

Examining the role of environmental social and governance metrics in financial reporting and investment decision-making during corporate mergers

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Abstract

The integration of Environmental, Social, and Governance (ESG) metrics into financial reporting and investment decision-making has emerged as a critical factor in contemporary corporate merger activities. This comprehensive review examines the transformative impact of ESG considerations on merger evaluation processes, due diligence frameworks, and post-merger value creation strategies. Through systematic analysis of existing literature, regulatory developments, and empirical evidence, this study reveals that ESG metrics significantly influence merger outcomes, investor confidence, and long-term value creation. The research demonstrates that companies incorporating robust ESG frameworks during merger activities experience enhanced stakeholder trust, improved regulatory compliance, and superior long-term financial performance. Our investigation synthesizes evidence from multiple jurisdictions and industry sectors, highlighting ESG's capacity to address critical challenges in modern merger and acquisition transactions. By exploring emerging trends, implementation mechanisms, and analytical frameworks, this review provides a balanced perspective on the opportunities and limitations of ESG integration in merger contexts. The findings suggest that while ESG metrics present promising enhancements to traditional merger evaluation approaches, successful implementation requires careful consideration of measurement standardization, stakeholder expectations, and regulatory compliance requirements.

Keywords: Environmental Social Governance; ESG Metrics; Corporate Mergers; Financial Reporting; Investment Decision-Making; Due Diligence; Stakeholder Value; Sustainable Finance

1. Introduction

The contemporary corporate landscape has witnessed a fundamental transformation in how merger and acquisition (M&A) activities are evaluated, structured, and executed. Traditional financial metrics, while remaining essential, are increasingly complemented by Environmental, Social, and Governance (ESG) considerations that reflect broader stakeholder interests and long-term sustainability concerns [1]. This evolution represents a paradigm shift from purely profit-maximizing approaches toward more holistic value creation strategies that encompass environmental stewardship, social responsibility, and governance excellence [2].

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Recent high-profile merger failures and regulatory scrutiny have highlighted the limitations of conventional due diligence processes that focus primarily on financial performance indicators. The collapse of several major transactions due to environmental liabilities, social controversies, or governance failures has underscored the importance of comprehensive ESG assessment in merger evaluation. Global investors, managing assets worth trillions of dollars, now actively integrate ESG criteria into their investment decisions, creating substantial pressure for corporations to demonstrate sustainable business practices throughout merger processes [3].

The regulatory landscape has evolved considerably, with jurisdictions worldwide implementing mandatory ESG disclosure requirements and sustainability reporting standards. The European Union's Corporate Sustainability Reporting Directive (CSRD), the Securities and Exchange Commission's proposed climate disclosure rules, and similar initiatives across Asia-Pacific markets have created new compliance obligations that directly impact merger transactions [4]. These developments reflect growing recognition that environmental and social risks can significantly affect corporate valuations and future cash flows.

ESG integration in merger activities represents more than regulatory compliance; it embodies a strategic approach to risk management and value creation [5]. Environmental factors including climate change impacts, resource scarcity, and pollution liabilities can substantially affect merged entity operations and profitability [6]. Social considerations encompassing workforce diversity, community relations, and human rights practices influence brand reputation and operational sustainability [7]. Governance structures including board composition, executive compensation, and stakeholder engagement mechanisms determine organizational effectiveness and accountability.

This research review aims to provide a comprehensive analysis of how ESG metrics are reshaping financial reporting and investment decision-making in corporate merger contexts. By examining theoretical frameworks, empirical evidence, and practical implementation challenges, the study seeks to offer nuanced insights into the evolving role of sustainability considerations in M&A transactions. The review will critically analyze the potential of ESG integration to enhance merger success rates, improve stakeholder outcomes, and create more resilient combined entities.

2. Theoretical Framework of ESG Integration in Mergers

2.1. Conceptual Foundations of ESG in Corporate Transactions

ESG integration in merger activities draws upon multiple theoretical frameworks that explain how environmental, social, and governance factors create or destroy value in corporate combinations [8]. Stakeholder theory provides the foundational rationale for ESG consideration, arguing that corporations must balance the interests of diverse constituencies including shareholders, employees, customers, communities, and environmental stakeholders. This theoretical perspective suggests that merger success depends not only on financial synergies but also on maintaining stakeholder support and legitimacy.

The resource-based view of the firm offers additional theoretical grounding for ESG integration, positioning sustainability capabilities as valuable, rare, and difficult-to-imitate resources that can provide competitive advantages in merged entities [9]. Environmental management systems, social capital, and governance expertise represent intangible assets that can enhance post-merger performance when effectively leveraged [10]. However, the identification and valuation of these resources presents significant challenges in practical merger contexts.

Institutional theory explains how regulatory pressures, social expectations, and industry norms drive ESG adoption in merger activities. Organizations operating in institutionalized environments face coercive, mimetic, and normative pressures to conform to sustainability expectations, influencing their merger strategies and due diligence processes [11]. This theoretical lens helps explain variations in ESG integration across different jurisdictions, industries, and organizational contexts.

2.2. ESG Metrics and Measurement Frameworks

The implementation of ESG considerations in merger evaluation requires sophisticated measurement frameworks that can quantify environmental, social, and governance performance across diverse organizational contexts. Environmental metrics encompass carbon emissions, energy efficiency, water usage, waste management, and biodiversity impacts that may affect merged entity operations and regulatory compliance [12]. These measurements present particular challenges due to variations in accounting standards, measurement methodologies, and data availability across different organizations and jurisdictions.

Social metrics focus on human capital management, community engagement, product safety, and supply chain responsibility that influence brand reputation and operational sustainability [13]. The quantification of social performance involves complex considerations including employee satisfaction, diversity metrics, community investment, and stakeholder engagement effectiveness. These measurements often rely on qualitative assessments that introduce subjectivity and comparability challenges in merger evaluation processes.

Governance metrics examine board composition, executive compensation, audit practices, and stakeholder engagement mechanisms that determine organizational effectiveness and accountability [14]. While governance factors are relatively easier to quantify compared to environmental and social metrics, their evaluation requires careful consideration of organizational culture, decision-making processes, and stakeholder relationships that may not be readily apparent from formal structures.

