

**Università Commerciale Luigi Bocconi
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Do ESG risks influence M&A transactions?

Part 1: International evidence

Part 2: Evidence from the United States

Master Thesis in Finance

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International evidence

Abstract: Using two large samples of global M&A transactions, this study assesses whether reputational ESG risks of targets and acquirors influence deal completion likelihood, deal duration and bid premium of the transaction. Higher reputational ESG risks of the acquiror are connected to a longer deal duration in the Americas, and to a lower deal completion likelihood for non-competitive and non-tender transactions. Higher reputational ESG risks of the target are related to a higher deal completion likelihood, if one of the transaction parties is small, to a shorter deal duration if the acquiror is small, and to higher bid premiums. The impact of reputational ESG risks varies across regions, as the strongest influence can be observed in the Americas, whereas Asia displays no significant relationship between reputational ESG risks and examined M&A characteristics. Overall, the results suggest material differences between the impact of reputational ESG risks on M&A deals compared to the impact of other ESG scores established in previous research.

Keywords: ESG Risks, Corporate Social Responsibility, Mergers and Acquisitions, Deal Completion Likelihood, Deal Duration, Bid Premium

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1 Introduction

Corporate Social Responsibility (CSR) has been a relevant topic for research since the 1950s (Carroll, 1999). Traditionally, the discussion has been dominated by two opposing views. The shareholder theory (Friedman, 1970) believes the shareholders' profits are a company's sole responsibility and considers CSR to be an unlawful spending of the shareholders' money. Instead, the stakeholder theory (Freeman, 1984) argues that CSR has a positive effect on shareholder wealth as it improves the relations with stakeholders, who are then more willing to cooperate with the company. Alternatives to and extensions of these two main theories have developed over time, for instance Corporate Social Performance (CSP) (Carroll, 1979). However, the definition of CSR itself remains much debated to date (Sarkar and Searcy, 2016), making implementation, interpretation and regulation difficult for corporates, investors and regulators alike.

The 2004 study *Who cares wins* (The-Global-Compact, 2004), conducted by major financial institutions in cooperation with the UN, defined and promoted the term ESG. It recommended a stronger involvement of all stakeholders in the environmental, social and governance topics, resulting in the development of ESG accounting standards, ratings and funds. The development of ESG factors including inherent metrics introduced measurability and objectivity to the CSR discussion. ESG ratings and scores not only enable practitioners to evaluate and compare the ESG performances of companies, but also facilitate studies examining the impact of ESG factors on various aspects of corporate and investment performance. Still, a high divergence can be observed among major ESG rating agencies (Chatterji et al., 2016) and the different methodologies lead to the need to carefully justify the choice of ESG scores for the individual research question.

Previous studies establish relations between CSR and, among others, corporate financial performance (Van Beurden and Gössling, 2008), firm value (Malik, 2015), access to finance (Cheng et al., 2014), cost of finance (Goss and Roberts, 2011) and stock price crash risk (Kim et al., 2014). An area that has received little attention despite growing importance for practitioners is Mergers & Acquisitions (M&A). Studying the impact of ESG factors on M&A markets is interesting for two reasons: First, the importance of

ESG due diligence in M&A transactions has strongly increased over the last years and is expected to continue its upwards trend in the future ([Mergermarket and IHS-Markit, 2019](#)). Second, M&A transactions inherit a high degree of information asymmetry and involve a high number of stakeholders. Given the evidence for an influence of ESG performance on key metrics, it seems likely that potential acquirors and targets alike have an interest in their counterparts' ESG performance. Initial research provides evidence for a positive relation between ESG scores and deal completion likelihood, bid premium and post-merger performance ([Deng et al., 2013](#); [Aktas et al., 2011](#); [Krishnamurti et al., 2019](#)) and a negative relation between ESG scores and deal duration ([Deng et al., 2013](#)). However, the majority of existing studies focus on the ESG scores of the acquiror, while little attention is given to the target. A potential explanation for the scarcity of research is the fact that major ESG rating agencies primarily focus on listed companies, who are rarely targeted in M&A transactions, thus making the creation of an adequately large dataset of targets difficult.

This study overcomes that bottleneck by extracting ESG data from RepRisk, a data provider that gathers ESG related incidents and relevant risk scores for more than 140,000 public and private companies as well as organizations all around the globe. By matching RepRisk's ESG scores with global M&A transactions from 2007 to 2019 I create and analyse two databases with 2,549 acquirors and 1,129 targets, respectively. Performing multivariate regressions I find varying and mostly weak effects of reputational ESG risks on M&A deals. I find a negative relation between the acquiror's ESG risks and the deal completion likelihood for transactions that are not competitive and transactions that do not include tender offers. The results are strongest in the Americas, while Asia shows inconclusive results. Confirming previous results by [Deng et al. \(2013\)](#), who find a negative relationship between the US acquiror's ESG scores and the deal duration, I find that transactions by acquirors with higher ESG risks take longer to be completed in the Americas, especially if the target is large in terms of total assets. No significant impact is detected in Africa, Europe or Oceania. Similarly, no significant relation is found between the acquiror's ESG risks and the bid premium. Moreover, I find that the target's

ESG risks do not have a significant influence on the deal completion likelihood when both parties are large, but are mostly related to a higher deal completion likelihood for smaller transaction parties. Finally, the target’s ESG risks are negatively related to the deal duration, but positively related to the bid premium.

The contributions of this paper to the existing literature are threefold. First, the broad coverage of RepRisk allows the construction of a unique, global dataset. It is larger than many previously used datasets and includes a more diverse range of both public and private companies. Furthermore, while previous studies often focus on one specific geography such as the US ([Deng et al., 2013](#)) or Israel ([Chen and Gaviols, 2015](#)), RepRisk’s global coverage allows a broad analysis and comparisons between regions. Second, in contrast to most previous studies, this paper analyses the impact of both the acquiror’s and target’s reputational ESG risks on M&A deal characteristics. Third, this study is the first to focus on reputational ESG risks. RepRisk differs from other ESG rating agencies as it only includes external sources in their scoring analysis, as opposed to self-reported documents, and only focuses on negative ESG incidents and reputational risks, as opposed to positive ESG activities and strengths. This approach provides a hint at what M&A practitioners look at in their ESG due diligence. While surveys indicate that the majority of M&A practitioners examine ESG performances to detect potential risks ([Mergermarket and IHS-Markit, 2019](#)), many also rely on ESG scores from different data providers whose scores do not primarily focus on ESG risks. As RepRisk itself is not amongst the most frequently used ESG scorers ([Petroy and Wong, 2020](#)) it is unlikely that their scores have a significant impact on the risk assessment of practitioners, thus allowing an assessment of the impact of reputational ESG risks on M&A transactions independent of commonly used ESG ratings.

While the results of this study are not congruent with results from previous research, they do not automatically imply a contradiction. The different results may be caused by differences in the study design but could also provide a first indication of the way in which ESG risks are actually perceived by practitioners. Although the results suggest that reputational ESG risks per se do not significantly influence M&A transactions, further

research is required to establish whether ESG risks influence M&A transactions, how they do it and to what extent the impact differs from the influence of other ESG measures.

The remainder of this paper is constructed as follows: Section 2 describes existing literature and provides the hypotheses development. Section 3 describes and summarizes the data and the methodology. Section 4 presents the empirical results and robustness tests. Section 5 discusses contributions and limitations of this paper. Section 6 concludes.

2 Literature Review & Hypotheses

2.1 The difference between ESG and CSR

In the wake of growing environmental and humanitarian awareness, the two terms Corporate Social Responsibility (CSR) and Environmental, Social and Governance (ESG) have been used increasingly in the recent years. As both of them are closely related and often used in the same breath, it is worth taking a moment to understand the differences between them.

The modern concept of CSR largely evolved in the 1950's in the United States ([Carroll, 1999](#)). Although definitions are diverse and subject to continuous change, they commonly involve the idea that corporates have a societal responsibility beyond their own financial interest (e.g. [Davis and Blomstrom, 1966](#); [Johnson, 1971](#)). Some academics regard CSR as a purely philanthropic concept (e.g. [Manne and Wallich, 1972](#)) and others include ethical and legal considerations (e.g. [Davis, 1967](#)). While several well-known, related concepts, including Corporate Social Performance and Freeman's stakeholder theory, have been developed on the building blocks of CSR, the concept of CSR itself remains highly theoretical to date and exhibits a variety of diverse definitions ([Sarkar and Searcy, 2016](#)). [Nielsen and Thomsen \(2007\)](#) argue that the lack of a common definition of CSR hampers the development of CSR strategies for organizations and leads to inconsistent reporting. This shortcoming in turn makes it difficult for investors, regulators and the general public to understand and evaluate the CSR activities and related risks of a company.

The term ESG first gained attention in the 2004 study *Who cares wins* ([The-Global-Compact, 2004](#)), conducted by 18 financial institutions upon invitation by the UN secre-

tary Kofi Annan. With the goal of developing solutions on how to integrate ESG factors in the financial markets, the report recommended to implement policies and to report ESG performance in a consistent manner and asked all stakeholders, including companies, investors and regulators, to integrate ESG factors into their work, arguing it would lead to more sustainable markets, stronger financial results and better outcomes for society. The importance of the inclusion of ESG factors into investment decisions was underlined by a joint legal report by the UNEPFI and the law firm Freshfields Bruckhaus Deringer concluding that investment firms are arguably required to include ESG considerations into investment decisions. Since then, accounting and reporting standards for ESG factors have been developed and rating companies for ESG emerged, making ESG strengths and risks quantifiable, comparable and available to a wide public.

In a wider sense both CSR and ESG describe corporates' and institutions' societal responsibility beyond their own profits. Based on the frequent interchangeable and joint utilization of both terms both in academia and practice, it could be argued that ESG factors are a mere quantification of CSR. Another view is that CSR describes the societal responsibility from a company's standpoint, whereas ESG describes the investor's point of view. Although I cannot provide an answer to these questions, I decided to focus exclusively on ESG factors in this study for two reasons: First, whereas the lack of a consistent CSR definition makes measurements difficult, the factors included in ESG are widely agreed on and measurable. Second, practitioners in M&A markets predominantly rely on ESG scores from rating agencies for their decision making.

In the remainder of the literature section I will use the terms ESG and CSR as they are used in the cited papers, even though different terms may often refer to the same data in the background.

2.2 ESG and M&A transactions

The impact of ESG factors on corporate and investment performance has been the subject of numerous studies. [Friede et al. \(2015\)](#) conduct a meta analysis of more than 2000 studies examining the relation between ESG and corporate financial performance

and show that 90% of the studies find a non-negative relation. In contrast, only few studies have examined the relevance of ESG factors on M&A transactions.

[Aktas et al. \(2011\)](#) are the first to posit a relation between a target's social and environmental risk management performance and the post-merger stock performance of the acquiror. By analysing 106 M&A transactions, they find that a higher ability of the target to manage social and environmental risks is related to higher post-merger returns for the acquiror, indicating that investors value responsible investments. One explanation for the value creation is suggested in the learning effect, as [Aktas et al. \(2011\)](#) show that acquirors of socially responsible targets improve their own social and environmental risk management performance in the aftermath of the acquisition.

[Deng et al. \(2013\)](#) expand the research by conducting a broad analysis of the acquiror's CSR performance on transaction characteristics and post-merger performance. They study 1,566 US mergers and find that acquirors with higher CSR performance achieve higher announcement returns and a better long-term post-merger performance. Moreover, they provide evidence for a higher deal completion likelihood and shorter deal durations of mergers by high CSR acquirors. They conclude that their results support the stakeholder value maximization view, which predicts that acquisitions benefiting stakeholders ultimately also manifest in gains for the shareholders.

Taking a different approach, [Chen and Gavigus \(2015\)](#) compare the value implications that CSR policies have for different investor types in Israel. The analysis of 134 Israeli deals reveals that unlike private and transient investors, who pay a premium for socially committed firms, M&A investors do not value CSR engagement as the prices paid for firms with good CSR performance do not differ from firms without CSR commitment. [Chen and Gavigus \(2015\)](#) suggest that well informed investors such as M&A investors either do not believe that CSR engagement provides additional profit potential, or consider firms with CSR policies to be "good actors".

[Gomes and Marsat \(2018\)](#) follow a similar approach but examine the bid premium instead of the sale price, arguing it is easier to assess whether acquirors value CSR performance differently from the marginal investor due to expected synergy effects, higher

idiosyncratic risk exposure or reduced information asymmetry in a transaction. Analysing 588 global deals, they find a positive relationship between the target’s CSR performance and the bid premium, suggesting that acquirors do value CSR commitment of potential targets. Breaking down the target’s CSR activities into environmental and social activities, [Gomes and Marsat \(2018\)](#) find that social activities are only valued in cross-border deals, while environmental commitments are valued generally. A potential explanation is the higher importance of social factors in acquisitions of foreign companies that stem from potential cultural differences, greater information asymmetry and the related risks.

[Krishnamurti et al. \(2019\)](#) conduct a broad analysis of how the bidder’s CSR activities impact Australian M&A transactions. Firstly, they find that CSR-oriented bidders create an abnormal announcement period return and pay lower bid premiums than non-CSR-oriented companies. Supporting the stakeholder theory, they argue that socially responsible firms make their investment choices in alignment with the stakeholder’s wealth maximization. Secondly, [Krishnamurti et al. \(2019\)](#) show that CSR-oriented targets are more likely to be acquired by socially responsible acquirors, suggesting that the ethical culture of the target is a decision criterion for potential acquirors.

This study differs from existing literature in several aspects. Firstly, it analyses reputational ESG risks which are obtained from RepRisk, a data provider that screens international media coverage for negative ESG incidents in relation with companies. In contrast to ESG score providers used by existing literature, which usually rely on documents created by the company itself, the reputational ESG risks provide an objective, external view of a company’s ESG risks. Secondly, this study analyses and compares the influence on M&A transactions both on a global and a regional level, whereas previous studies mainly focused on either the global level or one specific country. Thirdly, it examines the influence of both the acquiror’s and the target’s reputational ESG risks on deal completion likelihood, deal duration and bid premiums.

2.3 Hypotheses

2.3.1 Bid Premium

M&A transactions entail information asymmetry between the buyer and the seller, potentially leading to moral hazard problems (Gilson and Schwartz, 2005). M&A bidders should be particularly attentive with respect to company risks since a transaction involves a high level of idiosyncratic risk that cannot be diversified. To overcome the information asymmetry, interested bidders perform an extensive due diligence to find potential risks and usually have a better insight into the company profile than outside investors. Kim et al. (2014) suggest that a company's social responsibility is generally connected to lower stock price crash risk but associated with higher crash risk if it is used to cover up bad news. Similarly, Lee and Faff (2009) analyse global sustainability portfolios and find evidence that firms with high CSP have significantly lower idiosyncratic risk than their low CSP counterparts. Based on these findings, it would be sensible for M&A bidders to include the targets' reputational ESG risks in their decisions. As a higher idiosyncratic risk, *ceteris paribus*, typically results in a lower valuation, I propose the following first hypotheses:

H1(a): Firms with higher reputational ESG risks will be acquired for a lower acquisition premium than firms with lower reputational ESG risks.

Taking a look at the acquiror's ESG attitude, Krishnamurti et al. (2019) analyse Australian M&A transactions and find evidence that socially responsible acquirors pay a lower bid premium than less socially responsible acquirors. They argue that ethical CEOs are less susceptible to overconfidence, a trait which often leads to the overpayment for acquisitions and the undertaking of value-destroying investments (Malmendier and Tate, 2008). John et al. (2010) find that overconfidence can directly be linked to the payment of higher acquisition premiums, while McCarthy et al. (2017) provide evidence that CEO overconfidence is negatively related to the firm's CSR activities. I thus propose the second hypothesis:

H1(b): Firms with higher reputational ESG risks will pay larger acquisition premiums than firms with lower reputational ESG risks.

2.3.2 Deal Completion Likelihood and Deal Duration

Next, I study the impact of ESG risks on the success probability of a deal being completed and the duration of the deal completion.

Different factors might play a role in how a firm's ESG risks influence the deal completion. Looking at targets first, [Boone and Uysal \(2020\)](#) argue that reputational spillovers play a role in M&A transactions and can be both negative and positive. In particular, they show that firms with a bad environmental reputation have a lower probability of being acquired. This effect is stronger if the acquiror has a better reputation, with green firms never acquiring firms with a bad environmental reputation. Moreover, it might be related to stakeholders' increasing consideration of ESG factors in general, and environmental factors specifically. [Fernando et al. \(2017\)](#) show that institutional shareholders, who are widely considered to be more sophisticated than individual investors, avoid firms with high environmental risk exposures. Furthermore, they find that institutional investors also avoid firms that take environmental action beyond legal requirements and risk mitigation, suggesting that these actions do not create monetary shareholder value. In a broader analysis, [Hartzmark and Sussman \(2019\)](#) provide evidence that investors in general value sustainability as they prefer mutual funds with a high sustainability rating over those with low ratings, even though no evidence exists suggesting that the former outperform the latter. These findings allow the assumption that shareholders might also be inclined to oppose acquisitions of firms with high reputational ESG risks, which can delay M&A negotiations and ultimately even block the transaction.

Creditors and regulators consider ESG risks as well, whether it is consciously or unconsciously. [Goss and Roberts \(2011\)](#) find that CSR risks increase the cost of debt of lenders, while CSR investments are punished with higher loan spreads for low-quality

borrowers. In sum, CSR strengths and risks, especially those that affect the firm’s primary stakeholders, have a direct influence on a firm’s credit ratings (Attig et al., 2013). Hong and Liskovich (2015) show that socially responsible firms also have a better reputation among regulators and attribute it to the halo-effect, which implies that a firm’s CSR performance also improves its reputation in other areas. These results suggest that reputable firms might be met with less resistance by stakeholders when it comes to a potential acquisition, thus leading to shorter deal completion times and a higher chance of a successful transaction outcome. Krishnamurti et al. (2019) provide evidence that Australian firms with CSR activities are more likely to be acquired by bidders with CSR activities. Based on these findings, I pose the following hypotheses:

H2(a): M&A transactions with a target with higher reputational ESG risks are less likely to be completed than transactions with a target with lower reputational ESG risks.

H2(b): M&A transactions with a target with higher reputational ESG risks take more time to be completed than transactions with a target with lower reputational ESG risks.

Many of the previously described arguments are valid for an acquiror’s reputational ESG risks as well, as the target’s stakeholders also have an impact on the outcome of the transaction. Deng et al. (2013) find that transactions from acquirors with high CSR performance take less time to be completed and have a higher probability of being successful. Therefore, I propose the following hypotheses:

H3(a): M&A transactions by an acquiror with higher reputational ESG risks are less likely to be completed than transactions by an acquiror with lower reputational ESG risks.

H3(b): M&A transactions by an acquiror with higher reputational ESG risks take more time to be completed than transactions by an acquiror with lower reputational ESG risks.

3 Data and Methodology

This study merges data from *RepRisk*, which provides data on global ESG incidents and reputational risks for companies and organizations, and *Thomson Reuters' SDC Platinum*, which provides information on global M&A transactions and financial statement data.

