

The Wealth Effects of Takeover Bids Regulation in the European Union

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ABSTRACT

We investigate the wealth effects of the Takeover Bids Directive, enacted by European Union (EU), on mergers and acquisitions. The main goal of the directive is to protect target minority shareholders by restricting anti-takeovers provisions that entrench target managers, or by discouraging aggressive bidders. We test our hypotheses using a difference-in-differences methodology with a treatment sample of EU public acquisitions and a control sample of public acquisitions from the rest of the world. Our results suggest diverse effects of the regulation across treatment countries. We find that acquirers from countries with better shareholder protection engage in more value-enhancing acquisitions post adoption of the Takeover Bids Directive. Our evidence suggests that the directive facilitates better-governed EU acquirers to engage in deals with larger synergies that could otherwise be too costly. We also find an increase in the likelihood of firms becoming targets post adoption accompanied by a market value appreciation.

JEL Classifications: F30; G15; G30; G34; G38

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1. Introduction

The harmonization of the European Union (EU) Directives about securities regulation (e.g., securities offerings, insider trading, market manipulation, takeover bids, and mandatory disclosure) is one of the main efforts towards increased capital markets integration. These rules intend to enhance the competitiveness of capital markets, reduce market abuse, increase transparency, and improve liquidity (Lamfalussy, 2000), thus reducing information asymmetries between firms and investors (Daske *et al.*, 2008). Moreover, securities regulation is a way of creating an equally-leveled plan for all Member States. However, the impact of securities regulation, either positive or negative, on capital markets remains as an open question with no easy single answer (e.g., Christensen, Hail, and Leuz, 2016). On the one hand, the pros of securities regulation are mainly the better protection they provide to minority shareholders and its positive consequences for investor confidence (e.g., Coffee, 1984; Leuz and Wysocki, 2016; Fauver, Loureiro, and Taboada, 2017). On the other hand, the cons of securities regulation are related to the costs and difficulties in implementing and enforcing the rules (e.g., Stigler, 1971; Becker, 1983; Djankov *et al.*, 2003).

To overcome limitations in the enactment of new directives among Member States, the EU implemented the legal harmonization process, which is based on principles of mutual recognition, minimal harmonization of rules and home country control (Lamfalussy, 2000), assuring that the Member States set their own rules according to their institutional structures (Lannoo and Levin, 2004; Enriques and Gatti, 2008). In this study, we focus on one of those directives – the Takeover Bids Directive (TBD) – that affects the market for corporate control. The main goal of TBD is to protect target minority shareholders from excessive anti-takeover provisions that serve managerial

entrenchment and from aggressive bidders³. Boards of target companies from different Member States can use a variety of legal and structural mechanisms to fight against takeovers. TBD promotes the suspension of target pre- and post-anti-takeover provisions to protect shareholders' interest; in particular, when their companies are subject to changes of control and their securities are traded on a regulated market in a Member State. In the spirit of European Commission regulation process, all target shareholders must be treated equally, namely when there is a change in corporate control, existing security holders must be protected; they "must have sufficient time and information to enable them to reach a properly informed decision on the bid"⁴.

Excessive anti-takeover provisions have been associated with increased agency costs that challenge post integration in mergers and acquisitions (M&As), lower operating efficiency, and higher target managerial entrenchment, which discourage bidders from engaging in otherwise value-enhancing acquisitions (Gompers, Ishii, and Metrick, 2003). Empirically, Wang and Xie (2009) show that stronger shareholder rights or fewer anti-takeover provisions are associated with higher market value. By curtailing excessive anti-takeover provisions, TBD opens the possibility for more value-enhancing deals initiated by innovative bidders who are able to generate positive synergies in combining the two firms (e.g., Bena and Li, 2014). Should restrictive anti-takeover provisions be in place, many value-creating deals would not even be attempted, which hurts the interests of minority shareholders and favors entrenched target managers.

The literature shows that better-governed bidders, in particular those located in countries with higher quality of their financial institutions, are less likely to be affected

³ TBD has three main objectives: (1) protect minority shareholders' interests; (2) strengthen legal confidence, and (3) establish a regulatory framework to guide Member States in adopting the rules through the enactment of Directive 2004/25/EC.

See: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0025>.

⁴ Quoted in article 3, No. 1, b) of Directive 2004/25/EC. See also Appendix B in this manuscript for more details about TBD.

by agency problems in making their investment decisions (Ellis *et al.*, 2017). Bidders from better-governed countries are also more likely to generate larger synergies when they buy targets from countries with weaker shareholder protection, as good corporate governance practices can be transferred from bidders to targets in the post-merger integration process (Martynova and Renneboog, 2008; Wang and Xie, 2009; Ellis *et al.*, 2017). As a result, bidders from countries with better shareholder protection typically earn higher abnormal returns from M&A announcements. The enactment of TBD alleviates frictions and constraints that could prevent such acquirers from engaging in value-creating acquisitions. Therefore, it is expected that the main benefits of the enactment of TBD will accrue to acquisitions led by bidders domiciled in countries with better shareholder protection.

The enactment of TDB may also impact the likelihood of firms becoming targets of M&A deals. By reducing the number of anti-takeover provisions, TBD may increase the probability of some firms being acquired. Thus, the simple passage of the regulation may change the market perception about the prospects of some companies; those with higher probability of being acquired may observe a positive stock market adjustment as an anticipation of a future deal, as well noted in several studies that relate the reduction of anti-takeover provisions with higher equity market value (e.g., Gompers *et al.*, 2003; Bebchuk and Cohen, 2005; Bates, Becher, and Lemmon, 2008; Bebchuk, Cohen, and Ferrell, 2009; Wang and Xie, 2009; Harford, Humphery-Jenner and Powell, 2012).

Using a treatment sample of public acquisitions (i.e., acquisitions where both bidder and target are public companies) from 28 EU countries, and a control sample of public acquisitions from 31 countries outside EU, from 2000 to 2018, we analyze the impact of TBD on the wealth outcomes of M&A deals. We identify the quarter/year of enactment and study the staggered implementation of the regulation. In contrast with

reforms that are simultaneously applied, the staggered adoption of TBD provides the appropriate setting to investigate its causal effects. Building upon the literature on securities regulation (e.g., Coffee, 1984; Djankov *et al.*, 2003; Christensen *et al.*, 2016; Leuz and Wysocki, 2016; Fauver *et al.*, 2017) and the literature on the role of bidder corporate governance in acquisition synergies (e.g., Martynova and Renneboog, 2008; Wang and Xie, 2009; Ellis *et al.*, 2017), we hypothesize a positive effect post TBD on acquisition synergy when acquirers are from countries with stronger investor protection. We measure investor protection rights using two proxies: i) investor protection used by Rossi and Volpin (2004) that assesses the effective rights of minority shareholders computed as the product of the rule of law and anti-director rights (from La Porta *et al.* (1998)), and ii) institutional quality score, based on two regulatory quality indicators proposed by Kaufmann, Kraay, and Mastruzzi (2009). We estimate bidder, target, and combined M&A cumulative abnormal returns (CAR) using the event-study methodology (MacKinlay, 1997) and test the impact of TBD using a difference-in-differences (DiD) methodology (Atanasov and Black, 2016). We find that post TBD the combined CAR of both bidders and targets is significantly higher in deals led by acquirers domiciled in countries with better shareholder protection. We also find that in such deals bidder CARs are higher post TBD, while target CARs are lower. Our results suggest that (i) post TBD acquirers from countries with better shareholder protection are able to engage in better acquisitions and (ii) the wealth impact for bidder and target shareholders (which is typically higher for target shareholders) tends to be less asymmetric.

We next explore a potential mechanism that may explain our results. The enactment of TBD by EU countries may facilitate cross-border acquisitions within the EU by reducing frictions and integration costs. According to the literature on corporate

governance portability, better-governed bidders earn higher announcement returns when they acquire targets from countries with relatively weaker corporate governance standards (Martynova and Renneboog, 2008; Wang and Xie, 2009, Ellis *et al.*, 2017). Thus, we test whether our results are driven by cross-border acquisitions within the EU where bidders are from countries with better institutional quality than the target. We find that to be the case – our results suggest that the higher acquisition synergies post TBD of acquirers from countries with better shareholder protection are mainly driven by the higher wealth effects of cross-border deals where targets are from countries with weaker corporate governance. This evidence seems to indicate that TBD facilitates the acquisition of poorly-governed targets by better-governed acquirers, resulting in greater synergy benefits that might otherwise be blocked by the more restrictive anti-takeover provisions of the target.

Finally, we test the impact of TBD on the probability of a company being acquired. Our results suggest that following the enactment of TBD the likelihood of a EU public company being acquired increases. Moreover, we document an increment in stock prices of EU firms with higher probability of being target post-regulation, which suggests a market response to the anticipation of a potential acquisition. These results are consistent with the idea that TBD enactment enhanced the market for corporate control among EU Member States.

Our results pass two major robustness tests. First, we test the parallel trend assumption underlying the difference-in-differences methodology, by estimating changes in the period prior to TBD adoption. Second, we test whether other confounding factors may drive our results by examining the impact of a concurrent directive enacted by EU countries, during our sample period, to improve transparency in the financial

markets (the Transparency Directive – TPD). In both cases, our DiD results around TBD are confirmed.

Our study offers several contributions. First, we contribute to the literature on the impacts of securities regulation, which are important exogenous shocks that affect how firms operate in financial markets. So far, only a few studies provide causal estimates for the effects of securities regulation in the EU (e.g., Christensen *et al.*, 2016; Fauver *et al.*, 2017). This paper adds to this literature by showing how a specific directive about the market for corporate control, aiming at reducing frictions and protecting minority shareholders, impacts the wealth of takeover bids. Measuring the wealth effects of securities regulation has obvious policy implications, as it is one of the main indicators of the regulation efficacy. Second, we also contribute to the broader literature on the valuation effects of acquisition deals, in particular those that relate the M&A outcomes with the quality of bidder and target corporate governance (e.g., Martynova and Renneboog, 2008; Wang and Xie, 2009; Ellis *et al.*, 2017). Third, our study adds to the stream of the literature that relates the reduction of excessive anti-takeover provisions with positive market outcomes (e.g., Gompers *et al.*, 2003; Bebchuk and Cohen, 2005; Bates *et al.*, 2008; Bebchuk *et al.*, 2009; Harford *et al.*, 2012). Finally, by showing that the wealth effects of TBD accrue essentially to bidders located in countries with stronger shareholder protection, our results echo the findings of Christensen *et al.* (2016) and Fauver *et al.* (2017) that EU directives may have diverse effects depending on the *ex-ante* quality of the countries institutions.

Overall, our evidence suggests that the adoption of TBD not only increases the likelihood acquisitions of EU firms, but also facilitates bidders with better investment prospects, under better corporate governance environments, to pursue value-enhancing deals that would otherwise be too costly.

The remaining of this study is organized as follows: Section 2 describes the data and Section 3 reports our research methodology; Section 4 presents and discusses our empirical results; Section 5 concludes.

2. Sample and Data

Our sample of mergers and acquisitions is from Thomson Financial's Security Data Corporation (SDC) and includes deals announced between 2000 and 2018. Following prior literature (e.g., Alexandridis, Mavrovitis, and Travlos, 2012; Dutordoir, Roosenboom, and Vasconcelos, 2012), we exclude leveraged buyouts, spinoffs, recapitalizations, self-tender offers, exchange offers, repurchases, partial equity stake purchases, acquisitions of remaining interest, and privatizations, as well as deals in which the target or the acquirer is owned by the government. The deals are complete and both bidders and targets are publicly traded companies. We only include controlling acquisitions of at least 20% of the target equity, given that prior (after) to the acquisition the bidder owns less (more) than 50% of the target. We also require the deal value is disclosed and above \$1US Million.

Following previous studies (e.g., Christensen *et al.*, 2016; Fauver *et al.*, 2017), we collected quarterly financial data from Thomson Financial's Datastream and Worldscope. As noted by Christensen *et al.* (2016), quarterly data allow us to better control for confounding effects around the entry-into-force dates of the regulation. Examples of such confounding effects are macroeconomic shocks that occur around the adoption of EU Directives, but are unrelated to those reforms, or other concurrent regulation. To dissipate concerns about potential confounding events, in robustness tests, we investigate whether the impact of TBD is captured by the adoption of a concurrent reform – the Transparency Directive (TPD).

We employ a generalized difference-in-differences (DiD) methodology (Wooldridge, 2010) that takes as the control group all M&A deals not subject to the regulation at a given point in time – i.e., M&As involving targets from control countries and from treated countries prior to the regulation. Our treatment sample comprises M&As between 2000 and 2018, where both acquirer and target listed companies traded on regulated markets of EU Member States. The treatment sample also includes firms from Iceland and Norway that voluntarily adopt the EU directives, which ensures access to the EU's single market. Further, we also include Croatia, which only joined the EU in 2013. To ensure comparability of accounting and financial information across observations, we exclude financial firms (SIC codes between 6000 and 6999). We also exclude utilities (SIC codes starting with 49) because the specific price regulation of these industries may distort the deal synergies (Seshadri *et al.*, 2007). We exclude all observations without available information on market and book value of equity, and total assets. As control variables, besides firm-level variables, we include deal-level variables and country-level variables to capture differences in countries' macroeconomic shocks. All firm- and country-level variables are lagged one period (i.e., one quarter). All continuous variables are winsorized at the 1% and the 99% level to reduce the influence of outliers.

