Does reform trigger friction?

International ESG disclosure regulations and Unintended M&A consequence.

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ABSTRACT

To the extent disclosure regime lowers information friction related dead-weight cost, disclosure law should facilitate corporate investments (*the facilitation hypothesis, henceforth*). However, there is an alternative assertion that, the imposition of these laws give rise to a doubt in the market in the face of state opportunism increasing transaction cost and consequently deterring of corporate investments *(the friction argument, henceforth)*. In this paper we examine these two competing hypotheses by exploiting staggered imposition of ESG disclosure regulations in 53 countries and the M&A investment consequence. Our empirical estimation reveals ESG disclosure regulation deters M&A in support of the friction view of law. Furthermore, our examination of moderating role of state opportunism suggests, this deterring effect of ESG disclosure laws on M&A outcomes lowers in both intensity and magnitude by the quality of national institutions.

JEL Codes   :
Key Words   :

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1. Introduction

The M&As are strategic corporate decisions and an important source of corporate risk-taking and real investments. National laws and regulations of any country intend to create enabling environment to facilitate sustainable investments and capital formation national laws and regulations intend to create enabling environment (La Porta et al, 1996; Glendening et al., 2016). The effect of regulation on real investments and hence M&A outcomes is therefore one of the central concerns facing regulatory economics. Literature in national governance and institutional economics is dominated by the *Enabling Environment Hypothesis* which postulates that national disclosure reforms foster corporate investment and risk-taking by lowering information and agency related friction in the market (La Porta et al, 1996; Glendening et al., 2016; Fauver et al, 2017).

However, there is a small strand of literature on the *deterrence effect* of regulatory interventions on real investments and risk-taking relating to the possibility that intervention itself give rise to a fear or doubt on corporate risk-taking thereby deterring risk-taking appetite. This literature is based on the economic argument on the rent-seeking opportunism and exploitation that the state-ruler may engage in increasing the dead-weight cost of corporate risk-taking. (Stulz, 2005) argues that government (state) as an important opportunistic agent impacting corporate decisions.[1] The resulting effect of such interventions, notwithstanding to intended objective of facilitating capital allocation, would deter investments, prima facia. In this paper, we examine the M&A outcomes of regulatory intervention exploiting ESG disclosure regulations in an international setup.

This view posits the opportunism of state rulers to deploy their powers to expropriate corporates to extend their political agendas and rent seeking. The state expropriation actions

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[1] Stulz (2005) maintains that... "A firm's country of incorporation is a more important determinant of its financial policies than its industry."

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could range from an outright confiscation of assets to distorting regulations to favour their constituencies. In this view, the regulatory intervention itself is viewed as a friction, a source of rent seeking mechanism for a political agent in power.

In the face of higher expropriation risk, the political agent (ruler) in power/ These transparent and better-quality institutions protect stakeholders' interest in spite of expropriation risk. These institutions help the firm bond with the market to lower adverse selection and state agency costs facing a firm targeted by SWF investment (Stulz, 2005, Coffee Jr, 2002, Coffee Jr, 1999).

In the heightened global awareness and pressure towards climate change, resilience and sustainability, recent time has witnessed ESG reforms and policies implemented across different countries. We exploit one such class of regulations i.e. enactment of ESG disclosure regulations across 53 countries and revisit this important old debate of (un)intended outcome of regulatory interventions.

Our empirical study employs diff-in-diff estimation method documents deterrence effect of ESG disclosure regulations on M&A outcomes. Specifically, our empirical estimations reveal that the passage of ESG disclosure law deter both intensity (frequency) and magnitude (dollar volume) of M&A activities. In terms of economic magnitude, introducing ESG disclosure regulation in an enacting country lowers number of M&A deals by 21.5% in our sample countries per year. This translates to a reduction of minimum of 17.45% of dollar volume of M&A per year in these countries. The results survive false experiment tests and are stable over different sensitivity tests. Taken together, the results show deterring outcome of ESG disclosure regulations on M&A activities highlighting the possibility that (ESG disclosure) law can act as a source of friction. We further show that the passage of ESG disclosure regulation results in delay of deal completion time and increases bargaining power of target firms increasing bid premiums in the M&A deals.

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We next examine the role played by quality of national institutions and country-governance (specifically, regulatory quality, rule of law, and control of corruption) which could limit state expropriation and rent seeking opportunism. Our empirical results reveal quality of national institutions nullify the deterrence effect of ESG disclosure regulations underscoring its merit developing national institutions as these act as important enablers for capital formation and real investment (M&A) in the market. Finally, our results hold in the sub-sample of bilateral M&A activities.

Our paper makes two important contributions to the literature. The debate of on potential cost and benefit of regulatory interventions occupies central space in the regulatory economics. Our paper contributes to the literature by documenting unintended outcomes of ESG disclosure laws and show ESG disclosure deters M&A activities both in intensities and magnitude. It further increases deal completion time and increases cost of acquirer to bid the deal thereby acting as a source of friction, prima facia.

Second, we contribute to the literature in institutional economics and national governance by highlighting the role of national institutions in creating enabling environment which nullifies the deterrence effect of ESG regulation implementation.

Rest of the paper is structured as follows. Section 2 review relevant literature to formulate testable hypothesis on the deterrence argument of reform.

2. Literature review

Concerns of disclosure related to Environmental Social and Governance (ESG) issues? have been a fundamental part of the corporate firms in merger and acquisition transactions and sometimes reflect deadweight cost by increasing the rent-seeking behaviour and opportunism among regulators and national government agents. ESG disclosure has an important connection in our economy, and accessibility of ESG information is crucial for all stakeholders to ensure

appropriate capital distribution and avoid any possible crisis. An advanced level of ESG disclosure can attract capital and sustain confidence in financial markets. On the other hand, inferior disclosure and the uncertain image of firms can lead to disputes? and friction, unethical behaviour, manipulation in operations and harming market integrity at a higher cost (OECD, 2004).

The *Deterrence effect* of regulatory intervention provides some uncertainty on corporate risk taking and effect on risk-taking performance. Literature has identified the motivation for publication of ESG reports and bemoaned the sustainable change on ESG behaviour (Ball & Milne 2007). According to Murray et al. (2006), financial markets are motivating the firms to behave in a socially and environmentally sustainable way. On the contrary, Murray et al (2006) and Hopwood (2009) highlighted the lack of will from regulators to carefully control firms in order to implement the ESG practices.

The *Enabling Environment Hypothesis* is a rich and diverse area where risks are reduced and regulated. The national disclosure reforms reduce information and agency related friction in the market.

Recently, public consciousness of companies in the community has grown, due to social, environmental and ethical issues (Reverte 2009). Climate variations, declining natural resources, deprived working environment and rising corporate scandals have enhanced society's pressure with regard to companies' environmental, social and ethical duties (Money and Schepers 2007, p. 2). The companies are stimulated to initiate socially appropriate actions to develop correspondence between corporate operations and social values (Aerts and Cormier 2009; Chapple and Moon 2005). Therefore, companies face stress in terms of environmental, social, and governance (ESG) disclosure, as these are considered as thoughtful matters (e.g., Ioannou and Serafeim 2012; Kamal and Deegan 2013; Palazzo and Scherer 2006; Tagesson et al. 2009).

ESG disclosure is required according to public and private perception. First, governments and regulators emphasise ESG disclosure in their public objective for balancing private companies' activities with? public benefits. According to Ioannou and Serafeim (2011), many regulators worldwide are analysing the government measures put on organisations to ensure that corporate practices are associated with wider societal interest. According to Chan et al. (2014), and Talbot and Boiral (2015), government policies, as a result of new guidelines for working conditions, environmental security and corporate governance, required new reporting policies and regulations on ESG disclosure. There was also increasing demand from market participants and pressure from investors for ESG disclosure. Earlier literature shows evidence that stakeholders considered ESG information in their decision making process (e.g. see Berthelot et al. 2003; Gupta and Goldar 2006; Moneva and Cuellar 2009). Solomon and Solomon (2006) concluded that, from institutional investors and analysts, there was a continuous push to publish sustainability reports from corporations.

Mergers & Acquisitions (M&A) and ESG

Mergers and acquisitions (M&As) present a leading strategic choice for firms and may meaningfully impact on shareholder value (Tampakoudis et al., 2018). The initial information and conclusion of merger transactions can influence the interests not only of shareholders but also several stakeholders, for instance employees, customers, creditors and the wider society, all of whom perform a vital part in the effective post-merger assimilation process. Therefore, many studies have investigated corporate social responsibility (CSR) and the impact of Environmental Social and Governance on shareholders' perspectives in the M&A context, contributing mixed conclusions (for e.g. see Deng et al., 2013; Fatemi et al., 2017; Krishnamurti et al., 2020; Yen and Andre´, 2019; Zhang et al., 2020).

Many studies have examined the effects of ESG corporate performance on several M&A outcomes, for example, acquisition premiums (Gomes and Marsat, 2018; Qiao and Wu, 2019),

target choice and screening method (Gomes, 2019), target valuation (Chen and Gavious, 2015), deal uncertainties (Arouri et al., 2019), the amount of deals in mergers (Krishnamurti et al., 2020), the probability for an institution to become either a target or an acquirer (Boone and Uysal, 2020) and post-merger market evaluations (Tampakoudis and Anagnostopoulou, 2020).

