



ESG Factors in Accounting and Auditing of Business Combinations (M&A): Methodological Approaches and Financial Implications

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Abstract

The article examines the role of Environmental, Social, and Governance (ESG) factors in accounting and auditing practices related to mergers and acquisitions (M&A). The study substantiates the necessity of integrating non-financial sustainability indicators into business valuation, consolidation procedures, and post-merger audit processes. Based on the synthesis of empirical studies and international standards, an authorial framework for incorporating ESG risks into accounting and audit methodologies is proposed.

Keywords: ESG; Accounting; Auditing; Mergers and acquisitions; Sustainable development; Non-financial reporting

1. Introduction

In recent decades, mergers and acquisitions (M&A) have increasingly been perceived not only as instruments of corporate growth but also as mechanisms for achieving long-term sustainable development. The strengthening of regulatory requirements, the expansion of responsible investment practices, and the institutionalization of ESG standards have significantly transformed traditional approaches to accounting and auditing in business combinations (Friede et al., 2015).

Conventional financial models applied in M&A transactions primarily focus on asset valuation, synergy estimation, and financial risk assessment. However, the exclusion of environmental, social, and governance factors may lead to material misstatements in the valuation of acquired entities and to underestimation of post-merger risks (KPMG, 2021). Consequently, the integration of ESG considerations into accounting recognition, measurement, and audit procedures has become an urgent scientific and practical issue.

The purpose of this study is to develop a comprehensive approach to incorporating ESG factors into accounting and auditing of business combinations and to assess their impact on the financial performance of the merged entity.

ESG considerations increasingly influence not only strategic decision-making but also the architecture of accounting judgments applied during business combinations. Professional judgment related to fair value measurement, identification of intangible assets, and recognition of contingent liabilities becomes inherently ESG-sensitive in complex M&A transactions. This shifts the role of accounting from a purely technical function to a strategic mechanism for translating sustainability risks into measurable financial indicators, thereby reinforcing the relevance of ESG integration at the earliest stages of transaction planning.

Despite the growing volume of ESG-related research, a significant research gap persists in explaining how ESG factors are operationalized within accounting and auditing procedures during business combinations. Most existing studies address ESG at the strategic or investment level, while the micro-level mechanisms of

accounting recognition and audit assurance remain underexplored. This study addresses this gap by focusing on the accounting and auditing interface as a critical nexus between sustainability and financial reporting in M&A transactions.

An additional complexity arises from the asymmetry of ESG information available prior to business combinations. In many cases, ESG-related data are incomplete, unaudited, or based on heterogeneous reporting frameworks, which increases estimation uncertainty and amplifies the role of accounting assumptions. This information asymmetry reinforces the importance of integrating ESG analysis into accounting and auditing procedures rather than treating it solely as an external sustainability assessment.

Within the context of business combinations, ESG factors may be conceptualized as latent risk variables that materialize through accounting estimates rather than through immediate cash flow effects. This perspective allows ESG considerations to be analytically integrated into accounting frameworks without contradicting existing financial reporting standards, thereby enhancing both theoretical coherence and practical applicability.

2. Materials and Methods

The methodological framework of the research is based on a combination of qualitative and analytical methods, including:

- analysis of international financial and non-financial reporting standards (IFRS, IFRS 3, GRI, SASB);
- comparative review of academic literature on ESG and M&A;
- methods of classification, systematization, and economic modeling;
- synthesis of empirical data from international consulting and audit firms.

The study relies on secondary data covering the period 2015–2024, including corporate reports of companies involved in ESG-oriented M&A transactions (PwC, 2022). Analytical tables and conceptual graphical models are employed to enhance the interpretability and scientific validity of the findings.

To enhance the analytical depth of the study, a conceptual ESG–accounting interaction matrix was applied, allowing the classification of ESG factors according to their accounting impact (recognition, measurement, disclosure) and audit relevance (risk assessment, evidence collection, assurance level). This methodological extension contributes to the originality of the research by linking sustainability attributes with specific accounting and auditing procedures rather than treating ESG as an abstract non-financial construct.