To explore cross-countries differences in legal environment we use different measures of institutional quality and enforcement, such as i) investor protection (La Porta *et al.* 1998; Rossi and Volpin, 2004) that is a measure of the effective rights of minority shareholders computed as the product of rule of law and anti-director rights divided by ten; and ii) institutional quality score, based on institutional quality (Regulatory Quality) and enforcement (Rule of Law) indicators proposed by Kaufmann

et al. (2009), which measure regulatory quality. We assign firms to industries using the Fama and French (1997) 48-industry classification.

Our final sample adds to 4693 M&A deals, of which 605 involve listed companies from 28 EU countries – the treatment sample –, and 4088 deals that involve listed companies from 31 countries outside the EU – the control sample. In the empirical analysis, the number of observations is further reduced due to limited data availability for selected variables. Table 1 describes the sample by country and shows the dates of enactment of TBD in each EU Member State.

[Insert Table 1 here]

Panel A (Panel B) of Table 1 reports the number of acquirers, deals, and targets in our treatment (control) sample. Panel A shows that acquirers from the United Kingdom (UK), France, Sweden, Germany, Norway, Poland, and The Netherlands account for about 80% of all M&A deals. The UK alone represents about 38% of M&A deals in the treatment sample. Most of the target firms are also from the same countries. At the bottom of the distribution, with fewer deals, we find some recent Member States that joined the EU in 2004 (Czech Republic, Lithuania, Slovakia, and Slovenia) and 2007 (Bulgaria). Also, Portugal, Malta, Hungary, Cyprus, and Croatia have remarkably low takeover activity. Taken together, the volume of M&A in Continental Europe is relatively low, compared for example to common law countries, which can be explained by the higher ownership concentration of European companies or lack of stronger investor protection, which according to Armour and Skeel (2007) can frustrate many M&A deals.

As for the control group, composed of non-EU bidders and targets, the United States, Canada, Japan, and Australia account for almost 85% of M&A deals acting as bidders or targets.

3. Methodology and Variables

3.1 Difference-in-Differences and Identification Strategy

To test the impact of TBD on the wealth of bidder and target shareholders involved in public M&As in the EU, we employ the generalized DiD methodology adapted from Wooldridge (2010). We follow the standard M&A literature and use the cumulative abnormal return (CAR) around the deal announcement to measure the value created by the deal (combined CAR) and the gains accrued to acquirer shareholders (bidder CAR) and target shareholders (target CAR).

To compute CARs, we perform event studies around acquisition announcements. We estimate abnormal returns from the market model using the local market index and including a world market index (see, e.g., Ferreira and Laux, 2016; Fauver *et al.*, 2017), as follows:

$$R_{i,c,t} = \alpha_{i,c} + \beta_{i,c,t}R_{c,t} + \beta_{i,c,t}R_{w,t} + \varepsilon_{i,c,t} \quad (1)$$

where $R_{i,c,t}$ is firm i 's daily stock return; $R_{c,t}$ is the Datastream daily domestic market index return for country c ; $R_{w,t}$ is the daily return on the Datastream world market index, and $\varepsilon_{i,c,t}$ is firm i 's specific daily return. Our estimation window is (-255, -25) relative to the announcement day (event day 0) to be consistent with previous studies (e.g., MacKinlay, 1997). We compute cumulative abnormal returns for acquirers and targets over a three-day window (-1,+1), a five-day window (-2,+2), and an eleven-day window (-5,+5). We follow previous studies (e.g., Bradley, Desai, and Kim, 1988; Lang, Stulz, and Walkling, 1989; Wang and Xie, 2009) and estimate acquisition synergy in percentage (combined CARs) as a value-weighted portfolio, with the bidder and target weights based on their respective market capitalizations at the sixth trading day prior to the initial acquisition announcement. The target's weight is adjusted for any percentage

of the target's equity held by the bidder prior to the acquisition announcement. The combined CAR of each deal is the value-weighted portfolio over the event window.

Table 2 shows the descriptive statistics for CARs and other variables used in the study for the full sample, treatment, and control samples. Panel A of Table 2 shows that the mean combined CAR for the full sample ranges between 1.72% (3-day window) and 2.18% (11-day window), but slightly negative, yet very close to zero, for acquirers, and higher than 20% for target firms. This is consistent with the extant literature that documents a slightly negative or close to zero announcement returns for acquirers of public targets and positive for targets (see, e.g., Morck, Shleifer, and Vishny, 1990; Andrade, Mitchell, and Stafford, 2001; Moeller, Schlingemann, and Stulz, 2004). Panel B of Table 2 reports differences in mean CARs between treatment and control groups. Differences in mean CARs of target companies are statistically significant, showing that targets in the treatment group earn lower CARs than targets in the control group. The mean combined CARs and bidder CARs are similar between treatment and control samples.

[Insert Table 2 here]

To test the impact of the adoption of Takeover Bids Directive (TBD) on the acquisition synergy, we estimate the following DiD model:

$$\begin{aligned}
 CAR_{i,t} = & \alpha_i + \beta_1 Treatment_{i,c} + \beta_2 Post TBD_{c,t} + \gamma_1 Runup_{i,t} + \gamma_2 MB_{i,t-1} + \\
 & \gamma_3 (Deal level_{i,t}) + \gamma_4 (Country level_{c,t-1}) + \lambda_c + \eta_j + \gamma_t + \varepsilon_{i,c,t}
 \end{aligned}
 \tag{2}$$

where $CAR_{i,t}$ the is the cumulative abnormal return estimated over a three-day window (-1,+1), a five-day window (-2,+2), and an eleven-day window (-5,+5) for firm i at time t ; $Treatment_{i,c}$ is an indicator variable that equals one if firm i is included in our treatment group, and zero otherwise. Our treatment group includes all M&A deals

involving EU listed acquirers and targets, announced between 2000 and 2018; $Post\ TBD_{c,t}$ is an indicator variable that equals one starting in the quarter after the adoption of TBD in EU countries of target firms, and zero otherwise. According to TBD, the authority in charge of supervising the bid should be that of the Member State where the target firm is admitted to trading on its regulated market.

We follow prior literature (e.g., Schwert, 1996; Agrawal and Nasser, 2012), and control for the run-up effect to capture the adjustment in stock prices as a response to the anticipation of the deal announcement; run-up is estimated as market-adjusted buy-and-hold abnormal returns for acquirers and targets over a 200-day (-210, -11) window (e.g., Golubov, Yawson and Zhang, 2015).

Consistent with previous studies (e.g., Bradley *et al.*, 1988; Lang *et al.*, 1989; Rossi and Volpin, 2004; Wang and Xie, 2009), we also include $MB_{i,t-1}$ to control for the lagged market to book value of firm's equity, and a set of deal-level variables that include the following: method of payment, namely *Cash (Stock)* dummy that is equal to one if M&A deals are 100% paid in cash (stock), and zero otherwise; *Cross-border* that equals one if the target country is different from the acquirer's country, and zero otherwise; *Industry Diversification*, an indicator variable that equals one if the acquirer and target belong to the same 48-industry classification proposed by Fama and French (1997), and zero otherwise. *Relative Size* is the transaction (deal) value divided by the acquirer's total assets measured in the quarter prior to the acquisition announcement. To account for cross-country differences we include *GDP per Capita*, measured as the logarithm *GDP per capita*, reflecting constant 2010 USD prices, and *GDP Growth* is the annual percentage growth rate of real GDP. All variables are defined in Appendix A. The model also includes country (λ_c), industry (η_j), and quarter-year (γ_t) dummies. In the regressions, standard errors are clustered by country.

We next proceed to examine whether the impact of the adoption of TBD on M&A wealth effects is different when acquirers are from countries with better investor protection. The rationale is that the quality of the corporate governance at the country level matters for investment decisions. Acquirers from countries with better shareholder protection are more likely to make value-enhancing acquisitions, as their investment decisions are more closely monitored (Bris and Cabolis, 2008; Martynova and Renneboog, 2008; Ellis *et al.*, 2017; Renneboog and Vansteenkiste, 2018). If TBD is successful in breaking down inefficient anti-takeover provisions, used to entrench target managers, then acquirers with better governance will have a larger pool of potential targets to engage in value-creating M&As.

We measure the quality of country-level corporate governance using two proxies that capture legal, institutional and regulatory quality. Following Rossi and Volpin (2004), our first proxy for investor's rights protection is the product of the rule of law and anti-director rights of La Porta *et al.* (1998) divided by ten. The rule of law is an indicator based on the assessment of law and order tradition in a country produced and disclosed by the International Country Risk Group (ICRG); we use the most recent report of ICRG, from July 2016. Based on this investor protection measure, we create a dummy variable of high investor protection that equals one if a country's measure is above the median, and zero otherwise. The second proxy of investor protection rights is based on two regulatory quality indicators proposed by Kaufmann *et al.* (2009), namely, the Regulatory Quality and the Rule of Law, described in detail in Appendix A. Information about each indicator per country/year is from the World Bank Database (Worldwide Governance Indicators). We sum those two indicators and then create a binary variable equal to one if a country's score is above the annual median, and zero otherwise. Countries that score above the median are included in the group of high

institutional quality score (IQ Score). To test the hypothesis that acquirers from countries with better institutional quality make better deals post TBD, we estimate the following model:

$$\begin{aligned}
CAR_{i,t} = & \alpha_i + \beta_1 Treatment_{i,c} + \beta_2 Post\ TBD_{c,t} + \beta_3 Post\ TBD_{c,t} \times \\
& High\ Investor\ Protection_c\ (IQ\ Score_{c,t}) + \\
& \beta_4 High\ Investor\ Protection_c\ (IQ\ Score_{c,t}) + \gamma_1 Runup_{i,t} + \gamma_2 MB_{i,t-1} + \\
& \gamma_3 (Deal\ level_{i,t}) + \gamma_4 (Country\ level_{c,t-1}) + \lambda_c + \eta_j + \gamma_t + \varepsilon_{i,c,t} \quad (3)
\end{aligned}$$

where *High Investor Protection* and *High IQ Score* are equal to one if the firm is from a country with high shareholder protection or institutional quality as explained above; the remaining variables are similar to those in Equation (2) and defined in detail in Appendix A.

3.2 The Likelihood of Being Acquired

One of the expected outcomes of the enactment of TBD is the increase in takeover activity across EU Member States, with bidders and targets acting in a more liberalized market for corporate control. To test whether EU firms are more likely to become targets of M&A deals post TBD, we estimate the following probit model:

$$\begin{aligned}
prob(Target_{i,t} = 1) \\
= & \alpha_i + \beta_1 Post\ TBD_{c,t} + \gamma_1 (Firm\ level_{i,t-1}) + \gamma_2 (Country\ level_{c,t-1}) \\
& + \lambda_c + \eta_j + \gamma_t + \varepsilon_{i,c,t} \quad (4)
\end{aligned}$$

where the dependent variable is one for all target companies in our treatment sample and zero otherwise. To estimate these regressions we expand our initial sample to include a group of listed EU firms that were not involved in acquisitions through the period. To ensure that the group of non-target firms is comparable with the group of target firms, we use two matching techniques: Propensity Score Matching (PSM) and a

matching by size⁵. The regressions include a set of firm-level controls, such as *Size* (the logarithm of market capitalization), *Market-to-Book* (the market value of equity divided by the book value of equity), *Leverage* (the ratio of long-term debt to total assets), and *ROA* (the net income before extraordinary items divided by total assets), along with the same country-level controls and dummies per country, industry, and year, as in previous regressions.

We next investigate whether the likelihood of being a target post TBD varies depending on the level of shareholder protection and institutional quality of the target country. Prior literature suggests that firms from countries with poor shareholder protection are relatively undervalued (e.g., La Porta *et al.*, 1998; La Porta *et al.*, 2000; Moeller and Schlingemann, 2005), which increases the odds of being acquired (e.g., Palepu, 1986; Cremers, Nair, and John, 2009; Tunyi, Ntim, and Danbolt, 2019). The passage of TBD may, therefore, potentiate a larger number of acquisitions of companies from these countries. To test this hypothesis, we add the indicator variable *Low Investor Protection (IQ Score)*⁶ to qualify the country of each target and potential target, and its interaction with *Post TBD* to Equation (4).