3.1 Measures of reputational ESG risks

Data on reputational ESG risks is retrieved from RepRisk, which covers more than 90% of the world's GDP with its sources and includes more than 140,000 companies. Combining machine learning and human analysts, RepRisk continuously screens over 90,000 public sources and stakeholders in 20 languages, looking for risk incidents connecting any company to one of 28 ESG issues or 58 ESG "hot topics". The incidents are scored with respect to severity, reach and novelty of the risk and then flow into the Reputational Risk Index score (RRI) ranging from 0 (low risk) to 100 (high risk) for each company. Several metrics are derived from this RRI and reported on a monthly basis. The *Current RRI* indicates the current attention of media and stakeholders with respect to the company's ESG incidents. It decays over time unless a new risk incident is reported. The *Peak RRI* reports the highest RRI of the last two years. The *RepRisk Rating* (RRR) incorporates both the company's individual Peak RRI and a country-sector average ESG risk and is reported on a scale from AAA (low risk) to D (high risk). The country-sector factor includes, with equal weights, the country-sector score of the company's headquarters, and the average country-sector score of all countries the company operates in. Following the advice from RepRisk, the focus of this paper lies on the Peak RRI. The underlying rationale is that potential acquirors and targets do not only consider the current risks in their ESG due diligence but will also investigate the incidents in the recent past to assess the risk connected to the company.

3.1.1 RepRisk vs other ESG rating agencies

According to the recent *Rate the Raters 2020* report (Petroy and Wong, 2020), more than 600 ESG ratings and rankings existed as of 2018. While a few main ESG ratings are preferred by both academics and practitioners, the number of different ratings poses the question of the accuracy and convergence of the ratings. Chatterji et al. (2016) analyse six large and widely used ratings and find a high divergence in the scores, even when controlling for specific differences in measurements and prioritization. Concluding that most ratings have a low validity, they recommend a thorough understanding of the methodology behind the rating to assess the suitability for the respective case. In the following, I therefore compile the main differences between RepRisk’s scores, and the ratings most frequently used in the related literature (MSCI, formerly KLD, and Refinitiv, formerly ASSET4).

First, RepRisk measures the reputational ESG risk. In contrast to other ESG ratings, RepRisk only incorporates negative incidents published by third parties in their scores. They do not include positive ESG news, ESG strengths or CSR activities. Second, MSCI and Refinitiv include different reports and filings created by the rated companies into their rating calculations. The inclusion of company-created documents bears the risk of including overly euphemistic and biased information in the ESG scores. RepRisk instead relies entirely on external sources including online and print media, social media, regulators, think tanks and other online sources. This focus on third-party information ensures a higher degree of objectivity but leads to a potential exclusion of ESG concerns that are not frequently covered by media sources. Third, while MSCI and Refinitiv cover a fixed list of 8,500 and 9,000 public companies, respectively (as of June 2020), RepRisk continuously expands their coverage based on the results of their screening process. This process leads to a wider coverage of 140,000 public and private companies (as of June 2020) but means that large corporations might not be covered. Moreover, RepRisk reports monthly updated scores, while MSCI and Refinitiv usually update their ratings on a yearly basis.

To my knowledge, RepRisk data has not been used in the context of M&A transactions

before. However, I see three main advantages in its usage for my study:

First, according to a recent study by [Mergermarket and IHS-Markit \(2019\)](#) 67% of practitioners state to mainly look into ESG factors in order to avoid business risks. However, the question what practitioners particularly look at during their due diligence has not been considered to date. By contrasting previous results using ESG scores to results using RepRisk’s risk scores this study provides a first indication of what practitioners focus on, namely reputational ESG risks or ESG scores. Second, the broad coverage allows for the creation of a larger sample including both private and public companies. Third, the monthly updates enable a more accurate matching with the date of the merger announcement.

3.2 M&A and Financial Data

M&A and financial data for the period from 2007 to 2019 is obtained from Thomson Reuters’ SDC Platinum. SDC covers global deals and includes more than 1.1 million transactions since 1970, providing information on more than 1,000 data elements for both targets and acquirors, which is used for the dependent variables and control variables of this study.

3.3 Bid Premium

SDC provides information on bid premiums using the share price one day, one week and four weeks prior to the announcement date. Following [Rossi and Volpin \(2004\)](#) the four week premium is used in this study, as it reduces the risk of price changes caused by early leakage of rumors to influence the premium. The premium is calculated as:

$$BP_{4w}^i = \frac{OP_t^i - CP_{t-28}^i}{CP_{t-28}^i} \times 100 \quad (1)$$

where BP denotes the four-week premium, OP the offer price to target shareholders and CP the share price of the target four weeks prior to the transaction announcement. Following previous literature ([Rossi and Volpin, 2004](#); [Hope et al., 2011](#)) I use the natural

logarithm of the bid premium for the regressions.

3.4 Deal Completion Likelihood and Deal Duration

SDC provides information on the deal status. In order to prevent uncertainties and potential biases when analysing the impact on the deal completion likelihood, only transactions that are marked as "Completed" or "Withdrawn" are included, whereas transactions with presumed outcome are excluded. A binary variable is used to denote the deal outcome, taking the value "1" in case of a completed transaction and "0" for a withdrawn offer. Following [Deng et al. \(2013\)](#) the deal duration is calculated as the number of days between the announcement date and the effective date, both of which are reported in the SDC database. As a robustness check, the tests are repeated including withdrawn transactions, for which the deal duration is calculated as the number of days between the announcement date and the withdrawal date.

3.5 Control Variables

Following [Masulis et al. \(2007\)](#) firm-specific characteristics and deal-specific characteristics are included as control variables to isolate the effects of the reputational ESG risk scores. The included firm-specific characteristics are the acquiror's firm size as well as the target's firm size, leverage, FCF and current ratio. The deal-specific characteristics include dummy variables created to denote deals that are paid entirely by cash, hostile deals, competitive deals, deals that include tender offers, deals in which the acquiror owns at least 5% of the target prior to the deal (toehold) and deals in which the acquiror and the target operate in different major industries. Apart from the aforementioned control variables, all tests control for industry, country and year fixed effects.

3.6 Sample Selection

Since the effects of both the acquiror's and the target's reputational ESG risks on M&A transactions are analysed, two different data tables are constructed in three steps. First, deal information on global mergers from 2007 to 2019 is extracted from SDC. All

deals meeting the following criteria are included: (1) the acquiror owns less than 50% of the target’s shares before the transaction and, if the deal is completed, acquires at least 50% during the transaction, (2) the disclosed deal value exceeds one million dollars, (3) the deal was verifiably completed or withdrawn and (4) the acquiror is not primary active in the financial or utilities sector (according to SDCs MacroIndustry specification). The sample, including both successful and withdrawn transaction, consists of 62,675 deals. In a second step, targets and acquirors are matched with the RepRisk database, filtering out deals for which information on reputational ESG risks does not exist and creating two distinct databases with target and acquiror matches, respectively. Transactions may appear in both databases if both the target and the acquiror are included in the RepRisk database. In the creation of the matching algorithm, I follow [Li and Wu \(2020\)](#) and develop a python algorithm that (1) standardizes the different naming conventions, (2) cleans company names by removing company suffixes and certain characters and (3) matches the cleaned, standardized company names from both databases using a fuzzy matching algorithm. A detailed explanation of the algorithm can be found in appendix A. In a last step, I remove all deals for which relevant deal and accounting information to construct control variables is not available and deals from countries that have less than 10 transactions over the entire period. After applying these steps, the acquiror database consist of 2,549 deals, while the target database includes 1,129 deals.

3.7 Summary Statistics

Panel A of Table 1 presents the distribution of transactions across years and regions for both the acquiror and the target sample. The largest share of acquirors are headquartered in the Americas (57.4%), followed by Europe (18.6%) and Asia (17.5%). African companies have attempted the smallest number of transactions (1%). The number of deals has steadily declined over the years, from 305 in 2007 to 170 in 2018. This decline might seem surprising given the global number of M&A transactions has seen an upward trend in recent years. The matching of RepRisk data with SDC data is not the first to show this disparity as the initial deal sample retrieved from SDC already displayed a

similar pattern, even though it is not as strong. I thus conclude that the filters used to limit the deal sample must be the main reason for the divergence.

A similar picture can be seen for the target sample. The Americas lead the sample with 66.7% of the targets having their headquarters in this region, followed by Europe (12.8%), Asia (9.6%), Oceania (9.5%) and Africa (1.4%). The overall number of transactions has fluctuated over the observed time period, but saw a slight upwards trend over time, from 78 transactions in 2007 to 107 transactions in 2018. The trend, which can also be observed for the three main regions, might be explained by the fact that RepRisk’s coverage increases steadily and especially the number of smaller companies in the sample is expanded.

Panel B of Table 1 shows the mean values for the variables of the acquiror and target sample. Looking at the regional differences, deals have the highest likelihood of being completed in the Americas for both samples, whereas the likelihood is particularly low in Africa and Oceania. Accordingly, the deal duration is the shortest in the Americas, where acquirors spend an average of 108.23 days on their successful transactions, and the longest in Africa, where the deal duration for completed deals lasts 163.44 days on average. Furthermore, Europe has the highest average Peak RRI for acquirors (22.84) and targets (21.30) alike, while Oceania has significantly lower scores of 10.74 and 14.86. It is unclear whether this disparity is caused by an actual difference in ESG related risks, or whether it mainly stems from differences in ESG reporting and media coverage.

3.8 Methodology

Multivariate regressions are a common tool to analyse the impact of certain variables on firm and deal characteristics (e.g. [Rossi and Volpin, 2004](#)). To examine the relation between reputational ESG risks and deal duration as well as bid premium, I perform a multivariate OLS regression. For the analysis of the relation between reputational ESG risks and deal completion likelihood I use a probit model since the dependent variable is binary. In a first step, the impact of reputational ESG scores on the dependent variables is examined from a global perspective without interaction terms. Afterwards, potential

influences in subsamples and interdependent relationships between reputational ESG risk scores and other variables are analysed by introducing interaction terms. The analyses are performed on a global level, as well as on a continental level where sufficient observations exist (Americas, Asia, Europe), enabling comparisons across regions. Robustness tests, described in section 4.4, include the analysis of the deal completion likelihood with a cox proportional hazard model and alternative measurements for different variables.

4 Empirical Results

4.1 Deal Completion Likelihood

First, I analyse whether the reputational ESG risks of either the acquiror or target have an impact on the likelihood of deal completion. Following [Deng et al. \(2013\)](#) I run a probit regression in which the dependent variable takes the value of one if the transaction is completed, and zero if the transaction is withdrawn. Tables 2 and 4 show the results for multivariate probit regressions for the acquiror and target sample, respectively.

$$\begin{aligned}
P(\text{DealCompletion}_i = 1) = & \phi(\beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\
& + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\
& + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\
& + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\
& + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\
& + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\
& + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects} \\
& + \text{CountryEffects})
\end{aligned} \tag{2}$$

The results in Table 2 show small negative marginal effects for the tests without interaction term for the global level, the Americas and Europe, suggesting that higher reputational ESG risks might lead to a lower success probability of M&A transactions. However, none of the results are significant at the 10% level. In the second step, interac-

tion terms are introduced between the Peak RRI score and the binary variables indicating competing deals and deals including tender offers. The Peak RRI variable becomes significant at the 5% level globally, at the 10% level for Europe and at the 1% level for the Americas, while the marginal effects remain slightly negative. Similar results can be observed for both the inclusion of either of the two interactions terms, as well as the inclusion of both interaction terms simultaneously, which is shown in Table 2. A possible interpretation is that the reputational ESG risks have different influences for deals that include competition or tender offers and deals that do not. To further examine the relationship, the tests are repeated for the subsamples which are split by the tender and competition variables. The results are shown in the panels A and B of Table 3. The samples of deals not including tender offers or competition, respectively, generally have higher significance levels than their counterparts. Independent of the significance level, the marginal effects of the Peak RRI show a negative influence on the deal completion likelihood for non-tender and non-competing transactions, but a mostly positive influence for tender and competing transactions. These effects suggest that high reputational ESG risks decrease the deal completion likelihood for non-tender and non-competitive transactions, but do not decrease or even increase the likelihood for tender and competitive deals. An explanation for the former might be that marginal investors who are targeted by tender offers are primarily focused on the purely financial characteristics of the bidder and thus do not care about ESG performance, while institutional investors or majority holders have a holistic view and are aware of the potential impact of ESG risks on the target company. Moreover, previous owners of a company simply might prefer to give their company to a reputationally risk-free bidder. With respect to the competitiveness of the transaction, a possible explanation is that ESG risks find the shareholder's attention in non-competing bids but only play a subordinate role in competing bids in which other factors are prioritized in the significantly more complex due diligence process. Another option is that competing bids generally achieve higher acquisition prices and sellers are thus willing to accept higher ESG risks in turn for the additional premium.

Comparing the results for the different regions, the Americas show the strongest results

with the highest significance level, which also drive the global results. Europe shows less strong and significant results, while not enough observations were available to derive meaningful results for Asia, as well as for competitive and tender deals in Europe.

Hypothesis 3(a), stating that higher reputational ESG risks of the acquiror lead to a lower deal completion likelihood, is only partly supported, in particular for non-competing and non-tender transactions in the Americas and Europe. This outcome does not confirm the results of [Deng et al. \(2013\)](#), who finds that ESG scores generally have a significant influence on the deal completion likelihood of US transactions. However, it is important to emphasize that this disparity might be explained by the differences in the creation of the sample.

Apart from the ESG risks, the control variables included in the test show marginal results comparable to previous studies, with the firm size of the acquiror having a strong, positive relation with the deal completion likelihood, the firm size of the target having a negative relationship and hostile bids having a significantly lower probability of being successful on both a global and regional level. Interestingly, tender offers have a significant positive influence on the deal completion likelihood in all regions.

Table 4 describes the results of the probit regression of the target's reputational ESG risk on the deal completion likelihood. The marginal effects indicate a weak positive relationship between the Peak RRI and deal completion likelihood on a global scale, for the Americas and Asia and a weak negative relationship for Europe. These results would suggest that higher reputational ESG risks increase the deal completion likelihood in the Americas and Asia, but decrease it in Europe. However, none of the results are significant at the 10% level. Similar to the acquiror regression, the addition of interaction terms makes a part of the results significant. Using interaction terms between Peak RRI and the acquiror or target firm size leads to significant interaction terms and significant coefficient for the Peak RRI on a global level (5%) as well as in the Americas (10%). This observation suggests that reputational ESG risks influence the deal completion likelihood differently depending on the size of the participating companies. To allow for a better interpretation,

Panels A and B of Table 5 show results for the same probit regression run on subsamples, split at the median of the target firm size and acquiror firm size, respectively. There are not enough observations to derive meaningful results for Europe and Asia. The results are only significant at the 5% level for small firm sizes, for which the marginal effects are positive. This outcome suggests that higher ESG risks of targets have a positive relation with the deal completion likelihood for smaller targets and acquirors alike, while having no significant impact for larger companies.

The results are surprising and contradict hypothesis 2(a) that higher reputational ESG risks of the target lead to a lower deal completion likelihood. Instead, they suggest that higher reputational ESG risks even increase the deal completion likelihood when smaller targets and acquirors are involved. A potential explanation for the former might be that smaller targets generally have a lower exposure to media and the risk of a significant reputational damage is lower in spite of negative incidents. This hypothesis is supported by the fact that the smaller 50% of targets possess an average Peak RRI of 12.52, whereas the larger 50% of targets have an average Peak RRI of 20.42. While large ESG risks might be considered as a potential deal breaker, smaller risks might not be. The positive correlation between Peak RRI and the deal completion likelihood might thus stem from other firm characteristics that are positively seen and contribute to a higher exposure to ESG risks, for instance international activities or lower costs. A similar argument can be made for smaller acquirors, which might primarily focus on financial performance and not consider ESG risks in their due diligence. The results in Panel B indicate that large acquirors do care about reputational ESG risks, as the target's Peak RRI is negatively correlated to the deal completion likelihood. However, the results are not significant and conclusive derivations are thus not possible.

The control variables show similar coefficients as in previous studies. While a higher acquiror firm size, higher free cash flows and the existence of a tender offer have a significant positive impact on the deal completion likelihood, larger targets, hostile or competitive bids as well as all cash acquisitions have a significant negative impact on the deal completion likelihood.

4.2 Deal Duration

Next, I examine whether the acquiror's or target's Peak RRI have an influence on the deal duration, calculated as the number of days between the announcement date and the execution date or withdrawal date. A multivariate regression is run for the global sample, as well as for regions with sufficient observations for both the acquiror and target sample. Results for regressions, only including successful transactions, are presented in Tables 6 and 7.

$$\begin{aligned}
\text{DealDuration}_i = & \beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\
& + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\
& + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\
& + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\
& + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\
& + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\
& + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects} \\
& + \text{CountryEffects}) + \epsilon_i
\end{aligned} \tag{3}$$

The results in Table 6 show a positive correlation of the Peak RRI with the deal duration in the Americas at a significance level of 5%, indicating that a higher Peak RRI is connected to a longer deal duration. While the coefficients are close to zero on a global scale and in Asia, a negative coefficient is observed for Europe. However, none of these coefficients is significant at the 10% level. By adding the interaction term between the Peak RRI and the target's firm size, both the interaction term and the Peak RRI variable become significant at the 1% level for the global level, the Americas and Europe. The interaction term has a positive coefficient, while the Peak RRI has a larger, negative coefficient. This suggests that the acquiror's ESG risks have a negative relation with the deal duration for transactions with a smaller target, while they have a positive relation for transactions with a larger target. To further investigate this relationship, additional regressions are performed with the sample split at the median target size. The results, as

seen in Panel A of Table 8, show a significant positive impact of the Peak RRI variable on deal duration for large targets in the Americas. This is consistent with the findings by [Deng et al. \(2013\)](#) who focus on listed companies in their analysis, which are typically larger on average. While the remaining regressions do not reveal significant results, larger targets generally do show a positive relation between Peak RRI and the deal duration, while smaller targets show negative coefficients or coefficients close to zero, which would suggest that higher ESG risks lead to longer deal durations for large targets, but shorter deal durations for small targets. Asia is the only exception as a negative coefficient can be observed for large targets, while a positive coefficient is displayed for smaller targets. Neither of the two results are significant at the 10% level, however. The findings indicate that the acquiror's reputational ESG risks usually do not play a large role in the deal duration. This could mean that shareholders of the target and other stakeholders involved, such as creditors or regulators, do not consider ESG risks of the acquiror to be crucial topics that lead to longer discussions. A notable exception are the Americas where particularly transactions with large targets show a longer deal duration when ESG risks are high. This could indicate that shareholders of larger companies perform a more careful due diligence which extends the deal duration when ESG risks are found. The explanation is consistent with the fact that larger ESG risks in the Americas are, albeit not significant, also negatively correlated with the deal completion likelihood. Moreover, the findings are consistent with [Deng et al. \(2013\)](#) who find that US transactions by high CSR acquirors take less time to be completed.

Including withdrawn transactions into the regression leads to very similar results. However, while not being significant, the coefficients are generally less positive or more negative, indicating that transactions by acquirors with high ESG risks are withdrawn faster than other transactions. This hypothesis is strengthened when performing the regression including only withdrawn transactions, in which the coefficients are even more negative. For larger targets on a global level, the coefficient of -1.065 is significant at the 5% level, indicating that an additional score of Peak RRI leads to a withdrawal of the transaction one day earlier. Looking at the combined results, they suggest that ESG

risks can be a deal breaker and thus lead to a quicker withdrawal, but do not significantly influence the deal duration of transactions which are not withdrawn.