ESG Disclosure benefits and Costs

Managers often adopt a rational approach for weighing disclosure benefits against disclosure costs, by choosing the balance magnitude of ESG disclosure for their corporations.

In the earlier literature on disclosure benefits and costs, some researchers (e.g. see Albarrak et al., 2019; Bui et al., 2019) illustrated that a firm's major carbon disclosure can reduce the cost of equity by equalising its bad carbon performance. Similarly, Czerwinska´ and Ka´zmierkiewicz (2015), in a study on Polish firms, identified that higher transparency in disclosing ESG data resulted in lower volatility of stock returns. According to He (2011), there is a positive relationship between transparency disclosure of governance matters and the efficiency of capital allocation in deteriorating businesses. Leuz, Lins, and Warnock (2009) documented that overseas stockholders tend to invest less in the companies with low governance standards and poor disclosure of non-financial (ESG) information. Further, Serafeim and Grewal (2017) proposed that ESG data can be applied to forecast the financial performance of companies. On the other hand, the contrary view documents that higher ESG disclosures by firms can result in significant disclosure cost (Mattoo, Subramania, van der Mensbrugghe, & He, 2009; Aggarwal & Dow, 2011; Hainmueller & Hiscox, 2017). Mattoo et al. (2009) evidenced that some firms seek to reduce the ESG disclosure cost by trying to adopt less challenging climate change regulations rules.

Agency Cost and ESG Discourse

Earlier studies proposed that adequate governance systems can diminish the agency cost arising

from detachment of ownership and control, for instance, decreasing numbers of independent boards of directors, percentage shares of institutional investors and insider holdings (for e.g. see Cuadrado-Ballesteros, Rodrı'guez-Ariza, & GarcíaSanchez, ´ 2015; Dahya & McConnell, 2007; Lee & Lee, 2009; Lee, Lev, & Yeo, 2008; Liu, Miletkov, Wei, & Yang, 2015). Cuadrado-Ballesteros et al. (2015) concluded that the percentage of independent directors is positively related with the proportion of company disclosure with regard to corporate social responsibilities concerns. In another study, Siew et al. (2016) documented that listed firms on the New York Stock Exchange illustrated a negative relationship between ESG disclosure and market announcement asymmetry, as examined through a bid-ask spread. They also found that a higher level of institutional ownership can increase this impact further. Tamimi and Sebastianelli (2017) found that S&P 500 firms had a larger board size and a board with higher gender diversity usually reveal a higher volume of ESG data. Dalla Via and Perego (2018) documented that US firms who maintain high standards in corporate governance often offer high levels of minerals disclosure. Albarrak et al. (2019) documented that listed companies on U.S. NASDAQ with a higher number of independent directors have higher levels of carbon disclosure on Twitter. In the contrary view, carbon disclosure is not considered as a major characteristic by institutional investors into their investment decisions (for e.g. see Adams & Jiang, 2016; Aggarwal & Dow, 2011; Trucost, 2009).

Corruption, lack of civil liberty and Government opportunism and ESG Disclosure

We also study country-specific issues such as corruption, and how the lack of civil liberty and political benefits may affect the cost of ESG disclosure, for instance lobbying and exploitation (e.g. see Cooper, Gulenm, & Ovtchinnikov, 2010; Cuervo-Cazurra, 2006; Ioannou & Serafeim, 2012). According to Ioannou and Serafeim (2012), the proportion of corruption is higher in Japan relatively with Germany; Japanese companies are using less investment in building CSR reputation. Cooper et al. (2010) documented that societies with liberal and political rights are

more able to freely express their issues through non-governmental organisations and the media. Similarly, Bui et al. (2019) argued that domiciled companies in countries having exceptional performance in the World Bank's Worldwide Governance Indicators (WGI) are expected to announce higher level of carbon information. Campbell (2007) proposed that robust government regulations force firms to perform better in a socially responsible manner. Earlier studies (such as De Soto, 1989; Husted, 2005) identified that economic development plays a significant role for environmental sustainability, however, the empirical results on the country element of economic development is uncertain. Gnyawali (1996) proposed that stakeholders from wealthy countries are more knowledgeable and therefore request improved environmental and socially responsible conduct from companies. The contrary studies (Chapple & Moon, 2005; Ioannou & Serafeim, 2012) suggested that economic development is not the only factor for interpreting the variations of corporate, social and environmental performance. We, therefore, consider whether the lack of corruption, absence of civil liberty and lack of political freedom influence the cost of investing in ESG disclosures.

Overview of ESG Regulations

ESG debate has significant impact on the investment decisions and investors often criticize that the quality of firm level ESG disclosures are inadequate to form educated investment decisions (e.g., EY 2018; Ilhan et al. 2021). The identified gap between the demand and supply of ESG information enable many countries to propose *compulsory ESG disclosure regulations* to control firms in order to release adequate information on ESG issues with traditional financial disclosures or in separate focused reports (such as; sustainability reports or CSR reports).

The objective of regulations on compulsory ESG disclosure is to improve the source of ESG information, however, it is difficult to examine whether such regulations truly enhance the ESG information environment. For example, some countries announced regulations that consist of

loose standards and guidelines, therefore, firms could pick only plain and basic disclosure requirements (Leuz, Nanda, and Wysocki 2003; Burgstahler, Hail, and Leuz 2006; Christensen, Hail, and Leuz 2019). On the other hand, some firms willingly disclose high quality ESG information before any enforcement of regulations, which indicates that additional disclosure requirements may not have any effects for these firms.

Therefore, our paper will explore the important question whether ESG disclosure regulations have any impact on firms and investment decisions.

In summary, the current study contributes to the literature using this novel approach by, first, understanding that the ESG disclosure mandate is creating a deadweight cost by increasing the rent-seeking behaviour and opportunism among regulators and national government agents. This is especially true for countries with weaker regulatory quality, a weaker rule of law, and higher levels of corruption. Second, we argue that organic growth may face few challenges for firms, in comparison with strategic expansion through M&A required substantial legal requirements may be affected in negative way (unintended consequences), especially for countries with weaker regulatory quality, weaker rule of law and higher levels of corruption. Third, we argue that there are unintended consequence of ESG disclosure in M&A, and national institutions act as an ultimate determinant of translating disclosure reform into something positive for the expected policy outcome in the form of M&A. Finally, the cross-listing companies offer higher ESG disclosure by reduction in the additional cost through the signalling theory.

3. Identification Strategy

To isolate causal inferences, we use difference-in-difference estimation that exploits staggered enactment of ESG disclosure regulations in the international set up of 53 countries from 2000 to 2018. We compare the cross-time evolution of the dependent variables (M&A outcomes) in countries that enact ESG disclosure regulations relative to countries that do not

enact the restrictions.

Sample composition and data sources

We source ESG disclosure law data from Krueger, Sautner, Tang, Zhong (2021) and verify this with extensive media search. The information of the ESG disclosure regulations of 53 countries in presented in Appendix table A2. We use the Thomson Reuters Securities Data Corporation (SDC) database accessed through ThompsonOne and obtain the M&A deals data of 53 countries from 2000 to 2018 allowing us at-least 3 years before and after of enacting countries. This results in a total of 785,459 deals with a total volume (value) of USD 66.435 billion in our final sample constituting 53 target nations. We summarize the distribution of M&A deals across sample countries in Table 1. We observe that United States constitutes the maximum number of M&A deals with appx 26% of all deals both as a target and acquirer nation. This is followed by China, United Kingdom, and Japan with 8.4%, 7.31%, 6.14% of total number of deals as target nation and with 7.31%, 6.96% and 6.39% of total number of deals as acquirer nation respectively. In terms of total deal value, United States leads the table with more than USD 31 billion in deal value, followed by United Kingdom (USD 53.12 billion / USD 44 billion), and China (USD 41.3 billion / USD 41.6 billion) as target/acquirer nation respectively. Among the 25 nations with the ESG disclosure laws, we have 44.7% of the total M&A deals valuing USD 22.85 billion as target nation and 40.26% of the total M&A deals valuing USD 22.06 billion as acquirer nation.

[Insert Table 1 about here]

The data on industry characteristics and security prices are obtained from Datastream. Further we source various country specific macro-economic and governance data are from World Bank WDI and WGI database. Details of all the variables used their data source used in this study are described in Table A1.

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Measuring M&A activities

Dependent Variables

Our employment of dependent variables are in keeping with literature of M&A (Erel at al., 2015). Our primary dependent variables includes *deal frequency* which is computed as a number of deals aggregated at country level (or country-industry level) in a in country c in a year. However, we employ different alternative proxies of M&A outcomes including deal volume (US$ volume of M&A deals in country c in a year t) and *Cross border Deal Frequency*.

Enabling Institutions

A country's quality macro-governance is measured by four time-varying indices: capturing the quality of institutions (Regulatory quality, Rule of Law, Control of Corruption)

Control variables

Drawing on the existing literature, we include a number of country specific, industry-country-specific, bilateral country-pair specific, deal and firm-specific control variables in all multivariate regressions. Our first set of controls is specific to the target's domicile (Rossi and Volpin, 2004; Erel et al., 2012; Ahern et al., 2015). To capture a country's size and potential economic growth and development, we use the US$ of country GDP (*Country-size*), annual percentage change in gross domestic product (GDP growth) and GDP per capita (GDPCap) respectively. We also control of the inflow and outflow of FDI as these are other sources of capital formation and real investments. We also include the ratio of total stock market capitalization to GDP and Domestic credit as a proportion of GDP as a proxy of capital market development and Domestic credit market respectively. We capture country-specific trade openness (Trade) by including the ratio of the sum of the imports and exports value to GDP. Further, we also control for the effect of varying inflation (Inflation) by incorporating percentage change in the annual consumer price index. Data on all macroeconomic factors and

governance factors are retrieved from the WDI open source from the World Bank. For the examination of moderating role of national institutional quality, we employ WGI open source of the World Bank.

