ESG Considerations in Acquisitions and Divestitures: Corporate Responses to Mandatory ESG Disclosure[*]

Tong Li[†] Qilin Peng[‡] Luping Yu[§]

May 26, 2023

Abstract

As demands for environmental, social, and governance (ESG) data grow, mandatory ESG disclosure regulations are becoming more prevalent globally. However, corporate responses to these regulations remain unclear. Our ChatGPT-based analysis reveals a notable increase in ESG-related discussions during merger and acquisition conference calls subsequent to the implementation of ESG disclosure mandates. In conjunction with these heightened discussions, firms strategically modify their portfolio of productive assets through acquisitions and divestitures. They acquire assets with superior ESG performance and divest underperforming assets, particularly in the wake of negative ESG incidents. Firms subjected to these mandates are willing to offer higher premiums when acquiring assets with strong ESG attributes and to accept discounts when divesting assets with weaker ESG performance. Notably, our findings demonstrate that acquisitions are more effective than divestitures in driving improvement in ESG performance and enhancing overall firm value.

JEL Classifications: G15; G34; G38; Q55

Keywords: ESG Reporting; Mergers and Acquisitions; Divestiture; Green Innovation; ChatGPT

[*] We acknowledge helpful comments from Victor Lingfeng Geng, Chao Jin, Yong Yang, and participants at CUHK-XMU Business & Management Academic Seminar, Chinese Economists Society Annual Conference 2023, Asian Finance Association Annual Conference 2023, Asian Meeting of the Econometric Society 2023, and Academy of Management Journal Paper Development Workshop 2023. All remaining errors and omissions are our own.
[†] HKU Business School, The University of Hong Kong. Email: litong17@hku.hk.
[‡] Rotman School of Management, University of Toronto. Email: qilin.peng@rotman.utoronto.ca.
[§] School of Management, Xiamen University. Email: lupingyu@xmu.edu.cn.

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1 Introduction

Environmental, social, and governance (ESG) considerations in investment decisions have grown significantly. These factors aim to ensure that corporations not only achieve financial success but also demonstrate social and environmental responsibility. This heightened investor interest in ESG issues has resulted in a surge in demand for relevant information.[1] In response to this demand, regulatory bodies worldwide have taken steps to introduce ESG disclosure mandates. These mandates require firms to disclose their ESG practices, with the aim of enhancing corporate transparency and contributing to broader sustainability objectives (Krueger, Sautner, Tang, and Zhong, 2021; Christensen, Hail, and Leuz, 2021). However, the effectiveness of these regulations depends greatly on how firms react to the disclosure requirements. In this paper, we investigate corporate reactions to ESG disclosure mandates by focusing on mergers and acquisitions (M&As) and divestitures, all of which represent critical decisions in corporate asset allocation. By examining these strategic actions, we provide insights into how firms navigate and adapt to the evolving landscape of ESG reporting obligations.

M&As have long been acknowledged as crucial tools for corporations to achieve growth, undertake restructuring, and pursue diversification. Prior studies have extensively explored the effects of M&As on stock returns (e.g., Fuller, Kathleen, and Stegemoller, 2002), corporate governance (e.g., Wang and Xie, 2009), and employee welfare (e.g., Gehrke, Maug, Obernberger, and Schneider, 2022). In recent years, there has been a growing emphasis on integrating ESG factors into M&A activities.[2] By directing investments towards entities that actively enforce ESG policies, acquiring firms can strengthen their portfolios while concurrently promoting a more sustainable and equitable economic landscape. The 2022 M&A Trends Survey conducted by Deloitte substantiates this trend, revealing that over 70% of participating organizations incorporated ESG metrics into their target evaluations and reevaluated their portfolios from an ESG perspective.[3]

[1] For example, according to the 2020 Global Sustainable Investment Review, over $35 trillion has been invested with explicit ESG goals as of the beginning of 2020. See http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf
[2] https://corpgov.law.harvard.edu/2020/02/20/the-coming-impact-of-esg-on-ma/
[3] https://www2.deloitte.com/content/dam/Deloitte/us/Documents/mergers-acqisitions/us-deloitte-2022-mna-trends-report.pdf

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As the counterpart to acquiring assets through M&As, divestitures also serve as a critical tool for asset restructuring. These deals play a pivotal role in enhancing liquidity (e.g., Maksimovic and Phillips, 2001), refining business strategies (e.g., Edmans and Mann, 2019), and improving operational efficiency (e.g., Aktas, Baros, and Croci, 2022). Similar to the growing significance of ESG considerations in M&A activities, ESG practices are increasingly integral to divestiture decisions. For instance, companies are beginning to utilize ESG due diligence to evaluate potential risks associated with existing assets and pinpoint potential liabilities arising from operations. A study conducted by the UN Principles for Responsible Investment (PRI) identified the lack of opportunities for transitioning to a more sustainable business model as a crucial factor in divestment considerations.[4] Given the favorable perception of divesting from industries or assets exhibiting substandard environmental or social practices, companies are increasingly integrating ESG criteria into their divestiture strategies.

Whether and how mandatory ESG disclosure affects M&As and divestitures are open empirical questions. On the one hand, the obligation to comply with mandated ESG reporting may create several incentives for firms to restructure their productive assets for an enhanced ESG profile. First, with the aim to increase the transparency of corporate ESG practices, ESG disclosure mandates tend to reduce stakeholders' costs associated with monitoring firms' ESG activities. Improved transparency, coupled with the ability of stakeholders and investors to cost-effectively compare firms, is likely to heighten societal pressure (Darendeli, Fiechter, Hitz, and Lehmann, 2022). This pressure could potentially accelerate corporations' efforts to enhance their ESG image.[5] Secondly, mandatory ESG reporting can influence firms' cost-benefit tradeoffs. If the costs associated with mandatory ESG reporting outweigh the benefits, firms are expected to make adjustments and may even abandon certain activities.[6] Firms with high costs of maintaining strong ESG performance and high reputational risks are more likely to exit the market, whereas those

[4] https://www.unpri.org/download?ac=16109

[5] Social activists, policymakers, and consumers can influence businesses through various means such as public criticism (Dyck, Volchkova, and Zingales, 2008), boycotts, or imposing sustainability requirements in the supply chain (Dai, Liang, and Ng, 2021). If the costs of not aligning their ESG activities with certain stakeholders are too high, firms are motivated to adjust their ESG activities in response.

[6] Christensen et al. (2017) discovered that companies that are registered with the SEC and thus obligated to disclose mine-safety information are more likely to close risky mine sites compared to unregulated companies.

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with lower costs and reputational risks are more likely to enter or expand. In an attempt to enhance ESG profiles and mitigate exposure to ESG-related risks, firms can choose to make adjustments through real investment decisions (e.g., Sadka, 2006; Durnev and Mangen, 2007; Beatty, Liao, and Yu, 2013). In particular, firms may be more likely to acquire companies with strong ESG performance and show reluctance towards investing in companies with weak ESG practices. Firms may also choose to divest assets with poor ESG records, such as facilities releasing toxic substances or those with substandard workplace safety measures.

On the other hand, mandatory ESG disclosure could exert an opposite impact on firms' asset allocations. First, the enactment of compulsory ESG disclosure raises regulatory compliance costs for companies, resulting in a short-term decline in firm profitability (e.g., Chen, Hung, and Wang, 2018; Fiechter, Hitz, and Lehmann, 2022). This, in turn, may limit firms' capacity to purchase green assets, as they may not have sufficient funds to do so. Second, the potential benefits of improving ESG profiles in response to mandated reporting may be limited if the costs of making changes in real asset markets are prohibitively high (e.g., Pástor, Stambaugh, and Taylor, 2021, 2022). Following the introduction of ESG disclosure mandates, the increased (decreased) demand for green (brown) assets may result in higher premiums (discounts) for the purchase (disposal) of assets with strong (weak) ESG performance, which could decrease the attractiveness of restructuring productive assets.

To investigate the impact of mandatory ESG disclosure on acquisitions and divestitures, we rely on a dataset of global M&As and divestitures from 2000 to 2020 and employ a difference-in-differences (DID) approach. We exploit the staggered adoption of mandatory ESG disclosure regulations around the world to identify causal effects. We begin our empirical analysis by investigating awareness of ESG issues in merger and acquisition conference calls. Our findings reveal a notable surge in ESG-related discussions during these meetings, which signifies an amplified significance of ESG factors in mergers and acquisitions. We further document that the real impacts of these regulations exist in real asset markets. In particular, we show that firms acquire 17.6% more green patents from target firms after the implementation of ESG disclosure

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mandates. By contrast, firms facing these requirements reduce their acquisitions of target firms that have recently experienced negative ESG incidents. In addition, we find that firms in countries adopting disclosure mandates tend to acquire more (fewer) target firms from countries with strong (weak) environmental and social performances. Moreover, the effects of ESG disclosure mandates on corporate acquisitions become more pronounced with stricter law enforcement and higher institutional ownership but are mitigated by acquirers' financial constraints. Overall, these findings indicate that firms respond to mandatory ESG disclosure requirements by acquiring assets that help improve their ESG profiles.

We then examine the divestment of corporate assets. Our estimates from difference-in-differences regressions show that, compared to firms in countries without mandatory disclosure regulations, companies in countries with these regulations sell more assets in the post-mandate period. Importantly, this effect intensifies if the divested assets have recently experienced more negative ESG incidents. The divestment of poor ESG assets increases in terms of both number and dollar value. The results suggest that when firms are required to disclose their ESG performance, they tend to divest assets with poor ESG records, a reaction that is consistent with firms seeking to enhance their ESG performance.

In addition, we consider the effects of mandatory ESG disclosure on the pricing of acquisitions and divestitures. If firms' restructuring in real assets arises from the pressure to improve their ESG performance, we expect that firms are willing to offer higher prices to buy desirable assets with strong ESG records and accept lower prices to dispose of problematic assets with poor ESG profiles. Our empirical results confirm this conjecture. Specifically, we find that companies mandated to report on ESG issues pay higher premiums when acquiring target firms with more green patents but accept discounts when divesting assets with more negative ESG incidents.

Finally, we assess the impacts of post-mandate asset restructuring on firms' ESG performance and firm value. To effectively distinguish transient changes from long-run effects, we estimate dynamic effect regressions. We find that acquisitions following ESG disclosure mandates boost

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firms' ESG performance and may generate value for the firm even in the long run. However, although firms disposing of poor-ESG assets after the regulations experience a temporary increase in ESG scores, the short-term enhancement in ESG performance does not translate to a higher valuation for the divesting firms. These results suggest that after mandatory ESG disclosure requirements, firms benefit more from acquiring strong ESG assets than from divesting weak ESG assets.

Our paper makes several contributions to the literature. First, we contribute to the growing literature on the real effects of mandatory ESG disclosure. Some studies focus on regulations in a single country or a certain group of countries. For example, Jouvenot and Krueger (2019) and Downar et al. (2021) show that carbon disclosure requirements in the UK lead to a reduction in firms' carbon emissions. Chen et al. (2018) study a mandate in China that requires firms to disclose activities related to corporate social responsibility (CSR) and find that cities affected by the mandate experience significant improvements in their air and water quality. Fiechter et al. (2022) consider the CSR reporting mandate in the European Union and show that firms engage in more CSR activities due to the reporting mandate. Few recent studies have explored the impacts of ESG disclosure regulations around the world. Krueger et al. (2021) document an improvement in firms' information environment and a reduction in their negative ESG incidents after disclosure mandates are enacted. Lu, Peng, Shin, and Yu (2022) suggest that these mandates drive firms to restructure their global supplier network to evade ESG obligations. Wang (2023) focuses on ESG disclosure mandates on banks and provides evidence of positive spillover effects on borrowing firms' environmental and social performance. Unlike these studies, we investigate the effects of mandatory ESG disclosure regulations on real asset markets, considering both the purchase and sale of corporate assets. As a result, our results provide a more comprehensive understanding of the role that ESG disclosure mandates play in corporate asset allocations.