Overall, hypothesis 3(a), stating that transactions by acquirors with higher reputational ESG risks are less likely to be completed, is rejected globally, for Europe and Asia. The coefficients for Europe even suggest that higher ESG risks are related to a shorter completion time.

Table 7 presents results for the target sample. The coefficients for Peak RRI are positive globally and in Asia, and negative in the Americas and Europe. However, none of them is significant at the 10% level. Similar to the acquiror regression, the addition of an interaction term between the Peak RRI and the acquiror firm size leads to significant coefficients for both the interaction term and Peak RRI in all regions. To further investigate the relationship, Panel B of Table 8 presents regressions with the sample split by acquiror size. A significant negative correlation can be seen for smaller acquirors on a global level and in the Americas. In contrast to hypothesis 3(b), the results indicate that higher ESG risks of targets are connected to a shorter deal duration. Including withdrawn transactions in the sample leads to very similar results, indicating no material difference between the impact of ESG risks on withdrawn and successful transactions as higher ESG risks lead to lower deal durations in either case. Consistent with the results from the previous section, a possible explanation is that while a target’s reputational ESG risks generally are not considered as a deal breaker and thus do not prolong the deal duration, they might be positively related to other firm characteristics that reduce the length of the transaction process.

4.3 Bid Premium

Lastly, I analyse whether the bid premium is affected by the acquiror’s or target’s Peak RRI. Following [Krishnamurti et al. \(2019\)](#), a multivariate regression is run for the global sample, as well as for regions with sufficient observations for both the acquiror and

target sample. Results are presented in Tables 9 and 10.

$$\begin{aligned}
\text{BidPremium}_i = & \beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\
& + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\
& + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\
& + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\
& + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\
& + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\
& + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects} \\
& + \text{CountryEffects} + \epsilon_i
\end{aligned} \tag{4}$$

As seen in Tables 9 and 10, Peak RRI has positive coefficients for all regressions with exception of Asia for the acquiror sample. However, none of the coefficients of the acquiror sample is significant at the 10% level, suggesting that the acquiror’s reputational ESG risks do not influence bid premiums. [Krishnamurti et al. \(2019\)](#) analyse Australian transactions and find that socially responsible acquirors pay lower bid premiums. The results presented do not support their findings on for regions outside of Australia.

The results for the target sample are significant at the 5% level for the global level and at the 10% level for the Americas and Europe. These findings indicate that higher reputational ESG risks lead to a higher bid premium and are in contrast to hypothesis 1(a) which postulates that targets with higher reputational ESG risks are acquired for a lower bid premium. Moreover, the results are in opposition to the findings of [Gomes and Marsat \(2018\)](#) who show that higher CSR involvement of the target is positively related to bid premiums.

4.4 Robustness Tests

4.4.1 Dealing with Outliers

Outliers can significantly influence the results of regressions. Winsorizing and trimming are two different methods of treating outliers, both with their advantages and draw-

backs. Following previous literature in this field, the results displayed in this study show values obtained with observations winsorized at the 1% and 99% level. To avoid that the winsorization leads to biases that significantly change the results, I repeat all statistical tests using variables winsorized at the 0.5% and 99.5% level and variables trimmed only for values that are not sensible (i.e. negative number of days between the announcement and the completion) or have too much influence on the entire regression (based on Cook's distance). While the t-values vary slightly, leading to a shift in significance level for few results, the coefficients and overall results remain similar.

4.4.2 Survival Analysis for Deal Duration

Alternatively to the multivariate regression used in this paper, a survival analysis can be performed to analyse the deal duration. Following [Deng et al. \(2013\)](#), a cox proportional hazards model is used to examine the number of days until the "failure", which is given by the transaction execution or withdrawal. The results, presented in Tables 11 and 12 for the acquiror and target sample, remain very similar to the results from the multivariate regression as positive coefficients in the cox proportional hazards model imply an increased hazard and consequently a shorter deal duration.

4.4.3 Alternative measures of reputational ESG risk

This study uses RepRisk's Peak RRI score, ranging from 0-100, to analyse reputational ESG risks. An implicit assumption is that practitioners have a differentiated view on the severity of ESG risks and focus on the individual company for the risk assessment. To take into account the possibility that practitioners have a different understanding of ESG risks, the analyses are repeated with two additional scores. First, the Peak RRI is categorized on a scale from 0 (low risk) to 4 (extremely high risk) according to RepRisk's own interpretation of the risks. Scores from 0-24 indicate a low risk, 25-49 denotes medium risk, 50-59 high risk, 60-74 very high risk and 75-100 extremely high risk. The categorization allows an interpretation in which professionals do not differentiate the ESG risks too much, but rather look at them from a make-or-break perspective. For

instance, companies might deem any risk incidents that result in a score of above 24 to be too dangerous and retreat from the deal, independent of the exact RRI score. Second, the RRR, which incorporate the company’s individual Peak RRI as well as the country-sector average ESG risk, are transformed into values from 0 (for AAA) to 9 (for D). The underlying assumption of the RRR usage is that practitioners also consider the risk inherent to the company’s country of operation when analysing the ESG risks. Companies from a country with typically higher risk scores would thus exhibit a higher RRR as well. The results for the categorized Peak RRI remain similar to the original results, with some changes in the t-values that cause a shift in the significance level. The results for the RRR show a higher discrepancy. While the coefficient signs are similar with few exceptions, the significance levels are different from the original results in several cases. The overall results of the study remain robust, but further analysis is required to examine the influence of the country-sector ESG risks on M&A transactions.

5 Discussion

The results of this study provide new evidence on the influence of reputational ESG risks on M&A deal characteristics. At first, the results seem to oppose results from previous studies. They suggest primarily weak influences of reputational ESG risks on the examined deal characteristics. Significant results found oppose the relationships between ESG scores and deal characteristics established in previous papers and to the hypotheses postulated in this paper.

One possible explanation for the apparent contradiction are the differences in the study design or the sample. The databases used in the studies are different, which leads to different companies being included in the sample due to varying coverages. Additionally, previous studies often focused on one particular country or region, whereas this study includes global companies. However, discrepancies are also observed when only analysing the US, the country examined by [Deng et al. \(2013\)](#). Generally, the differences in the study design hardly explain the sometimes strikingly different results.

A second possibility is the usage of different ESG scores. ESG ratings used in previous

studies, e.g. KLD, and RepRisk have different methodologies as described in Section 3.1.1. [Chatterji et al. \(2016\)](#) find that ESG ratings are divergent, indicating that the same company can possess very different scores from different rating agencies. Although RepRisk is not part of the comparison, their distinct scoring methodology provides grounds for the assumption that their scores are divergent from other ESG scores as well. The divergence in ESG scores might be able to explain parts of the differences in results between this study and previous research.

While the results underline the relevance of ESG scores, they also shed light on the question of what companies consider when they talk about ESG. They might make their own assessment of ESG performances or rely on external ratings. They might focus on risks stemming from ESG-related activities or also weight in the advantages positive ESG performance has. The answers to these questions could have implications for CEOs who want to strengthen their companies' ESG profile, for rating agencies who aim to provide objective scores, for investors who want to assess the true inherent ESG risks of their investments as well as for academics who examine the impact of ESG scores on various financial and corporate metrics. This study provides first evidence that reputational ESG risks do not negatively influence the characteristics of M&A transactions in the way that strong ESG scores positively influence them. Further research is required to examine why reputational ESG risks influence deal characteristics in the opposite way suggested by ESG scores, as well as to examine whether it is the ESG scores themselves, or the metrics captured by the ESG scores, that drive the influence seen in previous literature.

5.1 Study Limitations

Despite its advantages, the utilization of ESG data from RepRisk comes with certain limitations. First, the lack of a common ID complicates the matching of companies with transaction data from other databases. While the algorithm developed for this study facilitates matching and has a high accuracy, and matches are manually checked, the process is time-consuming and prone to errors. False positive matches and missing positives cannot be ruled out, although the impact on the results is likely to be small due to the

large sample size. Second, RepRisk bases its scores entirely on third-party documents, articles and press releases. While this prevents subjective influence by the respective companies, the RRI score is strongly influenced by the media landscape and freedom of press in the different countries. Negative articles about corporates are likely to be less frequent in countries with a low degree of freedom of the press. Similarly, overarching events might influence the coverage of negative incidents. For instance, the focus of press and social media on the corona virus, especially in the second quarter of 2020, could lead to a less prominent coverage of negative events that otherwise might have been significantly larger. Third, the analysis of the influence of ESG scores on firm or deal characteristics automatically incorporates the question of how decision makers and stakeholders define ESG scores. This study provides a first indication to the question of whether negative press coverage influences M&A characteristics. However, it cannot answer whether negative press coverage is a relevant factor that stakeholders incorporate in their ESG due diligence. Consequently, the importance of ESG factors in M&A transactions cannot be answered either. Further studies analysing how stakeholders define relevant ESG factors and comparisons between different ESG scores are needed to advance the research in this field.

6 Conclusion

Relying on proven frameworks, this paper analyses the influence of target and acquiror reputational ESG risks on M&A deal completion likelihood, deal duration and bid premium globally and on a regional level. The analyses provide several new insights. First, acquirors with low reputational ESG risks are more likely to be involved in a successful transaction than acquirors with high reputational ESG risks if the transaction does not involve a tender offer or is non-competing. Second, targets with high reputational ESG risks are more likely to be part of a successful transaction if the target or acquiror is smaller than the median target or acquiror, respectively. Furthermore, the deal duration is significantly decreased for targets with high reputational ESG risks if the acquiror is a smaller than the median acquiror. Third, targets with higher reputational ESG risks are

acquired for a higher bid premium than targets with lower reputational ESG risks. Lastly, the influence varies strongly across regions. The Americas show the highest average influence of reputational ESG risks, whereas Asia exhibits the lowest degree of influence. The results oppose previous literature that predominantly finds that transactions by acquirors with a high CSR performance have a higher deal completion likelihood, lower deal duration and pay lower premiums, while transactions including targets with high CSR performance exhibit higher bid premiums. On the one hand, these findings suggest a disparity between the reputational ESG risks inherent to a company according to RepRisk and the ESG performance according to alternative ESG rating agencies. On the other hand, the results do not support theoretical frameworks suggesting that low ESG risks should lead to higher deal completion likelihoods and lower deal durations. Further research is necessary to understand companies' and investors' interpretations of ESG and whether ESG risks or strengths are weighted stronger. Finally, this study provides new evidence that reputational ESG risks have differing influences on M&A deals depending on the geography. While the coefficients show the highest significance in the Americas, Asia often shows inconclusive and insignificant results. The differences could be explained by differences in ESG reporting regulations and the varying relevance of ESG around the world. Further research is required to analyse the roots of the differences and whether a convergence in the relevance of ESG factors over time can be observed.

Appendix

A Matching Algorithm

RepRisk and SDC Platinum have different naming conventions and lack a common identifier. Therefore, I follow [Li and Wu \(2020\)](#) and develop a Python matching algorithm that connects companies from RepRisk with companies from SDC Platinum. With small adjustments, the matching algorithm can also be used to for other databases. The algorithm includes the following steps:

1. RepRisk often includes alternative or former company names in parentheses. These alternative names are split into separated strings, while irrelevant strings in parentheses that are sometimes included (e.g. the country of incorporation) are removed.
2. The company names of both databases are standardized by capitalizing the names, by removing additional words that are used to introduce alternative names (e.g. formerly known as, also, dba), suffixes and prefixes (e.g. Inc, AG) and by trimming certain special characters and spaces.
3. The company names from both databases are compared. A match occurs when the headquarter country is identical and (1) the company names are completely identical, (2) the URLs are completely identical, or (3) a fuzzy string matching algorithm leads to a score of at least 0.95. The fuzzy string matching algorithm compares words in a string and can handle minor spelling differences, spelling mistakes, different word orders and additional words (e.g. The Walt Disney Company vs. Walt Disney Company). Based on a sample, the 0.95 threshold proved to correctly identify the largest number of matches (more than 95%) while maintaining a high accuracy of more than 98%.

To remove false positives, I manually verify all matches afterwards. Sometimes, RepRisk has more than one entry for a company. In these cases, I use the most recent entry and remove the others. I apply the matching algorithm independently to targets and acquirors to create two separated databases, containing all targets and acquirors that are included in the RepRisk database, respectively.

B Variables Definitions

Variable	Definition
<i>Dependent Variables</i>	
DealCompletion	A dummy variable taking the value 1 if the deal is successful and 0 if the deal is withdrawn.
Daystocomplete	Measures the number of days between the announcement date and the execution of a merger.
Daystowithdrawn	Measures the number of days between the announcement date and the date of the withdrawal of the deal.
BidPremium	The natural logarithm of the bid premium, computed as the the offer price per share minus the share price of the target four weeks before the announcement date divided by the share price of the target four weeks before the announcement date, minus one.
<i>Company Characteristics</i>	
Peak RRI	The Peak Reputational Risk Index expresses a firm's reputational ESG risk as calculated by RepRisk and takes values between 0 (low risk) and 100 (high risk).
AcquirorSize	The natural logarithm of the of the book value of total assets of the acquiror.
TargetSize	The natural logarithm of the of the book value of total assets of the target.
TargetLeverage	The target's leverage, calculated as long term debt plus current liabilities divided by the total assets.
TargetFCF	The target's free cash flow, calculated as EBITDA plus net interest income minus taxes minus CAPEX, all scaled by the total assets.
TargetCurrentRatio	The target's current ratio, calculated as current assets divided by the current liabilities.
<i>Deal Characteristics</i>	
Toehold	A dummy variable taking the value 1 if the acquiror owns at least 5% of the target prior to the deal, and 0 otherwise.
Allcash	A dummy variable taking the value 1 if the deal has been financed completely with cash, and 0 otherwise.
Tender	A dummy variable taking the value 1 if the deal is reported as tender offer by SDC Platinum, and 0 otherwise.
Hostile	A dummy variable taking the value 1 if the deal is reported as hostile by SDC Platinum, and 0 otherwise.
Diversifying	A dummy variable taking the value 1 if the macro industry of the target and the acquiror are different according to SDC Platinum, and 0 otherwise.
Competing	A dummy variable taking the value 1 if the deal is reported as competitive bid by SDC Platinum, and 0 otherwise.

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Table 1

Sample distribution and summary statistics

This table shows the sample distribution and summary statistics for for both the acquiror and target sample. Panel A shows the sample distribution across years and regions. Panel B shows means of dependent and control variables by region for the entire observation period. All variables are defined in Appendix B. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019.

<i>Panel A: Sample distribution by year and region</i>												
	Acquirors						Targets					
	Africa	Americas	Asia	Europe	Oceania	Total	Africa	Americas	Asia	Europe	Oceania	Total
2007	2	186	35	64	18	305	0	56	5	5	12	78
2008	5	128	40	48	17	238	3	62	7	11	8	91
2009	2	115	49	30	16	212	1	48	11	5	11	76
2010	1	126	26	48	14	215	1	51	4	9	13	78
2011	2	111	48	40	11	212	4	52	8	5	10	79
2012	2	129	44	36	12	223	0	58	11	15	9	93
2013	3	93	34	20	10	160	0	44	7	4	4	59
2014	2	108	23	44	7	184	0	68	11	19	9	107
2015	1	128	44	32	7	212	3	87	18	16	7	131
2016	3	103	42	25	7	180	1	78	11	20	4	114
2017	2	86	19	38	2	147	1	48	2	13	2	66
2018	1	94	31	32	12	170	2	69	8	17	11	107
2019	0	57	11	16	7	91	0	32	5	6	7	50
Total	26	1464	446	473	140	2549	16	753	108	145	107	1129

<i>Panel B: Summary statistics by region</i>												
	Acquirors						Targets					
	Africa	Americas	Asia	Europe	Oceania	Total	Africa	Americas	Asia	Europe	Oceania	Total
Dealcomp	0.62	0.86	0.84	0.80	0.66	0.83	0.50	0.80	0.76	0.62	0.55	0.74
Daystocomp	163.44	108.23	133.37	133.79	127.70	118.46	143.88	136.30	213.37	181.04	142.64	149.16
Daystowith	65.30	138.64	187.27	108.48	119.11	136.31	130.75	133.68	182.04	119.29	115.90	132.26
BidPremium	3.48	3.57	3.38	3.50	3.61	3.53	3.17	3.46	2.86	3.55	3.50	3.44
Peak RRI	21.46	20.34	16.50	22.84	10.74	19.62	21.25	16.35	14.66	21.30	14.86	16.75
AcquirorSize	8.05	8.19	8.27	8.74	6.20	8.19	8.35	8.41	8.02	8.68	6.82	8.25
TargetSize	5.84	5.83	5.71	6.15	4.66	5.80	7.32	6.88	6.66	7.51	5.35	6.80
TargetLeverage	0.32	0.46	0.51	0.49	0.34	0.47	0.37	0.45	0.58	0.50	0.34	0.46
TargetFCF	-0.03	-0.08	-0.03	-0.03	-0.23	-0.07	0.01	-0.03	-0.01	0.03	-0.13	-0.03
TargetCurRatio	4.18	3.57	2.21	2.88	5.27	3.30	1.40	3.78	1.62	2.19	5.57	3.51
Toehold	0.12	0.06	0.27	0.13	0.24	0.12	0.00	0.06	0.23	0.19	0.24	0.11
Allcash	0.58	0.47	0.56	0.59	0.22	0.50	0.44	0.40	0.35	0.48	0.34	0.40
Tender	0.15	0.19	0.31	0.37	0.39	0.26	0.00	0.17	0.06	0.33	0.33	0.19
Hostile	0.00	0.02	0.00	0.02	0.01	0.02	0.00	0.03	0.01	0.06	0.01	0.03
Diversifying	0.27	0.21	0.39	0.26	0.16	0.25	0.13	0.18	0.44	0.20	0.20	0.21
Competing	0.04	0.08	0.04	0.12	0.19	0.09	0.13	0.09	0.00	0.20	0.18	0.11