We also include industry median of firm-level variables, all obtained from Datastream. These include the natural logarithm of book-value of the firm's total assets (Firm size) to account for firm size. Profitability is captured using return on assets (ROA). Leverage (long-term debt to book value of equity ratio) is a measure of a firm's long-term financial distress (Leverage). We control for bidder's misvaluation implications by including the market-to-book (MTB) ratio. The Herfindahl-Hirschman Index (HHI) is included to measure industry competition. Finally, we also incorporate commonly used deal-specific variables in the model. These include Deal size measured as the natural logarithm of the dollar value of the M&A deal, Public target dummy that takes the value of one if the target firm is a listed firm and zero otherwise. Similarly, we include Cash deal dummy that takes the value of one if at least 50% is paid in cash and zero otherwise, and Diversifying deal dummy that takes the value of one if the 2-digit SIC codes of the acquirer and target are different and zero otherwise. Data on all deal-specific factors are obtained from the SDC.

4. Empirical Analysis

Descriptive statistics

In the table 2 we summarize the data of dependent and independent variables used in the study under three panels. First in the Panel A we summarize the aggregated data at target nation-year level. We summarize the bilateral pair-year level aggregated data in the Panel B. Finally in the Panel C, we provide the descriptive statistics of the target-country industry and year level aggregated data.

[Insert Table 2 about here]

ESG disclosure laws and M&A outcomes:

We begin our empirical analysis by testing the enabling argument vis-à-vis deterrence argument of ESG disclosure regulation. To do so, in the baseline regression, we aggregate M&A data at target country-year level and run the following regression.

$$M\&A_{ct} = \alpha + \beta Law_c \times After_t + \delta X_{c,t-1} + \varphi_c + \varphi_t + \varepsilon_{ct} \qquad (1)$$

We present the results of the baseline regression in column [1-3] of table 3.

In the countries that pass an ESG Disclosure law, we observe that the number of M&A deals decline significantly in the years following the regulation. In Table 3 we present the first set of empirical results of our baseline regression. In column [1] without any control variables, we see a -25.00% ($100 \times (e^{-0.28.77} - 1)$) decline in the total M&A deals at 1% significance level. Even after controlling for macro-economic variables that may influence the M&A deals in model [2], we observe the DiD coefficients are stable. In terms of economic magnitude, this translates into about 21.5% decline in M&A deals per year. In model [3], we measure the impact of ESG disclosure on the size of M&A deals measured in US$ (in millions) and find the impact is consistent with the results in [2]. In terms of magnitude, the deterrence effect of ESG disclosure regulations translates to 17.45% of dollar volume of M&A per year. Taken together, the results show ESG disclosure regulations cause a deterrence in M&A intensity and volume thereby supporting the law as friction argument creating deadweight cost to deter M&A activities.

Next we employ a series of sensitivity tests, to examine where the coefficients are stable with these additional tests.

At the core of our DiD-based identification strategy is the parallel trend assumption (Angrist

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and Pishke, 2008). We therefore start testing this assumption using the false experiment test upto 4 lag- years prior to actual enactment year of ESG disclosure regulation. To facilitate comparison, we supplement this False experiment test to include treatment effect of the treated for upto 4 lead period after enactment of these regulation.

Specifically, we design following false experiments as in equation 2.

$$Ln(Deal\ Freq_{c,t}) = \alpha_1 R_{t-1} + \alpha_2 R_{t-2} + \alpha_3 R_{t-3} + \alpha_4 R_{t-4} + \alpha_5 R_t + \alpha_6 R_{t+1} + \\ \alpha_7 R_{t+2} + \alpha_8 R_{t+3} + \alpha_9 R_{t+4} + \delta X_{ct} + \varphi_c + \varphi_t + \varepsilon_{ct},$$

(2)

where $n \in \{-4,+4\}$ is the false (true) experiment upto 4 lag (lead) years. where all variables are defined as in equation (1), in country c during year t, and R_{t-n} (R_{t+n})is a dummy variable equal to 1 in one lag (lead) period of actual ESG regulation enactment in country c.

Figure 1 plots the coefficients of this design along with their 95% confidence interval. As shown in the figure 1, none of the DiD estimates (α_s) are distinquishable from zero in the lag term indicating that there is no systematic difference in the evolution of M&A deals in countries with and without ESG disclosure regulations prior to the passage of regulation holding the parallel trend assumption of DiD specification for assigning causality. On the contrary and in line with our deterrence effect argument, in and following the enactment years, the coefficients are significantly negative.

We see in table 1 that 26.17 (48.04) % of the total M&A deals (volume) involve US based targets, it could be argued that the results are driven by US. In order to alleviate this concern as the first set of robustness test, we estimate the causal effect excluding the US in Model [4] and find that the DiD coefficient is stable after excluding M&A deals where US is target nation. We further conduct robustness checks by allowing shorter time periods of ±5 and ±4 years before and after the legislation in models [5] and [6] respectively. The results are consistent with previous estimations documenting deterrence effect on DiD estimation with these varying

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before and after periods. The DiD coefficient is stable when employing cross border deal frequency as dependent variables result in model [7] in support of deterrence argument.

We next run the regression using a scaled dependent variable in model [8]. We do so by scaling the number of deals by the number of listed companies in the target nation in line with common practice in M&A research (Volpin, 2017). Finally in model [9] we control the effect of business cycles affecting our results. The result is consistent with previous estimation both in magnitude and significance.[2] All these additional robustness tests support our main results that indicate a general decline of 20.01% to 23.9% in M&A deals across models [3] to [9]. We have allowed for target nation and year fixed effects in all our models. These results support our deterrence hypothesis indicating the law as a source of friction.

[Insert Table 3 about here]

Deal Completion time

To the extent M&A participants find the imposition of regulation as a source of friction, this could not only deter M&A activities, but also delay the process of M&A completion. To examine this possibility we examine the deal completion time (time between deal announcement and deal completion (effective). As shown in table 4, the deal completion days (in natural logarithm) has increased following the ESG disclosure regulation. In terms of magnitude, this increase the deal completion time on an average by 3.93% to 4.5%. The results yet corroborate to our central postulation that law in itself could be a source of friction stemming from the possibility of state opportunism and rent seeking increasing the dead-weight cost to the M&A deals.

[Insert Table 4 about here]

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[2] As the data on business cycles are missing for a fraction of our data-points this has reduced the number of observations. However, the coefficient is consistent and significant in line with our hypothesized deterrence effect.

Deal Premium

In the section we are further the implications of our finding that acquirers that ultimately make a bid in the wake of ESG regulation are subject to interim risk. We do so by estimating the effect of ESG disclosure regulation on deal premium. From theoretical standpoint, in the face of the real options channel potential acquirers would delay their acquisitions in friction regime as maintained by deterrence argument. The logical extension of this view is the prediction that those acquirer who ultimately decide to bid are selected from among the firms for which deterring is more costly, all else equal (Hao et al., 2020).

To test our prediction, we examine the effects of ESG disclosure regime on offer premium. In particular, if during post friction period (ESG disclosure regulation) target firm's negotiation power increases, we should expect that they should be able to receive a higher offer price from acquirers. We report the test in table 5. In line with the higher negotiation power of target firms when acquirer who ultimately decide to bid when facing new disclosure regime, all estimation models ([1]-[7]) in table 5 shows an increase in bid-premium. The coefficients are stable using three different variations of bid-premium (bid-premium over target's price 4 week, 1 week and 1 day prior to announcement). The results taken together, support the argument that when facing regulatory friction, the target's bargaining power increases as acquirer who ultimately decides to bid having higher cost of delaying or deterring.

[Insert Table 5 about here]

Quality of Institutions [Law as friction and national governance]

The institutional regime in an economy is based on the allocation of rights and obligations among the firm's stakeholders, including shareholders (La Porta, 1999). The protection of different stakeholders is defined and enforced to varying degrees depending on the strengths of institutions of corporate governance in an economy (Capron and Guillén, 2009). As a result of their distinctive historical episodes and events, national corporate governance institutions differ significantly over the cross-section of countries, with effects for the degree of protection enjoyed by shareholders and other stakeholders (La Porta, 1999; Schneper and Guillén, 2004; Djankov, et al., 2008).

