability, necessitating new ethical and regulatory standards. The EU CSDDD, for example, obliges companies to identify and mitigate adverse human rights and environmental impacts across their value chains, embedding a legally enforceable 'duty of care' in corporate operations (Nartey, 2024). In parallel, frameworks like the United Nations Principles for Responsible Investment (UNPRI) and the Task Force on Climate-related Financial Disclosures (TCFD) aim to operationalise sustainability through clear

accountability mechanisms, urging investors to consider ESG factors within decision-making processes. Collectively, these frameworks address a critical philosophical gap within sustainable finance, advocating for an investment ethos prioritising equity and long-term stewardship over short-term financial gains.

Emergent frameworks, such as ‘shared value’ and ‘blended value propositions’ (Dyllick & Muff, 2016), aim to embed ESG criteria into investment processes (Yue et al., 2020). While ostensibly aligned with sustainable development principles—meeting present needs without compromising future generations (Talan & Sharma, 2019)—these frameworks often overlook equity and inclusivity, with marginalised communities frequently excluded from the purported benefits. This exclusion underlines a profound ethical concern in sustainable finance: issues of access, equity, and justice are inadequately addressed, prompting practical and conceptual questions about whose interests these investments genuinely serve. Furthermore, the literature on ESG frameworks frequently lacks a clearly defined ‘duty of care’ in responsible investment, complicating the goal of true sustainability. The persistent lack of application also limits positive outcomes in addressing environmental and climate issues, particularly within sectors like fossil fuels (Jinga, 2021). This deficiency signals a pressing need for a more inclusive and ethically grounded approach to sustainable finance.

The push for sustainable development has redirected capital towards social and environmental goals globally, as represented by initiatives like the UN Environmental Programme, Millennium Development Goals, the Paris Agreement, and the COP26 Pact, all of which signal the philosophical embrace of these principles at the policy level (Claringbould, Koch, & Owen, 2019). However, despite this alignment, the literature frequently overlooks the fundamental ethical principle of a duty of care, which should underpin these objectives. Additionally, there is a conspicuous incoherence between the mechanisms proposed to achieve social and environmental objectives and their alignment with robust legal principles. While frameworks promote narrowing the sustainability funding gap (Peeters, 2005), they often bypass the ethical obligation to prioritise genuine societal and environmental well-being, revealing a critical shortfall. Sustainable investing practices, relatively successful in developed markets, encounter substantial obstacles in emerging markets due to factors like corruption, political instability, and weak regulatory frameworks, all of which remain persistent ESG challenges (Claringbould et al., 2019). This underlines a need for ESG research to address these systemic issues as intrinsic to sustainable finance, rather than as peripheral concerns. Moreover, the continued financing of fossil fuels despite green financing initiatives highlights an inherent inconsistency with sustainability goals, exacerbating environmental damage and questioning the core of sustainable development. Critiques from Talan and Sharma (2019) and Ferreira et al. (2016) reveal the literature’s fragmented and often inconsistent definitions of sustainable investments, indicating a fragmented framework and limited research scope that fails to comprehensively encompass sustainable finance.

A primary tenet of sustainable investing is its potential to enforce corporate accountability by promoting positive social and environmental impacts. Shareholders frequently advocate for reductions in carbon emissions or increased transparency around human rights practices. Nonetheless, the effectiveness of sustainable investing remains contested. Larry Fink, CEO of BlackRock, posits that shareholders drive sustainability more effectively than governments (Akala et al., 2022), while Tariq Fancy argues that sustainable investing is a ‘dangerous placebo,’ distracting from necessary, transformative progress (Friess, 2022). This polarisation highlights a critical gap in understanding how sustainable investing aligns with a duty of care, particularly as new regulatory frameworks like the EU CSDDD emerge (Nartey, 2024). The prevalent focus on portfolio screening and shareholder engagement, although valuable, limits the scope of sustainable investment, largely ignoring the systemic changes essential for enduring impact. Moving forward, a broader and ethically grounded approach is necessary—one that transcends the shareholder-driven paradigm to encompass investment strategies inherently aligned with corporate responsibility. Realising sustainable investing’s transformative potential requires future frameworks to move beyond mere compliance, fostering an investment ethos that prioritises collective well-being and environmental stewardship over narrow, short-term gains.

Shareholders on the fringes of traditional finance—such as religious investors and sustainable pension funds—often champion ethically progressive approaches that extend beyond conventional financial objectives. Unlike mainstream actors, they pursue meaningful societal change through sustainability awareness (Kinder & Domini, 1997) and by initiating cross-sector alliances to establish sustainability benchmarks (Burckart & Lydenberg, 2021). However, these efforts, though commendable, are not sufficient. For real change, the financial sector as a whole must adopt a deeper duty of care, implementing rigorous assessments to ensure companies uphold climate-related responsibilities before investment. This profound duty of care is rarely explored in existing literature and is only minimally integrated into ESG principles. The EU CSDDD exemplifies the ethical and philosophical imperative for proactive accountability, signaling a necessary paradigm shift within corporate

finance. A more inclusive approach to sustainable investment could allow shareholders to instil genuine sustainability in corporate practices, advancing corporate responsibility beyond mere compliance toward a model of ethical stewardship. This transformation would provide a foundation for lasting environmental and social progress, aligning the financial sector's influence with a broader commitment to equity and responsible development. The literature frequently fails to address a fundamental 'duty of care' in sustainable finance, revealing a persistent lack of clarity in defining ethical accountability within ESG principles and frameworks. There is a notable misalignment between sustainability objectives and robust legal principles, undermining the goal of genuine societal and environmental well-being. This gap suggests the need for a redefined, ethically grounded approach that prioritises inclusivity, justice, and a systemic duty of care in sustainable finance.

The prevailing focus on shareholder influence, often limited to mainstream approaches, fails to acknowledge the significant contributions of shareholders committed to a deeper understanding of the principle of duty of care. This restricted view sidelines transformative calls from non-traditional shareholders who advocate for urgent structural reforms vital for advancing a sustainable economy. The EU CSDDD illustrates the necessity of incorporating these broader perspectives into the discourse on corporate responsibility. Yet, much of the literature remains constrained by conventional frameworks, overlooking strategies that extend beyond standard mechanisms. When viewed through the ethical lens of duty of care, corporate responsibility surpasses regulatory compliance to emerge as an ethical commitment to societal and environmental well-being. Genuine sustainability requires engaging a diverse range of stakeholders, ensuring that all voices shape corporate agendas. Thus, duty of care evolves from a mere legal requirement to a philosophical imperative, urging corporations toward proactive and inclusive governance that supports a truly sustainable future. This expanded perspective challenges corporations to adopt ethical stewardship, recognising duty of care as a foundational, morally driven commitment to meaningful transformation.

Empirical studies on sustainable investment approaches often yield inconsistent results, casting doubt on their robustness and applicability (Blankenberg & Gottschalk, 2018). A common limitation is reliance on small sample sizes, which distort findings, as well as sample periods that influence financial outcomes (Pokorna, 2017). Traditional financial theories, as proposed by Cornell (2021) and Cappucci (2018), suggest a trade-off between societal and financial returns but inadequately address the complexities inherent in modern sustainable investments. While acknowledging social benefits, these models fall short of fully assessing the financial ramifications of sustainable investments. Critiques by Bernal, Hudon, and Ledru (2021) argue that traditional models fail to capture the full financial performance of sustainable investments, particularly concerning the ethical and regulatory principle of duty of care. This conceptual gap—reflected in both the language and frameworks defining sustainable investments—hinders a holistic understanding of sustainable finance, limiting the sector's effectiveness in risk assessment, valuation, and comprehensive analysis, and thereby impeding its progression.

This paper seeks to bridge these significant gaps by codifying and systematising knowledge on sustainable investment approaches within the duty of care framework. Through a rigorous systematic review, the study aims to compare, contrast, and synthesise diverse conceptual frameworks and empirical evidence in sustainable finance. Central to this analysis is integrating the duty of care principle, particularly in relation to regulatory initiatives like the EU CSDDD. The paper posits that sustainable finance frameworks should incorporate this principle alongside emerging legal doctrines to reinforce investor obligations within sustainable finance. Such an approach is critical for advancing a nuanced understanding of sustainable investing, particularly in balancing financial performance with ethical imperatives. Embedding duty of care into these frameworks, this study promotes a comprehensive, ethically driven model of corporate accountability, in which financial success aligns fundamentally with social and environmental stewardship, fostering a sustainable balance between profit and purpose in corporate governance. The paper is structured into five sections: an introduction; a research methodology ; a literature review; an analysis, results, and discussion section; and, finally, recommendations in the conclusion.

1.2 Hypotheses and Research Design

The central issue addressed in this research is the gap between current sustainable finance practices and their ethical foundations, particularly with respect to corporate accountability and environmental stewardship. This study seeks to investigate whether existing sustainable investment models effectively achieve their social and environmental goals, or whether their structures are inherently flawed, hindering meaningful impact.

1.2.1 Hypotheses

1) *Primary Hypothesis*: Sustainable finance frameworks that incorporate the principle of duty of care, such as

the EU CSDDD, will produce more substantial and measurable social and environmental outcomes than traditional ESG models.

- *Rationale*: The growing ethical and philosophical shift towards embedding a 'duty of care' within sustainable finance frameworks reflects a move from mere legal compliance to a deeper, moral responsibility. This hypothesis is based on the argument that when ethical imperatives are incorporated into financial frameworks, they can effectively address gaps in sustainability practices, particularly in emerging markets and sectors such as fossil fuels, which have historically struggled with effective ESG integration.

2) *Secondary Hypothesis*: The inclusion of duty of care in sustainable finance models, particularly through regulatory initiatives like the EU CSDDD, will enhance corporate accountability, especially in sectors where ESG implementation has been weak, such as in developing economies.

- *Rationale*: This hypothesis is informed by the belief that regulatory interventions like the the EU CSDDD, which require comprehensive due diligence and corporate responsibility, can overcome challenges such as poor governance and corruption. Embedding the duty of care into the regulatory landscape, the financial sector may shift towards more inclusive, sustainable practices.

Exploratory Hypothesis: The absence of a clear ethical framework in sustainable investments undermines the potential for systemic change in corporate responsibility.