2.3. Value Creation Mechanisms Through ESG Integration

ESG integration in merger activities creates value through multiple mechanisms that extend beyond traditional financial synergies. Risk mitigation represents a primary value creation pathway, as comprehensive ESG due diligence can identify potential environmental liabilities, social controversies, and governance weaknesses that might otherwise result in post-merger surprises [15]. Early identification of these risks enables better pricing decisions, appropriate risk allocation, and proactive mitigation strategies.

Operational synergies emerge from combining complementary ESG capabilities and best practices across merging organizations [15]. Environmental management systems can be consolidated to achieve greater efficiency and compliance effectiveness. Social programs can be integrated to enhance employee engagement and community relations [18]. Governance processes can be harmonized to improve decision-making effectiveness and stakeholder communication.

Market positioning advantages result from ESG leadership that differentiates merged entities in increasingly sustainability-conscious markets. Consumers, business customers, and government clients increasingly prefer suppliers with strong ESG credentials, creating revenue opportunities for well-positioned merged entities [18]. However, achieving these benefits requires authentic commitment to sustainability rather than superficial marketing approaches.

3. ESG Integration in Financial Reporting During Mergers

3.1. Disclosure Requirements and Regulatory Frameworks

The integration of ESG metrics into financial reporting during merger activities occurs within an evolving regulatory landscape that varies significantly across jurisdictions [19]. The European Union has established the most comprehensive framework through the Corporate Sustainability Reporting Directive, which requires detailed ESG disclosures that directly impact merger documentation and due diligence processes [20]. These requirements mandate reporting on environmental impact, social responsibility, and governance practices using standardized metrics that facilitate comparability across potential merger partners.

In the United States, the Securities and Exchange Commission has proposed climate disclosure rules that would require public companies to report greenhouse gas emissions and climate-related risks in their financial statements [21]. These requirements have particular relevance for merger activities, as acquirers must assess climate-related liabilities and opportunities when evaluating potential targets. The proposed rules include Scope 1, Scope 2, and potentially Scope 3 emissions reporting that could significantly affect merger valuations and structure decisions [22].

Asian markets have implemented diverse approaches to ESG disclosure, with Singapore, Hong Kong, and Japan leading sustainability reporting initiatives that influence regional merger activities [23]. These frameworks create challenges for cross-border transactions, as companies must navigate multiple regulatory requirements while ensuring consistent ESG reporting standards. The lack of global harmonization in ESG reporting standards complicates international merger evaluation and increases transaction costs.

3.1.1. 3.2 Integration Challenges in Financial Statement Preparation

The incorporation of ESG metrics into merger-related financial reporting presents significant technical and methodological challenges. Traditional financial accounting frameworks were not designed to capture environmental and social impacts, creating difficulties in quantifying and presenting ESG performance alongside conventional financial

metrics [24]. The development of integrated reporting approaches attempts to address these challenges, but implementation remains inconsistent across organizations and jurisdictions.

Valuation challenges emerge when attempting to quantify ESG-related assets and liabilities in merger contexts. Environmental remediation costs, social license to operate, and governance risk premiums require sophisticated estimation techniques that often involve significant judgment and uncertainty [25]. These valuations can substantially affect merger pricing and structure decisions, yet standardized methodologies for ESG valuation remain underdeveloped.

Data quality and availability issues complicate ESG integration in financial reporting [26]. Many organizations lack comprehensive ESG data collection systems, particularly for Scope 3 emissions and supply chain social impacts [27]. This data scarcity creates challenges in merger due diligence processes and may result in incomplete risk assessment or valuation errors that affect transaction outcomes.

3.2. Stakeholder Communication and Transparency

Effective communication of ESG considerations in merger contexts requires sophisticated stakeholder engagement strategies that address diverse audience needs and expectations [28]. Investors increasingly demand detailed ESG analysis in merger materials, including assessment of environmental risks, social impact evaluation, and governance integration plans [29]. This information must be presented in formats that enable meaningful comparison and evaluation of merger alternatives.

Regulatory authorities require comprehensive ESG disclosure in merger approval processes, particularly in jurisdictions with strong environmental protection or social responsibility mandates [30]. Competition authorities increasingly consider ESG factors when evaluating merger impacts on market competition and consumer welfare. This regulatory scrutiny necessitates detailed documentation of ESG considerations throughout merger planning and execution phases.

Public stakeholder communication presents additional challenges, as communities, environmental groups, and social advocates scrutinize merger activities for potential negative impacts. Transparent communication of ESG commitments and mitigation strategies can enhance stakeholder support for merger transactions, while inadequate communication may result in opposition that complicates regulatory approval processes [31].

4. ESG Metrics in Investment Decision-Making

4.1. Investor Perspectives and Portfolio Management

Institutional investors have fundamentally transformed their approach to merger evaluation by integrating ESG considerations into investment decision-making processes [32]. Asset managers representing trillions of dollars in assets under management now actively incorporate ESG criteria into their merger investment strategies, reflecting both fiduciary duty evolution and client demand for sustainable investment options [33]. This shift has created substantial pressure for corporations to demonstrate ESG excellence throughout merger processes.

Portfolio diversification strategies increasingly consider ESG factors as risk management tools that can reduce portfolio volatility and enhance long-term returns [34]. Merger investments in companies with strong ESG profiles are viewed as more resilient to regulatory changes, reputation risks, and operational disruptions that could affect financial performance [35]. However, the relationship between ESG performance and financial returns remains debated, with empirical evidence showing mixed results across different time periods and market conditions.

ESG screening processes have become standard practice in merger evaluation, with investors applying both negative screening to exclude problematic transactions and positive screening to identify ESG leaders [36]. These screening approaches require sophisticated analytical frameworks that can assess ESG performance across diverse industry contexts and organizational structures. The subjectivity inherent in ESG evaluation creates challenges in developing consistent screening criteria [37].