Second, we add to the literature on mergers and acquisitions by showing how ESG reporting regulations may impact corporate acquisition decisions. Prior studies have examined incentives for firms to pursue mergers and acquisitions. The prominent contributing factors to corporate

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acquisition activities include, among others, product market synergies (Hoberg and Phillips, 2010), risk management considerations (Garfinkel and Hankins, 2011), managerial preferences (Jenter and Lewellen, 2015), and policy uncertainty (Bonaime, Gulen, and Ion, 2018). Cross-border mergers and acquisitions involve transactions between companies from different countries and therefore are influenced by additional drivers, such as national cultures (Ahern, Daminelli, and Fracassi, 2015), bank regulations (Karolyi and Taboada, 2015), disclosure requirements regarding financial and ownership information (Bonetti, Duro, and Ormazabal, 2020), and national regulations combating climate change (Li, Tang, and Xie, 2023). Our findings suggest that the pressure to improve ESG performance due to mandatory ESG disclosure requirements shapes corporate acquisition decisions, consistent with the growing importance of ESG considerations in M&A transactions.[7]

Third, our paper provides novel insights into the drivers of corporate divestitures. Existing literature has shown that divestitures can be motivated by firms' desire to boost operational efficiency (Maksimovic and Phillips, 2001) or the need to finance corporate investment (Edmans and Mann, 2019; Aktas et al., 2022). Recent studies have also linked divestitures to corporate ESG considerations. Edmans, Levit, and Schneemeier (2022) theoretically illustrate an equilibrium in which firms strategically divest brown assets and tilt to green assets to attract investors. Duchin, Gao, and Xu (2023) empirically demonstrate that firms divest polluting plants due to greenwashing incentives. Berg, Ma, and Streitz (2023) document that much of the reduction in greenhouse gas emissions from large emitters after the Paris Agreement can be attributed to the sale of pollutive assets. To our best knowledge, our paper is the first to examine the role of disclosure regulations in corporate divestiture decisions. We provide evidence that mandatory ESG disclosure pushes firms to divest assets with weak ESG records. We further show that firms tend to accept discounts in such divestitures.

2 Background and Hypothesis

[7] https://www.torys.com/Our%20Latest%20Thinking/Publications//2021/01/the-growing-importance-of-esg-in-ma-transactions/

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2.1 Institutional Background

In response to investors' growing interest in sustainable investments and demand for ESG-related information, an increasing number of jurisdictions are considering or implementing mandatory ESG disclosure regulations (Christensen et al., 2021). For example, the Non-Financial Reporting Directive (NFRD 2014/95/EU) in the European Union has required companies with more than 500 employees to provide "non-financial and diversity information" in their management report since 2018.[8] According to the NFRD, large EU-based companies must disclose how their activities affect the environment and society. The NFRD has now been incorporated into the national laws of all EU member states. Indeed, several similar regulations have already been implemented in some EU countries. One example is the New Economic Regulations Act adopted by France in 2001. This law requires listed companies in France to disclose how they deal with their environmental and social responsibilities, making France the first country in Europe to mandate such disclosures. As shown in Table IA.1, mandatory ESG disclosure requirements have been adopted not only in European countries but also in other countries worldwide, such as Australia, Canada, China, India, and South Africa. Although the U.S. Securities and Exchange Commission (SEC) does not currently require ESG-related disclosure, the situation may change soon since the SEC has proposed amending the rules.[9]

One intended purpose of mandatory ESG disclosure regulations is to enhance the transparency of firms' ESG activities and thereby induce firms to improve their ESG practices by increasing potential pressure from investors and other stakeholders. Given the societal interest in sustainable development, firms will likely face such pressures and respond by enhancing their ESG performance, especially if they are required to report their ESG practices publicly. Consistent with this idea, the introduction of mandatory ESG disclosure requirements reduces the number of negative firm-level ESG incidents (Krueger et al., 2021).

[8] https://www.greenfinanceplatform.org/policies-and-regulations/non-financial-reporting-directive-nfrd-directive-201495eu-and-proposal

[9] https://www.whitecase.com/insight-alert/sec-proposes-amendments-rules-regulate-esg-disclosures-investment-advisers-investment

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2.2 Hypothesis Development

Existing literature (e.g., Leuz and Wysocki, 2016) highlights the significant impact that disclosure can have on corporate activities. This influence arises from multiple factors. For instance, disclosure plays a crucial role in mitigating information asymmetry, thereby reducing agency costs through external monitoring (Shroff, Verdi, and Yu, 2014). In addition, disclosure facilitates corporate managers' ability to learn from the reporting practices of peer firms, which can serve as a valuable benchmark (Beatty et al., 2013). The transparency afforded by disclosure also enables investors and stakeholders to make comparisons among peer firms, reinforcing the effects of peer influence. Therefore, disclosure is likely to shape corporate decision-making by altering the tradeoffs between the costs and benefits that firms encounter.

Recent studies on mandatory ESG disclosures document real effects on firms' operations. These include positive outcomes like increased CSR activities (Fiechter et al., 2022), reduced carbon emissions (Downar et al., 2021), fewer negative incidents (Krueger et al., 2021), discontinuation of environmentally harmful suppliers (Darendeli et al., 2022), and limitations on environmentally unfriendly borrowers (Wang, 2023). These findings highlight both how increased transparency in ESG information can influence firms' daily business practices and how firms may adapt their operations to comply with mandatory ESG disclosure requirements. It is important to note, however, that mandatory ESG disclosure can also incur regulatory compliance costs and may result in decreased stock prices and profitability. This effect is particularly significant for companies with weak ESG performance, as it negatively impacts shareholder value (Chen, et al., 2018; Grewal, Riedl, and Serafeim, 2019). Consequently, disclosure mandates are expected to enhance firms' incentives to improve their performance on ESG issues that are driven by societal pressures, stakeholder expectations, and peer influences.

Firms have multiple ways to enhance their ESG performance, one of which involves acquiring assets that exhibit strong performance on ESG issues. This approach offers dual benefits. On the one hand, by acquiring assets with favorable ESG attributes, firms can immediately bolster their own ESG profiles, which is advantageous for organizations seeking to disclose their ESG

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practices and achieve short-term performance improvements. On the other hand, through the integration of these ESG-strong assets into their existing portfolio, acquiring firms have the potential to develop new business strategies that yield enhanced environmental and social impacts, fostering positive long-term synergies. Based on these considerations, we present our first hypothesis:

H1 (Asset Acquisitions): *Firms are more (less) likely to acquire assets with good (poor) ESG performance after their home country introduces mandatory ESG disclosure regulations.*

Corporate operations often involve assets that generate adverse social outcomes. For instance, a facility emitting pollutants may yield profits for its owner while detrimentally impacting the environment. When compelled to disclose their ESG practices, firms may strategically choose to curtail or entirely discontinue business activities associated with environmentally harmful assets to enhance their ESG reputation. In our second hypothesis, we examine firms' divestment of assets that socially responsible investors or stakeholders may consider problematic. We anticipate that mandatory ESG disclosure regulations incentivize firms to divest assets with poor ESG performance. To formalize our expectation, we propose our second hypothesis:

H2 (Asset Divestitures): *Firms are more likely to divest assets with poor ESG performance after their home country introduces mandatory ESG disclosure regulations.*

Because of the broad scope of disclosure requirements, mandates for ESG disclosure are anticipated to reshape the decision-making tradeoffs within corporations. The amplified transparency resulting from mandatory ESG disclosure regulations may prompt firms to enhance their ESG performance, thereby increasing the attractiveness of acquiring assets that exhibit excellent ESG characteristics or divesting assets with poor ESG performance. In this context, we anticipate that firms are willing to pay a higher premium when acquiring assets with favorable ESG performance and accept a discount when divesting assets with subpar ESG performance. Accordingly, we present the following two-part hypothesis:

H3a (Acquisition Premiums): *Firms pay a higher premium when acquiring assets with strong*

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ESG performance after their home country introduces mandatory ESG disclosure regulations.

H3b (Divestiture Premiums): *Firms accept a lower premium when divesting assets with poor ESG performance after their home country introduces mandatory ESG disclosure regulations.*

The asset restructuring prompted by mandatory ESG disclosure requirements has the potential to shape firms' ESG performance and firm value, extending beyond short-term effects. Acquisitions made in response to ESG disclosure mandates are anticipated to enhance firms' ESG performance and generate long-term value. Proactive strategies, such as mergers and acquisitions that align with green synergy, are likely to be recognized and rewarded by the capital market. Conversely, divestitures undertaken in response to negative incidents may be perceived as a passive strategy. It is worth noting that firms selling weak ESG assets following the regulations may experience a temporary increase in ESG scores, but this short-term enhancement may not necessarily translate into a higher valuation for divesting firms. Thus, we offer our fourth hypothesis:

H4a (Long-term Firm Value): *The acquisition of assets with strong ESG performance is expected to have a positive influence on long-term firm value.*

H4b (Short-term Firm Value): *The divestiture of assets with poor ESG performance is expected to have a positive influence on short-term firm value.*

3 Data and Sample

3.1 Data Sources

Our analysis combines data from multiple sources. First, we gather details on global mandatory ESG-related disclosure regulations following Krueger et al. (2021). We manually collect implementation years of ESG mandates disclosure from various sources, including the Carrot & Sticks (C&S) project, the Sustainable Stock Exchange (SSE) Initiative, the Global Reporting Initiative (GRI), and the Initiative for Responsible Investment (IRI). We also cross-

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check this information with that obtained from government agencies, stock exchanges, and newspapers. As shown in Table IA.1, there is a significant variation in time at which countries adopt mandatory ESG disclosure requirements.

Second, we obtain information on global mergers and acquisitions from the Security Data Company (SDC) Mergers and Corporate Transactions database. It provides detailed deal-level characteristics, including, among many others, the names, countries, and industries of target and acquirer firms, the dollar value of a transaction, the premium of a transaction value relative to the target's value, and whether a transaction is a divestiture of assets.

Third, we rely on PATSTAT Global to measure firms' innovation activities. Administrated by the European Patent Office (EPO), this database contains bibliographical and legal event patent data worldwide. In addition, we use data from RepRisk to capture firms' negative ESG incidents. The data provider screens over 100,000 public sources every day in 23 languages to systematically identify the ESG risk incidents associated with a certain company. The screening results are further analyzed and assured by specialized analysts. Furthermore, we obtain firms' ESG scores from Refinitiv ASSET4. The overall score is calculated based on more than six hundred firm-level measures that capture a firm's performance, commitment, and effectiveness in issues related to environmental, social, and corporate governance. The transcripts for M&A conference calls are obtained from S&P Global Market Intelligence. The database offers current and historical transcripts covering approximately 8,000 public companies.