⁵ We adopt the Propensity Score Matching (PSM) methodology (see Rosenbaum and Rubin, 1983), to match each treatment (target) firm with a control (non-target) firm with identical pre-treatment characteristics. The matching is established based on a propensity score that is estimated on a set of covariates (*Size*, *Market-Book*, *Leverage*, *ROA*), year and industry. The PSM was performed using the nearest neighbor algorithm with replacement, which allows that a control firm can be used more than once as a match. To test the quality of PSM we use the Likelihood-Ratio (LR) χ^2 test; if the propensity score specification is the most suitable one, the LR χ^2 test value should not be statistically significant. We also use an alternative (simple) analysis based on matching firms by the closest *Size* (the logarithm of market capitalization) in the same year and industry.

⁶ *Low Investor Protection (IQ Score)* = $1 - \text{High Investor Protection (IQ Score)}$, which computations were explained in the previous section.

4. Empirical Results

4.1 The Impact of Securities Regulation on M&A Announcement Returns

To test the impact of TBD adoption on the M&A gains to bidders and targets and on the combined deal synergies, we estimate several models based on Equation (2), where the dependent variable is either the bidder CAR, the target CAR, or the combined CAR. We compute CARs over three different event windows (3-day, 5-day, and 11-day).

[Insert Table 3 here]

Table 3 shows the results. Our coefficient of interest, $\beta_2(Post\ TBD_{c,t})$, which captures the post-regulation effects on CARs, is not statistically significant across estimations. There is no evidence that the average gain for bidder or target shareholders, nor the value created by the deal are significantly different after TBD is enforced.

Consistent with previous studies (e.g., Schwert, 1996; Agrawal and Nasser, 2012), we find an anticipation effect in acquirers and targets stock prices captured by the run-up variable, which coefficients are negative and statistically significant, suggesting that the market anticipates acquisitions and stock prices start reacting before the deal is announced. We also find that stock-paid acquisitions yield lower announcement returns for both bidders and targets (e.g., Asquith, Bruner, and Mullins, 1987; Travlos, 1987), whereas cash paid acquisitions positively affect target shareholder gains, as shown in Models (4) to (6). Acquirers with higher equity market-to-book ratio earn, on average, about 8 basis points higher announcement returns, while target shareholders earn less 14 to 18 basis points.

The null result on the DiD term, *Post TBD*, may hide differences across treated countries that have not been disentangled. As discussed earlier, differences in regulatory and quality of legal institutions among EU countries might undermine our results. Thus,

next we examine whether the impact of TBD differs when acquirers are from treated countries with better institutional quality and shareholder protection.

4.1.1 The Role of Investor Protection and Institutional Quality on Acquisition Synergy Post-Regulation

The literature shows that acquirers from countries with better corporate governance standards tend to engage in acquisitions that create more value (e.g., Bris and Cabolis, 2008; Martynova and Renneboog, 2008; Ellis *et al.*, 2017). The more stringent scrutiny of public companies in countries with better shareholder protection, leads managers to make better investment decisions. In the particular case of M&As, it translates into acquirers engaging in deals that create more synergies. The main purpose of TBD is to remove anti-takeover provisions that only serve the interests of entrenched target managers and hurt minority shareholders. Thus, post TBD, acquirers from countries with better governance standards will face less costs and restrictions when pursuing value-creating acquisitions.

We follow prior research (La Porta *et al.*, 1998; Rossi and Volpin, 2004) and use two proxies for shareholders' rights protection: i) investor protection, the product of the rule of law and anti-director rights (La Porta *et al.*, 1998); and ii) institutional quality score, based on two indicators proposed by Kaufmann *et al.* (2009), namely the Regulatory Quality and the Rule of Law. We estimate Equation (3) to test our hypothesis that post TBD acquirers from countries with better investor protection are able to engage in more value-enhancing acquisitions. We use interactions of *Post TBD* with dummy variables that identify countries with high (above median) investor protection and institutional quality. Table 4 shows the results.

[Insert Table 4 here]

In Panel A of Table 4, the main variable of interest is *Post TBD* × *High Investor Protection*, which captures the impact of TBD on acquisition announcement returns of M&A deals led by acquirers from countries with stronger investor protection rights. The results show a positive coefficient on the interaction term, *Post TBD* × *High Investor Protection*, in Models (1)-(3) (acquirer CARs) and Models (7)-(9) (combined CARs), suggesting that post TBD acquirers from countries with better shareholder protection engaged in deals that generated more synergies (higher combined CARs) and more gains for their shareholders (higher acquirer CARs). In contrast, the impact on target shareholder gains is null post TBD, independent of whether the deal is led by an acquirer in country with stronger investor protection or not. Interestingly, this result suggests that, post TBD, the increased synergy gains of deals conducted by acquirers domiciled in countries with *High investor protection* are captured essentially by the acquirers' shareholders rather than the targets' shareholders, who typically cash in the larger fraction of gains from public acquisitions. In other words, the better deals that certain acquirers are able to make post TBD contribute to reduce, on average, the asymmetric distribution of M&A gains between bidders and targets.

These wealth impacts are also economically significant. Taking Model (8) as an example, the total value created by a deal, measured by the combined CAR (-2,+2), is 4.5 percentage points (*pp*) higher, after TBD, in deals led by acquirers from countries with better shareholder protection, representing about twice its mean in the treatment sample (2.07%). In contrast, the coefficient on *Post TBD* shows that the combined CAR (-2,+2) is about 4.7 *pp* lower in deals led by acquirers from countries with weaker investor protection post TBD. Moreover, in Model (2), the coefficient on *Post TBD* × *High Investor Protection*, indicates an average increase in acquirer CAR (-2,+2) of

4.6 *pp*, post TBD, for acquirers from countries with better shareholder protection, whereas the coefficient on target CAR (-2,+2) is not statistically significant, suggesting that the magnitude of the synergy gains is captured by the acquirers' shareholders. The results are similar for CAR (-1,+1) and (-5,+5).

In Panel B of Table 4, instead of the time-invariant investor protection dummy, we use, as an alternative, a dummy variable based on time-variant institutional quality scores, as explained in section 2. We re-estimate Equation (3) replacing *High Investor Protection* by *High IQ Score*. Similar to the results uncovered above, we find that both combined CARs and acquirer CARs are higher post TBD for deals led by acquirers from countries with better institutional quality, whereas the impact on target CARs is negligible. The impact of TBD on CARs is also economically significant for acquirers from countries with better institutional quality. Taking Model (8) in Panel B of Table 4 as an example, on average, the combined CAR (-2,+2) is 4.6 *pp* higher post TBD in deals led by acquirers from countries with better institutional quality, representing again about twice its mean in the treatment sample (2.07%). In contrast, deals led by acquirers domiciled in countries with lower institutional quality, observe combined CARs 4.8 *pp* lower, on average. Additionally, in Model (2) the coefficient on *Post TBD* × *High IQ Score* is also positive and statistically significant indicating an average increase in acquirer CAR (-2,+2) of 5 *pp*, post TBD, for acquirers that are from countries with better institutional quality. Again, the coefficient on target CAR (-2,+2) is not statistically significant. The results in Table 4 are qualitatively identical among the three event windows used to estimate CARs.

Overall, the results suggest that TBD helps reduce the agency costs of inefficient anti-takeover provisions that favor target managerial entrenchment and make otherwise

value-enhancing acquisitions too costly. As a result, TBD allows that better-governed acquirers pursue their value-driven acquisitions more efficiently.

4.1.2 Does TBD Enhance Corporate Governance Portability?

In this section, we test one possible mechanism that might explain the higher announcement returns of deals led by acquirers from countries with better shareholder protection post TBD. By reducing excessive anti-takeover provisions, the enactment of TBD opens the possibility of bidders from better-governed countries acquiring targets from countries with weaker corporate governance that no longer can use their anti-takeover provisions to entrench their managers. The literature shows that good corporate governance can be portable from bidders to targets through acquisition deals (Martynova and Renneboog, 2008; Wang and Xie, 2009; Ellis *et al.*, 2017). When bidders from environments with stronger investor protection acquire targets from weaker investor protection environments, the potential for creating synergies is larger, as targets in such environments tend to be undervalued (e.g., Moeller and Schlingemann, 2005). There is a synergy effect of corporate governance, as the better management practices of the bidder apply to target's assets post acquisition.

Wang and Xie (2009) argue that good corporate governance transfers from bidder to target and show that synergy gains are higher when the bidder-target governance gap is larger. Other studies show that, in cross-border acquisitions, acquirers from countries with better investor protection create higher acquisition synergies, especially when the target is from a country with weaker investor protection than the acquirer (Bris and Cabolis, 2008; Martynova and Renneboog, 2008; Ellis *et al.*, 2017). We build upon this literature and test whether differences in investor protection quality of bidder and target's countries partially explain the impact of TBD documented in the previous

section. We use the same measure of country investor protection – the product of the rule of law and anti-director rights (La Porta *et al.*, 1998) – and compute the difference between acquirer and target. We then create a dummy variable, *High Difference in Investor Protection*, that equals one if the difference in investor protection between the two countries is above the median, and zero otherwise. In doing so, we capture those acquisitions where the bidder-target country investor protection gap is larger (ensuring that the acquirer is from a country with high investor protection).

[Insert Table 5 here]

The results in Table 5 show that the coefficient estimates on the main variable of interest, *Post-TBD*High Diff Inv Prot*, is positive and significant in Model (3) showing that acquisition synergies are higher post TBD when the bidder-target investor protection gap is larger. The results are also economically significant. Taking Model (3) as an example, deals led by better governed acquirers with a larger bidder-target investor protection gap earn 5.8 *pp* higher combined CAR (-2,+2)⁷, representing 2.8 times the treatment sample mean.

Overall, these results seem to indicate that buying targets from countries with weaker investor protection is one plausible explanation for why post TBD acquisitions led by acquirers from better-governed countries create higher synergy gains.

4.1.3 Robustness Tests

We conduct two additional tests to investigate the robustness of the results. First, we assess the parallel trends assumption underlying the DiD methodology, used in our models, by including a dummy variable that indicates the period prior the adoption of TBD. We create the variable *Pre TBD* that is equal to one three years (or 12 quarters)

⁷ For brevity, results for CARs (-1,+1) and (-5,+5) are shown in the Internet Appendix, Table I

before the enactment of TBD, and zero otherwise. We also interact *Pre TBD* with *High Investor Protection (IQ Score)* to compare pre and post TBD impact on CARs. If the treated and control firms follow the same trend prior adoption of TBD, then the coefficients on *Pre TBD* and the interaction term should not be statistically significant. The results of Table 6⁸, Panels A and B, show that to be the case, while the coefficients on *Post TBD × High Inv. Protection (IQ Score)* remain positive and statistically significant for acquirer and combined CARs. The evidence suggests that the announcement returns of EU and non-EU acquisitions follow a parallel trend before the regulation.

[Insert Table 6 here]

Second, we test whether our results are subsumed by the enactment of other securities regulation aimed to improve transparency in the financial markets – the Transparency Directive (TPD). Although TBD and TPD are arguably more complementary than concurrent, the transposition dates⁹ are highly correlated, which might suggest some contamination in the main results of the study. Moreover, as TPD stresses timely financial reporting and increased transparency, it helps improve the information environment of target companies and affect synergy gains. The staggered implantation of these two directives and the use of quarterly data allow us to better disentangle their effects and test which one predominates. In doing so, we add to the models in Table 4 and additional indicator, *Post TPD*, that is equal to one starting the quarter after the adoption of TPD and zero otherwise, and the interaction term *Post TPD × High Investor Protection (IQ Score)*.

[Insert Table 7 here]

⁸ Once, for brevity reasons, results for CARs (-1,+1) and (-5,+5) are shown in the Internet Appendix, Table II.

⁹ The TPD entry-into-force dates are described in the Internet Appendix, Table III.

Panel A (Panel B) of Table 7 reports the results using *High Investor Protection* (*IQ Score*). Due to the correlation of TBD and TPD enactment dates and the use of quarter-year dummies, the coefficient estimates of variable *Post TPD* drop out. The results¹⁰ show that the higher acquirer CAR (Model (1)) and combined CAR (Model (3)) in deals where acquirers are from countries with better investor protection are indeed related to the adoption of TBD. The coefficients on *Post TPD* × *High Investor Protection* are not statistically significant.

Taken together, the robustness tests give further support to our main findings that post TBD acquirers from better-governed countries engaged in acquisitions that created higher synergies and synergy gains were essentially captured by the acquirer shareholders.

4.2 The Takeover Likelihood Post-Regulation

To test whether the likelihood of being a target increased after the adoption of TBD, we estimate the probit model described in Equation (4). The results are shown in Table 8.

[Insert Table 8 here]

In Models (1)-(3), we use the propensity score matching (PSM¹¹) technique to select the group of firms that have not been acquired in the period. We employ the PSM technique by year and industry, using the set of firm-level attributes as covariates to estimate the propensity score. In Models (4)-(6), we select the group of non-target firms by matching each target firm with a non-target from the same industry and year and the closest *Size*.

¹⁰ Results for CARs (-1,+1) and (-5,+5) are shown in the Internet Appendix, Table IV.