4.2. Due Diligence Enhancement Through ESG Analysis

ESG due diligence has evolved from optional consideration to essential component of merger evaluation processes. Environmental due diligence encompasses assessment of climate risks, regulatory compliance, pollution liabilities, and resource efficiency opportunities that may affect merged entity performance [38]. This analysis requires specialized

expertise in environmental science, regulatory requirements, and risk assessment methodologies that traditional financial due diligence teams may lack.

Social due diligence examines human capital management, community relations, supply chain responsibility, and stakeholder engagement practices that influence operational sustainability and brand reputation [39]. The evaluation of social factors often involves qualitative assessments that require cultural sensitivity and stakeholder engagement expertise [40]. These assessments can reveal significant risks related to workforce disruption, community opposition, or reputation damage that may not be apparent from financial analysis alone.

Governance due diligence focuses on board effectiveness, management quality, internal controls, and stakeholder engagement mechanisms that determine organizational capability and accountability [41]. While governance factors may seem more readily quantifiable than environmental and social considerations, their evaluation requires deep understanding of organizational culture, decision-making processes, and stakeholder relationships that extend beyond formal structures.

4.3. Risk Assessment and Mitigation Strategies

ESG risk assessment in merger contexts requires sophisticated analytical frameworks that can identify, quantify, and prioritize diverse risk categories [42]. Environmental risks including climate change impacts, regulatory compliance failures, and resource scarcity can substantially affect merged entity cash flows and market position [43]. The long-term nature of many environmental risks creates challenges in traditional merger evaluation timeframes that typically focus on near-term financial projections.

Social risks encompassing workforce disruption, community opposition, and reputation damage can emerge rapidly and significantly impact merger success [44]. The interconnected nature of social risks means that problems in one area can cascade across multiple stakeholder relationships, creating systemic challenges for merged entities [45]. Risk mitigation strategies must address these interconnections while maintaining operational effectiveness.

Governance risks related to leadership capability, internal controls, and stakeholder engagement can undermine merger execution and post-merger integration success [46]. These risks are particularly challenging because they often involve organizational culture and human behavior factors that are difficult to assess and modify. Effective risk mitigation requires comprehensive change management strategies that address governance challenges throughout merger processes.

5. Case Studies and Empirical Evidence

5.1. Successful ESG Integration in Major Mergers

Several high-profile merger transactions have demonstrated the value of comprehensive ESG integration in creating successful combined entities. The merger between two major European utilities showcased how environmental leadership and renewable energy capabilities can create substantial value in sustainability-focused markets [47]. The combined entity leveraged complementary environmental technologies and regulatory expertise to accelerate renewable energy deployment while achieving significant cost synergies through operational efficiency improvements [48].

A landmark merger in the consumer goods sector illustrated how social responsibility and stakeholder engagement can facilitate successful international expansion [49]. The acquiring company's strong ESG credentials enabled smooth integration with the target company's sustainability-focused brand portfolio, creating enhanced market positioning in environmentally conscious consumer segments [50]. The merged entity achieved superior financial performance through premium pricing enabled by authentic sustainability commitments [51].

The combination of two financial services organizations demonstrated how governance excellence can enhance merger execution and stakeholder confidence. Comprehensive governance due diligence identified complementary risk management capabilities and stakeholder engagement practices that strengthened the merged entity's regulatory relationships and operational effectiveness [52]. The successful integration resulted in enhanced market confidence and superior long-term financial performance.

5.2. ESG-Related Merger Failures and Lessons Learned

Analysis of merger failures reveals significant risks associated with inadequate ESG consideration in transaction planning and execution. A major cross-border merger collapsed due to environmental liabilities that were not adequately identified during due diligence processes [53]. The hidden environmental costs exceeded the anticipated merger synergies, resulting in transaction abandonment and substantial advisory fees losses for both parties [54].

Social controversies have derailed several high-profile merger transactions when community opposition and stakeholder activism created regulatory and reputational challenges that exceeded management capabilities [55]. These failures highlight the importance of comprehensive stakeholder engagement and social impact assessment in merger planning processes. The lack of social license to operate can undermine even financially attractive merger opportunities [56].

Governance weaknesses have contributed to numerous post-merger integration failures that resulted in value destruction rather than creation. Poor board oversight, inadequate risk management, and insufficient stakeholder communication created operational challenges that prevented realization of anticipated merger benefits [57]. These experiences demonstrate the critical importance of governance excellence in merger success.

5.3. Industry-Specific ESG Considerations

Different industry sectors present unique ESG challenges and opportunities in merger contexts that require specialized analytical approaches. The energy sector faces particular scrutiny regarding climate transition risks and renewable energy capabilities that significantly affect merger valuations and regulatory approval processes [58]. Traditional fossil fuel companies seeking to acquire renewable energy assets must demonstrate authentic commitment to energy transition rather than superficial sustainability marketing [59].

The healthcare and pharmaceutical sector encounters complex social responsibility considerations related to drug pricing, access to healthcare, and research ethics that influence merger evaluation and stakeholder acceptance [60]. These social factors can create significant regulatory and reputational risks that affect merger success and long-term value creation.

The technology sector presents governance challenges related to data privacy, cybersecurity, and artificial intelligence ethics that have become critical factors in merger evaluation [61]. The rapid evolution of technology regulation creates uncertainty regarding future compliance requirements that must be considered in merger planning and valuation processes [62].

6. Benefits and Value Creation Opportunities

6.1. Enhanced Risk Management and Mitigation

ESG integration in merger activities provides comprehensive risk management capabilities that extend far beyond traditional financial risk assessment [63]. Environmental risk mitigation enables organizations to identify and address climate-related vulnerabilities, regulatory compliance gaps, and resource efficiency opportunities that may not be apparent through conventional due diligence processes. This enhanced risk identification capability allows for better transaction pricing, more effective risk allocation between parties, and proactive mitigation strategies that protect merged entity value [64].

The long-term nature of ESG risks requires sophisticated analytical frameworks that can model potential impacts across extended time horizons [65]. Climate change scenarios, regulatory evolution, and social trend analysis enable more comprehensive risk assessment that considers potential future challenges and opportunities. This forward-looking perspective provides competitive advantages in merger evaluation and strategic planning processes.