3.2 Sample Description

To begin our sample selection, we cover all firms included in Refinitiv Worldscope between the years 2000 and 2020. Using data from Worldscope, we construct a set of firm-year level control variables, which includes: *Total Assets*, *Leverage*, *ROA*, *Market-to-Book Ratio*, *Tangibility*, *Liquidity*, *Sales Growth*, and *Market Share*. Next, we aggregate the case-level M&A data from the SDC to a firm-year level and merge it with the financial data from Refinitiv Worldscope. We exclude firms that were not covered by the SDC, as well as those in the financial industry (SIC codes between 6000 and 6999). Finally, we merge the patent data from PATSTAT Global and

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ESG incidents data from RepRisk into our dataset.[10]

Our baseline sample, after eliminating observations with missing values for control variables, includes 142,429 firm-year observations from 90 countries or regions from 2000 to 2020. The number of observations used for regression analysis may vary among tables and columns due to missing values of different dependent variables. Table 1 presents the descriptive statistics of all variables used in our empirical analysis, which are defined in Table IA.1.

We further match M&A conference calls to our baseline sample. We collect transcripts of M&A conference calls between February 2002 and March 2023 from the S&P Global Market Intelligence Transcripts database. Our sample contains 8,891 transcripts, which include 31,163 and 140,433 components in executives' presentation sessions and Q&A sessions, respectively.[11]

[Insert Table 1 Here]

4 Empirical Results

We start our empirical analysis by examining the effects of mandatory ESG disclosure regulations on corporate M&A activities. Then, we investigate how ESG disclosure mandates affect the divestiture of firms' existing assets. Turning to the pricing effects of mandatory ESG disclosure, we focus on whether the premiums of the acquired (divested) targets change after the acquiring (target) firm is required to disclose its ESG practices. Finally, we conduct additional tests to support our main findings and consider the long-term effects of mandatory ESG disclosure requirements.

4.1 Mandatory ESG Disclosure and Mergers and Acquisitions

[10] The process of merging firm-level datasets can be time consuming due to differences in firm identifiers across datasets. In our study, we utilize the International Securities Identification Number (ISIN) as the primary linking key to establish connections between datasets. Additionally, we perform manual checks to ensure the accuracy of the linked dataset.

[11] An M&A conference call involves a presentation regarding the company's M&A activity and an opportunity for Q&A. Typically an operator will introduce the call and then hand it off to a representative from the firm. Questions and answers often follow. In this case, the operator will be listed on the first record, called a *component*, and the company's representative will have another component. There may be many components as management and analysts talk back and forth. Each of these components belongs to the same transcript. They are numbered in order and labeled with the speaker's name and type of component (Presenter Speech, Question, Answer, etc.).

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4.1.1 ESG-Related Discussions in Conference Calls

To explore whether ESG disclosure mandates incentivize firms to integrate ESG considerations in their M&A decisions, we directly examine ESG-related discussions in M&A conference calls. Corporate executives may talk more about firms' ESG practices during their presentations when considering ESG factors in M&As. In addition, if analysts pay more attention to ESG-related issues due to disclosure mandates, we expect more ESG-related discussions in Q&A sessions after the implementation of ESG disclosure regulations. For each component in the M&A call transcripts, we ask ChatGPT whether it covers ESG-related topics.[12] We then aggregate the outcomes to the firm-year level.

[Insert Table 2 Here]

We exploit ChatGPT, a capable large language model, to determine whether M&A conference calls discuss ESG issues. We find that both executives' presentations and the Q&A sessions potentially cover ESG-related topics. Table IA.2 in the Internet Appendix presents some examples. For instance, Carlos Tavares, Chairman of Fiat Chrysler Automobiles, says, "We have the traditional CO2 challenge, which may be even more stringent in the near future;" he stresses "Clean mobility is, of course, a must" in his presentation explaining the company's acquisition of Peugeot S.A. In another example, during a conference call explaining Fortum Corporation's acquisition of Uniper's stakes from Elliott and Knight Vinke, one analyst from BNP Paribas challenges the increase in Fortum Corporation's carbon footprint. As a response, Pekka Ilmari Lundmark, the CEO of Fortum, agrees that "the carbon footprint is an important consideration" and claims that the share of coal and lignite in the total generation output of the combined company is expected to decrease over time following the transaction. These examples illustrate the importance of ESG considerations in mergers and acquisitions.

Panel A of Table 2 summarizes the percentage of M&A conference calls that mention ESG-

[12] We posed the following inquiry in ChatGPT: "Check if the speech covers CSR/ESG topics and report the outcome as either Yes or No". Additionally, we set the Temperature to 0 to ensure consistent and formatted outcomes. Temperature is a parameter that controls the "creativity" or randomness of the text generated by ChatGPT. A higher temperature (e.g., 0.7) results in more diverse and creative output, while a lower temperature (e.g., 0.2) makes the output more deterministic and focused. We cross-verify the outcomes manually to ensure the accuracy of identification.

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related topics. Before the introduction of ESG disclosure mandates, 4.37% of M&A conference calls mention ESG in the presentation session. This portion increases to 6.19% after the implementation of mandatory ESG disclosure requirements. The difference of 1.82% is statistically different from zero at the 5% significance level. We also find a significant increase in the number of M&A conference calls that mention ESG-related topics in Q&A sessions after ESG disclosure mandates become effective.

Panel B of Table 2 reports the regression results for the effect of ESG disclosure mandates on discussions in M&A conference calls. Column (1) shows that there is no significant change in the total number of M&A conference calls after the introduction of mandatory ESG disclosure regulations. However, Columns (2) and (3) show that the number of M&A conference calls mentioning ESG in the presentation and Q&A sessions increases significantly when firms are required to disclosure their ESG practices. This evidence suggests that both corporate executives and analysts discuss more ESG-related topics after the implementation of ESG disclosure mandates. The results are consistent with our view that mandatory ESG disclosure requirements lead to an increased emphasis on ESG factors in mergers and acquisitions.

4.1.2 Baseline Results

This subsection examines how firms' acquisition decisions respond to mandatory ESG disclosure requirements. To do so, we first estimate the following regression model:

$$Acquisitions_{i,t} = \alpha + \beta Mandatory\ Disclosure_{i,t} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \tag{1}$$

where $Acquisitions_{i,t}$ represents measures of M&A activities; $Mandatory\ Disclosure_{i,t}$ is an indicator variable that equals one if the country of firm i has adopted mandatory ESG disclosure regulations in year t and zero otherwise; $\boldsymbol{X_{i,t}}$ is a set of firm-level control variables; and θ_i and θ_t denote firm and year fixed effects, respectively. Standard errors are clustered at the country level. The coefficient of interest is β, which captures the effects of ESG disclosure mandates on mergers and acquisitions.

We expect that the requirement to disclose ESG practices leads firms to acquire more assets

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that will boost their ESG performance and to buy fewer assets that will hurt their ESG performance. To test this conjecture, we focus on two proxies related to corporate M&As. First, green technology may help firms deal with environmental issues in their business operations and thus enhance their ESG performance. Hence, target firms with more green innovation are attractive assets for acquiring firms that seek to improve their ESG performance due to disclosure pressure.[13] Second, negative ESG incidents are detrimental to firms' ESG-related reputations, and a large number of ESG incidents in a given period can be regarded as a signal of poor ESG practices. Therefore, targets with more negative ESG incidents are assets that may adversely affect the ESG performance of the acquiring firm.

Table 3 presents the estimation results. Column (1) reports an increase in the number of acquired green patents following ESG disclosure mandates. The outcome variable is *Log(# of Acquired Green Patents)*, calculated as the logarithm of one plus the total number of green patents acquired by a firm from mergers and acquisitions in a given year.[14] Control variables include firm size (*Total Assets*), financial leverage (*Leverage*), return on assets (*ROA*), market-to-book ratio (*M/B*), asset tangibility (*Tangibility*), liquidity of assets (*Liquidity*), the sales growth rate (*Sales Growth*), and the market share (*Market Share*). The detailed definitions of these variables are provided in the Appendix. The coefficient estimate on the indicator for ESG disclosure mandates is positive (17.54) and statistically significant at the 5% level. This result indicates that firms obtain more green patents through mergers and acquisitions after their countries adopt mandatory ESG disclosure regulations.[15] This effect is economically significant, with the estimated coefficient corresponding to more than half of the mean outcome.

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[13] Cohen, Gurun, and Nguyen (2020) discovered a potential disconnection between green innovation and ESG performance in the sense that energy firms possess a great number of green patents. However, our results are similar if we exclude firms in the energy sector (Table IA.2 in the Internet Appendix).

[14] Green patents are identified based on the International Patent Classification (IPC) Green Inventory class symbol. The IPC Green Inventory was developed by the IPC Committee of Experts in order to facilitate searches for patent information relating to so-called Environmentally Sound Technologies (ESTs), as listed by the United Nations Framework Convention on Climate Change (UNFCCC). The duration of patents varies depending on the type of patent and the jurisdiction, but it is typically expressed in several years, either starting from the date of the patent application or the date of the patent grant. As most patents last for a maximum of 20 years if kept in force, we assume that a patent expires after reaching its maximum duration of 20 years.

[15] We do not find a significant change in the total number of patents firms acquire through mergers and acquisitions after they are required to disclose ESG practices (Table IA.3 in the Internet Appendix). The evidence suggests only green innovation becomes more valuable for firms facing mandatory ESG disclosure.

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[Insert Table 3 Here]

Column (2) presents results from the regression of the number of acquired targets that have recently experienced negative ESG incidents. The dependent variable is the logarithm of one plus the total number of acquired targets that have at least one identified negative ESG incident during the past three years (*Log(# Targets with ESG Incidents)*).[16] We find that the estimated coefficient on the mandatory disclosure indicator is significantly negative. This result suggests that when firms are required to disclose ESG performance, they acquire fewer targets with recent negative ESG events. Overall, the evidence in Table 3 is consistent with our first hypothesis.

4.1.3 Heterogeneity in Target Countries

We now investigate whether the effects of ESG disclosure mandates on M&As vary across countries. In general, firms located in countries that more successfully achieve Sustainable Development Goals (SDGs) and have higher levels of economic development perform better on ESG issues. Thus, we expect that following the introduction of ESG disclosure mandates, firms acquire more (less) target companies originating from countries with better (worse) SDG performance and from advanced (developing) countries. In our analysis, we focus on cross-border M&As and separate deals from different groups of countries. We then estimate the regression specified in Equation (1), with the logarithm of one plus the number of target firms from alternative groups of countries as the dependent variables. We measure a country's performance in achieving SDGs using the SDG index from the Sustainable Development Report provided by the United Nations' Sustainable Development Solutions Network. We use the International Monetary Fund's (IMF) economy groupings to classify countries into advanced and developing economies.

[Insert Table 4 Here]

The results are reported in Table 4. Column (1) estimates how mandatory ESG disclosure regulations in the countries of acquiring firms affect the acquisition of targets from countries with lower SDG scores than the acquirers' home countries. The negative and statistically significant

[16] Our results remain robust if we focus on a five-year horizon (Table IA.3 in the Internet Appendix).