¹¹ PSM procedure is explained in detail in *section 3.2* (footnote 3).

We observe in Table 8 that the coefficients on *Post TBD* are positive and statistically significant in all models. The economic magnitude is also significant; post TBD the probability of a firm being acquired is about 17% higher, on average (Models 1 and 4). These results suggest that the enactment of TBD helped increase the activity in the market for corporate control across EU countries. Moreover, we find that the likelihood of being acquired is even stronger for firms domiciled in countries with weaker shareholder protection (Models 2 and 5) and poorer institutional quality (Models 3 and 6), as the coefficients on the interaction terms *Post TBD*Low Investor and Protection (IQ Score)* are positive and statistically significant. This result echoes prior findings that firms from countries with poor shareholder protection are relatively undervalued (La Porta *et al.*, 1998; La Porta *et al.*, 2000; Moeller and Schlingemann, 2005) and for that reason more likely to be acquired (Palepu, 1986; Cremers *et al.*, 2009; Tunyi *et al.*, 2019). Thus, our evidence suggests that the passage of TBD facilitated the acquisition of targets with potential to generate greater synergies.

Having found that the enactment of TBD increased the likelihood of a firm being acquired, we next analyze if there is an average increase in the market value of firms that are more likely to be acquired following the passage of the rule. If TBD changes the odds of a company being acquired, then it is expected that post TBD the stock prices of firms that are most likely to become targets adjust upwards in anticipation of an imminent bid (e.g., Schwert, 1996; Agrawal and Nasser, 2012). To test if this is the case, we compute the buy-and-hold abnormal return (as the difference between the daily buy-and-hold stock return and market return) for different investment horizons post TBD: three months, six months and one year after the enactment of that directive in each country. Then, we estimate the following model:

$$\begin{aligned}
BHAR_{i,t} = & \alpha_i + \beta_1 Most\ Predicted\ Targets_{i,t} + \gamma_1 Volatility_{i,t} + \gamma_2 Beta_{i,t} + \\
& \gamma_3 (Firm\ level_{i,t-1}) + \gamma_4 (Country\ level_{c,t-1}) + \lambda_c + \eta_j + \gamma_t + \\
& \varepsilon_{i,c,t}
\end{aligned} \tag{5}$$

where the dependent variable is the three-month, six-month, or one-year buy-and-hold abnormal return (BHAR) post TBD. *Most Predicted Targets* is one if a firm belongs to the group of firms with a higher probability of being acquired and zero otherwise. The likelihood of a firm being acquired is estimated using the predicted values from equation (4); firms with predicted values above the median are included in the group of *Most Predicted Targets*. *Volatility* is measured as the standard deviation of daily market-adjusted residuals over the (-250, -25) period (as in, e.g., Moeller, Schlingemann, and Stulz, 2007; Golubov, Petmezas, and Travlos, 2016) relative to the TBD transposition dates in each country. *Beta* is estimated from the market model using daily returns over the same period as *Volatility*. The set of firm-level variables includes *Size* and *Market-Book*. We also add the same country-level controls and dummies per country, industry, and year, as in former regressions. As suggested by Lyon, Barber and Tsai (1999), in some regressions we estimate the coefficient standard errors using bootstrapping to correct for any potential bias due to cross-sectional dependence of overlapping BHAR that could eventually affect our statistical inference.

[Insert Table 9 here]

We report the results in Table 9. Panel A shows differences in means (medians) of BHARs between the most predicted group of potential targets and the group with the lower probability of firms being acquired. For all time periods post TBD, both the mean and median BHAR is higher for firms in the group of *Most Predicted Targets*. Taking the six-month BHAR as an example, firms with greater probability of being acquired

yield, on average, 6 percentage points (*pp*) higher market-adjusted returns post TBD than the group with lower probability of being acquired.

In Panel B, we report the estimates for our equation (5). Our variable of interest (*Most Predicted Targets_{i,t}*) captures the increase in share prices after TBD enactment for the group of firms with the higher probability of being acquired; the coefficients on that variable are generically positive and statistically significant. The economic magnitudes are also relevant: for instance, the average three-month (six-month) BHAR post TBD is about 1.92 (5.43) *pp* higher for the group of Most Predicted Targets. The result fades away as we increase the time horizon post TBD to one year – albeit the coefficient remains positive it is only statistically significant in Model (6). Overall, this evidence suggests that the enactment of TBD, and its specific goal of tearing down excessive anti-takeover provisions, increased the odds of some EU firms becoming acquisition targets. The market responded accordingly by increasing the stock value of firms with higher probability of being acquired. This adjustment, in anticipation of an expected future bid, can partially explain the weak effects we document on target CARs (see, e.g., Table 3) around the acquisition announcement.

5. Main Conclusions

In this study, we examine the effects of Takeover Bids Directive (TBD), enacted by EU, on acquisition synergies and the gains for bidder and target's shareholders; we also study whether the passage of TBD changed the likelihood of EU public firms becoming acquisition targets. The main purpose of TBD is to protect target minority shareholders from aggressive bid proposals or excessive anti-takeover provisions that favor managerial entrenchment and hurt minority shareholder's interests. To test our hypotheses, we use a treatment sample of 605 public M&A deals from 28 EU countries,

and a control sample of 4088 deals from 31 countries outside EU, over the period of 2000-2018. Our findings suggest that post TBD acquirers from countries with better corporate governance engage in M&As that generate higher synergies. We also find that acquirer shareholders capture the larger fraction of those benefits, while target shareholders remain the same. These results suggest that the additional synergy gains obtained after TBD contribute to reduce the average uneven distribution of M&A gains between bidder and target shareholders that is typically higher for the latter. We also explore a potential mechanism that might partially explain these results – the synergy effect of corporate governance. Our results suggest that TBD facilitated bidders from countries with better shareholder protection to acquire target from countries with poor shareholder protection with positive synergy gains. Accordingly, we also find that TBD increased the likelihood of EU public firms being acquisition targets, and more so those from countries with weaker shareholder protection and institutional quality. Finally, we document a market value appreciation in stock prices for firms with a higher probability of being acquired.

Taken together, our study shows that the adoption of TBD, and the consequent dismantling of excessive anti-takeover provisions, had positive wealth effects around the acquisition announcement that accrued essentially to acquirers from countries with better investor protection and institutional quality. Also, shortly after the adoption of TBD the market value of firms more likely to become targets increased.

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Appendix A - Definitions and Sources of the variables

Variable	Definition	Source
<u>Firm-level</u>		
Beta	Estimated parameter of a market model using daily returns over the (-250, -25) window relative to the TBD enactment dates in each country.	Datastream
Buy-and-hold abnormal returns (BHAR)	Buy-and-hold abnormal returns are measured as market-adjusted daily returns of stocks over three months, six months, and one-year post-TBD transposition dates in each country.	Datastream
Cumulative abnormal returns (CARs)	Absolute value of cumulative abnormal returns over the a three-day windows (-1,+1), a five-day windows (-2,+2), and an eleven-day window (-5,+5).	Datastream
Leverage	Long-term debt divided by total assets.	Worldscope
Ln Total Assets	Logarithm of total assets measured at current prices of 2010.	Worldscope
Market-to-Book Ratio	The market value of equity divided by the book value of equity.	Worldscope
ROA	Net income before extraordinary items divided by total assets.	Worldscope
Run-up	Market-adjusted daily buy-and-hold abnormal returns over a (-210, -11) window.	Datastream
Size (Ln Market Cap)	Logarithm of market capitalization that is calculated as the quarter-end market price multiplied by the number of common shares outstanding.	Worldscope /Datastream
Volatility	Volatility is the standard deviation of daily market-adjusted residuals measured over the window (-250, -25) relative to the TBD transposition dates in each country.	Datastream
<u>Deal-Level</u>		
Cash Payment	Indicator variable that equals one for 100% cash-financed M&A deals, and zero otherwise.	SDC
Cross-border	Dummy variable that equals one if the target country differs from the acquirer's country, and zero otherwise.	SDC
Industry Diversification	Dummy variable that equals one if the acquirer and target belong to the same industry portfolio, as measured by the 48 Industry Portfolios proposed by Fama and French (1997), and zero otherwise.	SDC/ Fama and French (1997)
Relative Size	The M&A deal value divided by the acquirer total assets measured in the quarter before the acquisition announcement.	SDC and Worldscope
Stock Payment	Indicator variable that equals one for 100% stock-financed M&A deals, and zero otherwise	SDC
<u>Industry-Level</u>		
Industry	Classification scheme proposed by Fama and French (1997) based on 48 Industry Portfolios.	Fama and French (1997)
<u>Country-Level</u>		
GDP <i>per Capita</i>	Logarithm of gross domestic product (GDP) <i>per capita</i> , measured at constant 2010 U.S. dollar prices.	Worldbank (Development Indicators)
GDP Growth	Annual percentage growth rate of real GDP.	Worldbank (Development Indicators)
Investor Protection	Proxy for minority shareholders rights, measured as the product of the rule of law (ICRG) and anti-director rights (La Porta <i>et al.</i> (1998)) divided by ten. Rule of Law is a measure	La Porta <i>et al.</i> (1998)

Institutional Quality Score (IQ Score)	<p>based on the assessment of law and order tradition in a country produced and disclosed by the International Country Risk Group (ICRG). Anti-director rights is an index proposed by La Porta <i>et al.</i> (1998) that measures shareholder's voting rights.</p> <p>Proxy for institutional quality and enforcement, based on two out of six regulatory quality measures proposed by Kaufmann <i>et al.</i> (2009): i) Regulatory Quality (policies and regulations that promote private sector development), and ii) Rule of Law (quality of contract enforcement, property rights, confidence in law forces and courts). These measures are based on responses to a large number of annual surveys .</p>	<p>International Country Risk Group (ICRG)</p> <p>Kaufmann <i>et al.</i> (2009) Worldbank (Worldwide Governance Indicators)</p>
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Appendix B – Brief Review about European Union Directives: Takeover Bids and Transparency Directive

The monetary union of 1999 led the EU to launch the Financial Services Action Plan (FSAP). This Plan focuses, among other financial areas, on harmonization of EU Directives about securities regulation, i.e., securities offerings, insider trading, market manipulation, takeover bids, and mandatory disclosure.

In this study we explore the effects of transposition of takeover bids directive and alternatively, the Transparency Directive.

B.1 Takeover Directive

The aim of the Takeover Bids Directive (TBD) is to create an equal playing field for mergers and acquisitions among the Member States, establishing a legal framework for the Member States to adopt the provisions enacted by the Directive 2004/25/EC¹². This Directive should enter into force no later than 20 May of 2006¹³, and each Member State should designate an authority(es) to supervise the enforcement of the TBD.

In the TBD text preamble, the European Commission reinforces the need for clarity and transparency regarding the legal issues that surround a takeover bid event. This Directive assumes the general principle of protecting shareholders, as set in its Article 3, which states that all shareholders of a target company that hold the same class of securities must be treated equally. In the case of a change in corporate control, the other shareholders must be protected, which means they must have sufficient time and information to reach a properly informed decision on the bid. The paragraph 9 of the Directive preamble states that: “Member States should take the necessary steps to protect the holders of securities, in particular those with minority holdings, when control of their companies has been acquired.” This highlights the focus of this Directive, which is pointed clearly to the target companies. This is important mainly

¹² See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0025>.

¹³ Entry-into-force dates are available in Panel A of Table 1 and at: <https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32004L0025>

because there were several legal, economic, and structural differences amongst Member States regarding the measures that the board of the target companies could use to fight against hostiles takeover bids.

To prevent the change of corporate control, target companies have some devices that can use, as is the case of pre-bid and post-bid defense measures. The paragraph 19 of the TBD preamble states “To that end, restrictions on the transfer of securities, restrictions on voting rights, extraordinary appointment rights and multiple voting rights should be removed or suspended during the time allowed for the acceptance of a bid and when the general meeting of shareholders decides on defensive measures, on amendments to the articles of association or on the removal or appointment of board members at the first general meeting of shareholders following closure of the bid.” Hence, this Directive tries to prevent such (pre-bid) defenses with the breakthrough rule, which provisions are displayed on article 11 that prohibits using any previously existing anti-takeover measures. On the side of post-bid defenses, the “Board Neutrality Rule” on Article 9 sets a limit that the board of the target company is not allowed to take any defensive actions to frustrate successful bids. However, under Article 12, the Member States can opt-out of both of these provisions. Where the Member States make use of the option provided in Article 12, they shall nevertheless grant companies of applying Article 9 and/or Article 11 (the so-called reciprocity rule). Such decision shall be taken by the general meeting of shareholders,

To emphasize the main purpose of this Directive of protecting minority shareholders, the TBD provides in its Articles 15 and 16 the obligation to “squeeze-out” and the right to “sell-out”, respectively. Article 15 states the obligation of squeezing-out, setting that Member States shall ensure that acquirers must be able to provide to all the remaining shareholders a fair price for their securities when the bidder holds 90% or more equity with voting rights. On the other side, Article 16 states that those bidders (that hold 90% or more) must “(...) buy his/her securities from him/her at a fair price under the same circumstances as provided for in Article 15(2).”