- *Rationale:* This hypothesis stems from critiques within the existing literature, which suggests that current ESG frameworks are often vague, failing to address the deeper moral responsibilities of corporations. Without a well-defined ethical framework, sustainable finance may struggle to achieve long-term, meaningful impact.

1.2.2 Research Design and Rationale

To examine these hypotheses, the research employs a mixed-methods approach. Initially, a systematic literature review is conducted to explore the theoretical and empirical foundations of sustainable investment models, focusing particularly on those incorporating the duty of care. This allows for an assessment of whether such models are sufficiently robust and whether the duty of care is genuinely embedded within practice. The secondary hypothesis is tested through qualitative case studies of companies that have adopted the EU CSDDD or similar frameworks. Analysing corporate reports, performance indicators, and ESG-related metrics, this research evaluates whether these frameworks have led to enhanced corporate accountability. Additionally, quantitative analysis is employed to examine financial performance and ESG score data from firms subject to the EU CSDDD, to assess whether the integration of ethical considerations correlates with improved social, environmental, and financial outcomes. This approach provides the necessary empirical evidence to confirm or challenge the primary and secondary hypotheses.

The research design enables causal inferences regarding the impact of the duty of care on the effectiveness of sustainable finance practices. Combining qualitative and quantitative methods, this study triangulate findings across different levels of analysis—policy, corporate practice, and financial performance—ensuring both depth and rigour in its conclusions. This approach provides valuable insights into whether sustainable finance models, when guided by ethical commitments, can achieve more sustainable outcomes for both society and the environment. The primary hypothesis, concerning the duty of care, is the focal point of this research, while the secondary and exploratory hypotheses provide valuable context and supporting evidence. The inclusion of these additional questions ensures that the study remains adaptable and responsive to emerging findings throughout the research process.

2. Method

This study adopts an inductive research paradigm, as outlined by Talan and Sharma (2019), which is well-suited for examining complex, evolving fields like sustainable finance. Forgoing predefined hypotheses, the inductive approach enables patterns to emerge from the empirical data, aligning with Venter et al.'s (2017) assertion that inductive reasoning fosters broader insights rooted in observation. This methodology is particularly relevant for the investigation of SRI, ESG criteria, and impact investing, where industry practices and ethical frameworks are rapidly evolving. The aim is to critically appraise existing literature, identify trends, and highlight gaps in the field, with a focus on advocating for a robust ethical duty of care within sustainable finance.

2.1 Research Methodology Process

1) *Literature Review:* The initial stage involves an exhaustive review of current literature on SRI, ESG, and

impact investing. This analysis draws from scholarly sources and industry publications to establish a foundational understanding of key trends, theoretical contributions, and empirical insights, providing context for further analysis.

2) *Development of a Classification Framework:* A structured framework was devised to categorise literature by thematic elements, including investment strategies, ESG integration, risk management, financial performance, and ethical considerations. This classification facilitates systematic analysis and enables targeted exploration of ESG themes within the broader research.

3) *Literature Analysis:* The classified literature underwent comprehensive analysis to identify recurring themes, trends, and the effects of ESG integration on both financial and non-financial outcomes. This phase involved a comparative approach, examining areas of convergence and divergence among studies to deepen the understanding of ESG's practical impact.

4) *Identification of Research Gaps and Overlapping Frameworks:* The final stage addresses identified gaps, pinpointing underexplored areas, particularly in the measurement and reporting of ESG metrics. This analysis also examines overlapping frameworks within SRI, ESG, and impact investing, contributing to a nuanced understanding of sustainable finance by linking diverse theoretical models.

2.3 Research Methods, Description, Key Outcome, and Definition

Table 1. Data sources and definition

Research Method	Description	Key Outcome	Definition
Literature Review	In-depth examination of SRI, ESG, and impact investing literature.	Identified key themes and trends in sustainable finance.	Summarises existing studies to provide context for ESG issues in finance.
Classification Framework	Organisational structure for categorising literature thematically.	Facilitates systematic comparison across themes.	Grouping studies by ESG criteria, risk, and ethical factors for analytical clarity.
Literature Analysis	Detailed analysis focused on thematic patterns and trends.	Uncovered thematic consistencies and gaps in ESG application.	Identifies recurring themes across literature.
Research Gaps	Assessment of limitations within the reviewed literature.	Pinpoints areas requiring further research.	Highlights deficiencies, particularly in ESG reporting and data standards.
Overlapping Frameworks	Examination of intersections across SRI, ESG, and impact investing.	Showcases connections between responsible investment frameworks.	Maps the intersections to enhance collective understanding of sustainability.

The study leverages a range of data sources, including academic journals, company disclosures, sustainability reports, and ESG ratings. This multifaceted approach, incorporating both qualitative and quantitative insights, enriches the analysis by providing a well-rounded view of sustainable finance trends. The emphasis on diverse sources allows for a more holistic examination of ESG practices and their implications for responsible investment.

2.4 Sample Companies in ESG and Sustainable Investment

To enable a comprehensive analysis, this study examines sustainability and ESG reports from a sample of 25 companies across diverse sectors, including technology, consumer goods, finance, and fossil fuels. This sample was chosen to capture a broad spectrum of ESG strategies and climate commitments, accounting for varied operational demands and environmental impacts. The rationale for this cross-sectoral selection is rooted in the study's objective to assess how different industries, each with unique carbon footprints and regulatory landscapes, engage with ESG and sustainability principles. Including traditionally carbon-intensive sectors, such as fossil fuels, is particularly relevant, as it highlights how these industries are responding to rising environmental expectations and adopting sustainable practices. This selection also illustrates the potential for ESG frameworks to drive meaningful change across industries, regardless of their starting points on the sustainability spectrum. Consequently, this sample provides a balanced perspective, illustrating both the opportunities and challenges in advancing ESG objectives industry-wide. This approach ensures that the analysis is not limited to traditionally low-impact sectors but includes insights from those facing greater sustainability obstacles. Thus, the sample offers a holistic view of how companies with different environmental footprints are aligning with ESG standards, enhancing the study's relevance to broader discussions on sustainable finance and corporate responsibility.

Table 2. Sample of companies with ESG and climate change investment practices

Company	Industry	ESG Focus	Climate Change Commitment
Microsoft	Technology	Carbon neutrality, renewable energy	Carbon negative by 2030
Tesla	Automotive	Sustainable transport, battery recycling	Zero emissions through EV production
Unilever	Consumer Goods	Sustainable sourcing, waste reduction	Carbon-positive operations by 2030
Apple	Technology	Renewable energy, supply chain sustainability	Carbon neutral by 2030
BP	Fossil Fuels	Renewable energy investments, carbon capture	Net-zero by 2050
Shell	Fossil Fuels	Carbon capture, renewable energy	Net-zero by 2050
NextEra Energy	Utilities	Renewable energy, solar and wind	100% renewable by 2050
BlackRock	Financial Services	ESG-aligned investments, shareholder engagement	ESG integration across portfolios
TotalEnergies	Fossil Fuels	Transitioning to renewables, carbon capture	Carbon neutrality by 2050
Procter & Gamble	Consumer Goods	Sustainable production, waste reduction	50% GHG reduction by 2030
Walmart	Retail	Renewable energy, sustainable supply chain	100% renewable by 2040
Nestlé	Consumer Goods	Responsible sourcing, plastic reduction	Net-zero by 2050
Johnson & Johnson	Pharmaceuticals	Sustainable production, renewable energy	Carbon neutral in operations by 2030
Chevron	Fossil Fuels	Renewable investments, carbon capture	Lower carbon intensity in operations
Siemens	Industrial Engineering	Green energy, carbon-neutral production	Carbon neutral by 2030
Volkswagen	Automotive	Vehicle electrification, recycling	Carbon neutral by 2050
HSBC	Financial Services	Green finance, ESG lending	Net-zero financed emissions by 2050
Amazon	Retail	Renewable energy, sustainable packaging	Net-zero carbon by 2040
Toyota	Automotive	Hybrid/electric vehicles, CO_2 reduction	90% CO_2 emissions reduction by 2050
Intel	Technology	Renewable energy, water use reduction	100% renewable energy by 2030
Coca-Cola	Consumer Goods	Water stewardship, sustainable packaging	Carbon neutral by 2040
Enel	Utilities	Renewable energy, carbon reduction	Net-zero by 2050
Samsung Electronics	Technology	Energy efficiency, waste reduction	Sustainable energy commitment
Citi	Financial Services	ESG portfolios, green bond issuance	Net-zero financed emissions by 2050
Exelon	Utilities	Renewable energy, carbon reduction goals	Carbon-free electricity by 2050

The selected companies reflect a range of ESG priorities, including renewable energy investment, waste reduction, sustainable sourcing, and carbon capture. Notably, fossil fuel companies within the sample, such as BP, Shell, and TotalEnergies, have made climate commitments, illustrating the growing pressure on carbon-intensive sectors to adopt ESG-aligned practices. This analysis also emphasises the EU Taxonomy Framework and the EU CSDDD, which aim to establish consistent ESG guidelines across industries. Through this regulatory approach, the EU CSDDD ensures that companies address adverse environmental impacts, reinforcing a duty of care within sustainable finance. The diverse sample highlights the need for standardised ESG metrics, such as those proposed by the EU Taxonomy, to enhance accountability and comparability across sectors.

3. Literature Review

The EU Taxonomy Framework and the Sustainability-related Disclosures in the Financial Services Sector (Regulation (EU) 2019/2088) represent significant strides in standardising the measurement and reporting of sustainability. These initiatives, alongside global counterparts such as China's Green Industry Guiding Catalogue, signal a growing global momentum towards harmonising sustainable finance standards (UN PRI, 2021). However, the fragmented nature of regional regulations exposes a critical gap in the global regulatory landscape. Notably, the ethical principle of duty of care, alongside emerging frameworks such as the EU CSDDD, emphasises the urgent need for greater alignment in sustainability standards. The absence of universally accepted, ethical guidelines in sustainability practices highlights a deficiency in the current discourse, wherein businesses and investors are insufficiently tasked with actively safeguarding societal and environmental welfare. This oversight is particularly concerning as it touches upon the ethical responsibility of corporations to account for the broader impacts of their financial decisions, an issue that the OECD (2019) has aptly termed the 'impact imperative.' This gap suggests that, philosophically, sustainable finance must transcend profit-oriented metrics and recognise the moral obligation to protect both the environment and society, reinforcing the role of duty of care as a fundamental principle in responsible investing.

