
The Impact of ESG Performance on Premiums Paid in Mergers and
Acquisitions Deals

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Dissertation

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Bibliographical Note

Francisco Castro was born in Porto in 1997. He began his academic journey with a Bachelor's degree in Business Management, during which he pursued a minor in Finance.

To deepen his expertise in these fields, he decided to pursue a Master's degree in Economics of Business and Strategy at the Faculdade de Economia da Universidade do Porto, beginning in October 2022. Throughout the programme, finance became a central pillar of his academic and professional growth, with a particular focus on Portfolio Management and Mergers & Acquisitions.

Alongside his academic path, Francisco co-founded the start-up *OpoTech Solutions*, where he led the development of *GrantHub*, a digital platform designed to connect Small and Medium Enterprises (SMEs) and researchers with relevant funding opportunities and specialized consultants. This venture played a key role in cultivating his entrepreneurial spirit and bridging his interests in finance, innovation, and strategic development.

This dissertation constitutes the culmination of his master's programme. Now on the horizon is the continuation of his European career, following his experience at the European Investment Fund (EIF).

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This road has not always been the easiest. A master's degree challenges more than academic skills, it reshapes the way you see yourself and the people around you. It demands resilience, discipline, and constant adaptation. For me, this journey has been transformative, expanding not only my knowledge but also my perspective on life. And while this dissertation closes one chapter, it does not mark the end of my education, only the beginning of a lifelong path of learning and growth.

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Abstract

The integration of Environmental, Social, and Governance (ESG) factors into Mergers and Acquisitions (M&A) has become a defining feature of contemporary deal-making, reflecting growing interest in sustainable corporate practices. As ESG concerns rise in investor agendas, companies with high ESG performance are increasingly perceived as more resilient, better governed, and aligned with stakeholders' expectations. (Shen, M., 2023). These characteristics may influence the valuation of target firms, particularly through acquisition premiums.

The dissertation explores the relationship between corporate sustainability and acquisition premiums in Mergers and Acquisition (M&A) deals, focusing on target firms' Environmental, Social, and Governance (ESG) performance. While ESG has become increasingly relevant to investors and corporate strategists, its financial implications in M&A valuations remain underexplored. By analyzing a dataset of M&A transactions, this study investigates whether higher ESG scores are associated with increased acquisition premiums.

This study contributes to the literature by showing that, despite the rising prominence of ESG in corporate strategy, ESG considerations were not fully integrated into M&A pricing decisions during the period analyzed. The results imply that financial fundamentals remain the main drivers of acquisition premiums. The thesis also underscores the importance of further research into how ESG may become more relevant in valuation as reporting standards, investor expectations, and regulatory frameworks continue to evolve.

Keywords: Environmental, Social, and Governance (ESG); Mergers and Acquisitions (M&A); Acquisition Premiums; Corporate Social Responsibility (CSR); Valuation; OLS Regression.

Resumo

A integração dos fatores Ambientais, Sociais e de Governança (ESG) em operações de Fusões e Aquisições (M&A) tornou-se uma característica marcante das transações contemporâneas, refletindo o crescente interesse em práticas empresariais sustentáveis. À medida que as preocupações ESG ganham destaque nas agendas dos investidores, as empresas com melhor desempenho nestas áreas são cada vez mais percebidas como mais resilientes, governadas e alinhadas com as expectativas dos stakeholders (Shen, M., 2023). Estas características podem influenciar a valorização das empresas-alvo, particularmente através dos prêmios de aquisição.

A presente dissertação explora a relação entre sustentabilidade corporativa e prêmios de aquisição em operações de M&A, com foco no desempenho ESG das empresas-alvo. Apesar da relevância crescente do ESG para investidores e estratégias corporativas, as suas implicações financeiras nas avaliações de M&A permanecem pouco estudadas. Através da análise de uma amostra de transações de M&A, este estudo investiga se pontuações mais elevadas de ESG estão associadas a prêmios de aquisição mais elevados.

Este estudo contribui para a literatura ao demonstrar que, apesar da crescente importância do ESG na estratégia empresarial, as considerações ESG não foram totalmente integradas nas decisões de preço em M&A durante o período analisado. Os resultados sugerem que os fundamentos financeiros continuam a ser os principais determinantes dos prêmios de aquisição. A dissertação também sublinha a importância de futuras investigações sobre como o ESG poderá ganhar maior relevância na avaliação, à medida que evoluem os padrões de investigação, as expectativas dos investidores e os enquadramentos regulatórios.

Palavras-chave: Ambiental, Social e Governança (ESG); Fusões e Aquisições (M&A); Prêmios de Aquisição; Responsabilidade Social Corporativa (RSC); Avaliação; Regressão OLS.

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List of Acronyms

AMH	Adaptive Market Hypothesis
CSR	Corporate Social Responsibility
ESG	Environmental, Social, and Governance
ESGC	ESG Combined
FE	Fixed Effects
GRW	Growth
IND FE	Industry Fixed Effects
LIQ	Liquidity
LEV	Leverage
M&A	Mergers and Acquisitions
MTB	Market-to-Book ratio
OLS	Ordinary Least Squares
ROE	Return on Equity
SDC	Securities Data Company (Thomson Reuters database)
SIZE	Firm Size
VIF	Variance Inflation Factor

1. Introduction

Mergers and Acquisitions (M&A) are long-established strategic tools that enable companies to expand market presence, boost competitiveness, and achieve financial and operational synergies (Tampakoudis & Anagnostopoulou, 2020; Moeini Gharagozloo et al., 2022). Traditionally evaluated on the basis of financial metrics, such as cash flow, earnings, or strategic fit, M&A deals are now being increasingly influenced by non-financial criteria, particularly those associated with Environmental, Social, and Governance (ESG) performance. The rise of stakeholder capitalism, intensified public scrutiny, and evolving regulatory frameworks have collectively elevated ESG considerations from peripheral concerns to core components of M&A decision-making (King & Bartels, 2015; Hanif et al., 2023).

Industry research reinforces this shift: according to a report from Deloitte (2024), over 70% of surveyed M&A leaders have abandoned potential transactions due to ESG-related concerns, while a vast majority express a willingness to pay premiums for targets with high ESG maturity. KPMG (2024) similarly finds that 82% of dealmakers now include ESG in their due diligence processes, with ESG maturity increasingly linked to both value creation and risk mitigation. These trends suggest that ESG is no longer just a reputational or compliance issue but is actively shaping the financial dynamics of corporate acquisitions.

However, despite its growing strategic relevance, the integration of ESG into M&A valuations remains theoretically and empirically contested. From the shareholder perspective, often aligned with Friedman's (1970) profit-maximization view, ESG-related costs may be seen as dilutive to firm value. By contrast, Freeman's (1984) stakeholder theory asserts that responsible ESG management enhances long-term value through risk reduction, reputation building, and stakeholder trust. Within M&A specifically, acquisition premiums offer a direct signal of how acquirers value target firms' characteristics. A high premium may reflect recognition of ESG as a value driver, or conversely, a lack thereof may be a signal of skepticism or information asymmetry (Levine et al., 2020; Maung et al., 2019).

The academic literature on this subject highlights' important gaps. Much of the existing research has focused on post-merger performance (Huang et al., 2023; Williamson et al., 2022), rather than pre-transaction pricing mechanisms such as acquisition premiums. Furthermore, many studies have emphasized the ESG profile of the acquiring firm (Krishnamurti et al., 2019; Arouri et al., 2019; Li et al., 2019), overlooking the ESG performance of the target, which is the actual subject of valuation. Methodologically, prior research often relies on aggregated ESG scores (Gomes & Marsat, 2018), masking the differential effects of the three individual pillars, Environmental, Social, and Governance. Finally, much of the existing empirical evidence is based on periods prior to 2018, before the full impact of the Paris Agreement and recent waves of regulation and stakeholder activism. As such, replication and extension of these findings in more recent contexts is essential.

Accordingly, the objective of this study is to analyze whether target firms' ESG performance has a significant influence on acquisition premiums in M&A deals, and whether this relationship is conditioned by the acquirer's own sustainability orientation. Using a quantitative approach based on Ordinary Least Squares (OLS) regression, the analysis explores both aggregate ESG scores and the three individual pillars, while controlling for firm size, industry, acquirer type, and regional effects.

By combining industry evidence with empirical analysis, this dissertation aims to contribute to the understanding of how ESG performance influences M&A valuations. In doing so, it seeks to highlight the ongoing evolution of ESG from a reputational consideration into a measurable and financially relevant component of deal-making, with potential implications for both theory and practice in corporate finance.