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coefficient on the disclosure indicator suggests that fewer target firms from lower SDG-score countries are purchased by foreign acquirers following the implementation of mandatory ESG disclosure mandates in acquiring countries. This finding is consistent with our expectations. In addition, Column (2) replaces the dependent variable with the number of acquisitions in which the target firm is from a country that performs better than the acquirer's home country in achieving SDGs. The coefficient on the disclosure indicator is significantly positive. This result indicates that firms facing mandatory ESG disclosure regulations tend to acquire more assets from countries with better SDG performance than their home countries. The last two columns in Table 4 separate target firms in developing countries from those in advanced countries. The analysis of targets from developing (advanced) countries yields a negative (positive) and statistically significant coefficient on the disclosure indicator. To the extent that firms' ESG performance positively correlates with the economic development of their home country, the results are consistent with our view that firms facing ESG disclosure mandates are motivated to purchase more (fewer) assets with strong (weak) ESG performance. Taken together, our findings in Table 4 provide additional support for our first hypothesis. We obtain similar conclusions by examining the dollar volume of M&As (Table IA.4 in the Internet Appendix).

4.1.4 Heterogeneity in Acquiring Firms

In addition to heterogeneity in target firms' home countries, we exploit variations at the acquiring-firm level to test our hypothesis that mandatory ESG disclosure regulations increase firms' incentives to acquire well-performing ESG assets. To explore the effects of specific firm characteristics, we introduce an interaction term between one given characteristic and the indicator for mandatory ESG disclosure requirements into Equation (1). The regression model is specified as follows:

$$Acquisitions_{i,t} = \alpha + \beta_1 Mandatory\ Disclosure_{i,t} \times M_{i,t} + \beta_2 Mandatory\ Disclosure_{i,t}$$

$$+\beta_3 M_{i,t} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \quad (2)$$

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where $M_{i,t}$ represents the acquiring firms' characteristic of interest, and all other variables are the same as in Equation (1). Standard errors are clustered at the country level. The coefficient of interest is on the interaction term, β_1.

We first consider the level of law enforcement stringency. We expect that our baseline effects are more pronounced in countries that enforce regulations more effectively. As a measure of law enforcement stringency, we adopt the rule of law index (*Rule of Law*) constructed by the World Bank. This measure captures residents' perceptions of the extent to which they have confidence in and abide by the rules of society, in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Table 5 presents the results. In Column (1), which uses *Log(# of Acquired Green Patents) as the dependent variable*, the coefficient on the interaction term between *Mandatory Disclosure* and *Rule of Law* is positive and statistically significant. In Column (2), which uses *Log(# Targets with ESG Incidents)* as the dependent variable, the coefficient on the interaction term between *Mandatory Disclosure* and *Rule of Law* is negative and statistically significant. These results suggest that if a company's home country enforces regulations more strictly, the firm tends to acquire more (fewer) assets with strong (weak) ESG profiles following the adoption of mandatory ESG disclosure requirements. The evidence is consistent with our expectations and supports our first hypothesis.

[Insert Table 5 Here]

Next, we focus on heterogeneity in the acquiring firms' financial constraints. Although mandatory ESG disclosure regulations could incentivize firms to acquire targets with strong ESG performance, such adjustments may be limited if firms lack the funding to make these acquisitions. Consistent with this view, we find that the increased number of acquired green patents following the adoption of ESG disclosure mandates is smaller for more financially constrained firms, that is, for firms with a higher Kaplan and Zingales (1997) index (Column (3)). By contrast, firms' financial constraints do not affect the reduction in their acquisitions of targets with negative ESG incidents following ESG disclosure mandates (Column (4)).

Third, we examine the role of shareholder pressure by exploiting heterogeneity in institutional

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ownership. In general, greater institutional holdings are associated with higher ESG scores (e.g., Chen, Dong, and Lin, 2020), indicating that institutional owners tend to push firms toward better ESG performance. Mandatory ESG disclosure regulations enable institutional investors to acquire more information about firms' ESG practices and thereby better monitor firms' ESG performance. As a result, firms with higher institutional ownership may face higher pressure to improve their ESG profiles after disclosure mandates are enforced. As reported in Column (5), we find a significantly positive coefficient on the interaction term between institutional ownership and the indicator for mandatory ESG disclosure in the regression of the number of acquired green patents. We also find a negative interaction effect between ESG disclosure mandates and institutional ownership in the regression of the number of acquired targets with negative ESG incidents. Taken together, the evidence suggests that institutional investors may intensify the pro-ESG effect of mandatory ESG disclosure regulations on corporate acquisition decisions.

4.2 Mandatory ESG Disclosure and Divestitures

Divestitures refer to the sale of a target firm/asset to an acquiring firm where the parent company loses a majority stake in the target company or the target company disposes of a portion of its assets. To examine whether mandatory ESG disclosure requirements induce firms to divest environmentally or socially undesirable assets, we estimate a regression model specified as follows:

$$Divestitures_{i,t} = \alpha + \beta_1 Mandatory\ Disclosure_{i,t} + \beta_2 Mandatory\ Disclosure_{i,t} \times \# \ ESG\ Incidents_{i,t-3\rightarrow t} + \beta_3 \# \ ESG\ Incidents_{i,t-3\rightarrow t} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \quad (3)$$

where $Divestitures_{i,t}$ represents measures of the divestiture activity of firm i in year t; $\# \ ESG\ Incidents_{i,t-3\rightarrow t}$ is the number of negative ESG incidents experienced by firm i in the three years up to year t; and all other variables are the same as in Equation (1). Standard errors are clustered at the country level.

The results are presented in Table 6. In Column (1), corporate divestiture activity is measured by the logarithm of one plus the total number of divestitures conducted by a firm in a given year.

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The coefficient on mandatory ESG disclosure is positive and significant, suggesting that firms facing ESG disclosure mandates divest more assets or subsidiary firms. More importantly, Column (2) reports a positive and significant coefficient on the interaction term between the mandatory disclosure indicator and the number of target firms' negative ESG incidents over the past three years. These results indicate that target firms with more negative ESG events are more likely to sell assets after the implementation of mandatory ESG disclosure requirements. This finding supports our hypothesis that firms are more likely to divest assets with poor ESG performance in response to mandatory ESG disclosure regulations. As shown in Columns (3) and (4), we obtain similar results if we focus on the dollar value of divestitures instead of the number of divestitures. These results again support our second hypothesis.

[Insert Table 6 Here]

4.3 Mandatory ESG Disclosure and Deal Premiums

Our results so far have shown that mandatory ESG disclosure requirements lead firms to acquire more green technologies and dispose of more assets with adverse ESG incidents. In addition to volume effects, we also explore the pricing effects, specifically whether the premiums of the acquisition and divestiture deals change after mandatory ESG disclosure regulations are introduced. To answer this question, we estimate regressions of deal premiums, where the deal premium is calculated as the premium of the offer price relative to the closing price of the target's stock a few days before the announcement of the acquisition or divestiture. We first consider acquisition deal premiums and estimate the following deal-level regression model:

$$Premium_{k,t} = \alpha + \beta_1 Mandatory\ Disclosure_{i,t} + \beta_2 Mandatory\ Disclosure_{i,t} \times$$

$$\#\ Green\ Patents_{j,t} + \beta_3 \#\ Green\ Patents_{j,t} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \quad (4)$$

where $Premium_{k,t}$ represents the premium of deal k in year t in which firm i pursues an acquisition; $\#\ Green\ Patents_{i,t}$ is the number of green patents held by the target firm j in year t; and all other variables are defined as previously. Standard errors are clustered at the country level.

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Columns (1) and (2) in Table 7 report the results of regressions specified in Equation (4) with the one-day acquisition premium as the dependent variable. The one-day premium refers to the percentage difference between the offer price of an acquisition deal and the target firm's closing stock price one day prior to the deal announcement. Column (1) shows that the coefficient on the mandatory ESG disclosure indicator is statistically indistinguishable from zero, indicating that mandatory ESG disclosure by itself does not impact the premium of M&A transactions in general.

Column (2) incorporates the interaction term between the ESG disclosure indicator and the number of green patents obtained by the target firm. We find that the coefficient on the interaction is estimated to be positive and statistically significant at the 5% level. This result suggests that after mandatory ESG disclosure regulations are enacted in the acquirer's home country, the acquiring firm is willing to pay a higher deal premium if the target has more green technologies. For robustness tests, we replace the one-day premium with a one-week premium in which the offer price is compared to the target firm's closing price seven days before the deal announcement. As shown in Columns (3) and (4), the results remain similar. To the extent that a higher number of green patents corresponds to better ESG performance, the evidence implies that firms that face mandatory ESG disclosure requirements pay higher premiums to acquire targets that perform well on ESG issues. The evidence supports our hypothesis regarding the effects of mandatory ESG disclosure on acquisition premiums.

[Insert Table 7 Here]

We now turn to the effects of ESG disclosure mandates on the premium of divestiture deals. To this end, we estimate a regression with the following specification:

$$Premium_{k,t} = \alpha + \beta_1 Mandatory\ Disclosure_{i,t} + \beta_2 Mandatory\ Disclosure_{i,t} \times$$

$$\#\ ESG\ Incidents_{i,t-3\rightarrow t} + \beta_3 \#\ ESG\ Incidents_{i,t-3\rightarrow t} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \qquad (5)$$

where $Premium_{k,t}$ represents the premium of deal k in year t in which firm i divests an asset; $\#\ ESG\ Incidents_{i,t-3\rightarrow t}$ is the number of negative ESG incidents experienced by firm i in the

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three years up to year t; and all other variables are defined as previously. Standard errors are clustered at the country level.

Columns (1) and (2) in Table 8 present results from the regressions of the one-day premium. Column (1) shows that the coefficient on the disclosure indicator is negative and significant, indicating that firms facing mandatory ESG disclosure requirements tend to accept a lower deal premium when divesting assets. Additionally, Column (2) shows a significantly negative interaction effect between the disclosure indicator and the number of negative ESG incidents experienced by the target over the past three years. The evidence suggests that following the implementation of ESG disclosure mandates, firms are willing to sell assets at discounts if they have recently experienced more negative ESG incidents. This finding supports our third hypothesis and is consistent with the idea that mandatory ESG disclosure regulations push firms to divest assets with poor ESG performance. We also find that the results are robust to an alternative measure of deal premium that is calculated using a seven-day window after the announcement (Columns (3) and (4)).[17]

[Insert Table 8 Here]

4.4 ESG Performance and Firm Value

We have shown that firms make adjustments in real asset markets in response to mandatory ESG disclosure requirements. One question that follows is whether these adjustments impact firms' ESG performance and firm value. In this subsection, we address this question by estimating the following dynamic effect models:

$$Y_{i,t} = \alpha + \sum_{m=0}^{5} \beta_m Mandatory\ Disclosure_{i,t}^{m} + \gamma \boldsymbol{X_{i,t}} + \theta_i + \theta_t + \epsilon_{i,t} \qquad (6)$$

where $Y_{i,t}$ represents measures of corporate ESG performance and firm value; m denotes the year relative to the adoption year of mandatory ESG disclosure regulations; $Mandatory\ Disclosure_{i,t}^{m}$, with m from 0 to 4, are indicator variables that equal one in the m-th year after (for positive values)

[17] Our results for acquisition premium and divestiture premium are also robust to deal premiums calculated using a one-month window before the deal announcement (Table IA.5 in the Internet Appendix).

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the home country of firm i adopts mandatory ESG disclosure requirements and zero otherwise; $Mandatory\ Disclosure_{i,t}^{5}$ equals one for years starting from the fifth year after the adoption of ESG disclosure mandates in firm i's country and zero otherwise; and all other variables are defined as previously. This specification allows us to distinguish short-term effects from long-term effects. Standard errors are clustered at the country level.