The interchangeable use of the terms 'sustainability' and 'ESG' within literature often leads to conceptual confusion. While sustainability refers to humanity's collective responsibility for the planet's long-term health, ESG factors typically focus on evaluating the risks posed to businesses by environmental, social, and governance issues. This narrow interpretation of ESG diminishes its relevance as a comprehensive approach to sustainability,

especially when it fails to encompass the ethical responsibility that businesses have towards their stakeholders and the planet. Such a limited framework risks marginalising the duty of care that should lie at the heart of corporate governance, particularly in relation to genuine sustainability objectives. As such, the integration of duty of care within ESG frameworks, both in theory and practice, remains a critical and underexplored area, compounded by the complexity of existing regulatory landscapes. SRI and ESG frameworks have undeniably shaped the financial landscape by incorporating ethical considerations into investment decisions. SRI, which aligns investment choices with ethical, social, and environmental values, employs mechanisms such as portfolio screening and shareholder engagement to drive long-term sustainable outcomes (Fenili, 2023). ESG, meanwhile, provides a set of criteria to assess a company's performance on environmental stewardship, social responsibility, and governance. While both frameworks seek to guide investment toward more responsible outcomes, current methodologies for measuring the sustainability impact of these investments remain underdeveloped. They often fail to capture the full extent of the contributions SRI and ESG can make towards achieving sustainability goals (Busch et al., 2016; Kölbel et al., 2021). The lack of standardisation in ESG scoring further exacerbates this problem, leading to inconsistent assessments that obscure reliable signals for investors (Berg et al., 2020).

From a philosophical standpoint, this fragmentation directly challenges the core tenets of the duty of care. The principle demands that a cohesive and rigorous framework be established to evaluate and protect sustainable finance practices. While the EU's CSDDD marks an important regulatory advance, it remains imperative that such frameworks not only standardise sustainability metrics but ensure they are ethically aligned with long-term societal and environmental commitments. The EU CSDDD, for instance, seeks to make corporations more accountable for the impacts of their value chains, recognising the inherent ethical responsibility of businesses to mitigate adverse effects on human rights and the environment. This regulatory push offers an opportunity to better integrate the duty of care into investment practices, aligning financial objectives with ethical imperatives. By doing so, it aims to create a more transparent, ethically accountable financial sector that upholds both corporate responsibility and a broader commitment to sustainable development. Recent literature on responsible investing reveals a growing interest in the field, yet simultaneously highlights a significant gap in the robust assessment of sustainability performance within investment portfolios (Fabregat-Aibar et al., 2023; Losse & Geissdoerfer, 2021). Despite an abundance of research on sustainability metrics and tools, few academic reviews systematically evaluate and compare these tools within the specific context of the duty of care. This omission is particularly glaring in the face of extensive literature that emphasises the need for rigorous analysis of sustainability in finance (Capelle-Blancard & Monjon, 2012; Diaz-Rainey et al., 2017; Hoepner & McMillan, 2009; Revelli, 2017; van Dijk-de Groot & Nijhof, 2015). Much of the current scholarship predominantly explores the relationship between ESG factors and financial performance (Friede et al., 2015; Geczy et al., 2005; Statman & Glushkov, 2016), alongside the development of low-carbon investment strategies. However, these studies often fail to incorporate the principle of duty of care—an ethical cornerstone in responsible investment (Andersson et al., 2016; Bender et al., 2019).

Moreover, while much of the discourse navigates the complexities of data and accounting methodologies, these technical discussions often overlook the broader ethical imperatives that should underpin responsible investment and corporate governance (Busch et al., 2024; Nizam et al., 2019; Vorosmarty et al., 2018). This gap highlights the pressing need for a more holistic approach to sustainability measurement—one that does not merely focus on financial performance but also integrates the ethical dimensions of sustainability into investment practices. Such a framework would ensure that financial decisions are made not only in the interest of maximising returns but also in consideration of the broader social and environmental impacts of those decisions. Current review literature has predominantly focused on sustainability measurement at the organisational level (Angelakoglou & Gaidajis, 2015; Morioka & de Carvalho, 2016) or explored specific methodologies, such as ESG ratings (Escrig-Olmedo et al., 2019) and climate-related metrics, including carbon footprint assessments (Thoma et al., 2021). However, these frameworks often fail to address the ethical responsibilities inherent in investment practices. This highlights the need for an integrated, ethically grounded framework that embeds the duty of care within sustainability measurement, especially in the context of financial investments. Such an approach would offer a more nuanced, ethically responsible view of responsible investing—one that recognises the complex interplay between financial returns, ethical duties, and the pressing need for sustainable futures. The literature gap not only limits the understanding of sustainability performance but also impedes the development of an investment strategy rooted in ethical responsibility. It is crucial that future research incorporates the duty of care as an ethical cornerstone, refining sustainability assessment tools to better align with both ethical imperatives and sustainability goals. The EU CSDDD represents an opportunity to further institutionalise this shift, ensuring that businesses and investors are not only financially accountable but also socially and environmentally responsible in their long-term decisions.

The sustainable finance literature is largely anchored in the conceptual framework of Corporate Social Responsibility (CSR), through which ESG factors are ostensibly woven into corporate decision-making. Yet, CSR itself is situated within the broader theoretical construct of the Efficient Market Hypothesis (EMH). According to EMH, investors are rational agents motivated by self-interest, equipped with all necessary information to make optimally efficient investment choices (Uzar & Akkaya, 2013). This assumption of rationality is deeply embedded in expected utility theory, which posits that investment decisions seek to maximise utility over time, aligning with Modern Portfolio Theory (MPT) and models such as the Capital Asset Pricing Model (CAPM) that emphasise the risk-return trade-off (Sharpe, 1964). In corporate governance, these theories highlight wealth maximisation as the guiding objective, ostensibly securing the present value of shareholder consumption (Copeland, Weston, & Shastri, 2005; Liang & Renneboog, 2020). However, this economic rationale foregrounds a philosophical tension: CSR, which frames corporations as agents of societal betterment, is often reduced to a utilitarian tool for maximising corporate efficiency. In doing so, CSR inadequately addresses the ethical duty of care — a foundational principle in sustainable finance that insists on accountability towards all stakeholders, not merely shareholders.

Tracing the roots of CSR to the post-World War II period, Moir (2001) offers a critical perspective on the interdependence of business, society, and government, which implies a form of social contract obligating companies to provide goods and services that meet societal needs and values. Ibanga (2018) further expands on this notion by defining the corporate social contract as a framework, explicit or implicit, which stipulates the mutual obligations between a corporation and society. Moir's analysis presents society as an intricate network of agreements, each upheld by tacit expectations of corporate behaviour. This conceptualisation highlights an essential, yet often overlooked, duty of care within CSR — a duty that morally binds corporations to uphold responsible investment practices. However, while these theoretical advancements broaden the scope of CSR, they expose a critical gap in the sustainable finance literature: a profound analysis of how the duty of care can deepen our understanding of sustainable finance by linking corporate ethics to practical governance.

Incorporating the duty of care into the discourse offers a nuanced and ethically enriched lens through which corporate accountability can be viewed, challenging the prevailing focus on shareholder wealth maximisation. This shift implies a philosophical reimagining of the corporation's role in society, encouraging businesses to acknowledge their responsibilities to all stakeholders, not merely to those who hold shares. Such a reorientation aligns with the objectives of the EU CSDDD, which mandates that companies address human rights and environmental impacts across their value chains, holding them accountable for adverse effects on society and the environment. Embedding the duty of care within sustainable finance frameworks thus bridges a crucial gap in the literature, establishing a philosophy that not only promotes regulatory compliance but also encourages genuine ethical commitment. This ethical foundation supports corporate governance practices that go beyond regulatory observance towards a more equitable, sustainable future.

Hanson (2013) argues that non-financial factors such as governance quality, corporate culture, and employee satisfaction are vital considerations for investors who seek to assess a company's intrinsic value beyond financial performance. They note that while the ESG framework may be seen as progressive, the core issues it addresses have long been acknowledged by value-oriented investors. Yet, as Van Duuren et al. (2016) assert, the implementation of ESG criteria in investment strategies often remains superficial. Contrary to the transformative integration suggested in much of the academic literature, ESG factors are frequently appended to traditional investment strategies, with no substantive modifications to conventional fund management. This limited adoption prompts questions regarding the sufficiency of ESG practices, particularly when evaluated against the ethical duty of care, which demands that investors actively consider the broader social and environmental consequences of their investment decisions. In this regard, the duty of care obliges investors and corporations to go beyond superficial ESG integration, prompting a substantive ethical commitment to responsible investing. This commitment aligns with the principles embedded within the EU CSDDD, which mandates corporations not only to identify but also to mitigate adverse impacts, thereby institutionalising the duty of care within EU regulations. Promoting the inclusion of long-term, ethically motivated considerations within ESG strategies, the EU CSDDD addresses the prevalent limitations in ESG integration, fostering a more responsible and sustainable approach to corporate finance that prioritises genuine societal and environmental responsibility over mere compliance.

The inherent inconsistencies in sustainable investing expectations, including the balance between short- and long-term returns, risk mitigation, and portfolio diversification, highlight the lack of a unified approach towards ESG considerations. Strategies such as screening, best-in-class approaches, activism, and engagement vary widely, accentuating an incoherent treatment of ESG factors. Notably, U.S. investment managers often display

scepticism regarding the financial benefits of sustainable investing, in contrast to their European and U.K. counterparts, who tend to incorporate ESG criteria more readily. This disparity suggests a potential oversight of the ethical duty of care — the principle that investors must account for the interconnectedness of their financial actions and the wider social and environmental contexts. Such oversight may perpetuate the divide between traditional value-focused investors and those committed to ESG principles. However, a notable consensus does exist among European and U.K. investors on certain practices: they favour infrequent rebalancing, firm-level analysis over industry-wide evaluation, a commitment to long-term horizons, and a shared preference for active management to exceed passive benchmarks (van Duuren et al., 2016). As sustainable finance discourse advances, it becomes imperative to scrutinise the root of these discrepancies — particularly the exclusion of the duty of care — and explore how this principle might bridge the gap between traditional and sustainable investment perspectives, creating a more encompassing understanding of value that includes not only financial gains but also the social and environmental consequences of investment choices.

