

Portability of Firm Corporate Governance in Mergers and Acquisitions

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Abstract

We study the corporate governance portability from bidders to targets in Mergers and Acquisitions and its impact on bidder announcement returns. We find that the bidder's cumulative abnormal returns are higher in acquisitions where the bidder's corporate governance quality exceeds that of the target. This result suggests a positive valuation effect for bidder shareholders resulting from the portability of good firm corporate governance from bidders to targets. We also find that this effect is stronger when bidders are domiciled in countries with better corporate governance. The results pass several robustness tests, including alternative measures of firm corporate governance and different sample periods.

Keywords: corporate governance portability; global mergers and acquisitions; M&A announcement returns; international corporate governance

JEL codes: G30, G34.

1. Introduction

Corporate governance changes widely across countries and firms (Starks and Wei, 2013) and the differences in corporate governance standards create an opportunity for the transfer of better governance through mergers and acquisitions – hence on M&As – (Renneboog and Vansteenkiste, 2019). The idea that good practices of corporate governance are portable from bidders to targets has found some echo in the literature (e.g., Ellis, Moeller, Schlingemann, and Stulz, 2017; Martynova and Renneboog, 2008; Wang and Xie, 2009). These studies accentuate the concept of “transferability of corporate governance” to illustrate the benefits that acquirers, particularly those from countries with better governance standards, achieve after acquiring targets from countries with weaker corporate governance. In short, such benefits are obtained from the enhancements in the target’s corporate governance standards post-acquisition – an effect that can be illustrated as a positive “contamination” of the target by the good governance practices of the bidder, which will raise the potential value of assets under management. This is more plausible to happen when the bidder acquires the majority or the totality of the target’s equity. In prior studies, the transferability of better corporate governance from bidders to targets is mainly related to country-level governance standards and tends to overlook that firm-level corporate governance can also be transferable and impact the value created in acquisitions. In this study, we attempt to answer the following questions: (i) does a positive gap in the firm-level governance between the bidder and the target (i.e., the bidder is better governed than the target before an M&A deal) create higher returns for bidder shareholders?; (ii) is this impact moderated by the corporate governance quality of the bidder’s domestic country?

Firm investment decisions, especially mergers and acquisitions, are an important source of value-creation or destruction for shareholders (Agyei-Boapeah, Fosu, and Ntim, 2020; Humphery-Jenner and Powell, 2011; Tunyi and Ntim, 2016). An important source of value-creation through M&As is induced by improving governance standards of the target firm. Therefore, our main objective is to examine the effect of firm-level governance gap on announcement bidder returns. We refer to the positive observed relationship between bidder returns and firm governance gap (bidder minus target) as the portability effect. M&As (both domestic and cross-border deals) offer an appropriate setting to understand the portability of firm-specific governance standards within and across countries. Firms may differ more in terms of firm-level governance in case of cross-border deals than in domestic deals but, if the portability effect holds, we should observe a positive association between firm governance gap and bidder returns in either type of deal and after controlling for country-level differences in cross-border deals. We hypothesize that the bidder cumulative

abnormal returns around the deal announcement are higher when the firm-level corporate governance gap between bidder and target is higher.

Previous studies on the portability theory focus on cross-border acquisitions and how country-level corporate governance standards can travel from bidders to targets through M&As. The portability theory of Ellis et al. (2017) suggests that superior governance practices imposed by the bidders' domestic institutions are a source of value creation in acquisitions of targets from weaker governance environments, which tend to be undervalued. This argument is supported by the "positive spillover by law hypothesis" of Martynova and Renneboog (2008) which states that in full or controlling acquisitions¹, the target firm comes under the umbrella of the bidder's governance; thus, if the bidder has better governance than the target pre deal, the bidder will apply its governance to the target, improve the overall quality of management of the combined firm and enhance the potential for creating synergies. In sum, both portability theory and "positive spillover by law" hypothesis suggest a valuation effect of cross-border deals and contend that country governance travels from bidders to targets through cross-border deals.

Most empirical studies on M&As examine changes in country-level governance standards such as shareholder rights, creditor rights, legal origin, accounting standards, and institutional quality, amongst others (Ellis et al., 2017; Martynova and Renneboog, 2008; Starks and Wei, 2013); a notable exception is Wang and Xie (2009), who analyze differences in firm-level shareholder rights, in the form of anti-takeover provisions, between bidders and targets in the United States. The new institutional environment can better protect shareholder rights and impose more rigorous accounting disclosure requirements, enhancing the target's assets market value under the bidder's management supervision. Bidders from better-governed countries may indeed have a strategy of selecting undervalued targets from poorly-governed countries as a way to create value for their shareholders.

Above and beyond the country-level governance standards, the importance of firm-level corporate governance is well-established in the literature (see among others, Bruno and Claessens, 2010; Aggarwal, Erel, Williamson, and Stulz, 2009). Several provisions in investor protection laws and other country-level governance mechanisms cannot be binding as companies have the freedom in their company charters to either adopt or reject certain provisions mentioned in their legal code (Black and Gilson, 1998). The voluntary governance practices (i.e., firm-level governance) are frequently adopted, especially after the financial crisis of 2007-2009 (Alexandridis, Antypas, and

¹ Full (controlling) acquisitions refer to the acquisition of 100% (more than 50%) of the target's equity.

Travlos, 2017)², and the firms that opt for more rigorous governance practices are rewarded by the capital markets (Chhaochharia and Laeven, 2009). The benefit of having good firm-level corporate governance permits stockholders to align the interests of managers with their own interests, and this benefit is carried to all investment decisions made by companies, including the decisions regarding M&As. Thus, the portability effect is not merely confined to country-level governance³ but can also result from a more pervasive shift in firm corporate governance to enhance the acquisition value. In our study, we address several dimensions of firm corporate governance – including board structure and function, compensation policy, and shareholder rights – and analyze, in a global M&A setting, whether good corporate governance is portable from bidders to targets, resulting in a higher value for acquiring shareholders.

We measure the corporate governance gap between bidders and targets based on four firm-level governance indices: board structure index, board function index, compensation policy index, and shareholder rights index.⁴ Using a sample of 1026 domestic and cross-border deals from 2003 to 2016, we find that the abnormal bidder returns around M&A announcements are significantly higher when the bidder-target corporate governance gap is higher.⁵ Economically, bidder returns increase by 0.74 to 0.84 percentage points for a one-standard-deviation increase in the bidder-target governance gap. The results hold after controlling for several firm- and deal-level characteristics, country-level corporate governance gap, and macro-economic variables. Our empirical evidence supports the idea that corporate governance is portable from the bidder to the target and suggests that one possible source of higher bidder gains from M&As is the improvement in the target's governance standards affected by the change in control. Our evidence also echoes the argument of Hartzell, Ofek, and Yermack (2004) that target managers usually do not possess enough incentives to change their firms' corporate governance voluntarily. This incentive problem is solved in M&As where better-governed bidders make side payments to target managers for giving up control and, therefore, improve the overall quality of the firms' corporate governance.

We acknowledge that deals with a higher bidder-target gap may not be randomly distributed in our sample of M&As and be dominated by certain types of firms, namely bidders with higher levels

² They argue that firms improved both mandatory and voluntary corporate governance mechanisms in the post-financial crisis period.

³ Aktas, Croci, and Simsir (2016) provide a comprehensive review of the literature on how internal (board of directors, executive compensation) and external (blockholders, takeover market, product market competition, labor market, and financial market) governance mechanisms affect the M&A process and outcomes.

⁴ We observe considerable cross-sectional variation in governance quality of bidders and targets.

⁵ Recently, the ASSET4 ESG updated the data, and our results still hold if we use new categories of corporate governance. The results are shown in the Internet Appendix.

of corporate governance pre-acquisition. In contrast, bidders with low levels of corporate governance may predominantly engage in deals where the bidder-target gap is smaller. We address this concern in two ways: first, we split our sample into two groups – high and low bidder-target gap – and use the Propensity Score Matching (PSM) technique to find similar bidders in both groups in all observable firm, deal, and country characteristics; second, we account for the existing level of the bidder’s corporate governance pre-acquisition in our regression models. Our results proved to be robust to this analysis.

Further, we examine in which countries the portability effect is more effective and more valued by the market in M&As⁶. It is expected that bidder-to-target portability will be more appreciated in countries with better country governance, first because in those countries investors value more good governance (Ellis et al., 2017; Klapper and Love, 2004), and second because the good quality of the country institutions helps make the transfer of good governance more effective (Martynova and Renneboog, 2008). We use World Governance Indicators issued by the World Bank and the anti-self-dealing index (ASDI) proposed by Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) to proxy for the country’s institutional quality. Following Kaufmann, Kraay, and Mastruzzi (2009), we compute the mean index, named world governance index (WGI), based on six indicators for each country. To identify better-governed countries, we create a binary variable that equals one if the index is above the world median and zero otherwise. We find that the portability effect is more substantial in countries with better country-level corporate governance, proposing that firms can have good governance mechanisms, but the country has to have adequate enforcement for those mechanisms to be efficient.

We contribute to the M&As literature in three ways. First, we extend the portability theory of Ellis et al. (2017) and show that beyond the country-level governance, firm-specific corporate governance can also be transferred through the acquisition channel and improve the management quality of a relatively weaker target firm. Not only country governance differences (Ellis et al., 2017; Martynova and Renneboog, 2008; Starks and Wei, 2013) but also the differences in firm governance explain part of the takeover value. Our results show the portability effect using four firm governance indices and suggest that each index has a similar effect on the bidder returns. It reveals that different dimensions of firm-level governance are equally important to derive takeover value.

⁶ Klapper and Love (2004) find that the average firm corporate governance is lower in nations with weaker legal systems. Similarly, Doidge, Karolyi, and Stulz (2007) document that, in general, country characteristics are more relevant than firm characteristics to explain the variation in firms’ corporate governance ratings.

Second, we contribute to the literature on cross-border acquisitions and national corporate governance quality (e.g., Ellis et al., 2017; Kim and Ozdemir, 2014; Zattoni, Dedoulis, Leventis, and Ees, 2020) by showing that the portability of firm-level corporate governance is amplified when bidders are domiciled in countries with better shareholder protection. It means that the effect of national governance standards assists the transferability of firm-level governance. We extend the debate over corporate governance from country-level to firm-level in the takeover market. The existing cross-border studies (Bris and Cabolis, 2008; Martynova and Renneboog, 2008; Rossi and Volpin, 2004; Starks and Wei, 2013) disregard the role of firm-level corporate governance perhaps due to higher variation in national governance standards across the countries. We show that firms also differ within countries although governance disparity is higher in cross-border deals.