The remainder of this dissertation is structured as follows. Chapter 2 reviews the theoretical background and relevant literature on the relationship between ESG performance and M&A activity, introducing stakeholder and signaling theories and presenting the hypotheses. Chapter 3 describes the research methodology, including sample selection, data collection, variable construction, and the econometric models employed. Chapter 4 reports the empirical results, combining descriptive statistics and regression outcomes, and discusses them in light of the hypotheses and prior studies. Finally, Chapter 5 summarizes the main conclusions, outlines theoretical and practical implications, acknowledges the study's limitations, and suggests directions for future research.

2. Literature Review

The relationship between Environmental, Social, and Governance (ESG) performance and Mergers and Acquisitions (M&A) has evolved into a vital area of academic inquiry, reflecting the broader transformation of financial markets toward sustainability and conscious practices.

As regulatory pressures intensify, investor expectations evolve, and ESG disclosure becomes more standardized, understanding how these factors influence transaction dynamics, in this case, acquisition premiums, has become increasingly relevant. This literature review synthesizes both academic and professional insights that address the intersection of ESG performance and M&A valuations, with special attention to deal pricing, strategic alignment, due diligence, and the role of individual ESG components.

2.1 Conceptual Foundations

The association between ESG performance and acquisition premiums has been examined by various researchers seeking to determine whether sustainability translates into financial value during transactions. (Shen et al., 2023) and (Toffano et al., 2023) provide empirical evidence that firms with higher ESG ratings tend to receive higher acquisition premiums, suggesting that acquirers are willing to pay more for targets perceived as resilient, well-managed, and aligned with long-term value creation. (Rui and Dramdal et al., 2022) support this argument, noting that high-ESG targets are often seen as possessing lower risk profiles and stronger stakeholder relationships, enhancing their negotiation power.

Beyond financial rationales, ESG is also increasingly internalized into acquirer decision-making processes. (Gigante et al., 2025) offers a behavioral perspective, arguing that ESG considerations are becoming internalized in buyer decision-making processes, particularly in environments characterized by heightened awareness of social and environmental responsibilities. (Ung and Urfe et al., 2021) underlines this by showing that resource use and environmental management scores are directly valued in premiums, indicating that sustainability can serve as a differentiating factor in competitive bidding. Nonetheless, the effect of ESG on premiums is far from universal. Studies such as (Behlic and Skyvell et al., 2024) suggest that while ESG scores had little influence on premiums under normal market

conditions, their role became more significant during times of crisis, as is the case of the COVID-19 pandemic, particularly through social and governance dimensions, which were seen as proxies for resilience in uncertain times.

On the other hand, (Salko et al., 2022) and (Carlsson and Tenggren et al., 2022) highlight heterogeneity in the pricing of ESG values, attributing it to variations in ESG rating methodologies and the subjective interpretation of sustainability indicators by different investor classes, which can create inconsistencies in how ESG is priced across markets. (Gomes and Marsat et al., 2018) and (Krishnamurti et al., 2019) suggest that while ESG may influence premium determination, its effect is highly context dependent, influenced by industry sector, deal structure, and market timing. They caution against assuming a universal premium effect without accounting for these moderating variables. In line with this, (Falkenberg and Vogt et al., 2022) note that environmental and social pillars may carry different weights across industries, while governance remains the most consistently priced dimension. Taken together, the literature suggests that ESG can influence M&A premiums both as a direct value driver and as a risk-mitigation mechanism, though its impact is moderated by methodological, contextual, and behavioral factors.

2.1.1. Stakeholder Theory versus Signaling Theory

The integration of Environmental, Social, and Governance (ESG) considerations into corporate strategy has revived longstanding debates on what the purpose of the firm is. Friedman (1970) argued that the sole responsibility of firms is to maximize shareholder wealth, and that expenditures on social initiatives constitute an inefficient allocation of resources that reduces firm value. In this view, ESG or Corporate Social Responsibility (CSR) activities represent costs that are borne by shareholders without yielding compensating returns (Vance et al., 1975). This “shareholder expense view” suggests a negative or neutral relationship between ESG performance and firm valuation, as resources are diverted away from profit-maximization (Friedman, 1970).

By contrast, stakeholder theory, backed by Freeman, contends that firms create value not only for shareholders but also for employees, customers, suppliers, and communities (Freeman, 1984). This broader perspective emphasizes that investments in ESG can reduce long-term risks, improve reputation, and enhance relational capital, which may ultimately

strengthen financial performance (Porter & Kramer et al., 2006; Godfrey, Merrill, & Hansen et al., 2009). Deng, Kang, and Low (2013) show that firms with higher CSR performance experience more favorable returns during merger announcement periods. In the M&A context, (Ung and Urfe et al., 2021) demonstrate that acquirers may be willing to pay premiums for targets with strong ESG performance, as such firms are seen as less risky and more resilient, particularly in terms of regulatory compliance, social controversies, and reputational exposure. Similarly, Toffano (2022) and Shen (2023) provide evidence that high-ESG firms tend to command higher acquisition premiums, reinforcing the stakeholder perspective that ESG is positively priced in transactions.

While stakeholder theory focuses on the intrinsic value of ESG for long-term performance, signaling theory provides an alternative but complementary explanation for why ESG performance may influence acquisition premiums. Signaling theory, originally derived from Spence (1973), argues that firms with superior private information about their quality can use observable signals to reduce information asymmetry in the market. In the context of M&A, ESG disclosure and performance can function as such signals. Firms with strong ESG scores credibly communicate transparency, sound governance, and effective stakeholder management, thereby reducing adverse selection problems between bidders and targets (Gomes & Marsat, 2018). (Rui and Dramdal et al., 2022) argue that high-ESG targets are perceived as possessing stronger stakeholder relations and reduced exposure to uncertainties, which enhances their negotiation power during acquisitions.

Importantly, both theories converge in linking ESG performance to acquisition premiums, though through different mechanisms. Stakeholder theory views ESG as a source of long-term value creation, protecting firms from reputational and operational risks while fostering legitimacy and competitive advantage (Godfrey et al., 2009; Aurori et al., 2019). Signaling theory, on the other hand, emphasizes ESG as a tool for mitigating information asymmetry, allowing firms to credibly communicate quality and thereby justify higher valuations (Choi et al., 2015; Gomes & Marsat, 2018). The heterogeneity of findings across empirical studies, ranging from strong positive effects (Shen, 2023; Gigante, 2025) to context-dependent impacts (Behlic & Skyvell, 2024; Zhou, 2019), highlights that the relationship between ESG and M&A premiums is not universal. Instead, it is mediated by contextual factors such as industry, disclosure quality, and market environment.

Taken together, both theories provide two key conceptual foundations for understanding the role of ESG in M&A valuations. The stakeholder lens frames ESG as a driver of intrinsic value and risk reduction, while the signaling lens highlights its role in reducing information asymmetry and shaping market perceptions. Both perspectives suggest that acquirers may rationally pay higher premiums for high-ESG firms, though the extent of this effect remains contingent on deal- and firm-specific conditions.

2.2. ESG and M&A Premiums: Empirical Evidence

Empirical research linking ESG and M&A has expanded steadily in recent years, although most studies still highlight the relative scarcity of evidence directly connecting ESG components with acquisition premiums. Early work pointed to the growing recognition that sustainability performance can shape transaction dynamics well before post-merger outcomes are realized. For instance, corporate buyers stated that ESG profiles increasingly entered valuation discussions: strong sustainability metrics tended to enhance target valuations, while weak or controversial ESG records frequently triggered demands for discounts or even abandonment of negotiations. This observation established ESG not simply as a reputational factor, but as a tangible input in deal pricing. Similarly (Aktaset al., 2011) and (De Bodt et al., 2011) provided one of the earliest large-sample empirical analyses, documenting how the social dimension of target companies affected their acquisition outcomes, thereby paving the way for subsequent research linking ESG or CSR attributes with valuation and performance in M&A transactions.

Building on this foundation, a number of studies suggest that socially responsible acquirers and targets tend to generate superior outcomes across multiple deal dimensions. (Brooks and Oikonomou et al., 2018), (Gomes and Marsat et al., 2018), and (Chen et al. 2019), collectively show that high CSR or ESG engagement is associated with higher cumulative abnormal returns at announcement, stronger long-term operating performance, and smoother deal processes characterized by shorter durations and lower uncertainty.

These findings are consistent with the predictions of stakeholder theory, which posits that good stakeholder management lowers risks and builds reputational capital, ultimately supporting higher valuations. (Deng et al., 2013), for example, find that acquirers with strong CSR profiles enjoy more favorable post-acquisition performance, while (Gomes and Marsat

et al., 2018) emphasize that ESG performance, particularly in cross-border transactions, helps mitigate information asymmetry and reduces transaction risk. Such benefits suggest that firms perceived as sustainable are not only attractive from a risk-management perspective but may also secure higher transaction values and create longer-term value for shareholders.