Integration of ESG risk management creates opportunities for operational improvements that generate sustainable value creation [66]. Environmental management system harmonization can reduce compliance costs while improving performance. Social program integration can enhance employee engagement and community relations. Governance process alignment can improve decision-making effectiveness and stakeholder communication [67].

6.2. Market Positioning and Competitive Advantages

ESG leadership creates significant market positioning advantages that can differentiate merged entities in increasingly sustainability-conscious business environments [68]. Consumer markets demonstrate growing preference for environmentally responsible products and socially conscious brands, creating revenue opportunities for companies with authentic ESG credentials. Business-to-business markets increasingly incorporate ESG criteria into supplier selection processes, creating competitive advantages for ESG leaders [69].

Government and institutional customers actively favor suppliers with strong ESG performance, particularly in jurisdictions with sustainability procurement policies [70]. These market preferences can translate into revenue premiums, market share gains, and customer loyalty benefits that justify the investments required for ESG excellence. However, achieving these benefits requires authentic commitment to sustainability rather than superficial marketing approaches.

The access to capital advantages associated with ESG leadership become particularly important in merger contexts where significant financing may be required. ESG-focused investors and lenders offer favorable terms to companies with strong sustainability credentials, reducing financing costs and improving transaction feasibility [71]. This cost of capital advantage can significantly affect merger economics and value creation potential.

6.3. Stakeholder Engagement and Social License

Comprehensive ESG integration enhances stakeholder engagement effectiveness by demonstrating authentic commitment to broader societal interests beyond shareholder value maximization [72]. This stakeholder trust creates social license to operate that facilitates merger approval processes and reduces regulatory and reputational risks. Strong stakeholder relationships can accelerate merger execution timelines while reducing compliance costs and opposition-related delays.

Employee engagement benefits from ESG leadership create human capital advantages that are particularly valuable in merger contexts where workforce retention and motivation are critical success factors. Organizations with strong ESG reputations attract and retain top talent more effectively, creating sustainable competitive advantages [73]. The cultural alignment facilitated by shared ESG values can improve post-merger integration success rates.

Community relations enhanced through social responsibility initiatives create operating advantages that may not be readily apparent but can significantly affect merged entity performance [74]. Local community support facilitates permit approvals, regulatory compliance, and operational continuity that contribute to long-term success. These relationship-based advantages become particularly important in jurisdictions with strong community consultation requirements.

7. Challenges and Implementation Barriers

7.1. Measurement and Standardization Challenges

The integration of ESG metrics into merger evaluation processes faces significant measurement and standardization challenges that complicate meaningful comparison and analysis. The absence of universally accepted ESG measurement standards creates difficulties in benchmarking potential merger targets and assessing relative performance across different organizations and jurisdictions [75]. This standardization gap results in increased due diligence costs and potential valuation errors that can affect merger success.

Data quality and availability issues present persistent challenges in ESG assessment, particularly for privately held companies or organizations in jurisdictions with limited sustainability reporting requirements [76]. The lack of comprehensive ESG data creates information asymmetries that may disadvantage some merger participants while creating opportunities for others with superior data collection capabilities. These information gaps can result in mispricing of ESG risks and opportunities.

The subjectivity inherent in many ESG assessments creates challenges in developing objective evaluation criteria that can be consistently applied across different merger contexts. Environmental impact assessments, social responsibility evaluations, and governance effectiveness measurements often involve significant judgment that may vary across evaluators and analytical frameworks [77]. This subjectivity can result in inconsistent merger evaluation outcomes and stakeholder disputes.

7.2. Cost and Resource Requirements

Comprehensive ESG integration in merger activities requires substantial investments in specialized expertise, analytical systems, and data collection infrastructure that may exceed the capabilities of smaller organizations or less experienced merger participants. Environmental due diligence requires scientists and engineers with specialized knowledge of regulatory requirements and technical assessment methodologies [78]. Social impact assessment requires anthropologists, sociologists, and community engagement specialists who understand cultural dynamics and stakeholder relationships [79].

The extended timeframes often required for comprehensive ESG analysis can create challenges in competitive merger processes where speed of execution provides advantages. Environmental assessments may require months of data collection and analysis, while social impact evaluations may involve extensive stakeholder consultation processes that cannot be easily accelerated [80]. These time requirements may disadvantage ESG-focused buyers in auction processes that prioritize execution speed.

Technology infrastructure requirements for ESG data collection, analysis, and reporting can represent significant capital investments that may not generate immediate returns. Sophisticated environmental monitoring systems, social media sentiment analysis tools, and governance dashboard systems require ongoing maintenance and updates that create permanent cost structures [81]. These technology investments may be particularly challenging for organizations with limited resources or experience in ESG management.

7.3. Regulatory and Compliance Complexities

The evolving regulatory landscape for ESG reporting and compliance creates significant uncertainties that complicate merger planning and execution processes [82]. Different jurisdictions have implemented varying ESG disclosure requirements that may conflict or create compliance burdens that exceed anticipated levels. The lack of regulatory harmonization across jurisdictions creates particular challenges for cross-border mergers that must satisfy multiple regulatory frameworks simultaneously [83].

The interpretive guidance for ESG regulations remains underdeveloped in many jurisdictions, creating uncertainties regarding compliance requirements and potential penalties for non-compliance [84]. This regulatory uncertainty makes it difficult to assess ESG-related risks and costs in merger planning processes. The evolving nature of ESG regulation means that compliance strategies developed during merger planning may become obsolete before transaction completion.

Enforcement inconsistencies across different regulatory authorities create additional complexities in ESG compliance planning [85]. Some jurisdictions actively enforce ESG requirements while others maintain more permissive approaches, creating uneven competitive conditions and compliance costs. These enforcement variations can affect merger structure decisions and value distribution between transaction parties.

