

Does Mandatory Bid Rule Discourage Acquisitions above the Threshold?

Yongjoon Lee,^{*} Bushik Kim,[†] and Woochan Kim[‡]

This Draft: May 2024, *very preliminary*

Abstract

Our study, which leverages the staggered adoptions of the mandatory bid rule (MBR) globally, challenges the prevailing belief that this rule increases acquisition costs and hinders takeovers. Our findings suggest that this belief may be overstated. Firstly, we reconfirm the findings of Kim, Kim, and Lee (2023), using a more refined sample and alternative model specifications, showing that the MBR reduces the control premium – the critical determinant of the overall acquisition cost and an indicator of private benefits an acquirer will likely expropriate post-takeover. More importantly, our data does not support the idea that these results are merely due to self-selection. Our discrete choice model shows that the likelihood of post-acquisition ownership exceeding the threshold does not significantly decrease after implementing the MBR. Additionally, our analyses indicate that the mandatory bid rule does not reduce the number of transactions that exceed the threshold.

Keywords: corporate takeovers, equal opportunity rule, mandatory bid rule, cost of acquisition, control premium, private benefits of control, post-acquisition ownership, self-limitation mechanism, deal frequency

JEL Classification: G30, G32, G34, G38

^{*} Korea University Business School; e-mail: ylee130@korea.ac.kr

[†] Korea University Business School; e-mail: bskim61@gmail.com

[‡] Corresponding author; Korea University Business School; European Corporate Governance Institute (ECGI); e-mail: wckim@korea.ac.kr

1. Introduction

The mandatory bid rule (MBR) obliges the acquirer to make a tender offer to the remaining shareholders at an equitable price, given that the bidder acquires more than the stipulated threshold in the law. First introduced in the United Kingdom in 1972, the purpose of the rule is clearly stated in the opening line of the General Principle of the U.K. Takeover Code: All holders of the securities of an offeree company of the same class must be afforded equivalent treatment (General Principle 1. (1)). The principle of *equal treatment* is carried out by affording equal opportunity to controlling shareholders and minority shareholders during control transfers (known as the *equal opportunity* rule). Typically, minority shareholders are given a choice to tender their shares at the same price offered to the controlling shareholder. Since the bidder is required to make a tender offer to all remaining shareholders, this effectively grants minority shareholders the right to exit if they disagree with the transfer of control.

The U.K. mandatory bid rule is considered the global standard for regulating takeovers, adopted by twenty-nine of the thirty-eight OECD member countries. Additionally, several non-OECD countries have also implemented this rule. While most adopters are located in Europe, there are also countries in Asia, Latin America, and Africa that have adopted the rule. Notable exceptions to this global standard include South Korea and the U.S.

While the rule promotes equal treatment between controlling shareholders and minority shareholders, it has also faced criticism for making acquisitions overly costly and thus hindering efficient control transfers (Easterbrook and Fischel, 1981; Bebchuk, 1994; Bergström, Högfeltd, Macey, and Samuelsson, 1997). Under the mandatory bid rule, acquisition costs may escalate for two reasons: first, acquirers must offer minority shareholders the *same* control premium as that given to the controlling shareholder; second, this offer must be extended to *all* minority

shareholders.

However, these two critical features of the mandatory bid rule may not necessarily lead to higher acquisition costs. First, acquirers may not continue to offer the same level of control premium as they did before the implementation of the MBR. If there is an opportunity to reduce the offering price – perhaps due to increased bargaining power – acquirers are more likely to take advantage of it, since the offer now needs to be extended to all shareholders, including minorities. Second, a lower offering price may make the bid less attractive to minority shareholders, making many choose not to tender their shares. As a result, the overall acquisition costs may not necessarily increase; in fact, they could potentially decrease.

This study empirically investigates these possibilities by examining the staggered adoptions of the mandatory bid rule across 41 countries. Our findings provide evidence supporting our conjecture. Firstly, we reconfirm the findings of Kim, Kim, and Lee (2023), using a more refined sample and alternative model specifications, showing that the MBR reduces the control premium - the critical determinant of the overall acquisition cost and the extent of private benefits an acquirer is likely to derive post-acquisition. Our analyses, based on triple differencing models, reveal that the mandatory bid rule leads to a 45-percentage points reduction in control premium and a 10-percentage points reduction in private benefits of control.

However, this initial set of findings can be an artifact of self-selection. Acquirers offering high control premiums might strategically purchase shares just below the rule-triggering threshold to circumvent the obligation for a mandatory bid. Alternatively, they could abandon acquisitions altogether, including those below the threshold. If acquirers react in these ways, it could lead to a decreased average control premium for transactions that occur above the threshold. Yet, such a decrease should not be interpreted as evidence that the mandatory bid rule reduces acquisition

costs; instead, it indicates the contrary.

Thus, in our next set of tests, we investigate how extensively acquirers exhibit such behaviors. Our manipulation tests reveal that post-acquisition ownership tends to cluster just below the rule-triggering threshold, suggesting that acquirers may be engaging in self-selection. However, this pattern does not extend to ownership levels distant from the threshold. Our findings from a discrete choice model do not support the assertion that the likelihood of post-acquisition ownership exceeding the threshold decreases. Furthermore, our analyses demonstrate that the mandatory bid rule does not reduce the number of transactions above the threshold.

Our study contributes to the literature on corporate takeovers by providing the first empirical examination of the mandatory bid rule's impact on the acquirer's post-acquisition ownership levels. Prior research on this topic has been largely theoretical, and empirical studies on MBR have primarily focused on its influence on control premiums for block sellers (Rossi and Volpin, 2004; Wang and Lahr, 2017), on control premiums for block acquirers (Kim, Kim, and Lee, 2023), on shareholder returns around the time of rule adoption (Humphrey-Jenner, 2012; Wang and Lahr, 2017; Eswar, 2019), and on the extraction of private benefit of control (Kim, Kim, and Lee, 2023).

Our study also offers valuable insights for policymakers in countries contemplating the adoption of mandatory bid rules. Our findings suggest that these policymakers should not be overly concerned about the possibility that mandatory bid rules might raise acquisition costs and thus dampen the takeover market.

The rest of the paper proceeds as follows. Section 2 reviews the literature and develops the hypotheses. Section 3 details the process of sample construction and outlines our research design. Section 4 provides results. Section 5 concludes.

2. Literature Review and Hypotheses

2.1. Existing Literature

Most studies on the mandatory bid rule have primarily focused on explaining its mechanism theoretically. For example, Bebchuk (1994) compares the mandatory bid rule (also known as the equal opportunity rule) to the market rule of the United States, illustrating that while it is more effective in discouraging inefficient transfers, it is less effective in facilitating efficient ones. Burkart, Gromb, and Panunzi (2000) contend that the mandatory bid rule can decrease the acquirer's private benefits by requiring the offeror to purchase a larger fraction of shares. De la Bruslerie (2013) has shown that under the mandatory bid rule, it can be strategically beneficial for acquirers to make credible commitments to reduce the potential for private expropriation of minority shareholders. Without these commitments, minority shareholders might opt to tender their shares, fearing expropriation. As a result, acquirers could end up with a final stake larger than planned, potentially escalating their financial burden. Essentially, the MBR acts as a self-limitation mechanism that prevents acquirers from engaging in private expropriation after the acquisition.