Despite the growing number of positive results, the literature also reports ambiguity. (Jost et al. 2022) and (Carlsson & Tenggren et al., 2022) argue that ESG or CSR performance does not always translate into higher premiums, reflecting methodological issues in ratings and the intangible nature of ESG benefits. Some evidence even supports the shareholder expense view, suggesting that acquirers oriented toward cost efficiency may pay lower premiums for highly ESG-active targets (Meckl & Theuerkorn et al., 2015; Krishnamurti et al., 2019).

Professional reports mirror these mixed academic findings but clearly show ESG's growing practical relevance. A PwC–PRI survey (2012) revealed that over 80% of companies had reduced valuations or abandoned deals due to poor ESG performance, with most buyers expecting a discount for ESG risks such as contaminated land or poor labor practices, but generally not paying an explicit premium for good ESG metrics. Instead, solid ESG practices were viewed as a baseline expectation, integrated into the starting valuation (PwC, 2012). More than a decade later, ESG considerations are seen as central to deal-making. According to Deloitte's 2023 M&A ESG Survey, 72% of M&A leaders had abandoned deals due to ESG concerns, and 83% stated they would pay a premium for high-ESG targets, a sharp increase compared to prior years (Deloitte, 2023). This shift reflects improvements in ESG data availability and greater investor confidence in quantifying ESG impacts on value creation.

Other industry studies reinforce this progression. KPMG (2022, 2023) stresses that ESG due diligence has become a standard practice, with investors often factoring sustainability into valuations, risk assessments, and exit multiples. Reports show that while ESG “red flags” can lead to discounts or deal abandonment, strong ESG maturity increasingly commands valuation premiums, often estimated in the range of 1–5% (KPMG, 2022; 2023). Case evidence, such as Bayer's troubled acquisition of Monsanto, illustrates the

severe costs of underestimating ESG-related risks (Spottswood et al., 2023).

Taken together, the empirical evidence indicates that ESG is increasingly embedded in M&A pricing. Academic studies highlight positive effects of ESG, particularly governance and environmental pillars, on premiums, while also acknowledging methodological and contextual variability. Professional surveys confirm that ESG has become a decisive factor in whether deals proceed and at what price, with poor ESG often leading to valuation discounts or deal cancellations, and strong ESG maturity supporting higher premiums. Yet, the literature has not converged on a single conclusion, as the relationship remains mediated by industry, disclosure, investor perception, and broader market conditions.

2.3. Disaggregating ESG: Pillars and Sectorial Effects

A significant thread in the literature addresses the differential impact of ESG components, Environmental, Social, And Governance, on deal valuation. Aggregated scores, while useful for capturing overall sustainability performance, may daze the individual effects that each pillar might have. As per (Ozdemir et al., 2022) and (Gigante et al., 2025), the emphasis that environmental and governance factors tend to carry more weight in M&A decision-making, particularly due to regulatory exposure and investor sensitivity to board practices and environmental liabilities. Social factors, although increasingly recognized, are often underweighted due to difficulties in measurement and standardization. Nonetheless, (Gomes and Marsat et al., 2018) argue that the materiality of each pillar varies by industry, for instance, the social dimension may be more relevant in sectors related to human capital or public trust.

This perspective underscores the methodological importance of analyzing ESG pillars separately rather than relying solely on composite indicators, as this distinction enables greater clarity in identifying which sustainability dimensions most influence acquisition premiums.

From an environmental standpoint, acquirers may view high environmental performance as a safeguard against regulatory penalties, operational disruptions, and reputational crises. Strong performance on this dimension reduces exposure to risks such as emissions fines, waste management liabilities, and delays in obtaining operating permits (Jo

& Na, 2012). (Rugman & Verbeke, 1998; Giese et al., 2019) suggests that firms with strong environmental practices face fewer extreme-event risks and benefit from long-term operational efficiency. These characteristics can make them attractive M&A targets, leading bidders to offer higher premiums. Conversely, from a shareholder cost perspective, significant investments in emissions reduction or environmentally friendly innovation may be perceived as costly commitments, potentially lowering the willingness of acquirers to pay a premium for such firms (Zakaria & Kiziler, 2023). This duality illustrates the tension between the stakeholder view, which highlights risk mitigation and reputational value, and the shareholder view, which frames sustainability initiatives as expenses that erode financial returns.

The social pillar reflects a company's ability to manage stakeholder relationships, particularly with employees, customers, suppliers, and communities. Positive social performance has been associated with higher employee motivation, lower turnover, and improved health and safety outcomes, all of which enhance productivity and long-term value creation (Lassoued & Khanchel, 2023). For bidders, these outcomes reduce integration risks, improve brand equity, and strengthen legitimacy in host markets. Gomes and Marsat (2018) and Khanchel and Lassoued (2022) argue that acquirers may be willing to pay higher premiums for firms with robust social records, particularly where local community engagement or supply-chain resilience are critical. However, (Aktas et al., 2011) note that social investments may also be disinvested or reprioritized post-acquisition, depending on the acquirer's strategic orientation. Institutional investors, who increasingly incorporate ESG into portfolio screening, are more likely to reward strong social performance in valuations, whereas marginal investors, who may have privileged access to firm-specific information, sometimes interpret social activities as costly or inefficient (Chen & Gavius, 2015). This divergence helps explain why the social pillar produces more heterogeneous empirical results than environmental or governance factors.

Governance, finally, is the most consistently associated with M&A premiums across studies. Effective governance structures reduce agency costs, align managerial incentives with shareholder interests, and prevent misuse of resources (La Porta et al., 1996; Martynova & Renneboog, 2008). Good governance is often viewed as a transferable asset, providing acquirers with tested monitoring mechanisms and managerial expertise that enhance post-

acquisition integration (Ellis et al., 2017). For these reasons, governance scores are the most robust predictor of acquisition premiums, relative to environmental and social pillars.

However, this performance may also exert downward pressure on premiums in cases where CSR-oriented managers adopt conservative or risk-averse acquisition strategies. (Deng et al., 2013) and (Aktas et al., 2011) suggest that firms with ethical, CSR-focused leadership may pay lower bid premiums themselves, avoid overpayment and thereby protect shareholder value. This reflects a nuanced interaction between governance quality and managerial behavior, where effective structures can both attract higher offers for targets and discipline acquirers' bidding strategies.

In sum, the literature illustrates that the three ESG pillars affect M&A valuations in distinct and sometimes contradictory ways. Environmental performance is valued for risk mitigation and long-term efficiency but may be penalized for perceived costs, social performance enhances stakeholder trust but suffers from inconsistent valuation across investor classes, and governance performance is generally prized for its role in reducing agency problems, though it may temper acquirers' own willingness to pay high premiums.

The weight of each pillar is not uniform but depends on sectoral characteristics, regulatory environments, and the strategic priorities of acquirers. For this reason, disaggregating ESG into its individual components provides sharper insights into how sustainability influences M&A pricing than aggregated indices alone.

2.3.1 ESG Across Industries

The influence of ESG on M&A valuations is not uniform across sectors, as previously stated. Each industry presents specific sustainability challenges and risk exposures, which condition the relative weight of environmental, social, and governance pillars in deal-making. As noted by Gomes and Marsat (2018), the relevance of ESG dimensions varies significantly depending on business models and stakeholder expectations, making industry context a key determinant of how acquisition premiums are shaped.

In highly regulated and environmentally sensitive sectors, such as energy, chemicals, and heavy manufacturing, the environmental pillar is particularly decisive. Targets with

strong environmental records are perceived as less exposed to regulatory sanctions, litigation risks, and operational disruptions tied to environmental liabilities (Jo & Na, 2012; Giese et al., 2019). This can justify higher premiums, as acquirers gain assurance against costly environmental legacies. The case of Bayer's acquisition of Monsanto illustrates the opposite: underestimating ESG-related risks, especially environmental controversies, can lead to severe post-acquisition costs and reputational damage (Spottswood et al., 2023). Similarly, Deloitte's (2023) M&A ESG survey shows that 72% of dealmakers abandoned potential transactions due to ESG concerns, with environmental red flags being particularly prominent in extractive and resource-intensive industries.

By contrast, in labor-intensive and consumer-facing sectors such as retail, services, and healthcare, the social dimension often carries greater weight. Firms in these industries depend heavily on employee engagement, customer trust, and community relations, which means poor labor practices or weak supply chain oversight can create significant reputational and operational risks (Lassoued & Khanchel, 2023). PwC's (2012) report on ESG in M&A highlighted that acquirers often demanded discounts when facing weak labor or social performance, particularly in sectors with high public visibility. Conversely, strong social credentials can enhance target attractiveness by reducing integration challenges, boosting workforce morale, and supporting customer loyalty, thereby justifying higher premiums (Khanchel & Lassoued, 2022; Gomes & Marsat, 2018).