8. Future Directions and Emerging Trends

8.1. Technology Integration and Digital Transformation

The future of ESG integration in merger activities will be significantly shaped by technological innovations that enhance data collection, analysis, and reporting capabilities. Artificial intelligence and machine learning algorithms are increasingly being deployed to analyze vast datasets for ESG risk identification and performance assessment [86]. These technologies enable more sophisticated pattern recognition and predictive analytics that can identify subtle ESG risks and opportunities that might escape traditional analytical approaches.

Blockchain technology presents opportunities for enhanced ESG data verification and supply chain transparency that could revolutionize due diligence processes in merger activities [87]. Distributed ledger systems can provide immutable records of environmental performance, social impact metrics, and governance decisions that increase confidence in ESG assessments. However, the energy consumption associated with some blockchain implementations creates environmental concerns that must be carefully managed.

Internet of Things (IoT) sensors and satellite monitoring technologies enable real-time environmental performance tracking that can provide unprecedented insights into target company operations and compliance status [88]. These monitoring capabilities can reduce due diligence uncertainties while enabling continuous post-merger performance

monitoring. The integration of IoT data with traditional financial reporting systems represents a significant technological challenge that requires substantial infrastructure investments.

8.2. Regulatory Evolution and Standardization

The regulatory landscape for ESG reporting and compliance continues to evolve rapidly, with major jurisdictions implementing increasingly comprehensive requirements that will significantly affect merger activities. The International Sustainability Standards Board (ISSB) is developing global baseline standards for sustainability disclosures that could provide the harmonization needed to reduce cross-border merger complexities [89]. However, the adoption timeline and implementation details remain uncertain.

Mandatory ESG due diligence requirements are being considered in several jurisdictions, which could fundamentally change merger evaluation processes and professional liability frameworks [90]. These requirements may mandate specific analytical procedures, stakeholder consultation processes, and disclosure standards that increase merger costs while potentially improving outcomes. The professional liability implications of mandatory ESG due diligence represent a significant concern for advisory firms and merger participants.

Climate-related financial disclosures are becoming mandatory in major financial centers, requiring detailed reporting of climate risks and opportunities that directly affect merger valuation and structure decisions [91]. The implementation of these requirements will create substantial data collection and analysis obligations that may favor larger organizations with greater resources while creating barriers for smaller market participants.

8.3. Stakeholder Capitalism and Purpose-Driven Organizations

The evolution toward stakeholder capitalism and purpose-driven organizational models is fundamentally reshaping merger evaluation criteria and success metrics. Traditional shareholder value maximization approaches are being supplemented or replaced by multi-stakeholder value creation frameworks that consider environmental impact, social benefit, and governance excellence alongside financial returns [92]. This shift requires new analytical frameworks and measurement systems that can assess value creation across multiple dimensions simultaneously.

Benefit corporation structures and other hybrid organizational forms are becoming more prevalent, creating new merger considerations related to mission preservation and stakeholder protection [93]. These organizational forms may require specialized merger structures and governance arrangements that protect non-financial objectives while enabling value creation. The legal and regulatory frameworks for these hybrid structures remain underdeveloped in many jurisdictions.

The growing emphasis on corporate purpose and social impact is creating new merger motivations beyond traditional financial synergies. Purpose-driven mergers seek to enhance societal impact and environmental benefit while achieving financial returns [94]. These transactions require specialized evaluation frameworks that can assess mission alignment and impact potential alongside traditional financial metrics.

9. Conclusion

The integration of Environmental, Social, and Governance metrics into financial reporting and investment decision-making during corporate mergers represents a fundamental transformation in how business combinations are evaluated, structured, and executed. This comprehensive review has demonstrated that ESG considerations have evolved from peripheral concerns to central elements of merger strategy, creating both significant opportunities and substantial challenges for market participants. The evidence clearly indicates that ESG integration can enhance risk management, create competitive advantages, and improve long-term value creation when implemented effectively.

The theoretical frameworks and empirical evidence examined in this review reveal that successful ESG integration requires sophisticated analytical capabilities, substantial resource investments, and comprehensive stakeholder engagement strategies. Organizations that develop these capabilities can achieve superior merger outcomes through enhanced risk identification, improved market positioning, and stronger stakeholder relationships. However, the implementation challenges associated with measurement standardization, regulatory compliance, and resource requirements create barriers that may limit ESG integration effectiveness for some market participants.

The regulatory evolution and technological developments examined in this study suggest that ESG integration in merger activities will continue to expand and become more sophisticated over time. The development of global sustainability reporting standards, mandatory ESG disclosure requirements, and advanced analytical technologies will create both

opportunities and obligations for merger participants. Organizations that proactively develop ESG capabilities will be better positioned to navigate this evolving landscape and capture the value creation opportunities it presents.

Looking forward, the transformation toward stakeholder capitalism and purpose-driven organizations will further elevate the importance of ESG considerations in merger activities. This evolution will require new analytical frameworks, measurement systems, and governance structures that can balance multiple stakeholder interests while achieving sustainable value creation. The successful implementation of these approaches will depend on continued innovation in ESG measurement methodologies, regulatory framework development, and stakeholder engagement practices.

The future of merger activities will be characterized by increasingly sophisticated ESG integration that reflects growing recognition of the interconnections between environmental sustainability, social responsibility, governance excellence, and long-term financial performance. Organizations that embrace this transformation and develop comprehensive ESG capabilities will be better positioned to create value for all stakeholders while contributing to broader societal objectives of sustainable development and responsible business conduct.

9.1. Recommendations

The successful integration of ESG metrics into merger activities requires a systematic and strategic approach that addresses the multifaceted challenges identified in this review. Organizations should prioritize the development of comprehensive ESG analytical capabilities that encompass environmental risk assessment, social impact evaluation, and governance effectiveness measurement. This capability development should include investment in specialized expertise, advanced analytical technologies, and robust data collection systems that can support sophisticated ESG evaluation processes. The establishment of standardized ESG measurement frameworks and reporting protocols will be essential for achieving consistent and meaningful comparisons across potential merger opportunities.

Stakeholder engagement strategies must be developed that recognize the diverse interests and expectations of constituencies affected by merger activities. These strategies should emphasize authentic communication, meaningful consultation, and collaborative problem-solving approaches that build trust and support for merger objectives. The development of social license to operate through effective stakeholder engagement will become increasingly important as ESG considerations gain prominence in merger evaluation and approval processes.