Empirical research on the MBR is limited, and none has yet investigated its impact on the level of post-acquisition ownership. For instance, Rossi and Volpin (2004) and Wang and Lahr (2017) both examine the effect on the control premium received by block sellers, yet their findings are inconclusive. Rossi and Volpin (2004) report that the rule reduces the premium, while Wang and Lahr (2017) find that it increases the premium. Regarding shareholder wealth, Humphery-Jenner (2012) demonstrates a decrease in the acquiring firm's stock price, using the E.U. Takeover Directive of 2012 as a quasi-natural experiment. In contrast, Wang and Lahr (2017) show gains in the wealth of target firm shareholders and find no evidence of a decrease in the wealth of acquiring firm shareholders. Additionally, Eswar (2019) also supports the positive impact of the mandatory

bid rule on target firms' shareholders, suggesting that improved governance practices by the acquirer further augment this positive effect.

Most recently, Kim, Kim, and Lee (2023) examined the effect of the mandatory bid rule on the control premium paid by block acquirers and the extent of private benefits they are likely to expropriate post-acquisition. By exploiting staggered adoptions of the rule globally, they demonstrated that both the control premium and the potential for private benefit expropriation are reduced under the mandatory bid rule.

2.2. Hypotheses Development

Mandatory bid rules may not increase acquisition costs for deals exceeding the rule-triggering threshold. This prediction stems from the idea that acquirers might not maintain the same control premium post-rule implementation as before. If acquirers identify an opportunity to lower the offer price—perhaps due to increased bargaining power—we hypothesize they would be more likely to seize this opportunity under the mandatory bid rule. This is because the offer now must be extended not only to the controlling shareholder but also to other shareholders, increasing the amount of total acquisition cost for every dollar increase in the offer price. Additionally, a lower offer price may deter many minority shareholders from tendering their shares, thus preventing the acquirer from needing to purchase a more significant proportion of shares despite the obligation to extend the offer to all minority shareholders. As a result, the overall acquisition costs may remain stable or even decrease. Our first hypothesis, which focuses on the control premium, can be stated as follows.

Hypothesis 1: *The mandatory bid rule reduces the control premium paid by the acquirer for deals that exceed the rule-triggering threshold.*

The control premium paid by acquirers is not only a key component in determining the total cost of an acquisition but also indicates the extent of private benefits that the new acquirer is likely to extract post-acquisition (Barclay and Holderness, 1989). Under the mandatory bid rule, it can be strategically beneficial for acquirers to make credible commitments to minimize the potential for private expropriation of minority shareholders. Without such commitments, minority shareholders might choose to tender their shares due to fears of expropriation. Consequently, acquirers may end up with a final stake larger than originally intended, which could increase their financial burden (De la Bruslerie, 2013).

However, the control premium per share alone does not fully capture this aspect, as it does not consider the proportion of shares purchased at this premium. In this study, following Dyck and Zingales (2004), we employ a normalized measure, which is calculated as the product of the control premium paid by the acquirer and the proportion of shares acquired in a privately negotiated acquisition. Our second hypothesis focuses on the impact of the mandatory bid rule on this measure.

***Hypothesis 2:** The mandatory bid rule reduces the private benefits the acquirer will likely extract post-acquisition that exceed the rule-triggering threshold.*

However, analyzing the average control premium of individual deals above the threshold can be misleading for two reasons. First, acquirers offering high control premiums might opt to purchase shares just below the rule-triggering threshold to circumvent the obligation for a mandatory bid. Second, they may abandon acquisitions entirely, including those below the threshold. If acquirers react to mandatory bid rules in these ways, the average control premium for deals that remain above the threshold will decrease. However, such a reduction does not indicate that the mandatory bid rule is lowering acquisition costs; instead, it suggests the opposite. We test the following four

hypotheses to explore how extensively acquirers exhibit such behaviors.

***Hypothesis 3a:** The mandatory bid rule leads to the distribution of post-acquisition ownership bunching just below the rule-triggering threshold.*

***Hypothesis 3b:** The mandatory bid rule lowers post-acquisition ownership levels.*

***Hypothesis 3c:** The mandatory bid rule lowers the likelihood of deals occurring above the rule-triggering threshold.*

***Hypothesis 3d:** The mandatory bid rule results in fewer deals occurring above the rule-triggering threshold.*

3. Data and Research Design

3.1. Sample Construction

Our sample consists of privately negotiated block deals sourced from SDC Platinum. Out of the 47 countries that adopted the mandatory bid rule from 1980-2022, we exclude six countries for various reasons. First, we exclude countries where the threshold exceeds 50%, such as Chile and Japan, each with a threshold of 66.67%. In these countries, deals that trigger the mandatory bid obligation are less likely to involve control transfers, which are the primary focus of our study. Additionally, we exclude China due to its extensive allowances for exceptions to the rule, as Cai (2000) noted. We also remove Australia and New Zealand from our study. Australia allows acquirers to increase their shareholding beyond the threshold through creeping acquisitions by up to 3% every six months, while New Zealand permits acquirers to make partial offers below 50%. Lastly, we leave out Canada, where we lack information on the state of incorporation of target firms. In the case of Canada, individual provinces adopted the mandatory bid rule before the

nationwide adoption in 2011. This exclusion process leaves us with deals from 41 countries for analysis.

Next, to identify privately negotiated control transfer deals, we exclude tender offers and open market purchases and remove any transactions where the deal value falls below \$1 million. Following the approach of Dyck and Zingales (2004), we also exclude transactions where the acquisition size is less than 10% of the target company's shares. Additionally, we excluded firms in the financial and utilities sectors, as control transfers in these industries may be subject to special regulations.

However, this sample, also used in Kim, Kim, and Lee (2023), includes a considerable proportion of deals with negative control premiums, approximately 43 percent of all transactions. This study limits our analysis to transactions with positive control premiums, defined as cases where the offering price is higher than the stock price one day before the deal announcement. This is because potential acquisition cost increases are not a concern for transactions with negative control premiums. Lastly, we drop deals missing any of the following data: price per share, deal announcement date, post-acquisition ownership, the proportion of shares acquired, Datastream code of the target firm, firm-level data, or stock price data. Our final sample of deals spans from 1985 to 2022. We source firm-level data and stock prices from Worldscope and Datastream.

Appendix Table A provides a detailed overview of the rule-triggering threshold and the adoption dates for the mandatory bid rule across 41 countries. In cases where specific implementation dates are unknown, we have assumed a default date of January 1st. The data shows that rule-triggering thresholds range from 25% to 50%, with 30% being the most frequently observed threshold. The adoption dates extend from 1972, starting with the U.K., to 2012, when Turkey implemented its rule. A notable trend is that most adoptions occurred during the 2000s.

Furthermore, the table also highlights that several countries have adjusted their thresholds following the initial adoption.

Our primary source on country-specific rules is the OECD Corporate Governance Fact Book 2017. This information is supplemented by various other sources, including the Centre for Business Research's CBR Extended Shareholder Protection Index from the University of Cambridge (January 2016), the Common Legal Framework for Takeover Bids in Europe (December 2008), Thomson Reuters Practical Law, the Economist Intelligence Unit Country Surveys, and research by Dyck and Zingales (2004).

3.2. Variable Definitions

Our outcome variables include *Control Premium (i day after)*, *PBC (i day after)*, *Post-Acq. Ownership*, and *No. of Deals*. *Control Premium (i day after)* is computed using the share price offered and the share price that prevailed *i* days after the deal announcement. Since we are computing the control premium paid by the acquirer, we use a post-announcement share price that reflects the valuation effect of a new controlling shareholder.