Table 9 presents the results. The sample in Columns (1) and (2) include firms that make acquisitions within three years after their home country adopts mandatory ESG disclosure regulations. Column (1) uses a firm's ESG score as the outcome variable. The coefficient estimates indicate that there is a significant improvement in acquiring firms' ESG performance following the second year after the adoption of ESG disclosure mandates. The evidence suggests that the acquisitions following ESG disclosure mandates help firms improve their ESG profiles.

[Insert Table 9 Here]

In Column (2), we explore whether or not these acquisitions affect firm value. As a proxy for firm value, we consider Tobin's Q calculated as the sum of market capitalization and the book value of total liabilities divided by the sum of book value of equity and total liabilities. We find that the coefficients on post-event dummies are all positive and statistically significant after the adoption year. These results suggest that firms benefit from disclosure regulations in the long term.

Columns (3) and (4) show the results for the sample of firms that divest assets within three years after the enactment of mandatory ESG disclosure regulations. Column (3) shows that although there is an increase in firms' ESG scores several years after the adoption of these regulations, the improvement disappears after five years following the disclosure mandates. This result suggests that the divestment of weak ESG assets does not help improve firms' ESG performance in the long run. Consistent with the temporary improvement in ESG performance, we do not find a significant post-event increase in the value of divesting firms (Column (4)).

Taking the results together, our findings indicate that acquisitions made in response to ESG disclosure mandates have a positive impact on firms' ESG performance and can potentially create

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value for the firm in the long-term. However, when firms divest poor-ESG assets following the regulations, they experience only a temporary improvement in ESG scores, which does not lead to a higher valuation for the divesting firms. These results suggest that, after mandatory ESG disclosure requirements, firms benefit more from acquiring assets with strong ESG performance rather than divesting assets with weak ESG performance. Our findings shed light on firms' prescriptive actions towards ESG following ESG disclosure mandates.

5 Conclusion

This paper investigates corporations' real-asset responses to mandatory ESG disclosure regulations. Our analysis offers empirical evidence that sheds light on how ESG considerations, prompted by the introduction of mandatory ESG reporting, influence mergers and acquisitions. In line with a heightened focus on ESG factors within such transactions, we discover a notable increase in ESG-related discussions during conference calls involving corporate executives and analysts. This provides valuable insights into the evolving landscape of ESG considerations within the context of M&As.

We further demonstrate that the introduction of ESG disclosure mandates has a significant impact on firms' acquisition and divestment decisions. Specifically, these mandates stimulate a higher number of acquisitions involving firms with commendable ESG performances, such as those with a higher number of green patents, firms from developed countries, and firms residing in countries that excel in achieving SDGs. By contrast, firms become more reluctant to acquire entities with a history of negative ESG incidents. These effects are particularly pronounced for acquiring firms based in countries with higher levels of legal enforcement and acquirers with greater institutional ownership. However, the ability of acquirers to purchase assets with superior ESG performance is limited by severe financial constraints. Alongside changes in M&As, ESG mandates also drive a more active divestment of assets with inadequate ESG profiles. This indicates that firms are taking proactive steps to align their portfolios with improved ESG standards and divest from assets deemed as having performed poorly in ESG areas.

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Consistent with the goal of enhancing ESG performance, firms are willing to pay higher premiums when acquiring assets with favorable ESG attributes and to accept discounts when divesting assets with poor ESG performance following the implementation of mandatory ESG disclosure regulations. Moreover, these strategic responses in the real asset market are associated with notable improvements in firms' sustainable ESG performance. Although the effects of divestitures tend to be temporary, M&As induced by ESG disclosure mandates could enhance firm value over the long term. Overall, firms that demonstrate a keen ability to identify, address, and monitor opportunities tend to successfully execute transactions that bolster their long-term value.

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Table 1 Descriptive Statistics

This table presents the descriptive statistics of the main variables in this paper. Mandatory Disclosure is an indicator variable that takes one if the home country of a firm has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. Other variables are defined in Table A.1 in the Appendix.

	Obs	Mean	Std Dev	5%	Median	95%
Dependent Variables						
# of ESG Incidents	68,817	5.06	16.6	0	0	26
1-Day Acquisition Premium	12,131	23.3	43.8	-26.4	15.1	98.0
1-Day Divestiture Premium	3,917	16.2	38.6	-28.6	8.9	78.9
1-Week Acquisition Premium	12,123	29.6	49.5	-27.4	21.2	115.0
1-Week Divestiture Premium	3,919	18.3	40.1	-27.9	11.1	81.1
ESG Score	5,172	0.71	0.27	0.13	0.83	0.96
Log(# Acquired Green Patents)	13,695	0.35	1.02	0	0	2.71
Log(# Divestures)	142,716	0.10	0.29	0	0	0.69
Log(# M&A Conference Calls)	13,707	0.14	0.31	0	0	0.69
Log(# M&A Conference Calls Mentioning ESG by Analysts)	13,707	0.01	0.07	0	0	0
Log(# M&A Conference Calls Mentioning ESG by Executives)	13,707	0.01	0.07	0	0	0
Log(# Targets from Advanced Countries)	51,540	0.05	0.19	0	0	0.69
Log(# Targets from Developing Countries)	51,540	0.02	0.12	0	0	0
Log(# Targets from High-SDG-Score Countries)	51,540	0.02	0.13	0	0	0
Log(# Targets from Low-SDG-Score Countries)	51,540	0.04	0.17	0	0	0
Log(# Targets with ESG Incidents)	14,882	0.06	0.20	0	0	0.69
Log($ Divestures)	142,716	0.33	1.23	0	0	3.26
Tobin's Q	14,952	1.71	1.58	0.70	1.29	4.01
Independent Variables						
Institutional Ownership	10,083	21.6	26.6	0.21	10.3	84.6
KZ Index	12,317	-2.56	6.04	-21.6	-0.26	2.32
Mandatory Disclosure	142,716	0.27	0.44	0	0	1
Rule of Law Index	14,009	1.23	0.69	-0.41	1.52	1.85
Control Variables						
Leverage	142,716	25.3	22.9	0	22.6	62.9
Liquidity	142,716	2.46	3.68	0.48	1.49	7.21
Market Share	142,716	9.01	20.3	0.00	0.79	58.5
Market-to-Book	142,716	1.22	1.67	0.12	0.71	3.92
ROA	142,716	-5.84	38.2	-49.6	2.50	14.7
Sales Growth	142,716	19.0	81.0	-36.4	5.22	89.5
Tangibility	142,716	30.7	24.6	1.47	25.2	80.1
Total Assets	142,716	20.0	2.48	15.7	20.1	23.8

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Table 2 Mandatory ESG Disclosure and ESG-Related Discussions in Conference Calls

This table reports the relation between ESG disclosure mandates and ESG-related discussions in merger and acquisition (M&A) conference calls. Panel A presents the percentage of M&A conference calls that mention ESG-related topics before and after the implementation of ESG disclosure mandates. Conference calls mentioning ESG-related topics are identified by ChatGPT. Panel B reports the regression results of the effects of mandatory ESG disclosure requirements on the number of M&A conference calls, M&A conference calls mentioning ESG by executives, and M&A conference calls mentioning ESG by analysts. *Mandatory Disclosure* is an indicator variable that takes one if a firm's home country has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (Market-to-Book), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: M&A Conference Calls Mentioning ESG Topics

	Obs	Mean	Std. err.	Std. dev.	[95% conf. interval]	
% M&A conference calls mentioning ESG topics in the presentation session						
Before Mandatory ESG Disclosure	2,010	4.37	0.45	19.99	3.50	5.24
After Mandatory ESG Disclosure	824	6.19	0.82	23.63	4.57	7.81
Diff		1.82**	0.87			
% M&A conference calls mentioning ESG topics in the Q&A session						
Before Mandatory ESG Disclosure	2,010	3.70	0.41	18.23	2.90	4.50
After Mandatory ESG Disclosure	824	5.03	0.74	21.14	3.58	6.47
Diff		1.33*	0.79			

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Panel B: Regression Results

	(1) Log(# M&A Conference Calls)	(2) Log(# M&A Conference Calls Mentioning ESG by Executives)	(3) Log(# M&A Conference Calls Mentioning ESG by Analysts)
Mandatory Disclosure	2.008	0.495*	0.526**
	(0.42)	(0.10)	(0.05)
Total Assets	4.480***	0.130	0.202
	(0.00)	(0.35)	(0.32)
Leverage	0.0671**	-0.00477	0.00780
	(0.04)	(0.15)	(0.13)
ROA	0.0507***	0.00365	0.0104**
	(0.00)	(0.12)	(0.05)
Market-to-Book Ratio	0.646	-0.102**	-0.0642
	(0.15)	(0.02)	(0.43)
Tangibility	-0.205***	-0.0111	-0.0169***
	(0.00)	(0.30)	(0.00)
Liquidity	-0.348***	-0.00449	-0.0172
	(0.00)	(0.81)	(0.72)
Sales Growth	0.0111	-4.38e-05	0.00212
	(0.15)	(0.97)	(0.13)
Market Share	-0.156	-0.0291	-0.0163
	(0.11)	(0.17)	(0.33)
Constant	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
Cluster at Economy Level	Yes	Yes	Yes
Observations	13,707	13,707	13,707
R-squared	0.135	0.122	0.136

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Table 3 Mandatory ESG Disclosure and Mergers and Acquisitions

This table reports the effects of mandatory ESG disclosure requirements on corporate acquisitions of assets with good ESG performance. Column (1) presents the regression of the logarithm of one plus the number of green patents acquired by a firm in a given year through mergers and acquisitions. Column (2) shows the regression of the logarithm of one plus the number of acquired target firms that have experienced negative ESG incidents in the past three years. *Mandatory Disclosure* is an indicator variable that takes one if the home country of a firm has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (Market-to-Book), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	Log(# Acquired Green Patents)	Log(# Targets with ESG Incidents)
Mandatory Disclosure	17.64**	-5.340**
	(0.04)	(0.02)
Total Assets	2.904*	1.217**
	(0.08)	(0.02)
Leverage	-0.120	0.0456**
	(0.33)	(0.03)
ROA	-0.0216	-0.0302**
	(0.69)	(0.03)
Market-to-Book Ratio	-1.587	0.729***
	(0.10)	(0.00)
Tangibility	-0.233**	-0.0413*
	(0.02)	(0.10)
Liquidity	-0.426	-0.0459
	(0.17)	(0.66)
Sales Growth	0.0122	0.00357
	(0.46)	(0.19)
Market Share	0.0171	-0.00281
	(0.89)	(0.95)
Constant	Yes	Yes
Firm Dummy	Yes	Yes
Year Dummy	Yes	Yes
Cluster at Country Level	Yes	Yes
Observations	13,695	14,882
R-squared	0.586	0.551

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Table 4 Mandatory ESG Disclosure and Mergers and Acquisitions: Cross-country Variations