Governance, meanwhile, is relevant across industries, but its importance becomes most visible in financial services, technology, and high-growth sectors, where oversight, transparency, and managerial accountability are crucial for investor confidence. Shen (2023) finds governance scores to be the most robust ESG predictor of premiums, especially in industries exposed to complex ownership structures or regulatory scrutiny. Efficient governance structures reduce agency costs and information asymmetries, making them transferable assets that acquirers value highly (Martynova & Renneboog, 2008). KPMG's (2023) ESG Due Diligence study similarly stresses that governance quality is often the first lens through which buyers evaluate targets, particularly in financial institutions and tech companies, where weak governance can pose systemic risks or erode intangible value.

Taken together, the evidence indicates that ESG impacts M&A transactions

differently across industries: environmental risks dominate in resource-heavy sectors, social issues are critical in labor- and consumer-driven industries, and governance standards are central in sectors where oversight and investor trust are paramount. Ultimately, the sectoral context determines which ESG pillar most influences deal pricing, underlining the need for acquirers to adopt industry-specific ESG assessments rather than rely on uniform scoring systems.

2.4. ESG Metrics and Methodological Challenges

2.4.1. ESG Metrics

A key methodological issue in the literature on ESG and M&A valuations concerns how ESG performance is measured. The absence of a universally standardized framework has led researchers and practitioners to adopt a wide range of metrics, from aggregate scores to disaggregated pillar-specific indicators. This diversity in measurement approaches strongly influences empirical findings and complicates the task of drawing clear conclusions about the impact of ESG on acquisition premiums (Gomes & Marsat, 2018).

Most studies employ aggregate ESG scores, which combine environmental, social, and governance dimensions into a single rating provided by agencies such as MSCI, Refinitiv, or Sustainalytics. These aggregated metrics are attractive because they allow for comparability across firms and industries, offering a broad view of sustainability performance (Shen, 2023). However, aggregated scores may obscure the heterogeneity of effects across pillars, as strong governance can offset weak environmental or social practices, producing misleading overall ratings (Ozdemir et al., 2022). For example, Gigante (2025) notes that governance and environmental dimensions often drive valuation outcomes more strongly than the social dimension, yet aggregated scores can dilute these distinctions.

To address this limitation, several studies have opted to analyze pillar-specific metrics. Disaggregated measures allow researchers to isolate the role of each dimension in M&A pricing. Shen (2023) finds that governance scores consistently predict higher acquisition premiums, reflecting investor sensitivity to managerial accountability and transparency. Similarly, environmental indicators, such as carbon emissions, waste management, or regulatory compliance, are particularly relevant in resource-intensive

industries, while social indicators, covering labor practices, diversity, and community relations, are more salient in labor-intensive and consumer-facing sectors (Gomes & Marsat, 2018). Professional reports echo this disaggregation: PwC (2012) highlighted that poor labor practices or environmental liabilities often resulted in valuation discounts, while Deloitte (2023) and KPMG (2023) observed that governance and environmental red flags are now frequently treated as deal-breakers during due diligence.

Deloitte's (2023) global M&A ESG survey reported that 99% of organizations now measure ESG profiles of potential targets, with more than half employing clearly defined and quantifiable metrics, compared to less than 40% only two years earlier. This reflects a broader trend in which sustainability-related data, such as emissions intensity, board composition, or workplace safety indicators, are systematically integrated into valuation models and negotiation processes. KPMG (2023) similarly emphasizes that ESG due diligence has shifted from high-level reputational screening to data-driven analysis, using quantifiable indicators to identify potential risks and value-creation opportunities.

While aggregate ESG scores remain the most common proxy in academic studies, there is a growing recognition of the value of disaggregated, pillar-specific metrics in capturing the nuanced ways that sustainability performance affects M&A valuations. Both academic evidence and industry practice demonstrate that governance and environmental factors tend to weigh more heavily in pricing decisions, though social factors are increasingly relevant in certain sectors. The trend toward more standardized and transparent ESG measurement suggests that future research will benefit from improved data quality, enabling clearer assessments of how individual ESG dimensions shape acquisition premiums.

2.4.2. Methodological Challenges

Research exploring the relationship between ESG performance and M&A premiums faces significant methodological hurdles. The main challenge stems from the difficulty of capturing complex, multidimensional sustainability practices in a manner that is both reliable and comparable across firms and industries. Unlike traditional financial indicators, ESG metrics lack global standardization, which complicates the task of formulating clear hypotheses and interpreting empirical results (Gomes & Marsat, 2018).

The first major challenge is the heterogeneity of ESG ratings and disclosure practices. Different data providers adopt distinct weighting systems, resulting in weak correlations across ESG scores (Shen, 2023; Toffano, 2022). For example, a company may be rated highly on governance by one agency but poorly on environmental performance by another, yielding inconsistent aggregate measures. This makes cross-study comparisons difficult and undermines empirical validity. PwC (2012) and Deloitte (2023) found that buyers frequently adjusted valuations in response to ESG red flags but struggled to reward strong ESG performance consistently due to measurement gaps, and that nearly all M&A leaders now assess ESG, fewer than 60% rely on clearly defined, quantifiable metrics.

A second challenge involves causality versus correlation. Strong ESG firms often exhibit higher premiums, but this does not necessarily mean ESG is the causal driver. Well-performing companies may simply have more financial slack to invest in ESG initiatives, creating endogeneity concerns (Gomes & Marsat, 2018; Ung & Urfe, 2021). (Zrigui et al., 2023) further argue that methodological designs frequently fail to account for self-selection bias, as acquirers may target high-ESG firms precisely because they are already successful.

Similarly, Behlic and Skyvell (2024) find that ESG's impact on premiums strengthened during the COVID-19 crisis but warn that such results may reflect the exceptional context rather than a generalizable relationship. This ambiguity makes it difficult to isolate ESG's true financial impact.

A third challenge lies in pillar-level heterogeneity. Aggregated ESG scores often mask the distinct influence of environmental, social, and governance dimensions. Several studies highlight governance as the most consistent predictor of premiums, while environmental and social dimensions show more variable results depending on sector (Shen, 2023; Falkenberg & Vogt, 2022). Braun (2020) notes that ESG data often lack sector-specific adjustments, which risks overstating their comparability across industries with very different sustainability exposures.

A fourth difficulty concerns time sensitivity of ESG data. M&A deals are negotiated based on forward-looking expectations, but most ESG datasets are backward-looking, annual, and sometimes lagging actual corporate practices (Shen, 2023; Gigante, 2025). This

introduces temporal mismatches: acquisition premiums are determined at signing, yet the ESG data used in empirical studies may represent past conditions. KPMG (2023) reports that professional due diligence is increasingly forward-looking, integrating scenario analysis of ESG risks, but academic research rarely incorporates such predictive elements.

Finally, there are regional and institutional context limitations. The valuation of ESG varies according to the strength of legal systems, investor protection regimes, and disclosure requirements. For instance, (Jost et al., 2022) show that in weak governance environments, CSR programs may reflect managerial opportunism rather than genuine value creation. Similarly, (Li et al., 2019) argue that in emerging markets with lower investor protection, acquirers may interpret ESG spending as self-serving, leading to discounts rather than premiums. This highlights that empirical results are not universally generalizable but are mediated by institutional frameworks.

2.5. Market Trends and Evolving Investor Perspective

Investor sentiment and market reactions also reflect ESG considerations. According to (Müller-Hof et al., 2023) and (Petersson & Tjällman et al., 2022), stock price movements around deal announcements often signal investor approval or concern over the target's ESG profile. Positive reactions can indicate market confidence in the sustainability profile of the transaction, while negative responses may arise from perceived ESG-related risks. Qualitative assessment further inform decision-making processes. (Petersson & Tjällman et al., 2022) show that interviews with management and stakeholders help acquirers evaluate the alignment between the target's ESG practices and their own strategic goals. These insights play a crucial role in forming a comprehensive view of value creation potential beyond what is captured through quantitative metrics.

Over the past two decades, ESG has grown into a decisive factor in global investment and M&A activity. In 2018, the global market for ESG investing surpassed \$30 trillion, with \$12 trillion of assets domiciled in the United States, primarily managed through asset management firms and community investment funds practicing negative screening and ESG integration (Global Sustainable Investment Review, 2018). This rapid expansion is illustrated in Figure 1, which shows the sharp rise of US sustainable investing from less than \$0.5 trillion

in 1995 to nearly \$17 trillion by 2020, with most growth occurring after 2012. A smaller but significant portion of this growth has taken the form of shareholder advocacy, demonstrating how investors increasingly use their influence to shape corporate behavior.