PBC (i day after) represents the product of the control premium paid by the acquirer and the proportion of shares that the acquirer newly purchased through the privately negotiated transaction. This metric effectively captures the lower bound of the private benefits of control, expressed as a fraction of the total market capitalization. In a perfectly competitive market, where the seller can capture the full value of the security benefits produced by the buyer, this measure accurately estimates the private benefits of control that the buyer expects to gain (Dyck and Zingales, 2004). When this assumption does not hold, the measure may be downwardly biased. However, in this study, using this measure is innocuous as we are not focused on the absolute level of private

benefits of control but rather on their changes following the adoption of the MBR.

Post-Acq. Ownership refers to the proportion of shares the acquirer holds after completing the privately negotiated transaction. It is calculated by summing the shares the acquirer owned before the deal with the proportion of newly acquired shares through the transaction. *No. of Deals* counts the total number of transactions that occurred within a specific country-year.

Our key indicator variables include *Adopt*, *Post MBR*, and *Trigger*. *Adopt* equals one if the target firm's country of incorporation adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. *Post MBR* equals one if the mandatory bid rule is in effect in the target firm's country of incorporation at the time of the deal announcement and 0 otherwise. *Trigger* equals one if the deal triggers the mandatory bid obligation and 0 otherwise. Mandatory bid obligation is presumed to be triggered if (i) the pre-acquisition ownership is less than 50% and (ii) the post-acquisition ownership exceeds the threshold. We also use firm- and deal-specific covariates defined in Appendix Table B.

3.3. Summary Statistics

Table 1 presents the summary statistics of outcome variables and covariates (firm and deal characteristics) from two sets of samples used in the study. Panel A details the sample used to analyze the impact on control premium and private benefits of control ($N = 618$), while Panel B describes the sample used to investigate the effects on post-acquisition ownership ($N = 697$). The MBR adopter sample in each panel includes transactions from 1985 to 2022 in countries that adopted MBR during this period. In contrast, the MBR non-adopter sample comprises their nearest neighbor matches in countries that did not adopt MBR at any time during this period. For each transaction in the MBR adopter sample in Panel A, Mahalanobis matching is employed to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches

are conditioned to have occurred in the same year and involve target firms incorporated in countries with the same legal origin. For the samples in Panel A, matches are further conditioned to have the same rule-triggering indicator value (1 if triggered, 0 otherwise). Appendix B provides definitions for each variable listed in the table.

3.4. Research Design

When testing hypotheses on *Control Premium* (*i* day after) and *PBC* (*i* day after), we use a staggered triple differencing model as specified in Equation (1).

$$Y_{i,j,k,t} = \beta_0 + \beta_1 Post MBR_{k,t} + \beta_2 Trigger_{i,j,k,t} + \beta_3 (Post MBR_{k,t} \times Trigger_{i,j,k,t}) + \gamma' Controls + Year_t + Country_k + \varepsilon_{i,j,k,t} \quad (1)$$

$Y_{i,j,k,t}$ represents an outcome variable that can be *Control Premium* (*i* day after) or *PBC* (*i* day after). Here subscript *i* denotes the target firm, *j* the acquiring firm, *k* the country of incorporation of the target firm, and *t* the year the deal was announced. The sample includes transactions involving target firms whose countries of incorporation adopted a mandatory bid rule at any point in time from 1985 to 2022, encompassing 618 firms. $Post MBR_{k,t}$ captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country *k* at time *t*, and 0 otherwise. $Trigger_{i,j,k,t}$ is another binary indicator that equals one if the post-acquisition ownership of acquirer *j* in target firm *i* in country *k* at time *t* exceeds the rule-triggering threshold of country *k* at time *t*, and 0 otherwise. For years before a country adopts the rule, the value of $Trigger_{i,j,k,t}$ is set using the threshold the country will later implement. The coefficient β_3 captures how the difference in outcomes between transactions that exceed the threshold and those that do not varies following the adoption of the mandatory bid rule, compared to similar differences in other MBR-

adopting countries.

One issue with this approach is that the TWFE coefficient β_1 may be downward biased. This occurs because transactions in countries that have *last* adopted the rule are also used as control samples. If the effects on these transactions are dynamic, the estimated effects on transactions in countries that have *newly* adopted the rule could be biased downward (Baker, Larcker, and Wang, 2022). However, we do not directly correct this bias in this study using the alternative methods presented by Callaway and Sant'Anna (2021) and Sun and Abraham (2021), among others. The primary focus of our research is on β_3 , which is less likely to be affected as any bias in β_1 might be differenced away.

We are more concerned with the fact that $Trigger_{i,j,k,t}$ is not exogenous given to acquirers. To account for potential unobservable differences between transactions above and below the threshold, we further differentiate the triple differencing model outlined in Equation (1) by making further comparisons between MBR-adopting and MBR non-adopting countries, as specified in Equation (2).

$$\begin{aligned}
Y_{i,j,k,t} = & \beta_0 + \beta_1 Adopt_k + \beta_2 Post MBR_{k,t} \\
& + \beta_3 Trigger_{i,j,k,t} + \beta_4 (Adopt_k \times Post MBR_{k,t}) \\
& + \beta_5 (Adopt_k \times Trigger_{i,j,k,t}) + \beta_6 (Post MBR_{k,t} \times Trigger_{i,j,k,t}) \\
& + \beta_7 (Adopt_k \times Post MBR_{k,t} \times Trigger_{i,j,k,t}) + \gamma' Controls + Year_t \\
& + Country_k + \varepsilon_{i,j,k,t}
\end{aligned} \tag{2}$$

$Adopt_k$ equals one if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. By subtracting the differences observed in transactions that exceed the threshold from those that do not in MBR non-adopting countries

($Adopt_k = 0$), we can control for any unobservable differences that might exist between similar transactions in MBR-adopting countries ($Adopt_k = 1$).

This analysis uses the United States and South Korea as MBR non-adopting countries.^{4,5} The sample transactions from these countries are nearest-neighbor matches to transactions from countries that have adopted the MBR. As noted earlier, we employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. Transactions from MBR non-adopting countries are categorized as either Pre-MBR or Post-MBR, and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in MBR-adopting countries.

When testing hypotheses on *Post-Acq. Ownership* or *Pr (Post-Acq. Ownership > Threshold)*, we use staggered double or triple differencing models as specified in Equations (3) and (4).

$$Y_{i,j,k,t} = \beta_0 + \beta_1 Post\ MBR_{k,t} + \beta_2 Adopt_k + \beta_3 (Post\ MBR_{k,t} \times Adopt_k) + \gamma' Controls + Year_t + Country_k + \varepsilon_{i,j,k,t} \quad (3)$$

⁴ Currently, three states—Pennsylvania, South Dakota, and Maine—have a mandatory tender offering rule in the United States. During the second wave of state takeover laws, a cash-out provision requiring a tender offer was adopted, and several states later repealed this provision (Karpoff and Malatesta, 1989). However, even for firms in these states, it is unclear whether they are subject to the provision due to opt-out options, such as in the State of Pennsylvania (Pound, 1992). Therefore, we proceed with our analysis under the assumption that no states have adopted the mandatory bid rule. For robustness, our results remain consistent even after excluding firms from these three states.