Third, our work contributes to the literature that relates value-enhancing takeovers with reduced agency costs in the 1980s and 1990s (for example, Bradley, Desai, and Kim, 1988; Loderer and Martin, 1990). The results show that takeovers of the 2000s and 2010s also create efficiency gains in the same way through firm corporate governance transfers from bidders to targets.

2. Background

In the aftermath of several corporate scandals, over the past two decades, and the global financial crisis, countries all over the world have responded through the enactment of new regulations and reforms aiming to improve the quality of firms' corporate governance. Fauver, Hung, Li, and Taboada (2017) document several corporate board reforms in a vast number of countries that occurred in the late 1990s, early 2000s. These reforms, aimed at improving board function through greater independence and better monitoring (e.g., separation between CEO and chairman, requiring audit and compensation committees), helped shape the overall quality of shareholder protection at the country level. In spite of improvements in the national regulatory environment and their relevance for the overall corporate governance quality of domestic firms, several studies highlight the importance of firm-level corporate governance stemming from firm voluntary adoption of governance practices or different levels of legal enforcement, which give firms latitude to deviate from the norm in some countries. There are at least two reasons why firms adopt voluntary governance practices beyond the country's regulation: first, by doing so, they can send a signal to investors that the firm has better governance practices in place (Chhaochharia and Laeven, 2009); second those practices have been shown to positively affect firm value (Bebchuk and Cohen, 2005; Brown and Caylor, 2006; Core, Guay, and Rusticus, 2006; Gompers, Ishii, and Metrick, 2003). The importance of firm-level

governance is even higher when firms operate in countries with weaker institutional environments (Durnev and Kim, 2004; Klapper and Love, 2004), as those firms may want to endorse higher corporate governance standards to counterbalance the drawbacks of weaker country governance. Nonetheless, Aggarwal et al. (2009) argue that differences in firm-level governance are also relevant in countries with better shareholder protection. Firms from countries with better institutional quality also invest in voluntary practices to improve the quality of their corporate governance and distinguish from their peers. Bruno and Claessens (2010) and Chhaochharia and Laeven (2009) find that apart from the mandatory governance mechanisms, firms prefer voluntary governance practices, contending that both country and firm governance practices are neither complement nor substitute to one another. These studies suggest that firms vary in the degree of voluntary provisions and that higher levels of these provisions are positively associated with firm value.

There is yet another important reason that explains why firm-level heterogeneity persists even after several country-level governance reforms around the world including Anglo-American to Continental European systems (Aguilera and Jackson, 2010), board reforms (Fauver, Hung, Li, and Taboada, 2017), and gender quota laws (see among others, Ahern and Dittmar, 2012; Greene, Intintoli, and Kahle, 2020). As mentioned by Fauver et al. (2017), countries' approach to the implementation of board reforms is different. In some countries, board reforms enactment is mandatory while in others it is comply-or-explain and the latter creates disparity across firms within the countries. In some environments, forcing the implementation of a legal governance system imported from a foreign country can be problematic and not fully applicable (Gerlach, 1992; Hamilton et al., 2000; Khanna, Kogan, and Palepu, 2006; Lubatkin, Lane, Collin, and Very, 2005). To minimize agency problems resulting from a lack of enforcement, firms willing to achieve higher governance standards are motivated to enhance their own internal governance mechanisms and practices.

Another line of inquiry suggesting within-country variation of firm corporate governance relates to the role played by multinational corporations in transferring their knowledge to foreign subsidiaries (see among others, Kogut and Mello, 2017; Song, 2014). Multinational firms attempt to address inherent governance problems when there is a gap between legal orientation of the parent and subsidiary firms (Nohria and Ghoshal, 1994). When the governance of the subsidiary's host country is weaker, it has to be compensated by the better governance standards of the parent company (Farah, Chakravarty, Dau, and Beamish, 2022). These studies show that multinationals can be a vehicle of

improving subsidiary governance through the transfer of good governance standards from the parent to the subsidiary.

The transferability of corporate governance operates when firms differ in their governance practices in a similar manner as the “influence effect” of overlapping directors documented by Bouwman (2011). When the same directors are appointed to other boards, they tend to carry their governance practices to the new companies. A similar phenomenon happens through acquisitions with bidder directors carrying their governance standards to the target firms. When bidders possess better governance standards than targets, this could be a source of value creation for the shareholders involved in the transaction.

M&As provide indeed the appropriate context to study the transferability of corporate governance standards from one firm to another. In an M&A deal that results in a change in corporate control, the bidder’s governance standards will be applied to the new (combined) firm, in effect restoring the target’s governance practices. Thus, post-acquisition, the targets’ assets will be under the bidder’s management. If the bidder has better governance standards than the target pre-acquisition, one would expect that, once the bidder gains control over the target bidder shareholders it will benefit from the deal. The market for corporate control is the ideal setting to identify effective transfers of corporate governance between firms (which come as a consequence of transfer of control) and measure their valuation impact. To minimize agency conflict, firms can implement internal governance mechanisms such as supervision by the board of directors, compensation packages and monitoring by large shareholders.

3. Theoretical framework

Prior theoretical work on corporate governance has mainly focused on agency theory (Jensen and Meckling, 1976), theory of law and finance (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1998), and portability theory (Ellis et al., 2017). The literature relating firm value and corporate governance (either firm-level or country-level) shows that the higher levels of governance positively affect firm value due to lower agency problems in better-governed firms (Bebchuk, Cohen, and Ferrell, 2009; Gompers, Ishii, and Metrick, 2003; Klapper and Love, 2004; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2002; Yermack, 1996). Better-managed firms are more profitable as they could pay more dividends, make better investment decisions as their managers are less entrenched and better aligned with shareholders (Black, Jang, and Kim, 2006). The quality of firm management is therefore intrinsically related to the quality of the firm’s corporate governance. Thus,

the market value of better-governed firms is also higher (La Porta et al., 2002), while poorly-governed firms tend to be undervalued, which increases the risk of being acquired and may potentiate the acquisition gains (e.g., La Porta et al., 2000; Loureiro and Silva, 2022). In fact, undervalued firms from countries with poor governance quality are not only more likely to be targeted, but also when acquired by bidder with superior governance generate higher returns for the shareholders involved in the deals (Ellis et al., 2017; Wang and Xie, 2009).

The theory of law and finance (La Porta et al., 1998) provides the background to understand cross-country differences in corporate governance quality and its impact on corporate value (La Porta et al., 2002). Countries with poor institutional quality and weaker shareholder rights are less financially developed (Ellis et al., 2017), implying that their local firms are incapable of benefiting from investment opportunities that firms from better-governed countries are. Foreign firms from countries with better governance can take advantage of their lower cost of capital and purchase assets from poorly governed firms. In doing so, they may generate value for their investors by improving management and ultimately provide a more efficient allocation of resources than the local firms.

According to the portability theory and the theory of law and finance, governance differences among countries serve as a main source of higher bidder returns (Bris and Cabolis, 2008; Martynova and Renneboog, 2008; Rossi and Volpin, 2004). The portability theory of Ellis et al. (2017) states that the advantages of good country governance are transferable from bidders to targets and the country governance difference between the bidder and the target is positively associated with bidder returns. The authors test whether acquisition announcement returns are partially explained by the difference in countries' corporate governance scores between bidder and target and find that cumulative abnormal returns to bidder shareholders are higher when the bidder-target governance gap is higher. They argue that through the acquisition the weaker governance of the target will be suppressed by the superior governance practices of the bidder that will prevail post deal.

According to international law, the nationality of the target firm changes when the bidder acquires 100% stake in the target. The change in target nationality implies that the target firm obeys the law of the bidder's country and therefore, shareholder rights change accordingly. Undoubtedly, the legal system of the bidder origin has value implications but, beyond the legal systems, firms can opt voluntarily for better governance standards (Bris and Cabolis, 2008). The Coasian view (Glaeser, Johnson, and Shleifer, 2001) states that laws are unnecessary and firms can privately contract on adopting the best level of shareholder protection. Consistent with this view, Gompers, Ishii, and

Metrick (2003) and Cremers and Nair (2005) provide empirical evidence that firm-level measures of shareholder protection positively affect stock returns.

With the popularity of cross-border deals and their intense influence on reappportioning of economic activity (Col, 2017; Erel, Liao, and Weisbach, 2012; Kuipers, Miller, and Patel, 2009), it is important to understand the factors that affect a company's decision to extend its operations within and across the border. It is highly debated that the nature of legal institutions and country features might motivate multinational companies' actions to step into foreign market through M&As. Previous literature suggests that the value created in cross-border M&As can be attributed not only to the portability phenomenon, but also to other factors such as depreciations, cultural and geographic proximity, or market timing (Erel, Liao, and Weisbach, 2012; Martynova and Renneboog, 2008; Tremblay, 2020).

Considering the importance of firm-level governance and portability theory, firstly derived for country-level governance, we expect that bidders with better governance than targets possess a higher capability to generate value via M&As because they can impose their higher governance efficiency on the target. These companies may enhance the profitability of target firms and enable them to earn additional rents from scarce resources. Better firm-level governance means that firms are efficiently managed as compared to their counterparts. Thus, better-governed firms may create more wealth through M&As due to the portability of firm corporate governance from bidders to targets. In sum, when the difference in firm-level governance between the bidder and the target firm will high, the potential for value-creation will be higher and vice versa.

4. Literature review and hypotheses development

The empirical evidence on the value created by M&A deals is quite extensive and gravitates towards the idea that target shareholders benefit from takeovers while bidders earn close to zero returns, or even negative when target are public firms (Andrade, Mitchell, and Stafford, 2001; Lang, Stulz, and Walkling, 1991; Renneboog and Vansteenkiste, 2019). Bidder returns tend to be higher when acquisitions are paid in cash (e.g., Graham, Lemmon, and Wolf, 2002), when they involve firms from related industries (e.g., Masulis, Wang, and Xie, 2007), when the target is private (e.g., Fuller, Netter, and Stegemoller, 2002), or when the relative size of the deal is larger (Moeller and Schlingemann, 2005).