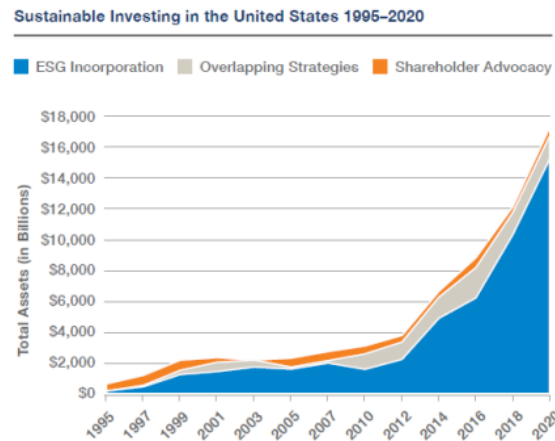


Figure 1: US Sustainable Investing Growth 1995-2020 (Source: US SIF Foundation)

A major driver of this trend has been the quantification and disclosure of ESG practices at the firm level. According to the Global Reporting Initiative (2020), 82% of the world's largest 250 corporations now report on sustainability using GRI standards, that measure sustainability impact in a corporate setting. The rapid adoption of ESG disclosure is evident in Figure 2, which highlights the growth of ESG reporting among S&P 500 firms, from just 20% in 2011 to more than 80% by 2015. This parallel expansion of ESG investing and ESG reporting illustrates a mutually reinforcing cycle: greater transparency builds investor confidence, which in turn fuels capital allocation toward sustainable assets.



Figure 2: Growth in ESG Reporting in the S&P 500 (Source: G&A Institute, 2016)

Ioannou and Serafeim (2017) show that regulatory mandates are a significant driver of ESG disclosure, with such requirements positively correlated with firm valuation as measured by Tobin's Q. Allianz (2018) highlights that 55% of millennial investors have discussed ESG with financial advisors, suggesting that generational shifts in values are directly shaping investment demand.

Together, these market trends reveal a fundamental change in the investor perspective. Whereas ESG once functioned primarily as a reputational or compliance consideration, it is now treated as a core driver of risk management, valuation, and long-term value creation. Strong ESG performance increasingly supports higher acquisition premiums and smoother integration, while weak ESG records can lead to valuation discounts or deal abandonment. As both capital markets and corporate strategies continue to converge on sustainability priorities, ESG is positioned not as a secondary factor but as a central determinant in modern M&A transactions.

3. Research Methodology and Hypothesis Development

3.1 Research Methodology

After reviewing the current state of research on ESG and M&A, it becomes clear that sustainability factors are no longer peripheral but have become central to how investors and acquirers assess value.

The dissertation employs a quantitative research design to examine whether higher ESG in target firms is associated with higher acquisition premiums. The study adopts a deductive approach, testing theory-driven hypothesis based on the stakeholder theory and signaling theory. As previously mentioned, the stakeholder theory, originally formulated by Freeman (1984), posits that companies create long-term value by considering the interests of all stakeholders, not just shareholders, including employees, customers, suppliers, communities, and regulators. In the context of M&A, this theory implies that firms demonstrating responsible ESG practices are more likely to align with the values of acquiring firms and broader stakeholder expectations, making them more attractive targets.

The signaling theory, introduced by Spence (1973), suggests that firms convey their

underlying quality through observable signals. ESG performance can serve as such a signal in M&A contexts, where strong ESG ratings may indicate superior governance, lower risk exposure, and long-term viability. Consequently, acquirers may interpret high ESG scores as indicators of lower asymmetric information and potential for synergy realization, thereby justifying a higher acquisition premium.

Ordinary Least Squares (OLS) regression is used to estimate the impact of ESG variables on acquisition premiums, controlling for deal and firm-specific characteristics.

3.2 Hypothesis Development

To answer the research question, what is “*The Impact of ESG Performance on Premiums Paid in Mergers and Acquisitions Deals*”, the following economical hypotheses are formulated, grounded in the findings of Chapter 2.

General Hypothesis:

- **Hypothesis 1:** ESG performance has a positive (negative) effect on the acquisition premium if the stakeholder value maximization view (the shareholder spending view) is confirmed.

Pillar-Specific Hypothesis:

- **Hypothesis 1a:** Environmental performance has a positive (negative) effect on the acquisition premium if the stakeholder value maximization view (the shareholder spending view) is confirmed.
- **Hypothesis 1b:** Social performance has a positive (negative) effect on the acquisition premium if the stakeholder value maximization view (the shareholder spending view) is confirmed.

- **Hypothesis 1c:** Governance performance has a positive (negative) effect on the acquisition premium if the stakeholder value maximization view (the shareholder spending view) is confirmed.

3.3. Variables

3.3.1 Dependent Variable

The dependent variable in this study is the acquisition premium, measured as the percentage difference between the offer price and the target's stock price prior to the deal announcement. Following standard practice in M&A literature, the premium is calculated relative to the target's share price at a specified pre-announcement reference point, typically one day, one week, or one month before the announcement date, in this case 28 days before the public announcement (Rossi & Volpin, 2004). This measure captures the value that acquirers are willing to pay above the prevailing market price to gain control of the target firm, thereby serving as a direct indicator of how firm-specific attributes, such as ESG performance, are capitalized in the transaction.

The acquisition premium ($Premium_i$) is calculated as the relative difference between the offer price per share and the target's stock price:

$$PREMIUM_i = \frac{P_{OFFER} - P_{TARGET, t-28}}{P_{TARGET, t-28}} \cdot 100$$

The final offer price per share (P_{OFFER}) is compared with the target company's stock price from 28 days before the takeover announcement ($P_{TARGET, t-28}$) (Rossi & Volpin, 2004).

3.3.2 Independent Variable

The independent variable is the ESG performance of the target firm. ESG scores are sourced from established providers such as LSEG Workspace Data & Analytics and Refinitiv ESG, ensuring global coverage and comparability. These databases assess ESG performance through a combination of quantitative indicators and qualitative assessments, drawing on company reports, CSR disclosures, regulatory filings, media coverage, and third-party sources.

LSEG Workspace in particular offers historical coverage from 2002, tracking over 870 metrics per company, of which 186 are used to construct pillar and overall ESG scores, supplemented by an ESGC (controversy-adjusted) score. The database covers more than 16,000 companies worldwide, public and private, and is updated weekly. While ESG scores are industry-adjusted, they primarily reflect disclosure practices rather than the actual effectiveness of ESG initiatives. Higher scores therefore indicate greater transparency and commitment to reporting across environmental, social, and governance dimensions.

ESG data is structured into three dimensions: environmental (E), social (S), and governance (G), which together form the aggregate ESG score. Each dimension captures specific categories:

- **Environmental (E):** emissions reduction, resource efficiency, waste management, and innovation in environmentally friendly products or processes.
- **Social (S):** labor practices, employee rights and training, diversity and inclusion, community engagement, customer responsibility, and supply chain management.
- **Governance (G):** board structure, independence and compensation, shareholder rights, transparency of reporting, and managerial accountability.

Scores are standardized on a 0–100 scale to facilitate cross-country and cross-industry comparability. Following prior research (e.g., Gomes & Marsat, 2018; Bereskin et al., 2018), the ESG values employed correspond to the most recent year prior to the deal announcement, as acquisition processes typically begin before the transaction becomes public. This approach mitigates potential endogeneity by ensuring that ESG scores are exogenous to deal outcomes.

3.3.3 Control Variables

To isolate the effect of ESG on acquisition premiums, a set of control variables is included. These help account for firm-specific, deal-specific, and contextual factors that could otherwise bias the relationship:

- **Firm size:** Measured by total assets or market capitalization. Larger firms often attract higher premiums due to greater market power, economies of scale, and lower

relative risk (Moeller et al., 2004). Bigger targets also tend to have more visibility and disclosure, which can affect how acquirers and investors perceive value.

- **Deal size:** Measured by the transaction value. Larger deals often involve more complex negotiations, greater integration challenges, and higher public scrutiny, which can influence premiums (Andrade et al., 2001). At the same time, deal value may correlate with the acquirer's willingness to incorporate ESG considerations when assessing synergies and risks (Deng et al., 2013).
- **Leverage:** Financial leverage can influence a firm's performance, as the obligation to meet interest expenses may reduce profitability. A higher leverage ratio signals greater exposure to financial distress, which increases the potential agency costs borne by investors (Jensen & Meckling, 1976).
- **Liquidity:** The liquidity of a firm reflects its ability to cover short-term obligations with available current assets. Higher liquidity ratios indicate stronger financial flexibility, which reduces the risk of default and increases the firm's attractiveness to investors (Opler et al., 1999).
- **Market-to-Book Ratio:** The market-to-book ratio compares the market value of a firm to its book value and serves as a proxy for growth opportunities. A higher ratio suggests that investors expect stronger future performance, while a lower ratio may indicate undervaluation or limited growth prospects (Fama & French, 1992).
- **Return on Equity:** ROE measures a firm's profitability relative to shareholder equity and reflects how effectively management generates returns from invested capital. A higher ROE indicates stronger financial performance and greater value creation for shareholders (Damodaran, 2012).