Table 2

Influence of Peak RRI on deal completion likelihood of the acquiror sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the acquiror sample. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a probit regression without interaction terms. Columns (2), (4), (6) and (8) report results of a probit regression including two interaction terms between Peak RRI and Tender as well as Peak RRI and Competing. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	-0.001 (-1.454)	-0.001 (-2.382)**	-0.001 (-1.569)	-0.001 (-2.611)***	-0.001 (-1.008)	-0.001 (-1.770)*	0.001 (1.039)	0.001 (1.004)
AcquirorSize	0.022 (4.543)***	0.022 (4.559)***	0.024 (3.826)***	0.023 (3.760)***	0.016 (1.252)	0.017 (1.404)	0.015 (1.281)	0.015 (1.237)
TargetSize	-0.029 (-6.405)***	-0.029 (-6.385)***	-0.028 (-4.903)***	-0.027 (-4.794)***	-0.027 (-2.557)**	-0.028 (-2.669)***	-0.019 (-1.853)*	-0.019 (-1.873)*
TargetLeverage	0.010 (0.484)	0.007 (0.322)	0.012 (0.546)	0.008 (0.347)	0.009 (0.122)	0.001 (0.019)	-0.015 (-0.266)	-0.013 (-0.234)
TargetFCF	0.059 (2.235)**	0.057 (2.195)**	0.069 (2.494)**	0.068 (2.476)**	-0.149 (-1.111)	-0.158 (-1.173)	0.102 (1.165)	0.092 (1.045)
TargetCurrentRatio	0.000 (0.181)	0.000 (0.162)	0.002 (1.197)	0.002 (1.197)	-0.005 (-1.237)	-0.004 (-1.198)	-0.014 (-2.816)***	-0.013 (-2.691)***
Toehold	-0.019 (-0.997)	-0.018 (-0.941)	-0.067 (-2.409)**	-0.065 (-2.349)**	-0.020 (-0.451)	-0.011 (-0.245)	0.001 (0.017)	0.005 (0.123)
Allcash	-0.021 (-1.414)	-0.021 (-1.419)	-0.020 (-1.121)	-0.020 (-1.112)	0.078 (2.315)**	0.085 (2.531)**	-0.110 (-3.301)***	-0.110 (-3.337)***
Tender	0.096 (6.087)***	0.097 (3.754)***	0.064 (3.180)***	0.064 (0.878)	0.141 (4.045)***	0.140 (2.638)***	0.157 (3.888)***	0.155 (3.372)***
Hostile	-0.416 (-8.727)***	-0.419 (-8.752)***	-0.462 (-7.183)***	-0.466 (-7.133)***	-0.274 (-3.084)***	-0.289 (-3.255)***		
Diversifying	-0.008 (-0.526)	-0.008 (-0.529)	0.001 (0.056)	0.001 (0.072)	0.080 (2.021)**	0.078 (1.996)**	-0.094 (-2.701)***	-0.097 (-2.774)***
Competin	-0.408 (-14.108)***	-0.409 (-11.149)***	-0.406 (-10.484)***	-0.408 (-8.167)***	-0.432 (-7.387)***	-0.406 (-6.313)***	-0.392 (-4.391)***	-0.410 (-3.642)***
Tender × Peak RRI		(1.262)		(2.026)**		(0.187)		(-0.902)
Competing × Peak RRI		(2.033)**		(1.634)		(2.041)**		(1.233)
Constant	(2.982)***	(3.210)***	(1.697)*	(1.818)*	(0.622)	(0.563)	(1.695)*	(1.764)*
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2545	2545	1450	1450	473	473	442	442
Pseudo R^2	0.254	0.257	0.279	0.286	0.364	0.374	0.337	0.342

Table 3

Influence of Peak RRI on deal completion likelihood for subsamples of the acquiror sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the acquiror sample, split by the variables Tender and Competing. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Panel A reports probit regression estimates with the acquiror sample split into transactions that include a tender offer, shown in columns (2) and (4), and transactions that do not include a tender offer, shown in columns (1), (3) and (5). Europe has too few observations with tender offers to derive meaningful results. Panel B reports probit regression estimates with the acquiror sample split into competitive transactions with more than one bidder, shown in columns (2) and (4), and non-competitive transactions, shown in columns (1), (3) and (5). Europe has too few observations with competitive transactions to derive meaningful results. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

<i>Panel A: Acquiror sample split by Tender</i>					
	Global		Americas		Europe
	(1)	(2)	(3)	(4)	(5)
Peak RRI	-0.001 (-2.139)**	0.001 (1.790)*	-0.001 (-2.335)**	0.002 (1.290)	-0.003 (-1.775)*
Control Variables	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	1863	623	1153	257	288
Pseudo R^2	0.250	0.436	0.244	0.606	0.370
<i>Panel B: Acquiror sample split by Competing</i>					
	Global		Americas		Europe
	(1)	(2)	(3)	(4)	(5)
Peak RRI	-0.001 (-2.251)**	0.002 (1.209)	-0.001 (-2.019)**	-0.001 (-0.314)	-0.003 (-2.196)**
Control Variables	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	2278	214	1332	105	372
Pseudo R^2	0.188	0.297	0.198	0.259	0.354

Table 4

Influence of Peak RRI on deal completion likelihood of the target sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the target sample. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a probit regression without interaction terms. Columns (2), (4), (6) and (8) report results of a probit regression including two interaction terms between Peak RRI and TargetSize as well as AcquirorSize. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	0.001 (1.095)	0.001 (2.559)**	0.001 (1.170)	0.001 (1.781)*	-0.004 (-1.606)	-0.004 (0.279)	0.007 (1.570)	0.013 (1.556)
AcquirorSize	0.030 (3.930)***	0.030 (3.082)***	0.037 (4.144)***	0.037 (2.708)***	-0.015 (-0.587)	-0.011 (-0.401)	-0.103 (-1.939)*	-0.129 (-1.693)*
TargetSize	-0.025 (-2.486)**	-0.022 (-0.733)	-0.033 (-2.918)***	-0.031 (-0.965)	0.007 (0.199)	0.004 (0.619)	0.120 (1.681)*	0.116 (1.781)*
TargetLeverage	0.044 (0.932)	0.038 (0.812)	-0.001 (-0.013)	-0.010 (-0.190)	-0.372 (-1.645)*	-0.380 (-1.657)*	0.675 (1.542)	1.136 (1.581)
TargetFCF	0.153 (2.172)**	0.137 (1.929)*	0.127 (1.709)*	0.107 (1.438)	-0.229 (-0.448)	-0.326 (-0.602)	1.028 (1.650)*	1.635 (1.528)
TargetCurrentRatio	0.000 (0.176)	0.000 (0.181)	-0.000 (-0.008)	-0.000 (-0.069)	-0.009 (-1.237)	-0.009 (-1.083)	0.193 (2.690)***	0.250 (2.286)**
Toehold	-0.000 (-0.008)	-0.000 (-0.005)	-0.051 (-1.022)	-0.056 (-1.131)	0.166 (1.610)	0.166 (1.617)	0.232 (1.411)	0.283 (1.474)
Allcash	-0.060 (-2.272)**	-0.064 (-2.399)**	-0.059 (-1.984)**	-0.061 (-2.051)**	-0.172 (-1.957)*	-0.174 (-1.976)**	-0.247 (-2.005)**	-0.386 (-2.131)**
Tender	0.159 (5.049)***	0.155 (4.941)***	0.137 (3.772)***	0.133 (3.633)***	0.351 (3.662)***	0.337 (3.425)***		
Hostile	-0.608 (-7.734)***	-0.603 (-7.715)***	-0.616 (-6.423)***	-0.604 (-6.329)***	-0.590 (-3.156)***	-0.623 (-3.157)***		
Diversifying	-0.000 (-0.004)	-0.001 (-0.027)	0.030 (0.833)	0.026 (0.707)	0.249 (2.407)**	0.250 (2.433)**	-0.148 (-1.392)	-0.171 (-1.344)
Competing	-0.410 (-8.925)***	-0.401 (-8.761)***	-0.469 (-7.910)***	-0.458 (-7.798)***	-0.306 (-3.152)***	-0.282 (-2.800)***		
TargetSize \times Peak RRI								
		(-1.718)*		(-1.842)*		(-0.639)		(-1.275)
AcquirorSize \times Peak RRI								
		(-0.174)		(0.711)		(0.111)		(-0.453)
Constant								
	(0.600)	(-0.414)	(0.197)	(-0.484)	(0.877)	(0.512)	(-0.770)	(-1.374)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1119	1119	748	748	144	144	84	84
Pseudo R^2	0.223	0.228	0.271	0.276	0.418	0.422	0.474	0.509

Table 5

Influence of Peak RRI on deal completion likelihood for subsamples of the target sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the target sample, split by the TargetSize and AcquirorSize. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Panel A reports probit regression estimates with the target sample split at the median TargetSize. Columns (1) and (3) show transactions in which the target is smaller than the median TargetSize, while columns (2) and (4) show transactions in which the target is larger. Panel B reports probit regression estimates with the target sample split at the median AcquirorSize. Columns (1) and (3) show transactions in which the acquiror is smaller than the median AcquirorSize, while columns (2) and (4) show transactions in which the acquiror is larger. All variables are winsorized at the 1st and 99th percentiles. All variables are defined in Appendix B. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

<i>Panel A: Target sample split by TargetSize</i>				
	Global		Americas	
	(1)	(2)	(3)	(4)
Peak RRI	0.003 (2.292)**	-0.000 (-0.110)	0.002 (1.919)*	0.000 (0.193)
Control Variables	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	557	558	369	373
Pseudo R^2	0.231	0.275	0.324	0.312
<i>Panel B: Target sample split by AcquirorSize</i>				
	Global		Americas	
	(1)	(2)	(3)	(4)
Peak RRI	0.003 (2.196)**	-0.001 (-0.907)	0.003 (2.226)**	-0.001 (-0.524)
Control Variables	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	558	557	368	373
Pseudo R^2	0.201	0.332	0.245	0.384

Table 6

Influence of Peak RRI on deal duration of the acquiror sample

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the acquiror sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a regression without interaction terms. Columns (2), (4), (6) and (8) report results of a regression including an interaction term between Peak RRI and TargetSize. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	0.046 (0.382)	-1.283 (-3.790)***	0.262 (1.968)**	-1.081 (-2.970)***	-0.095 (-0.239)	-3.459 (-3.198)***	-0.072 (-0.199)	1.468 (1.199)
AcquirorSize	-1.679 (-1.254)	-0.850 (-0.634)	-4.003 (-2.771)***	-3.054 (-2.158)**	-1.658 (-0.369)	0.540 (0.121)	0.713 (0.180)	0.000 (0.000)
TargetSize	19.862 (13.586)***	15.043 (8.355)***	19.779 (12.410)***	14.689 (7.703)***	23.051 (5.096)***	11.419 (1.879)*	22.921 (4.746)***	27.812 (4.640)***
TargetLeverage	-0.074 (-0.012)	-1.459 (-0.241)	0.338 (0.059)	-0.827 (-0.143)	2.894 (0.123)	-7.987 (-0.362)	-19.886 (-0.503)	-21.627 (-0.544)
TargetFCF	-2.567 (-0.436)	-3.816 (-0.651)	-7.785 (-1.273)	-8.849 (-1.450)	14.762 (0.608)	4.884 (0.207)	27.755 (0.961)	32.165 (1.114)
TargetCurrentRatio	-0.358 (-1.356)	-0.268 (-1.039)	-0.335 (-1.169)	-0.270 (-0.980)	-1.383 (-1.404)	-0.963 (-1.037)	-3.911 (-1.076)	-4.375 (-1.193)
Toehold	11.354 (1.796)*	11.806 (1.871)*	22.908 (2.658)***	23.456 (2.723)***	24.120 (1.310)	20.684 (1.127)	-13.995 (-1.152)	-14.770 (-1.225)
Allcash	-35.664 (-7.305)***	-35.710 (-7.349)***	-24.883 (-4.478)***	-25.431 (-4.610)***	-25.643 (-1.798)*	-22.677 (-1.588)	-70.780 (-4.573)***	-69.781 (-4.516)***
Tender	-12.547 (-3.003)***	-12.811 (-3.079)***	-20.421 (-3.814)***	-19.843 (-3.746)***	1.783 (0.159)	1.560 (0.141)	-12.118 (-1.065)	-13.163 (-1.135)
Hostile	47.480 (1.812)*	46.756 (1.773)*	54.933 (1.084)	52.015 (1.007)	36.723 (1.181)	43.001 (1.423)		
Diversifying	-5.657 (-1.280)	-5.854 (-1.329)	-1.160 (-0.216)	-1.707 (-0.322)	1.278 (0.095)	1.985 (0.150)	-25.807 (-2.483)**	-25.764 (-2.473)**
Competing	14.872 (1.435)	13.628 (1.322)	11.927 (0.950)	10.132 (0.807)	16.310 (0.529)	14.716 (0.480)	-19.068 (-0.836)	-22.649 (-0.976)
TargetSize \times Peak RRI		0.219 (3.787)***		0.220 (3.455)***		0.512 (3.037)***		-0.254 (-1.242)
Constant	54.443 (3.638)***	72.374 (4.737)***	91.355 (2.252)**	117.609 (2.880)***	42.924 (0.746)	95.359 (1.611)	69.250 (1.456)	47.784 (1.058)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2116	2116	1261	1261	376	376	370	370
R^2	0.308	0.315	0.328	0.337	0.288	0.315	0.405	0.409

Table 7

Influence of Peak RRI on deal duration of the target sample

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the target sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a regression without interaction terms. Columns (2), (4), (6) and (8) report results of a regression including an interaction term between Peak RRI and AcquirorSize. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	0.082 (0.339)	-2.557 (-2.858)***	-0.186 (-0.686)	-2.331 (-2.005)**	-0.078 (-0.065)	-8.338 (-1.977)*	1.007 (0.921)	-9.398 (-1.952)*
AcquirorSize	-1.471 (-0.695)	-6.224 (-2.292)**	-0.255 (-0.114)	-3.816 (-1.296)	5.690 (0.609)	-19.123 (-1.347)	1.418 (0.109)	-18.328 (-1.396)
TargetSize	25.353 (9.667)***	25.040 (9.640)***	26.762 (9.409)***	26.554 (9.419)***	18.031 (1.376)	20.194 (1.660)	27.517 (1.901)*	30.514 (2.335)**
TargetLeverage	-4.743 (-0.350)	-2.284 (-0.168)	3.978 (0.272)	5.673 (0.384)	12.465 (0.193)	21.797 (0.345)	-142.629 (-1.916)*	-126.052 (-1.702)*
TargetFCF	11.337 (0.671)	9.664 (0.585)	-1.680 (-0.095)	-3.213 (-0.186)	-43.356 (-0.241)	56.904 (0.328)	-60.173 (-0.404)	-83.783 (-0.510)
TargetCurrentRatio	0.094 (0.374)	0.186 (0.739)	0.112 (0.370)	0.222 (0.685)	-0.639 (-0.418)	0.070 (0.047)	2.337 (0.231)	3.665 (0.405)
Toehold	2.117 (0.199)	1.391 (0.130)	21.897 (1.585)	21.882 (1.558)	67.392 (1.486)	60.427 (1.393)	-30.032 (-0.845)	-17.466 (-0.533)
Allcash	-22.588 (-2.689)***	-22.777 (-2.736)***	-8.805 (-0.924)	-9.197 (-0.973)	-25.433 (-0.688)	-37.649 (-1.089)	-32.990 (-0.688)	-33.244 (-0.801)
Tender	-31.958 (-3.608)***	-30.731 (-3.491)***	-53.176 (-5.622)***	-52.121 (-5.546)***	-9.735 (-0.183)	3.250 (0.058)	30.136 (0.511)	7.046 (0.105)
Hostile	23.829 (0.814)	23.956 (0.788)	51.986 (1.189)	49.640 (1.114)	38.711 (0.596)	44.083 (0.834)		
Diversifying	1.686 (0.200)	1.776 (0.212)	6.562 (0.734)	6.925 (0.777)	-41.162 (-0.998)	-44.769 (-1.097)	4.885 (0.138)	2.948 (0.096)
Competing	13.139 (0.859)	11.157 (0.735)	9.959 (0.468)	9.671 (0.459)	46.950 (1.253)	25.759 (0.632)		
AcquirorSize × Peak RRI		0.309 (2.746)***		0.246 (1.705)*		0.912 (2.310)**		1.194 (2.275)**
Constant	-14.146 (-0.525)	26.647 (0.953)	-39.864 (-0.746)	-7.819 (-0.144)	6.897 (0.046)	144.323 (1.094)	-53.475 (-0.552)	21.985 (0.225)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	834	834	598	598	89	89	80	80
R^2	0.373	0.381	0.388	0.393	0.511	0.550	0.725	0.761

Table 8

Influence of Peak RRI on deal duration for subsamples of the acquiror and target samples

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the acquiror and target samples. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Panel A reports regression estimates with the acquiror sample split at the median TargetSize. Columns (1), (3), (5) and (7) show transactions in which the target is smaller than the median TargetSize, while columns (2), (4), (6) and (8) show transactions in which the target is larger. Panel B reports regression estimates with the target sample split at the median AcquirorSize. Columns (1), (3), (5) and (7) show transactions in which the acquiror is smaller than the median AcquirorSize, while columns (2), (4), (6) and (8) show transactions in which the acquiror is larger. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

<i>Panel A: Acquiror sample split by TargetSize</i>								
	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	-0.107 (-0.798)	0.202 (1.014)	0.053 (0.404)	0.429 (1.761)*	-0.584 (-0.965)	0.504 (0.925)	0.273 (0.515)	-0.275 (-0.493)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1119	997	662	599	208	168	194	176
R^2	0.196	0.324	0.108	0.355	0.243	0.478	0.415	0.419
<i>Panel B: Target sample split by AcquirorSize</i>								
	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	-0.569 (-2.101)**	0.110 (0.289)	-0.778 (-2.630)***	-0.039 (-0.089)	1.736 (0.924)	-6.645 (-1.084)	3.705 (1.546)	0.795 (0.321)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	402	432	292	306	47	42	38	42
R^2	0.523	0.414	0.438	0.460	0.879	0.993	0.993	0.876

Table 9

Influence of Peak RRI on bid premium of the acquiror sample

This table reports regression estimates of bid premium on reputational ESG risk and control variables for the acquiror sample. The dependent variable is the natural logarithm of the the bid premium calculated as the share price offered in the transaction minus the share price 4 weeks before the transaction over the share price 4 weeks before the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global	Americas	Europe	Asia
	(1)	(2)	(3)	(4)
Peak RRI	0.000 (0.268)	0.001 (0.606)	0.003 (0.841)	-0.007 (-1.569)
AcquirorSize	0.066 (3.814)***	0.068 (3.242)***	0.021 (0.462)	0.086 (1.460)
TargetSize	-0.103 (-6.740)***	-0.093 (-5.385)***	-0.153 (-3.723)***	-0.012 (-0.205)
TargetLeverage	0.060 (0.782)	0.081 (0.927)	0.520 (2.238)**	-0.313 (-0.800)
TargetFCF	-0.196 (-2.065)**	-0.189 (-1.556)	0.029 (0.101)	-0.231 (-0.628)
TargetCurrentRatio	-0.001 (-0.219)	-0.002 (-0.378)	0.011 (1.308)	0.021 (0.614)
Toehold	-0.088 (-1.259)	-0.004 (-0.043)	-0.087 (-0.472)	-0.143 (-0.945)
Allcash	0.067 (1.334)	0.042 (0.735)	0.192 (1.404)	0.036 (0.208)
Tender	0.160 (3.501)***	0.111 (2.006)**	0.070 (0.656)	0.391 (2.168)**
Hostile	0.136 (1.438)	0.109 (1.045)	0.059 (0.200)	-0.123 (-0.132)
Diversifying	-0.002 (-0.040)	-0.050 (-0.748)	0.100 (0.796)	-0.036 (-0.241)
Competing	0.302 (4.852)***	0.337 (4.216)***	0.279 (2.006)**	0.586 (1.947)*
Constant	3.380 (17.617)***	3.200 (11.324)***	4.097 (8.934)***	2.311 (4.054)***
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	1866	1108	367	272
R^2	0.153	0.152	0.189	0.297