Corporate governance – either country or firm-level – also plays a role in explaining bidder announcement returns. Previous studies find that bidder announcement returns are higher when the

bidder either comes from a country with higher shareholders protection (Bris and Cabolis, 2008; Rossi and Volpin, 2004) or the country governance gap is positive, i.e., the bidder's institutional quality or shareholder rights are better than that of the target's (Ellis et al., 2017; Martynova and Renneboog, 2008; Starks and Wei, 2013). A common feature of the latter studies is that bidders are from better-governed countries than targets. This line of inquiry only considers cross-border deals and overlooks the differences in governance quality among the firms within each country.

Other studies highlight the role of firm-level corporate governance in M&As (Cotter, Shivdasani, and Zenner, 1997; Datta, Iskandar-Datta, and Raman, 2001; Masulis, Wang, and Xie, 2007), suggesting that bidders with better corporate governance have relatively higher announcement returns and tend to pay fairer prices for their targets. Managers from companies with well-designed incentive-alignment mechanisms and better monitoring tend to pursue value-creating deals, better estimate the synergies, and pay a fair takeover premium.

As discussed in the Section 2, although the quality of corporate governance is partially determined by the level of shareholder protection and the country's institutional quality where the firm is domiciled, there is enough variation in corporate governance quality among firms from the same country (Starks and Wei, 2013). Besides the country-level corporate governance standards, firms implement their monitoring mechanisms of managerial activities with different efficiency degrees. The firm-level governance is found to affect the capital structure (Liao, Mukherjee, and Wang, 2015), dividend payout (Chang, Dutta, Saadi, and Zhu, 2018), forecast accuracy (Kerl and Ohlert, 2015), and payout precommitment (Flavin, Goyal, and O'Connor, 2021). Some recent studies use ASSET4 ESG scores as proxies for firm corporate governance and find that higher governance scores are positively associated with higher market valuation and performance (e.g., Doung, Kang, and Salter, 2015; Dremptic, Klein, and Zwergel, 2020; Mervelskemper and Streit, 2017).

It is plausible to conjecture that good firm-specific governance practices – related to board efficiency, compensation schemes, or shareholders rights – can be transferred from bidders to targets through M&As in a similar manner as country-level governance standards or investor protection in the form of antitakeover amendments⁷. The quality of firm-specific corporate governance is affected by a variety of corporate actions and routine procedures related, for example, to information disclosure (particularly the amount of voluntary information that is released) or the structure and function of the board (e.g., the number of board meetings, incentives to increase attendance, concerns

⁷ As proxied by the Gompers, Ishii and Metrick (2003) and used by Wang and Xie (2009) in their study about U.S. M&As.

about board diversity and its potential benefits). Enhanced corporate disclosure, most of it through voluntary communications, increase transparency, integrity, analyst forecast accuracy, and help reduce uncertainty regarding firm's operations (e.g., Chahine and Filatotchev, 2008; Collett and Hrasky, 2005; Healy and Palepu, 2001). Firms also differ in the actions norms adopted to improve board independence, create and promote the independence of different supervising committees (audit, compensation, governance), promote the use of incentive-based compensation, etc., reflecting diverse governance conditions that affect corporate performance in general and the outcomes of M&As in particular (e.g., Boone, Casares, Karpoff, and Raheja, 2007; Cotter, Shivdasani, and Zenner, 1997; Datta, Iskandar-Datta, and Raman, 2001). Bidders with higher standards in their actions and norms of corporate governance can take these perks with them when they acquire targets that score lower in those attributes and raise the potential for synergy gains. In other words, bidders with pre-acquisition higher corporate governance scores than their targets – for example, in terms of board function and composition, executive compensation, and investor protection – are more likely to earn higher returns from the deals. Building upon these ideas, we formulate the main hypothesis of this study as follows:

H1: A higher firm corporate governance gap between the bidder and the target (bidder minus target) is associated with higher bidder announcement returns, ceteris paribus.

In addition, we explore whether the corporate governance standards of the bidders' countries moderate the portability effect driven by the firm-specific corporate governance differences between bidders and targets. Companies from countries with higher corporate governance standards also have a better environment in terms of institutional quality, shareholder protection, and law enforcement. These factors allow firms to materialize more efficiently any efficiency gains, including those originated by improved managerial and firm governance practices (Martynova and Renneboog, 2008). Therefore, we would expect that the portability effect is more likely to generate higher announcement returns to bidder shareholders when the bidder is domiciled in a better-governed country. In other words, we expect that the quality of the bidder's country institutions moderates the wealth effect of the bidder-target firm governance portability in M&As. Combining these arguments with our main hypothesis (*H1*), we derive the following testable hypothesis:

H2: The positive effect of the bidder-target corporate governance gap is amplified when the bidder is from a country with better institutional quality, ceteris paribus.

5. Research design

5.1 Sample and Data

We use various sources to assemble the panel of companies involved in mergers and acquisitions around the world. The sample of mergers and acquisitions is from Securities Data Corporation (SDC) database. Our sample comprises 649 domestic M&As and 377 cross-border M&As between 2003 and 2016 from 15 countries. Both acquirers and targets are publicly traded companies with stock price data from Refinitiv (Thomson Reuters) DataStream database. Firm-level corporate governance data are from the ASSET4 ESG database.

The initial sample of M&As from SDC comprises 16,981 completed deals from 2003 to 2016. We exclude deals (2,401) where the bidder belongs to the financial industry (SIC codes 6000-6999) and utilities (SIC codes 4900-4949). We require that bidders have less than 50% of the target shares before the deal and end up with a controlling position on the target equity post-acquisition; this resulted in a total of 6,176 deals.⁸ To compute the governance gap, we need governance scores from the ASSET4 ESG database for both bidders and targets; due to missing ESG data, mainly for targets, the number of deals dropped to 1,058. We further eliminate countries with less than five deals over the sample period. Our final sample consists of 1,026 deals where we do not have missing information on any variable used in the regression analyses. Appendix C shows all steps we followed in getting the final sample of M&As.

5.2 Dependent variable: Cumulative abnormal returns

If an acquisition involving public companies is not anticipated, the deal value can be captured by the announcement returns. Under our central hypothesis, we postulate that firm corporate governance portability should have a positive effect on bidders' cumulative abnormal returns. We estimate expected returns using the following market model:

$$R_{ijt} = \alpha_{ij} + \beta_{ij}Rm_{jt} + \varepsilon_{ijt}, t = -255, \dots, -25, \quad (1)$$

where R_{ijt} is the daily stock return for bidder firm i in country j ; Rm_{jt} is the DataStream daily market index return for country j ; ε_{ijt} is the bidder's excess return. Fama, Fisher, Jensen, and Roll, (1969) standard event study methodology is used to calculate cumulative abnormal returns (as the

⁸ We find similar results using 100% ownership acquisitions.

difference between expected and realized daily returns) for 5-day period (t-2, t+2) around the announcement date.

5.3 Independent variable of interest: Corporate governance indices

The key independent variables are based on the corporate governance scores of four firm governance mechanisms: board structure (effective participation of independent directors), board function (guarantee that corporate governance principles are applied), compensation policy (guarantee incentive alignment and independent compensation designs), and shareholder rights (guarantee that minority shareholders are protected). Our choice is driven by the fact that the quality of the bidder's firm corporate governance can be transferred to a target with weaker quality of firm corporate governance. Data on these firm-level governance mechanisms are from the ASSET4 ESG database. This database rates firms on 250 key performance indicators grouped into four major categories of performance: social, corporate governance, environmental, and economic. It allocates a percentage score based on many factors to each of the below-mentioned classes. ASSET4 ESG uses data from the company's regulatory filings and annual reports to calibrate governance scores. This study focuses on the corporate governance pillar that measures a firm's processes to ensure that its executives and board members work in their shareholders' best interests. This pillar is divided into the following categories:

- (i) Board function – measures a firm's management dedication and effectiveness towards following the best corporate governance principles associated with board functions and activities. This indicates a firm's potential to have a useful board by formulating important board committees with assigned responsibilities and tasks.
- (ii) Board structure – measures a firm's management dedication and effectiveness towards following the best corporate governance principles associated with well-balanced membership of the board. It reveals a firm's potential to safeguard the exchange of constructive and critical ideas and an effective decision-making process through an independent, diverse, and experienced board.
- (iii) Compensation policy – measures a firm's management dedication and effectiveness towards making compensation policies for managers. It elaborates how the managers are compensated both financially and non-financially.
- (iv) Shareholder rights – measures a firm's management commitment and effectiveness toward defining and protecting shareholders' rights. It reflects whether the minority shareholders have the same rights as larger shareholders or not.

Since our research design is based on firm-level governance relative strength, we use collective measures to capture the relative quality of each governance mechanism. We use 55 individual governance variables that cover both disclosure and action norms,⁹ and each governance variable has a score from 0 (lowest) to 100 (highest). We construct four corporate governance indices¹⁰ based on the categories mentioned above for both bidders and targets. To measure the gap in firm corporate governance between the bidder and the target, we calculate for each governance index the lagged average score for both bidder and target at the end of the year before an acquisition. The gap is calculated as the bidder's index minus the target's index. A positive gap means that the bidder has a better quality of corporate governance than the target. The higher the gap, the more efficiently the bidder can use the target's assets to enhance the acquisition value. Measuring the bidder-target gap in these different dimensions allows us to better understand the scope of corporate governance portability in M&As.

5.4 Control variables

We consider three groups of variables associated with bidder returns: country characteristics, deal characteristics, and bidder characteristics.¹¹

The country characteristics that we control for include bidder-target country governance gap, Gross Domestic Product (GDP) growth, and GDP per capita, all of which are measured one year before the deal announcement. The studies on country-level governance find evidence that a higher difference in country governance between bidders and targets generates positive returns to bidders (Ellis et al., 2017; Martynova and Renneboog, 2008). To control for financial development and economic growth, we use the log of GDP per capita and GDP growth.

We include several deal-specific characteristics, such as stock payment, cross-border deals, whether the bidder and the target are from the same industry, and relative deal size. It is well established that, in public acquisitions, acquirers earn significantly lower returns when they finance the deal with equity due to the adverse selection problem mentioned by Myers and Majluf (1984). In contrast, bidders tend to earn higher returns when they pay with cash (Bhagat, Dong, Hirshleifer, and

⁹ Definitions of all these individual governance variables are given in Appendix B.