⁵ South Korea adopted the mandatory bid rule in January 1997, but it was repealed in February of the following year to facilitate corporate restructuring during the Asian Financial Crisis. To the best of our knowledge, although the rule was in place in 1997, no takeovers were actually subject to it. Additionally, upon further verification, the three Korean deal announcements in our sample that occurred within this period were not subject to the rule either.

$$Y_{i,j,k,t} = \beta_0 + \beta_1 Post\ MBR_{k,t} + \gamma' Controls + Year_t + Country_k + \varepsilon_{i,j,k,t} \quad (4)$$

In Equation (3), $Y_{i,j,k,t}$ represents an outcome variable that can be *Post-Acq. Ownership* or $Pr(Post-Acq. Ownership > Threshold)$. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR depending on the timing of matched transactions in MBR-adopting countries. The coefficient β_3 captures how the size of post-acquisition ownership or the likelihood of it exceeding the threshold changes in MBR-adopting countries following their implementation, compared to the changes observed in MBR non-adopting countries.

In Equation (4), $Y_{i,j,k,t}$ represents $Pr(Post-Acq. Ownership > Threshold)$. In this analysis, we restricted the transactions to deals from countries that implemented an MBR at any time between 1985 and 2022. The coefficient β_1 captures how the likelihood of post-acquisition ownership exceeding the threshold changes in MBR-adopting countries following the adoption of the mandatory bid rule compared to similar changes in other MBR-adopting countries.

Lastly, when testing hypotheses on *No. of Deals*, we use a double differencing model as specified in Equation (5).

$$Y_{k,t} = \beta_0 + \beta_1 UK_k + \beta_2 Trigger_{k,t} + \beta_3 (UK_k \times Trigger_{k,t}) + \gamma' Controls + Year_t + \varepsilon_{k,t} \quad (5)$$

$Y_{k,t}$ represents an outcome variable that is *No. of Deals*. The coefficient β_3 captures the difference between the number of deals below and above the threshold in the U.K. compared to those in the U.S. For the U.S., a deal is classified as rule-triggering if post-acquisition ownership exceeds the same threshold as in the U.K. (30%).

In this study, we do not check for pre-treatment parallel trends. This is because we did not have sufficient data on privately negotiated deals prior to the adoption of MBR. Our data begins in 1985, which excludes pre-MBR transactions for countries like Hong Kong, Norway, Singapore, and the U.K., which adopted the MBR before 1985. Additionally, the SDC Platinum database has limited data coverage in the 1980s and the 1990s, further diminishing our pre-MBR sample size, even for countries that adopted the MBR later.

4. Results

4.1. MBR and Control Premium

We first examine the impact of the mandatory bid rule on control premiums for transactions that exceed the bid-triggering threshold. Figure 1 displays the average control premium paid by acquirers, derived from the difference between the offered share price and the share price two days after the announcement. The analysis is confined to transactions involving target companies whose countries of incorporation implemented a mandatory bid rule at any time between 1985 and 2022, encompassing 618 transactions. The Y-axis measures the average control premium paid by the acquirer, where 0.1 signifies a 10-percentage point premium. The figure compares the control premium before (Pre MBR) and after (Post MBR) the rule's adoption. Black bars represent control premiums for deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For the years before a country adopts the rule, a transaction is classified as an above-threshold deal if post-acquisition ownership exceeds the threshold the country subsequently implements.

The bar charts indicate that with the adoption of the mandatory bid rule, the control premium paid by acquirers substantially decreased from 60 percent to 23 percent for deals above the rule-triggering threshold. In contrast, the control premiums for deals below the threshold remained

essentially unchanged. These findings are confirmed in our regression analyses.

Table 2 presents estimates from triple differencing models that compare the control premium for deals above and below the threshold, both before and after the adoption of the rule, relative to other countries that adopted MBR (Equation (1)). The analysis is restricted to deals where the target firm's country of incorporation adopted a mandatory bid rule at any point of time from 1985 to 2022 (618 firms). Columns (1) to (3) use the control premium based on the share price one day after the announcement (Control Premium (1 day after)), whereas columns (4) to (6) use the control premium based on the share price two days after the announcement (Control Premium (2 days after)).

Post MBR captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. For years before a country adopts the rule, the value of *Trigger* is set using the threshold the country will later implement.

Regarding the inclusion of control variables, columns (1) and (4) include year and country-fixed effects but do not include firm and deal characteristics. Columns (2) and (5) include country-fixed effects and firm and deal characteristics but omit year-fixed effects. Columns (3) and (6) include all controls. Definitions of the variables are provided in Appendix B.

The results confirm **Hypothesis 1**, which states that the mandatory bid rule reduces the control premium paid by the acquirer for deals that exceed the rule-triggering threshold. The coefficient for *Post MBR* \times *Trigger* being -0.446 in Column (6) suggests that the mandatory bid rule reduces the control premium by 45 percentage points. This coefficient is statistically significant at the 1% level. Interestingly, the coefficient on *Post MBR* is positive and statistically

significant, indicating that the average control premium paid by acquirers for deals below the threshold increased after the rule adoption. This increase could be due to acquirers with high control premiums choosing to acquire shares below the rule-triggering threshold. We will address this issue of self-selection more directly in subsequent analyses.

Table 3 displays estimates from models that further differentiate the triple differencing, comparing MBR-adopting and MBR non-adopting countries (Equation (2)). $Adopt_k$ equals one if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in MBR-adopting countries.

Again, we find results consistent with **Hypothesis 1**. The coefficient for $Adopt \times Post\ MBR \times Trigger$ being -0.713 in Column (6) suggests that the mandatory bid rule reduces the control premium by 71 percentage points. This coefficient is statistically significant at the 5% level. The reduction in the control premium is surprisingly high, but this appears to be an artifact of the differencing model, where the effects on MBR-adopting countries are estimated relative to those on MBR non-adopting countries. Further investigation shows that control premiums in MBR non-adopting countries have increased for deals above the threshold following the adoption of the mandatory bid rule. This pattern makes the effect in MBR-adopting countries appear even more pronounced.

4.2. MBR and Private Benefits of Control

Next, we examine the impact of the mandatory bid rule on the extent of private benefits that the new acquirer is likely to extract post-acquisition that exceed the bid-triggering threshold. Figure 2

illustrates the lower bound of private benefits of control, expressed as a fraction of total market capitalization. It is the product of the control premium paid by the acquirer and the proportion of shares acquired in a privately negotiated acquisition. The control premium is determined by comparing the offered share price to the share price two days after the announcement. The analysis is confined to transactions involving target companies whose countries of incorporation implemented a mandatory bid rule at any time between 1985 and 2022, encompassing 618 transactions.

The bar charts indicate that with the adoption of the mandatory bid rule, the extent of private benefits that the acquirer is likely to extract post-acquisition decreased substantially from 15 percent to 7 percent of total market capitalization for deals above the rule-triggering threshold. Conversely, it remained essentially unchanged for deals below the threshold. Our regression analyses corroborate these findings.

Table 4 presents estimates from triple-differencing models that compare lower bounds of private benefits of control for deals above and below the threshold, both before and after the adoption of the rule, relative to other countries that adopted MBR (Equation (1)). The analysis is restricted to deals where the target firm's country of incorporation adopted a mandatory bid rule at any point of time from 1985 to 2022 (618 firms). For calculating private benefits of control, columns (1) to (3) apply the control premium based on the share price one-day post-announcement (PBC (1 day after)), while columns (4) to (6) use the control premium based on the share price two days post-announcement (PBC (2 days after)).