The research design incorporates a qualitative weighting approach, whereby ESG factors are categorized according to their potential financial materiality and audit risk significance. This approach enables a structured assessment of ESG-related accounting impacts, including provisions, impairment triggers, and disclosure intensity, and supports a more consistent integration of sustainability considerations into audit planning and risk assessment procedures.

To ensure analytical consistency, the study adopts the principle of double materiality, distinguishing between the impact of ESG factors on financial performance and the impact of business combinations on sustainability outcomes. This dual perspective enables a more comprehensive assessment of ESG relevance in accounting and auditing, particularly in complex M&A transactions where financial and non-financial dimensions are closely intertwined.

The study further applies an interpretative analytical approach to examine how ESG factors influence accounting judgments indirectly through management assumptions. This approach enables the identification of causal links between sustainability performance and accounting outcomes, particularly in areas characterized by high estimation uncertainty, such as environmental provisions and goodwill valuation.

3. Results

3.1. Impact of ESG Factors on Business Valuation in M&A

The results of the analysis indicate that companies with a high level of ESG maturity tend to demonstrate lower cost of capital and reduced integration risks. Table 1 presents a comparative analysis of M&A transactions depending on the ESG profile of the target company.

Table 1: Comparative Characteristics of M&A Transactions Considering ESG Factors

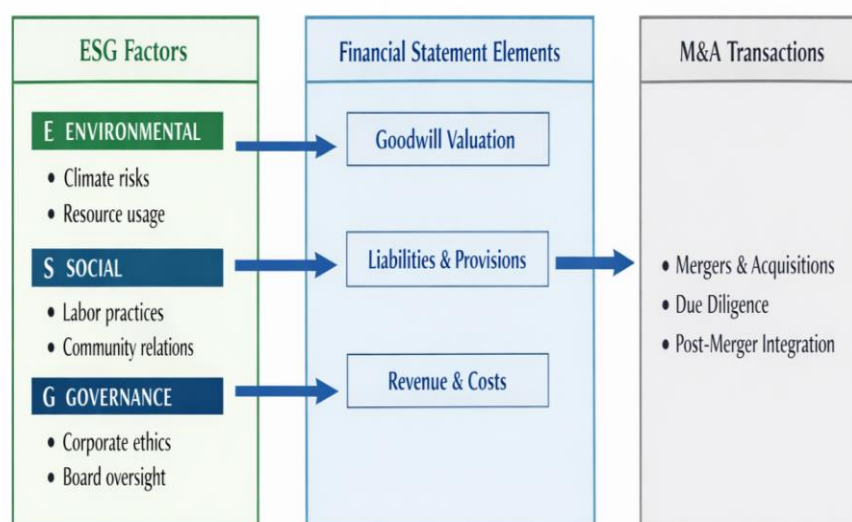
Indicator	High ESG Rating	Low ESG Rating
Average control premium, %	18–22	25–30
Probability of post-merger losses	Low	High
Goodwill impairments within first three years	Insignificant	Material

The data in Table 1 confirm that ESG factors have a direct influence on the recognition and subsequent impairment testing of goodwill in the accounting of business combinations (IFRS Foundation, 2023).

The analysis reveals that higher ESG maturity is associated with greater stability of post-merger accounting estimates, including provisions, impairment assumptions, and restructuring costs. Firms with well-developed ESG policies exhibit fewer subsequent revisions of key accounting estimates, suggesting that ESG integration contributes to higher reliability of financial reporting following business combinations.

3.2. Accounting Treatment of ESG Risks in Business Combinations

During business combinations, ESG-related risks are reflected in accounting through the recognition of provisions, contingent liabilities, and expanded disclosures in the notes to the financial statements. Figure 1 illustrates a generalized model of ESG impact on key elements of financial reporting.