¹⁰ These indices are time-varying and capture a gap in governance quality between bidders and targets. Each governance index is calculated by summing up scores of all governance variables in a category provided by ASSET4 ESG and dividing by the number of variables.

¹¹ For a review on the determinants of M&As and their wealth effects, see, for example, Martynova and Renneboog (2008) and Jensen and Ruback (1983).

Noah, 2005; Wang and Xie, 2009). We classify deals as “same industry” if the bidder and the target share the same Fama-French 48 industry. Morck, Shleifer, and Vishny (1990) show that diversifying acquisitions are value-destructive for bidder shareholders and wealth increasing for self-interested managers. The M&As of related businesses can create higher returns due to cost-saving through economies of scale (Masulis, Wang, and Xie, 2007). Other studies on diversification discount (e.g., Campa and Kedia, 2002; Villalonga, 2004) find that diversifying acquisitions are not necessarily linked with lower firm value, but sometimes they increase firm value. Therefore, the net effect of diversifying acquisitions on bidder CARs is inconclusive. Some studies show that cross-border deals are value-enhancing for bidder shareholders (see Ellis et al., 2017; Martynova and Renneboog, 2008). We also include the relative size of the deal, following the studies of Asquith (1983) and Moeller and Schlingmann (2005), who show that the relative deal size positively affects bidder returns.

We control for some bidder characteristics, including leverage, Tobin’s q , and size; all of them are measured one year prior to the deal announcement. Leverage plays an important governance role in limiting managerial discretion because higher debt decreases future cash flows (Lang, Stulz, and Walkling, 1991). It provides incentives for managers to increase firm performance to keep their jobs alive (Gilson, 1990) and can be seen as an antitakeover protection (Garvey and Hanka, 1999). The effect of Tobin’s q on returns is ambiguous, according to the existing studies. Lang, Stulz, and Walkling (1989) show that bidder returns increase with the bidder’s Tobin’s q and decrease with the target’s Tobin’s q , while Wang and Xie (2009) do not find any relation between bidder returns and Tobin’s q of the bidder. Moeller, Schlingmann, and Stulz (2004) document the bidder size negative effect on the returns as larger bidders pay higher premiums. We finally control for the pre-deal bidder stock price run-up (Golubov, Petmezas, and Travlos, 2012; Martynova and Renneboog, 2008) using a window of 90 to 20 days before the deal’s announcement.

6. Empirical results and discussion

6.1 Descriptive statistics

Table 1 shows the country distribution of bidder firms and deals around the world. The most active nations in the international market of mergers and acquisitions are the United States¹², Japan, and Canada. These three countries represent 67% of the global sample of M&As. The United States dominates the takeover market, with 133 bidders involved in 298 (domestic and cross-border) M&A

¹² Although the US dominates our sample, the results for portability of firm corporate governance still hold when we drop deals made by the US bidders.

deals. The total number of firms engaged in domestic M&A activity from the leading countries exceeds their cross-border M&As. Our global acquisitions sample shows 591 bidding firms involved in 649 domestic deals and 377 cross-border deals. It is well documented that mergers and acquisitions appear in waves and clusters by industry. We observe the highest dollar value of M&A activity in the year 2005 (see Figure 1). The number of M&A deals has been steadily increasing from 2003 to 2005 and reached its peak in 2005, a significant decline in M&A activity during the world crisis in 2008, and a revival in 2009. This trend of M&A deals is similar, as reported by Wang and Xie (2009) and Moeller, Schlingemann, and Stulz (2004).

Table 2 shows summary statistics of involved variables, and we find substantial dispersion in our sample for all variables. Panel A of Table 2 reports that the average bidder's 5-day cumulative abnormal return is 2.3%, consistent with studies that say that M&As create positive returns for bidder shareholders (Alexandridis et al., 2017; Martynova and Renneboog, 2008). Panel B of Table 2 shows the differences in firm corporate governance in four indices. The primary firm corporate governance indices we focus on are the board structure index, board function index, compensation policy index, and shareholder rights index. The differences in these indices can take values from -60 to +76. We report that firm governance differences vary from 47.51 to 53.31 at the median, but their standard deviations are quite large. The bidder governance indices are higher than the target indices, and subsequently, differences in all indices are higher. Panel C of Table 2 states that the average bidder's WGI gap is 7.24, while average GDP growth and GDP per capita are 1.93 and 10.66, respectively. Panel D of Table 2 presents dummy variables for same-industry deals, deals paid in stock, cross-border deals, and relative size. Public acquirers paid in stock accounted for 18%; almost 37% of acquirers engaged in cross-border deals while remaining in domestic deals. Deals among the same industries are 37.8%. The bidder attributes that we consider are leverage, Tobin's Q, size, and stock price run-up. All of them are measured at the end of a year before an acquisition. Panel E of Table 2 Presents that mean values for bidder leverage, Tobin's Q, size, run-up are 0.22, 1.74, 15.91, 0.005, respectively. The definitions of all variables are in Appendix A and Appendix B.

A concern with the several firm characteristics is that they might be strongly correlated. To check it for our sample, we present the correlation matrix for involved variables in Table 3. The first column provides the correlation of the bidder returns with all variables, and the second column shows the correlation of the board structure gap with other variables. Not surprisingly, the board structure gap is strongly correlated with gaps in other firm corporate governance mechanisms. We show that the firm governance gap in our governance indices is positively correlated with the bidder returns.

6.2 Regression analyses

6.2.1 Portability of firm corporate governance

We use the following model to test our main hypothesis (*H1*):

$$\begin{aligned} Bidder\ CAR\ (-2, +2)_{d,t} = & \alpha + \beta_1 CG\ GAP_{d,t-1} + \beta_2 Country\ controls_{j,t-1} + \\ & \sum \beta_m Deal\ controls_{d,t} + \sum \beta_n Firm\ controls_{i,t-1} + \\ & \lambda_k + \eta_j + \gamma_t + \varepsilon_{i,t} \end{aligned} \quad (2)$$

where $Bidder\ CAR\ (-2, +2)_{d,t}$ is the bidder's cumulative abnormal return around the announcement date of deal d at time t over the 5-day event window; α is the intercept; $CG\ GAP_{d,t-1}$ is the corporate governance score of the bidder's index minus the corporate governance score of the target's index for deal d , one year before the deal announcement. $Country\ controls_{j,t-1}$ is a vector of country-specific controls for country j one year prior to the deal and it includes: WGI gap¹³, Gross Domestic Product (GDP) growth, and log GDP per capita; $Deal\ controls_{d,t}$ is a vector of deal-specific controls for deal d in year t ; $Firm\ controls_{i,t-1}$ is a vector of firm-specific controls one year prior to the deal.

The deal specific-controls include: payment method, a dummy variable that is equal to one if the deal is paid in cash and zero otherwise; cross-border deal, an indicator variable that is equals to one for cross-border deals and zero otherwise; same industry deal, a dummy variable that is equal to one if the bidder and the target belong to the same industry and zero otherwise; relative deal size, deal-value scaled by the bidder market value of equity. Firm specific-controls of bidders include leverage, long-term debt divided by total assets; Tobin's q, total assets minus book value of equity plus the market value of equity divided by total assets; size, the log of the book value of total assets; stock price run-up, the sum of abnormal returns using the market model for a window of 90 days up to 20 days before the deal announcement. We also add dummies to control for industry, λ_k , country, η_j , and year, γ_t . to control for omitted factors. Further, Fama-French 48 industry categories are used for the bidder's industry fixed effects. Finally, we mitigate the outliers' effect by winsorizing firm-specific controls and bidder CARs at the top and bottom 1% of the distribution.

¹³ This is lagged difference in WGI between the bidder and the target countries.

To test our main hypothesis, we estimate cross-sectional regressions of bidder CARs on differences in four governance indices and a set of control variables. The results are reported in Table 4. In Models 1 to 8, we show the effect of portability of firm corporate governance on bidder CARs; the portability effect is captured by the coefficients on the bidder-target gap measured as the difference in board structure index, the difference in board function index, the difference in compensation policy index, and the difference in shareholder rights index. As shown in Table 3, differences in firm-level governance mechanisms are highly correlated, so that multicollinearity can make it difficult to examine the impact of firm governance in multiple regressions. To tackle this problem, we estimate regressions with the difference in one firm governance index at a time to gauge the strength of the relation between bidder announcement returns and firm corporate governance indices. We first include only the bidder-target governance gap as the key explanatory variables. The estimated coefficients on the governance gap indices are positive and statistically significant, meaning that acquirers earn higher returns when targets have relatively lower firm-level governance standards. The results are also economically significant. A one-standard-deviation increase in the bidder-target governance gap in terms of board structure, board function, compensation policy, shareholder rights increase bidder announcement returns by 0.75¹⁴, 0.84, 0.77, 0.74 percentage points (pp), respectively.

In Models 5 to 8 of Table 4, we add all independent variables and estimate the effect of firm corporate governance gap on bidder CARs. The parameter estimates show that the bidder-target corporate governance gaps positively and significantly affect the bidder announcement returns. The economic magnitudes of the portability effect are almost the same as reported previously. Moreover, compared to other variables that explain the variation in bidder CARs, the impact of our variable of interest is relatively strong. Taking Model 6 as an example, a one-standard deviation increase in the bidder-target board function gap leads to a 0.84 pp increase in bidder announcement returns, representing 36.5% ($=0.84/2.3\text{pp}$) of the mean bidder CAR; while, for example, a one-standard deviation increase in bidder size reduces bidder CARs by 0.59 pp¹⁵ – an impact that represents only 25.6% ($=0.59/2.3\text{pp}$) of its mean. Our regression models include a set of control variables that have

¹⁴ Considering Model (1) in Table 4, the coefficient on governance gap in board structure is 0.0003 (t-statistic of 4.025) with 25.255 standard deviation. So, an increase of one standard deviation in board structure gap increases bidder CARs by 0.75 percentage points (Standard deviation \times β coefficient \times 100 = 25.255 \times 0.0003 \times 100 = 0.75).

¹⁵ Considering Model (6) in Table 4, an increase of one standard deviation in board function gap increases bidder CARs by 0.84 pp (Standard deviation \times β coefficient \times 100 = 28.128 \times 0.0003 \times 100 = 0.84). However, an increase of one standard deviation in bidder size decreases bidder CARs by 0.55 pp (Standard deviation \times β coefficient \times 100 = 1.696 \times 0.0035 \times 100 = 0.59)

been suggested in the existing literature, along with industry, year and country dummies. The coefficients of control variables are similar in magnitude and statistical significance across the four model specifications (Model 5 to 8) in Table 4; they are also comparable to what other studies report (Masulis, Wang, and Xie 2007; Wang and Xie, 2009).