The results confirm **Hypothesis 2**, which states that the mandatory bid rule reduces the private benefits the acquirer will likely extract post-acquisition that exceed the rule-triggering threshold. The coefficient for *Post MBR × Trigger* being -0.105 in Column (6) suggests that

the mandatory bid rule reduces the private benefits of control by 10.5 percentage points. This coefficient is statistically significant at the 5% level.

Table 5 displays estimates from models that further differentiate the triple differencing model, comparing MBR-adopting and MBR non-adopting countries (Equation (2)). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in MBR-adopting countries.

We find results consistent with **Hypothesis 2**. The coefficient for *Adopt* × *Post MBR* × *Trigger* being -0.154 in Column (6) suggests that the mandatory bid rule reduces the private benefits of control by 15 percentage points. This coefficient is statistically significant at the 5% level.

4.3. MBR and Post-Acquisition Ownership Manipulation

The findings so far, however, can be an artifact of self-selection. Acquirers offering high control premiums might choose to purchase shares just below the rule-triggering threshold to circumvent the obligation for a mandatory bid. In this sub-section, we examine the existence of such behavior.

Figure 3 shows the histograms of post-acquisition ownership for transactions in countries that adopted mandatory bid rules (Figure 3-1) and those that did not (Figure 3-2). Each figure compares the post-acquisition ownership histograms before (Pre MBR) and after (Post MBR) the rule's adoption. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in countries that have adopted the MBR. The Y-axis represents the proportion of deals, while the X-axis shows post-acquisition ownership levels relative to the mandatory bid threshold. A value of 0 indicates that post-

acquisition ownership equals the threshold for mandatory bid obligation. Each histogram bin represents a 5%p interval.

The histograms for MBR-adopting countries (Figure 3-1) show that the distribution of post-acquisition ownership does not bunch immediately below the threshold before the rule's adoption but does so afterward, indicating the presence of a sorting behavior. Before rule adoption, the fraction of deals immediately below the threshold (0-5%p below the threshold) is slightly lower than that of deals immediately above it (0-5%p above the threshold). In contrast, after the rule's adoption, the fraction of deals immediately below the threshold (0-5%p below the threshold) is substantially higher than the fraction immediately above it (0-5%p above the threshold). It is also higher than the fraction of deals 5-10%p below the threshold.

As a placebo test, we examine the post-acquisition ownership histograms for MBR non-adopting countries (Figure 3-2). As expected, these histograms do not exhibit clear signs of bunching. In both histograms—one before the rule's adoption in matching countries and another after that—the distribution peaks below the threshold, and the fraction of deals gradually decreases as post-acquisition ownership increases.

Figure 4 depicts the outcomes of manipulation tests for transactions in countries that have adopted the mandatory bid rule. Figure 4-1 shows the outcome before the adoption, while Figure 4-2 presents the outcome afterward. The results confirm **Hypothesis 3a**, which states that the mandatory bid rule leads to the distribution of post-acquisition ownership bunching just below the rule-triggering threshold. The test statistic is 1.687 with a p -value of 0.091 for deals before the rule's adoption and -4.435 with a p -value of < 0.001 for those after.

As a placebo test, we also conduct manipulation tests for matched transactions in countries that have not adopted the mandatory bid rule. Figure 5-1 shows the outcome before the adoption

(pre-MBR), while Figure 5-2 presents the outcome afterward (post-MBR). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of corresponding matched transactions in countries that have adopted the MBR. As expected, there are no signs of manipulation. The test statistic is -0.053 with a p -value of 0.958 for deals before the rule's adoption and 1.145 with a p -value of 0.252 for those after

4.4. MBR and Post-Acquisition Ownership Size

In this subsection, we examine whether the patterns observed around the threshold extend to post-acquisition ownership levels that are distant from the threshold. Specifically, we investigate whether the discontinuity observed around the threshold is substantial enough to significantly reduce the average size of post-acquisition ownership following the adoption of the mandatory bid rule.

Table 6 presents results from triple differencing models that measure how the size of post-acquisition ownership changes in MBR-adopting countries following their implementation compared to the changes observed in MBR non-adopting countries (Equation (3)). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR depending on the timing of matched transactions in MBR-adopting countries. Column (1) omits firm and deal characteristics, Column (2) leaves out fixed effects, Column (3) does not include country-fixed effects, and Column (4) incorporates all controls. The Adopt coefficients are absorbed into country-fixed effects.

The results provide only weak support for **Hypothesis 3b**, which states that the mandatory bid rule results in lower post-acquisition ownership levels. The coefficient for *Post MBR* ×

Adopt being -0.033, as shown in Column (6), suggests that the mandatory bid rule reduces post-acquisition ownership size only 3.3 percentage points.

Another way to examine the existence of self-selection is to see whether the likelihood of post-acquisition ownership exceeding the threshold falls with the rule adoption. Table 7 presents results from linear probability models that estimate the likelihood of a transaction's post-acquisition ownership exceeding the mandatory bid rule threshold. Columns (1) to (4) report results from triple differencing models that measure the likelihood of post-acquisition ownership exceeding the threshold changes in MBR-adopting countries following their implementation, compared to the changes observed in MBR non-adopting countries (Equation (3)). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR depending on the timing of matched transactions in MBR-adopting countries.

Columns (5) to (8) provide findings from double differencing models that analyze how the likelihood of post-acquisition ownership exceeding the threshold varies following the adoption of mandatory bid rules compared to changes observed in other MBR-adopting countries (Equation (4)). The analyses in columns (5) to (8) are restricted to deals from countries that implemented an MBR at any time between 1985 and 2022, encompassing 697 transactions. In each analysis, columns (1) and (5) exclude fixed effects; columns (2) and (6) do not incorporate country fixed effects; columns (3) and (7) exclude year fixed effects; and columns (4) and (8) are comprehensive, including all variables.

Both results do not support **Hypothesis 3c**, which states that the mandatory bid rule lowers the likelihood of deals occurring above the rule-triggering threshold. The coefficients for *Post MBR* \times *Adopt* in Columns (1) - (4) are negative, but they become statistically insignificant upon adding country fixed effects. Similarly, the coefficients for *Post MBR* in Columns (5) – (8)

are also negative but turn statistically insignificant once we introduce country and year-fixed effects.

Appendix C analyzes the proportion of shares acquirers newly purchase from privately negotiated deals. This metric is distinct from post-acquisition ownership as it does not account for prior ownership stakes in the target company. A decline in this measure could suggest the presence of self-selection among acquirers; however, our findings do not support this. Figure C1 illustrates that the proportion of shares acquired in deals below and above the rule-triggering threshold remains largely unchanged after implementing the mandatory bid rule. This is further corroborated by Table C1, where triple differencing regression analyses are presented. The coefficient on $Post \times Trigger$ is negative but modest, at 4.2 percentage points.

4.5. MBR and Deal Frequency

Lastly, we test if the mandatory bid rule results in fewer deals occurring above the rule-triggering threshold. We do this using two countries with a sufficiently large number of deals: the U.K. and the U.S. Figure 6 presents the average deal frequency (number of deals per year) in the U.S. (left-side bars) and the U.K. (right-side bars). Black bars represent the number of deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For the U.S., a deal is classified as rule-triggering if post-acquisition ownership exceeds the same threshold as in the U.K. (30%).