Table 10

Influence of Peak RRI on bid premium of the target sample

This table reports regression estimates of bid premium on reputational ESG risk and control variables for the target sample. The dependent variable is the natural logarithm of the bid premium calculated as the share price offered in the transaction minus the share price 4 weeks before the transaction over the share price 4 weeks before the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global	Americas	Europe	Asia
	(1)	(2)	(3)	(4)
Peak RRI	0.004 (1.980)**	0.004 (1.890)*	0.014 (1.968)*	0.042 (1.499)
AcquirorSize	0.040 (1.734)*	0.042 (1.512)	0.087 (1.227)	0.686 (1.944)*
TargetSize	-0.095 (-3.912)***	-0.088 (-3.172)***	-0.127 (-1.510)	-1.519 (-3.404)***
TargetLeverage	0.108 (0.806)	0.142 (0.943)	0.022 (0.053)	0.913 (0.238)
TargetFCF	-0.101 (-0.479)	-0.064 (-0.263)	-1.424 (-1.785)*	8.046 (0.699)
TargetCurrentRatio	-0.003 (-0.470)	-0.005 (-0.757)	-0.010 (-0.376)	-0.571 (-1.357)
Toehold	0.084 (0.848)	0.114 (0.867)	-0.380 (-1.576)	1.189 (1.005)
Allcash	0.090 (1.362)	0.068 (0.913)	0.246 (1.381)	-2.450 (-1.375)
Tender	0.091 (1.273)	0.069 (0.826)	0.136 (0.628)	-4.429 (-1.985)*
Hostile	0.090 (0.770)	0.085 (0.702)	-0.054 (-0.159)	11.141 (2.102)*
Diversifying	-0.007 (-0.094)	0.079 (1.001)	-0.463 (-2.231)**	1.582 (1.481)
Competing	0.348 (4.601)***	0.352 (3.759)***	-0.050 (-0.250)	
Constant	3.121 (11.318)***	2.764 (6.636)***	4.686 (4.402)***	12.267 (2.933)**
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	862	613	120	42
R^2	0.159	0.139	0.400	0.773

Table 11

Influence of Peak RRI on deal duration of the acquiror sample: cox proportional hazards model

This table reports regression estimates of a non-parametric Cox model. The model regresses deal duration on reputational ESG risk and control variables for the acquiror sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a regression without interaction terms. Columns (2), (4), (6) and (8) report results of a regression including an interaction term between Peak RRI and TargetSize. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	-0.002 (-1.040)	0.013 (3.583)***	-0.004 (-1.979)**	0.014 (2.830)***	0.003 (0.809)	0.044 (4.306)***	0.002 (0.585)	-0.003 (-0.223)
AcquirorSize	0.086 (5.135)***	0.077 (4.543)***	0.118 (5.248)***	0.103 (4.573)***	0.036 (0.764)	0.023 (0.475)	0.064 (1.311)	0.069 (1.374)
TargetSize	-0.240 (-15.475)***	-0.186 (-9.432)***	-0.265 (-13.172)***	-0.201 (-7.835)***	-0.194 (-4.886)***	-0.060 (-1.194)	-0.271 (-6.347)***	-0.289 (-4.850)***
TargetLeverage	-0.128 (-1.756)*	-0.108 (-1.491)	-0.144 (-1.590)	-0.131 (-1.451)	-0.107 (-0.448)	0.087 (0.361)	-0.220 (-1.030)	-0.221 (-1.034)
TargetFCF	0.028 (0.298)	0.040 (0.415)	0.181 (1.578)	0.200 (1.730)*	-0.664 (-2.132)**	-0.620 (-2.074)**	-0.112 (-0.290)	-0.126 (-0.325)
TargetCurrentRatio	0.005 (1.134)	0.004 (0.996)	0.007 (1.309)	0.007 (1.250)	0.028 (2.139)**	0.023 (1.665)*	-0.043 (-1.861)*	-0.042 (-1.848)*
Toehold	-0.226 (-3.116)***	-0.230 (-3.167)***	-0.459 (-3.590)***	-0.469 (-3.664)***	-0.393 (-2.215)**	-0.370 (-2.086)**	0.029 (0.214)	0.029 (0.212)
Allcash	0.302 (5.794)***	0.298 (5.726)***	0.279 (4.067)***	0.274 (3.991)***	0.371 (2.812)***	0.354 (2.675)***	0.331 (2.171)**	0.327 (2.143)**
Tender	0.385 (6.757)***	0.389 (6.817)***	0.367 (4.669)***	0.364 (4.635)***	0.334 (2.664)***	0.312 (2.493)**	0.791 (4.849)***	0.794 (4.862)***
Hostile	-1.941 (-5.082)***	-1.970 (-5.157)***	-2.898 (-4.075)***	-2.935 (-4.125)***	-0.650 (-1.231)	-0.737 (-1.398)	-42.579 (.)	-42.571 (.)
Diversifying	0.008 (0.137)	0.011 (0.205)	-0.042 (-0.553)	-0.039 (-0.513)	0.097 (0.727)	0.065 (0.481)	0.023 (0.177)	0.019 (0.145)
Competing	-0.667 (-6.082)***	-0.667 (-6.083)***	-0.634 (-4.257)***	-0.642 (-4.309)***	-0.745 (-3.260)***	-0.746 (-3.279)***	-0.072 (-0.199)	-0.070 (-0.193)
TargetSize × Peak RRI		-0.002 (-4.381)***		-0.003 (-3.999)***		-0.006 (-4.307)***		0.001 (0.434)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2481	2481	1428	1428	458	458	432	432

Table 12

Influence of Peak RRI on deal duration of the target sample: cox proportional hazards model

This table reports regression estimates of a non-parametric Cox model. The model regresses deal duration on reputational ESG risk and control variables for the target sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Columns (1), (3), (5) and (7) report results of a regression without interaction terms. Columns (2), (4), (6) and (8) report results of a regression including an interaction term between Peak RRI and AcquirorSize. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Global		Americas		Europe		Asia	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peak RRI	0.002 (0.906)	0.024 (2.875)***	0.002 (0.819)	0.016 (1.526)	0.009 (0.833)	0.102 (2.312)**	-0.013 (-1.185)	0.154 (3.106)***
AcquirorSize	0.079 (3.321)***	0.123 (4.259)***	0.090 (3.296)***	0.116 (3.436)***	-0.104 (-0.843)	0.110 (0.690)	0.058 (0.490)	0.328 (2.345)**
TargetSize	-0.322 (-10.179)***	-0.324 (-10.222)***	-0.350 (-9.709)***	-0.352 (-9.756)***	-0.368 (-2.431)**	-0.321 (-2.068)**	-0.218 (-1.392)	-0.281 (-1.923)*
TargetLeverage	-0.120 (-0.818)	-0.096 (-0.656)	-0.226 (-1.318)	-0.205 (-1.196)	-0.505 (-0.718)	-0.494 (-0.701)	2.078 (2.250)**	2.298 (2.506)**
TargetFCF	0.067 (0.294)	0.058 (0.253)	0.224 (0.883)	0.225 (0.881)	1.179 (0.580)	0.391 (0.192)	1.305 (0.620)	1.334 (0.611)
TargetCurrentRatio	-0.003 (-0.525)	-0.003 (-0.571)	-0.002 (-0.298)	-0.002 (-0.400)	0.019 (0.842)	0.007 (0.307)	0.029 (0.226)	0.059 (0.470)
Toehold	-0.156 (-1.228)	-0.139 (-1.092)	-0.471 (-2.480)**	-0.464 (-2.443)**	-1.122 (-2.340)**	-0.902 (-1.872)*	0.590 (1.588)	0.461 (1.237)
Allcash	0.116 (1.359)	0.111 (1.295)	0.007 (0.071)	-0.000 (-0.003)	0.210 (0.504)	0.151 (0.371)	-0.034 (-0.085)	0.380 (0.949)
Tender	0.675 (6.059)***	0.675 (6.076)***	1.005 (7.657)***	1.004 (7.662)***	0.399 (0.952)	0.320 (0.755)	-0.033 (-0.040)	0.141 (0.157)
Hostile	-1.858 (-4.070)***	-1.870 (-4.098)***	-2.711 (-3.779)***	-2.711 (-3.779)***	-1.656 (-1.799)*	-2.030 (-2.187)**	(.)	(.)
Diversifying	-0.079 (-0.797)	-0.079 (-0.804)	-0.095 (-0.776)	-0.102 (-0.835)	0.997 (2.700)***	1.178 (3.155)***	0.341 (0.839)	0.263 (0.677)
Competing	-0.767 (-4.479)***	-0.778 (-4.537)***	-0.744 (-3.377)***	-0.757 (-3.429)***	-1.213 (-2.541)**	-1.149 (-2.419)**		
AcquirorSize × Peak RRI		-0.003 (-2.711)***		-0.002 (-1.341)		-0.011 (-2.191)**		-0.019 (-3.438)***
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1110	1110	745	745	143	143	103	103

Part 2: Do ESG risks influence M&A transactions? Evidence from the United States

Abstract: Using two large samples of US M&A transactions, this study assesses whether reputational ESG risks of targets and acquirors influence deal completion likelihood, deal duration and bid premium of the transaction. Higher reputational ESG risks of the acquiror are connected to a longer deal duration if the transaction includes a large target or does not involve a tender offer, as well as to a decreased deal completion likelihood for non-competitive and non-tender transactions. Higher reputational ESG risks of the target are related to a shorter deal duration if the acquiror is small or the target has a low leverage. The bid premium remains unaffected by the reputational ESG risks of either transaction party. The impact is slightly stronger for firms from Republican states than for firms from Democratic states. Overall, the results suggest differences between the impact of reputational ESG risks on M&A deals compared to the impact of other ESG scores established in previous research.

Keywords: ESG Risks, Corporate Social Responsibility, Mergers and Acquisitions, Deal Completion Likelihood, Deal Duration, Bid Premium

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1 Introduction

Over the last years, Corporate Social Responsibility (CSR) and Environment, Social and Governance (ESG) have experienced a surge in interest by practitioners and researchers alike. Numerous studies document significant relationships between CSR/ESG factors and corporate financial performance (e.g. [Van Beurden and Gössling, 2008](#)), firm value (e.g. [Malik, 2015](#)), access to finance (e.g. [Cheng et al., 2014](#)), cost of finance (e.g. [Goss and Roberts, 2011](#)) and stock price crash risk (e.g. [Kim et al., 2014](#)), among others. However, little research has been conducted on analysing the relationship between ESG factors and Mergers & Acquisitions (M&A). Recent surveys suggest that the importance of ESG due diligence in M&A transactions has strongly increased over the last years ([Mergermarket and IHS-Markit, 2019](#)), therefore it seems probable that both acquirors and targets have a strong interest in their counterparties ESG performance.

Initial research conducted for different countries suggest an existing relationship between CSR performance and post-merger performance ([Aktas et al., 2011](#)), deal completion likelihood & deal duration ([Deng et al., 2013](#)) and bid premia ([Krishnamurti et al., 2019](#)). The United States (US) is particularly interesting due to the high number of M&A transactions, the existence of a large number of ESG scores as well as the high public interest in ESG related issues. [Deng et al. \(2013\)](#) provide evidence for a positive relation between the acquiror's CSR performance and deal completion likelihood and a negative relation between the acquiror's CSR performance and deal duration for US transactions. On the other side, [Worring \(2020\)](#) finds that reputational ESG risks of the acquiror and the target do influence M&A transactions in the Americas, but only in certain subsamples of the M&A market.

This study aims at building a connection between the two studies and to find possible explanations for diverging results. For this purpose, this study refines the study by [Worring \(2020\)](#), reviews whether the results found for the Americas hold true for the US alone and compares it to the results found by [Deng et al. \(2013\)](#). As an additional factor, I include the political affiliation of the headquarter state of the participating parties, as previous research indicates that the political views of stakeholders significantly impact

the support for CSR related measures.

I create two databases with 1,086 acquirors and 553 targets by matching ESG data from RepRisk, a data provider that gathers ESG related incidents and relevant risk scores for globally more than 140,000 public and private companies and organizations, with global M&A transactions from 2007 to 2019. Multivariate regressions partly confirm the relationships between reputational ESG risks and M&A transactions for the Americas. I find that reputational ESG risks of the acquiror decrease the deal completion likelihood, if the transactions are not competitive or do not involve a tender offer, and increase the deal duration if the transactions include large targets or do not involve a tender offer. On the other side, I find a negative relationship between the target's reputational ESG risks and the deal duration, if the transactions include small acquirors or targets with low leverage. The political affiliation of neither the acquiror nor the target headquarter states materially affect the examined relationships. Nonetheless, I find that reputational ESG risks of the acquiror lead to a stronger decrease in the deal completion likelihood, if the target is located in a Republican state, whereas they lead to a stronger increase in the deal duration if the acquiror is located in a Republican state.

The contributions of this paper to the existing literature are threefold. First, it is the first paper to perform detailed analyses of the impact of the ESG factors of both the acquiror and the target on M&A transactions in the US. Second, it is the first study to clearly differentiate between Democratic and Republican states and perform independent analyses per party affiliation. Third, this study focuses on reputational ESG risks in the US as opposed to commonly used ESG scores. The difference between the ESG risk scores reported by RepRisk and ESG scores used in previous papers by [Deng et al. \(2013\)](#) provides a first indication to the question which parts of ESG factors drive the ESG due diligence in M&A transactions. While the results of this study partly support the results found by ([Deng et al., 2013](#)), they do not completely coincide. Although the difference could be explained by differences in the study design, it might also be caused by the different ESG scoring methodologies used in the studies. Further research is required to identify what exactly M&A practitioners consider in their ESG due diligence and which

factors actually drive the M&A characteristics.

The remainder of this paper is constructed as follows: Section 2 describes existing literature and provides the hypotheses development. Section 3 describes and summarizes the data and the methodology. Section 4 presents the empirical results and robustness tests. Section 5 discusses contributions and limitations of this paper. Section 6 concludes.

2 Literature Review & Hypotheses

2.1 The difference between ESG and CSR

The terms Social Corporate Responsibility (CSR) and Environmental, Social and Governance (ESG) have experienced a boost in popularity over the last years. While both terms are often used interchangeably, they are not identical. The development of the modern concept of CSR was initiated in the 1950's in the United States ([Carroll, 1999](#)). Although the definitions of CSR typically involve the idea that corporates have a societal responsibility beyond their own financial interest (e.g. [Davis and Blomstrom, 1966](#); [Johnson, 1971](#)), a large number of different definitions can be found, which leads to obstacles in the development of CSR strategies for organizations and to inconsistent reporting ([Nielsen and Thomsen, 2007](#)). The resulting difficulties for investors, regulators and the public to understand and evaluate the CSR activities and related risks of a company led to the development of the ESG framework, which first gained attention in the 2004 study *Who cares wins*, initiated by the UN ([The-Global-Compact, 2004](#)). The report's plea to all stakeholders to integrate ESG factors into their work, arguing it would lead to more sustainable markets, stronger financial results and better outcomes for society, led to the development of reporting standards and ESG ratings. This concretization and standardization enabled the quantification and comparison of ESG strengths and risks and made them available to a wide publicity.

Although both terms are frequently used interchangeably in academia and practice, this study will focus exclusively on ESG factors for two reasons: Firstly, while the lack of a consistent CSR definition makes measurements difficult, the factors included in ESG are widely agreed on and measurable. Secondly, practitioners in M&A markets predominantly

rely on ESG scores from rating agencies for their decision making. In the remainder of this section I will use the terms ESG and CSR as they are used in the cited papers.

2.2 ESG and M&A transactions

The global impact of ESG factors on corporate and investment performance has been analysed extensively. [Friede et al. \(2015\)](#) conduct a meta analysis of more than 2000 studies examining the relation between ESG and corporate financial performance and show that 90% of the studies find a non-negative relation. In contrast, only few studies have examined the relevance of ESG factors on M&A transactions, and even less have focused on the United States.

The first analysis of the relationship between social and environmental risk management performance and the post-merger stock performance is conducted by [Aktas et al. \(2011\)](#). In an analysis of 106 global M&A transactions, they find that a higher ability of the target to manage social and environmental risks is related to higher post-merger returns for the acquiror, indicating that investors value responsible investments.

[Deng et al. \(2013\)](#) are the first to perform a detailed analysis of the influence of the acquiror's CSR performance on transaction characteristics and post-merger performance in the US. Analysing 1,566 US transactions they find a positive relationship between the acquiror's CSR performance and announcement returns, the long-term post-merger performance as well as the deal completion likelihood. Instead, a negative relationship is found between the acquiror's CSR performance and the deal duration. [Deng et al. \(2013\)](#) conclude that their results support the stakeholder value maximization view, which predicts that acquisitions benefiting stakeholders ultimately also manifest in gains for the shareholders.

Analysing 588 global transactions, [Gomes and Marsat \(2018\)](#) are the first to examine the impact of the target's CSR performance on the bid premium. They find that targets with a higher CSR performance are acquired for higher bid premia, indicating that CSR performance creates value in the view of the acquirors.

Finally, [Worring \(2020\)](#) examines the impact of the acquiror's and target's reputational

ESG risks on deal completion likelihood, deal duration and bid premia on a global and regional level. Although the results differ across regions, an influence of the target’s and acquiror’s reputational ESG risks on the M&A transactions can be observed for certain subsamples. In the Americas, higher reputational ESG risks of the acquiror are associated with a lower deal completion likelihood, if the transaction is not competitive or does not include a tender offer, and with a longer deal duration. Instead, higher reputational ESG risks of the target are related to a higher deal completion likelihood if the target or acquiror is smaller than the median of the sample, with a shorter deal duration if the acquiror is smaller than the median and with a higher bid premium.

This study aims at further examining the impact of reputational ESG risks on deal completion likelihood, deal duration and bid premia in the United States. The purpose of this paper is twofold. First, it repeats the analyses performed by [Worring \(2020\)](#), confirming the results observed on the regional level for the Americas for the United States. This analysis will additionally facilitate a comparison of the results with the study results of ([Deng et al., 2013](#)), who examine US transactions using a different ESG scoring methodology. Second, the influence of political views across the states on the relationship between reputational ESG risks and M&A characteristics is analysed, as previous research suggests that the political views of stakeholders have an influence on the acceptance of a firm’s CSR measures.

2.3 Hypotheses

In a first step, this study aims at assessing to what extent the results obtained by [Worring \(2020\)](#) for the Americas hold true for transactions in the US. Accordingly, the following hypothesis will be validated:

H1: M&A transactions with a target with higher reputational ESG risks are associated with a higher deal completion likelihood, if the target or the acquiror is smaller than the sample median.

H2: M&A transactions with a target with higher reputational ESG risks are associated

with a shorter deal duration, if the acquiror is smaller than the sample median.

H3: M&A transactions with a target with higher reputational ESG risks are associated with a higher bid premium.

H4: M&A transactions with an acquiror with higher reputational ESG risks are associated with a lower deal completion likelihood, if the transaction is not competitive or does not involve a tender offer.

H5: M&A transactions with an acquiror with higher reputational ESG risks are associated with a longer deal duration.

In a second step, the influence of political views on the relationship between reputational ESG risks and M&A transactions is evaluated.

Over the past years the United States has experienced a period of increasing political polarization. The citizens become increasingly divided on a large number of topics and states are often categorized as "blue", or Democratic, and "red", or Republican. Among others, the views of Republicans and Democrats fundamentally differ with respect to role of the government and the tax regulations ([Tavares, 2004](#)). It appears logical, that the views on the role of the firm and the appreciation of CSR also varies across followers of the political parties. [Rubin \(2008\)](#) analyses the CSR ratings of firms based on the predominant political views in the state of the headquarters and finds that companies in "blue" states have higher CSR ratings than companies in "red" states. Similarly, [Di Giuli and Kostovetsky \(2014\)](#) find that Democratic founders and CEOs spend more on CSR than their Republican counterparts. As it seems that decisionmakers of the two political parties have differing preferences with respect to CSR in their own companies, we would expect to see a diverging sensibility for ESG risks of the opposing M&A transaction party as well. I thus pose the following hypothesis:

H6: Higher reputational ESG risks of the acquiror or target are associated with a stronger influence on the M&A deal characteristics if the counterparty is located in a Democratic state.