Overall, the results are consistent with our main hypothesis - for all of the firm governance indices, we find that the bidder CARs are higher in deals where the bidder-target corporate governance gap is greater. This result suggests that one potential source of higher bidder gains from M&As is the improvement in target's corporate governance standards due to a change in control. In other words, the evidence corroborates the argument of good corporate governance practices at the firm level being portable from bidders to targets through acquisitions, which is in line with recent studies that document positive bidder returns resulting from the portability of country-level governance (see, for example, Ellis et al., 2017; Martynova and Renneboog, 2008).

Next, we investigate if the portability effect exists when we split the sample into cross-border and domestic deals. The rationale behind this analysis is to address potential concerns that the quality of countries' institutions and the overall level of shareholder protection may contaminate firm-level corporate governance and therefore mask the results we uncovered above. Although we include the country governance gap as a control variable in our baseline regressions, one may still question whether the evidence attributed to firm-specific corporate governance is driven by the broader governance standards of the bidder's home country. To elude such issues, we re-estimate our models using two separate samples of domestic (649 deals) and cross-border acquisitions (377 deals). We re-estimated similar models as those in columns (5) to (8) of Table 4, but replaced the proxy for country governance gap by the bidder's country governance level.

The results are shown in Table 5; the coefficients on bidder-target corporate governance gap are still positive and statistically significant for the subsample of domestic deals, albeit weaker than what we find using the subsample of cross-border deals, showing that our results on firm governance portability are not contaminated by differences in macro-level conditions. Our evidence also suggests that within countries there is enough firm-level variation in corporate governance, which creates opportunities for value-enhancing M&As through firm governance portability.

6.2.2 Bidder's country governance and the portability of firm governance

Our second hypothesis (*H2*) is based on *H1* and tests the moderating effect of the quality of the bidder's country governance standards on the portability of firm corporate governance from bidders to targets. To test *H2*, we use the following model:

$$\begin{aligned}
 Bidder\ CAR(-2, +2)_{d,t} = & \alpha + \beta_1 CG\ GAP_{d,t-1} + \beta_2 high\ Country\ gov_{j,t-1} + \beta_3 CG\ GAP_{d,k,t-1} \times \\
 & high\ Country\ gov_{j,t-1} + \sum \beta_m Deal\ controls_{dt} + \sum \beta_n Firm\ controls_{i,t-1} + \\
 & \sum \beta_q Country\ controls_{j,t-1} + \sum \beta_f FE_{t,k,j} + \varepsilon_{i,t}
 \end{aligned} \tag{3}$$

To measure country governance, we use World Governance Indicators issued by the World Bank (see Kaufmann et al., 2009) and the anti-self-dealing index (ASDI) proposed by Djankov et al. (2008). The indicators are time-varying and measure how well a nation overcomes corruption, government effectiveness, regulatory quality, the recognition for the rule of law, the level of political stability, and citizen's freedom to elect a government. Following Kaufmann et al. (2009), we compute the mean index (WGI index) based on these six attributes for each country and create a dummy variable based on the WGI index and ASDI. We define better-governed countries if the index is above the world median.

Table 6 estimates cross-sectional regressions of bidder CARs on the same variables included in Table 4 except bidder's WGI index plus an additional variable based on the interaction between firm governance gap and WGI index. Like before, all regressions include year, industry, and country fixed effects. Our variable of interest is the interaction between the bidder-target governance gap and the bidder's WGI index (a proxy for the better-governed countries). Models (1)-(4) test the interaction between the firm governance gap and the WGI index; we find that, on average, the portability effect is positive when the bidder is from a better-governed country. The coefficient on the interaction term [*High bidder WGI* × *B – T governance gap*] is positive and statistically significant in all of the regressions. As far as economic magnitude is concerned, for instance, in Model (1), we observe that on average portability effect is 0.06 percentage points higher when the bidder is from a better-governed country. In Models (5)-(8), the variable of interest is the interaction between the bidder-target governance gap and high bidder ASDI. The results support the view that the portability effect is higher when bidders are from better-governed countries.

Overall, we find evidence that the portability effect is higher when the bidder is domiciled in a country with better governance standards. It is in line with the notion that bidders from better-

governed countries make value increasing-acquisitions (Ellis et al., 2017; Martynova and Renneboog, 2008) and suggests that firms may adopt good governance standards, but the country should have adequate enforcement for those standards to be efficient.

7. Robustness tests

This section examines the robustness of the positive impact of corporate governance portability on bidder CARs documented above.

A first concern is that deals with a higher or lower bidder-target gap may not be randomly distributed in the sample. For instance, deals with high bidder-target gap may be dominated by bidders with higher levels of corporate governance pre acquisition, whereas bidders with weaker levels of pre-deal corporate governance may engage in deals where the gap is smaller. We address this concern in two ways. First, we divide our sample into two groups of high and low bidder-target gap, using the sample median values as a cutoff, and applied the Propensity Score Matching Technique to match each high-gap deal with a low-gap deal; in the matching procedure we account for all observable firm, deal, and country characteristics used in this study. The results, in panel A of Table 7, show that the coefficients on the dummy “High bidder-target governance gap” are positive and statistically significant in three out the four governance scores. Second, in Panel B, we control for the existing level of the bidder’s corporate governance pre acquisition in all regression models by including a dummy variable that identifies bidders with higher governance standards prior to the deal. The coefficients on our variable of interest are still positive and statistically significant for all governance scores.

Next, we test whether our results are robust to alternative specifications of our models. First, instead of the 5-day window around the deal announcement used to compute bidder CARs, we use an alternate 11-day window (Panel C of Table 7) and found similar results as before. Second, in Panel D of Table 7, instead of using each individual governance score, we construct an overall index (Model 1) based on the average score of the four governance indices used in the study and a second average index based on the principal components of each individual score – PCA index (Model 2); the results remain qualitatively unchanged. Additionally, in Models 3 to 6, we reconstructed our four corporate governance indices based on the main individual governance attributes under each category¹⁶ as all

¹⁶ For each category, we are now using a subset of attributes from Appendix B: Board structure - attributes (1), (2), (4), (5), (8), (14), (16) that reinforce independence and expertise; Board function – attributes (2), (4), (5), (6) that capture independent committees and board attendance; Compensation policy - attributes (1), (3), (10), (11), (12) that capture

attributes are not equally discussed in the burgeoning governance literature (for a general review, see, Aktas, Croci, and Simsir, 2016). The results are in line with those in Table 4.

Finally, several voluntary governance mechanisms were spotlighted after the 2008 financial crisis (Gupta and Leech, 2015), and firms were inclined towards firm-level governance improvements post-financial crisis (Alexandridis et al., 2017). To that end, we examine the portability effect before and after the financial crisis. Following Alexandridis et al. (2017), we identify the pre-financial crisis era as before 2009 and re-estimate baseline models on takeovers from 2003 to 2009 (494 transactions) and from 2010 to 2016 (532 transactions) separately; the firm governance gap positively affects bidder returns in each period (Panel E). Thus, all results are consistent with prior evidence that well-managed bidders acquiring poorly-managed targets generate higher gains.

8. Conclusion

Our study contributes to the literature on mergers and acquisition and the portability of corporate governance by examining how the pre-existing differences in bidder and target corporate governance level can affect the returns earned by bidder shareholders around deal announcements. We expand the theory of country-level corporate governance portability of Ellis et al. (2017) by showing that firm-level corporate governance standards can also be transferred from bidders to targets through mergers and acquisitions. Acquirers with good corporate governance – e.g., well-functioning and more independent boards, well-designed executive compensation contracts, enhanced investor protection through better corporate disclosure – that purchase targets with low scores in those dimensions are likely to positively influence the governance practices of the target firms and potentiate the gains from the acquisitions.

In this study, we compute the difference in firm corporate governance levels between bidders and targets pre-deal and test its impact on the acquisition gains that accrue to bidder shareholders. We use multi-dimensional governance indices based on the scores of individual governance attributes of ASSET4 ESG, namely board structure and function, compensation policy, and shareholder rights. We use an international sample of M&As and show that acquisitions where bidders have higher governance quality than targets generate higher bidder announcement returns, suggesting that firm governance is portable from the bidder to the target.

incentive-based compensation; Shareholders rights - attributes (1), (5), (7), (9), (11) that capture antitakeover provisions, ownership and voting rights.

Our findings are not due to firm corporate governance, acting as a proxy for country-level governance. We isolate the impact of cross-country differences in corporate governance by controlling for country-level gaps and by separating cross-border deals from domestic deals; we conclude that beyond the differences among countries firm-level governance portability still persists. In addition, we show that firm-level governance portability is more effective when bidders are from countries with better institutional quality and investor protection. Moreover, we find similar results in a global sample of domestic deals. Overall, our results suggest that M&A deals with different firm corporate governance standards create higher bidder returns, partly associated with firm corporate governance improvements of targets.

Our study also offers some relevant policy insights for regulators and policy makers on how a well-functioning market for corporate control, free of inefficient frictions, can be a vehicle for transferring good corporate governance practices between firms, with positive consequences for the market value of firms' equity.

This work is subject to certain limitations that open important avenues for future research. Further research should scrutinize how the returns from M&As are distributed between the acquirer and the target stockholders as a function of the firm corporate governance gap. Our results can stimulate future research to investigate how the bidder-target governance gap affects the success of an M&A deal. We have focused on control-acquisitions, and the work we conducted could be applied to partial acquisitions or joint ventures. Lastly, there is no reliable source of firm-level governance data for private bidders and targets. The study on privately combining firms could lead to the study's extension.

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Table 1: Distribution by the bidder's country

The table shows the sample distribution of control acquisitions per country between 2003 and 2016. The ASSET4 ESG database covers both the acquirer and target before an M&A deal. We eliminate countries with less than five deals during the sample period.