The bar charts in Figure 6 show that the number of privately negotiated deals per year is consistently higher in the U.S. than in the U.K. across all ranges of post-acquisition ownership sizes. However, the reduction in deal frequency for transactions exceeding the threshold is more pronounced in the U.S., where it drops from 5.9 deals per year to 2.5 deals per year. In contrast, in the U.K., the frequency decreases from 2.6 to 1.4 deals per year. In percentage terms, deal frequency drops by 57.6 percent in the U.S. and 46.2 percent in the U.K. This observation suggests

that the mandatory bid rule may not necessarily result in fewer deals occurring above the rule-triggering threshold. We confirm this finding in our regression analyses.

Table 8 presents the results from difference-in-differences models estimating the difference between the number of deals below and above the threshold in the U.K. compared to those in the U.S. (Equation (5)). Again, for the U.S., a deal is classified as above the threshold if post-acquisition ownership exceeds 30%, which is the same threshold applied in the U.K. Column (1) omits year-fixed effects, while Column (2) includes them.

The results do not support **Hypothesis 3d**, which states that the mandatory bid rule lowers the frequency of deals occurring above the rule-triggering threshold. The coefficients for $UK \times Trigger$ in Columns (1) - (2) are both positive and statistically significant either at the 1% level or at the 10% level. These results suggest that the drop in deal frequency for transactions above the threshold is less pronounced in the U.K.

5. Conclusion

Academics and practitioners have consistently expressed concerns about the potential increase in acquisition costs and the subsequent stagnation of the takeover market that the mandatory bid rule might cause. This critique is based on two assumptions: first, that acquirers should continue to offer the incumbent block holder a high per-share price even after the rule's introduction, and second, that the remaining shareholders should tender their shares even if the acquirer offers a less attractive per-share price during the post-adoption period.

Our findings challenge the long-held criticism against the mandatory bid rule by showing that the underlying logic may be less convincing than initially thought. Firstly, we reconfirm the findings of Kim, Kim, and Lee (2023), using a more refined sample and different model specifications, showing that the MBR reduces the control premium - the primary factor influencing

both total acquisition costs and the potential private benefits an acquirer may obtain after the acquisition.

More importantly, our data refute the idea that the MBR reduces the likelihood or number of transactions that surpass the bid-triggering threshold. Results from a discrete choice model do not uphold the notion that post-acquisition ownership levels exceeding this threshold are less likely. Additionally, our analysis shows that the mandatory bid rule does not diminish the number of transactions that exceed the threshold.

Our research contributes to the literature on corporate takeovers by providing the first empirical analysis of how the mandatory bid rule affects deal sizes. It also provides insights for policymakers in countries considering implementing mandatory bid rules. Our results indicate that policymakers should not be overly concerned about the potential for mandatory bid rules to increase acquisition costs and to suppress the takeover market.

An obvious extension of this study would be to investigate the impact of the mandatory bid rule on the overall costs of acquisitions, encompassing the expenses from privately negotiated block deals and costs incurred from making tender offers to remaining minority shareholders. It would also be valuable to explore how sensitive minority shareholders are to changes in the offering price to block holders, which is another factor that determines the overall acquisition costs, along with the control premium paid by the acquirer.

References

- Baker, Andrew C., David F. Larcker, and Charles CY Wang. "How much should we trust staggered difference-in-differences estimates?" *Journal of Financial Economics* 144, no. 2 (2022): 370-395.
- Barclay, Michael J., and Clifford G. Holderness. "Private benefits from control of public corporations." *Journal of financial Economics* 25, no. 2 (1989): 371-395.
- Bebchuk, Lucian Arye. "Efficient and inefficient sales of corporate control." *The Quarterly Journal of Economics* 109, no. 4 (1994): 957-993.
- Bergström, Clas, Peter Högfeldt, Jonathan R. Macey, and Per Samuelsson. "The regulation of corporate acquisitions: A law and economics analysis of European proposals for reform." *Columbia Business Law Review*. (1995): 495-524.
- Burkart, Mike, Denis Gromb, and Fausto Panunzi. "Agency conflicts in public and negotiated transfers of corporate control." *The Journal of Finance* 55, no. 2 (2000): 647-677.
- Cai, Wei. "The mandatory bid rule in China." *European Business Organization Law Review (EBOR)* 12, no. 4 (2011): 653-680.
- Callaway, Brantly, and Pedro HC Sant'Anna. "Difference-in-differences with multiple time periods." *Journal of Econometrics* 225, no. 2 (2021): 200-230.
- De La Bruslerie, Hubert. "Equal opportunity rule vs. market rule in transfer of control: How can private benefits help to provide an answer?" *Journal of Corporate Finance* 23 (2013): 88-107.
- Dyck, Alexander, and Luigi Zingales. "Private benefits of control: An international comparison." *The Journal of Finance* 59, no. 2 (2004): 537-600.
- Easterbrook, Frank H., and Daniel R. Fischel. "Corporate control transactions." *Yale Law Journal* 91 (1981): 698-737.
- Eswar, Sapnoti K. "Does the mandatory bid rule add values to target shareholders?." *Financial Management* 48, no. 3 (2019): 739-771.
- E.U. Commission. "Report on the implementation of the directive on takeover bids." *Commission Staff Working Document* (2007): 1-20.
- Ewens, Michael, Kairong Xiao, and Ting Xu. "Regulatory costs of being public: Evidence from bunching estimation." *Journal of Financial Economics* 153 (2024): 1037-1075.

- Humphery-Jenner, Mark. "The impact of the E.U. takeover directive on takeover performance and empire building." *Journal of Corporate Finance* 18, no. 2 (2012): 254-272.
- Karpoff, Jonathan M., and Paul H. Malatesta. "The wealth effects of second-generation state takeover legislation." *Journal of Financial Economics* 25, no. 2 (1989): 291-322.
- Kim, Bushik, Woochan Kim, and Yongjoon Lee. "The effect of mandatory bid rule on private benefits of control." *Asian Review of Financial Research* 36, no. 3 (2023): 1-30.
- Pound, John. "On the motives for choosing a corporate governance structure: A study of corporate reaction to the Pennsylvania takeover law." *Journal of Law, Economics, and Organization* 8 (1992): 656-672.
- Rossi, Stefano, and Paolo F. Volpin. "Cross-country determinants of mergers and acquisitions." *Journal of Financial Economics* 74, no. 2 (2004): 277-304.
- Sun, Liyang, and Sarah Abraham. "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects." *Journal of Econometrics* 225, no. 2 (2021): 175-199.
- Wang, Ying, and Henry Lahr. "Takeover law to protect shareholders: Increasing efficiency or merely redistributing gains?" *Journal of Corporate Finance* 43 (2017): 288-315

Figure 1. MBR and Control Premium Acquirers Paid

This figure displays the average control premium paid by acquirers, derived from the difference between the offered share price and the share price two days after the announcement. The analysis is confined to transactions involving target companies whose countries of incorporation implemented a mandatory bid rule at any time between 1985 and 2022, encompassing 618 transactions. The Y-axis measures the average control premium paid by the acquirer, where 0.1 signifies a 10-percentage point premium. The figure compares the control premium before (Pre MBR) and after (Post MBR) the rule's adoption. Black bars represent control premiums for deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For the years before a country adopts the rule, a transaction is classified as an above-threshold deal if post-acquisition ownership exceeds the threshold the country subsequently implements.