Regulatory compliance frameworks must be established that can navigate the complex and evolving landscape of ESG requirements across multiple jurisdictions. These frameworks should emphasize proactive compliance strategies, continuous monitoring of regulatory developments, and flexible adaptation capabilities that can respond to changing requirements. Organizations should invest in legal and regulatory expertise that can provide guidance on ESG compliance obligations and their implications for merger structure and execution strategies.

Technology integration strategies should be developed that leverage emerging digital capabilities to enhance ESG data collection, analysis, and reporting effectiveness. The integration of artificial intelligence, blockchain, and IoT technologies should be carefully planned to ensure compatibility with existing systems while providing meaningful improvements in ESG analytical capabilities that support more informed merger decision-making processes.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

- [1] Aslam MA. Sustainable Business Practices: Integrating Environmental, Social, and Governance (ESG) Metrics. *International Journal of Business & Computational Science*. 2024;1(1).
- [2] Valiyeva M. Mergers and Acquisitions Lifecycle through the Lens of Sustainable Development.
- [3] Matos P. ESG and responsible institutional investing around the world: A critical review.
- [4] Maalouf E. Achieving corporate environmental responsibility through emerging sustainability laws. *Asia Pacific Journal of Environmental Law*. 2024 Jun 28;27(1):64-99.

- [5] Rugira J. The impact of corporate social responsibility on corporate risk-taking: evidence from Mergers and acquisitions (M&As).
- [6] Repetto R, Austin D. Pure profit: The financial implications of environmental performance.
- [7] Onyekwelu NP, Ezeafulukwe C, Owolabi OR, Asuzu OF, Bello BG, Onyekwelu SC. Ethics and corporate social responsibility in HR: A comprehensive review of policies and practices. *International Journal of Science and Research Archive*. 2024 Feb;11(1):1294-303.
- [8] Rantanen N. The Impact of ESG Ratings on Value Creation in Mergers and Acquisitions.
- [9] Tóth ZJ. Internationalisation and Its Influence on Sustainability and Business Practices: A Study of Small and Medium-Sized Construction Materials Manufacturers in Hungary.
- [10] Bae Y, Lee K, Roh T. Acquirer's absorptive capacity and firm performance: The perspectives of strategic behavior and knowledge assets. *Sustainability*. 2020 Oct 12;12(20):8396.
- [11] Cosa M. How Institutional Pressures Drive Learning and Memory in Organizations. In *Impacts of Innovation and Cognition in Management 2025* (pp. 231-262). IGI Global Scientific Publishing.
- [12] Awewomom J, Dzeble F, Takyi YD, Ashie WB, Ettey EN, Afua PE, Sackey LN, Opoku F, Akoto O. Addressing global environmental pollution using environmental control techniques: a focus on environmental policy and preventive environmental management. *Discover Environment*. 2024 Feb 6;2(1):8.
- [13] Klassen RD, Vereecke A. Social issues in supply chains: Capabilities link responsibility, risk (opportunity), and performance. *International Journal of production economics*. 2012 Nov 1;140(1):103-15.
- [14] Efunniyi CP, Abbulimen AO, Obiki-Osafiele AN, Osundare OS, Agu EE, Adeniran IA. Strengthening corporate governance and financial compliance: Enhancing accountability and transparency. *Finance & Accounting Research Journal*. 2024 Aug;6(8):1597-616.
- [15] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [16] Barrett C, Friedman D, Bard S, Nielson J, Herfurth J. Keep ESG Top of Mind During Post-Merger Integration. Boston Consultancy Group. 2023.
- [17] Bernardino P. Engaging employees through corporate social responsibility programs: Aligning corporate social responsibility and employee engagement. *Journal of Organizational Psychology*. 2021;21(1):105-13.
- [18] Kalogeropoulou F. *Strategic sustainability risk management in product development companies: key aspects and conceptual approach* (Master's thesis, Πανεπιστήμιο Πειραιώς).
- [19] Malhotra P. Aligning Financial Reporting Standards. *Aligning Financial Reporting Standards With Global Trade Needs*. 2025 Jun 12:153.
- [20] Hazrati M, Annamayer E. Evaluating EU Directives on Corporate Sustainability Reporting and Due Diligence Through the Lens of the 'JUST' Framework. In *New Engagement Strategies for Energy Justice: Perspectives from the Next Generation 2025* Jan 9 (pp. 121-141). Cham: Springer Nature Switzerland.
- [21] Dowdell J. Mandating Climate-Related Risks and GHG Emissions: Does The Securities and Exchange Commission Have The Power?. *Md. L. Rev. Online*. 2022;82:119.
- [22] Downie J, Stubbs W. Corporate carbon strategies and greenhouse gas emission assessments: the implications of scope 3 emission factor selection. *Business Strategy and the Environment*. 2012 Sep;21(6):412-22.
- [23] Liu FH, Demeritt D, Tang S. Accounting for sustainability in Asia: Stock market regulation and reporting in Hong Kong and Singapore. *Economic Geography*. 2019 Aug 8;95(4):362-84.
- [24] Akpan JU, Oluwagbade O. Social and environmental responsibility in accounting: Beyond financial metrics. *International Journal of social sciences and management research*. 2023;9(9):163-88.
- [25] Bice S, Brueckner M, Pforr C. Putting social license to operate on the map: A social, actuarial and political risk and licensing model (SAP Model). *Resources policy*. 2017 Sep 1;53:46-55.
- [26] Gharpure A. ESG Reporting in Enterprise Financial Systems: Challenges and Innovations. *Journal of Computer Science and Technology Studies*. 2025 May 2;7(3):194-201.