Country	No. of bidder firms	No. of domestic deals	No. of cross-border deals
Australia	66	75	19
Canada	101	145	42
Finland	4	1	7
France	34	25	43
Germany	17	5	15
India	7	4	4
Israel	5	2	9
Italy	9	1	11
Japan	135	157	45
Norway	5	3	4
Spain	10	5	7
Sweden	12	3	14
Switzerland	17	7	27
United Kingdom	36	19	29
United States	133	197	101
Total	591	649	377

Table 2: Descriptive statistics

The sample consists of 1026 completed international mergers and acquisitions listed in Securities Data Corporation (SDC) between 2003 and 2016. The ASSET4 ESG database covers both the acquirer and target before an M&A deal. The CARs are calculated using the market model for the period (-255, -25). The bidder's CARs are the 5-day cumulative abnormal returns around the announcement date. Other variables are defined in Appendix A and Appendix B.

	N	Mean	Median	S.D.
Panel A: Cumulative abnormal returns				
Bidder CARs	1026	0.023	0.019	0.051
Panel B: Bidder-target firm governance gap				
Board Structure gap	1026	39.229	47.515	25.255
Board Function gap	1026	40.555	53.311	28.128
Compensation Policy gap	1026	39.672	51.058	25.748
Shareholder Rights gap	1026	43.278	51.468	24.952
Panel C: Country characteristics				
WGI gap	1026	7.243	0	24.329
GDP growth	1026	1.938	2.225	2.04
Log GDP per capita	1026	10.669	10.695	.367
Panel D: Deal characteristics				
Stock Payment (dummy)	1026	0.181	0	0.385
Cross-border deal (dummy)	1026	0.367	0	0.482
Same industry deal (dummy)	1026	0.378	0	0.485
Relative size	1026	0.183	0.051	0.336
Panel E: Bidder characteristics				
Bidder Leverage	1026	0.225	0.208	0.162
Bidder Tobin Q	1026	1.745	1.472	0.968
Bidder Size	1026	15.913	15.867	1.696
Bidder Run up	1026	0.005	0.001	0.182

Table 3: Correlation Matrix

This table shows the correlation among variables used in the regression analysis. The governance data for public listed bidders and targets are from the ASSET4 ESG database. We compute CARs using the market model for the period (-255, -25). The data on international mergers and acquisitions are obtained from Securities Data Corporation (SDC). Our sample covers majority control acquisitions from 15 countries between 2003 and 2016. All variables are defined in Appendix A and Appendix B.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	1															
2	0.13***	1														
3	0.10***	0.93***	1													
4	0.11***	0.92***	0.94***	1												
5	0.13***	0.87***	0.84***	0.84***	1											
6	-0.00	-0.00	-0.01	-0.00	-0.00	1										
7	0.00	-0.13***	-0.13***	-0.12***	-0.12***	-0.11**	1									
8	-0.09**	-0.03	-0.01	0.00	-0.07*	0.39***	0.13***	1								
9	-0.05	0.06*	0.10**	0.10***	0.00	0.00	-0.21***	0.02	1							
10	0.01	-0.30***	-0.26***	-0.26***	-0.35***	-0.07*	-0.31***	-0.00	0.07*	1						
11	0.00	-0.09**	-0.09**	-0.07*	-0.09**	0.00	-0.07*	-0.00	-0.06*	0.07*	1					
12	-0.01	0.14***	0.14***	0.12**	0.10**	-0.02	-0.07*	-0.02	-0.07*	-0.00	-0.19**	1				
13	-0.08**	-0.05	-0.05	-0.05	-0.00	0.09**	0.32***	0.07*	-0.24***	-0.27***	0.20***	0.41**	1			
14	-0.03	0.01	0.01	0.02	0.00	0.05	-0.05	0.00	-0.00	-0.03	0.05	-0.00	-0.03	1		
15	0.06*	0.11***	0.15***	0.11***	0.04	-0.02	-0.06*	-0.05	0.06*	0.09**	-0.01	-0.08**	-0.08**	-0.00	1	
16	-0.08**	0.10**	0.08**	0.09**	-0.02	-0.02	0.00	-0.03	-0.00	0.04	-0.05	-0.06	0.01	0.06*	-0.11***	1

(1) Bidder CARs
(2) Board structure gap
(3) Board function gap
(4) Compensation policy gap
(5) shareholder rights gap
(6) Country governance gap
(7) Stock payment dummy
(8) Cross-border dummy
(9) Same industry dummy
(10) Relative size
(11) Bidder leverage
(12) Bidder Tobin Q
(13) Bidder size
(14) Bidder run up
(15) GDP growth
(16) GDP per capita

Table 4: Firm governance gap and bidder cumulative abnormal returns

The sample consists of 1026 completed international mergers and acquisitions listed in Securities Data Corporation (SDC) between 2003 and 2016. The ASSET4 ESG database covers both the acquirer and target before an M&A deal. Our dependent variable is the bidder's 5-day cumulative abnormal returns around the announcement date. The main variable of interest ("Bidder-target governance gap") is the firm-level corporate governance difference between the bidder and the target governance indices: board structure index, board function index, compensation policy index, and shareholder rights index. These indices are based on 55 firm governance attributes from the ASSET4 ESG database having a percentage score from 0 (lowest) to 100 (highest). Other variables are defined in Appendix A and Appendix B. T-statistics are shown in parenthesis; Standard errors are corrected for heteroscedasticity (White, 1980). *, ** and *** show statistical significance level at 10%, 5% and 1% respectively. All regressions control for year, industry, and country fixed effects, whose coefficients are not shown for brevity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variables	Board	Board	Compensation	Shareholder	Board	Board	Compensation	Shareholder
Bidder CARs (-2, +2)	Structure	Function	Policy	Rights	Structure	Function	Policy	Rights
Bidder-target governance gap	0.0003*** (4.025)	0.0003*** (3.728)	0.0003*** (3.910)	0.0003*** (3.400)	0.0004*** (3.807)	0.0003*** (3.548)	0.0003*** (3.793)	0.0003*** (3.222)
Country governance gap					0.0001 (0.962)	0.0001 (1.046)	0.0001 (1.035)	0.0001 (1.000)
Stock Payment dummy					-0.0037 (-0.610)	-0.0036 (-0.601)	-0.0035 (-0.577)	-0.0041 (-0.672)
Cross-border dummy					-0.0129*** (-3.036)	-0.0129*** (-3.015)	-0.0129*** (-3.031)	-0.0126*** (-2.945)
Same industry dummy					-0.0046 (-1.141)	-0.0051 (-1.253)	-0.0052 (-1.281)	-0.0044 (-1.090)
Relative size					0.0074 (0.795)	0.0065 (0.696)	0.0067 (0.719)	0.0060 (0.640)
Bidder leverage					0.0047 (0.368)	0.0047 (0.370)	0.0038 (0.299)	0.0051 (0.395)
Bidder Tobin Q					-0.0038 (-1.613)	-0.0036 (-1.551)	-0.0036 (-1.545)	-0.0038 (-1.610)
Bidder size					-0.0033** (-2.186)	-0.0035** (-2.399)	-0.0034** (-2.290)	-0.0034** (-2.304)
Bidder run up					-0.0094 (-0.789)	-0.0097 (-0.810)	-0.0101 (-0.844)	-0.0095 (-0.798)
GDP growth					0.0021 (1.225)	0.0020 (1.173)	0.0022 (1.270)	0.0023 (1.350)
GDP per capita					-0.0336* (-1.745)	-0.0359* (-1.869)	-0.0372* (-1.937)	-0.0389** (-2.033)
Constant	0.0828*** (5.931)	0.0825*** (5.904)	0.0827*** (5.996)	0.0800*** (5.620)	0.4887** (2.407)	0.5161** (2.557)	0.5281*** (2.613)	0.5432*** (2.695)
Year, industry, and country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	1026	1026	1026	1026	1026	1026	1026	1026
<i>R</i> ²	0.1166	0.1133	0.1144	0.1107	0.1428	0.1399	0.1412	0.1368

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 5: Domestic versus Cross-border deals

The international sample of M&As is from Securities Data Corporation (SDC) between 2003 and 2016. Both bidders and targets are public companies with governance data available from the ASSET4 ESG database. The variable of interest (“Bidder-target governance gap”) is the firm-level corporate governance difference between the bidder and the target governance indices: board structure index, board function index, compensation policy index, and shareholder rights index. The governance indices cover 55 firm governance attributes that ASSET4 ESG categorizes in four governance dimensions mentioned in section 4.2. Each governance attribute has a percentage score from 0 (lowest) to 100 (highest). The dependent variable is the 5-day bidder return around the announcement date. All variables are defined in Appendix A and Appendix B. T-statistics are shown in parenthesis; Standard errors are corrected for heteroscedasticity (White, 1980). *, ** and *** show statistical significance level at 10%, 5% and 1% respectively.

Dependent variables	Domestic deals				Cross-border deals			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bidder CARs (-2, +2)	Board Structure	Board Function	Compensation Policy	Shareholder Rights	Board Structure	Board Function	Compensation Policy	Shareholder Rights
Bidder-target governance gap	0.0003** (2.226)	0.0003** (2.275)	0.0003** (2.261)	0.0002* (1.876)	0.0004*** (2.713)	0.0003** (2.393)	0.0004*** (2.641)	0.0004*** (2.610)
Bidder country governance	0.0020 (1.245)	0.0022 (1.334)	0.0021 (1.285)	0.0023 (1.406)				
Country governance gap					0.0000 (0.426)	0.0000 (0.421)	0.0000 (0.425)	0.0000 (0.397)
Control variables and constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.3361 (1.020)	0.3029 (0.908)	0.3376 (1.018)	0.3508 (1.053)	0.5684* (1.733)	0.6353* (1.904)	0.6475* (1.935)	0.6220* (1.861)
Year, industry, and country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	649	649	649	649	377	377	377	377
<i>R</i> ²	0.1838	0.1850	0.1837	0.1809	0.2633	0.2556	0.2606	0.2572

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 6: Portability and the bidder's country governance