Moreover, the TBD in its Article 4 defines that “The authority competent to supervise a bid shall be that of the Member State in which the offeree company has its registered office if that

company's securities are admitted to trading on a regulated market in that Member State", which emphasizes the main objective of this Directive that is to protect the investors of the target companies, mainly the minority investors.

Finally, TBD provisions are aligned with other Directives included in the FSAP, namely with Market Abuse and Transparency Directive. In accordance with Article 4: "Information thus exchanged shall be covered by the obligation of professional secrecy to which persons employed or formerly employed by the supervisory authorities receiving the information are subject. Cooperation shall include the ability to serve the legal documents necessary to enforce measures taken by the competent authorities in connection with bids, as well as such other assistance as may reasonably be requested by the supervisory authorities concerned for the purpose of investigating any actual or alleged breaches of the rules made or introduced pursuant to this Directive."

B.2 Transparency Directive

The Transparency Directive (TPD) concerns corporate reporting and disclosure. Enacted by EU Directive 2004/109/EC¹⁴, TPD aims the efficiency, transparency and integration of securities markets, which according to this directive preamble contributes "(...) to a genuine single market in the Community by better allocation of capital and by reducing costs". Thus, this Directive regards "The disclosure of accurate, comprehensive, and timely information about security issuers builds sustained investor confidence and allows an informed assessment of their business performance and assets. This enhances both investor protection and market efficiency." Moreover, this Directive purpose is to "(...) upgrade the current transparency requirements for security issuers and investors" as stated in paragraph 38 of its preamble.

¹⁴ See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0109>. The Transparency Directive is in force, However, this act has been changed. Latest consolidated version dated November 26, 2013. Entry-into-force dates available in the Internet Appendix, Table III, and at: <https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32004L0109>.

In accordance with the spirit of the FSAP, i.e., the integration of securities markets, this Directive main purpose is to protect the minority investors, which in turn would enhance the admission of securities to regulated markets in member states, making markets more dynamic and appealing. The paragraph 7 of TPD preamble sets that “Member States other than the home Member State should no longer be allowed to restrict admission of securities to their regulated markets by imposing more stringent requirements on periodic and ongoing information about issuers whose securities are admitted to trading on a regulated market.”

Regarding investor protection, the disclosure of financial information plays a master role, as highlighted in paragraph 27 of the Directive preamble, which states that “ So as to ensure the effective protection of investors and the proper operation of regulated markets, the rules relating to information to be published by issuers whose securities are admitted to trading on a regulated market should also apply to issuers which do not have a registered office in a Member State”.

Table 1: Sample Description by Country

Table 1 describes the number of acquirers (“No. Acquirers”), the number of M&A deals (“No. Deals”) and the number of targets (“No. Targets”) per country for our treatment and control groups. Panel A reports the treatment sample composed of EU public acquirers and EU public targets, and also shows the enactment dates of Takeover Bids Directive (TBD). Panel B describes the control sample of non-EU public acquirers and non-EU public targets. Our M&A database was collected from Thomson Financial's SDC and includes all deals announced between 2000 and 2018 in EU and non-EU countries.

<i>Panel A: Treatment sample by country (EU acquirers and EU targets)</i>				
<i>Country:</i>	No. Acquirers	No. Deals	No. Targets	TBD
Austria	6	6	8	May-06
Belgium	8	10	10	May-07
Bulgaria	0	0	2	Jun-07
Croatia	1	1	2	Jul-13
Cyprus	1	1	3	Apr-07
Czech Republic	0	0	3	Apr-08
Denmark	12	14	15	Jun-05
Finland	13	16	12	Jul-06
France	76	90	85	Apr-06
Germany	31	35	33	Jul-06
Greece	14	16	15	May-06
Hungary	1	1	1	Jul-06
Iceland	2	2	1	Nov-07
Ireland	7	8	6	May-06
Italy	18	20	14	Dec-07
Lithuania	0	0	3	Mar-07
Luxembourg	2	2	1	May-06
Malta	1	1	1	Jun-06
Netherlands	21	25	21	Oct-07
Norway	23	29	44	Jan-08
Poland	25	27	28	Jan-09
Portugal	1	1	1	Nov-06
Romania	2	2	4	Jan-07
Slovakia	0	0	2	Jan-08
Slovenia	0	0	2	Aug-06
Spain	14	18	20	Jul-07
Sweden	44	49	44	Jul-06
United Kingdom	190	231	224	May-06
All Countries	513	605	605	
<i>Panel B: Control sample by country (non-EU acquirers and non- EU targets)</i>				
<i>Country:</i>	No. Acquirers	No. Deals	No. Targets	
Argentina	2	2	4	
Australia	214	276	315	
Brazil	23	32	33	
Canada	537	799	844	
Chile	5	7	6	
China	46	49	32	
Colombia	3	3	3	
Ecuador	0	0	2	
Egypt	2	2	3	
Hong Kong	18	22	20	
India	73	94	87	
Indonesia	7	8	8	
Israel	26	35	38	
Japan	331	453	411	
Malaysia	8	8	12	
Mexico	15	15	11	
New Zealand	8	9	18	
Pakistan	3	3	4	
Peru	4	5	8	
Philippines	6	6	6	

Russia	9	13	12
Singapore	23	27	26
South Africa	19	25	28
South Korea	112	127	126
Sri Lanka	4	4	4
Switzerland	23	37	21
Taiwan	48	61	66
Thailand	19	21	21
Turkey	8	8	7
United States	1178	1935	1912
Uruguay	1	2	0
All Countries	2775	4088	4088

Table 2: Descriptive Statistics

Table 2 provides descriptive statistics for our M&A sample collected from Thomson Financial's SDC. It includes all deals announced between 2000 and 2018 for a treatment sample of EU public acquirers and targets, and a control group of non-EU public acquirers/targets. Panel A shows descriptive statistics for variables used in the empirical analysis for the full sample, treatment and control groups. For each variable, we report the number of observations ("N"), the mean, the median, and the standard deviation. Cumulative abnormal returns (CAR) are estimated over a three-day window (-1, +1), a five-day window (-2, +2), and an eleven-day window (-5,+5). Abnormal returns are estimated from the market model in equation (1), using an estimation window over (-250, -25). *Market-to-Book* is the market value of equity divided by the book value of equity. *Size (Ln Market Cap)* is the logarithm of the market value of equity. *Ln Total Assets* is the logarithm of total assets, reflecting 2010 prices. *Leverage* is the ratio of long-term debt to total assets. *ROA* is net income before extraordinary items divided by total assets. *Run-up Acquirer (Target)* is the market-adjusted buy-and-hold abnormal returns for acquirers' (targets) stock over a (-210, -11) window. *Relative Size* is the deal value divided by the acquirer total assets measured in the quarter prior to the acquisition announcement. *Cash (Stock) Payment* is an indicator variable that equals one for 100% cash (stock) M&A deals, and zero otherwise. *Cross-border* is a dummy variable that equals one if the target country is different from the acquirer's country, and zero otherwise. *Industry Diversification* is a binary variable that equals one if the acquirer and target belong to the same 48-industry classification proposed by Fama and French (1997), and zero otherwise. *GDP per Capita* is measured as the logarithm *GDP per capita*, measured at constant 2010 USD prices. *GDP Growth* is the annual percentage growth rate of real GDP. All variables are defined in Appendix A. Panel B reports the differences in means of CARs between treatment and control groups. Differences in means are tested using *t*-statistic test. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

Panel A – Descriptive Statistics

Group:	Full Sample				Treatment				Control			
	N	Mean	Median	St.Dev	N	Mean	Median	St.Dev	N	Mean	Median	St.Dev
Abnormal Returns												
Acquirer												
CAR (-1,+1)	3614	-0.0008	-0.0023	0.0866	449	-0.0012	0.0013	0.0712	3165	-0.0007	-0.0027	0.0886
CAR (-2,+2)	3614	-0.0008	-0.0031	0.1002	449	-0.0042	-0.0010	0.0847	3165	-0.0003	-0.0036	0.1022
CAR (-5,+5)	3614	0.0011	-0.0035	0.1287	449	-0.0082	-0.0096	0.1047	3165	0.0024	-0.0031	0.1317
Target												
CAR (-1,+1)	3033	0.2164	0.1545	0.2791	373	0.1599	0.1086	0.2133	2660	0.2243	0.1631	0.2863
CAR (-2,+2)	3033	0.2273	0.1726	0.2844	373	0.1751	0.1188	0.2331	2660	0.2346	0.1786	0.2902
CAR (-5,+5)	3033	0.2438	0.1909	0.3128	373	0.1970	0.1562	0.2594	2660	0.2503	0.1961	0.3191
Combined												
CAR (-1,+1)	2943	0.0172	0.0120	0.0741	342	0.0200	0.0143	0.0676	2601	0.0168	0.0115	0.0749
CAR (-2,+2)	2943	0.0188	0.0115	0.0860	342	0.0207	0.0132	0.0768	2601	0.0185	0.0113	0.0871
CAR (-5,+5)	2943	0.0218	0.0146	0.1082	342	0.0173	0.0184	0.0911	2601	0.0224	0.0140	0.1102
Firm-level												
Acquirer												
Market-to-Book	3614	2.9514	2.0560	4.2489	449	2.5979	1.9461	3.9145	3165	3.0016	2.0707	4.2925
Size (Ln Mkt Cap)	3614	13.829	13.905	2.2861	449	13.513	13.366	2.0754	3165	13.874	13.992	2.3112
Ln Total Assets	3614	13.816	13.941	2.2242	449	13.680	13.463	2.1196	3165	13.835	13.980	2.2383
Leverage	3571	0.1679	0.1322	0.1698	447	0.1604	0.1459	0.1434	3124	0.1689	0.1307	0.1732
ROA	3614	-0.0318	0.0313	0.3023	449	-0.0038	0.0360	0.2867	3165	-0.0358	0.0308	0.3043
Run-up	3614	0.1410	0.0233	0.6472	449	0.1227	0.0261	0.5470	3165	0.1436	0.0229	0.6602
Target												
Market-to-Book	3033	2.5980	1.6935	5.7432	373	2.5437	1.9683	3.3696	2660	2.6056	1.6681	6.0019
Ln Market Cap	3033	11.848	11.789	1.9535	373	11.727	11.703	1.9321	2660	11.865	11.810	1.9563
Ln Total Assets	3032	11.951	11.874	1.8594	373	11.912	11.779	1.8708	2659	11.956	11.892	1.8458
Leverage	2994	0.1299	0.0352	0.1822	371	0.1117	0.0578	0.1431	2623	0.1325	0.0327	0.1869
ROA	3031	-0.1154	0.0060	0.3846	373	-0.0573	0.0214	0.2893	2658	-0.1236	0.0033	0.3955
Run-up	3033	0.0544	-0.0500	0.6199	373	0.0050	-0.0273	0.4952	2660	0.0613	-0.0514	0.6352
Deal-level												
Relative Size	3614	0.4430	0.1689	1.0807	449	0.3970	0.1603	1.1224	3165	0.4495	0.1699	1.0747
Cash Payment	3614	0.3913	0	0.4881	449	0.4454	0	0.4976	3165	0.3836	0	0.4863
Stock Payment	3614	0.3486	0	0.4766	449	0.3140	0	0.4646	3165	0.3536	0	0.4781
Cross-border	3614	0.1923	0	0.3942	449	0.3007	0	0.4591	3165	0.1769	0	0.3817
Industry Diversification	3614	0.6375	1	0.4808	449	0.6169	1	0.4867	3165	0.6404	1	0.4799
Country-level												
Acquirer												
Ln GDP per capita	3614	10.623	10.748	0.5816	449	10.594	10.596	0.2604	3165	10.627	10.767	0.6136
GDP growth(%)	3456	2.3124	2.3302	2.9558	442	2.9484	2.8470	2.4966	3014	2.2191	2.3213	3.0063
Target												
Ln GDP per capita	3033	10.628	10.749	0.5681	373	10.602	10.594	0.2931	2660	10.632	10.767	0.5966
GDP growth(%)	2876	2.4098	2.4247	2.9729	362	3.0077	2.9744	2.5680	2514	2.3237	2.3302	3.0174

Panel B - Univariate Comparisons between Treatment and Control Groups

<i>Group:</i>	Control		Treat		Difference (Treat-Control)	<i>p</i> value
	N	Mean	N	Mean		
<u>Acquirers</u>						
CAR (-1,+1)	3165	-0.0007	449	-0.0012	0.0005	0.899
CAR (-2,+2)	3165	-0.0003	449	-0.0042	0.0039	0.441
CAR (-5,+5)	3165	0.0024	449	-0.0082	0.0106	0.102
<u>Targets</u>						
CAR (-1,+1)	2660	0.2243	373	0.1599	0.0644 ***	0.000
CAR (-2,+2)	2660	0.2346	373	0.1751	0.0595 ***	0.000
CAR (-5,+5)	2660	0.2503	373	0.1970	0.0533 ***	0.002
<u>Combined</u>						
CAR (-1,+1)	2601	0.0168	342	0.0200	-0.0032	0.460
CAR (-2,+2)	2601	0.0185	342	0.0207	-0.0022	0.659
CAR (-5,+5)	2601	0.0224	342	0.0173	0.0051	0.410