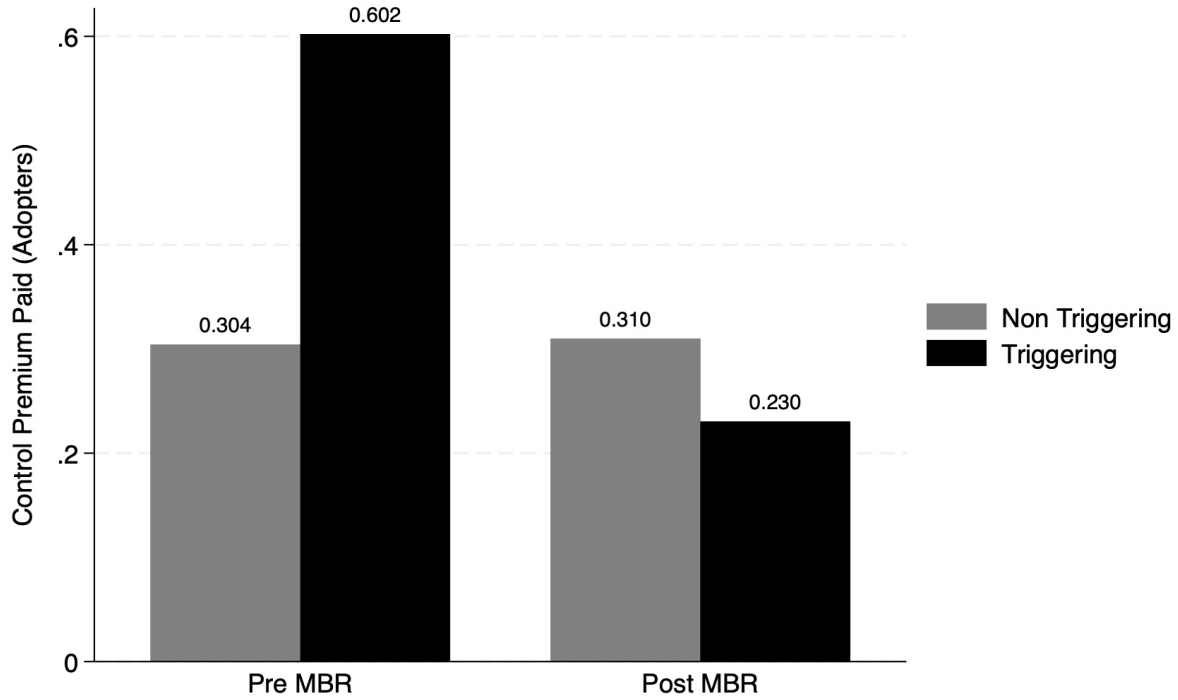


Figure 2. MBR and Private Benefits of Control

This figure illustrates the lower bound of private benefits of control, expressed as a fraction of total market capitalization. It is the product of the control premium paid by the acquirer and the proportion of shares acquired in a privately negotiated acquisition. The control premium is determined by comparing the offered share price to the share price two days after the announcement. The analysis is confined to transactions involving target companies whose countries of incorporation implemented a mandatory bid rule at any time between 1985 and 2022, encompassing 618 transactions. The figure compares PBC before (Pre MBR) and after (Post MBR) the adoption of the rule. Black bars represent PBC for deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For the years before a country adopts the rule, a transaction is classified as an above-threshold deal if post-acquisition ownership exceeds the threshold the country subsequently implements.

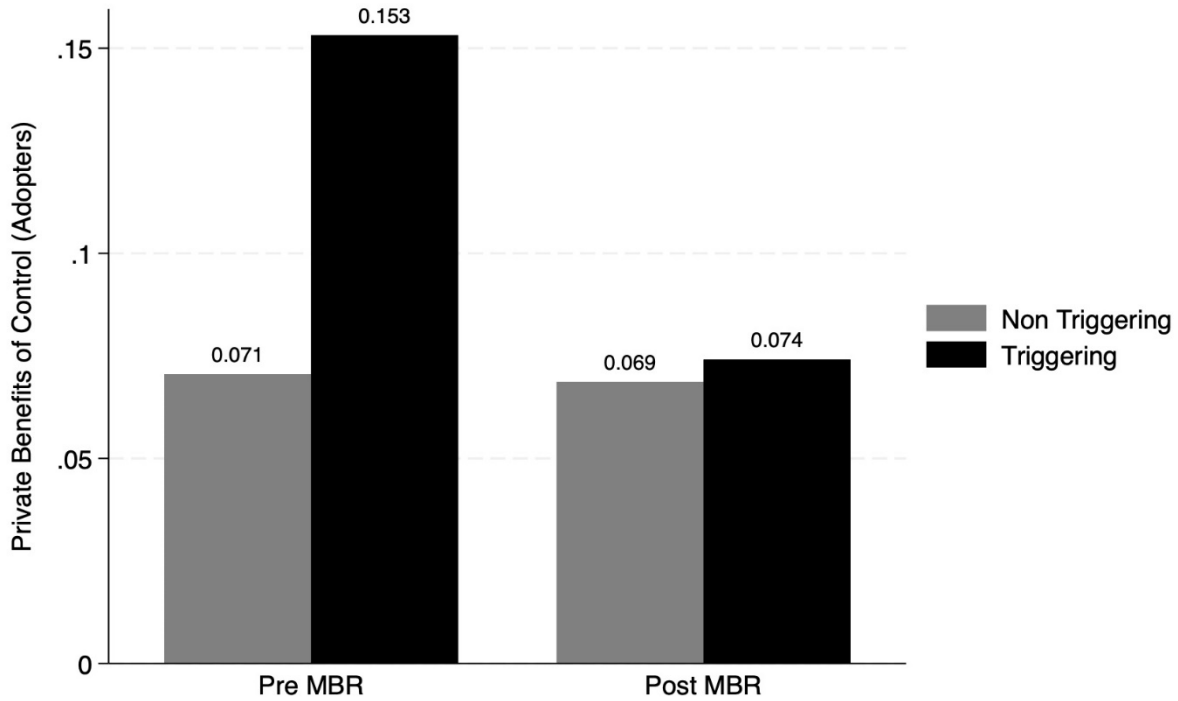


Figure 3. Histogram of Post-Acquisition Ownership around the Threshold

This figure shows the histograms of post-acquisition ownership for transactions in countries that adopted mandatory bid rules (Figure 3-1) and those that did not (Figure 3-2). Each figure compares the post-acquisition ownership histograms before (Pre MBR) and after (Post MBR) the rule's adoption. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in countries that have adopted the MBR. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. The Y-axis represents the proportion of deals, while the X-axis shows post-acquisition ownership levels relative to the mandatory bid threshold. A value of 0 indicates that post-acquisition ownership equals the threshold for mandatory bid obligation. Each histogram bin represents a 5%p interval.