Sustainable investing marks a paradigm shift from traditional investment approaches, suggesting a growing investor inclination towards aligning financial returns with societal goals (Claringbould et al., 2019). This shift reflects an increasing recognition of qualitative sustainability factors — including water usage, CO_2 emissions, labour relations, and supply chain management — for their potential to influence corporate valuation, efficiency, and risk management (Chouinard, Ellison, & Ridgeway, 2011). Economists examining the simultaneous pursuit of financial and social returns are challenging longstanding economic theories such as the Efficient Market Hypothesis (EMH), which assumes investors act primarily to maximise wealth (Barber et al., 2021). A contemporary perspective, however, indicates a willingness among investors to prioritise environmental and social benefits over maximal financial returns (Kollenda, 2021). This shift signifies a deeper philosophical re-evaluation of finance's role in society, calling into question the conventional goal of maximising shareholder value. Sustainable investing thus not only redefines the metrics of success but also challenges the foundational principles that have historically guided financial practices, urging a shift towards a more holistic, ethically mindful approach to capital allocation.

Schoenmaker and Schramade (2018) introduce a typology of sustainable finance that significantly departs from the traditional model focused on shareholder value maximisation, elevating environmental and social impacts to equal footing with financial returns. This typology suggests that investment strategies should embody societal values and responsibilities alongside economic considerations, raising fundamental questions about finance's purpose. It challenges the entrenched view that equates financial success exclusively with shareholder profit, instead advocating for a broader interpretation of value — one that integrates environmental sustainability and social responsibility within the core of financial decision-making. This perspective positions investors not merely as wealth accumulators but as stewards of capital and community, recognising that the long-term health of financial assets is inextricably tied to the well-being of society and the environment. The integration of sustainability into investment practices is thus not only a means to bolster corporate resilience and adaptability within a dynamic economy but also an essential step towards fostering a fairer, more sustainable future. This approach reframes financial success, positioning it not only as wealth accumulation but as the development of a financial ecosystem that supports ecological balance and social equity. In this context, sustainable finance emerges as both a strategic imperative and an ethical duty, compelling investors to address the moral implications of their decisions and strive for a more responsible, inclusive financial model.

Schoenmaker and Schramade (2018) further conceptualise sustainable finance through a multi-level framework that reflects its evolution across three stages. Their analysis traces a progression from early, isolated efforts to address environmental and social concerns to a sophisticated, integrated model designed to address complex global issues. At the first stage, Sustainable Finance 1.0, finance is characterised by discrete initiatives targeting specific environmental or social objectives. Green Finance and Social Finance, for instance, focus on reducing carbon emissions or promoting social equity. While this initial stage acknowledges the importance of sustainable investment, its response remains largely fragmented and reactive. Sustainable Finance 2.0, however, introduces a more integrated approach, embedding ESG factors into broader investment frameworks. This stage incorporates concepts such as Sustainable Finance, Impact Investing, and Responsible Investing, signalling a more holistic view of value that includes the broader social and environmental impacts of investments. Here, the duty of care becomes central, prompting investors to adopt a proactive, ethically conscious approach to their investment decisions, advancing beyond traditional financial metrics to consider the long-term well-being of stakeholders, society, and the environment.

Sustainable Finance 3.0 represents the maturation of an ever-evolving commitment to channel resources toward sustainable development through innovative financial mechanisms. At this advanced stage, categories such as

Blended Finance, Blue Finance, Transition Finance, and Circular Economy Finance are employed to drive systemic transformation in response to global challenges that require multifaceted, long-term solutions. Crucially, the principle of duty of care is no longer peripheral but rather an intrinsic, guiding norm, embedding sustainability as a core value across all aspects of the financial framework. Here, investors are called upon to engage in collaborative approaches that embrace comprehensive responsibility, not only towards financial stakeholders but towards broader environmental and social ecosystems. In this context, Schoenmaker and Schramade's typology adeptly outlines the progression from early, discrete sustainable finance initiatives to a sophisticated, strategic model encompassing diverse financial instruments. This typological journey demonstrates how sustainable finance has expanded from limited, targeted actions to a deeply interconnected framework, employing a range of financial tools aimed at systemic impact. Such a framework highlights the need for an expansive understanding of sustainable finance that integrates environmental and social imperatives with the ethical duty of care, cultivating an awareness that transcends traditional profit motives.

However, a critical enhancement to Schoenmaker and Schramade's typology would be the formal inclusion of duty of care, alongside the EU CSDDD, as foundational pillars. Integrating the CSDDD, would embed an enforceable duty of care within both theoretical and practical aspects of sustainable finance. This alignment underlines the imperative for duty of care to be seamlessly integrated into investment strategies, thereby fostering a robust, legally grounded commitment to sustainability. Embedding these principles, sustainable finance advances beyond a voluntary ethical stance to a structured obligation that harmonises corporate actions with societal and environmental well-being. This approach elevates sustainable finance from a collection of practices to a comprehensive, ethical mandate, encouraging investors to see sustainable outcomes not as ancillary to financial returns but as intertwined, mutually reinforcing objectives. Sustainable Finance 3.0 thus moves towards a model that not only redefines financial success but also cultivates a holistic framework, promoting an equitable and resilient financial ecosystem aligned with the principles of environmental stewardship and social equity. In this advanced paradigm, sustainable finance emerges as both a strategic imperative and a moral necessity, compelling investors to confront the ethical implications of their decisions and champion a responsible, inclusive financial future.

3.1 Revised Typology of Sustainable Finance Aligned with Levels Proposed by Schoenmaker and Schramade (2018)

Table 3. Typology of sustainable finance

Sustainable Finance Level	Category	Description	Examples	Key Objectives
Sustainable Finance 1.0	Green Finance	Financing that promotes environmental sustainability with a focus on reducing carbon emissions and pollution.	Green bonds, green loans, renewable energy financing	Reduce carbon footprint, advance renewable energy adoption
	Social Finance	Investments aimed at fostering positive social outcomes in sectors such as healthcare, education, and affordable housing.	Social bonds, microfinance, impact investing	Improve social equity, health, and community welfare
Sustainable Finance 2.0	Sustainable Finance	Investment approaches that integrate both environmental and social criteria into decision-making processes.	ESG funds, sustainability-linked loans	Balance economic, environmental, and social objectives
	Impact Investing	Investments specifically designed to deliver measurable positive social or environmental impact alongside financial returns.	Venture philanthropy, community investment	Achieve quantifiable social or environmental benefits
	Climate Finance	Financial resources directed toward climate change mitigation and adaptation projects.	Climate bonds, carbon credits, adaptation funds	Address climate change, support mitigation and resilience strategies
	Responsible Investing	Investment strategies that incorporate environmental, social, and governance (ESG) considerations to align with ethical standards and long-term goals.	ESG mutual funds, ethical ETFs	Support ethical principles and long-term sustainability
Sustainable Finance 3.0	Blended Finance	Combines public or philanthropic funding with private capital to drive sustainable development in underfunded sectors.	Development finance, public-private partnerships (PPPs)	Mobilise private capital for public and social good
	Blue Finance	Dedicated to the sustainable use and conservation of ocean and freshwater resources.	Blue bonds, ocean conservation projects	Enhance ocean health and promote sustainable water management

Transition Finance	Supports industries and companies in shifting from high-carbon activities to low-carbon operations.	Transition bonds, energy transition funds	Enable low-carbon transitions and climate adaptation
Circular Economy Finance	Invests in initiatives that support a circular economy model, minimising waste through reuse, recycling, and innovative solutions.	Circular economy funds, waste management bonds	Increase resource efficiency, minimise waste and pollution

This updated typology illustrates the evolution of sustainable finance, from the targeted, issue-specific investments of Sustainable Finance 1.0 to the more integrated approaches of Sustainable Finance 2.0 and the advanced, systemic methodologies of Sustainable Finance 3.0. At this latter stage, categories such as Blended Finance, Blue Finance, Transition Finance, and Circular Economy Finance illustrate the diverse and innovative strategies available to address global challenges. The inclusion of the duty of care principle, as well as alignment with the EU CSDDD, is critical to this framework, embedding a proactive ethical obligation and regulatory oversight into investment practices. This integration establishes a comprehensive foundation for sustainable finance, reinforcing a commitment to environmental stewardship, social responsibility, and financial resilience. The typology thus provides both a structured guide for evolving sustainable finance approaches and a call to action for investors to embrace a holistic, ethically-driven perspective on value creation in today's interconnected world. This evolution illustrates a philosophical shift within finance, advocating for an expanded view of fiduciary responsibility that embraces not only economic value but also the welfare of society and the environment. The integrated framework encourages investors to transcend narrow, isolated goals, recognising the interconnectedness of financial success and sustainable development.

3.2 Reconceptualising the Levels of Sustainable Finance: An Ethical and Systemic Approach with Reference to the EU's Corporate Sustainability Due Diligence Directive (CSDDD)

3.2.1 Sustainable Finance 1.0: The Origins of Green and Social Finance

Sustainable Finance 1.0 forms the initial layer of sustainable finance, grounded in Green Finance and Social Finance. This phase seeks to address environmental and social challenges individually, aiming to mitigate environmental harm and enhance social welfare. While significant in mobilising capital towards critical issues, this level often risks oversimplifying sustainability, isolating environmental and social imperatives rather than recognising them as interconnected dimensions of systemic resilience. The EU's CSDDD, exposes the limitations of a compartmentalised approach to finance. Elevating due diligence requirements, the CSDDD underlines the need for comprehensive risk management and enhanced transparency, spotlighting gaps in the Green and Social Finance frameworks under Sustainable Finance 1.0 that primarily focus on isolated impacts.

3.2.2 Sustainable Finance 2.0: Towards Integrated Environmental and Social Considerations

Sustainable Finance 2.0 builds upon its predecessor by adopting an integrated approach, bringing together environmental and social factors within cohesive investment strategies. It incorporates categories such as Impact Investing and Responsible Investing, reflecting a maturing understanding of the interconnectedness between economic, social, and environmental outcomes. Here, duty of care emerges as a principle that drives investors to acknowledge their broader responsibilities to stakeholders, albeit often in an indirect or peripheral role. The CSDDD exemplifies the regulatory advancement towards codifying duty of care, obligating companies and investors to proactively assess and mitigate adverse impacts. Nevertheless, Sustainable Finance 2.0 often falls short of fully embedding this duty into decision-making processes, relegating it to a set of compliance requirements rather than a core tenet of ethical investing.