Table 3: The impact of TBD on M&A announcement returns

Table 3 provides regression estimates of Equation (2). Cumulative abnormal returns (CAR) are estimated for a three-day window (-1, +1), a five-day window (-2, +2), and an eleven-day window (-5,+5). Abnormal returns are estimated from the market model in Equation (1), using an estimation window over (-250, -25). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in treated countries, and zero otherwise. *Run-up Acquirer (Target)* is the market-adjusted buy-and-hold abnormal returns for acquirers' (targets) stock over a (-210, -11) window. *Market-to-Book* is the book value of equity divided by the market value of equity. *Relative Size* is the deal value divided by the acquirer total assets measured in the quarter prior to the acquisition announcement. *Cross-border* is a dummy variable that equals one if the target country is different from the acquirer's country, and zero otherwise. *Stock (Cash) Payment*, indicator variable that equals one for 100% cash (stock) M&A deals, and zero otherwise. *Industry Diversification* is a binary variable that equals one if the acquirer and target belong to the same 48-industry classification proposed by Fama and French (1997), and zero otherwise.. *GDP per Capita* is measured as the logarithm *GDP per capita*, measured at constant 2010 USD prices. *GDP Growth* is the annual percentage growth rate of real GDP. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics clustered at country-level are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Dependent Variable:</i>	CAR Acquirer			CAR Target			CAR Combined		
<i>Event window:</i>	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treat	0.4231*** (15.76)	0.3752*** (12.46)	0.4300*** (12.33)	0.0572 (0.70)	0.0153 (0.20)	0.1416 (1.14)	-0.0099 (-0.36)	-0.008h0 (-0.28)	-0.0380 (-1.58)
Post-TBD	-0.0004 (-0.04)	-0.0013 (-0.13)	0.0117 (1.40)	0.0012 (0.05)	0.0089 (0.26)	-0.0133 (-0.37)	-0.0065 (-0.86)	-0.0048 (-0.74)	0.0072 (0.93)
Run-up (Acquirer)	-0.0090*** (-4.16)	-0.0163*** (-5.97)	-0.0352*** (-13.69)				-0.0072*** (-4.16)	-0.0128*** (-7.47)	-0.0261*** (-9.01)
Run-up (Target)				-0.0432*** (-6.43)	-0.0508*** (-7.94)	-0.0756*** (-10.31)	0.0004 (0.40)	-0.0028 (-0.94)	-0.0058 (-0.96)
Market-to-Book	0.0008*** (6.11)	0.0011*** (3.78)	0.0013** (2.64)	-0.0014** (-2.20)	-0.0017** (-2.62)	-0.0018*** (-4.77)	0.0001 (0.18)	0.0004 (0.92)	0.0006 (1.18)
Relative size	-0.0015 (-0.50)	-0.0012 (-0.37)	-0.0035 (-1.56)	-0.0058* (-1.96)	-0.0094*** (-3.33)	-0.0133*** (-3.57)	0.0017 (0.72)	0.0020 (0.73)	0.0000 (0.02)
Cross-border	0.0068* (1.72)	0.0057* (1.77)	0.0044 (0.84)	0.0103 (0.80)	0.0028 (0.19)	0.0076 (0.62)	0.0049 (1.62)	0.0035 (0.98)	0.0028 (0.47)
Stock payment	-0.0010 (-0.24)	0.0027 (0.81)	0.0009 (0.27)	-0.0530*** (-3.34)	-0.0545*** (-3.91)	-0.0730*** (-6.94)	-0.0120** (-2.61)	-0.0086** (-2.34)	-0.0140*** (-2.84)
Cash Payment	0.0099* (2.01)	0.0114** (2.03)	0.0110* (1.91)	0.0550*** (3.85)	0.0629*** (6.22)	0.0598*** (5.33)	0.0003 (0.09)	0.0023 (0.57)	-0.0019 (-0.50)
Industry diversification	0.0009 (0.44)	0.0007 (0.26)	0.0021 (0.59)	-0.0055 (-0.77)	-0.0107 (-1.44)	-0.0162* (-1.96)	0.0007 (0.45)	-0.0001 (-0.02)	-0.0004 (-0.09)
GDP per capita	0.0171 (0.40)	0.0228 (0.39)	0.0577 (0.93)	0.1031 (0.80)	0.0607 (0.45)	0.0034 (0.02)	0.0066 (0.21)	0.0076 (0.15)	0.0167 (0.33)
GDP growth	-0.0009 (-0.40)	-0.0025 (-0.89)	-0.0002 (-0.04)	-0.0067 (-1.54)	-0.0073 (-1.65)	-0.0086* (-1.70)	-0.0004 (-0.33)	-0.0022 (-1.24)	-0.0009 (-0.37)
Constant	-0.1992 (-0.42)	-0.2475 (-0.39)	-0.6174 (-0.90)	-1.0189 (-0.70)	-0.4942 (-0.33)	0.1554 (0.10)	-0.0131 (-0.04)	-0.0151 (-0.03)	-0.1080 (-0.21)
Quarter/Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,614	3,033	3,033	3,033	2,943	2,943	2,943
R-squared	0.082-	0.088	0.091	0.183	0.185	0.193	0.102	0.102	0.107

Table 4: The impact of TBD – Investor protection and institutional quality

Table 4 provides regression estimates of Equation (3). Panel A shows interaction with *High Investor Protection* and Panel B shows interactions with *High Institutional Quality*. Cumulative abnormal returns (CAR) are estimated for a three-day window (-1, +1), a five-day window (-2, +2), and an eleven-day window (-5,+5). Abnormal returns are estimated from the market model in equation (1), using an estimation window over (-250, -25). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *High Investor Protection* is a dummy variable that equals one if a country's investor protection is above the median, and zero otherwise. *High IQ Score* is a dummy variable that equals one if a country's institutional quality score is above the median, and zero otherwise. All variables are as described in Table 3 and in Appendix A. White heteroskedasticity-adjusted *t*-statistics clustered at country-level are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Panel A: Investor Protection</i>									
<i>Dependent Variable:</i>	CAR Acquirer			CAR Target			CAR Combined		
<i>Event window:</i>	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treat	0.0345 (1.62)	0.0560** (2.58)	0.0900*** (3.16)	-0.0338 (-0.22)	-0.0920 (-0.58)	-0.1376 (-0.83)	0.0163 (0.78)	0.0471** (2.18)	0.0701*** (2.76)
Post-TBD	-0.0462*** (-2.79)	-0.0448*** (-3.62)	-0.0292** (-2.13)	0.1650 (1.36)	0.1669 (1.34)	0.1720 (1.26)	-0.0520** (-2.34)	-0.0472** (-2.07)	-0.0348 (-1.42)
Post-TBD*High Inv Prot	0.0488** (2.64)	0.0463*** (2.91)	0.0436*** (2.85)	-0.1758 (-1.50)	-0.1697 (-1.42)	-0.1990 (-1.53)	0.0487** (2.13)	0.0453* (1.92)	0.0450* (1.77)
High Investor Protection	0.0478 (0.52)	0.0704 (0.57)	0.2202 (1.62)	-0.2556 (-0.74)	-0.0899 (-0.26)	-0.0092 (-0.03)	-0.0132 (-0.44)	-0.0353 (-0.78)	-0.0306 (-0.63)
Run-up (Acquirer)	-0.0090*** (-4.18)	-0.0163*** (-5.99)	-0.0352*** (-13.71)				-0.0072*** (-4.14)	-0.0127*** (-7.50)	-0.0261*** (-8.97)
Run-up (Target)				-0.0429*** (-6.38)	-0.0506*** (-7.90)	-0.0753*** (-10.26)	0.0003 (0.34)	-0.0029 (-0.95)	-0.0059 (-0.97)
Market-to-Book	0.0008*** (6.11)	0.0010*** (3.82)	0.0013** (2.65)	-0.0014** (-2.20)	-0.0017** (-2.62)	-0.0018*** (-4.77)	0.0001 (0.17)	0.0004 (0.91)	0.0006 (1.17)
Relative size	-0.0015 (-0.50)	-0.0012 (-0.38)	-0.0035 (-1.56)	-0.0059* (-2.00)	-0.0095*** (-3.38)	-0.0134*** (-3.63)	0.0017 (0.72)	0.0020 (0.73)	0.0000 (0.01)
Cross-border	0.0068* (1.71)	0.0057* (1.77)	0.0044 (0.84)	0.0107 (0.83)	0.0032 (0.21)	0.0080 (0.66)	0.0049 (1.61)	0.0035 (0.97)	0.0028 (0.46)
Stock payment	-0.0012 (-0.27)	0.0026 (0.79)	0.0008 (0.24)	-0.0526*** (-3.28)	-0.0540*** (-3.84)	-0.0724*** (-6.81)	-0.0122** (-2.67)	-0.0087** (-2.39)	-0.0141*** (-2.87)
Cash Payment	0.0098* (1.98)	0.0113* (2.00)	0.0109* (1.88)	0.0557*** (3.95)	0.0635*** (6.42)	0.0605*** (5.47)	0.0002 (0.06)	0.0022 (0.55)	-0.0020 (-0.53)
Industry diversification	0.0010 (0.47)	0.0008 (0.28)	0.0021 (0.60)	-0.0058 (-0.83)	-0.0110 (-1.50)	-0.0165** (-2.04)	0.0008 (0.50)	0.0000 (0.01)	-0.0003 (-0.07)
GDP per capita	0.0182 (0.42)	0.0239 (0.41)	0.0587 (0.94)	0.1013 (0.79)	0.0588 (0.44)	0.0012 (0.01)	0.0089 (0.28)	0.0098 (0.19)	0.0189 (0.37)
GDP growth	-0.0011 (-0.49)	-0.0027 (-0.96)	-0.0003 (-0.09)	-0.0060 (-1.47)	-0.0065 (-1.56)	-0.0078 (-1.64)	-0.0006 (-0.51)	-0.0024 (-1.37)	-0.0011 (-0.45)
Constant	-0.1694 (-0.44)	-0.2214 (-0.42)	-0.5978 (-1.05)	-0.7485 (-0.67)	-0.3900 (-0.34)	0.1814 (0.16)	-0.0505 (-0.18)	-0.0577 (-0.12)	-0.2080 (-0.44)
Quarter/Country/Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,614	3,033	3,033	3,033	2,943	2,943	2,943
R-squared	0.082	0.088	0.092	0.184	0.185	0.194	0.103	0.102	0.107