We view the quality of the institutions as important as these institutions enable investors' confidence in the financial market of an economy (Schneper and Guillén, 2004). These institutions protect corporates against state expropriation (Stulz, 2005).These country-level corporate governance rules also improve confidence among the market participants in the rules of society. In particular, this improves the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. These institutions also improve the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Studies in public administration and politics document state exploitation by rulers/ ruling parties is one of the key problems facing a nation, especially emerging economies and new democracies (Van Biezen, 2008); Kopecký, 2011). In the existence of week national institution, a regulatory intervention itself could give rise to the playing field for opportunistic behaviour from state-rulers/actors increasing the indirect cost of doing business. As M&A is a strategic investment, this corporate risk-taking in the form of M&A may face deterrence when the national governance is weaker. On the contrary, an economy with strong institutions and state-mechanism to discourage corruption, the opportunistic nature of regulatory interventions

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weakens. In line with this argument, in this second set of enquiry, we examine whether quality of institutions weakens the deterrence effect of ESG disclosure regulation. To examine this prediction, we employ following regression equation

$$M\&A_{ct} = \alpha + \beta(Law_c \times After_t) + \omega(Law_c \times After_t \times Gov_{c,t-1}) +$$
$$\delta X_{c,t-1} + \varphi_c + \varphi_t + \varepsilon_{ct}, \tag{3}$$

While our baseline results support the conjecture that ESG disclosure laws act as friction and thus reduce the number of M&A deals, we investigate whether the results hold when we consider the quality of institutions of these target nations. We use RQ, RL, CC and the PC1 as an additional control variable and interact our DiD with these continuous variable scores and present the results in Table 5. Supporting our line of argument that higher quality of national institutions lowers the state-opportunism and rent seeking opportunism weakening the deterrence argument we see that quality of institutions of the target nation positively moderates the effects of frictions. The corollary is that, with each unit reduction of RQ, RL or CC, the M&A further reduces by approximately 8.78%, 8.53% and 8.57% respectively.

[Insert Table 6 about here]

Bilateral M&A [The effects of ESG disclosure on M&A: Bilateral Perspective]

We extend our analysis of the impact of ESG disclosure laws on bilateral country-pair settings. While we lose some observations from our original sample due to the restriction that both target and acquirer domicile are required to be from the 53 countries, country-pair analysis provides rich source of variation on the impact of ESG disclosure regulations on M&A outcomes. Specifically, country-pair analysis enables us to isolate the impact of the ESG disclosure laws on their M&A activities originating from the domiciles of targets and acquirers separately. Following specifications similar to Erel, Liao, and Weisbach (2012) we run the following

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regression:

$$M\&A_{tgt-acq,t} = \alpha + \beta_{tgt}(Law_{tgt} \times After_{t-tgt}) + \beta_{acq}(Law_{acq} \times After_{t-acq})$$

$$+\delta_{tgt}X_{t-1,tgt} + \delta_{acq}X_{t-1,acq} + \varphi_{tgt} + \varphi_{acq} + \varphi_t + \varepsilon_{tgt-acq,t} \tag{4}$$

The results of the equation (4) are presented in Table 7. The results are consistent with our baseline results in table 3.

[Insert Table 7 about here]

Institutional Quality and Disclosure Law: Bilateral M&A

Finally, we extend the analysis of the moderation of quality of institutions on the deterrence effect of ESG disclosure in the bilateral enquiry. To do so, we run diff-in-diff-in-diff regression (5)

$$M\&A_{tgt-acq,t} = \alpha + \beta_{tgt}(Law_{tgt} \times After_{t,tgt}) + \beta_{acq}(Law_{acq} \times After_{t,acq}) +$$

$$\omega_{tgt}(Law_{tgt} \times After_{t,tgt} \times Gov_{tgt,t-1}) +$$

$$\omega_{acq}(Law_{acq} \times After_{t,acq} \times Gov_{acq,t-1}) + \tag{5}$$

$$\delta_{tgt}X_{t-1,tgt} + \delta_{acq}X_{t-1,acq} + \varphi_{tgt} + \varphi_{acq} + \varphi_t + \varepsilon_{tgt-acq,t}$$

We present the results in table 8. The results across different models ([1]-[5]) are consistent with the findings in table 6 and supports the argument that quality of national institutions lowers state-opportunism and weakens the deterrence effect of ESG disclosure regulation.

[Insert Table 8 about here]

5. Conclusion

While regulations are aimed to eliminate or lower market friction to facilitate efficient resource allocation, in the wake of weak institutions state-opportunism and rent seeking behaviour can lead to regulatory intervention, prima facia, the source of market friction increase dead-weight cost in M&A outcomes. We test this argument exploiting staggered implementation of ESG disclosure regulations of 53 countries from 2000- 2018 and examining the M&A consequences. Using a diff-in-diff estimation design, we document an in support of the deterrence argument of ESG disclosure regulations. We further show that good quality institutions and national governance minimize this risk of state opportunism and rent seeking thereby nullifying the deterrence effect. Our results are of policy relevance of regulators towards developing institutional quality and national governance.

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Table 1. Panel A. Distribution of M&A deals across sample countries

Country	ESG Disclosure Law	Target Nation				Acquirer Nation			
		Freq.	Percent	Volume (USD mil)	Percent	Freq.	Percent	Volume (USD mil)	Percent
Argentina	2008	2818	0.36	123042.53	0.19	1431	0.18	56916.73	0.09
Australia	2003	33788	4.30	1966746.99	2.96	29599	3.77	1799716.87	2.71
Austria	2016	3887	0.49	174598.49	0.26	3734	0.48	150257.73	0.23
Bahrain	-	237	0.03	13489.01	0.02	308	0.04	16984.42	0.03
Belgium	-	5335	0.68	356136.13	0.54	4625	0.59	451233.45	0.68
Bermuda	-	592	0.08	225329.48	0.34	885	0.11	273400.14	0.41
Brazil	-	11102	1.41	1025098.98	1.54	7663	0.98	809626.23	1.22
Canada	-	42442	5.40	2495258.38	3.76	42801	5.45	2666175.47	4.01
Chile	2015	2663	0.34	178224.55	0.27	1707	0.22	118314.33	0.18
China	2008	66005	8.40	4135402.91	6.22	57385	7.31	4168560.77	6.27
Colombia	-	1833	0.23	94380.85	0.14	900	0.11	61943.69	0.09
Egypt	-	1447	0.18	88379.89	0.13	846	0.11	36773.55	0.06
France	2003	33035	4.21	1942330.37	2.92	31927	4.06	2467776.32	3.71
Germany	-	31937	4.07	1924555.9	2.90	27401	3.49	1931364.05	2.91
Greece	2006	2224	0.28	157674.08	0.24	1807	0.23	110229.02	0.17
Hong Kong	2016	14690	1.87	947112.89	1.43	18252	2.32	1239681.3	1.87
Hungary	-	2054	0.26	59633.06	0.09	1096	0.14	15053.37	0.02
India	2015	22059	2.81	622341.01	0.94	16920	2.15	446518.73	0.67
Indonesia	2012	5045	0.64	183649.01	0.28	2546	0.32	102637.81	0.15
Ireland-Rep	-	3528	0.45	467424.24	0.70	3385	0.43	335752.03	0.51
Israel	-	2813	0.36	173390.48	0.26	2370	0.30	218358.79	0.33
Italy	2016	15685	2.00	1320300.62	1.99	12798	1.63	1165963.98	1.76
Japan	-	48197	6.14	1985274.06	2.99	50162	6.39	2479666.99	3.73
Jordan	-	729	0.09	10499.7	0.02	535	0.07	3274.25	0.00
Malaysia	2007	14117	1.80	315231.29	0.47	13622	1.73	314784.94	0.47
Mexico	-	3939	0.50	372791.61	0.56	2160	0.27	329916.32	0.50
Morocco	-	447	0.06	33764.31	0.05	221	0.03	12175.45	0.02
Netherlands	2016	11408	1.45	1215030.79	1.83	11732	1.49	1315303.61	1.98
New Zealand	-	5073	0.65	127411.14	0.19	3691	0.47	89395.88	0.13
Nigeria	-	633	0.08	51932.62	0.08	313	0.04	15121.26	0.02
Norway	2013	7679	0.98	363267.76	0.55	5978	0.76	290759.83	0.44
Oman	-	371	0.05	6505.47	0.01	293	0.04	7674.79	0.01

Country	Year								
Pakistan	2009	621	0.08	20013.28	0.03	361	0.05	4859.64	0.01
Peru	2016	1732	0.22	68152.67	0.10	848	0.11	20568.34	0.03
Philippines	2011	2984	0.38	111484.55	0.17	2200	0.28	93592.22	0.14
Poland	-	7954	1.01	170339.95	0.26	4994	0.64	83988.89	0.13
Portugal	2010	2967	0.38	218568.47	0.33	2130	0.27	153992.15	0.23
Qatar	-	229	0.03	15265.75	0.02	470	0.06	98168.24	0.15
Russian Fed	-	30515	3.88	906854.54	1.37	23799	3.03	712319.04	1.07
Singapore	2016	8604	1.10	423712.66	0.64	10990	1.40	635214.55	0.96
Slovenia	-	750	0.10	12468.81	0.02	406	0.05	5295.02	0.01
South Africa	2010	5687	0.72	319706.74	0.48	4752	0.60	256617.44	0.39
South Korea	-	18878	2.40	882732.31	1.33	17733	2.26	848993.73	1.28
Spain	2012	18600	2.37	1307557.81	1.97	15052	1.92	1230233.9	1.85
Sri Lanka	-	697	0.09	5749.28	0.01	481	0.06	2359.68	0.00
Switzerland	2016	8055	1.03	1047874.52	1.58	9229	1.17	1265779.96	1.91
Thailand	2014	5340	0.68	140927.27	0.21	4210	0.54	142080.71	0.21
Tunisia	-	246	0.03	6987.73	0.01	95	0.01	1780.18	0.00
Turkey	2014	3966	0.50	236945.59	0.36	2420	0.31	115197.06	0.17
United Arab Emirates	-	1571	0.20	109872.4	0.17	1643	0.21	253568.66	0.38
United Kingdom	2013	57428	7.31	5312157.69	8.00	54690	6.96	4400323.4	6.62
United States	-	205533	26.17	31918213.87	48.04	206473	26.29	31001012.18	46.66
Vietnam	-	5290	0.67	43992.5	0.07	3520	0.45	18392.46	0.03
Others	-	-	-	-	0.00	59870	7.62	1590137.4	2.39
Total		785459	100	66,435,786.96	100.00	785459	100	66435786.96	100.00