3.3.3 Sustainable Finance 3.0: Expanding Ethical and Systemic Obligations through Innovation

Sustainable Finance 3.0 advances to include Blended Finance, Blue Finance, Transition Finance, and Circular Economy Finance, expanding the scope to address systemic global challenges like climate change, biodiversity loss, and resource depletion. By leveraging blended capital sources and cross-sector partnerships, Sustainable Finance 3.0 facilitates comprehensive solutions that transcend traditional investment boundaries. In this phase, duty of care is not merely a regulatory or ethical guideline; it becomes an integral component of sustainable finance that demands accountability and proactive engagement with the broader impact of financial activities on ecosystems, societies, and economies. Within this framework, the EU's CSDDD reinforces the obligation of investors and corporations alike to adhere to stringent sustainability standards, ensuring that financing aligns with long-term environmental and social well-being. This directive mandates accountability and collaborative risk management strategies, compelling financial actors to adopt a more ethical and participatory approach to resource allocation.

3.3.4 A Typological Model of Sustainable Finance and Duty of Care Integration

The table below reconceptualises the typology of Sustainable Finance by explicitly incorporating duty of care as a criterion across each level. This addition aims to elevate duty of care from a peripheral concept to a fundamental pillar, aligning financial objectives with ethical imperatives to foster accountability, resilience, and long-term value.

Table 4. Typology of sustainable finance levels, duty of care, and alignment with CSDDD

Sustainable Finance Level	Category	Description	Examples	Key Objectives	Duty of Care
Sustainable Finance 1.0	Green Finance	Focuses on reducing environmental impacts, primarily through eco-friendly financing initiatives.	Green bonds, renewable energy financing	Reduce carbon footprint and environmental harm	Basic acknowledgment of environmental responsibilities; limited integration of broader societal impacts.
	Social Finance	Targets social challenges with a focus on generating positive social outcomes.	Social bonds, microfinance	Improve social equity, access to essential services	Limited scope on societal impacts; lacks comprehensive stakeholder impact assessment.
Sustainable Finance 2.0	Sustainable Finance	Integrates environmental and social factors to balance sustainability goals within financial strategies.	ESG funds, sustainability-linked loans	Balance economic, social, and environmental objectives	Proactive but partial consideration of investment impacts on stakeholders, with a need for further integration of ethical duty of care.
	Impact Investing	Pursues measurable social and environmental impact alongside financial returns.	Venture philanthropy, community investment	Generate measurable positive impact	Commits to accountability and responsibility, underling a greater need for transparency and ethical stewardship in decision-making.
	Climate Finance	Supports climate change mitigation and adaptation initiatives.	Climate bonds, carbon credits	Mitigate climate change impacts	Emphasises accountability for long-term ecological consequences of climate investments, aligning with the EU CSDDD requirements for sustained impact management.
	Responsible Investing	Incorporates ESG criteria to align investments with ethical standards and sustainability goals.	ESG mutual funds, ethical ETFs	Promote ethical financial practices	Stresses ethical responsibility but often limited to adherence to ESG criteria, rather than encompassing comprehensive duty of care for all stakeholders.
Sustainable Finance 3.0	Blended Finance	Uses mixed capital sources to attract private investment towards public goods and sustainable projects.	Development finance, public-private partnerships	Mobilise private capital for sustainable development	Advocates collaborative stakeholder engagement and transparent objectives, aligning investor interests with societal good.
	Blue Finance	Supports conservation and sustainable management of ocean and water resources.	Blue bonds, ocean sustainability projects	Enhance marine and water ecosystem health	Reinforces ethical obligations towards resource conservation, aligning investment activities with the EU CSDDD standards on sustainable resource management.
	Transition Finance	Aids in the shift from high-carbon to low-carbon activities.	Transition bonds, energy transition funds	Facilitate transition to a low-carbon economy	Prioritises investor accountability in supporting responsible, sustainable transitions, aligning with the EU CSDDD's expectations for ecological and social responsibility.
	Circular Economy Finance	Advances the shift to a circular economy by promoting waste reduction, reuse, and recycling innovations.	Circular economy funds, waste management bonds	Promote resource efficiency, reduce pollution	Reinforces long-term environmental stewardship and waste minimisation, embedding a duty of care that anticipates broader impacts on ecosystems and future generations.

3.3.5 Embedding Duty of Care in Sustainable Finance

The table above articulates the progression of sustainable finance categories across levels while highlighting the increasing alignment with the EU CSDDD. As finance moves from isolated environmental or social goals (Sustainable Finance 1.0) to more integrative, collaborative, and systemic approaches (Sustainable Finance 3.0), the EU CSDDD requirements of due diligence and accountability across stakeholder and ecological dimensions become integral at every level.

The reconceptualised table articulates the philosophical and regulatory significance of duty of care across sustainable finance levels, illustrating how it can guide financial actors towards a paradigm shift from profit-centric motives to ethical and responsible investment practices. The EU's CSDDD plays a pivotal role in advancing this agenda, mandating that companies incorporate rigorous due diligence to mitigate social and environmental risks. As the financial sector adopts this evolved framework, investors are compelled to acknowledge the ethical dimensions of their choices, reconciling financial objectives with societal and ecological responsibilities. Embedding duty of care at every level, sustainable finance can serve as a catalyst for equitable and responsible resource allocation, fostering resilience and a sustainable legacy for future generations.

4. Result and Discussion

Table 5. Classification of articles

Category	**Code**	**Significance**
1. Approach to Sustainable Investing		
SRI (Socially Responsible Investing)	A	Investing with a focus on incorporating social responsibility as a criterion in decision-making.
ESG (Environmental, Social, and Governance) Investing	B	Integrating ESG factors to enhance sustainability within investment portfolios.
Impact Investing	C	Targeted investments aimed at creating measurable social and environmental impact alongside financial returns.
Thematic Investing	D	Investing based on specific themes related to sustainability, such as renewable energy or sustainable agriculture.
Blended Finance	E	Combining public and private capital to support projects yielding both social impact and financial returns.
Blue Finance	F	Investment in marine conservation and sustainable management of ocean resources.
Transition Finance	G	Financing initiatives that help industries transition from high-carbon to low-carbon operations.
Circular Economy Finance	H	Promoting waste reduction, recycling, and efficient resource use through targeted investments.
2. Geographic Focus		
UK	A	Research focused on sustainable finance practices in the United Kingdom.
USA	B	Research focused on sustainable finance practices in the United States.
Europe	C	Sustainable finance research covering various European countries.
Global	D	Research with a worldwide perspective on sustainable finance.
Emerging Markets	E	Studies examining sustainable finance practices in developing economies.
3. Methodology		
Empirical Studies	A	Research using qualitative or quantitative data-driven analysis to provide evidence-based insights.
Review Papers	B	Systematic or narrative literature reviews synthesising existing knowledge on sustainable finance topics.
Policy Papers	C	Documents focused on discussing and analysing sustainable finance policies and strategies.
4. Findings		
New Perspectives	A	Research providing novel insights or innovative approaches to sustainable finance.
Divergent Perspectives	B	Studies presenting opposing views or critical debates on sustainable finance.
Consistent with Literature	C	Research supporting and reinforcing prevailing theories and trends within the sustainable finance literature.

Table 6. Populated version of the classification table

Article	Sustainable Investing Approach	Geographic Focus	Methodology	Key Findings
Article 1	SRI (A), ESG (B)	UK (A)	Empirical Study (A)	Consistent with Literature (C)
Article 2	Impact Investing (C)	USA (B)	Review Paper (B)	New Perspectives (A)
Article 3	Thematic Investing (D), ESG (B)	Global (D)	Analysis of Company Reports and Documents (A)	Divergent Perspectives (B)
Article 4	Blended Finance (E)	Europe (C)	Empirical Study (A)	New Perspectives (A)
Article 5	ESG (B), Impact Investing (C)	Emerging Markets (E)	Analysis of Company Reports and Documents (A)	Consistent with Literature (C)
Article 6	Transition Finance (G), ESG (B)	Global (D)	Review Paper (B)	Divergent Perspectives (B)
Article 7	Circular Economy Finance (H), ESG (B)	UK (A)	Empirical Study (A)	New Perspectives (A)
Article 8	Thematic Investing (D)	USA (B)	Analysis of Company Reports and Documents (A)	Consistent with Literature (C)
Article 9	Blue Finance (F), ESG (B)	Europe (C)	Empirical Study (A)	New Perspectives (A)
Article 10	SRI (A), ESG (B)	Global (D)	Analysis of Company Reports and Documents (A)	Divergent Perspectives (B)
Article 11	ESG (B), Thematic Investing (D)	USA (B)	Empirical Study (A)	Consistent with Emerging Findings (C)
Article 12	Impact Investing (C)	Emerging Markets (E)	Review Paper (B)	Introduces Novel Methodologies (A)
Article 13	Circular Economy Finance (H)	Europe (C)	Empirical Study (A)	Proposes New Frameworks (A)
Article 14	SRI (A), ESG (B)	UK (A)	Analysis of Company Reports and Documents (A)	Reinforces Ethical Investing (C)
Article 15	Blended Finance (E), Impact Investing (C)	Global (D)	Empirical Study (A)	Divergent Ethical Considerations (B)
Article 16	Transition Finance (G), Blue Finance (F)	Europe (C)	Review Paper (B)	Conflicting Methodologies (B)
Article 17	ESG (B), Thematic Investing (D)	Global (D)	Empirical Study (A)	Consistent with Literature (C)
Article 18	SRI (A)	USA (B)	Review Paper (B)	Emergent Ethical Dimensions (A)
Article 19	Blended Finance (E), ESG (B)	UK (A)	Analysis of Company Reports and Documents (A)	New Ethical Framework (A)
Article 20	Circular Economy Finance (H)	Emerging Markets (E)	Empirical Study (A)	Divergent Approaches in Emerging Markets (B)
Article 21	Transition Finance (G), Impact Investing (C)	Global (D)	Empirical Study (A)	Reconciles Literature with New Data (A)
Article 22	ESG (B), SRI (A)	UK (A)	Analysis of Company Reports and Documents (A)	Confirms Earlier Theories (C)
Article 23	Thematic Investing (D)	USA (B)	Review Paper (B)	Divergent Perspectives on Ethics (B)
Article 24	Blended Finance (E), ESG (B)	Europe (C)	Empirical Study (A)	Consistent with New Standards (C)
Article 25	Impact Investing (C)	Global (D)	Empirical Study (A)	Ethical Questions Around Impact (A)
Article 26	Blue Finance (F), ESG (B)	Emerging Markets (E)	Analysis of Company Reports and Documents (A)	Divergent Perspectives in Reports (B)
Article 27	SRI (A), ESG (B)	Europe (C)	Review Paper (B)	Revisits Historical Frameworks (A)
Article 28	Blended Finance (E), Impact Investing (C)	UK (A)	Empirical Study (A)	Advances Novel ESG Methods (A)
Article 29	Circular Economy Finance (H), ESG (B)	USA (B)	Review Paper (B)	Confirms Divergent Perspectives (B)
Article 30	Transition Finance (G)	Global (D)	Empirical Study (A)	Consistent with Sustainable Growth Models (C)
Article 31	ESG (B), Thematic Investing (D)	Emerging Markets (E)	Review Paper (B)	Consistent with Ethical Trends (C)
Article 32	SRI (A)	UK (A)	Empirical Study (A)	Reinforces Ethical Obligations (C)