3.4 Model Specification

In order to test the hypotheses described in Chapter 3.2, OLS regressions are estimated using the dependent, independent, and control variables defined in Chapter 3.3. A complete

list of variable names, definitions, and data sources is provided in Appendix 3.

- **Hypothesis 1 (Aggregate ESG model):**

$$PREMIUM_i = \alpha \cdot \beta_1 ESGSCORE_i^{TARGET} + \gamma'X_i + \delta_t + \iota_{ind.} + \varepsilon_i;$$

$$PREMIUM_i = \alpha \cdot \beta_1 ESGSCORE_i^{TARGET} + \gamma_1 SIZE_i + \gamma_2 DEALSIZE_i$$

$$+ \gamma_3 LEV_i + \gamma_4 LIQ_i + \gamma_5 MTB_i + \gamma_6 ROE_i + YEAR_{FE} + IND_{FE} + \varepsilon_i;$$

H1: $\beta > 0$, under stakeholder-value view (or 0 under shareholder-spending view).

Equation 1: Regression Model for Hypothesis 1

In the above equation, i is the company index, t represents the period, *PREMIUM* represents the acquisition offers premium, *ESGSCORE*, the overall ESG score. To maintain a solid research model, fixed effects are implemented for the variables *TIME* and *INDUSTRY*, and ε_i the error term. In the regression specification, $\gamma'X_i$ represents the combined effect of all control variables on the dependent variable

- **Hypothesis 1a (Environmental Performance):**

$$PREMIUM_i = \alpha + \beta_E ENVIR_i^{TARGET} + \gamma'X_i + \delta_t + \varepsilon_i;^1$$

H1a: $\beta_E > 0$, under stakeholder-value view (or 0 under shareholder-spending view).

Equation 2: Regression Model for Hypothesis 1a

Estimates how the target's environmental score relates to the acquisition premium, holding standard controls and year/industry effects constant. A positive (negative) association supports the stakeholder-value (shareholder-spending) view.

- **Hypothesis 1b (Social Performance):**

$$PREMIUM_i = \alpha + \beta_S SOC_i^{TARGET} + \gamma'X_i + \delta_t + \iota_{ind} + \varepsilon_i;^2$$

¹ Control Variables are the same as in the previous models

²; ³ Control Variables are the same as in the previous models

H1b: $\beta_S > 0$, under stakeholder-value view (or 0 under shareholder-spending view).

Equation 3: Regression Model for Hypothesis 1b

Assesses the link between the target's social score and the premium, net of controls and fixed effects. A positive (negative) effect is consistent with the stakeholder-value (shareholder-spending) view.

- **Hypothesis 1c (Governance Performance):**

$$PREMIUM_i = \alpha + \beta_S GOVERN_i^{TARGET} + \gamma' X_i + \delta_t + \iota_{ind} + \varepsilon_i;^3$$

H1c: $\beta_G > 0$, under stakeholder-value view (or 0 under shareholder-spending view).

Equation 4: Regression Model for Hypothesis 1c

Tests whether the target's governance score is associated with the premium after accounting for controls and fixed effects. A positive (negative) relation aligns with the stakeholder-value (shareholder-spending) view.

4. Data Collection

4.1 Data Collection

The empirical analysis relies on secondary data from known databases. M&A transaction data is collected from financial platforms such as Orbis M&A and LSEG Workspace & Analytics, while ESG scores are sourced from providers such as LSEG Workspace Data & Analytics and Refinitiv ESG. The dataset includes cross-border and domestic transactions across multiple sectors, filtered to ensure availability of both ESG scores and premium values.

To ensure the robustness of the sample, a number of selection criteria are applied, following the approach of Gomes and Marsat (2018). First, only closed and completed

transactions are included, where the acquirer initially owned less than 50% of the target's equity and, through the acquisition, gained a controlling stake above 50%. This criterion ensures that the dataset captures true changes of control, which are most relevant to the analysis of acquisition premiums. Second, very small transactions, such as those below USD 1 million, are excluded to avoid distortions from non-strategic deals. Third, financial firms are excluded from the dataset, given that M&A in this sector is subject to distinct regulatory frameworks that may bias ESG-related effects.

Historical ESG scores are matched with transaction data to ensure that the measures reflect conditions prior to the announcement date. This approach recognizes that acquisition processes often begin well before deals are made public, thereby reducing potential hindsight bias. The dataset also distinguishes between domestic and cross-border transactions, acknowledging that premiums may vary across institutional environments, regulatory systems, and cultural contexts.

Finally, the dataset spans multiple years and sectors, with a concentration of transactions in regions with established ESG reporting practices and higher institutional quality, such as North America and Western Europe. Industrial and consumer discretionary firms are expected to feature prominently in the sample, reflecting both higher deal activity and greater ESG materiality in these industries. By applying these criteria, the dataset ensures both breadth and comparability, allowing for a meaningful analysis of the relationship between ESG performance and acquisition premiums.

4.2 Sample Selection

Beginning with the temporal dimension, Table 1 presents the distribution of the final sample by year. The dataset covers completed transactions between 2005 and 2023, resulting in a total of 195 deals, of which 70 were cross-border acquisitions, where we can see the variation in deal activity and international transactions over time.

Year	No. of Transactions	Transactions (%)	No. of Cross-Boarder	Cross-Boarder (%)
2005	2	1.03	1	1.43

2006	8	4.10	1	1.43
2007	4	2.05	3	4.29
2008	10	5.13	5	7.14
2009	13	6.67	3	4.29
2010	8	4.10	4	5.71
2011	16	8.21	5	7.14
2012	19	9.74	7	10.00
2013	6	3.08	1	1.43
2014	13	6.67	5	7.14
2015	11	5.64	3	4.29
2016	10	5.13	4	5.71
2017	9	4.62	5	7.14
2018	13	6.67	3	4.29
2019	9	4.62	5	7.14
2020	7	3.59	2	2.86
2021	13	6.67	5	7.14
2022	11	5.64	4	5.71
2023	13	6.67	4	5.71
Total	195	100.00	70	100.00

Table 1: Distribution of the Sample by Year

The selected transactions span the period from 2004 to 2024. However, due to data limitations in LSEG, some years presented insufficient or unreliable information. In addition, historical data started to be collected from the first of January, in order to align with fiscal

year reporting and ensure consistency across the dataset.

Country	Target	Proportion Target (%)	Acquirer	Proportion Acquirer (%)
United States	95.0	48.72	68.0	34.87
United Kingdom	23.0	11.79	17.0	8.72
Norway	14.0	7.18	15.0	7.69
Greece	9.0	4.62	4.0	2.05
France	8.0	4.2	7.0	3.59
Sweden	5.0	2.56	5.0	2.56
Cyprus	5.0	2.56	5.0	2.56
Spain	5.0	2.56	5.0	2.56
Belgium	4.0	2.05	3.0	1.54
Italy	4.0	2.05	6.0	3.08
Germany	3.0	1.54	3.0	1.54
Finland	3.0	1.54	1.0	0.51
Netherlands	3.0	1.54	5.0	2.56
Denmark	2.0	1.03	1.0	0.51
Ireland	2.0	1.03	2.0	1.03
Jersey	2.0	1.03	1.0	0.51
Luxembourg	2.0	1.03	5.0	2.56
Switzerland	2.0	1.03	2.0	1.03
Austria	1.0	0.51	0.0	0.0
Portugal	1.0	0.51	1.0	0.51
Guernsey	1.0	0.51	1.0	0.51

Iceland	1.0	0.51	1.0	0.51
Japan	0.0	0.0	4.0	2.05
Saudi Arabia	0.0	0.0	1.0	0.51
Russia	0.0	0.0	1.0	0.51
New Zealand	0.0	0.0	1.0	0.51
Mexico	0.0	0.0	1.0	0.51
Malaysia	0.0	0.0	2.0	1.03
Lebanon	0.0	0.0	1.0	0.51
Israel	0.0	0.0	1.0	0.51
India	0.0	0.0	4.0	2.05
Hong Kong	0.0	0.0	3.0	1.54
China (Mainland)	0.0	0.0	3.0	1.54
Chile	0.0	0.0	1.0	0.51
Canada	0.0	0.0	10.0	5.13
Australia	0.0	0.0	1.0	0.51
United Arab Emirates	0.0	0.0	3.0	1.54
Total	195.0	100.0	195.0	100.0

Table 2: Distribution of the Sample by Country

Table 2 reports the distribution of the sample by country, distinguishing between targets and acquirers. The United States dominates the sample, accounting for almost half of all target firms (48.72%) and more than one-third of acquirers (34.87%). This strong presence reflects both the depth of the U.S. capital market and its central role in international M&A activity. The United Kingdom and Norway follow, representing 11.79% and 7.18% of targets respectively, and around 8.72% and 7.69% of acquirers. Other European countries such as

Greece and France appear with smaller shares, below 5% each, indicating a more modest but still significant involvement in the transactions captured in the sample. Overall, cross-country distribution highlights a concentration of M&A activity in mature markets.