Table 2. Summary Statistics

Panel A: Data aggregated at target nation-year level

	Count	Mean	SD	Median	25th pctile.	75th pctile.
Ln (deal count)	1006	5.4043	1.6826	5.4250	4.2905	6.5862
Ln (deal count CB)	1006	4.4799	1.3969	4.6200	3.5264	5.3891
Ln (deal volume)	995	9.0989	2.2065	9.2424	7.9588	10.6293
Ln (deal volume CB)	987	8.1910	2.0944	8.4401	7.2107	9.5975
Country size	1006	26.4108	1.5690	26.3599	25.4685	27.4852
Ln (GDP per capita)	1006	9.3684	1.3379	9.6107	8.2713	10.5197
GDP growth	1005	0.0350	0.0313	0.0343	0.0171	0.0532
Capital market development	976	0.8549	1.3234	0.5462	0.2920	0.9523
Domestic Credit market	906	0.8280	0.4796	0.7671	0.4013	1.1864
FDI-inward	1006	0.0473	0.0745	0.0254	0.0123	0.0447
FDI-outward	1006	0.0362	0.0749	0.0112	0.0025	0.0334
Trade	995	0.8870	0.6733	0.6655	0.4976	1.0887
Inflation	1005	0.0463	0.0606	0.0303	0.0127	0.0625
Unemployment	1006	0.0700	0.0493	0.0567	0.0380	0.0891
RQ	953	0.6950	0.8112	0.7198	0.0334	1.4082
RL	953	0.6153	0.9022	0.5883	-0.1499	1.4527
CC	953	0.6026	0.9986	0.4701	-0.2764	1.4885
PC1	953	-0.0000	1.6991	-0.0156	-1.5204	1.5445

Panel B: Data aggregated at bilateral pair-year level

	Count	Mean	SD	Median	25th pctile.	75th pctile.
Ln (deal count)	16041	1.5637	0.9787	1.0986	0.6931	2.0794
Country size [tgt]	16041	27.1121	1.4405	26.9824	26.1339	28.1380
Country size [acq]	16041	27.3504	1.4844	27.3381	26.3812	28.3804
Ln (GDP per capita) [tgt]	16041	9.6191	1.2576	10.0748	8.7510	10.6305
Ln (GDP per capita) [acq]	16041	9.6191	1.2576	10.0748	8.7510	10.6305
GDP growth [tgt]	16038	0.0326	0.0305	0.0306	0.0161	0.0503
GDP growth [acq]	16039	0.0309	0.0300	0.0285	0.0150	0.0449
Capital market development [tgt]	15876	0.9796	1.4099	0.6596	0.3651	1.1299
Capital market development [acq]	15910	1.1506	1.5494	0.8107	0.4946	1.2173
Domestic Credit market [tgt]	14889	0.9532	0.4927	0.9686	0.5187	1.2914
Domestic Credit market [acq]	14929	1.0885	0.4646	1.1143	0.7607	1.4054
FDI-inward [tgt]	16041	0.0526	0.0819	0.0269	0.0149	0.0455
FDI-inward [acq]	16041	0.0602	0.0930	0.0270	0.0142	0.0503
FDI-outward [tgt]	16041	0.0448	0.0840	0.0169	0.0051	0.0411
FDI-outward [acq]	16041	0.0578	0.0939	0.0244	0.0092	0.0541
Trade [tgt]	15969	0.8653	0.7335	0.6112	0.4743	1.0008
Trade [acq]	15917	0.9466	0.8256	0.6296	0.4992	1.1435
Inflation [tgt]	16038	0.0394	0.0490	0.0246	0.0115	0.0544
Inflation [acq]	16039	0.0295	0.0402	0.0198	0.0094	0.0380
Unemployment [tgt]	16041	0.0716	0.0471	0.0582	0.0422	0.0864
Unemployment	16041	0.0662	0.0435	0.0552	0.0409	0.0792
RQ [tgt]	15345	0.8637	0.8149	1.0168	0.2264	1.5858
RQ [acq]	15345	1.0900	0.7276	1.2814	0.6447	1.6736

RL [tgt]	15345	0.7936	0.9204	1.0015	-0.0374	1.6572
RL [acq]	15345	1.0646	0.8141	1.4133	0.4551	1.7365
CC [tgt]	15345	0.7936	1.0215	0.9505	-0.2160	1.7598
CC [acq]	15345	1.0927	0.9322	1.3777	0.3370	1.8793
PC1 [tgt]	15345	-0.0000	1.7027	0.2360	-1.7174	1.6742
PC1 [acq]	15345	0.0000	1.6987	0.5971	-1.2566	1.4758
Panel C. Data aggregated at target country-industry and year level						
Ln (deal count)	43428	1.9553	1.1734	1.6094	1.0986	2.6391
Size [Industry Median]	33551	7.1697	3.0108	6.6419	5.0702	8.6842
Leverage [Industry Median]	33174	0.2202	0.1878	0.1972	0.0504	0.3306
Capex [Industry Median]	33550	0.2602	4.2527	0.0810	0.0457	0.1380
Growth [Industry Median]	33550	3.4970	274.4317	0.0688	-0.0037	0.1656
Cash holding [Industry Median]	33551	0.1140	0.1065	0.0867	0.0439	0.1504
HHI [Industry Median]	35950	0.0217	0.0410	0.0129	0.0092	0.0209

Table 3. Law or friction: Baseline result

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$M\&A_{ct} = \alpha + \beta Law_c \times After_t + \delta X_{c,t-1} + \varphi_c + \varphi_t + \varepsilon_{ct} .$$

The dependent variable is deal frequency, expressed in natural log transformation (1,2,4,5,6 &9), deal volume (3), cros border (CB) deal frequency (7) and deal frequency scaled by no. of listed companies in country c (8). Law_c is a country dummy that takes the value of 1 if a target country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions.

	Ln (deal freq.)	Ln (deal freq.)	Ln (deal vol.)	Ln (deal freq.) Excluding US.	Ln (deal freq.) [-5,+5] years	Ln (deal freq.) [-4,+4] years	Ln (CB deal freq.)	Deal freq.÷ No of listed co.	Ln (deal freq.)
	Model [1]	Model [2]	Model [3]	Model [4]	Model [5]	Model [6]	Model [7]	Model [8]	Model [9]
$Law_c \times After_t$	-0.2877***	-0.2414***	-0.1918**	-0.2390***	-0.2235***	-0.2001***	-0.2466**	-0.2165***	-0.1338*
	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.01)	(0.05)	(0.00)	(0.09)
Country size		0.1682	1.7703**	0.1939	0.2147	0.2145	-0.6152	-0.0162	-0.3204
		(0.63)	(0.013)	(0.63)	(0.51)	(0.51)	(0.20)	(0.96)	(0.56)
Ln (GDP per capita)		0.5331	-0.3777	0.5090	0.4196	0.4543	0.5804	0.3732	0.9856
		(0.21)	(0.61)	(0.26)	(0.32)	(0.27)	(0.21)	(0.25)	(0.17)
GDP growth		1.0556	3.6116**	1.0301	1.0266	1.2776	0.7957	1.4203*	-0.2251
		(0.28)	(0.019)	(0.30)	(0.35)	(0.28)	(0.35)	(0.06)	(0.84)
Capital market development		0.0588	0.0149	0.0581	0.1260***	0.1287***	0.0335	0.0465	0.1274***
		(0.24)	(0.65)	(0.26)	(0.00)	(0.00)	(0.74)	(0.20)	(0.00)
Domestic Credit market		-0.2938*	0.1622	-0.3016*	-0.0931	-0.0446	-0.7141**	-0.2877**	-0.0573
		(0.07)	(0.42)	(0.07)	(0.63)	(0.82)	(0.01)	(0.02)	(0.73)
FDI inward		-0.1708	1.8640**	-0.1728	0.3198	0.3723	0.5208	0.1972	-0.0850
		(0.39)	(0.02)	(0.49)	(0.15)	(0.12)	(0.59)	(0.32)	(0.59)
FDI outward		0.0000	-1.1666	0.0001	0.0011	0.0012	0.0023	0.0003	0.0023*
		(0.98)	(0.13)	(0.96)	(0.48)	(0.42)	(0.59)	(0.84)	(0.09)
Trade		0.1661	0.7058***	0.1724	0.2491	0.1908	0.0771	-0.0363	0.2873
		(0.53)	(0.00)	(0.50)	(0.43)	(0.53)	(0.86)	(0.85)	(0.50)
Inflation		-0.1029	-0.0562	-0.1076	0.5932	0.7101	0.6556	-0.3494	-0.6414
		(0.85)	(0.95)	(0.88)	(0.33)	(0.25)	(0.66)	(0.53)	(0.50)
Unemployment		0.4571	3.0312**	0.4919	0.0582	-0.0468	2.2377	1.2480	-0.5648
		(0.67)	(0.02)	(0.60)	(0.96)	(0.97)	(0.23)	(0.17)	(0.66)
Real GDP forecast									0.0230***
									(0.00)
R² (Adj.)	0.9382	0.9541	0.8882	0.9485	0.9581	0.9592	0.6880	0.9489	0.9494
N	1006	884	884	865	683	647	863	884	584
Target Nation FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 4. Deal Completion time