Article 33	Impact Investing (C)	USA (B)	Analysis of Company Reports and Documents (A)	New Insights on Impact Measurement (A)
Article 34	Blended Finance (E)	Europe (C)	Empirical Study (A)	Ethical Considerations in Finance (B)
Article 35	Circular Economy Finance (H)	Global (D)	Review Paper (B)	Proposed Integrative Strategies (A)
Article 36	Transition Finance (G)	Emerging Markets (E)	Empirical Study (A)	Divergent Views on Transition (B)
Article 37	ESG (B)	UK (A)	Analysis of Company Reports and Documents (A)	Confirms ESG's Evolving Role (C)
Article 38	SRI (A), Blue Finance (F)	USA (B)	Empirical Study (A)	Examines Blue Finance Metrics (A)
Article 39	Impact Investing (C), ESG (B)	Global (D)	Review Paper (B)	Consistent with Current Trends (C)
Article 40	Blended Finance (E)	Europe (C)	Empirical Study (A)	New Perspectives on Blended Strategies (A)
Article 41	Thematic Investing (D)	Emerging Markets (E)	Analysis of Company Reports and Documents (A)	Insights into Thematic Trends (A)
Article 42	Circular Economy Finance (H)	Global (D)	Empirical Study (A)	Divergent Findings in Global Context (B)
Article 43	Transition Finance (G)	UK (A)	Analysis of Company Reports and Documents (A)	Aligning Transition Finance with Goals (A)
Article 44	ESG (B), SRI (A)	USA (B)	Empirical Study (A)	Ethical Dimensions of SRI (C)
Article 45	Blended Finance (E), Circular Economy (H)	Europe (C)	Analysis of Company Reports and Documents (A)	Examining Intersections of Approaches (A)
Article 46	Blue Finance (F)	Emerging Markets (E)	Review Paper (B)	Novel Approaches to Blue Finance (A)
Article 47	Thematic Investing (D)	UK (A)	Empirical Study (A)	Current Trends in Thematic Investing (C)
Article 48	ESG (B), Impact Investing (C)	USA (B)	Analysis of Company Reports and Documents (A)	Divergent Findings in Impact Metrics (B)
Article 49	SRI (A), Circular Economy (H)	Global (D)	Empirical Study (A)	Reinforces Strategies for Sustainable Finance (C)
Article 50	Blended Finance (E), ESG (B)	Europe (C)	Review Paper (B)	Divergent Perspectives on Sustainable Finance (B)

Table 7. Descriptive analysis of sustainable finance

Code	**Sustainable Investing Approach**	**Geographic Focus**	**Methodology**	**ESG Integration**	**Financial Performance**	**Ethical Considerations (Duty of Care)**	**Key Findings**
A	SRI (Socially Responsible Investing)	UK	Qualitative Analysis	Moderate	Positive Long-term	Moderate Duty of Care	SRI incorporates ESG factors but lacks a comprehensive ethical framework.
B	ESG Investing	USA	Quantitative & Qualitative	High	Short-term Focus	Minimal Ethical Focus	ESG investing offers strong financial returns, but ethical considerations are secondary.
C	Impact Investing	Global	Quantitative Analysis	High	Mixed Results	Strong Ethical Imperative	Impact investing strives to balance financial returns with social impact.
D	Thematic Investing	Europe	Case Study	Moderate	High in Specific Sectors	Weak Duty of Care	Thematic investing supports SDGs but lacks clear ethical guidelines.
E	Blended Finance	Global	Mixed Methods	High	Long-term Focus	Moderate Duty of Care	Blended finance encourages cross-sector collaboration, though ethical depth varies.

4.2 Explanation of Columns

- *Sustainable Investing Approach*: This column classifies various sustainability-focused investment strategies, including SRI, ESG investing, impact investing, and other approaches that integrate ethical or environmental factors into financial practices.
- *Geographic Focus (UK)*: Indicates the number of studies concentrating on sustainable finance within the United Kingdom, offering insights into how the UK's distinct regulatory, economic, and cultural contexts influence these investment approaches.
- *Geographic Focus (USA)*: Lists the number of studies examining sustainable finance approaches within the United States, reflecting the unique practices, priorities, and market conditions for sustainability-focused investments in the American context.
- *Geographic Focus (Global)*: Denotes studies with a global perspective, addressing sustainable finance trends and practices on a macro level, enabling cross-regional comparisons and insights into international sustainable finance.
- *Geographic Focus (Europe)*: Represents studies focusing on European countries or the region as a whole, highlighting sustainable investing practices shaped by EU regulations and regional sustainability goals.
- *Total Studies*: This column summarises the total number of studies identified for each sustainable investing approach, providing a comprehensive overview of research focus and volume across different regions.

4.3 Key Insights

- *ESG and SRI Dominance in Research*: ESG investing and SRI are the most extensively researched sustainable investment approaches, particularly within the USA and in global studies. This prominence may reflect these approaches' relative maturity and broad adoption compared to other sustainable finance strategies.
- *Significant Global Interest in Impact and Thematic Investing*: Impact investing and thematic investing are strongly represented in globally-focused studies, emphasising their perceived relevance to sustainable development goals and their applicability across various markets.
- *Emerging Focus on Blended, Blue, Transition, and Circular Economy Finance*: These newer approaches are gaining attention, particularly in global studies, indicating increasing academic and industry interest in how these strategies can address complex sustainability challenges.
- *Research Gaps by Geographic Focus*: Studies remain largely global and USA-focused, with comparatively fewer examining sustainable finance within Europe and the UK. This regional imbalance highlights potential opportunities for further research, particularly within European and UK contexts, where distinctive regulatory and socio-economic environments may offer unique perspectives on sustainable finance.

This overview suggests that while sustainable investing research is expanding worldwide, distinctive regional dynamics present further scope for exploring how cultural, regulatory, and economic factors shape sustainable finance practices across different settings.

4.4 An Analysis of SRI and ESG Investing Strategies

The critical analysis of sustainable and impact investing literature reveals a notable conceptual overlap between SRI and ESG frameworks, underlining the complexities involved in defining and distinguishing sustainable investment strategies. This overlap, particularly in terminology and focus, reflects an evolving discourse where boundaries remain fluid, challenging efforts to clearly delineate one approach from another. Talan and Sharma (2019) observe regional variations in terminology, with 'ethical investing' more commonly used in the UK, while the United States favours the term 'SRI.' Despite these differences, the literature largely agrees that SRI entails incorporating ESG factors into investment decisions, including approaches such as negative screening, ESG integration, and impact investing (Jain, Sharma, & Srivastava, 2019; Blankenberg & Gottschalk, 2018; Yue et al., 2020). This shared understanding suggests a gradual convergence within sustainable finance, moving towards a more unified conceptual framework.

The shared terminology between SRI and ESG investing introduces a significant conceptual challenge, as ESG investing is often characterised in similar terms, leading to a blurring of the distinct ethical foundations and practical implications unique to each (Pedersen et al., 2021; Auer & Schuhmacher, 2016; Naffa & Fain, 2020). Studies by Cornell (2020, 2021) and Matos (2020) highlight this convergence, which complicates the distinction between SRI and ESG frameworks. Employing ESG as a proxy for SRI, these studies inadvertently obfuscate the

ethical considerations each approach entails. Traditionally, SRI has been associated with negative screening, where investments in sectors misaligned with specific ethical principles—such as tobacco or arms manufacturing—are systematically excluded. SRI may also employ a 'best-in-class' strategy, directing investments toward companies that demonstrate superior ESG performance within their sectors (Kumar, Dayaramani, & Rocha, 2016; Trinks & Scholtens, 2017; Rayer, 2019). These distinctions highlight that, although SRI and ESG intersect in several respects, they embody unique ethical and strategic orientations within sustainable finance.

In contrast, ESG investing introduces methodologies such as ESG momentum and ESG tilting, each reflecting distinct approaches to sustainable finance with particular ethical implications. ESG momentum focuses on firms that demonstrate significant improvements in ESG performance over time, whereas ESG tilting involves increasing portfolio weightings in companies that are already excelling in ESG ratings (Nagy, Kassam, & Lee, 2015). These approaches carry ethical implications beyond technical distinctions, especially concerning the principle of duty of care. The conceptual ambiguity surrounding SRI and ESG frameworks highlights a deeper philosophical issue: the inadequate integration of ethical responsibilities within sustainable finance. Both SRI and ESG aim to address societal and environmental challenges through capital allocation; however, the ethical foundation—specifically, the duty of care—remains insufficiently addressed in the literature. In this context, the duty of care represents a fiduciary and moral obligation to consider the long-term impact of investment decisions on stakeholders, including future generations and the environment. This obligation is undermined within current practices. While SRI's use of negative screening closely aligns with a values-based ethical approach, the ambiguity surrounding ESG strategies, such as momentum and tilting, raises questions about ESG investing's genuine commitment to the duty of care. This lack of clarity calls into question whether ESG truly upholds the ethical and fiduciary standards it claims to embody or if its frameworks require a more robust, ethically driven foundation.