Target Macro Industry	Target Companies	Proportion (%)
Energy and Power	58	29.74
Technology	46	23.59
Industrials	32	16.41
Consumer Staples	22	11.28
Materials	17	8.72
Consumer Products and Services	9	4.62
Financials	3	1.54
Healthcare	3	1.54
Media and Entertainment	3	1.54
Real Estate	2	1.03
Total	195	100.0

Table 3: Distribution of the Sample by Industry

Table 3 summarizes the industry distribution of the final sample, restricted to the five sectors included in the screening criteria: energy, basic materials, industrials, technology, and consumer cyclical. These industries were selected because they represent capital-intensive and innovation-driven sectors, where ESG considerations are expected to be particularly relevant in M&A decision-making. The concentration of deals in energy and power (29.7%) and technology (23.6%) highlights the importance of both traditional industries with high environmental impact and emerging sectors shaped by digital transformation. Industrials (16.4%) maintain a significant share, reflecting the role of infrastructure, manufacturing, and logistics in cross-border consolidation. Meanwhile,

consumer-related sectors (15.9 %) and basic materials (8.7%) appear less dominant but still relevant, given their exposure to sustainability challenges.

Although the initial screening criteria were restricted to five industries, the final dataset obtained still includes a limited number of transactions in other sectors such as financials, healthcare, and real estate. This outcome reflects two factors: the inherent limitations of the database filters, which sometimes categorize deals under overlapping, and the decision to preserve these observations to maintain a robust sample. Importantly, the presence of these additional industries does not alter the core focus of the analysis, as the majority of transactions remain concentrated in the five target sectors where ESG considerations are most strategically relevant.

For the extraction of ESG data, the LSEG Formula Builder was used, making use of the Environmental, Social, and Governance analytics categories to retrieve both aggregate and pillar-specific scores. The search was conducted at the company level, using the firm's name and cross-checking with its unique PermID identifier to ensure accuracy. To capture the relevant temporal dimension, the parameters were set to collect ESG scores at $t-1$ and $t+1$, corresponding to the year immediately preceding and the year following the deal announcement.

4.3 Descriptive Statistics

To provide an overview of the dataset and the main variables employed in the empirical analysis, Table 4 presents the descriptive statistics for the dependent variable, the target firms' ESG indicators, and the control variables.

Variable ⁴	Mean	Std. Dev	Min.	Max.
PREMIUM	0.12	0.25	-0.57	1.25
ESG Score	44.1	21.58	7.74	82.23
ESG CS	42.77	18.53	9.7	74.02

⁴ Acronyms and proxy variables are specified in Appendix A.

Environ. PL	37.82	3.92	0.0	91.49
Social PL	47.78	24.03	6.09	95.07
Govern. PL	42.93	21.77	6.0	90.02
SIZE	5128.64	13027.07	0.28	78570.0
LIQ	17.45	20.94	0.0	76.47
MTB	10.54	94.8	0.0	939.21
ROE	4.94	234.2	-849.98	1917.15
LIQ	2244.09	6523.49	0.29	47952.77
GRW	88.13	341.41	-966.1	1842.0

Table 4: Descriptive Statistics

The average acquisition premium is 11.9%, with a standard deviation of 25.4%. The minimum premium in the sample is -0.57 , while the maximum reaches 1.25. This suggests that although certain transactions were concluded at negative premiums, most acquisitions involved a positive premium over the pre-announcement share price.

With respect to firm fundamentals, the average size of target companies amounts to 5,128 million USD in total assets, though there is substantial variation across firms, as indicated by the wide range between 0.28 million and 78,570 million USD. The average leverage ratio is 17.5%, with values spanning from 0% to 76.5%. The market-to-book ratio exhibits a mean of 10.5 but is highly dispersed (standard deviation of 94.8), reflecting the presence of outliers in valuation measures across firms. Profitability, proxied by return on equity, averages 4.9%, although the dispersion is significant due to extreme negative and positive values. Liquidity levels also vary considerably, with an average cash position of 2,244 million USD, ranging from almost zero to nearly 48 million USD, confirming the heterogeneous nature of firms included in the sample.

Turning to ESG performance, the average ESG score for target companies is 44.1,

with substantial dispersion (standard deviation of 21.6). Among the pillars, the social score records the highest average (47.8), followed by governance (42.9) and environmental (37.8). The environmental pillar also displays the widest variation, with values ranging from 0 to 91.5, highlighting that while some firms disclose strong social and governance practices, environmental initiatives are less consistent across the sample. Overall, these results indicate that firms targeted in M&A transactions are diverse in terms of financial and sustainability characteristics, providing a suitable empirical setting to examine the relationship between ESG performance and acquisition premiums.

In addition to the descriptive statistics, we also computed a correlation matrix (Table 5) to examine the relationships among the variables included in the regression model.

	*1	*2	*3	*4	*5	*6	*7	*8	*9	*10	*11
PREMIUM *1	1.000										
ESG Score *2	-0.042	1.000									
ESG CS *3	-0.004	0.897* **	1.000								
Environ. PL *4	-0.013	0.915* **	0.820* **	1.000							
Social PL *5	-0.015	0.906* **	0.835* **	0.775* **	1.000						
Govern. PL *6	0.143	0.557* **	0.572* **	0.357* *	0.379* *	1.000					
SIZE *7	-0.026	0.103	0.148	0.233	0.039	-0.099	1.000				
LIQ *8	0.220*	-0.234	0.398*	-0.092	-0.203	-0.260	-0.052	1.000			
MTB *9	-0.010	0.117	0.174	0.037	0.179	0.038	-0.031	-0.026	1.000		
ROE *10	0.007	0.140	-0.000	0.122	0.098	0.138	-0.001	-0.039	-0.099	1.000	
GRW *11	-0.023	0.071	0.168	0.177	-0.006	-0.001	0.674* **	-0.032	-0.028	0.011	1.000

Table 5: Correlation Matrix

Note: This table presents Pearson correlation coefficients for all variables used in the regression

models. Significance at the 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively.

As expected, the ESG indicators are strongly and significantly correlated. The ESG Score is closely related to the ESG Combined Score (0.897**), and to the environmental (0.915***), social (0.906***), and governance (0.557***) pillars. Likewise, the ESG Combined Score correlates highly with the individual pillars (0.820–0.835***), confirming that while the ESG dimensions are interrelated, they capture distinct aspects of sustainability performance and should be analyzed separately.

If we look at the dependent variable, PREMIUM does not exhibit strong correlations with ESG or financial control variables, with coefficients generally close to zero and statistically insignificant. This indicates that multicollinearity is unlikely to bias the regression results. Among the financial controls, SIZE and GROWTH display moderate positive correlations with the environmental and social pillars, while LIQ is weakly and negatively correlated with ESG measures, significant only in a few cases. Overall, the correlation analysis confirms that ESG dimensions are interrelated but remain distinct, while their relationships with PREMIUM and control variables are limited, alleviating concerns of multicollinearity in the regression framework.

	ESG Score	ESG CS	Environ. PL Score	Social PL Score	Govern. PL Score
ESG Score	0.002 (0.011)				
ESG CS		0.006 (0.017)			
Environ. PL Score			0.003 (0.008)		
Social PL Score				-0.0 (0.008)	
Govern. PL Score					0.004 (0.007)
SIZE	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)
LEV	-0.002 (0.01)	-0.002 (0.01)	-0.002 (0.01)	-0.005 (0.007)	-0.001 (0.009)
LIQ	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)	-0.0 (0.0)
MTB	-0.003 (0.082)	0.019 (0.108)	-0.003 (0.082)	-0.007 (0.068)	0.017 (0.091)

ROE	0.001 (0.013)	0.001 (0.015)	0.001 (0.012)	0.003 (0.011)	-0.0 (0.015)
GRW	0.0 (0.001)	-0.0 (0.001)	0.0 (0.0)	0.0 (0.001)	-0.0 (0.001)
constant	0.016 (0.809)	-0.142 (1.03)	0.026 (0.599)	0.19 (0.618)	-0.066 (0.632)
R ²	0.267	0.33	0.3	0.223	0.377
VIF	9.99	12.88	8.83	10.35	12.2

Table 61: OLS Regression Results^a

Note: None of the coefficients are statistically significant at the 1%, 5%, or 10% levels, indicating no robust relationship between ESG performance and acquisition premiums in this sample.