**Table 4: The impact of TBD – Investor protection and institutional quality
(Continued)**

<i>Panel B: Institutional quality</i>									
<i>Dependent Variable:</i>	CAR Acquirer			CAR Target			CAR Combined		
<i>Event window:</i>	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)	(-1,+1)	(-2,+2)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treat	0.4236*** (16.34)	0.3762*** (13.23)	0.4334*** (13.76)	0.0663 (0.80)	0.0260 (0.33)	0.1532 (1.23)	-0.0112 (-0.42)	-0.0092 (-0.33)	-0.0395 (-1.68)
Post-TBD	-0.0505*** (-3.48)	-0.0497*** (-3.70)	-0.0379*** (-2.88)	0.1856 (1.40)	0.1947 (1.39)	0.2011 (1.33)	-0.0547** (-2.51)	-0.0483* (-2.00)	-0.0414* (-1.79)
Post-TBD*High IQ Score	0.0528*** (3.20)	0.0509*** (3.05)	0.0518*** (3.43)	-0.1944 (-1.51)	-0.1947 (-1.45)	-0.2252 (-1.55)	0.0512** (2.30)	0.0463* (1.87)	0.0512** (2.11)
High IQ Score	-0.0130*** (-3.23)	-0.0150 (-1.52)	-0.0265 (-1.31)	0.1017*** (3.17)	0.1371*** (3.38)	0.1434*** (3.43)	-0.0072 (-0.73)	-0.0029 (-0.39)	-0.0177** (-2.08)
Run-up (Acquirer)	-0.0090*** (-4.18)	-0.0163*** (-5.98)	-0.0352*** (-13.70)				-0.0071*** (-4.15)	-0.0127*** (-7.55)	-0.0260*** (-8.95)
Run-up (Target)				-0.0429*** (-6.41)	-0.0505*** (-7.95)	-0.0753*** (-10.32)	0.0003 (0.33)	-0.0029 (-0.95)	-0.0059 (-0.97)
Market-to Book	0.0008*** (6.08)	0.0010*** (3.80)	0.0013** (2.64)	-0.0014** (-2.24)	-0.0018** (-2.65)	-0.0019*** (-4.77)	0.0001 (0.17)	0.0004 (0.91)	0.0006 (1.17)
Relative size	-0.0015 (-0.50)	-0.0012 (-0.38)	-0.0035 (-1.56)	-0.0058* (-1.99)	-0.0094*** (-3.35)	-0.0133*** (-3.60)	0.0017 (0.72)	0.0020 (0.73)	0.0000 (0.02)
Cross-border	0.0068* (1.71)	0.0057* (1.76)	0.0044 (0.83)	0.0111 (0.86)	0.0038 (0.25)	0.0087 (0.71)	0.0049 (1.61)	0.0035 (0.97)	0.0028 (0.47)
Stock payment	-0.0012 (-0.28)	0.0025 (0.77)	0.0007 (0.21)	-0.0526*** (-3.31)	-0.0541*** (-3.88)	-0.0725*** (-6.90)	-0.0122** (-2.67)	-0.0087** (-2.40)	-0.0142*** (-2.86)
Cash Payment	0.0099** (2.03)	0.0114** (2.07)	0.0111* (1.97)	0.0547*** (3.84)	0.0622*** (6.27)	0.0591*** (5.59)	0.0003 (0.08)	0.0023 (0.56)	-0.0019 (-0.49)
Industry diversification	0.0009 (0.43)	0.0007 (0.25)	0.0020 (0.57)	-0.0051 (-0.74)	-0.0101 (-1.42)	-0.0156* (-1.92)	0.0007 (0.45)	-0.0000 (-0.00)	-0.0004 (-0.11)
GDP per capita	0.0169 (0.39)	0.0223 (0.39)	0.0559 (0.91)	0.1098 (0.83)	0.0703 (0.52)	0.0132 (0.10)	0.0081 (0.26)	0.0095 (0.18)	0.0169 (0.33)
GDP growth	-0.0011 (-0.50)	-0.0027 (-0.97)	-0.0004 (-0.11)	-0.0056 (-1.31)	-0.0060 (-1.33)	-0.0072 (-1.51)	-0.0007 (-0.52)	-0.0024 (-1.36)	-0.0011 (-0.46)
Constant	-0.1821 (-0.39)	-0.2257 (-0.35)	-0.5702 (-0.84)	-1.2035 (-0.81)	-0.7488 (-0.49)	-0.1089 (-0.07)	-0.0208 (-0.06)	-0.0306 (-0.06)	-0.0915 (-0.17)
Quarter/Country/Industry									
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,614	3,033	3,033	3,033	2,943	2,943	2,943
R-squared	0.082	0.088	0.092	0.185	0.187	0.195	0.103	0.102	0.107

Table 5: Corporate governance portability in M&As post TBD

Table 5 provides regression estimates of Equation (3). Cumulative abnormal returns (CAR) are estimated for a five-day window (-2, +2). Abnormal returns are estimated from the market model in equation (1), using an estimation window over (-250, -25). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *High Difference Investor Protection* is a dummy variable that equals one if the difference in investor protection measure between acquirer and target countries is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics clustered at country-level are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Dependent Variable:</i>	CAR Acquirer	CAR Target	CAR Combined
<i>Event window:</i>		(-2,+2)	
<i>Model:</i>	(1)	(2)	(3)
Treat	0.3614*** (13.52)	0.0346 (0.41)	-0.0457 (-1.62)
Post-TBD	-0.0046 (-0.39)	0.0144 (0.44)	-0.0126 (-1.48)
Post-TBD*High Diff Inv Prot	0.0240 (1.44)	-0.0615* (-1.70)	0.0583*** (3.84)
High Diff Investor Prot	-0.0200*** (-3.00)	0.0649** (2.21)	-0.0172*** (-3.26)
Control Variables	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes
Observations	3,614	3,033	2,943
R-squared	0.089	0.187	0.104

Table 6: Robustness Tests: Identification strategy

Table 6 provides regression estimates of equation (3). Panel A (B) reports the results using investor protection (institutional quality score) as a proxy for shareholders' rights. Cumulative abnormal returns (CAR) are estimated for a five-day window (-2, +2). Abnormal returns are estimated from the market model in equation (1), using an estimation window over (-250, -25). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Pre-TBD* is an indicator variable equal to one in quarters *t-12* to *t-1* relative to the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *High Investor Protection (High IQ Score)* is a dummy variable that equals one if a country's investor protection (institutional quality score) is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics clustered at country-level are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Panel A – Investor Protection</i>			
<i>Dependent Variable:</i>	CAR Acquirer	CAR Target	CAR Combined
<i>Event window:</i>	(-2,+2)		
<i>Model:</i>	(1)	(2)	(3)
Treat	0.0495** (2.30)	-0.1198 (-0.77)	0.0503*** (2.72)
Pre-TBD	0.0110 (0.77)	0.0348 (0.24)	-0.0051 (-0.20)
Pre-TBD*High Inv Prot	0.0072 (0.40)	0.0100 (0.07)	0.0325 (1.08)
Post-TBD	-0.0388*** (-4.17)	0.1897* (1.85)	-0.0485*** (-3.07)
Post-TBD*High In Prot	0.0492*** (4.37)	-0.1713* (-1.96)	0.0608*** (3.53)
High Investor Protection	0.0680 (0.56)	-0.0859 (-0.25)	-0.0517 (-1.17)
Control Variables	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes
Observations	3,614	3,033	2,943
R-squared	0.089	0.186	0.103
<i>Panel B – Institutional Quality</i>			
<i>Dependent Variable:</i>	CAR Acquirer	CAR Target	CAR Combined
<i>Event window:</i>	(-2,+2)		
<i>Model:</i>	(1)	(2)	(3)
Treat	0.3750*** (13.05)	0.0236 (0.30)	-0.0257 (-0.94)
Pre-TBD	-0.0000 (-0.00)	0.1419 (1.05)	-0.0069 (-0.29)
Pre-TBD*High IQ Score	0.0178 (0.94)	-0.0918 (-0.68)	0.0343 (1.18)
Post-TBD	-0.0488*** (-3.42)	0.2876** (2.48)	-0.0502*** (-2.94)
Post-TBD*High IQ Score	0.0587*** (3.82)	-0.2634** (-2.64)	0.0625*** (3.39)
High IQ Score	-0.0142 (-1.38)	0.1519*** (3.63)	-0.0023 (-0.40)
Control Variables	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes
Observations	3,614	3,033	2,943
R-squared	0.089	0.188	0.103

Table 7: Robustness Tests: Concurrent regulation (TPD)

Table 7 provides regression estimates of equation (3). Panel A (B) reports the results using investor protection (institutional quality score) as a proxy for shareholders' rights. Cumulative abnormal returns (CAR) are estimated for a five-day window (-2, +2). Abnormal returns are estimated from the market model in equation (1), using an estimation window over (-250, -25). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD* (*Post-TPD*) is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive (Transparency Directive) in countries belonging to our treatment sample, and zero otherwise. *High Investor Protection* (*High IQ Score*) is a dummy variable that equals one if a country's investor protection (institutional quality score) is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics clustered at country-level are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Panel A – Investor Protection</i>			
<i>Dependent Variable:</i>	CAR Acquirer	CAR Target	CAR Combined
<i>Event window:</i>	(-2,+2)		
<i>Model:</i>	(1)	(2)	(3)
Treat	0.0567** (2.59)	-0.0924 (-0.58)	0.0481** (2.19)
Post-TBD	-0.0449*** (-3.64)	0.1683 (1.34)	-0.0474** (-2.09)
Post-TBD*High Inv Prot	0.0533*** (2.79)	-0.2254* (-1.79)	0.0572* (1.94)
Post-TPD*High Inv Prot	-0.0081 (-0.60)	0.0612 (1.47)	-0.0136 (-0.74)
High Investor Protection	0.0695 (0.56)	-0.1034 (-0.30)	-0.0328 (-0.72)
Control Variables	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes
Observations	3,614	3,033	2,943
R-squared	0.088	0.186	0.102
<i>Panel B – Institutional Quality</i>			
<i>Dependent Variable:</i>	CAR Acquirer	CAR Target	CAR Combined
<i>Event window:</i>	(-2,+2)		
<i>Model:</i>	(1)	(2)	(3)
Treat	0.3763*** (13.22)	0.0279 (0.36)	-0.0072 (-0.26)
Post-TBD	-0.0498*** (-3.73)	0.1960 (1.39)	-0.0485* (-2.02)
Post-TBD*High IQ Score	0.0579*** (2.94)	-0.2498* (-1.78)	0.0582* (1.90)
Post-TPD*High IQ Score	-0.0081 (-0.60)	0.0605 (1.45)	-0.0136 (-0.74)
High IQ Score	-0.0150 (-1.53)	0.1369*** (3.37)	-0.0029 (-0.40)
Control Variables	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes
Observations	3,614	3,033	2,943
R-squared	0.088	0.187	0.102

Table 8: Likelihood of being acquired post TBD

Table 8 provides the marginal effects for the probit model set in equation (4). The dependent variable is *Target* that equals one for EU listed firms acquired by EU bidders, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *Low Investor Protection (IQ Score)* is a dummy variable that equals one if a country's investor protection (institutional quality) is below the median, and zero otherwise. *Size* the logarithm of the market value of equity. *Market-to-Book* is the market value of equity divided by the book value of equity. *Leverage* is the ratio of long-term debt to total assets. *ROA* is net income before extraordinary items divided by total assets. Firms are matched by year, industry, and by a set of covariates (*Size*, *Market-Book*, *Leverage*, *ROA*) using the PSM technique (using the nearest neighbor with replacement 1:10) in models (1)-(3). In models (4)-(6), firms are matched by year, industry, and by the closest *Size*. All variables are defined in Appendix A. Robust z-statistics are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, matched respectively.

<i>Dependent Variable:</i>		Target ($P_{\text{target}=1}$)				
<i>Type of Matching:</i>	<i>Propensity Score</i>			<i>Matching by Size</i>		
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Post-TBD	0.1728*** (5.62)	0.1406*** (5.06)	0.1570*** (5.27)	0.1659*** (6.00)	0.1516*** (5.62)	0.1490*** (5.65)
Post-TBD*Low Inv Prot		0.0570* (1.89)			0.0678** (2.31)	
Low Investor Protection		-0.2514*** (-6.88)			-0.1974*** (-5.73)	
Post-TBD*Low IQ Score			0.0656* (1.87)			0.0846** (2.38)
Low IQ Score			-0.2647*** (-7.16)			-0.2506*** (-7.68)
Size	0.0014 (0.74)	0.0007 (0.44)	0.0014 (0.77)	0.0046* (1.94)	0.0045* (1.93)	0.0044** (1.97)
Market-to Book	0.0016 (1.10)	0.0015 (1.27)	0.0017 (1.19)	-0.0016 (-1.40)	-0.0014 (-1.20)	-0.0013 (-1.23)
Leverage	0.0326 (1.25)	0.0250 (1.14)	0.0289 (1.14)	-0.0126 (-0.53)	-0.0150 (-0.64)	-0.0152 (-0.67)
ROA	-0.0831*** (-3.57)	-0.0622*** (-3.20)	-0.0796*** (-3.54)	-0.0526*** (-2.94)	-0.0518*** (-2.96)	-0.0507*** (-2.99)
GDP per capita	-0.6659*** (-12.25)	-0.5760*** (-12.44)	-0.6742*** (-12.44)	-0.6371*** (-12.94)	-0.6505*** (-13.26)	-0.6382*** (-13.11)
GDP growth	0.0065** (2.04)	0.0069** (2.56)	0.0075** (2.39)	0.0062** (2.03)	0.0074** (2.43)	0.0074** (2.47)
Quarter/Industry/Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,309	4,309	4,309	4,321	4,321	4,321
LR chi ² (<i>p</i> value)		(0.150)				
Pseudo R ²	0.243	0.272	0.246	0.211	0.213	0.215
Actual Prob.	0.101	0.101	0.101	0.0963	0.0963	0.0963

Table 9: The effect of takeover anticipation on stock value post TBD

Panel A shows the differences in means (medians) of *buy-and-hold abnormal returns* (BHARs) between Most and Less Predicted Targets groups. BHARs are measured as market-adjusted daily returns of stocks over three months, six months, and one-year post-TBD transposition dates in each country. Differences in means are tested using *t*-statistic test (medians are tested using Wilcoxon-Mann-Whitney test). The Most (Less) Predicted Targets group accounts for 558 (452) observations. Panel B reports regression estimates of equation (5) using different specifications. The dependent variable is BHARs measured over three months, six months, and one-year post-TBD. *Most Predicted Targets* is one if a firm belongs to the group of firms with a higher probability of being acquired and zero otherwise. *Size* is the logarithm of the market value of equity. *Market-to-Book* is the market value of equity divided by the book value of equity. *Volatility* is the standard deviation of daily market-adjusted residuals measured over the window (-250, -25) relative to the TBD transposition dates. *Beta* is estimated from a market model using daily returns over the window (-250, -25) relative to the TBD enactment dates. All variables are defined in Appendix A. Models (1), (3) and (4) include quarter, country, industry fixed effects and robust (White heteroskedasticity-adjusted) *t*-statistics are shown in parentheses. In models (2), (4) and (6), the coefficients' standard errors are estimated via bootstrapping with 5000 repetitions. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, matched respectively.