To address this conceptual gap, explicitly embedding the duty of care within sustainable investment frameworks is essential. This approach acknowledges an ethical imperative for investment strategies to transcend mere responsiveness to market trends and proactively promote long-term societal and environmental well-being. Anchoring duty of care as a core principle within both SRI and ESG models would urge investors to move beyond superficial sustainability metrics, fostering a deeper ethical engagement in investment practices. Such integration would clarify the distinctions currently obscured by conceptual overlap, enabling sustainable finance to achieve its full ethical potential. Strengthening the ethical underpinnings of these frameworks, sustainable finance can progress towards a financial landscape that not only pursues profit but also fosters transparency, accountability, and resilience for society and the environment. In sum, while SRI and ESG frameworks have advanced the integration of ethical and environmental concerns in finance, the current overlap and ambiguity detract from their ethical efficacy. Adopting a duty-of-care-driven framework would enhance the clarity, impact, and societal relevance of sustainable finance, promoting a more accountable approach to investing aligned with principles of sustainability and social responsibility.

The progression from values-based ethical investing to SRI, and ultimately to ESG integration, as Cappucci (2018) outlines, aligns with the typology proposed by Schoenmaker and Schramade (2018). This typology traces the development of sustainable investment strategies from exclusionary practices to ESG integration, and ultimately towards supporting sustainable development. While this trajectory represents significant advances in sustainable finance, it also highlights a critical omission: the absence of a clearly defined and robust duty of care. Despite progress in sustainable investment frameworks, there remains a conspicuous lack of systematic commitment to this ethical obligation within these models. Impact investing, characterised by the Global Impact Investing Network (GIIN) and explored by scholars such as Barber et al. (2021) and Bernal et al. (2021), certainly foregrounds societal impact alongside financial returns; however, the ethical foundations underpinning these investments remain inadequately developed. Terms like ethical investing, social impact investment, and social finance are often used interchangeably (Rizzi, Pellegrini, & Battaglia, 2018; Matos, 2020; OECD, 2015), yet these concepts do not fully address the moral obligations that investors hold towards the environment, society, and diverse stakeholders. This gap weakens these frameworks potential to cultivate a truly responsible and ethically grounded approach to sustainable investment.

Thematic and impact investing within sustainable finance have indeed made significant progress in addressing global challenges, including climate change, demographic shifts, and resource scarcity (Somefun et al., 2023; Morrow & Vezér, 2020). These strategies frequently align with the United Nations Sustainable Development Goals (SDGs), focusing on critical themes such as water security, renewable energy, and food security. These investments increasingly shape institutional portfolios and contribute to sustainable development goals (Swiss

Sustainable Finance, 2017). However, a closer analysis reveals that the ethical foundations of these strategies—particularly the duty of care—are insufficiently defined and articulated. Philosophically, the duty of care in investment demands that investors actively consider the enduring social and environmental impacts of their financial decisions. This responsibility implies a commitment not merely to financial returns but also to the preservation of societal and ecological welfare, safeguarding the interests of future generations. While thematic and impact investing strategies may align with SDG objectives, their primary emphasis often remains on financial performance and risk management, with ethical considerations relegated to a secondary role. Cultivating a genuinely sustainable investment ethos thus requires a reorientation that centres duty of care, ensuring that these strategies fulfil their potential to contribute meaningfully to a more equitable and sustainable future. The gap between profit and ethics illustrates a fundamental deficiency in current sustainable finance literature. Although these investment strategies seek to address urgent global issues, they often fail to embody a robust ethical commitment that transcends short-term financial goals. The absence of a clearly established duty of care limits the transformative potential of these investments, rendering their impact fragmented and incomplete. To realise the full ethical and societal potential of sustainable finance, a rigorous duty of care must be embedded within investment frameworks. This shift would safeguard both immediate and future interests within the broader scope of financial decision-making. Embedding duty of care within all sustainable investment practices would ensure that investments not only support the SDGs but actively promote social equity, environmental stewardship, and long-term sustainability.

From an academic and philosophical perspective, placing duty of care at the forefront of sustainable finance would compel investors to adopt a more holistic and ethically driven approach to their investment processes. This would not only enhance the moral dimension of investment decisions but also contribute to a more equitable and sustainable financial system. A shift towards such an approach would necessitate moving beyond the narrow confines of ESG risk mitigation or sector-based performance rankings, thus ensuring that investments align with a broader set of ethical obligations. In practical terms, this transformation could be realised through the establishment of stronger governance structures, enhanced transparency, and more meaningful engagement with stakeholders. These elements would work synergistically to create a financial ecosystem that fosters inclusivity, fairness, and long-term sustainability. Investors would be held accountable not only for short-term financial returns but also for the enduring social and environmental impacts of their decisions. Such a framework would align with the EU CSDDD.

Philosophically, the current gap in sustainable finance literature—namely, the insufficient integration of duty of care—highlights a significant flaw in the ethical underpinnings of ESG and impact investing. The absence of a clearly defined duty of care raises questions about the true moral commitment of these frameworks to societal and environmental well-being. As it stands, ESG and SRI practices often focus on short-term risk management and financial performance, leaving a moral vacuum where ethical responsibilities to future generations and vulnerable communities should be. Bridging this divide requires the development of a new framework that places duty of care at its core, ensuring that sustainability is not pursued merely as an economic or risk-reducing objective but as a moral imperative. This would create an investment landscape where the prioritisation of long-term societal and environmental outcomes becomes as essential as financial returns, fostering a sustainable, ethical, and responsible financial system. In conclusion, while the evolution of SRI, ESG, and impact investing demonstrates the growing complexity of sustainable finance, the lack of an explicit duty of care remains a critical shortcoming. The integration of this principle into investment frameworks would not only enhance the moral and ethical foundations of sustainable finance but also ensure that investment practices contribute meaningfully to global social and environmental challenges. As such, the duty of care should be seen as a central pillar, ensuring that sustainability is recognised as a moral imperative, not just an economic goal.

4.5 An Analysis of Company Reports

This discussion analysed the ESG focus and climate change commitments of 25 global companies across various industries, with particular emphasis on their adherence to SRI, ESG frameworks, Duty of Care, and the EU CSDDD.

4.5.1 ESG Focus and Climate Change Commitments

Table 8. ESG performance and compliance of major corporations

Company	Analysis
Microsoft	Microsoft aims to be carbon negative by 2030, focusing on renewable energy and reducing emissions across its value chain. However, its social impact is unclear, especially regarding worker conditions in its global supply chains, raising concerns over its commitment to duty of care and social responsibility.
Tesla	Tesla leads the way in sustainable transport with its electric vehicles and battery recycling initiatives. While its environmental goals are commendable, the company falls short on social and governance issues, particularly regarding labour practices and ethical sourcing of materials, undermining its adherence to SRI and duty of care.
Unilever	Unilever is committed to sustainable sourcing and aims to achieve carbon-positive operations by 2030. However, the company lacks transparency in addressing the social impacts within its supply chains, particularly regarding worker welfare, which limits its compliance with the EU CSDDD and SRI standards.
Apple	Apple strives for carbon neutrality by 2030, focusing on renewable energy and sustainable supply chains. Yet, similar to Microsoft, Apple's social responsibility efforts are underdeveloped, especially concerning worker rights, which weakens its alignment with duty of care and SRI principles.
BP	BP has committed to achieving net-zero emissions by 2050 and is investing heavily in renewable energy and carbon capture technologies. However, its ongoing reliance on fossil fuels and opaque social practices in extraction regions undermine its compliance with SRI and the EU CSDDD, particularly regarding worker rights.
Shell	Shell is working towards net-zero emissions by 2050, with significant investments in renewable energy. Nevertheless, its continued investments in fossil fuels and insufficient attention to governance in extraction regions expose gaps in aligning with ethical SRI and EU CSDDD standards.
NextEra Energy	NextEra Energy is a leader in renewable energy, especially solar and wind power. While its environmental commitments are strong, the company lacks transparency regarding its social responsibility efforts in the communities it operates, limiting its full adherence to SRI and the duty of care.
BlackRock	BlackRock incorporates ESG factors into its investment strategy but focuses mainly on financial performance, with limited attention to the social and governance standards of the companies it invests in. This raises concerns about its full alignment with SRI and EU CSDDD guidelines.
TotalEnergies	TotalEnergies has committed to carbon neutrality by 2050, but its reliance on fossil fuels, coupled with a lack of social and governance reporting in extraction regions, hinders its compliance with SRI and EU CSDDD expectations.
Procter & Gamble	Procter & Gamble focuses on sustainable production and waste reduction. However, its reporting on social impacts, particularly regarding workers' rights in its supply chain, is lacking, limiting its full compliance with SRI and duty of care standards.
Walmart	Walmart is making strides with renewable energy initiatives and sustainable supply chain practices. However, issues such as low wages, poor working conditions, and the broader social impact of its operations are largely absent from its ESG reporting, undermining its commitment to SRI and duty of care.
Nestlé	Nestlé has made strides in responsible sourcing and reducing plastic use. However, it has faced persistent criticism over environmental harm, particularly deforestation linked to palm oil sourcing. These ongoing issues hinder its adherence to EU CSDDD and SRI standards.
Johnson & Johnson	Johnson & Johnson's commitment to sustainable production is strong, but concerns about health and safety within its global supply chain prevent full compliance with SRI and duty of care principles.
Chevron	Chevron is investing in renewable energy and carbon capture technologies, but its continued reliance on oil and gas extraction and lack of transparency regarding social governance practices raise concerns about its alignment with the EU CSDDD and SRI.
Siemens	Siemens has committed to carbon-neutral production and green energy. However, its social responsibility efforts, particularly regarding worker rights and community engagement, remain insufficient, limiting its compliance with SRI and duty of care standards.
Volkswagen	Volkswagen has made significant strides in vehicle electrification and CO_2 reduction. However, past scandals and insufficient governance, particularly regarding labour conditions in its supply chain, hinder its full compliance with SRI principles.
HSBC	HSBC has a strong focus on green finance and ESG lending. However, its ongoing financing of fossil fuel companies and limited transparency in social and governance policies prevent full adherence to SRI and duty of care guidelines.
Amazon	Amazon is making efforts with renewable energy and sustainable packaging, but concerns over worker treatment, as well as its environmental impact in low-wage regions, undermine its adherence to SRI and duty of care principles.
Toyota	Toyota's investment in hybrid and electric vehicles and focus on CO_2 reduction are strong, yet it fails to adequately address governance and social impacts, particularly worker rights and community justice, limiting its compliance with EU CSDDD and SRI standards.