The sample consists of 1026 completed international mergers and acquisitions listed in Securities Data Corporation (SDC) between 2003 and 2016. The ASSET4 ESG database covers both the acquirer and target before an M&A deal. Our dependent variable is the bidder's 5-day cumulative abnormal returns around the announcement date. The variable of interest is the interaction between the better-governed country (measured with WGI and ASDI) and the bidder-target governance gap (B-T gap). We create a dummy variable that equals one if the country governance is above the world median (High WGI/High ASDI) and zero otherwise. The B-T gap is the firm-level corporate governance difference between the bidder and the target governance indices: board structure index, board function index, compensation policy index, and shareholder rights index. These indices are based on 55 firm governance attributes from the ASSET4 ESG database having a percentage score from 0 (lowest) to 100 (highest). Other variables are defined in Appendix A and Appendix B. T-statistics are shown in parenthesis; Standard errors are corrected for heteroscedasticity (White, 1980). *, ** and *** show statistical significance level at 10%, 5% and 1% respectively. All regressions control for year, industry, and country fixed effects, whose coefficients are not shown for brevity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variables	Board	Board	Compensation	Shareholder	Board	Board	Compensation	Shareholder
Bidder CARs (-2, +2)	Structure	Function	Policy	Rights	Structure	Function	Policy	Rights
B-T gap	-0.0002 (-0.520)	-0.0002 (-0.680)	-0.0002 (-0.686)	-0.0004 (-0.926)	0.0001 (0.531)	0.0001 (0.413)	0.0001 (0.409)	0.0000 (0.280)
Higher Bidder WGI	-0.0363 (-1.451)	-0.0373 (-1.402)	-0.0447* (-1.668)	-0.0456 (-1.567)				
Higher Bidder WGI x B-T gap	0.0006* (1.650)	0.0006* (1.680)	0.0006* (1.844)	0.0007* (1.766)				
High ASDI					-0.0450*** (-2.984)	-0.0470*** (-3.128)	-0.0490*** (-3.224)	-0.0466*** (-3.175)
High ASDI x B-T gap					0.0004** (2.407)	0.0004** (2.396)	0.0004** (2.549)	0.0004** (2.512)
Control variables and constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year, industry, and country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>N</i>	1026	1026	1026	1026	1026	1026	1026	1026
<i>R</i> ²	0.1455	0.1427	0.1446	0.1417	0.1068	0.1030	0.1057	0.1003

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 7: Robustness tests

The global M&As sample covers 1026 controlling acquisitions from Securities Data Corporation (SDC) between 2003 and 2016. In panel A, we estimate the models using a PSM matched sample – after splitting the sample into high/low bidder-target governance gap, each bidder from the high group was matched with a bidder from the low group based on all observable deal, firm, country characteristics used in the study. In Panel B, we include an additional control variable – the high bidder governance dummy. In Panel C, we replace the dependent variable by the 11-day bidder CARs. In Panel D, we replace the independent variable by the different firm corporate governance measurements. In Panel E, we show results for two different periods of the sample. Other variables are defined in Appendix A and Appendix B. T-statistics are shown in parenthesis; Standard errors are corrected for heteroscedasticity (White, 1980). *, ** and *** show statistical significance level at 10%, 5% and 1% respectively. All regressions control for year, industry, and country fixed effects, whose coefficients are not shown for brevity.

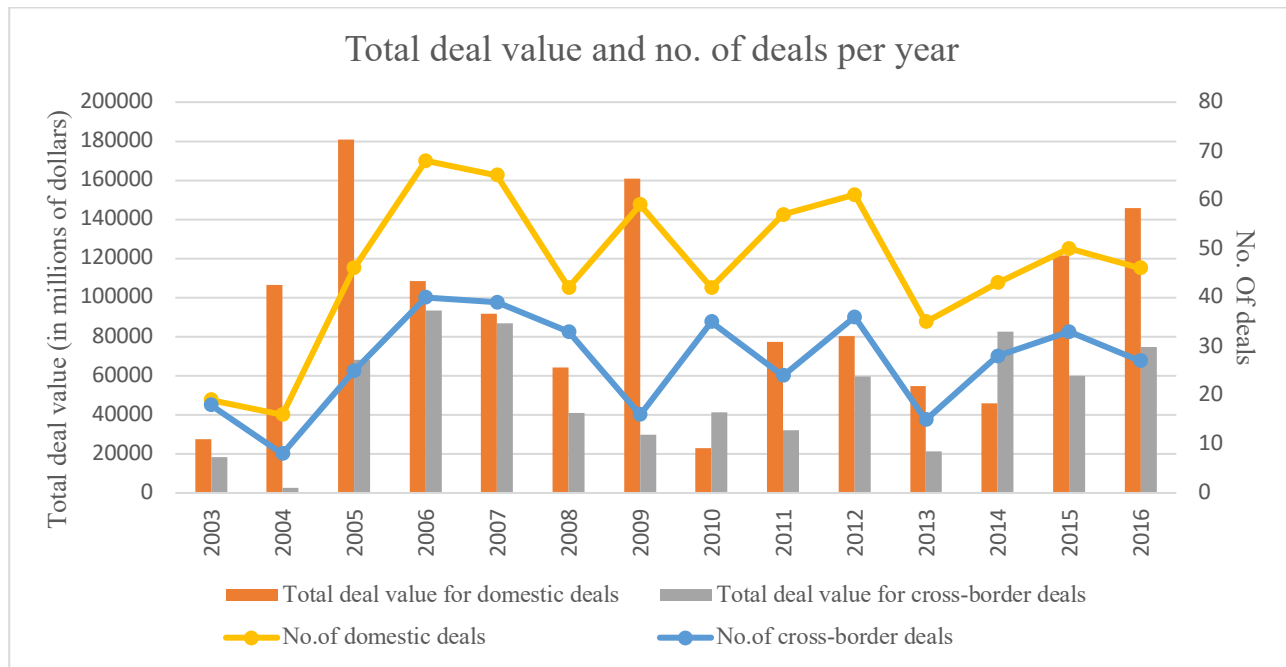
Panel A: PSM-matched samples of high and low bidder-target gap						
	(1)	(2)	(3)	(4)		
Dependent variables: Bidder CARs (-2, +2)	Board Structure	Board Function	Compensation Policy	Shareholder Rights		
High bidder-target governance gap dummy	0.0142*** (2.66)	0.0135*** (2.54)	0.0129*** (2.59)	-0.0023 (-0.513)		
Control variables and constant	Yes	Yes	Yes	Yes		
Year, industry, & country dummies	Yes	Yes	Yes	Yes		
N	680	670	672	670		
R ²	0.163	0.186	0.194	0.185		
Panel B: Bidder governance as an additional control						
	(1)	(2)	(3)	(4)		
Bidder-target governance gap	Board Structure	Board Function	Compensation Policy	Shareholder Rights		
Bidder-target governance gap	0.0004*** (3.689)	0.0003*** (3.357)	0.0003*** (3.529)	0.0004*** (3.633)		
High bidder governance dummy	0.0033 (0.626)	0.0023 (0.466)	0.0031 (0.707)	-0.0104** (-2.523)		
Control variables and constant	Yes	Yes	Yes	Yes		
Year, industry, and country dummies	Yes	Yes	Yes	Yes		
N	1026	1026	1026	1026		
R ²	0.1404	0.1376	0.1388	0.1345		
Panel C: 11-day Bidder cumulative abnormal returns						
	(1)	(2)	(3)	(4)		
Dependent variables Bidder CARs (-5, +5)	Board Structure	Board Function	Compensation Policy	Shareholder Rights		
Bidder-target governance gap	0.0004*** (4.211)	0.0004*** (4.084)	0.0004*** (4.173)	0.0004*** (3.894)		
Control variables and constant	Yes	Yes	Yes	Yes		
Year, industry, and country dummies	Yes	Yes	Yes	Yes		
N	1026	1026	1026	1026		
R ²	0.1570	0.1556	0.1560	0.1539		
Panel D: Alternative measures of firm governance						
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variables Bidder CARs (-2, +2)	Average index	PCA index	Board Structure Main attributes	Board Function Main attributes	Compensation Policy Main attributes	Shareholder Rights Main attributes
Bidder-target governance gap	0.0004*** (3.668)	0.0066*** (3.800)	0.0003*** (3.535)	0.0003*** (3.479)	0.0003*** (3.833)	0.0003*** (3.160)
Control variables and constant	Yes	Yes	Yes	Yes	Yes	Yes
Year, industry, and country dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	1026	1026	1026	1026	1026	1026

R^2	0.1414		0.1412		0.1391		0.1380		0.1411		0.1347	
Panel E: Sub-periods of sample												
	2003-2009				2010-2016							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variables	Board	Board	Comp.	Share.	Board	Board	Comp.	Share.	Board	Board	Comp.	Share.
Bidder CARs (-2, +2)	Structure	Function	Policy	Rights	Structure	Function	Policy	Rights	Structure	Function	Policy	Rights
Bidder-target gov. gap	0.0004**	0.0003**	0.0003**	0.0003**	0.0004***	0.0004***	0.0003***	0.0003***	0.0004***	0.0004***	0.0003***	0.0003***
	(2.545)	(2.075)	(2.235)	(2.463)	(2.947)	(3.155)	(3.170)	(2.667)	(2.947)	(3.155)	(3.170)	(2.667)
Control variables and constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year, industry, and country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	494	494	494	494	532	532	532	532	532	532	532	532
R^2	0.2314	0.2249	0.2263	0.2261	0.1886	0.1912	0.1891	0.2314	0.1886	0.1912	0.1891	0.2314

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Figure 1.

This figure reveals the total deal value (in millions of dollars) and the number of deals of all acquisitions led by bidders over 2003 to 2016. The data are obtained from the Securities data corporation (SDC).



Appendix A: Variable definitions

Variable	Definition
Panel A: Cumulative Abnormal Returns	
Bidder CARs	5-day bidder cumulative abnormal returns around the announcement date. The CARs are calculated using the market model for the period (-255, -25). Source: DataStream.
Panel B: Firm-level governance indices	
Board Structure index	Taken from ASSET4 ESG, based on lagged average of 16 variables (definitions in appendix B).
Board function index	Taken from ASSET4 ESG, based on lagged average of 15 variables (definitions in appendix B).
Compensation policy index	Taken from ASSET4 ESG, based on lagged average of 13 variables (definitions in appendix B).
Shareholder rights index	Taken from ASSET4 ESG, based on lagged average of 11 variables (definitions in appendix B).
Panel C: Bidder's country characteristics	
WGI index	It is the average index based on six country governance dimensions proposed by Kaufmann, Kraay, and Mastruzzi (2009). These dimensions include control of corruption, political stability, govt. Effectiveness, the rule of law, voice and accountability, and regulatory quality. Source: World Governance Indicators.
GDP growth	Annual growth in real GDP. Source: World Development Indicators.
Log GDP per capita	Log of real GDP (current US dollars)/average population. Source: World Development Indicators.
Panel D: deal characteristics	
Stock Payment	Dummy variable: 1 for the purely stock-financed deal, 0 otherwise. Source: Securities Data Corporation.
Cross border deal	Dummy variable: 1 if cross border deal, 0 otherwise. Source: Securities Data Corporation.
Same industry deal	Dummy variable: 1 for same industry deal, 0 otherwise. Source: Securities Data Corporation.
Relative size	Deal value/Bidder market value of equity. Sources: Securities Data Corporation and World Scope.
Panel E: Bidder characteristics	
Bidder run-up	The sum of abnormal returns using the market model for a window of 90 days up to 20 days before deal announcement. Source: DataStream.
Leverage	Long-term debt/total assets. Source: WorldScope.
Tobin's Q	$(\text{assets} - \text{book value of equity} + \text{market value of equity}) / \text{assets}$. Source: WorldScope.
Size	Natural logarithm of book value of assets. Source: WorldScope.