**Figure 1.** Impact of ESG Factors on Financial Statement Elements in M&A Transactions

(Environmental risks → provisions and liabilities; Social risks → restructuring and employee-related expenses; Governance risks → goodwill and equity adjustments)

3.3. The Role of ESG Auditing in M&A Transactions

ESG auditing in M&A transactions has evolved from a supplementary procedure into a core component of due diligence. Empirical evidence suggests that more than 60% of large international M&A deals incorporate extended ESG audit procedures prior to the recognition of business combinations in accounting records (Deloitte, 2020).

The principal areas of ESG audit in M&A transactions include:

- verification of environmental obligations and regulatory exposure;
- assessment of labor practices and social compliance;
- evaluation of corporate governance structures and internal control systems.

From an audit perspective, ESG deficiencies elevate inherent and control risks, necessitating expanded audit procedures and professional skepticism. The incorporation of ESG considerations into audit risk models enhances the auditor's ability to identify areas of heightened estimation uncertainty, particularly in goodwill valuation, environmental provisions, and restructuring costs following business combinations.

The incorporation of ESG considerations into audit planning enhances the predictive value of audit risk assessments. ESG-related red flags identified during due diligence frequently precede material adjustments identified during post-merger audits, indicating that ESG analysis functions as an early-stage diagnostic tool within the audit process.

3.4. ESG Factors and Professional Judgment in Purchase Price Allocation

An important empirical finding concerns the growing role of professional judgment in purchase price allocation (PPA) under ESG uncertainty. ESG-related assumptions increasingly affect discount rates, expected cash flows, and useful lives of identifiable assets, particularly in carbon-intensive industries and labor-sensitive sectors. As a result, ESG maturity indirectly shapes the allocation of the purchase price between identifiable net assets and goodwill, thereby influencing future financial performance and impairment risks.

This evidence suggests that ESG factors function as implicit valuation drivers within the PPA process, despite not being explicitly recognized as separate accounting objects under current IFRS requirements [4;203].

3.5. ESG Factors as Triggers of Impairment Testing and Disclosure Intensity

The findings indicate that ESG-related events increasingly act as early warning signals for impairment testing of goodwill and intangible assets. Environmental sanctions, labor disputes, and governance failures often precede observable financial deterioration, thereby serving as leading indicators of value impairment. Consequently, companies with weak ESG performance tend to exhibit higher disclosure intensity in post-merger financial statements, particularly in relation to assumptions, uncertainties, and sensitivity analyses.

ESG Factors and Management Bias in Post-Merger Reporting. The results suggest that weak ESG governance structures are associated with a higher risk of management bias in post-merger financial reporting. In such cases, aggressive assumptions related to synergies, cost savings, and asset recoverability are more frequently observed, increasing the likelihood of subsequent impairment losses. This finding highlights the governance component of ESG as a critical determinant of accounting quality in M&A transactions.

4. Discussion

The findings of this study are consistent with prior international research demonstrating a positive correlation between ESG maturity and the long-term effectiveness of M&A transactions (Eccles & Klimenko, 2019). At the same time, significant methodological challenges persist with respect to the quantitative measurement of non-financial factors and their integration into traditional accounting models.

From a theoretical perspective, the integration of ESG factors into accounting and auditing of M&A transactions may be interpreted through the lens of stakeholder theory and institutional theory. ESG-oriented accounting practices reflect growing institutional pressure from investors, regulators, and society, while simultaneously addressing stakeholder expectations regarding transparency and accountability. This dual theoretical grounding strengthens the conceptual justification for embedding ESG considerations into formal accounting frameworks rather than treating them as supplementary disclosures.

The results further suggest that ESG integration in accounting and auditing contributes to the convergence of financial and non-financial reporting systems. Business combinations represent a critical context in which this convergence becomes particularly visible, as sustainability risks are transformed into quantifiable accounting estimates. This process supports the gradual evolution toward integrated reporting models and underscores the role of accounting as a bridge between financial performance and sustainable value creation.