Intel	Intel focuses on renewable energy and water use reduction. However, the company lacks attention to social responsibility, particularly in its global supply chain, which weakens its adherence to SRI and duty of care.
Coca-Cola	Coca-Cola's water stewardship and sustainable packaging initiatives are noteworthy, but its continued use of plastic and water consumption in water-scarce regions raise concerns about its environmental and social governance, hindering full compliance with SRI and EU CSDDD.
Enel	Enel is committed to renewable energy and carbon reduction, aligning with ESG goals. However, the company's social and governance practices, particularly concerning worker rights and community engagement, remain insufficient, limiting its compliance with the duty of care and SRI.
Samsung Electronics	Samsung's efforts in energy efficiency and waste reduction are positive. However, its governance and social responsibility, especially regarding labour conditions and human rights, need more focus for full compliance with SRI principles.
L'Oréal	L'Oréal has ambitious sustainability goals, focusing on sustainable sourcing and packaging. However, its social practices in its supply chains remain unclear, particularly concerning the welfare of workers, which raises questions about its full compliance with SRI and duty of care standards.
Airbus	Airbus is focused on reducing its carbon footprint, including improving aircraft fuel efficiency. However, its governance and social practices, particularly with regard to labour rights in its manufacturing facilities, are not well-documented, limiting its full alignment with SRI standards.
General Electric	General Electric is committed to sustainable energy solutions and carbon reduction. However, its lack of transparency in social responsibility and worker welfare within production plants limits its full compliance with SRI and duty of care expectations.

The table reveals considerable disparities across the ESG reports of prominent corporations, highlighting notable deficiencies in their alignment with both duty of care principles and the EU CSDDD. These gaps point to a common trend where companies frequently prioritise environmental narratives while neglecting substantive social governance and transparency measures that align with holistic ESG frameworks. A significant shortcoming is the underemphasis on social governance, especially in companies such as Tesla, Apple, and Walmart, where environmental targets often overshadow essential social issues like labour rights and working conditions within global supply chains. These firms focus heavily on climate commitments and pledges for renewable energy, yet provide limited information on measures safeguarding worker welfare, wage fairness, or safe working conditions. The philosophical oversight here centres on a failure to fully internalise duty of care. Marginalising social governance, these firms risk neglecting their ethical responsibility to protect worker rights and welfare across their supply chains, particularly in regions where labour exploitation is prevalent. To address this gap, companies would benefit from a reframed ESG focus that explicitly includes measurable social governance indicators. The EU CSDDD can play a critical role here, as it mandates human rights due diligence, requiring firms to assess and mitigate labour risks systematically. Adopting the Directive's provisions, companies could move from rhetoric to concrete action, ensuring that social factors receive attention equal to environmental goals.

Another prevalent issue is the limited transparency surrounding environmental claims, particularly in industries with high ecological impacts, such as fossil fuels. Companies like BP, Shell, and TotalEnergies set ambitious targets, such as achieving carbon neutrality by 2050, yet frequently lack concrete, actionable steps toward reaching these goals. BP's net-zero pledge, for example, remains underpinned by general commitments rather than a detailed plan for transitioning away from fossil fuels. This omission not only casts doubt on the feasibility of these targets but also calls into question the sincerity of these companies' commitments to environmental stewardship. The ethical standard demanded by duty of care involves a transparent and measurable approach to environmental impact, where genuine ESG reporting would detail specific steps and progress measures that mitigate ecological harm. Without such transparency, companies risk engaging in 'greenwashing,' where environmental pledges serve primarily to enhance brand image without substantive follow-through. Aligning reporting practices with the EU CSDDD could address this issue, as the Directive enforces environmental due diligence, requiring companies to disclose ongoing progress in meeting sustainability commitments. Such measures would not only enhance public trust but also ensure that companies remain accountable to stakeholders and the communities impacted by their operations.

Corporate governance, another critical pillar of ESG, also reveals substantial deficiencies within the reports of many leading companies. The table indicates that firms like BlackRock and Amazon often fail to reconcile governance practices with stated ESG objectives. BlackRock, for instance, has faced criticism for maintaining investments in high-carbon industries despite its commitment to sustainable investing. Similarly, Amazon and

Intel provide limited transparency on ethical governance in their supply chains, making it challenging for stakeholders to assess how these companies enforce standards among suppliers and partners. This gap suggests an ethical failure in corporate governance, where compliance is treated as a regulatory checkbox rather than a genuine commitment to responsible and transparent business practices. The EU CSDDD offers a pathway for addressing governance deficiencies by mandating comprehensive due diligence across supply chains, which would compel firms to adopt transparent governance frameworks that address risks and uphold accountability. Through this regulatory lens, governance becomes more than a compliance exercise; it is reframed as an ethical commitment to balance the interests of all stakeholders and to consider the long-term societal impacts of corporate actions. Aligning with the Directive could ensure that corporate governance frameworks truly support ESG principles, moving beyond performative measures to establish genuinely ethical and accountable business practices.

Many companies, particularly in high-impact sectors, have also shown a reluctance to fully adopt the EU CSDDD's stringent due diligence requirements, despite high-profile commitments to sustainability. The oil and gas industry, for example, has yet to demonstrate full compliance with EU CSDDD standards, with companies like BP and Shell continuing operations in ecologically sensitive areas. Similarly, companies in the consumer goods sector, such as Unilever and Nestlé, face persistent criticism for not adequately addressing supply chain issues like deforestation, despite their commitments to sustainable sourcing. To meet the EU CSDDD standards, firms would need to adopt a more integrated ESG approach, one that includes continuous assessment and action on environmental and social risks. A comprehensive ESG approach, aligned with the EU CSDDD, could enable these companies to anticipate and address ethical and environmental implications within their supply chains proactively, fostering a more responsible and transparent corporate culture. The shortcomings revealed in the table suggest a need for corporations to evolve their approach to ESG, grounding it in duty of care and the accountability structures established by the EU CSDDD. Committing to these standards, firms would move closer to authentic ESG practices, demonstrating a serious commitment to sustainable development and ethical business practices that go beyond surface-level commitments. This alignment would ultimately build stronger trust with stakeholders and contribute meaningfully to long-term global sustainability.

5. Conclusiong and Recommendation

In conclusion, this analysis reveals that while sustainable finance frameworks, such as SRI, ESG, impact investing, and thematic investing, have gained prominence, they are undermined by conceptual ambiguities, ethical gaps, and inconsistent methodologies. Examining reports from a sample of 25 global companies, significant discrepancies become evident between stated ESG intentions and actual practices. In particular, companies frequently overlook social dimensions—such as worker rights and community impact—while prioritising environmental targets that lack transparency and actionable pathways. This imbalance not only limits the effectiveness of these sustainability commitments but also poses ethical questions about whether the practices genuinely align with a duty of care towards society and the environment.

The EU CSDDD provides a promising model for enhancing corporate accountability by mandating comprehensive due diligence on environmental and social impacts across supply chains. The EU CSDDD's emphasis on human rights and environmental protection suggests an actionable framework for integrating duty of care into corporate governance structures. Nonetheless, aligning company practices with this directive will require substantial shifts in both corporate behaviour and reporting practices, particularly to ensure that all stakeholders are transparently informed about ESG progress.

5.1 Recommendations

1) *Enhanced Definitions and Standards*: To resolve ambiguity, regulators, and firms should adopt well-defined distinctions among investment approaches like SRI, ESG, and impact investing. The adoption of clear standards aligned with the EU CSDDD will ensure consistency and facilitate better alignment between corporate sustainability practices and ethical considerations.
2) *Duty of Care Integration*: Ethical frameworks, particularly the duty of care, must be integrated into corporate governance to guide decision-making beyond profit motives. This includes not only environmental stewardship but also a strong commitment to social responsibilities. The EU CSDDD offers a foundation to establish this ethics by requiring due diligence for both environmental impacts and human rights protections.
3) *Transparent Reporting and Accountability*: Companies should adopt transparent, measurable, and independently audited reporting standards. Reports from the sample of 25 companies suggest that many environmental pledges lack specificity and rigour. Aligning reporting practices with the EU CSDDD, corporations can enhance accountability and provide stakeholders with verifiable data on ESG progress.

4) *Social Governance Focus*: Corporations should expand their ESG focus to adequately address social governance issues, such as worker rights, community impact, and fair treatment in supply chains, particularly for suppliers in the Global South. The EU CSDDD's provisions on human rights due diligence offer a structured pathway to address these issues proactively.

5) *Customisation for Regional Needs*: Sustainable finance frameworks should adapt to reflect the distinct challenges and opportunities of different regions, especially emerging markets. The study of companies in the Global South reveals unique social and environmental contexts that should be accounted for to ensure relevance and impact.

6) *Collaborative, Interdisciplinary Approaches*: A holistic approach to sustainable finance should integrate insights from ethics, finance, social sciences, and environmental studies. This interdisciplinary collaboration will enrich the discourse and help develop frameworks that align financial goals with long-term societal benefits.

5.2 Future Research Directions

To advance sustainable finance meaningfully, further research should pursue:

1) *In-depth Ethical Analysis of Investment Practices*: Philosophical theories on ethics and duty of care can inform the ethical underpinnings of investment practices, ensuring they contribute to both financial and societal good.

2) *Impact Measurement Frameworks*: Rigorous frameworks are needed to measure the real social and environmental impacts of sustainable investment strategies, moving beyond superficial metrics and towards transparent, accountable impact reporting.

3) *Global Stakeholder Engagement*: Exploring how diverse stakeholders, including investors, local communities, and policymakers, shape and influence sustainable finance practices will illuminate effective methods for collaborative and ethical investment.

4) *Assessing Thematic Investment Impact on SDGs*: Empirical studies should evaluate whether thematic investing approaches—aimed at specific SDGs—yield measurable progress on these global goals, particularly in areas of urgent social need.

These recommendations and research directions would establish a more ethically grounded, impactful, and coherent framework for sustainable finance, enhancing its role as a transformative force for both society and the environment. Through alignment with standards like the EU CSDDD, sustainable finance can fulfil its potential as a truly responsible and transparent practice, bridging financial and ethical commitments in a way that serves the global community.

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