This table reports how mandatory ESG disclosure requirements affect mergers and acquisitions by exploiting variations in ESG profiles across countries. Columns (1) and (2) present regressions of the logarithm of one plus the number of acquired target firms from countries with lower and higher sustainable development goal (SDG) scores than the acquirer's home country, respectively. Columns (3) and (4) show regressions of the logarithm of one plus the number of acquired target firms from developing and developed countries, respectively. Only cross-border mergers and acquisitions are included in the analysis. Other variables are defined as previously; detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Log(# Targets from Low-SDG-Score Countries)	Log(# Targets from High-SDG-Score Countries)	Log(# Targets from Developing Countries)	Log(# Targets from Advanced Countries)
Mandatory Disclosure	-1.326**	1.198*	-0.629*	2.136**
	(0.04)	(0.08)	(0.09)	(0.04)
Total Assets	1.801***	1.536***	0.687***	3.148***
	(0.00)	(0.00)	(0.00)	(0.00)
Leverage	-0.0114	-0.0106*	-0.00890	-0.0168*
	(0.23)	(0.07)	(0.19)	(0.06)
ROA	-0.000465	-0.000989	0.000720	-0.00127
	(0.85)	(0.78)	(0.68)	(0.70)
Market-to-Book Ratio	0.218**	0.164	0.0395	0.384***
	(0.01)	(0.11)	(0.44)	(0.00)
Tangibility	-0.0349***	-0.0184**	-0.0139**	-0.0486***
	(0.00)	(0.03)	(0.04)	(0.00)
Liquidity	-0.0477	-0.0482*	-0.0327	-0.0969**
	(0.18)	(0.09)	(0.11)	(0.02)
Sales Growth	0.00306**	0.00173*	0.000180	0.00522***
	(0.03)	(0.06)	(0.79)	(0.00)
Market Share	0.00806	-0.00806	0.00831	-0.00612
	(0.65)	(0.52)	(0.47)	(0.80)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes
Observations	51,540	51,540	51,540	51,540
R-squared	0.170	0.123	0.132	0.133

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Table 5 Mandatory ESG Disclosure and Mergers and Acquisitions: Heterogeneity in Acquirers

This table reports the heterogeneous effects of mandatory ESG disclosure requirements on mergers and acquisitions in different groups of firms. *Rule of Law Index* captures perceptions of the extent to which agents have confidence in and abide by the rules of society. A higher value of the index indicates stricter law enforcement. *KZ Index* is the Kaplan-Zingales financial constraint index, with a higher value indicating a higher level of financial constraint. *Institutional Ownership* refers to the percentage of shares held by institutional owners. Other variables are defined as previously; detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Law Enforcement		Financial Constraints		Shareholder Pressure	
	Log(# Acquired Green Patents)	Log(# Targets with ESG Incidents)	Log(# Acquired Green Patents)	Log(# Targets with ESG Incidents)	Log(# Acquired Green Patents)	Log(# Targets with ESG Incidents)
Mandatory Disclosure	9.457*	-4.138**				
* Rule of Law Index	(0.09)	(0.05)				
Mandatory Disclosure			-1.683**	-0.0267		
* KZ Index			(0.04)	(0.89)		
Mandatory Disclosure					1.006*	-0.122***
* Institutional Ownership					(0.08)	(0.01)
Mandatory Disclosure	4.667	-3.364	10.31	-5.602**	-1.929	-4.220
	(0.40)	(0.28)	(0.16)	(0.04)	(0.86)	(0.13)
Rule of Law Index/KZ Index/	-7.326	-5.886	0.570	-0.235*	-0.435**	-0.0506
Institutional Ownership	(0.60)	(0.18)	(0.11)	(0.06)	(0.03)	(0.32)
Total Assets	4.040**	0.947*	4.647***	1.294*	3.718	1.780***
	(0.04)	(0.07)	(0.01)	(0.06)	(0.19)	(0.01)
Leverage	-0.0697	0.0463**	-0.127	0.0816**	-0.0701	0.0607
	(0.66)	(0.05)	(0.35)	(0.02)	(0.71)	(0.15)
ROA	-0.0375	-0.0314*	0.131	-0.0712***	0.0961	-0.0403
	(0.57)	(0.05)	(0.25)	(0.00)	(0.61)	(0.16)
Market-to-Book Ratio	-1.805	0.591**	-2.274	1.057***	-1.358	1.118***
	(0.12)	(0.02)	(0.19)	(0.00)	(0.40)	(0.00)
Tangibility	-0.296***	-0.0399	-0.119	-0.0131	-0.255**	-0.0623*
	(0.01)	(0.13)	(0.21)	(0.71)	(0.01)	(0.07)
Liquidity	-0.411	-0.0462	-0.854**	-0.234	-0.422	0.0632
	(0.20)	(0.68)	(0.03)	(0.19)	(0.61)	(0.71)
Sales Growth	0.0112	0.00319	-0.0195	0.00179	0.0346	0.00758
	(0.53)	(0.22)	(0.15)	(0.52)	(0.22)	(0.12)
Market Share	-0.0463	-0.0167	-0.217	0.0364	0.164	0.000801
	(0.74)	(0.65)	(0.25)	(0.48)	(0.35)	(0.99)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes	Yes	Yes
Observations	12,863	14,009	11,360	12,317	9,067	10,083
R-squared	0.595	0.573	0.601	0.564	0.572	0.535

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Table 6 Mandatory ESG Disclosure and Divestitures

This table reports the effects of mandatory ESG disclosure requirements on the divestiture of assets with good ESG performance. Columns (1) and (2) present the regression of the logarithm of one plus the number of divestitures executed by a firm in a given year. Columns (3) and (4) show the regression of the logarithm of one plus the total dollar value of divestitures executed by a firm in a given year. *Mandatory Disclosure* is an indicator variable that takes one if a firm's home country has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. *# ESG Incidents* is the number of negative ESG events experienced by the target firm over the three years before the divestiture. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (M/B), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Log(# Divestitures)		Log($ Divestitures)	
Mandatory Disclosure	1.357**	0.732	4.458*	2.597
	(0.05)	(0.35)	(0.08)	(0.46)
Mandatory Disclosure * # ESG Incidents		0.124***		0.486***
		(0.01)		(0.00)
# ESG Incidents		-0.0837*		-0.0398
		(0.06)		(0.75)
Total Assets	2.703***	4.003***	10.67***	16.49***
	(0.00)	(0.00)	(0.00)	(0.00)
Leverage	0.0285**	0.0408***	0.0909***	0.0974
	(0.01)	(0.00)	(0.01)	(0.11)
ROA	-0.0289***	-0.0376***	-0.0783***	-0.130***
	(0.00)	(0.00)	(0.00)	(0.00)
Market-to-Book Ratio	-0.401***	-0.434**	-1.216***	-2.073***
	(0.00)	(0.02)	(0.00)	(0.01)
Tangibility	-0.0902***	-0.125***	-0.395***	-0.608***
	(0.00)	(0.00)	(0.00)	(0.00)
Liquidity	-0.0694	-0.117***	-0.236	-0.512*
	(0.13)	(0.00)	(0.15)	(0.06)
Sales Growth	-0.00586***	-0.00547**	-0.0231***	-0.0244***
	(0.00)	(0.02)	(0.00)	(0.00)
Market Share	0.0524**	0.0572*	0.126	0.0884
	(0.03)	(0.10)	(0.20)	(0.50)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes
Observations	142,716	68,817	142,716	68,817
R-squared	0.267	0.311	0.226	0.229

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Table 7 Mandatory ESG Disclosure and Premium of Mergers and Acquisitions

This table reports the effects of mandatory ESG disclosure requirements on acquisition deal premiums. Columns (1) and (2) use the one-day and one-week premium as the dependent variable, respectively. The one-day (one-week) acquisition premium is the percentage difference between the offer price of an acquisition deal and the target firm's closing stock price one day (seven days) prior to the deal announcement. *Mandatory Disclosure* is an indicator variable that takes one if a firm's home country has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. # *Target Green Patents* is the number of green patents granted to the target firm in the year before the acquisition. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (Market-to-Book), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	1-Day Acquisition Premium		1-Week Acquisition Premium	
Mandatory Disclosure	-1.145	-1.994	-1.536	-2.703
	(0.73)	(0.59)	(0.59)	(0.40)
Mandatory Disclosure		0.0429**		0.0522**
* # Target Green Patents		(0.04)		(0.03)
# Target Green Patents		-0.0307**		-0.0345**
		(0.03)		(0.03)
Total Assets	-3.167	-3.149	-2.838	-3.061
	(0.12)	(0.17)	(0.22)	(0.20)
Leverage	-0.0339	-0.0273	-0.0285	-0.0185
	(0.66)	(0.75)	(0.67)	(0.79)
ROA	0.00273	0.00256	0.0167	-0.00634
	(0.98)	(0.98)	(0.88)	(0.95)
Market-to-Book Ratio	-1.347	-1.603	-1.279	-1.415
	(0.20)	(0.16)	(0.23)	(0.23)
Tangibility	0.0607	0.0807	0.0725	0.0928
	(0.66)	(0.62)	(0.63)	(0.56)
Liquidity	-0.539	-0.562	-0.436	-0.468
	(0.23)	(0.28)	(0.41)	(0.44)
Sales Growth	-0.0102	-0.0182***	-0.00604	-0.00952
	(0.20)	(0.00)	(0.48)	(0.17)
Market Share	0.144	0.169	0.140	0.178
	(0.15)	(0.12)	(0.18)	(0.11)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Economy Level	Yes	Yes	Yes	Yes
Observations	12,131	11,239	12,135	11,243
R-squared	0.589	0.596	0.598	0.603

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Table 8 Mandatory ESG Disclosure and Premium of Divestitures

This table reports the effects of mandatory ESG disclosure requirements on the divestiture deal premiums. Columns (1) and (2) use the one-day and one-week premium as the dependent variable, respectively. The one-day (one-week) divestiture premium is the percentage difference between the offer price of a divestiture deal and the target firm's closing stock price one day (seven days) prior to the deal announcement. *Mandatory Disclosure* is an indicator variable that takes one if a firm's home country has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. # *ESG Incidents* is the number of negative ESG events experienced by the target firm over three years before the divestiture. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (Market-to-Book), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	1-Day Divestiture Premium		1-Week Divestiture Premium	
Mandatory Disclosure	-9.419**	-5.715	-10.63***	-6.944
	(0.03)	(0.20)	(0.01)	(0.10)
Mandatory Disclosure * # ESG Incidents		-0.120**		-0.119**
		(0.05)		(0.03)
# ESG Incidents		0.0206		0.0279
		(0.54)		(0.40)
Total Assets	4.146*	3.997*	3.017	2.893
	(0.05)	(0.06)	(0.17)	(0.19)
Leverage	-0.217*	-0.227**	-0.309**	-0.317**
	(0.06)	(0.04)	(0.01)	(0.01)
ROA	-0.0561	-0.0516	-0.109	-0.105
	(0.68)	(0.71)	(0.57)	(0.59)
Market-to-Book Ratio	-1.321	-1.428	-1.162	-1.253
	(0.46)	(0.44)	(0.54)	(0.52)
Tangibility	0.0103	0.00771	0.000398	-0.00226
	(0.94)	(0.96)	(1.00)	(0.99)
Liquidity	0.0376	0.0195	-0.325	-0.347
	(0.98)	(0.99)	(0.87)	(0.86)
Sales Growth	-0.0153	-0.0149	-0.0339	-0.0336
	(0.46)	(0.47)	(0.27)	(0.27)
Market Share	0.138	0.139	0.0826	0.0847
	(0.43)	(0.43)	(0.66)	(0.65)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Economy Level	Yes	Yes	Yes	Yes
Observations	3,917	3,917	3,919	3,919
R-squared	0.747	0.748	0.757	0.758

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Table 9 Effects on ESG Performance and Firm Value