<i>Panel A - Univariate Comparisons between Most and Less Predicted Targets groups</i>							
	Differences in means (Most-Less Predicted Targets)		Differences in means (<i>p</i> value)		Differences in medians (Most-Less Predicted Targets)		Differences in medians (<i>p</i> value)
3-mths BHAR	0.018 *		0.076		0.001 *		0.099
6-mths BHAR	0.060 ***		0.000		0.062 ***		0.000
1-year BHAR	0.071 ***		0.006		0.073 ***		0.005
<i>Panel B – The impact of TBD transposition on stock prices of firms with a higher likelihood of being acquired</i>							
<i>Dependent Variable:</i>	3-mths BHAR	3-mths BHAR	6-mths BHAR	6-mths BHAR	1-year BHAR	1-year BHAR	
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)	
Most Predicted Targets	0.0192* (1.68)	0.0225** (2.04)	0.0543*** (2.85)	0.0543*** (3.17)	0.0459 (1.52)	0.0459* (1.67)	
Size	0.0084** (2.46)	0.0094*** (3.10)	0.0159*** (3.06)	0.0181*** (4.04)	0.0144 (1.56)	0.0246*** (3.09)	
Market-to-Book	0.0007 (0.27)	-0.0024 (-0.99)	0.0001 (0.02)	-0.0052 (-1.48)	0.0097 (1.60)	0.0003 (0.06)	
Volatility	-1.1000** (-2.33)	-1.0120** (-2.15)	0.1054 (0.13)	0.0578 (0.07)	1.1439 (1.09)	0.9679 (0.95)	
Beta	-0.0114 (-0.49)	-0.0067 (-0.30)	-0.0165 (-0.43)	-0.0151 (-0.43)	0.0353 (0.59)	0.0590 (1.05)	
GDP per capita	-0.0339 (-1.49)	-0.0823*** (-3.49)	-0.0731** (-2.13)	-0.1442*** (-4.44)	0.0721 (1.26)	-0.0438 (-0.78)	
GDP growth	0.0175** (2.25)	-0.0051 (-1.58)	0.0388** (2.50)	0.0017 (0.34)	0.0152 (0.69)	0.0036 (0.42)	
Constant	0.3899 (1.57)	0.7762*** (3.11)	0.5896 (1.55)	1.2609*** (3.65)	-0.8277 (-1.31)	0.0308 (0.05)	
Quarter/Industry/ Country FE	Yes	No	Yes	No	Yes	No	
Bootstrapped standard errors	No	Yes	No	Yes	No	Yes	
Observations	850	851	850	851	850	851	
R-squared	0.239	0.078	0.192	0.071	0.185	0.021	

Internet Appendix

The Wealth Effects of Takeover Bids Regulation in the European Union

1. Does TBD Enhance Corporate Governance Portability?

Table I: Corporate governance portability in M&As post TBD

Table I provides regression estimates of Equation (3) using as dependent variable cumulative abnormal returns (CAR) estimated for a three-day window (-1, +1), and an eleven-day window (-5,+5). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *High Difference Investor Protection* is a dummy variable that equals one if the difference in investor protection measure between acquirer and target countries is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A in the manuscript. White heteroskedasticity-adjusted *t*-statistics are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Dependent Variable:</i>	CAR Acquirer		CAR Target		CAR Combined	
<i>Event window:</i>	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Treat	0.4088*** (16.52)	0.4236*** (13.49)	0.0776 (0.83)	0.1559 (1.37)	-0.0439 (-1.45)	-0.0749** (-2.49)
Post-TBD	-0.0038 (-0.37)	0.0095 (0.93)	0.0103 (0.39)	-0.0066 (-0.19)	-0.0139 (-1.45)	0.0004 (0.04)
Post-TBD*High Diff Inv Prot	0.0250* (1.91)	0.0170 (0.70)	-0.0926*** (-2.80)	-0.0683 (-1.61)	0.0545*** (3.38)	0.0518* (1.90)
High Diff Investor Prot	-0.0207*** (-3.21)	-0.0094 (-1.18)	0.0653** (2.50)	0.0454 (1.61)	-0.0177*** (-3.35)	-0.0105 (-1.52)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,033	3,033	2,943	2,943
R-squared	0.084	0.092	0.185	0.194	0.106	0.108

2. Robustness Tests

Table II: Robustness Tests: Identification strategy.

Table II provides regression estimates of equation (3). Panel A (B) reports the results using investor protection (institutional quality score) as a proxy for shareholders' rights. Cumulative abnormal returns (CAR) are estimated for a three-day window (-1, +1), and an eleven-day window (-5,+5). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Pre-TBD* is an indicator variable equal to one in quarters *t-12* to *t-1* relative to the adoption of the Takeover Bid Directive in countries belonging to our treatment sample, and zero otherwise. *Post-TBD* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive in countries belonging to our treatment sample, and zero otherwise. *High Investor Protection (High IQ Score)* is a dummy variable that equals one if a country's investor protection (institutional quality score) is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Panel A – Investor Protection</i>						
<i>Dependent Variable:</i>	CAR Acquirer		CAR Target		CAR Combined	
<i>Event window:</i>	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Treat	0.0225 (0.85)	0.0858*** (3.25)	-0.0578 (-0.38)	-0.1383 (-0.84)	0.0087 (0.40)	0.0646** (2.33)
Pre-TBD	0.0205 (1.21)	0.0066 (0.35)	0.0164 (0.12)	0.0777 (0.57)	0.0126 (0.55)	0.0092 (0.26)
Pre-TBD*High Inv Prot	-0.0100 (-0.56)	0.0287 (1.23)	0.0213 (0.15)	-0.0706 (-0.52)	0.0078 (0.29)	0.0234 (0.59)
Post-TBD	-0.0359 (-1.57)	-0.0248** (-2.10)	0.1761* (1.75)	0.2208** (2.15)	-0.0453** (-2.31)	-0.0292 (-1.30)
Post-TBD*High In Prot	0.0436* (1.87)	0.0565*** (4.24)	-0.1691* (-1.90)	-0.2443*** (-2.81)	0.0525** (2.66)	0.0562** (2.38)
High Investor Protection	0.0471 (0.51)	0.2149 (1.62)	-0.2508 (-0.73)	-0.0165 (-0.05)	-0.0157 (-0.53)	-0.0411 (-0.83)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,033	3,033	2,943	2,943
R-squared	0.082	0.093	0.184	0.194	0.104	0.108
<i>Panel B – Institutional Quality</i>						
<i>Dependent Variable:</i>	CAR Acquirer		CAR Target		CAR Combined	
<i>Event window:</i>	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Treat	0.4226*** (16.21)	0.4316*** (13.43)	0.0639 (0.76)	0.1550 (1.24)	-0.0234 (-0.90)	-0.0588** (-2.60)
Pre-TBD	0.0117 (0.79)	-0.0138 (-0.54)	0.0954 (0.69)	0.1908 (1.46)	0.0084 (0.40)	-0.0037 (-0.11)
Pre-TBD*High IQ Score	-0.0015 (-0.10)	0.0483* (1.74)	-0.0538 (-0.39)	-0.1780 (-1.37)	0.0118 (0.47)	0.0357 (0.94)
Post-TBD	-0.0440** (-2.17)	-0.0433** (-2.35)	0.2483** (2.21)	0.3242** (2.61)	-0.0493** (-2.70)	-0.0415* (-1.97)
Post-TBD*High IQ Score	0.0513** (2.49)	0.0741*** (3.89)	-0.2371** (-2.38)	-0.3416*** (-3.17)	0.0563*** (3.05)	0.0678*** (3.05)
High IQ Score	-0.0114*** (-3.88)	-0.0264 (-1.26)	0.1120*** (3.12)	0.1604*** (3.72)	-0.0055 (-0.57)	-0.0167** (-2.08)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,033	3,033	2,943	2,943
R-squared	0.083	0.093	0.185	0.195	0.104	0.108

Table III: Transparency Directive (TPD) entry-into-force dates

Table III reports the enactment dates of Transparency Directive (TPD) for the treatment sample composed of EU public acquirers and EU public targets.

Country:	TPD entry-into-force dates
Austria	Apr-07
Belgium	Sep-08
Bulgaria	Jan-07
Croatia	Jul-13
Cyprus	Mar-08
Czech Republic	Aug-09
Denmark	Jun-07
Finland	Feb-07
France	Dec-07
Germany	Jan-07
Greece	Jul-07
Hungary	Dec-07
Iceland	Nov-07
Ireland	Jun-07
Italy	Nov-07
Lithuania	Mar-07
Luxembourg	Jan-08
Malta	Oct-07
Netherlands	Jan-09
Norway	Jan-08
Poland	Mar-09
Portugal	Nov-07
Romania	Jan-07
Slovakia	May-07
Slovenia	Aug-07
Spain	Dec-07
Sweden	Jul-07
United Kingdom	Jan-07

Table IV: Robustness Tests: Concurrent regulation (TPD)

Table IV reports regression estimates of equation (3). Panel A (B) reports the results using investor protection (institutional quality score) as a proxy for shareholders' rights. Cumulative abnormal returns (CAR) are estimated for a three-day window (-1, +1), and an eleven-day window (-5,+5). *Treat* is a dummy variable equal to one for firms included in our treatment group, i.e., EU listed firms, and zero otherwise. *Post-TBD (Post-TPD)* is an indicator variable equal to one starting the quarter after the adoption of the Takeover Bids Directive (Transparency Directive) in countries belonging to our treatment sample, and zero otherwise. *High Investor Protection (High IQ Score)* is a dummy variable that equals one if a country's investor protection (institutional quality score) is above the median, and zero otherwise. The coefficients' estimates of the control variables are not reported for brevity. All variables are defined in Appendix A. White heteroskedasticity-adjusted *t*-statistics are shown in parentheses. Regressions include quarter, country, industry fixed effects. ***, ** and * mean statistical significance at the 1 percent level, 5 percent level and 10 percent level, respectively.

<i>Panel A – Investor Protection</i>						
<i>Dependent Variable:</i>	CAR Acquirer		CAR Target		CAR Combined	
<i>Event window:</i>	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Treat	0.0343 (1.60)	0.0889*** (3.13)	-0.0339 (-0.22)	-0.1380 (-0.83)	0.0166 (0.78)	0.0711*** (2.81)
Post-TBD	-0.0462*** (-2.78)	-0.0290** (-2.10)	0.1655 (1.36)	0.1735 (1.27)	-0.0521** (-2.34)	-0.0350 (-1.44)
Post-TBD*High Inv Prot	0.0460** (2.09)	0.0327 (1.28)	-0.1979 (-1.63)	-0.2575* (-1.91)	0.0515* (1.77)	0.0562* (1.79)
Post-TPD*High Inv Prot	0.0032 (0.26)	0.0125 (0.63)	0.0242 (0.88)	0.0643 (1.48)	-0.0032 (-0.18)	-0.0129 (-0.70)
High Investor Protection	0.0481 (0.52)	0.2215 (1.64)	-0.2609 (-0.76)	-0.0234 (-0.07)	-0.0126 (-0.42)	-0.0283 (-0.59)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,033	3,033	2,943	2,943
R-squared	0.082	0.092	0.184	0.194	0.103	0.107
<i>Panel B – Institutional Quality</i>						
<i>Dependent Variable:</i>	CAR Acquirer		CAR Target		CAR Combined	
<i>Event window:</i>	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)	(-1,+1)	(-5,+5)
<i>Model:</i>	(1)	(2)	(3)	(4)	(5)	(6)
Treat	0.4235*** (16.30)	0.4332*** (13.69)	0.0670 (0.81)	0.1552 (1.24)	-0.0107 (-0.40)	-0.0376 (-1.63)
Post-TBD	-0.0505*** (-3.47)	-0.0377*** (-2.85)	0.1861 (1.40)	0.2025 (1.34)	-0.0548** (-2.52)	-0.0416* (-1.81)
Post-TBD*High IQ Score	0.0500** (2.45)	0.0410 (1.58)	-0.2160 (-1.63)	-0.2830* (-1.89)	0.0540* (1.88)	0.0624** (2.04)
Post-TPD*High IQ Score	0.0032 (0.26)	0.0125 (0.63)	0.0237 (0.86)	0.0635 (1.47)	-0.0033 (-0.18)	-0.0129 (-0.70)
High IQ Score	-0.0130*** (-3.22)	-0.0265 (-1.31)	0.1016*** (3.17)	0.1432*** (3.43)	-0.0072 (-0.73)	-0.0177** (-2.08)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Quarter/ Country/ Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,614	3,614	3,033	3,033	2,943	2,943
R-squared	0.082	0.092	0.185	0.195	0.103	0.107