Appendix B: Definitions of the firm-level governance variables from the ASSET4 ESG

A. Board Structure index

(1) Background and skills	“Does the company describe the professional experience or skills of every board member? OR Does the company provide information about the age of individual board members?”.
(2) Board Diversity	“Percentage of female on the board.”
(3) Board Member Affiliations	“Average number of other corporate affiliations for the board member.”
(4) CEO-Chairman Separation	“Does the CEO simultaneously chair the board? AND has the chairman of the board been the CEO of the company?”.
(5) Experienced Board	“Average number of years each board member has been on the board.”
(6) Implementation	“Does the company describe the implementation of its balanced board structure policy?”.
(7) Improvements	“Does the company have the necessary internal improvement and information tools to develop balanced board structure?”.
(8) independent board members	“Percentage of independent board members as reported by the company.”
(9) Individual Reelection	“Are all board members individually subject to re-election (no classified or staggered board structure)?”.
(10) Mandates Limitation	“Does the company provide information about the other mandates of individual board members? AND Does the company stipulate a limit of the number of years of board membership?”.
(11) Monitoring	“Does the company monitor the board functions through the establishment of a nomination committee?”.
(12) non-executive board members	“Percentage of non-executive board members.”
(13) Policy	“Does the company have a policy for maintaining a well-balanced membership of the board?”.
(14) Size of Board	“Total number of board members which are in excess of ten or below eight.”
(15) Specific Skills	“Percentage of board members who have either an industry specific background or a strong financial background.”
(16) Strictly Independent Board Members	“Percentage of strictly independent board members (not employed by the company; not representing or employed by a majority).”

B. Board Function index

(1) Audit Committee Expertise	“Does the company have an audit committee with at least three members and at least one "financial expert" within the meaning of Sarbanes-Oxley?”.
(2) Audit Committee Independence	“Percentage of independent board members on the audit committee as stipulated by the company.”
(3) Audit Committee Management Independence	“Does the company report that all audit committee members are non-executives?”.
(4) Board Attendance	“Does the company publish information about the attendance of the individual board members at board meetings?”.
(5) Board Meetings	“Number of board meetings per year.”
(6) Compensation Committee Independence	“Percentage of independent board members on the compensation committee as stipulated by the company.”
(7) Compensation Committee Management Independence	“Does the company report that all compensation committee members are non-executives?”.
(8) Implementation	“Does the company describe the implementation of its board functions policy?”.
(9) improvements	“Does the company have the necessary internal improvement and information tools to develop appropriate and effective board functions?”.
(10) Monitoring	“Does the company monitor the board functions through the establishment of a corporate governance committee?”.

- | | |
|---|--|
| (11) Nomination committee independence | “Percentage of non-executive board members on the nomination committee.” |
| (12) Nomination committee involvement | “Percentage of nomination committee members who are significant shareholders (more than 5%).” |
| (13) Nomination Committee Management Independence | “Are the majority of the nomination committee members non-executives?”. |
| (14) Nomination Committee Processes | “Does the nomination committee have the responsibility for the selection, appointment and succession procedures for board members or executives?” OR Does the company report or show to constantly supervise the performance of board members or executives?”. |
| (15) Policy | “Does the company have a policy for maintaining effective board functions?”. |

C. Compensation Policy index

- | | |
|---|---|
| (1) Board Member Compensation | “Total compensation of the non-executive board members in US dollars.” |
| (2) Compensation Controversies | “Is the company under the spotlight of the media because of a controversy linked to high executive or board compensation?”. |
| (3) Highest remuneration package | “Highest remuneration package within the company in US dollars.” |
| (4) Implementation | “Does the company describe the implementation of its compensation policy?”. |
| (5) Improvements | “Does the company have the necessary internal improvement and information tools to develop attractive and performance-oriented compensation policy?”. |
| (6) Individual compensation | “Does the company provide information about the total individual compensation of all executives and board members?”. |
| (7) Long Term Objectives | “Is the management and board members remuneration partly linked to objectives or targets which are more than two years forward looking?”. |
| (8) Monitoring | “Does the company monitor the senior executives and board compensation through the establishment of a compensation committee?”. |
| (9) Policy | “Does the company have a policy for performance-oriented compensation that attracts and retain the senior executives and board members?”. |
| (10) Remuneration structure | “Does the company subdivide the remuneration of executives according to fixed salaries, bonuses and stock option plans (or restricted stocks)?”. |
| (11) Stock compensation | “Do the companies most recently granted stocks or stock options vest in a three-year period at a minimum?”. |
| (12) Stock option program | “Does the company’s a statute or by-laws require that stock-options are only granted with a vote at a shareholder meeting?”. |
| (13) Sustainability Compensation Incentives | “Is the senior executive's compensation linked to CSR/H&S/Sustainability targets?”. |

D. Shareholder Rights index

- | | |
|---------------------------------------|--|
| (1) Anti-takeover devices | “The number of anti-takeover devices in place in excess of two.” |
| (2) Available articles of association | “Are the company’s articles of association, statutes or bylaws publicly available or on request?”. |
| (3) Implementation | “Does the company describe the implementation of its shareholder rights policy?”. |
| (4) Improvements | “Does the company have the necessary internal improvement and information tools to develop appropriate shareholder rights principles?” |
| (5) Majority shareholders | “Percentage of shares held by all insiders and 5% owners.” |
| (6) Monitoring | “Does the company monitor the shareholder rights through the establishment of a corporate governance committee?”. |
| (7) Ownership | “Is the company owned by a reference shareholder who has the majority of the voting rights, veto power or golden share?”. |

- (8) Policy “Does the company have a policy for ensuring equal treatment of minority shareholders, facilitating shareholder engagement or limiting the use of anti-takeover devices?”.
- (9) Share structure “Is the company's outstanding equity constituted of 100% common stocks?”.
- (10) Shareholder controversies “Is the company under the spotlight of the media because of a controversy linked to shareholders rights?”.
- (11) Voting rights “Are all shares of company providing equal rights?”.

Appendix C: Step by step data cleaning

This table shows steps to be followed for getting the final sample of M&As.

Steps to be followed	Database	Filters	Number of deals dropped	Number of deals available
1	SDC	Completed deals from 2003 to 2016 where both bidder and target are public firms	N/A	16,981
2	SDC	Dropping financials and utilities	2,401	14,580
3	SDC	Majority control acquisitions	8,404	6,176
4	ASSET4 ESG	Available bidders with governance data (4,787 firms that includes serial acquirers)	715	5,461
5	ASSET4 ESG	Available targets with governance data (1,058)	4,403	1,058
6	Merged data from all databases (WorldScope, DataStream, World Bank)	Dropped countries with less than 5 deals during the sample period	12	1,046
7	Final dataset	Dropped deals with missing information on dependent and control variables	20	1,026

Internet Appendix: Updated data by ASSET4 ESG

The sample consists of completed international mergers and acquisitions listed in Securities Data Corporation (SDC) between 2003 and 2016. The ASSET4 ESG database covers both the acquirer and target before an M&A deal. The key independent variable (“Bidder-target governance gap”) is the firm-level corporate governance difference between the bidder and the target governance scores of the updated categories of governance, management, and shareholder rights. The management and shareholder rights scores are weighted averages of individual governance attributes (67 in the management category and 50 in shareholders) under each category, and governance score is the weighted average based on management, shareholder, and CSR categories. These categories have a percentage score from 0 (lowest) to 100 (highest). The results for 5-day CARs are presented in the table. Other variables are defined in Appendix A and Appendix B. T-statistics are shown in parenthesis; Standard errors are corrected for heteroscedasticity (White,1980). *, ** and *** show statistical significance level at 10%, 5% and 1% respectively. All regressions control for year, industry, and country fixed effects, whose coefficients are not shown for brevity.

Dependent variables: Bidder CARs (-2, +2)	(1) Governance	(2) Management	(3) Shareholder Rights
Bidder-target governance gap	0.0002** (2.199)	0.0002** (2.453)	0.0001 (1.388)
Country governance gap	0.0001 (0.865)	0.0001 (0.862)	0.0001 (0.917)
Stock Payment dummy	-0.0036 (-0.576)	-0.0038 (-0.611)	-0.0046 (-0.725)
Cross-border dummy	-0.0130*** (-2.927)	-0.0129*** (-2.928)	-0.0126*** (-2.842)
Same industry dummy	-0.0045 (-1.085)	-0.0044 (-1.067)	-0.0046 (-1.107)
Relative size	0.0018 (0.198)	0.0012 (0.138)	0.0003 (0.029)
Bidder leverage	0.0079 (0.585)	0.0088 (0.656)	0.0073 (0.541)
Bidder Tobin Q	-0.0043* (-1.726)	-0.0042* (-1.705)	-0.0043* (-1.736)
Bidder size	-0.0047*** (-2.978)	-0.0045*** (-2.908)	-0.0041*** (-2.698)
Bidder run up	-0.0117 (-0.919)	-0.0120 (-0.946)	-0.0116 (-0.907)
GDP growth	0.0024 (1.357)	0.0023 (1.322)	0.0026 (1.497)
GDP per capita	-0.0382* (-1.960)	-0.0385** (-1.980)	-0.0402** (-2.048)
Constant	0.5695*** (2.789)	0.5714*** (2.806)	0.5825*** (2.836)
Year, industry, and country dummies	Yes	Yes	Yes
<i>N</i>	998	1000	1000
<i>R</i> ²	0.1300	0.1310	0.1251

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

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