- [27] Sorsa T. Navigating the Upstream Scope 3 Primary Data Transition-Challenges and Solutions in Supply Chain Emissions Data Collection.
- [28] Liang L, Ding T, Tan R, Song M. ESG Performance Evaluation and Reporting. In *The ESG Systems in Chinese Enterprises: Theory and Practice* 2025 Apr 29 (pp. 213-242). Singapore: Springer Nature Singapore.
- [29] Valiyeva M. Mergers and Acquisitions Lifecycle through the Lens of Sustainable Development.
- [30] Maalouf E. Achieving corporate environmental responsibility through emerging sustainability laws. *Asia Pacific Journal of Environmental Law*. 2024 Jun 28;27(1):64-99.
- [31] Bakker B. *Reporting Challenges of the Social Dimension ESG in Healthcare* (Master's thesis, University of Twente).
- [32] Schramade W. Integrating ESG into valuation models and investment decisions: the value-driver adjustment approach. *Journal of Sustainable Finance & Investment*. 2016 Apr 2;6(2):95-111.
- [33] Zeidan R. ESG Investing. In *The Green Banking Transition Manual: Navigating the Sustainable Finance Landscape* 2025 Mar 14 (pp. 175-255). Singapore: Springer Nature Singapore.
- [34] Kaiser L, Welters J. Risk-mitigating effect of ESG on momentum portfolios. *The Journal of Risk Finance*. 2019 Dec 2;20(5):542-55.
- [35] Agbakwuru V, Onyenahazi OB, Antwi BO, Oyewale K. The impact of environmental, social, and governance (ESG) reporting on corporate financial performance. *International Journal of Research Publication and Reviews*. 2024 Sep;5(9):3629-44.
- [36] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [37] Basile I, Ferrari P. Integrating sustainability criteria into the investment process. In *Asset Management and Institutional Investors: Methods and Tools for Asset Allocation, Portfolio Management and Performance Evaluation* 2024 Oct 27 (pp. 257-281). Cham: Springer International Publishing.
- [38] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [39] Govindan K, Kaliyan M, Kannan D, Haq AN. Social sustainability. *Sustainable Supply Chain Management*. 2025 Feb 20;17(8):455-66.
- [40] Sherman MH, Ford J. Stakeholder engagement in adaptation interventions: an evaluation of projects in developing nations. *Climate Policy*. 2014 May 4;14(3):417-41.
- [41] Manginte SY. Fortifying transparency: Enhancing corporate governance through robust internal control mechanisms. *Advances in Management & Financial Reporting*. 2024 May 20;2(2):72-84.
- [42] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [43] Aggarwal R, Dow S. Corporate governance and business strategies for climate change and environmental mitigation. *The European Journal of Finance*. 2012 Apr 1;18(3-4):311-31.
- [44] Pelosi N, Adamson R. Managing the "S" in ESG: The case of indigenous peoples and extractive industries. *Journal of applied corporate finance*. 2016 Jun;28(2):87-95.
- [45] Namatame A, Komatsu T. Management of systemic risks and cascade failures in a networked society. *Information Knowledge Systems Management*. 2011 Jan 1;10(1-4):111-33.
- [46] Ikponmwoba AS, Chima OK, Ezeilo OJ, Ojonugwa BM, Adesuyi MO. A Conceptual Framework for Financial Risk Prediction and Internal Controls in Post-Merger Entities.
- [47] Hao N, Dragomir VD. Renewable Energy, Sustainable Business Models, and Decarbonization in the European Union: Comparative Analysis of Corporate Sustainability Reports. *Sustainability*. 2025 Apr 17;17(8):3646.
- [48] Ekechukwu DE, Simpa P. Trends, insights, and future prospects of renewable energy integration within the oil and gas sector operations. *World Journal of Advanced Engineering Technology and Sciences*. 2024 May;12(1):152-67.

- [49] Park KM, Meglio O, Schriber S. Building a global corporate social responsibility program via mergers and acquisitions: A managerial framework. *Business Horizons*. 2019 May 1;62(3):395-407.
- [50] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [51] Salvi A, Petruzzella F, Giakoumelou A. Green M&A deals and bidders' value creation: the role of sustainability in post-acquisition performance. *International Business Research*. 2018;11(7):96-105.
- [52] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [53] Johansson O, Nyström L. The M&A Due Diligence Process in Ukraine vs. Sweden A Comparative Case Study.
- [54] Moffitt JH. Merging in the Shadow of the Law: The Case for Consistent Judicial Efficiency Analysis. *Vand. L. Rev.*. 2010;63:1695.
- [55] Vas A. The Corporate Law Implications of Mergers and Acquisitions in the Luxury Fashion Sector: Analysing Brand Integrity and Shareholder Interests.
- [56] Demuijnck G, Fasterling B. The social license to operate. *Journal of business ethics*. 2016 Jul;136(4):675-85.
- [57] Pirson M, Turnbull S. Corporate governance, risk management, and the financial crisis: An information processing view. *Corporate Governance: An International Review*. 2011 Sep;19(5):459-70.
- [58] Juhola S, Laurila AG, Groundstroem F, Klein J. Climate risks to the renewable energy sector: Assessment and adaptation within energy companies. *Business Strategy and the Environment*. 2024 Mar;33(3):1906-19.
- [59] Durmus Senyapar HN. Sustainability marketing strategies for the energy sector: Trends, challenges, and future directions. *Environment and Social Psychology*. 2024;9(5):2573.
- [60] Salvioni DM, Gennari F, Astori R. Corporate responsibility and ethical culture in pharmaceutical industry. *Journal of Business & Economic Policy*. 2015 Jun;2(2).
- [61] Akinsola K. Corporate Governance Challenges in Tech M&A: Board Oversight and Shareholder Rights. Available at SSRN 5125960. 2025 Feb 5.
- [62] Rezaee Z. *Financial Services Firms: Governance, Regulations, Valuations, Mergers, and Acquisitions*. John Wiley & Sons; 2011 Jun 9.
- [63] Cinciulescu D. Developments and perspectives on corporate environmental risk management. A comprehensive analysis of ESG integrations. *Revista de Științe Politice. Revue des Sciences Politiques*. 2024(81):83-91.
- [64] Zeidan R. ESG Investing. In *The Green Banking Transition Manual: Navigating the Sustainable Finance Landscape* 2025 Mar 14 (pp. 175-255). Singapore: Springer Nature Singapore.
- [65] Laokulrach M. ESG Integration in Investment Analysis. In *Environmental, Social, and Governance (ESG) Investment and Reporting* 2025 Apr 5 (pp. 93-117). Cham: Springer Nature Switzerland.
- [66] Kalyanam AK. Integration of ESG Data in the Retail Sector (Essential for Sustainable business and Risk Management). *Integration*. 2024 Dec;8(12).
- [67] Mason C, Simmons J. Embedding corporate social responsibility in corporate governance: A stakeholder systems approach. *Journal of Business Ethics*. 2014 Jan;119(1):77-86.
- [68] Mebar H. Creating an ESG Services Portfolio.
- [69] Samuel O, Simbiat A, Sakiru F, Adeseun K, Itunu T, Kevin I: AI-Augmented Decision Support System for Sustainable Transportation and Supply Chain Management: A Review.
- [70] Huang J, Han F, Li Y. Government as major customer: The effects of government procurement on corporate environmental, social, and governance performance. *Finance Research Letters*. 2023 Jun 1;54:103781.
- [71] Mirza N, Umar M, Lobont OR, Safi A. ESG lending, technology investment and banking performance in BRICS: navigating sustainability and financial stability. *China Finance Review International*. 2025 Jun 5;15(2):324-36.
- [72] Rezaee Z. Corporate sustainability: Theoretical and integrated strategic imperative and pragmatic approach. *The Journal of Business Inquiry*. 2017 Mar 1;16.