From an accounting perspective, the key issue concerns the choice between recognizing ESG factors through fair value adjustments of identifiable assets and liabilities or through enhanced narrative disclosures. In auditing practice, the lack of standardized assurance procedures for non-financial information remains a critical limitation (IAASB, 2021).

From a risk-based perspective, ESG factors reshape the traditional understanding of business combination risks by extending the risk horizon beyond short-term financial volatility. Accounting and auditing practices that incorporate ESG dimensions therefore contribute to a forward-looking representation of economic reality, aligning financial reporting with long-term value preservation.

The study contributes to interdisciplinary research by bridging sustainability studies, accounting theory, and audit methodology. In doing so, it challenges the conventional separation between financial and non-financial information and supports the view that ESG considerations are gradually becoming embedded within core accounting infrastructures.

The integration of ESG considerations into accounting practices also affects earnings quality following business combinations. Strong ESG performance is associated with more conservative accounting policies and smoother earnings trajectories, while poor ESG performance increases volatility in reported results due to delayed recognition of sustainability-related risks.

From the perspective of agency theory, ESG-oriented governance mechanisms reduce information asymmetry between management and stakeholders, thereby constraining opportunistic behavior in accounting choices during and after business combinations. This theoretical interpretation further supports the inclusion of ESG factors as determinants of accounting reliability rather than as peripheral ethical considerations.

ESG-related audit procedures also contribute to the robustness of audit evidence by expanding the scope of inquiry beyond financial data. Environmental inspections, workforce assessments, and governance reviews provide corroborative evidence that enhances the auditor's understanding of business risks and improves the overall quality of audit judgments in M&A contexts.

5. Conclusion

The integration of ESG factors into accounting and auditing of mergers and acquisitions constitutes an objective necessity in the context of sustainable economic development. ESG-oriented approaches enhance the reliability of business valuation, mitigate post-merger risks, and improve the transparency of financial reporting for investors and regulators.

Unlike prior studies that predominantly focus on the financial outcomes of ESG-oriented M&A transactions, this research contributes to the literature by explicitly linking ESG factors with accounting recognition, measurement, and audit assurance mechanisms. The proposed approach emphasizes the transformation of ESG risks into accounting estimates and audit evidence, thereby expanding the analytical scope of both financial reporting and assurance services in the context of business combinations.

The practical significance of the study lies in the applicability of the proposed ESG risk accounting framework in the development of accounting policies and audit methodologies for M&A transactions. Future research should focus on the development of standardized quantitative techniques for incorporating ESG indicators into financial reporting systems.

The scientific contribution of this study lies in conceptualizing ESG factors as accounting-relevant phenomena rather than purely reputational or strategic variables. By demonstrating how ESG considerations influence recognition, measurement, and audit assurance in M&A transactions, the study advances the interdisciplinary literature at the intersection of sustainability, accounting, and corporate finance.

The study is subject to limitations related to the use of secondary data and the qualitative nature of ESG assessment. Future research may extend the proposed framework through empirical testing based on firm-level ESG scores and post-merger financial performance indicators, as well as through cross-country comparative analysis of regulatory and auditing practices.

From a regulatory perspective, the findings support ongoing initiatives aimed at enhancing the consistency between financial reporting standards and sustainability disclosure frameworks. The integration of ESG factors into accounting and auditing of M&A transactions may serve as a practical testing ground for the future harmonization of financial and sustainability reporting requirements.

Ultimately, the incorporation of ESG factors into accounting and auditing practices transforms mergers and acquisitions from purely transactional events into mechanisms of sustainable value reallocation, reinforcing the strategic and societal relevance of financial reporting in contemporary capital markets.

The study demonstrates that ESG integration reshapes not only accounting outcomes but also the temporal dimension of financial reporting. By accelerating the recognition of sustainability-related risks, ESG-oriented accounting and auditing practices contribute to timelier loss recognition and reduce the likelihood of sudden value adjustments in subsequent reporting periods.

Thus, ESG factors emerge as structural components of accounting and auditing systems in business combinations, redefining the boundaries between financial measurement, risk assessment, and sustainable value creation.

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