Table 6 shows the OLS regression results with PREMIUM as the dependent variable. The coefficients for the overall ESG score (0.002) and the ESG Combined Score (0.006) are both positive, but not statistically significant. This means that, in our sample, having higher overall ESG ratings does not have a clear impact on the premiums paid in acquisitions. The Environmental (0.003) and Social (0.000) scores also show no significant effects, while the Governance score (0.004) is slightly higher but still not significant. In short, none of the ESG indicators show a strong relationship with the acquisition premium. The explanatory power of the models is moderate, with R² values ranging from 0.22 to 0.38, meaning the regressions explain around 22% to 38% of the variation in premiums.

Looking at the control variables, firm size (SIZE) tends to have a small positive effect, which is in line with the idea that bigger firms are often acquired with higher mark-ups. Leverage (LEV) is very small and not significant, meaning the debt levels of targets are not important for premiums. Liquidity (LIQ) is slightly negative, suggesting that firms with more cash might receive lower premiums, as buyers see less need to pay extra for such targets. The market-to-book ratio (MTB) has a small positive effect, showing that acquirers are willing to pay more for companies with stronger growth opportunities. Return on equity (ROE) is consistently negative (around -0.002 in some models), meaning more profitable firms did not necessarily receive higher premiums. Finally, growth (GROWTH), measured by changes in net income, has no consistent effect and is statistically insignificant.

5. Empirical Results

This section presents the empirical results of the OLS regressions examining the relationship between target firms' ESG performance and acquisition premiums. The analysis is based on a sample of international M&A transactions carried out between 2005 and 2023, with PREMIUM as the dependent variable. The models test the overall ESG score as well as the environmental, social, and governance pillars separately, while controlling for firm-level financial characteristics such as size, leverage, liquidity, market-to-book ratio, return on equity, and growth. All financial variables are measured at the 1% and 99% levels to limit the influence of outliers, and robust standard errors are applied to address heteroskedasticity.

The regression results show that ESG performance does not significantly explain acquisition premiums in our sample of M&A transactions. For H1, the coefficients for the ESG Score (0.002) and ESG Combined Score (0.006) are positive but not significant, suggesting no overall effect. For the sub-hypotheses, H1a Environmental (0.003), H1b Social (0.000), and H1c Governance (0.004) are also not supported, as none of the pillar scores are statistically significant. These results contradict prior evidence that higher ESG reduces premiums (Krishnamurti et al., 2019) and instead indicate that financial controls such as firm size and market-to-book ratios play a more consistent role.

From a theoretical perspective, the lack of significance does not support the shareholder spending view of stakeholder theory, which would predict a negative link between ESG and premiums. Nor does it align with the signaling view, where ESG performance would act as a credible signal of quality leading to higher valuations. Instead, our findings suggest that ESG considerations were not decisive in acquirers' pricing strategies during 2005–2023, with traditional financial indicators carrying greater weight (Hussainey & Salama et al., 2022).

From a stakeholder theory perspective, this absence of significance offers little support for the shareholder spending view, which argues that managers of high-ESG firms are more likely to overinvest and thus pay lower premiums (Aktas, de Bodt, & Cousinet al., 2011). Nor do the results align with the view that ethically minded executives avoid excessive premiums by acting prudently and focusing on long-term shareholder value. Instead, the lack

of a consistent ESG effect suggests that managers in our sample may not have factored stakeholder-related concerns heavily into their acquisition strategies.

From the lens of the signaling theory, the findings also suggest that ESG performance did not act as a credible signal of target quality in the market for corporate control. If ESG were perceived as a signal of lower risk, superior governance, or better long-term financial prospects, we would expect higher premiums for strong ESG performers. However, the insignificant coefficients across all pillars indicate that acquirers may have viewed ESG disclosures as peripheral rather than decisive in pricing decisions.

Overall, the results do not support H1 or its sub-hypotheses (H1a–H1c) and diverge from the research that found a significant negative relationship between ESG and premiums (Hussainey & Salama et al., 2022). This suggests that in the M&A market of 2005–2023 for his sample, ESG factors neither acted as a strong signal of value nor materially influenced acquirers’ willingness to pay. Instead, traditional financial indicators played a more decisive role, aligning more closely with shareholder wealth than with ESG-driven valuation logics. If we wanted to become closer in any case, the evidence leans slightly closer to the signaling perspective, since ESG scores did not send a clear or credible signal that influenced valuation outcomes, whereas stakeholder-driven explanations of overinvestment or ethical restraint are not reflected in the data.

6. Conclusion

This research examined whether ESG performance influences the premiums paid in M&A transactions. Using a sample of international deals announced between 2005 and 2023, we tested the effect of overall ESG scores as well as the environmental, social, and governance pillars on acquisition premiums, while controlling for key financial variables. Across all regression specifications, the coefficients for ESG were small and statistically insignificant (e.g., ESG Score = 0.002; ESG Combined = 0.006; Environmental = 0.003; Social = 0.000; Governance = 0.004). These findings suggest that ESG considerations did not play a decisive role in acquirers’ pricing strategies in the observed period. Instead, traditional financial characteristics such as firm size and market-to-book ratios appeared more influential in explaining premium variation.

As stated, the findings do not confirm Hypothesis 1 or its sub-hypotheses (H1a–H1c) and differ from earlier studies that found a strong negative link between ESG and M&A premiums. From a theoretical point of view, the evidence does not support the shareholder spending view of stakeholder theory, which suggests high-ESG firms should be linked to lower premiums, nor the signaling theory, which assumes ESG acts as a positive signal that increases valuations.

This study has several limitations. First, the sample size of valid observations is constrained, especially once ESG and financial variables are merged, reducing statistical power. Second, reliance on LSEG Workspace, ESG scores may bias results, since ESG ratings are partly based on disclosure rather than actual performance, and methodological differences across providers are well known. Third, only target ESG performance was analyzed, while ignoring the ESG profile of acquirers, which may also shape valuation outcomes and strategic fit. Fourth, deal-specific factors such as payment method, deal hostility, or cross-border status could not be fully incorporated, which may mask relevant interactions between ESG and premiums.

Future studies could address these limitations in several ways. First, incorporating both acquirer and target ESG scores would provide a more complete picture of how ESG alignment or mismatch affects deal valuation. Second, using alternative ESG metrics may reduce measurement bias. Third, more advanced econometric methods could help address endogeneity. Fourth, researchers could decompose ESG pillars into subcategories (e.g., carbon emissions, diversity, board independence) to identify which dimensions matter most. Finally, expanding the sample and incorporating recent trends in sustainable finance could capture whether ESG considerations gain more importance over time as regulatory frameworks and investor expectations evolve.

In my view, the fact that ESG performance showed no significant effect on acquisition premiums in this sample does not necessarily mean ESG is irrelevant. Rather, it suggests that during the timeline, ESG factors were not yet systematically priced into M&A decisions. Acquirers may recognize ESG qualitatively in due diligence but still base valuation primarily on financial fundamentals. However, with growing regulatory attention to sustainability and increased investor activism, ESG is likely to become a more important

driver of deal valuations in the future. My interpretation is that ESG is currently in a transitional phase: not fully ignored, but not yet decisive. Over time, as disclosure quality improves and ESG data becomes more comparable and reliable, we may see stronger and more consistent relationships between ESG and M&A premiums.

7. Appendix

7.1 Appendix A - Definition and Measures of Variables

Variables	Abbreviation	Measurements
ESG Variables		
ESG Score	ESG	LSEG overall ESG Score
ESG Combined Score	ESGC	LSEG combined Score
Environmental Score	ESNV	LSEG Environmental Pillar Score
Social Score	SOC	LSEG Social Pillar Score
Governance Score	GOV	LSEG Governance Pillar Score
Transaction Variable		
Bid Premium	$\frac{(\text{Target share price at announcement} - \text{Target share price 4 weeks prior})}{\text{Target share price 4 weeks prior}}$	
Financial Variables		
Size	SIZE	total assets of the target
Leverage	LEV	Ratio of long-term debt to total assets
Liquidity	LIQ	Cash and cash equivalents / total assets
Market-to-book ratio	MTB	Market value of equity / book value of equity
Return on Equity	ROE	Net income / shareholders' equity
Growth	GRW	Year-on-year percentage change in net income

Note on variable construction: The acquisition premium (PREMIUM) was calculated as the difference between the target stock price on the announcement date and the share price four weeks prior, scaled

by the latter. Firm size (SIZE) was proxied by the target's total assets (USD millions). Leverage (LEV) was measured as the ratio of long-term debt to total assets. Liquidity (LIQ) was proxied by the acquirer's cash holdings (USD millions). The market-to-book ratio (MTB) was taken directly from Refinitiv as the ratio of market price to book value four weeks prior to announcement. Growth (GRW) was proxied using changes in net income, due to the lack of consistent revenue data across the sample. ESG performance variables for targets were drawn from Refinitiv's ESG database (ESG Score and Environmental, Social, and Governance pillars), matched through PermID and aligned to the year preceding the transaction announcement.

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