3 Data and Methodology

This study merges data from *RepRisk*, which provides data on global ESG incidents and reputational risks for companies and organizations, and *Thomson Reuters' SDC Platinum*, which provides information on global M&A transactions and financial statement data.

3.1 Measures of reputational ESG risks

I collect data on reputational ESG risks from RepRisk, which covers more than 90% of the world's GDP with its sources and includes more than 140,000 companies and organizations. Combining machine learning and human analysts, RepRisk continuously screens over 90,000 public sources and stakeholders in 20 languages, looking for risk incidents connecting any company to one of 28 ESG issues or 58 ESG "hot topics". The incidents are scored with respect to severity, reach and novelty of the risk and then flow into the Reputational Risk Index score (RRI) ranging from 0 (low risk) to 100 (high risk) for each company. Although multiple metrics are derived from the underlying data and reported by RepRisk, the focus of this paper lies on the Peak RRI, which reports the highest RRI of the last two years. The underlying rationale is that potential acquirors and targets do not only consider the current risks in their ESG due diligence but will also investigate the incidents in the recent past to assess the risk connected to the company.

According to the recent *Rate the Raters 2020* report ([Petroy and Wong, 2020](#)), more than 600 ESG ratings and rankings existed as of 2018. While a few main ESG ratings are preferred by both academics and practitioners, the number of different ratings poses the question of the accuracy and convergence of the ratings. [Chatterji et al. \(2016\)](#) analyse six large and widely used ratings and find a high divergence in the scores, even when controlling for specific differences in measurements and prioritization. Concluding that most ratings have a low validity, they recommend a thorough understanding of the methodology behind the rating to assess the suitability for the respective case. As elaborated by [Worring \(2020\)](#), RepRisk is used in this study because of its methodology and the associated advantages: First, RepRisk focuses only on ESG risks instead of including ESG strengths

as well, which resembles the focus of M&A practitioners according to a recent study by [Mergermarket and IHS-Markit \(2019\)](#). Second, RepRisk does not consider documents released by the firm to be rated, ensuring a higher degree of objectivity. Third, RepRisk rates all firms which are negatively mentioned in the screening universe instead of a fixed number of companies, resulting in a significantly larger database.

3.2 M&A and Financial Data

Data on M&A transactions and relevant financial data for the transaction parties for the period from 2007 to 2019 is obtained from Thomson Reuters' SDC Platinum. SDC includes more than 1.1 million transactions since 1970, providing information on more than 1,000 data elements for both targets and acquirors. The information is used to construct the dependent variables and control variables of this study, as well as to identify the headquarter states used to associate political parties to the transaction parties.

3.3 Bid Premium

Following [Rossi and Volpin \(2004\)](#), I use the four week bid premium, which is provided by SDC and calculated using the share price four weeks prior to the announcement:

$$BP_{4w}^i = \frac{OP_t^i - CP_{t-28}^i}{CP_{t-28}^i} \times 100 \quad (1)$$

where BP denotes the four-week premium, OP the offer price to target shareholders and CP the share price of the target four weeks prior to the transaction announcement. The natural logarithm of the bid premium is used for the regressions following previous literature ([Rossi and Volpin, 2004](#); [Hope et al., 2011](#)).

3.4 Deal Completion Likelihood and Deal Duration

SDC provides information on the deal status of M&A transactions. Only transactions that are marked as "Completed" or "Withdrawn" are included, whereas transactions with presumed outcome are excluded. A binary variable is used for the deal completion likelihood, taking the value "1" in case of a completed transaction and "0" for a withdrawn

offer. The deal duration is calculated as the number of days between the announcement date and the effective date, both of which are reported in the SDC database. To examine potential differences between completed and withdrawn transactions, the analyses are repeated including withdrawn transactions, for which the deal duration is calculated as the number of days between the announcement date and the withdrawal date.

3.5 Control Variables

Following [Masulis et al. \(2007\)](#) I include firm-specific characteristics and deal-specific characteristics as control variables and control for industry and year fixed effects. As firm-specific variables I include the acquiror’s firm size as well as the target’s firm size, leverage, FCF and current ratio. Furthermore, I add two dummy variables indicating the political party that received the majority of votes during the 2020 presidential election in the respective state of the transaction parties. The deal-specific variables consist of dummy variables denoting deals that are paid entirely by cash, hostile deals, competitive deals, deals that include tender offers, deals in which the acquiror owns at least 5% of the target prior to the deal (toehold) and deals in which the acquiror and the target operate in different major industries.

3.6 Sample Selection

Two distinct datasets are constructed in three steps to analyse the effects of both the acquiror’s and the target’s reputational ESG risks on M&A transactions. First, deal information on US mergers from 2007 to 2019 is extracted from SDC. All deals meeting the following criteria are included: (1) the acquiror owns less than 50% of the target’s shares before the transaction and, if the deal is completed, acquires at least 50% during the transaction, (2) the disclosed deal value exceeds one million dollars, (3) the deal was verifiably completed or withdrawn and (4) the acquiror is not primary active in the financial or utilities sector (according to SDCs MacroIndustry specification). Second, targets and acquirors are matched with the RepRisk database, creating two distinct databases with target and acquiror matches, respectively. Transactions may appear in both databases if

both the target and the acquiror are included in the RepRisk database. Following [Li and Wu \(2020\)](#), the matching algorithm is developed in python and (1) standardizes the different naming conventions, (2) cleans company names by removing company suffixes and certain characters and (3) matches the cleaned, standardized company names from both databases using a fuzzy matching algorithm. A detailed explanation of the algorithm can be found in appendix A. Third, all deals for which relevant deal and accounting information to construct control variables is not available are removed. The resulting acquiror database consist of 1,086 deals, while the final target database includes 553 deals.

3.7 Summary Statistics

Panel A of Table 1 presents the distribution of transactions across years and industries for the acquiror sample. The industries with the highest number of transactions are High Technology (236), Healthcare (195) and Industrials (158), whereas Telecommunications exhibits the lowest number of transactions (39). The number of deals has steadily declined over the years, from 151 in 2007 to 72 in 2018. Panel B of Table 1 shows the mean values for the variables of the acquiror sample. The Peak RRI is highest for Consumer Staples acquirors with a score of 28, whereas Consumer Products and Services only has an average Peak RRI of 17. Both the deal completion likelihood and the deal duration show significant differences across industries. While 95% of the transactions in the Telecommunications industry are completed, they have the longest deal duration with 172.3 days. Transactions in Retail, instead, only have a probability of 73% of being completed. The shortest transaction duration can be observed for deals in the Consumer Products and Services industry with 92.91 days on average. The highest bid premia are paid in the Healthcare industry, whereas Energy and Power has the lowest bid premia. Moreover, across industries, it takes transactions roughly 30 days longer to be withdrawn than to be completed.

Panels A and B of Table 2 provide a similar picture showing the sample distribution and sample statistics for the target sample. The highest number of targets is seen in the Healthcare (102) and High Technology (89) industries, while only 18 targets belong

to the Telecommunications industry. Similar to the acquiror sample, the bid premia are highest for the Healthcare industry and lowest for the Energy and Power sector. While the average Peak RRI of targets (16.16) is significantly lower than the Peak RRI of acquirors (21), the average deal completion likelihood is lower with 81% and the average deal duration for completed deals is roughly 36 days longer than for acquirors. Although the deal duration of withdrawn transactions is similar to the one of completed transactions, strong discrepancies can be observed across industries. For instance, withdrawn deals have a significantly longer duration in the Consumer Products and Services industry, whereas transactions are withdrawn more than twice as fast than completed in the Telecommunications industry.

3.8 Methodology

Multivariate regressions are frequently used to analyse the impact of certain variables on firm and deal characteristics (e.g. [Rossi and Volpin, 2004](#)). I perform a multivariate OLS regression to assess the impact of reputational ESG risks on the deal duration as well as the bid premium, whereas I use a probit model for the analysis of the relationship between reputational ESG risks and deal completion likelihood. A three step procedure is used for all tests. First, the impact of reputational ESG scores on the dependent variables is examined without interaction terms. Second, potential influences in subsamples and interdependent relationships between reputational ESG risk scores and other variables are analysed by introducing interaction terms. The interaction terms are used to verify whether the relationships found by [Worring \(2020\)](#) hold true for the US, but are also used to find potential new relationships. Third, all tests are repeated for the subsamples including only acquirors or targets from Republican or Democratic states, respectively. The results provide an insight on whether the political views have a significant impact on the appreciation of ESG scores, as suggested in previous literature.

4 Empirical Results

4.1 Deal Completion Likelihood

First, I analyse whether the reputational ESG risks of either the acquiror or target have an impact on the likelihood of deal completion. Following [Deng et al. \(2013\)](#) I run a probit regression in which the dependent variable takes the value "1" if the transaction is completed, and "0" if the transaction is withdrawn. Tables 3 and 4 show the results for multivariate probit regressions for the acquiror and target sample, respectively.

$$\begin{aligned} P(\text{DealCompletion}_i = 1) = & \phi(\beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\ & + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\ & + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\ & + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\ & + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\ & + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\ & + \beta_{13} \text{AcquirorParty}_i + \beta_{14} \text{TargetParty}_i \\ & + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects}) \end{aligned} \tag{2}$$

The results in Table 3 indicate a negative relationship between reputational ESG risks of the acquiror and the deal completion likelihood for certain subsamples. While the regression without interaction term does not result in a statistically significant impact, the introduction of interaction terms between the Peak RRI and tender offers as well as between the Peak RRI and competing offers leads to a negative relationship statistically significant at the 5% significance level. To further investigate the relationship between the interaction terms, I repeat the probit regressions for subsamples split into transactions which include tender offers or competing bids, and transactions which do not. The results, presented in Panel A of Table 5, indicate that the reputational ESG risks decrease the deal

completion likelihood for transactions without tender offers and non-competitive transactions, but increase the likelihood for deals including tender offers and competitive offers. However, only the former results are significant at the 5% and 10% level, respectively.

With respect to the political affiliation, the results are only significant for targets located in states that voted Republican in the 2020 election. In Republican states, an increase in the Peak RRI by 1 is associated with a decrease in the deal completion likelihood by 0.3% at the 5% significance level. Although not significant at the 10% level, an increase in the Peak RRI in Democratic states would be associated with a slightly increased deal completion likelihood. Furthermore, the coefficients are negative, but not statistically significant for the location of the acquiror headquarters.

The results overall support the hypothesis that higher reputational ESG risks of US acquirors decrease the deal completion likelihood if the transactions are not competitive or do not involve a tender offer. They are partly consistent with previous research by [Deng et al. \(2013\)](#), who find that higher ESG scores generally have a significant, positive influence on the deal completion likelihood of US transactions. The results suggest that relevant parties in the transaction, be it the selling shareholders, creditors or regulators, do take the risks stemming from negative ESG events into consideration when deciding about the outcome of the negotiations. However, limitations are required for tender and competitive deals, which present opposing, but insignificant results. A potential explanation for the different results for tender deals is that marginal investors targeted by tender offers might primarily focus on financial characteristics of the bidder, and less on secondary characteristics such as ESG performances. Similarly, ESG considerations might only play a subordinate role as differences in financial characteristics between the competing bidders are in the focus of the due diligence. Finally, the results do not support the hypothesis that reputational ESG risks have a stronger influence in Democratic states, as the coefficients are higher in absolute terms and significant at a higher level for Republican targets.

Table 4 presents regression results for the target sample. No significant relationship is found between the Peak RRI and the deal completion likelihood. Previous research

by [Worring \(2020\)](#) suggests that the relationship differs depending on the size of the participating parties. However, the coefficient of the Peak RRI remains insignificant after the addition of interaction terms between the Peak RRI and the acquiror size or target size. Moreover, Panel B of Table 5 shows that the results remain similar for subsamples split at the median of the acquiror size and target size, respectively, indicating that reputational ESG risks of US targets do not influence the deal completion likelihood independent of the firm size.

Although the coefficients are not significant, the sign of the marginal effects of the Peak RRI differ across party affiliations. While the coefficient for the Peak RRI is slightly negative if the acquiror is located in a Republican state, it is positive if the acquiror is located in a Democratic state. If the coefficients were statistically significant, this would suggest that higher reputational ESG risks of the target are negatively interpreted by acquirors from Republican states, but positively by acquirors from Democratic states. The opposite is the case for the location of the target, where a positive coefficient is observed for Republican states, but a negative coefficient for Democratic states. Overall, the observations neither support the hypothesis that higher reputational ESG risks of the target decrease the deal completion likelihood, nor the hypothesis that the deal completion likelihood is impacted differently depending on the political affiliation of the headquarter state.

4.2 Deal Duration

Next, I examine whether the acquiror's or the target's Peak RRI have an influence on the deal duration, calculated as the number of days between the announcement date and the execution date or withdrawal date. I run a multivariate regression on successful transactions, withdrawn deals as well as the combined sample. The results for the multivariate regressions run on the samples including only successful transactions is shown in Tables 6 and 7. A cox proportional hazards model is used for robustness tests, the results of which are discussed in 4.4.

$$\begin{aligned}
\text{DealDuration}_i = & \beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\
& + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\
& + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\
& + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\
& + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\
& + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\
& + \beta_{13} \text{AcquirorParty}_i + \beta_{14} \text{TargetParty}_i \\
& + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects} + \epsilon_i
\end{aligned} \tag{3}$$

The results presented in Table 6 show a low, positive coefficient for the Peak RRI, which would suggest that a higher reputational ESG risk is connected to a longer deal duration. However, the coefficient is not significant at the 10% level without interaction terms. The addition of interaction terms between the Peak RRI and either the target size or the dummy indicating tender offers results in significant interaction terms as well as a Peak RRI coefficient significant at the 5% and 1%, respectively. Although the usage of both interaction terms at once does not result in a significant Peak RRI coefficient, the results indicate that the deal duration might be impacted differently by reputational ESG scores depending on the target size and the inclusion of tender offers in the deal. Panel A of Table 8 presents regression results for subsamples dividing the transactions at the median of the target size and into deals including tender offers and deals not including tender offers. The results suggest that an increase in the Peak RRI by 1 is connected to an increased deal duration of 0.572 days for transactions including larger targets and of 0.465 days for transactions not involving tender offers. Although the coefficients for transactions of smaller targets and transactions involving tender offers are negative, suggesting a negative relationship between the Peak RRI and the deal duration,

they are not significant at the 10% level.

The coefficients are positive independent of the political affiliation of the headquarter states of both the target and the acquiror. However, the coefficient is statistically significant only for acquirors from Republican states, where an increase in the Peak RRI is associated with a longer deal duration of 0.767 days.

The results partly support the hypothesis that higher reputational ESG risks lead to a longer deal duration, and only partly confirm previous results by [Deng et al. \(2013\)](#), who find that higher ESG scores of US acquirors are generally connected to a faster completion of the deal. Instead, the results of this study only confirm a positive relationship between reputational ESG risks and the deal duration for transactions involving large targets and transactions not involving tender offers. Among other differences in the study design, one explanation for the differing results could be that [Deng et al. \(2013\)](#) only examine transactions in which both the acquiror and the target are listed companies, whereas the sample of this study also includes private companies. Since listed companies, on average, are larger than private companies, the companies examined by [Deng et al. \(2013\)](#) might largely fall into the subsample including large targets in this study.

The results do not support the hypothesis that the targets react differently to reputational ESG risks of the acquiror depending on the political affiliation of the state, either.

Finally, including only withdrawn transactions or both completed and withdrawn transactions in the regression does not yield any statistically significant results. However, the coefficient for the Peak RRI is negative for withdrawn transactions, which would suggest that higher reputational ESG risks were related to a faster withdrawal of the transaction, if statistically significant.

Table 7 shows regression results for the target sample. The Peak RRI coefficient is slightly negative, but not statistically significant for the regression excluding interaction terms. When including interaction terms between the Peak RRI and the acquiror size as well as the target leverage, the coefficient turns significant at the 5% level. To further

examine the relationship, I perform regressions on the subsamples dividing the sample at the median of the acquiror size and the target leverage, respectively. The results presented in Panel B of Table 8 show significant, negative coefficients for the subsamples including smaller acquirors and targets with a lower leverage, but insignificant coefficients for the remaining subsamples. This suggests that higher reputational ESG risks of the target are related to a faster deal completion if the acquiror is smaller or the target has a lower leverage. While these observations contradict the hypothesis that higher reputational ESG risks of the target lead to a longer deal duration, they are congruent with the previous results indicating that higher reputational ESG risks of the target also might lead to a higher deal completion likelihood. A possible explanation for the results is that while a target's reputational ESG risks generally are not considered as a deal breaker and thus do not prolong the deal duration, they might be positively related to other firm characteristics that reduce the length of the transaction process.

As opposed to the acquiror's Peak RRI, the impact of the target's Peak RRI differs depending on the location of the acquiror headquarters. While the Peak RRI is associated with a statistically insignificant, longer deal duration for acquirors in Republican states, an increase of the Peak RRI by 1 is related to a 0.796 shorter deal duration for acquirors in Democratic states. Nonetheless, these observations do not support the hypothesis that Democratic decisionmakers consider ESG risks more strongly in their due diligence than Republican managers.

4.3 Bid Premium

Lastly, I examine the influence of the acquiror's and the target's reputational ESG risks on the bid premium. Following [Krishnamurti et al. \(2019\)](#), I run a multivariate regression. The results are presented in Tables 9 and 10.

$$\begin{aligned}
\text{BidPremium}_i = & \beta_0 + \beta_1 \text{PeakRRI}_i + \beta_2 \text{AcquirorSize}_i \\
& + \beta_3 \text{TargetSize}_i + \beta_4 \text{TargetLeverage}_i \\
& + \beta_5 \text{TargetFCF}_i + \beta_6 \text{TargetCurrentRatio}_i \\
& + \beta_7 \text{Toehold}_i + \beta_8 \text{Allcash}_i \\
& + \beta_9 \text{Tender}_i + \beta_{10} \text{Hostile}_i \\
& + \beta_{11} \text{Diversifying}_i + \beta_{12} \text{Competing}_i \\
& + \beta_{13} \text{AcquirorParty}_i + \beta_{14} \text{TargetParty}_i \\
& + \sum_{t=2007}^{2019} \beta_t \text{Year}_{i,t} + \text{IndustryEffects} + \epsilon_i
\end{aligned} \tag{4}$$

The results presented do not show any statistically significant relationship between the Peak RRI of the acquiror or the target and the bid premium. Neither the addition of interaction terms, nor the division by party affiliation reveals further insights, suggesting that the bid premium is not influenced by the reputational ESG risks of either transaction party. Nonetheless, we can observe that the coefficients are negative for the acquiror sample and positive for the target sample. If the coefficients were significant, this would indicate that higher reputational ESG risks of the acquiror would rather decrease the bid premium, whereas higher reputational ESG risks of the target would rather increase the bid premium.

The results do not support the hypotheses that acquirors with higher reputational ESG risks pay higher premiums and targets with higher reputational ESG risks are acquired for lower premiums. Additionally, the results do not expand the findings of [Krishnamurti et al. \(2019\)](#), who find that socially responsible acquirors in Australia pay lower bid premiums. The findings are also in opposition to the results of [Gomes and Marsat \(2018\)](#), who find a positive relationship between a higher CSR involvement of the target and the bid premium. Finally, the hypothesis that the political affiliation of the headquarter state

influences the relationship is not supported by the results either.