This table reports how firms' ESG performance and valuation change after acquisitions or divestitures following ESG disclosure mandates. Columns (1) and (2) include the sample of firms that make acquisitions within three years after the adoption of mandatory ESG disclosure regulations; Columns (3) and (4) include firms that make divestitures within the same timeframe and regulatory landscape. The dependent variable in Columns (1) and (3) is a firm's *ESG Score*. The dependent variable in Columns (2) and (4) is a firm's *Tobin's Q*. The year dummies are indicators for years relative to the adoption year of ESG disclosure mandates in a firm's home country. Control variables are defined as previously; detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Post-Mandates M&A Sample		Post-Mandates Divestiture Sample	
	ESG Score	Tobin's Q	ESG Score	Tobin's Q
Year 0	1.112	8.485	0.923	1.900
	(0.60)	(0.18)	(0.61)	(0.80)
Year 1	0.125	28.51**	1.121	17.61
	(0.96)	(0.02)	(0.60)	(0.10)
Year 2	6.201*	18.36**	7.087*	13.70
	(0.09)	(0.04)	(0.08)	(0.14)
Year 3	6.662*	13.66**	8.294**	6.876
	(0.10)	(0.05)	(0.05)	(0.42)
Year 4	8.360**	18.70**	7.929*	17.41
	(0.04)	(0.05)	(0.08)	(0.22)
Year 5 and After	9.693**	21.23**	1.126	14.83
	(0.03)	(0.05)	(0.83)	(0.37)
Total Assets	7.561***	-34.35***	5.069***	-57.60***
	(0.00)	(0.00)	(0.00)	(0.00)
Leverage	-0.0373	-0.0665	-0.0307	0.227
	(0.51)	(0.62)	(0.47)	(0.32)
ROA	0.0247	-0.172	0.0338	-0.789***
	(0.29)	(0.28)	(0.11)	(0.00)
Market-to-Book Ratio	1.674**		0.713	
	(0.01)		(0.29)	
Tangibility	-4.93e-05	-0.641*	-0.0134	-0.733***
	(1.00)	(0.06)	(0.71)	(0.00)
Liquidity	-0.203**	0.154	-0.256	0.809
	(0.04)	(0.86)	(0.27)	(0.47)
Sales Growth	-0.0236***	0.0867***	-0.0209***	0.122***
	(0.00)	(0.00)	(0.00)	(0.00)
Market Share	-0.112*	0.443	-0.0615	0.934***
	(0.05)	(0.14)	(0.11)	(0.00)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes
Observations	3,957	10,851	5,172	14,952
R-squared	0.838	0.548	0.804	0.503

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Appendix

Table A.1 Variable Definition

	Dependent Variables	Source
# of ESG Incidents	The total number of negative ESG incidents in the last 3 years. We measure negative ESG events using data on ESG incidents compiled by RepRisk, a company that collects firm-specific ESG news in multiple languages from public media sources. RepRisk evaluates the potential impact of an ESG event based on the novelty and severity of the incident.	RepRisk
ESG Score	A company's ESG performance based on verifiable reported data in the public domain. Refinitiv captures and calculates over 450 company-level ESG measures, including a subset of 186 (detailed in the ESG glossary, available on request) of the most comparable and material per industry that power the overall company assessment and scoring process. These are grouped into 10 categories that reformulate the three pillar scores and the final ESG score, which reflects the company's ESG performance, commitment, and effectiveness based on publicly reported information.	Refinitiv ASSET4
1-Day Acquisition Premium	The percentage difference between the offer price of an acquisition deal and the target firm's closing stock price 1 day prior to the deal announcement	SDC
1-Day Divestiture Premium	The percentage difference between the offer price of a divestiture deal and the target firm's closing stock price 1 day prior to the deal announcement	SDC
1-Week Acquisition Premium	The percentage difference between the offer price of an acquisition deal and the target firm's closing stock price 1 week prior to the deal announcement	SDC
1-Week Divestiture Premium	The percentage difference between the offer price of a divestiture deal and the target firm's closing stock price 1 week prior to the deal announcement	SDC
Log(# Acquired Green Patents)	The logarithm of one plus the number of green patents obtained by a firm in a given year through M&As. Green patents are identified based on IPC Green Inventory class symbol.	SDC, PATSTAT
Log(# Divestures)	The logarithm of one plus the number of divestitures executed by a firm in a given year. The deal is a divestiture if there is a loss of majority control: the parent company loses a majority interest in the target or the target company disposes of assets.	SDC, IMF
Log(# M&A Conference Calls)	The logarithm of one plus the number of M&A conference calls by a firm in a given year. S&P Global Market Intelligence Transcripts data offers current and historical transcripts covering approximately 8,000 public companies.	S&P Global
Log(# M&A Conference Calls Mentioning ESG by Analysts)	The logarithm of one plus the number of M&A conference calls in which analysts mention ESG in Q&A sessions. ESG topics are identified by ChatGPT.	S&P Global, ChatGPT

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Log(# M&A Conference Calls Mentioning ESG by Executives)	The logarithm of one plus the number of M&A conference calls in which executives mention ESG in presenter speech sessions. ESG topics are identified by ChatGPT.	S&P Global, ChatGPT
Log(# Targets from Advanced Countries)	The logarithm of one plus the number of acquired target firms that are located in developed countries based on the classification of economies provided by the International Monetary Fund (IMF).	SDC, IMF
Log(# Targets from Developing Countries)	The logarithm of one plus the number of acquired target firms that are located in developing countries based on the classification of economies provided by the International Monetary Fund (IMF).	SDC, IMF
Log(# Targets from High-SDG-Score Countries)	The logarithm of one plus the number of acquired target firms that are located in countries whose Sustainable Development Goals (SDG) index is higher than that in the acquirer's home country. The SDG index measures the total progress towards achieving all 17 UN-proposed SDGs.	SDC, SDR
Log(# Targets from Low-SDG-Score Countries)	The logarithm of one plus the number of acquired target firms that are located in countries whose Sustainable Development Goals (SDG) index is lower than that in the acquirer's home country. The SDG index measures the total progress towards achieving all 17 UN-proposed SDGs.	SDC, SDR
Log(# Targets with ESG Incidents)	The logarithm of one plus the number of acquired target firms that have experienced negative ESG incidents in the past three years.	SDC, RepRisk
Log($ Divestures)	The logarithm of one plus the total dollar volume of divestitures executed by a firm in a given year. The deal is a divestiture if there is a loss of majority control: the parent company loses a majority interest in the target or the target company disposes of assets.	SDC
Tobin's Q	Tobin's Q. Calculated as [Market Capitalization (Worldscope item 08001) + Total Liabilities (Worldscope item 03351)] / [Common Equity (Worldscope item 03501) + Total Liabilities (Worldscope item 03351)]. Firm-year level Tobin's Q is winsorized at level 1% and 99% levels.	Worldscope
	Independent Variables	**Source**
Institutional Ownership	The percentage of shares held by institutional investors. Calculated as [SharesHeld / Common Shares Outstanding (Worldscope item 05301)] * 100. SharesHeld represents the number of shares held by institutional investors. Winsorized at the 1% and 99% levels.	Thomson Reuters Ownership
KZ Index	Kaplan-Zingales (1997) index. It measures corporate relative reliance on external financing, with a higher value indicating a higher likelihood of experiencing difficulties financing ongoing operations when financial conditions tighten.	Worldscope
Mandatory Disclosure	Dummy variable that equals one for all years starting with the first year after the implementation of mandatory ESG disclosure in a country and zero otherwise.	Manually Collected

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Rule of Law Index	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator in units of a standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	WorldBank
	Control Variables	**Source**
Leverage	Financial leverage. Worldscope item 08236. Calculated as the ratio of total debt to total assets. Winsorized at the 1% and 99% levels.	Worldscope
Liquidity	Liquidity. Firms with more liquid assets use these assets as another internal source of funds instead of debt, leading to a lower optimal debt equity ratio. Calculated as Total Current Assets (Worldscope item 02201) / Total Current Liabilities (Worldscope item 03101). Total Current Assets represents cash and other assets that are reasonably expected to be realized in cash, sold, or consumed within one year or one operating cycle. Total Current Liabilities represents debt or other obligations that the company expects to satisfy within one year. Winsorized at the 1% and 99% levels.	Worldscope
Market Share	Firm's percentage share of sales by all public firms in the same Fama & French 12 industry in the same country. Winsorized at the 1% and 99% levels.	Worldscope
Market-to-Book	Market-to-book ratio. A higher market-to-book tends to be a sign of more attractive future growth options, which a firm tends to protect by limiting its leverage. Calculated as Market Capitalization / (Total Assets - Total Liabilities), where Total Liabilities (Worldscope item 03351) represent all short- and long-term obligations expected to be satisfied by the company. Winsorized at the 1% and 99% levels.	Worldscope
ROA	Return on assets. Calculated as [Net Income (Worldscope item 01651) / Total Assets (Worldscope item 02999)] * 100. Winsorized at the 1% and 99% levels.	Worldscope
Sales Growth	Growth rate of sales. Worldscope item 08631. The growth rate of firm's net sales (in percentage). Calculated as (Current Year's Net Sales or Revenues / Last Year's Total Net Sales or Revenues - 1) * 100. Winsorized at the 1% and 99% levels.	Worldscope
Tangibility	Asset tangibility. Firms operating with greater tangible assets have a higher debt capacity. Calculated as Property, Plant, and Equipment (Worldscope item 02501) / Total Assets (Worldscope item 02999). Property, Plant, and Equipment represents Gross Property, Plant, and Equipment less accumulated reserves for depreciation, depletion, and amortization. Winsorized at the 1% and 99% levels.	Worldscope
Total Assets	Natural logarithm of [1 + Raw Total Assets (Worldscope item 07230)]. Raw Total Assets represents the total assets of the company converted to U.S. dollars using the fiscal year-end exchange rate.	Worldscope

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Internet Appendix

ESG Considerations in Acquisitions and Divestitures: Corporate Responses to Mandatory ESG Disclosure

Not for Publication

Table IA.1 List of Mandatory ESG Disclosure Regulations Around the World

Country	Year	Disclosure Venue	Regulation	Authority
Argentina	2008	Sustainability Reports	Ley N 2594 de balance de responsabilidad social y ambiental	Buenos Aires City Council
Australia	2003	Annual Report	Listing Rule 4.10.3, Australian Stock Exchange	Australian Stock Exchange
Austria	2016	Management Report; Non-financial Report	Transposition of EU NFR Directive: Sustainability and Diversity Improvement Act 257/ME	Ministry of Justice
Canada	2004	Data Disclosure	The TSX Timely Disclosure Policy	Stock Exchange
Chile	2015	Annual Report	Norma de Caracter General N 385/386	Superintendencia de valores y seguros
China	2008	Annual Social Responsibility Report	Guidelines on Listed Companies' Environmental Information Disclosure	Shanghai Stock Exchange (SSE)
France	2001	Annual Report	New Economic Regulations Act (NRE)	Parliament
Germany	2016	Annual Report	Transposition of EU NFR Directive: CSR Directive Implementation Act	Governments
Greece	2006	Annual Report	Law 3487, 2006	Governments
Hong Kong	2015	Directors’ Report, ESG Report	HKEX Listing Rules Disclosure of Financial Information	Hong Kong Stock Exchange
Hungary	2016	Annual Report	Transposition of EU NFR Directive: Amendments to Accounting Act C of 2000	Governments
India	2015	Sustainability Reports	Circular No. CIR/CFD/CMD/10/2015 Format for Business Responsibility Report	Securities and Exchange Board of India (SEBI)
Indonesia	2012	Annual Report	Rule No.KEP-431/BL/2012 concerning the obligation to submit annual reports for issuers of public companies	Capital Market and Financial Institutions Supervisory Agency (Bapepam-LK)
Ireland	2016	Non-financial Statement, Director Report	Transposition of EU NFR Directive (1)	Governments
Italy	2016	Management Report	Transposition of EU NFR Directive: legislative Decree 30 December 2016, n.254	Ministry of Economic Affairs
Malaysia	2007	Annual Report	Main Markets Listing Requirements CSR Description	Bursa Malaysia Securities Berhad
Netherlands	2016	Annual Management Report	Transposition of EU NFR Directive	Ministry of Security and Justice