- [73] Lin Y. Research on the Impact of Corporate ESG Performance on Long-Term Sustainable Competitive Advantage. *Journal of Modern Business and Economics*. 2024 Oct 20;1(2).
- [74] Deigh L, Farquhar J, Palazzo M, Siano A. Corporate social responsibility: engaging the community. *Qualitative Market Research: An International Journal*. 2016 Apr 11;19(2):225-40.
- [75] Mortkovitch N. Assessing the Impact of ESG Scores on M&A Performance: A Theoretical and Empirical Examination.
- [76] Esty D, Cort T. Toward enhanced corporate sustainability disclosure: making ESG reporting serve investor needs. *Va. L. & Bus. Rev.*. 2021;16:423.
- [77] Bennett M, James P, Klinkers L, editors. *Sustainable measures: Evaluation and reporting of environmental and social performance*. Routledge; 2017 Sep 8.
- [78] Crabb A, Leroy P. *The handbook of environmental policy evaluation*. Routledge; 2012 May 4.
- [79] Hanna P, Vanclay F, Langdon EJ, Arts J. The importance of cultural aspects in impact assessment and project development: reflections from a case study of a hydroelectric dam in Brazil. *Impact assessment and project appraisal*. 2016 Oct 1;34(4):306-18.
- [80] Caniato M, Vaccari M, Visvanathan C, Zurbrügg C. Using social network and stakeholder analysis to help evaluate infectious waste management: A step towards a holistic assessment. *Waste Management*. 2014 May 1;34(5):938-51.
- [81] Odunaike A. Integrating Real-Time Financial Data Streams to Enhance Dynamic Risk Modeling and Portfolio Decision Accuracy.
- [82] Olteanu AL, Ionaşcu AE. Navigating the ESG landscape and its impact in the business and investment sector. *Journal of Financial Studies*. 2023;8(15):144-58.
- [83] Challapalli S. Benefits and constraints associated with the harmonization of financial regulations: An overview. *Asian Journal of Economics, Business and Accounting*. 2023 Jun 7;23(15):49-56.
- [84] Prisco M. The impact of ESG considerations on private equity and venture capital transactions: the Western scenario. *Business Law International*. 2024;25(1):5-21.
- [85] Adejugbe BT. Navigating the Interplay: ESG, Sustainability, and Sustainability Reporting-An Examination of Regulatory Risks and Opportunities. *AGORA Int'l J. Jurid. Sci.*. 2024;18:165.
- [86] Rane N, Choudhary S, Rane J. Artificial intelligence driven approaches to strengthening Environmental, Social, and Governance (ESG) criteria in sustainable business practices: a review. *Social, and Governance (ESG) criteria in sustainable business practices: a review* (May 27, 2024). 2024 May 27.
- [87] AYODEJI DC, OYEYIPO I, ATTIOPE V, ONWUZULIKE OC, NWAQZOMUDOH MO, JOAN N, ISIBOR BA, AHMADU J. A Strategic Framework for Optimizing Mergers & Acquisitions: Valuation, Due Diligence, Integration, and Financial Stability.
- [88] SA Lawal, S Omefe, AK Balogun, C Michael, SF Bello: Circular Supply Chains in the AI Era with Renewable Energy Integration and Smart Transport Networks. ... *Communication In Physical Sciences*, 2021
- [89] Ilori O, Lawal CI, Friday SC, Isibor NJ, Chukwuma-Eke EC. A framework for environmental, social, and governance (ESG) auditing: Bridging gaps in global reporting standards. *International Journal of Social Science Exceptional Research*. 2023 Jan;2(1):231-48.
- [90] David Y. Environmental, Social, and Governance (ESG) Factors in M&A Due Diligence: Legal Obligations, Risk Assessment, and Integration Strategies. *Risk Assessment, and Integration Strategies* (May 15, 2024). 2024 May 15.
- [91] Hösli A, Weber RH. Climate change reporting and due diligence: Frontiers of corporate climate responsibility. *European Company and Financial Law Review*. 2022 Mar 15;18(6):948-79.
- [92] Ho VH. Enlightened shareholder value: Corporate governance beyond the shareholder-stakeholder divide. *J. Corp. L.*. 2010;36:59.
- [93] Reiser DB. Benefit corporations-a sustainable form of organization. *Wake Forest L. Rev.*. 2011;46:591.
- [94] Lyon F, Stubbs W, Dahmann F, Edwards M. From “business as usual” to sustainable “purpose-driven business”: Challenges facing the purpose ecosystem in the United Kingdom and Australia. *Business and Society Review*. 2025 Mar;130:198-221.