4.4 Robustness Tests

4.4.1 Dealing with Outliers

Winsorizing and trimming are two different methods of treating outliers to limit their impact on the regression results. Although both methods have their advantages and drawbacks, the results displayed in this study show values obtained with observations winsorized at the 1% and 99% level. Nonetheless, all statistical tests are repeated using trimmed variables and variables winsorized at the 0.5% and 99.5% level in order to eliminate the possibility that the choice of methodology influences the results. While the t-values vary slightly, the coefficients and overall results remain similar.

4.4.2 Survival Analysis for Deal Duration

Since the analysis of the deal duration includes the measurement of days until a certain "failure event", a survival analysis can be performed alternatively to the multivariate OLS regression. Following [Deng et al. \(2013\)](#), I use a cox proportional hazards model. A positive coefficient in the cox proportional hazards model implies an increased hazard and consequently a shorter deal duration and is equivalent to a negative coefficient in the OLS regression. The results overall remain very similar, with mostly small changes in the coefficients and the significance level.

5 Discussion

Whereas [Worring \(2020\)](#) shows that reputational ESG risks have differing, but mostly weak influences on M&A deal characteristics across regions, this study provides new insights on the influence of reputational ESG risks on M&A transactions in the US. The focus on the US is particularly interesting for two reasons. First, the existence of previous literature examining the influence of ESG scores on M&A transactions in the US ([Deng et al., 2013](#)) enables a direct comparison of the results. Second, the unique political and

social situation in the United States provides grounds for an analysis of the relationship between the ESG risks and M&A transactions depending on the predominant political views, which has previously been connected to differences in the appreciation of CSR actions by stakeholders.

[Deng et al. \(2013\)](#) find that deals by socially responsible acquirors have a higher deal completion likelihood and take significantly less time to be completed throughout the entire US sample. The results of this study only partly support this. While higher reputational ESG risks of the acquiror are associated with a lower deal completion likelihood and a longer deal duration, the coefficients are statistically significant only for subsamples of the dataset, but not for the overall population.

As outlined by [Worring \(2020\)](#), there are two main possibilities to explain the differing results. First, the distinct study design and sample selection can cause differences, as the time frames, deal selection and control variables differ. Second, material variances can be caused by difference between ESG ratings, as used by [Deng et al. \(2013\)](#), and reputational ESG risks provided by RepRisk. [Chatterji et al. \(2016\)](#) find a high divergence between ESG ratings, suggesting that different ESG rating agencies provide differing scores. While this study cannot attest that the different ESG scoring methodologies cause the divergent results, it provides additional reason to further investigate to what extent the impact of ESG factors on M&A transactions is driven by the differences in ESG scores and metrics, and which ESG factors, risks and strengths are primarily considered by M&A practitioners.

Lastly, the results of this study do not reveal material differences in the consideration of reputational ESG risks by Republican and Democratic decisionmakers. Only few coefficients differ across political affiliations, and even less of these coefficients are statistically significant. Nonetheless, the few statistically significant coefficients oppose the initial hypothesis based on previous research. The results indicate that Republicans might be more influenced by reputational ESG risks than Democrats, the opposite of what we might have expected based on the previous literature. However, the observations are not consistent enough across the analyses to derive stronger conclusions.

5.1 Study Limitations

This study entails three main limitations. First, the lack of a common identifier between the databases and the usage of a matching algorithm could lead to the inclusion of false-positives in the data sample on the one side, and to the exclusion of relevant observations on the other side. Second, while used in previous studies, the usage of the latest election result to determine the political affiliations might be overly simplistic. For instance, this study does not differentiate between swing states won by a minimal margin and strongly Republican or Democratic states. The further refinement of these classifications could lead to more robust results. Third, the scores provided by RepRisk are not commonly used by M&A practitioners and researchers. When drawing comparisons with previous literature, we always need to consider that differences in results do not necessarily imply contradictions, but might stem from different scoring methodologies and utilizations of the scores. Further research is needed to understand the reasons for the differences across ESG scores and to understand the drivers of the relationship between ESG factors and M&A transactions.

6 Conclusion

Building on the research by [Worring \(2020\)](#), this paper examines the impact of US acquirors' and US targets' reputational ESG risks on M&A deal completion likelihood, deal duration and bid premium, revealing new insights. First, the relationships between reputational ESG risks and M&A transactions found for the Americas by [Worring \(2020\)](#) are only partly confirmed for the US. While reputational ESG risks of the acquiror do decrease the deal completion likelihood, if the transactions are not competitive or do not involve a tender offer, the target's reputational ESG risks do not appear to have a significant influence on the deal completion likelihood. The acquiror's ESG risks only increase the deal duration if the deal includes a large target or does not involve a tender offer, whereas the target's ESG risks are associated with a faster deal completion if the transaction includes small acquirors or targets with low leverage. The bid premium remains unaffected by both the target's and the acquiror's reputational ESG risks. Overall, the

results only partly confirm previous research, which finds that US acquirors with higher CSR performance are generally associated with a higher deal completion likelihood and shorter deal duration. It remains unclear, however, whether the differences in results can be attributed to differences in the study design or to diverging ESG scores. Second, against the initial hypothesis, the political affiliation of the headquarter states of the participating firms does not materially influence the relationship between reputational ESG risks and M&A transactions. The few statistically significant results even suggest that firms from Republican states do include ESG risks more frequently in their considerations than firms from Democratic states, which contradicts previous study results. Further research is required to understand the discrepancies between the results of this study and the relationships suggested by previous literature.

Appendix

A Matching Algorithm

RepRisk and SDC Platinum have different naming conventions and lack a common identifier. Therefore, I follow [Li and Wu \(2020\)](#) and develop a Python matching algorithm that connects companies from RepRisk with companies from SDC Platinum. With small adjustments, the matching algorithm can also be used to for other databases. The algorithm includes the following steps:

1. RepRisk often includes alternative or former company names in parentheses. These alternative names are split into separated strings, while irrelevant strings in parentheses that are sometimes included (e.g. the country of incorporation) are removed.
2. The company names of both databases are standardized by capitalizing the names, by removing additional words that are used to introduce alternative names (e.g. formerly known as, also, dba), suffixes and prefixes (e.g. Inc, AG) and by trimming certain special characters and spaces.
3. The company names from both databases are compared. A match occurs when the headquarter country is identical and (1) the company names are completely identical, (2) the URLs are completely identical, or (3) a fuzzy string matching algorithm leads to a score of at least 0.95. The fuzzy string matching algorithm compares words in a string and can handle minor spelling differences, spelling mistakes, different word orders and additional words (e.g. The Walt Disney Company vs. Walt Disney Company). Based on a sample, the 0.95 threshold proved to correctly identify the largest number of matches (more than 95%) while maintaining a high accuracy of more than 98%.

To remove false positives, I manually verify all matches afterwards. Sometimes, RepRisk has more than one entry for a company. In these cases, I use the most recent entry and remove the others. I apply the matching algorithm independently to targets and acquirors to create two separated databases, containing all targets and acquirors that are included in the RepRisk database, respectively.

B Variables Definitions

Variable	Definition
<i>Dependent Variables</i>	
DealCompletion	A dummy variable taking the value 1 if the deal is successful and 0 if the deal is withdrawn.
Daystocomplete	Measures the number of days between the announcement date and the execution of a merger.
Daystowithdrawn	Measures the number of days between the announcement date and the date of the withdrawal of the deal.
BidPremium	The natural logarithm of the bid premium, computed as the the offer price per share minus the share price of the target four weeks before the announcement date divided by the share price of the target four weeks before the announcement date, minus one.
<i>Company Characteristics</i>	
Peak RRI	The Peak Reputational Risk Index expresses a firm's reputational ESG risk as calculated by RepRisk and takes values between 0 (low risk) and 100 (high risk).
AcquirorSize	The natural logarithm of the of the book value of total assets of the acquiror.
TargetSize	The natural logarithm of the of the book value of total assets of the target.
TargetLeverage	The target's leverage, calculated as long term debt plus current liabilities divided by the total assets.
TargetFCF	The target's free cash flow, calculated as EBITDA plus net interest income minus taxes minus CAPEX, all scaled by the total assets.
TargetCurrentRatio	The target's current ratio, calculated as current assets divided by the current liabilities.
AcquirorParty	A dummy variable taking the value 1 if the headquarter of the acquiror is located in a state that voted Democratic in the 2020 Presidential election, and 0 otherwise.
TargetParty	A dummy variable taking the value 1 if the headquarter of the target is located in a state that voted Democratic in the 2020 Presidential election, and 0 otherwise.
<i>Deal Characteristics</i>	
Toehold	A dummy variable taking the value 1 if the acquiror owns at least 5% of the target prior to the deal, and 0 otherwise.
Allcash	A dummy variable taking the value 1 if the deal has been financed completely with cash, and 0 otherwise.
Tender	A dummy variable taking the value 1 if the deal is reported as tender offer by SDC Platinum, and 0 otherwise.
Hostile	A dummy variable taking the value 1 if the deal is reported as hostile by SDC Platinum, and 0 otherwise.
Diversifying	A dummy variable taking the value 1 if the macro industry of the target and the acquiror are different according to SDC Platinum, and 0 otherwise.
Competing	A dummy variable taking the value 1 if the deal is reported as competitive bid by SDC Platinum, and 0 otherwise.

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Table 1

Sample distribution and summary statistics for the acquiror sample

This table shows the sample distribution and summary statistics for the acquiror sample. Panel A shows the sample distribution across years and industries. Panel B shows means of dependent and control variables by industry for the entire observation period. All variables are defined in Appendix B. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019.

<i>Panel A: Sample distribution by year and industry for the acquiror sample</i>											
	Con- sumer Prod- ucts & Ser- vices	Con- sumer Sta- ples	Energy and Power	Health- care	High Tech	Indus- trials	Mate- rials	Media and Enter- tain- ment	Retail	Telecom- munica- tions	Total
2007	12	7	13	23	36	23	14	7	9	7	151
2008	2	4	11	19	25	17	5	5	9	2	99
2009	7	7	8	13	20	6	3	11	3	5	83
2010	5	4	8	19	21	19	10	5	4	1	96
2011	4	3	8	6	12	14	12	3	4	4	70
2012	3	5	6	17	23	15	10	3	6	5	93
2013	5	1	1	16	15	7	7	7	4	1	64
2014	3	8	9	20	10	6	6	5	5	2	74
2015	11	6	5	14	23	16	6	5	7	3	96
2016	2	6	8	19	20	8	6	7	1	3	80
2017	1	6	5	10	8	15	8	9	1	1	64
2018	2	6	12	10	11	7	9	9	2	4	72
2019	4	0	6	9	12	5	1	6	0	1	44
Total	61	63	100	195	236	158	97	82	55	39	1,086
<i>Panel B: Summary statistics by industry for the acquiror sample</i>											
	Con- sumer Prod- ucts & Ser- vices	Con- sumer Sta- ples	Energy and Power	Health- care	High Tech	Indus- trials	Mate- rials	Media and Enter- tain- ment	Retail	Telecom- munica- tions	Total
DealCompletion	0.90	0.83	0.86	0.92	0.90	0.89	0.80	0.74	0.73	0.95	0.87
Daystocomplete	92.91	96.79	120.28	93.73	102.99	99.74	126.18	163.80	113.40	172.30	110.42
Daystowithdraw	171.33	115.91	116.43	98.00	151.88	111.47	125.37	192.19	173.53	55.00	139.12
BidPremium	3.71	3.45	3.11	3.88	3.62	3.53	3.60	3.52	3.38	3.52	3.58
Peak RRI	17.00	28.00	20.50	22.98	19.94	18.31	21.92	20.33	24.25	19.08	21.00
AcquirorSize	8.13	8.59	8.26	8.87	8.68	8.36	7.91	8.91	8.34	9.58	8.56
TargetSize	5.84	6.32	6.94	5.49	5.69	5.91	6.36	7.01	6.26	7.01	6.08
TargetLeverage	0.55	0.55	0.47	0.48	0.45	0.48	0.45	0.65	0.52	0.79	0.50
TargetFCF	-0.03	0.04	-0.03	-0.21	-0.02	0.02	-0.07	-0.04	0.01	0.01	-0.05
TargetCurRatio	2.24	2.00	1.76	4.05	2.65	2.55	3.06	2.04	2.30	1.67	2.68
Toehold	0.02	0.05	0.09	0.03	0.01	0.04	0.06	0.10	0.05	0.03	0.04
Allcash	0.54	0.63	0.24	0.65	0.70	0.56	0.38	0.48	0.62	0.41	0.56
Tender	0.21	0.21	0.03	0.33	0.23	0.18	0.11	0.09	0.27	0.13	0.20
Hostile	0.02	0.02	0.00	0.02	0.02	0.01	0.03	0.00	0.07	0.00	0.02
Diversifying	0.51	0.22	0.14	0.07	0.25	0.42	0.12	0.35	0.25	0.28	0.24
Competing	0.05	0.08	0.05	0.08	0.06	0.01	0.13	0.17	0.13	0.05	0.07
AcquirorParty	0.72	0.76	0.23	0.83	0.87	0.70	0.56	0.90	0.58	0.54	0.71
TargetParty	0.46	0.56	0.29	0.70	0.72	0.50	0.31	0.70	0.51	0.69	0.57

Table 2

Sample distribution and summary statistics for the target sample

This table shows the sample distribution and summary statistics for the target sample. Panel A shows the sample distribution across years and industries. Panel B shows means of dependent and control variables by industry for the entire observation period. All variables are defined in Appendix B. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019.

<i>Panel A: Sample distribution by year and industry for the target sample</i>											
	Con- sumer Prod- ucts & Ser- vices	Con- sumer Sta- ples	Energy and Power	Health- care	High Tech	Indus- trials	Mate- rials	Media and Enter- tain- ment	Retail	Telecom- munica- tions	Total
2007	1	4	3	9	5	4	9	2	5	1	43
2008	3	2	1	9	10	8	4	0	4	1	42
2009	2	2	6	6	6	3	2	3	1	0	31
2010	5	1	3	8	8	5	4	1	2	1	38
2011	1	1	7	7	3	2	6	1	2	1	31
2012	4	4	7	10	2	2	4	3	3	3	42
2013	1	2	4	6	3	3	3	3	2	2	29
2014	2	6	4	12	2	5	6	5	4	2	48
2015	3	5	6	14	19	7	5	4	7	0	70
2016	3	4	7	10	10	8	8	6	1	4	61
2017	0	3	7	5	4	9	3	5	3	1	40
2018	5	2	13	3	11	4	6	4	4	2	54
2019	0	0	6	3	6	3	2	2	2	0	24
Total	30	36	74	102	89	63	62	39	40	18	553
<i>Panel B: Summary statistics by industry for the target sample</i>											
	Con- sumer Prod- ucts & Ser- vices	Con- sumer Sta- ples	Energy and Power	Health- care	High Tech	Indus- trials	Mate- rials	Media and Enter- tain- ment	Retail	Telecom- munica- tions	Total
DealCompletion	0.77	0.83	0.84	0.85	0.84	0.83	0.79	0.74	0.68	0.72	0.81
Daystocomplete	107.61	115.07	153.69	136.39	125.23	145.69	183.49	199.76	110.33	259.85	146.38
Daystowithdraw	257.43	125.50	93.67	98.07	97.43	115.82	155.85	249.90	193.38	124.80	145.76
BidPremium	3.41	3.40	3.08	3.66	3.48	3.28	3.58	3.43	3.30	3.59	3.43
Peak RRI	15.47	21.33	18.07	12.55	13.39	16.70	17.48	20.44	14.30	21.61	16.16
AcquirorSize	8.63	8.45	8.71	9.25	9.30	8.88	8.41	8.93	8.45	9.18	8.88
TargetSize	6.92	7.16	7.68	7.00	6.96	7.51	7.35	8.18	7.05	8.96	7.34
TargetLeverage	0.49	0.64	0.49	0.46	0.48	0.52	0.48	0.61	0.59	0.57	0.51
TargetFCF	-0.07	0.04	-0.06	0.01	0.00	0.04	0.01	0.06	0.03	0.05	0.01
TargetCurRatio	2.27	1.92	1.61	3.32	2.69	2.10	2.71	1.79	1.58	1.90	2.35
Toehold	0.00	0.08	0.08	0.03	0.00	0.02	0.03	0.05	0.03	0.00	0.03
Allcash	0.53	0.44	0.18	0.61	0.60	0.44	0.45	0.36	0.57	0.11	0.46
Tender	0.10	0.08	0.05	0.32	0.26	0.10	0.16	0.05	0.30	0.00	0.17
Hostile	0.03	0.00	0.00	0.04	0.02	0.03	0.05	0.00	0.07	0.00	0.03
Diversifying	0.57	0.14	0.15	0.10	0.31	0.16	0.15	0.21	0.25	0.39	0.21
Competing	0.13	0.06	0.03	0.14	0.10	0.03	0.08	0.13	0.10	0.11	0.09
AcquirorParty	0.57	0.61	0.23	0.42	0.78	0.48	0.24	0.69	0.53	0.50	0.49
TargetParty	0.57	0.78	0.28	0.78	0.88	0.67	0.60	0.82	0.57	0.61	0.67

Table 3

Influence of Peak RRI on deal completion likelihood of the acquiror sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the acquiror sample. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Column (2) reports results of a probit regression including two interaction terms between Peak RRI and Tender as well as Peak RRI and Competing. Columns (3) and (4) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (3)/Democratic (4) in the 2020 presidential election. Columns (5) and (6) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (5)/Democratic (6) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Peak RRI	-0.001 (-1.562)	-0.001 (-2.309)**	-0.002 (-1.618)	-0.001 (-0.762)	-0.003 (-2.569)**	0.000 (0.105)
AcquirorSize	0.027 (3.583)***	0.026 (3.475)***	0.022 (1.133)	0.028 (3.235)***	0.027 (2.112)**	0.032 (3.144)***
TargetSize	-0.033 (-5.076)***	-0.032 (-5.012)***	-0.036 (-2.125)**	-0.034 (-4.656)***	-0.024 (-2.264)**	-0.043 (-4.772)***
TargetLeverage	0.066 (2.082)**	0.060 (1.885)*	0.125 (1.451)	0.059 (1.723)*	0.096 (1.467)	0.053 (1.491)
TargetFCF	0.072 (2.071)**	0.072 (2.116)**	0.113 (1.261)	0.085 (2.027)**	0.030 (0.452)	0.113 (2.689)***
TargetCurrentRatio	0.004 (0.992)	0.005 (1.009)	0.023 (1.543)	0.001 (0.212)	0.015 (1.727)*	-0.000 (-0.016)
Toehold	-0.144 (-4.209)***	-0.142 (-4.217)***	-0.297 (-3.433)***	-0.111 (-2.880)***	-0.199 (-3.642)***	-0.113 (-2.370)**
Allcash	-0.020 (-1.020)	-0.020 (-0.998)	-0.034 (-0.654)	-0.020 (-0.913)	-0.029 (-0.884)	-0.021 (-0.807)
Tender	0.073 (3.197)***	0.072 (1.094)	0.102 (1.711)*	0.071 (2.830)***	0.099 (2.515)**	0.059 (1.980)**
Hostile	-0.421 (-5.183)***	-0.419 (-5.138)***		-0.374 (-4.336)***		-0.346 (-4.013)***
Diversifying	-0.003 (-0.153)	-0.001 (-0.063)	0.022 (0.359)	-0.017 (-0.708)	0.017 (0.438)	-0.008 (-0.276)
Competing	-0.423 (-9.139)***	-0.424 (-7.215)***	-0.407 (-3.754)***	-0.438 (-8.113)***	-0.533 (-6.992)***	-0.346 (-5.900)***
AcquirorParty	0.023 (1.144)	0.023 (1.142)			0.062 (1.821)*	-0.002 (-0.063)
TargetParty	0.028 (1.532)	0.028 (1.506)	0.057 (1.186)	0.027 (1.300)		
Tender \times Peak RRI						
Competing \times Peak RRI		(1.766)*				
Constant		(1.354)				
	(2.240)**	(2.421)**	(0.771)	(2.507)**	(0.198)	(2.399)**
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1086	1086	264	773	458	590
Pseudo R^2	0.307	0.315	0.240	0.349	0.275	0.326