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$Deal\ completion\ time_{jc,t} = \alpha + \beta Law_c \times After_t + \boldsymbol{\delta_c X_{c,t-1}} + \boldsymbol{\delta_c X_{c,i,t-1}} + \boldsymbol{\delta_j} + \varphi_{c,i} + \varphi_t + \varepsilon_{ct}$$

The dependent variable Time between deal announcement and deal completion in days expressed in log transformation. Law_c is a country dummy that takes the value of 1 if a target country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions.

	est1	est2
$Law_c \times After_t$	0.0385**	0.0439***
	(0.02)	(0.01)
Country size	-0.5548***	-0.5430***
	(0.00)	(0.00)
GDP per capita	0.4737***	0.4589***
	(0.00)	(0.00)
Capital market development	-0.0157*	-0.0164*
	(0.07)	(0.06)
Domestic Credit market	0.1038***	0.1023***
	(0.00)	(0.00)
FDI inward	0.7022***	0.6641***
	(0.00)	(0.00)
FDI outward	-1.0005***	-0.9687***
	(0.00)	(0.00)
Trade	0.1505***	0.1685***
	(0.00)	(0.00)
Inflation	0.1942	0.1014
	(0.30)	(0.59)
Unemployment	0.1619	0.1632
	(0.52)	(0.51)
Size Ind-av. tgt	0.0010	0.0010
	(0.67)	(0.67)
Debt Ind-av. tgt	0.0261	0.0341
	(0.38)	(0.25)
MB Ind-av. tgt	0.0153***	0.0149***
	(0.00)	(0.00)
Cash-holding Ind-av. tgt	-0.0441	-0.0471
	(0.33)	(0.30)
Cash deal		-0.0899***
		(0.00)
Public-acq.		0.1491***
		(0.00)
Public-tgt.		0.2370***
		(0.00)
R^2 (Adj.)	0.06822	0.07577
N	189483	189483
Year	Yes	Yes
Target Country-Industry FE	Yes	Yes

p-values in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 5. Deal Premium and ESG disclosure regulation

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$Deal\ Premium_{jc,t} = \alpha + \beta(Law_c \times After_t) + \delta_c X_{c,t-1} + \delta_c X_{c,i,t-1} + \delta_j + \varphi_{c,i} + \varphi_t + \varepsilon_{jct}$$

The dependent variable is deal premium, based target price four week in models (1-5), one week (model 6) and one day (model 7) before announcement. Law_c is a country dummy that takes the value of 1 if a target country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions.

	Deal premium based on target price 4 week prior to announcement					1 day prior to announcement	1 week prior to announcement
	Model [1]	Model [2]	Model [3]	Model [4]	Model [5]	Model [6]	Model [7]
$Law_c \times After_t$	0.0594***	0.0440***	0.0515***	0.0577***	0.0630***	0.0678***	0.0689***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Country size[tgt]		-0.5900***	-0.5759***	-0.5945***	-0.5810***	-0.5936***	-0.6146***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
ln(GDP per capita) [tgt]		0.7511***	0.7546***	0.7621***	0.7447***	0.7383***	0.7722***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP growth [tgt]		-0.4354**	-0.2733	-0.2863	-0.2843	-0.2640	-0.1564
		(0.02)	(0.18)	(0.17)	(0.17)	(0.13)	(0.41)
Capital market development [tgt]		-0.0002	-0.0043	-0.0054	-0.0067	-0.0029	-0.0033
		(0.97)	(0.39)	(0.28)	(0.18)	(0.52)	(0.48)
Domestic Credit market [tgt]		-0.0953***	-0.0956***	-0.0893***	-0.0904***	-0.0733***	-0.0795***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FDI-in [tgt]		-0.0936	-0.1287	-0.1423	-0.1537	-0.2639***	-0.1942*
		(0.36)	(0.24)	(0.20)	(0.17)	(0.01)	(0.06)
FDI-out [tgt]		0.1658	0.2825**	0.2845**	0.3085***	0.3113***	0.2407**
		(0.12)	(0.01)	(0.01)	(0.01)	(0.00)	(0.02)
Inflation [tgt]		0.4374***	0.4295***	0.4035***	0.3941***	0.1990	0.2612*
		(0.00)	(0.00)	(0.01)	(0.01)	(0.12)	(0.06)
Unemployment [tgt]		0.4943**	0.1862	0.3070	0.2526	0.0396	0.1232
		(0.02)	(0.39)	(0.15)	(0.24)	(0.83)	(0.52)
Ind-size [tgt]			0.0022	0.0023	0.0024	0.0023	0.0027
			(0.33)	(0.31)	(0.29)	(0.24)	(0.20)
Ind-debt/TA [tgt]			0.0342	0.0330	0.0329	0.0187	0.0332
			(0.21)	(0.22)	(0.23)	(0.42)	(0.19)
Ind-MB [tgt]			-0.0091***	-0.0092***	-0.0090***	-0.0065***	-0.0077***
			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Ind cash-holding [tgt]			0.1005***	0.0971***	0.0962***	0.0418	0.0632*
			(0.00)	(0.01)	(0.01)	(0.18)	(0.06)

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HHI				0.3188	0.2945	0.2693	0.2709
				(0.22)	(0.26)	(0.20)	(0.24)
Cash deal					-0.0478***	-0.0260***	-0.0354***
					(0.00)	(0.00)	(0.00)
r2_a	0.05104	0.05544	0.05717	0.05694	0.05882	0.07017	0.06539
N	61646	60556	56357	56357	56357	56380	56429
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

p-values in parentheses
* $p<0.1$, ** $p<0.05$, *** $p<0.01$

Table 6. Law as friction and country governance

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$M\&A_{ct} = \alpha + \beta(Law_c \times After_t) + \omega(Law_c \times After_t \times Gov_{c,t-1}) + \delta X_{c,t-1} + \varphi_c + \varphi_t + \varepsilon_{ct}$$

The dependent variable is deal frequency, expressed in natural log transformation (1,2,4,5,6 &9), deal volume (3), cros border (CB) deal frequency (7) and deal frequency scaled by no. of listed companies in country c (8). Law_c is a country dummy that takes the value of 1 if a target country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions.

	Model [1]	Model [2]	Model [3]	Model [4]
$Law_c \times After_t$	-0.2906***	-0.2822***	-0.2763***	-0.2284***
	(0.00)	(0.00)	(0.00)	(0.00)
$Law_c \times After_t \times RQ_{ct-1}$	0.0878***			
	(0.01)			
$Law_c \times After_t \times RL_{ct-1}$		0.0853**		
		(0.04)		
$Law_c \times After_t \times CC_{ct-1}$			0.0857**	
			(0.02)	
$Law_c \times After_t \times PC1_{ct-1}$				0.0474**
				(0.04)
Country size	0.1370	0.1402	0.1314	0.1384
	(0.64)	(0.72)	(0.74)	(0.72)
Ln (GDP per capita)	0.5790*	0.5816	0.5870	0.5857
	(0.06)	(0.20)	(0.19)	(0.19)
GDP growth	1.0549	1.0393	1.0620	1.0426
	(0.14)	(0.28)	(0.27)	(0.28)
Capital market development	0.0453	0.0471	0.0466	0.0469
	(0.13)	(0.40)	(0.41)	(0.40)
Domestic Credit market	-0.2722***	-0.2640	-0.2744*	-0.2713*
	(0.01)	(0.10)	(0.09)	(0.10)
FDI inward	-0.3488	-0.3382	-0.3594	-0.3480
	(0.29)	(0.22)	(0.16)	(0.20)

FDI outward	0.0005	0.0006	0.0006	0.0006
	(0.68)	(0.68)	(0.67)	(0.67)
Trade	0.1935*	0.1970	0.1921	0.1963
	(0.07)	(0.47)	(0.47)	(0.47)
Inflation	0.2412	0.2485	0.2461	0.2347
	(0.72)	(0.75)	(0.75)	(0.77)
Unemployment	0.5222	0.5029	0.5878	0.4964
	(0.36)	(0.54)	(0.49)	(0.58)
RQ	-0.0422			
	(0.78)			
RL		-0.0667		
		(0.53)		
CC			-0.0348	
			(0.78)	
PC1				-0.0390
				(0.72)
R^2 (Adj.)	0.9548	0.9548	0.9549	0.9549
N	842	842	842	842
Target Nation FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Table 7. The effects of ESG disclosure on M&A: Bilateral Perspective

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$M\&A_{tgt-acq,t} = \alpha + \beta_{tgt}Law_{tgt} \times After_{t-tgt} + \beta_{acq}\left(Law_{acq} \times After_{t-acq}\right)$$

$$+\delta_{tgt}X_{t-1,tgt} + \delta_{acq}X_{t-1,acq} + \varphi_{tgt} + \varphi_{acq} + \varphi_t + \varepsilon_{tgt-acq,t}$$

The dependent variable is deal frequency of a target-acquiror country pair in year t, expressed in natural log transformation. $Law_{tgt(acq)}$ is a country dummy that takes the value of 1 if a target (an acquiror) country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero, otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions

	Model[1]	Model[2]	Model[3]	Model[4]	Model[5]
$Law_{tgt} \times After_t$	-0.0933***	-0.1422***			-0.1567***
	(0.00)	(0.00)			(0.00)
$Law_{acq} \times After_t$			0.0364	-0.0544*	-0.0653**
			(0.32)	(0.08)	(0.04)
Country size [tgt]		0.2241*			0.1718
		(0.09)			(0.23)
Country size [acq]				0.0386	0.0084
				(0.69)	(0.94)
ln(GDP per capita) [tgt]		-0.1757			-0.1219
		(0.19)			(0.40)
ln(GDP per capita) [acq]				0.2297**	0.3231***
				(0.04)	(0.01)
GDP growth [tgt]		1.0597***			1.1786***
		(0.00)			(0.00)
GDP growth [acq]				0.3567	0.5154*
				(0.17)	(0.06)
Capital market development [tgt]		0.0139			0.0100
		(0.10)			(0.21)
Capital market development [acq]				0.0337***	0.0397***
				(0.00)	(0.00)
Domestic Credit market [tgt]		-0.1779***			-0.1821***
		(0.00)			(0.00)
Domestic Credit market [acq]				-0.0174	-0.0122
				(0.63)	(0.75)

	(1)	(2)	(3)	(4)	(5)
FDI-in [tgt]		0.0283			-0.0328
		(0.85)			(0.82)
FDI-in [acq]				0.0039	-0.0158
				(0.98)	(0.91)
FDI-out [tgt]		-0.0633			-0.0211
		(0.61)			(0.86)
FDI-out [acq]				0.0705	0.0396
				(0.55)	(0.75)
Trade [tgt]		-0.0850*			-0.0883*
		(0.10)			(0.09)
Trade [acq]				0.0608	0.0650
				(0.19)	(0.19)
Inflation [tgt]		0.0190			0.0293
		(0.91)			(0.86)
Inflation [acq]				0.6475***	0.7824***
				(0.00)	(0.00)
Unemployment [tgt]		0.4983*			0.4754*
		(0.06)			(0.09)
Unemployment [acq]					0.5491*
					(0.09)
R² (Adj.)	0.8226	0.8288	0.8223	0.8284	0.8351
N	15756	14479	15756	14600	13524
Year	Yes	Yes	Yes	Yes	Yes
Target Country FE	Yes	Yes	Yes	Yes	Yes
Acquirer Country FE	Yes	Yes	Yes	Yes	Yes
Target-Acquirer Pair FE	Yes	Yes	Yes	Yes	Yes

Table 8. Institutional Quality and Disclosure Law: Bilateral M&A

The table reports the effect of ESG disclosure regulation on M&A consequence as estimated by equation

$$M\&A_{tgt-acq,t} = \alpha + \beta_{tgt}\left(Law_{tgt} \times After_{t,tgt}\right) + \beta_{acq}\left(Law_{acq} \times After_{t,acq}\right) + \omega_{tgt}\left(Law_{tgt} \times After_{t,tgt} \times Gov_{tgt,t-1}\right) +$$

$$\omega_{acq}\left(Law_{acq} \times After_{t,acq} \times Gov_{acq,t-1}\right) + \delta_{tgt}X_{t-1,tgt} + \delta_{acq}X_{t-1,acq} + \varphi_{tgt} + \varphi_{acq} + \varphi_t + \varepsilon_{tgt-acq,t}$$

The dependent variable is deal frequency of a target-acquiror country pair in year t, expressed in natural log transformation. $Law_{tgt(acq)}$ is a country dummy that takes the value of 1 if a target (an acquiror) country c has passed ESG disclosure regulation during our sample period and 0, otherwise. $After_t$ is a time dummy that takes the value of one for years after ESG regulation is introduced and zero, otherwise. The estimation control for country attributes that could affect demand for or supply of M&A which includes Country size, Ln (GDP per capita), GDP growth, Capital market development, Domestic Credit market, FDI inward, FDI outward, Trade, Inflation and Unemployment. All specification has country and year FE. RQ, RL, CC, PC1 are the governance measures of target (acquiror) country. The standard errors are double-clustered at target country -year level and the associated p-value is reported in the parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Appendix Table A.1 provides the detailed variable definitions.

	Model[1]	Model[2]	Model[3]	Model[4]	Model[5]
$Law_{tgt} \times After_t$	-0.1339***	-0.1235***	-0.1300***	-0.0475***	-0.0580***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
$Law_{acq} \times After_t$	-0.0396	-0.0165	-0.0293	-0.0089	-0.0144
	(0.22)	(0.58)	(0.28)	(0.49)	(0.37)
$Law_{tgt} \times After_t \times RQ_{tgt,t-1}$	0.1051***				
	(0.00)				
$Law_{tgt} \times After_t \times RQ_{acq,t-1}$	0.0126				
	(0.64)				
$Law_{acq} \times After_t \times RQ_{tgt,t-1}$	0.0110				
	(0.60)				
$Law_{acq} \times After_t \times RQ_{acq,t-1}$	0.0123				
	(0.56)				
$Law_{tgt} \times After_t \times RL_{tgt,t-1}$		0.0917***			
		(0.00)			
$Law_{tgt} \times After_t \times RL_{acq,t-1}$		0.0215			
		(0.37)			
$Law_{acq} \times After_t \times RL_{tgt,t-1}$		0.0039			
		(0.84)			
$Law_{acq} \times After_t \times RL_{acq,t-1}$		0.0002			
		(0.99)			
$Law_{tgt} \times After_t \times CC_{tgt,t-1}$			0.0929***		
			(0.00)		
$Law_{tgt} \times After_t \times CC_{acq,t-1}$			0.0269		
			(0.20)		
$Law_{acq} \times After_t \times CC_{tgt,t-1}$			0.0069		
			(0.69)		

	(1)	(2)	(3)	(4)	(5)
$Law_{acq} \times After_t \times CC_{acq,t-1}$			0.0150		
			(0.38)		
$Law_{tgt} \times After_t \times PC1_{tgt,t-1}$				0.0338***	
				(0.00)	
$Law_{tgt} \times After_t \times PC1_{acq,t-1}$				0.0334*	
				(0.08)	
$Law_{acq} \times After_t \times PC1_{tgt,t-1}$				0.0262	
				(0.21)	
$Law_{acq} \times After_t \times PC1_{acq,t-1}$				-0.0131	
				(0.34)	
$Law_{tgt} \times After_t \times PC1_{tgt-acq,t-1}$					-0.0111
					(0.43)
$Law_{acq} \times After_t \times PC1_{tgt-acq,t-1}$					0.0231
					(0.12)
Country size [tgt]	0.0596	0.0600	0.0672	0.2677**	0.2666**
	(0.68)	(0.67)	(0.64)	(0.01)	(0.02)
Country size [acq]	-0.1296	-0.0870	-0.1035	-0.0627	-0.0867
	(0.22)	(0.40)	(0.31)	(0.44)	(0.34)
ln(GDP per capita) [tgt]	-0.0443	-0.0642	-0.0354	-0.2146*	-0.2514**
	(0.76)	(0.66)	(0.81)	(0.05)	(0.04)
ln(GDP per capita) [acq]	0.4587***	0.3994***	0.4177***	0.3143**	0.3197**
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
GDP growth [tgt]	1.2752***	1.3181***	1.2673***	1.2986***	1.2729***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP growth [acq]	0.4224	0.4376	0.3672	0.4134	0.4207
	(0.12)	(0.11)	(0.18)	(0.18)	(0.18)
Capital market development [tgt]	-0.0033	-0.0059	0.0012	-0.0112	-0.0073
	(0.71)	(0.49)	(0.89)	(0.37)	(0.57)
Capital market development [acq]	0.0302***	0.0241**	0.0294***	-0.0019	0.0025
	(0.00)	(0.01)	(0.00)	(0.90)	(0.88)
Domestic Credit market [tgt]	-0.2034***	-0.1978***	-0.2043***	-0.1862***	-0.1617***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Domestic Credit market [acq]	-0.0096	-0.0146	0.0170	-0.0339	-0.0234
	(0.80)	(0.70)	(0.65)	(0.38)	(0.50)
FDI-in [tgt]	0.0072	0.0293	0.0499	0.0004	0.2954*
	(0.96)	(0.85)	(0.75)	(1.00)	(0.07)
FDI-in [acq]	-0.0872	-0.0555	0.0043	0.0168	0.1719*
	(0.54)	(0.70)	(0.98)	(0.84)	(0.10)
FDI-out [tgt]	-0.0734	-0.0999	-0.1105	0.0129	-0.1941
	(0.57)	(0.43)	(0.38)	(0.93)	(0.25)