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Norway	2013	Annual and Sustainability Reports	Act Amending the Norwegian Accounting Act	Norwegian Parliament
Pakistan	2009	Directors' Report	Companies (Corporate Social Responsibility) General Order	Securities and Exchange Commission of Pakistan
Peru	2016	Sustainability Reports	Resolucion SMV No 033-2015-SMV/01	Peruvian Capital Markets Superintendency
Philippines	2011	Annual Report	Corporate Social Responsibility Act, 2011	Committee on Trade and Commerce
Poland	2016	Annual Report	Transposition of EU NFR Directive: Amendments to the Accounting Act	Governments
Portugal	2010	Annual Report	The Financial Reporting Accounting Standard n 26	Commission for Accounting Normalization
Singapore	2016	Sustainability Reports	SGX0ST Listing Rules Practice Note 7.6 Amendments to Sustainability Reporting Guide	Singapore Stock Exchange (SGX)
Slovenia	2017	Annual Reports	Act Amending the Companies Act ZGD-1J	Governments
South Africa	2010	Integrated/Sustainability Report	Johannesburg Stock Exchange Listing Requirement 2010	Johannesburg Stock Exchange (JSE)
Spain	2012	Annual Report/Sustainability Report	Spanish Sustainable Economy Law (revision of 2011)	The National Securities Market (CNVM)
Turkey	2014	GHG Report/Annual Report	GHG Monitoring Regulation/Communique on Corporate Governance Principles	Capital Markets Board of Turkey
United Kingdom	2013	Strategic Report; Director's Report	The Companies Act 2006 Regulations 2013	Secretary of State

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Table IA.2 Examples of M&A Conference Call Transcripts Mentioning ESG

The following are two examples of M&A conference calls that mentioned ESG issues (highlighted in bold).

EXAMPLE 1:
Carlos Tavares (Chairman of the Managing Board): If we look at those challenges, on the next slide, we can see that not only **we have the traditional CO2 challenge, which may be even more stringent in the near future**, looking at what the authorities are now discussing in terms of green deals all over the world, and specifically in Europe. But beyond the CO2 challenge, which is going to be one of the challenges we'll have to face, we also have the cost of mobility. **Clean mobility is, of course, a must**, but affordable mobility is what our customers will be expecting from us. They will be expecting from us safe, **clean,** and affordable mobility. And this is the dimension in which this new company will have a lot more competitiveness than the 2 companies standing alone.

Source: Conference Call for the Acquisition of Peugeot S.A. by Fiat Chrysler Automobiles N.V., Dec 18, 2019

EXAMPLE 2:
James Sparrow (BNP Paribas Markets 360): … You obviously will **increase your sort of consolidated carbon footprint** at a time when you're trying to transition to cleaner energy. So just curious to think how you view that and also how your majority shareholder views the fact that, effectively, you're becoming - **you're increasing your carbon footprint**.

Pekka Ilmari Lundmark (President, CEO & MD): Okay. Yes, if I take the second part of the question, and then Markus will continue on the credit rating and its implications. **Obviously, the carbon footprint is an important consideration**. We continue to be of the opinion that Europe and the world needs to reduce emissions fast. When you just technically calculate that -- what the combined Fortum's and Uniper's generation -- of the generation volume, what the share of coal and lignite would be of the total output in 2018, coal and lignite of the total generation output of the combined portfolio would have been 18%, 1-8. And then obviously, subject to then the plans that will be confirmed regarding coal phaseout with the national authorities, we will then **expect that share to shrink over time**.

Source: Conference Call for the Acquisition of Uniper by Fortum Corporation, Oct 8, 2019

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Table IA.3 Mandatory ESG Disclosure and Mergers and Acquisitions: Alternative Measures

This table reports the effects of mandatory ESG disclosure requirements on corporate acquisitions of patents and assets with poor ESG performance. Column (1) presents the regression of the logarithm of one plus the number of patents acquired by a firm in a given year through mergers and acquisitions. Column (2) presents the regression of the logarithm of one plus the number of green patents acquired from a non-energy firm in a given year through mergers and acquisitions. Non-energy firms refer to companies with primary two-digit SIC codes beyond the following: 10 (Metal, Mining), 12 (Coal Mining), 13 (Oil&Gas Extraction),14 (Nonmetallic Minerals, Except Fuels), 29 (Petroleum&Coal Products), or 49 (Electric, Gas, &Sanitary Services), in line with Cohen, Gurun, and Nguyen (2022). Column (3) shows the regression of the logarithm of one plus the number of acquired target firms that have experienced negative ESG incidents in the past five years. *Mandatory Disclosure* is an indicator variable that takes one if the home country of a firm has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. Control variables include firm size (Total Assets), financial leverage (Leverage), return-on-assets (ROA), market-to-book ratio (Market-to-Book), asset tangibility (Tangibility), liquidity of assets (Liquidity), growth rate of net sales (Sales Growth), and share of product markets (Market Share). Detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) Log(# of Acquired Patents)	(2) Log(# Acquired Green Patents from Non-energy Firms)	(2) Log(# of Targets with ESG Incidents in the Last 5 Years)
Mandatory Disclosure	25.82	19.31*	-5.270**
	(0.17)	(0.08)	(0.04)
Total Assets	7.872***	5.708***	1.376**
	(0.01)	(0.01)	(0.02)
Leverage	0.00276	-0.176	0.0670***
	(0.99)	(0.20)	(0.00)
ROA	-0.0269	-0.0559	-0.0330**
	(0.72)	(0.32)	(0.02)
Market-to-Book Ratio	-2.123	-1.037	0.910***
	(0.15)	(0.36)	(0.00)
Tangibility	-0.331	-0.372**	-0.0320
	(0.11)	(0.02)	(0.22)
Liquidity	-0.465	-0.633	-0.0700
	(0.40)	(0.42)	(0.38)
Sales Growth	-0.0224	0.00208	0.00465**
	(0.24)	(0.89)	(0.05)
Market Share	-0.00448	-0.111	0.0134
	(0.98)	(0.60)	(0.78)
Constant	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes
Observations	13,695	11,285	14,882
R-squared	0.679	0.588	0.568

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Table IA.4 Mandatory ESG Disclosure and Volume of Cross-Border Mergers and Acquisitions

This table reports how mandatory ESG disclosure requirements affect the dollar volume of mergers and acquisitions by exploiting variations in ESG profiles across countries. Columns (1) and (2) present regressions of the logarithm of one plus the dollar volume of acquired target firms from countries with lower and higher Sustainable Development Goal (SDG) scores than the acquirer's home country, respectively. Columns (3) and (4) show regressions of the logarithm of one plus the dollar volume of acquired target firms from developing and developed countries, respectively. Only cross-border mergers and acquisitions are included in the analysis. Other variables are defined as previously; detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Coefficients are multiplied by 100 for the sake of readability. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1) Log(Value of Targets from Lower SDG Countries)	(2) Log(Value of Targets from Higher SDG Countries)	(3) Log(Value of Targets from Developing Countries)	(4) Log(Value of Targets from Advanced Countries)
Mandatory Disclosure	-5.252**	5.631*	-2.775**	11.16**
	(0.05)	(0.07)	(0.04)	(0.04)
Total Assets	9.408***	8.202***	3.270***	17.29***
	(0.00)	(0.00)	(0.00)	(0.00)
Leverage	-0.0280	0.0162	-0.0386	0.0237
	(0.55)	(0.70)	(0.15)	(0.72)
ROA	0.00581	-0.00658	-0.00146	-0.00545
	(0.76)	(0.70)	(0.87)	(0.81)
Market-to-Book Ratio	1.206**	1.137**	0.392	2.231***
	(0.03)	(0.05)	(0.25)	(0.00)
Tangibility	-0.191***	-0.123***	-0.0780**	-0.290***
	(0.00)	(0.01)	(0.02)	(0.00)
Liquidity	-0.337**	-0.280*	-0.212**	-0.634***
	(0.05)	(0.10)	(0.05)	(0.00)
Sales Growth	0.0247**	0.0151***	0.00256	0.0342***
	(0.01)	(0.00)	(0.59)	(0.00)
Market Share	0.0878	0.00907	0.0457	0.0574
	(0.39)	(0.91)	(0.52)	(0.68)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Country Level	Yes	Yes	Yes	Yes
Observations	51,540	51,540	51,540	51,540
R-squared	0.163	0.109	0.121	0.128

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Table IA.5 Mandatory ESG Disclosure and Alternative Deal Premiums

This table reports the effects of mandatory ESG disclosure requirements on the one-month premium of acquisition and divestiture deals. The dependent variable in the first (last) two columns is the one-month acquisition (divestiture) premium, which is the percentage difference between the offer price of an acquisition (divestiture) deal and the target firm's closing stock price one month prior to the deal announcement. *Mandatory Disclosure* is an indicator variable that takes one if a firm's home country has adopted mandatory ESG disclosure regulations in a given year and zero otherwise. # *Target Green Patents* is the number of green patents granted to the target firm in the year before the acquisition. # ESG Incidents is the number of negative ESG events experienced by the target firm over three years before the divestiture. Control variables are defined as previously; detailed definitions are provided in Table A.1 in the Appendix. Firm and year fixed effects are included in the regressions. Standard errors clustered at the country level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	1-Month Acquisition Premium		1-Month Divestiture Premium	
Mandatory Disclosure	-4.621	-6.358*	-9.213*	-5.673
	(0.16)	(0.09)	(0.08)	(0.30)
Mandatory Disclosure		0.0499*		
*# Target Green Patents		(0.07)		
Mandatory Disclosure				-0.107*
* # ESG Incidents				(0.07)
# Target Green Patents/# ESG Incidents		-0.0411*		-0.00367
		(0.05)		(0.92)
Total Assets	-1.890	-1.922	3.905	3.718
	(0.41)	(0.39)	(0.18)	(0.21)
Leverage	-0.0520	-0.0477	-0.379*	-0.390*
	(0.50)	(0.54)	(0.07)	(0.06)
ROA	0.0864	0.0577	-0.0588	-0.0538
	(0.45)	(0.62)	(0.78)	(0.81)
Market-to-Book Ratio	-1.082	-1.291	1.719	1.605
	(0.25)	(0.15)	(0.32)	(0.37)
Tangibility	0.0579	0.0777	0.0382	0.0367
	(0.71)	(0.63)	(0.79)	(0.80)
Liquidity	-0.0995	-0.0296	-1.495	-1.507
	(0.76)	(0.93)	(0.57)	(0.57)
Sales Growth	-0.00389	-0.00605	-0.0497**	-0.0489**
	(0.75)	(0.51)	(0.04)	(0.04)
Market Share	0.186*	0.203*	0.0475	0.0491
	(0.09)	(0.10)	(0.83)	(0.83)
Constant	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Cluster at Economy Level	Yes	Yes	Yes	Yes
Observations	12,123	11,232	3,919	3,919
R-squared	0.598	0.606	0.750	0.751

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