Table 4

Influence of Peak RRI on deal completion likelihood of the target sample

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the target sample. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Column (2) reports results of a probit regression including two interaction terms between Peak RRI and TargetSize as well as Peak RRI and AcquirorSize. Columns (3) and (4) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (3)/Democratic (4) in the 2020 presidential election. Columns (5) and (6) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (5)/Democratic (6) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Peak RRI	0.001 (0.569)	0.001 (1.154)	-0.000 (-0.103)	0.002 (1.289)	0.003 (0.956)	-0.001 (-0.725)
AcquirorSize	0.039 (3.418)***	0.039 (2.231)**	0.051 (2.332)**	0.040 (2.582)***	0.069 (2.466)**	0.045 (3.165)***
TargetSize	-0.048 (-3.480)***	-0.047 (-1.601)	-0.043 (-1.836)*	-0.075 (-3.349)***	-0.058 (-1.610)	-0.058 (-3.416)***
TargetLeverage	0.022 (0.353)	0.006 (0.094)	0.091 (0.817)	-0.058 (-0.674)	-0.086 (-0.587)	0.044 (0.571)
TargetFCF	0.237 (2.527)**	0.220 (2.333)**	0.334 (1.557)	0.289 (2.534)**	0.425 (1.428)	0.218 (2.125)**
TargetCurrentRatio	-0.009 (-0.848)	-0.009 (-0.840)	-0.016 (-0.925)	-0.008 (-0.504)	0.021 (0.653)	-0.024 (-1.916)*
Toehold	-0.057 (-0.771)	-0.062 (-0.847)	-0.316 (-2.428)**	0.122 (1.022)		-0.128 (-1.595)
Allcash	-0.046 (-1.431)	-0.048 (-1.466)	-0.027 (-0.470)	-0.066 (-1.414)	-0.144 (-1.981)**	-0.016 (-0.422)
Tender	0.234 (3.728)***	0.229 (3.665)***		0.049 (0.706)	0.265 (1.634)	0.216 (3.017)***
Hostile	-0.676 (-5.212)***	-0.665 (-5.111)***		-0.549 (-3.013)***		-0.664 (-4.917)***
Diversifying	0.013 (0.332)	0.007 (0.191)	0.051 (0.672)	-0.026 (-0.550)	-0.057 (-0.583)	0.019 (0.407)
Competing	-0.303 (-6.464)***	-0.296 (-6.343)***	-0.455 (-4.510)***	-0.250 (-4.419)***	-0.409 (-3.427)***	-0.294 (-5.413)***
AcquirorParty	0.055 (1.770)*	0.057 (1.819)*			0.057 (0.807)	0.069 (1.859)*
TargetParty	-0.007 (-0.209)	-0.006 (-0.182)	-0.012 (-0.224)	-0.017 (-0.354)		
TargetSize \times Peak RRI						
AcquirorSize \times Peak RRI		(-1.540)				
Constant		(0.623)				
	(1.787)*	(1.074)	(0.379)	(2.788)***	(0.031)	(1.839)*
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	553	553	222	270	147	369
Pseudo R^2	0.296	0.300	0.260	0.351	0.332	0.341

Table 5

Influence of Peak RRI on deal completion likelihood for subsamples of the acquiror and target samples

This table reports probit regression estimates of deal completion likelihood on reputational ESG risk and control variables for the acquiror and target sample. The dependent variable is a dummy variable equal to one if the deal was completed, and zero if it was withdrawn. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Panel A reports probit regression estimates with the acquiror sample split into transactions that include a tender offer, shown in column (2), transactions that do not include a tender offer, shown in column (1), competitive transactions with more than one bidder, shown in column (4), and non-competitive transactions, shown in column (3). Panel B reports probit regression estimates with the target sample split at the median TargetSize and AcquirorSize. Columns (1) and (3) show transactions in which the target/acquiror is smaller than the median TargetSize/AcquirorSize, columns (2) and (4) show transactions in which the target/acquiror is larger. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Marginal effects are reported instead of coefficients, t-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

<i>Panel A: Acquiror sample split by Tender and Competing</i>				
	(1)	(2)	(3)	(4)
Peak RRI	-0.002 (-2.160)**	0.001 (0.260)	-0.001 (-1.894)*	0.005 (1.112)
Control Variables	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	864	66	1007	68
Pseudo R^2	0.286	0.519	0.217	0.568
<i>Panel B: Target sample split by TargetSize and AcquirorSize</i>				
	(1)	(2)	(3)	(4)
Peak RRI	0.001 (0.299)	0.001 (0.566)	0.001 (0.306)	0.001 (0.736)
Control Variables	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	263	277	277	235
Pseudo R^2	0.425	0.293	0.275	0.360

Table 6

Influence of Peak RRI on deal duration of the acquiror sample

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the acquiror sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Column (2) reports results of a probit regression including two interaction terms between Peak RRI and TargetSize as well as Peak RRI and Tender. Columns (3) and (4) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (3)/Democratic (4) in the 2020 presidential election. Columns (5) and (6) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (5)/Democratic (6) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Peak RRI	0.251 (1.516)	-0.695 (-1.513)	0.767 (2.318)**	0.054 (0.273)	0.145 (0.554)	0.260 (1.238)
AcquirorSize	-2.003 (-1.083)	-0.650 (-0.350)	-10.373 (-2.362)**	0.150 (0.070)	-0.871 (-0.274)	-2.236 (-0.980)
TargetSize	20.541 (11.344)***	15.770 (7.079)***	25.768 (6.403)***	19.001 (9.188)***	15.168 (5.059)***	25.541 (11.008)***
TargetLeverage	-1.223 (-0.194)	-1.760 (-0.275)	1.562 (0.119)	-3.238 (-0.430)	10.406 (0.879)	-1.421 (-0.190)
TargetFCF	-7.506 (-1.071)	-9.452 (-1.345)	-0.567 (-0.048)	-7.840 (-0.853)	0.320 (0.029)	-17.386 (-1.811)*
TargetCurrentRatio	-0.052 (-0.058)	-0.070 (-0.080)	0.698 (0.317)	0.042 (0.042)	-0.375 (-0.248)	1.465 (1.161)
Toehold	38.851 (2.704)***	38.806 (2.636)***	39.696 (1.059)	36.935 (2.244)**	28.300 (1.542)	43.862 (1.658)*
Allcash	-27.464 (-4.552)***	-28.748 (-4.837)***	-19.266 (-1.590)	-29.731 (-4.158)***	-41.203 (-4.339)***	-16.106 (-2.243)**
Tender	-31.904 (-5.359)***	-4.342 (-0.521)	-26.137 (-1.866)*	-33.780 (-5.074)***	-2.419 (-0.224)	-49.178 (-7.137)***
Hostile	133.159 (6.339)***	138.647 (6.428)***		136.229 (5.325)***		145.942 (4.381)***
Diversifying	-2.157 (-0.382)	-3.785 (-0.684)	8.989 (0.732)	-3.672 (-0.584)	-12.444 (-1.360)	2.039 (0.268)
Competing	15.944 (0.862)	13.048 (0.752)	-11.164 (-0.444)	29.794 (1.204)	53.128 (1.860)*	-1.561 (-0.069)
AcquirorParty	-2.992 (-0.499)	-3.180 (-0.539)			-0.354 (-0.036)	-5.945 (-0.791)
TargetParty	-13.573 (-2.467)**	-13.376 (-2.450)**	-9.154 (-0.908)	-16.965 (-2.570)**		
TargetSize \times Peak RRI		0.186 (2.465)**				
Tender \times Peak RRI		-1.093 (-4.058)***				
Constant	23.863 (1.400)	36.710 (2.021)**	54.023 (1.567)	14.135 (0.711)	40.602 (1.523)	-23.211 (-1.010)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	940	940	263	677	388	552
R^2	0.368	0.385	0.488	0.348	0.305	0.477

Table 7

Influence of Peak RRI on deal duration of the target sample

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the target sample. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Column (2) reports results of a probit regression including two interaction terms between Peak RRI and AcquirorSize as well as Peak RRI and TargetLeverage. Columns (3) and (4) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (3)/Democratic (4) in the 2020 presidential election. Columns (5) and (6) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (5)/Democratic (6) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Peak RRI	-0.195 (-0.572)	-4.366 (-2.251)**	0.450 (0.785)	-0.796 (-1.933)*	0.429 (0.579)	-0.407 (-1.113)
AcquirorSize	-1.305 (-0.417)	-6.548 (-1.704)*	-2.611 (-0.434)	0.482 (0.124)	-5.881 (-0.828)	1.606 (0.437)
TargetSize	30.315 (9.220)***	31.028 (9.529)***	26.781 (4.879)***	32.155 (7.203)***	24.372 (2.954)***	32.037 (8.451)***
TargetLeverage	3.140 (0.172)	-22.897 (-0.931)	-7.170 (-0.281)	21.112 (0.769)	40.485 (1.082)	-19.769 (-0.881)
TargetFCF	17.811 (0.770)	6.401 (0.293)	54.329 (1.518)	-26.911 (-0.817)	122.041 (1.758)*	2.654 (0.116)
TargetCurrentRatio	2.158 (0.829)	1.950 (0.740)	-0.279 (-0.064)	5.407 (1.493)	1.105 (0.171)	1.556 (0.499)
Toehold	45.801 (2.438)**	46.116 (2.322)**	58.478 (1.864)*	14.888 (0.605)	59.404 (2.222)**	40.319 (1.346)
Allcash	-4.754 (-0.442)	-4.576 (-0.428)	15.634 (0.873)	-20.955 (-1.743)*	-14.772 (-0.716)	-1.921 (-0.162)
Tender	-63.730 (-5.675)***	-63.096 (-5.582)***	-66.881 (-3.538)***	-55.683 (-3.771)***	-46.459 (-1.793)*	-69.045 (-5.548)***
Hostile	94.933 (3.104)***	92.506 (2.960)***		147.729 (3.647)***		136.772 (3.406)***
Diversifying	-2.233 (-0.237)	-1.296 (-0.138)	-4.297 (-0.273)	-2.391 (-0.190)	2.305 (0.110)	-5.716 (-0.468)
Competing	-4.488 (-0.180)	-3.465 (-0.142)	-47.381 (-2.182)**	28.744 (0.726)	14.703 (0.260)	-24.454 (-1.153)
AcquirorParty	-5.671 (-0.608)	-6.345 (-0.685)			8.586 (0.428)	-11.675 (-1.026)
TargetParty	2.426 (0.224)	3.297 (0.313)	0.218 (0.013)	3.518 (0.217)		
AcquirorSize \times Peak RRI		0.359 (1.810)*				
TargetLeverage \times Peak RRI		1.640 (1.621)				
Constant	-93.866 (-2.953)***	-40.849 (-1.210)	-85.414 (-1.752)*	-109.575 (-2.380)**	-82.167 (-1.357)	-79.647 (-1.955)*
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	446	446	221	225	144	302
R^2	0.416	0.428	0.409	0.485	0.473	0.478

Table 8

Influence of Peak RRI on deal duration for subsamples of the acquiror and target samples

This table reports regression estimates of deal duration on reputational ESG risk and control variables for completed transactions of the acquiror and target samples. The dependent variable is the days between the announced date and the effective date of the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Panel A reports regression estimates with the acquiror sample split into transactions in which the target is smaller than the median TargetSize, shown in column (1), transactions in which the target is larger, shown in column (2), transactions that include a tender offer, shown in column (4), and transactions that do not include a tender offer, shown in column (3). Panel B reports probit regression estimates with the target sample split at the median AcquirorSize and TargetLeverage. Columns (1) and (3) show transactions in which the acquiror is smaller than the median AcquirorSize/the target has a lower leverage than the median TargetLeverage, columns (2) and (4) show transactions in which the acquiror is larger than the median AcquirorSize/the target has a higher leverage than the median TargetLeverage. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

<i>Panel A: Acquiror sample split by TargetSize and Tender</i>				
	(1)	(2)	(3)	(4)
Peak RRI	-0.125 (-0.757)	0.572 (1.878)*	0.465 (2.333)**	-0.444 (-1.238)
Control Variables	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	498	442	746	194
R^2	0.142	0.362	0.381	0.344
<i>Panel B: Target sample split by AcquirorSize and TargetLeverage</i>				
	(1)	(2)	(3)	(4)
Peak RRI	-0.744 (-2.183)**	-0.019 (-0.037)	-0.855 (-1.867)*	0.248 (0.524)
Control Variables	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	219	227	195	251
R^2	0.442	0.501	0.471	0.450

Table 9

Influence of Peak RRI on bid premium of the acquiror sample

This table reports regression estimates of bid premium on reputational ESG risk and control variables for the acquiror sample. The dependent variable is the natural logarithm of the the bid premium calculated as the share price offered in the transaction minus the share price 4 weeks before the transaction over the share price 4 weeks before the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Columns (2) and (3) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (2)/Democratic (3) in the 2020 presidential election. Columns (4) and (5) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (4)/Democratic (5) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Peak RRI	-0.001 (-0.474)	-0.004 (-0.845)	-0.000 (-0.097)	-0.000 (-0.096)	-0.002 (-0.716)
AcquirorSize	0.095 (3.943)***	0.071 (1.133)	0.104 (3.755)***	0.078 (1.943)*	0.121 (3.704)***
TargetSize	-0.075 (-3.735)***	-0.043 (-0.911)	-0.084 (-3.704)***	-0.065 (-2.096)**	-0.077 (-2.714)***
TargetLeverage	0.148 (1.445)	0.012 (0.055)	0.197 (1.588)	-0.015 (-0.079)	0.186 (1.449)
TargetFCF	-0.250 (-1.523)	-0.309 (-1.123)	-0.205 (-1.004)	-0.615 (-3.198)***	-0.047 (-0.188)
TargetCurrentRatio	0.016 (1.287)	0.026 (0.821)	0.016 (1.142)	-0.004 (-0.205)	0.024 (1.332)
Toehold	0.031 (0.239)	-0.220 (-0.622)	0.039 (0.289)	-0.143 (-0.799)	0.242 (1.198)
Allcash	0.079 (1.179)	0.179 (1.228)	0.044 (0.552)	0.129 (1.344)	0.037 (0.410)
Tender	0.119 (1.962)*	0.053 (0.334)	0.144 (2.116)**	0.045 (0.462)	0.165 (2.006)**
Hostile	-0.027 (-0.209)	-0.176 (-0.497)	0.104 (0.788)	0.059 (0.328)	-0.075 (-0.449)
Diversifying	-0.017 (-0.232)	-0.235 (-0.973)	0.023 (0.300)	-0.063 (-0.582)	0.024 (0.216)
Competing	0.421 (4.523)***	0.490 (1.982)**	0.367 (3.597)***	0.409 (2.903)***	0.366 (2.981)***
AcquirorParty	0.000 (0.001)			0.073 (0.700)	-0.032 (-0.248)
TargetParty	-0.027 (-0.458)	0.119 (0.999)	-0.049 (-0.722)		
Constant	2.935 (12.226)***	2.902 (5.413)***	2.862 (10.422)***	2.961 (8.576)***	2.739 (7.442)***
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	822	227	595	352	470
R^2	0.180	0.214	0.190	0.272	0.173

Table 10

Influence of Peak RRI on bid premium of the target sample

This table reports regression estimates of bid premium on reputational ESG risk and control variables for the target sample. The dependent variable is the natural logarithm of the the bid premium calculated as the share price offered in the transaction minus the share price 4 weeks before the transaction over the share price 4 weeks before the transaction. The data is extracted from Thomson Reuters' SDC Platinum database and RepRisk for January 2007 to September 2019. Column (1) reports results of a probit regression without interaction terms on the entire US sample. Columns (2) and (3) report results of a probit regression only on transactions where the acquiror headquarter is located in a state that voted Republican (2)/Democratic (3) in the 2020 presidential election. Columns (4) and (5) report results of a probit regression only on transactions where the target headquarter is located in a state that voted Republican (4)/Democratic (5) in the 2020 presidential election. All variables are defined in Appendix B. All variables are winsorized at the 1st and 99th percentiles. All firm controls are lagged by one year. Standard errors are robust to heteroskedasticity. T-statistics are reported in parentheses. The symbols *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Peak RRI	0.001 (0.586)	0.002 (0.444)	0.002 (0.645)	0.004 (0.728)	0.002 (0.705)
AcquirorSize	0.082 (2.480)**	0.029 (0.625)	0.110 (2.210)**	0.078 (1.019)	0.093 (2.544)**
TargetSize	-0.079 (-2.479)**	-0.067 (-1.568)	-0.087 (-1.708)*	-0.102 (-1.206)	-0.073 (-2.000)**
TargetLeverage	0.390 (2.252)**	0.409 (1.925)*	0.578 (1.926)*	0.686 (2.478)**	0.080 (0.341)
TargetFCF	-0.003 (-0.009)	-0.094 (-0.327)	0.026 (0.048)	0.295 (0.429)	-0.013 (-0.035)
TargetCurrentRatio	0.024 (0.812)	0.026 (0.751)	0.048 (1.010)	-0.005 (-0.095)	0.020 (0.577)
Toehold	0.211 (1.337)	-0.209 (-0.862)	0.407 (1.919)*	-0.197 (-0.598)	0.374 (2.002)**
Allcash	0.083 (0.940)	0.055 (0.465)	0.131 (0.910)	-0.036 (-0.207)	0.167 (1.629)
Tender	0.086 (0.867)	0.124 (0.919)	0.126 (0.876)	0.369 (1.746)*	0.009 (0.080)
Hostile	0.021 (0.129)	-0.021 (-0.085)	-0.104 (-0.324)	-0.310 (-1.143)	0.275 (1.334)
Diversifying	0.083 (1.005)	0.207 (1.397)	0.074 (0.592)	0.037 (0.177)	0.114 (1.108)
Competing	0.287 (2.603)***	0.268 (1.401)	0.257 (1.772)*	0.509 (2.222)**	0.193 (1.408)
AcquirorParty	0.055 (0.696)			0.077 (0.451)	-0.010 (-0.117)
TargetParty	-0.004 (-0.049)	0.085 (0.797)	-0.094 (-0.635)		
Constant	2.498 (6.922)***	2.479 (5.635)***	2.438 (3.888)***	2.451 (3.460)***	2.535 (6.690)***
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	453	230	223	146	307
R^2	0.183	0.207	0.248	0.292	0.201