FDI-out [acq]	0.0241	-0.0061	-0.0408	-0.0152	-0.1067*
	(0.85)	(0.96)	(0.75)	(0.80)	(0.10)
Trade [tgt]	-0.0706	-0.0886	-0.0638	-0.1019**	-0.1186***
	(0.20)	(0.11)	(0.24)	(0.02)	(0.00)
Trade [acq]	0.1061**	0.0868	0.0754	0.0667	0.0573
	(0.04)	(0.10)	(0.16)	(0.14)	(0.17)
Inflation [tgt]	0.1039	0.1746	0.0223	0.0869	-0.0398
	(0.55)	(0.32)	(0.90)	(0.63)	(0.84)
Inflation [acq]	0.8554***	0.8369***	0.9420***	0.5536**	0.5650**
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
Unemployment [tgt]	0.7667***	0.8042***	0.5269*	0.6039**	0.2824
	(0.01)	(0.00)	(0.06)	(0.01)	(0.22)
Unemployment [acq]	0.9938***	0.7698**	0.9772***	0.9560***	0.5961*
	(0.00)	(0.01)	(0.00)	(0.01)	(0.06)
RQ [tgt]	-0.0007				
	(0.99)				
RQ [acq]	0.1485***				
	(0.00)				
RL [tgt]		0.1089**			
		(0.02)			
RL [acq]		0.2362***			
		(0.00)			
CC [tgt]			-0.0098		
			(-0.24)		
CC [acq]			0.2063***		
			(0.00)		
PC1 [tgt]				-0.0025	
				(0.90)	
PC1 [acq]				0.1374***	
				(0.00)	
PC1 [tgt – acq]					-0.0666***
					(0.00)
R^2 (Adj.)	0.8376	0.8379	0.8383	0.4714	0.4701
N	12958	12958	12958	13252	13252
Year	Yes	Yes	Yes	Yes	Yes
Target Country FE	Yes	Yes	Yes	Yes	Yes
Acquirer Country FE	Yes	Yes	Yes	Yes	Yes
Target-Acquirer Pair FE	Yes	Yes	Yes	Yes	Yes

Figure 1. Average Treatment Effect of the Treated (ATT) plot.
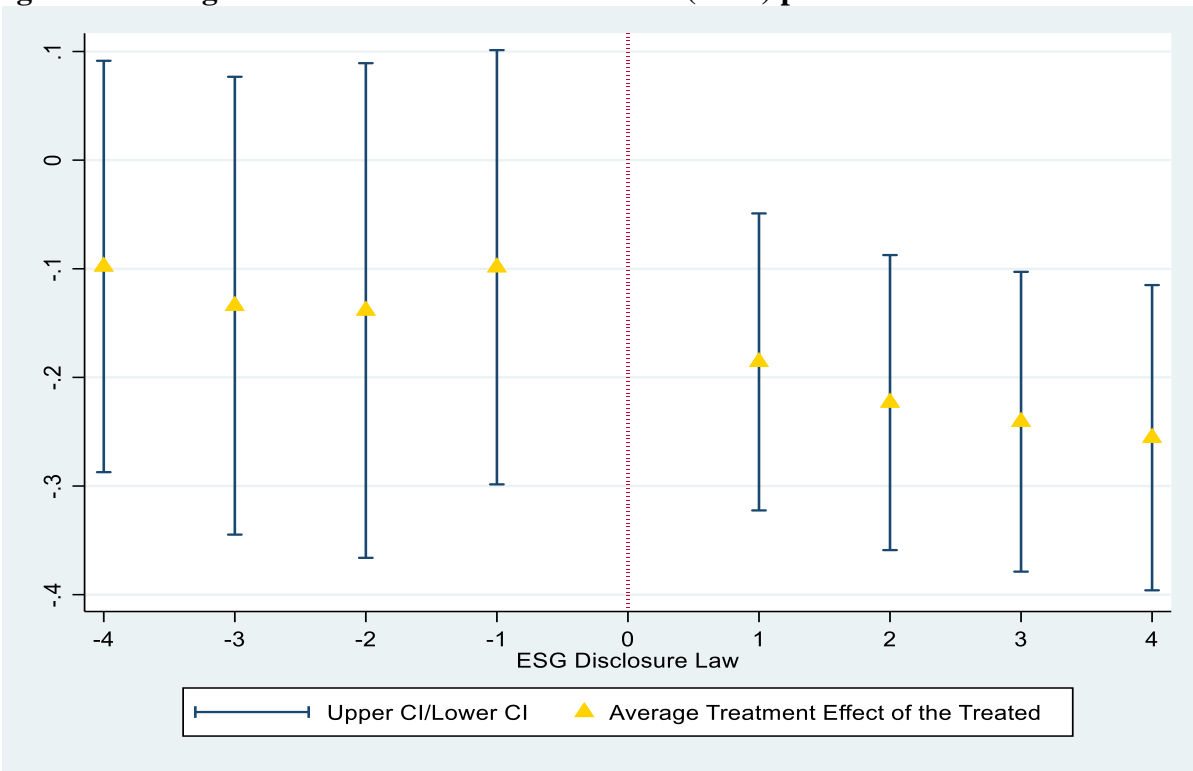
Notes: This figure plots the treatment effect from the equation $Ln(Deal\ Freq_{c,t}) = \alpha_1 R_{t-1} + \alpha_2 R_{t-2} + \alpha_3 R_{t-3} + \alpha_4 R_{t-4} + \alpha_5 R_t + \alpha_6 R_{t+1} + \alpha_7 R_{t+2} + \alpha_8 R_{t+3} + \alpha_9 R_{t+4} + \delta X_{ct} + \varphi_c + \varphi_t + \varepsilon_{ct}$, where all variables are defined as in the Appendix table A1. in country c during year t, and R_t is a dummy variable equal to 1 if ESG regulation is enacted in country c during year t.

Appendix Table A1: Definition of variables

This table shows the construction of the variables. Explanations are provided in the description of the variables in the text.

Variables	Definition	Source
Dependent Variables		
Deal Frequency	Natural log transformation of number of deals.	SDC Platinum
Deal Volume	Natural log transformation of US dollar volume of M&A deals.	SDC Platinum
CB deal frequency	Cross border deal frequency as a proportion of total deals	SDC Platinum
Deal completion	Time between deal announcement and deal completion in days expressed in log transformation	SDC Platinum
Deal premium	Deal premium based on target price 4 week, one week and one day prior to announcement of the target company	SDC Platinum
Explanatory Variables		
ESG disclosure regulation	ESG disclosure regulation index for sample countries as presented in Appendix table A2.	-
Industry-level Control		
Size	Natural logarithm of total assets	Thomson Refinitiv
MB	The ratio of market value of equity to book value	Thomson Refinitiv
Leverage	Ratio of the sum of long- and short-term debt to total asset	Thomson Refinitiv
CAPX	Capital Expenditure	Thomson Refinitiv
ROA	EBITDA/Total Assets	Thomson Refinitiv
Country-level control		
Country Size	Log transformation of GDP as measured in USD at current prices	World bank WDI
Ln(GDP per capita)	Log transformation of GDP per capita	World bank WDI
GDP growth	Year on year growth of GDP	World bank WDI
Capital Market development	Market capitalisation of listed companies scaled by GDP	World bank WDI
Private Sector Credit	Size of Domestic Credit scaled by GDP	World bank WDI
FDI (Inward)	Total inward Foreign Direct Investment scaled by GDP	World bank WDI
FDI (Outward	Total outward Foreign Direct Investment scaled by GDP	World bank WDI
Trade	Total trade scaled by GDP	World bank WDI
Inflation	Year on year changes in CPI	World bank WDI
Unemployment	Unemployment rate	World bank WDI
Governance Variable		
Regulatory Quality	Quality of regulation	Work Bank WGI
Rule of Law	Quality of rule of law	Work Bank WGI
Control of Corruption	Quality of corruption control	Work Bank WGI
PC1	First Principal component of Regulatory Quality, Rule of Law and Control of Corruption variable	Authors' computation

Appendix Table A1: ESG disclosure laws across the world

Country	ESG disclosure law	Disclosure	Comply or Explain
Argentina	2008	Sustainability reports	No
Australia	2003	Annual Report	No
Austria	2016	Management report; non-financial report	No
Bahrain	-	-	-
Belgium	-	-	-
Bermuda	-	-	-
Brazil	-	-	-
Canada	-	-	-
Chile	2015	Annual report	Yes
China	2008	Annual Social Responsibility	No
Colombia	-	-	-
Egypt	-	-	-
France	2003	Annual Report	No
Germany	-	-	-
Greece	2006	Annual Report	No
Hong Kong	2016	Directors' Report,	Yes
Hungary	-	-	-
India	2015	Sustainability reports	No
Indonesia	2012	Annual Report	No
Ireland-Rep	-	-	-
Israel	-	-	-
Italy	2016	Annual Management	Yes
Japan	-	-	-
Jordan	-	-	-
Malaysia	2007	Annual Report	Yes
Mexico	-	-	-
Morocco	-	-	-
Netherlands	2016	Annual Management	Yes
New Zealand	-	-	-
Nigeria	-	-	-
Norway	2013	Annual and	No
Oman	-	-	-
Pakistan	2009	Directors' Report	No
Peru	2016	Sustainability reports	No
Philippines	2011	Annual Report	No
Poland	-	-	-
Portugal	2010	Annual Report	No
Qatar	-	-	-
Russian Fed	-	-	-
Singapore	2016	Sustainability reports	Yes
Slovenia	-	-	-
South Africa	2010	Integrated /	Yes
South Korea	-	-	-
Spain	2012	Annual Report	Yes

Sri Lanka	-	-	-
Switzerland	2016	Information Disclosure	Yes
Thailand	2014	Annual report	Yes
Tunisia	-	-	-
Turkey	2014	GHG report /Annual Report	No
United Arab Emirates	-	-	-
United Kingdom	2013	strategic report;	No
United States	-	-	-
Vietnam	-	-	-