Figure 3-1. Histogram for MBR Adopting Countries ($N = 697$)

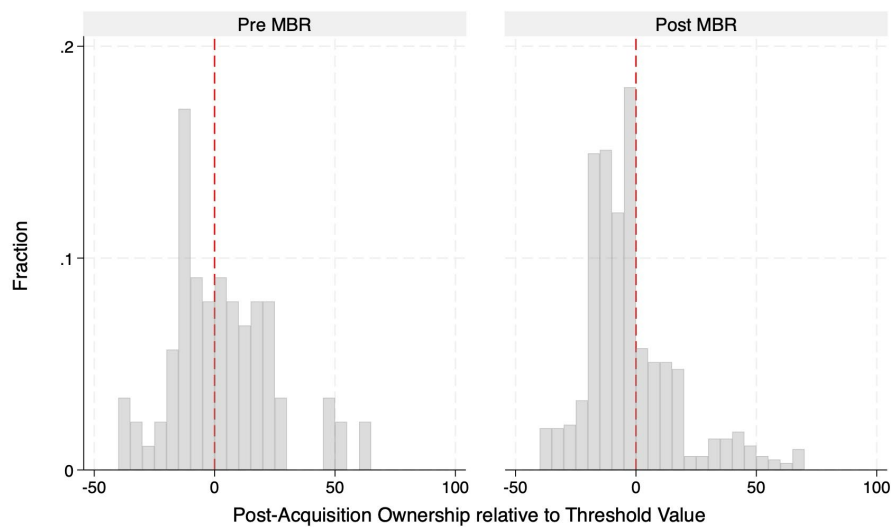


Figure 3-2. Histogram for MBR Non-Adopting Countries ($N = 1,394$)

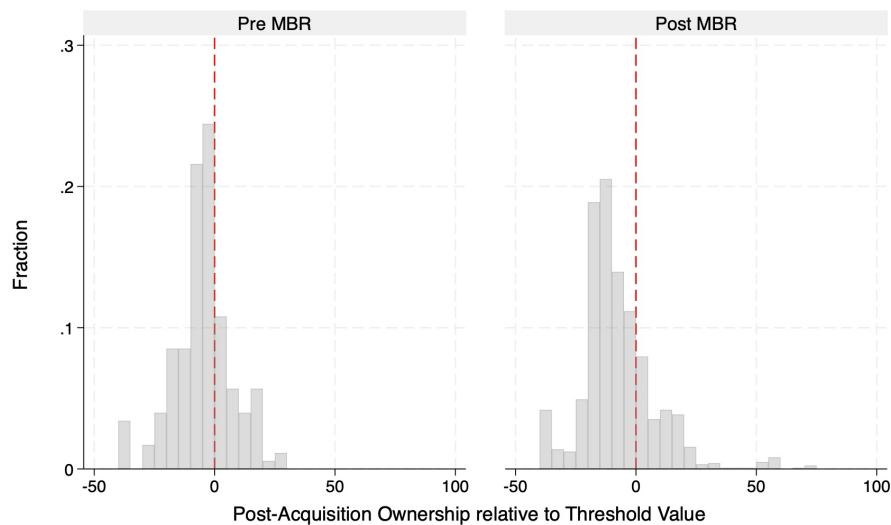


Figure 4. Manipulation Tests for Transactions in MBR Adopting Countries

This figure depicts the outcomes of manipulation tests for transactions in countries that have adopted the mandatory bid rule. Figure 4-1 shows the outcome before the adoption, while Figure 4-2 presents the outcome afterward. The Y-axis represents the proportion of deals, while the X-axis shows post-acquisition ownership levels relative to the mandatory bid threshold. A value of 0 indicates that post-acquisition ownership equals the threshold for mandatory bid obligation. The test statistic is 1.687 with a p -value of 0.091 for deals before the rule's adoption and -4.435 with a p -value of < 0.001 for those after.

Figure 4-1. Manipulation Test for Deals Before Adoption ($N = 88$)

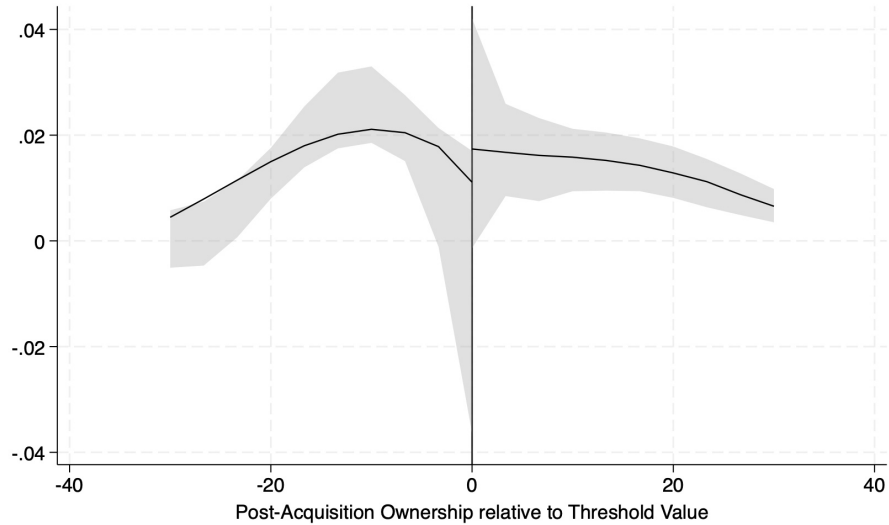


Figure 4-2. Manipulation Test for Deals After Adoption ($N = 609$)

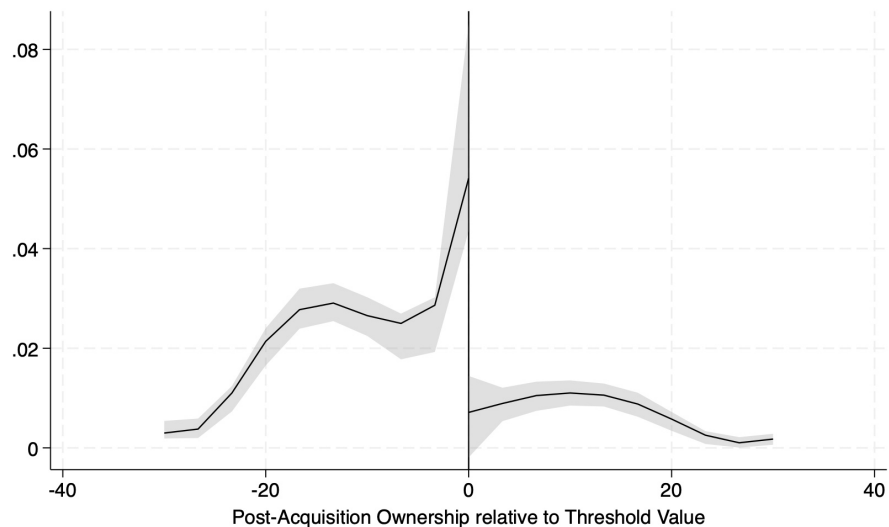


Figure 5. Manipulation Tests for Transactions in MBR Non-Adopting Countries

This figure depicts the outcomes of manipulation tests for matched transactions in countries that have not adopted the mandatory bid rule. Figure 5-1 shows the outcome before the adoption (pre-MBR), while Figure 5-2 presents the outcome afterward (post-MBR). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of corresponding matched transactions in countries that have adopted the MBR. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. The Y-axis represents the proportion of deals, while the X-axis shows post-acquisition ownership levels relative to the mandatory bid threshold. A value of 0 indicates that post-acquisition ownership equals the threshold for mandatory bid obligation. The test statistic is -0.053 with a p -value of 0.958 for deals before the rule's adoption and 1.145 with a p -value of 0.252 for those after.

Figure 5-1. Manipulation Test for Deals before Adoption ($N = 176$)

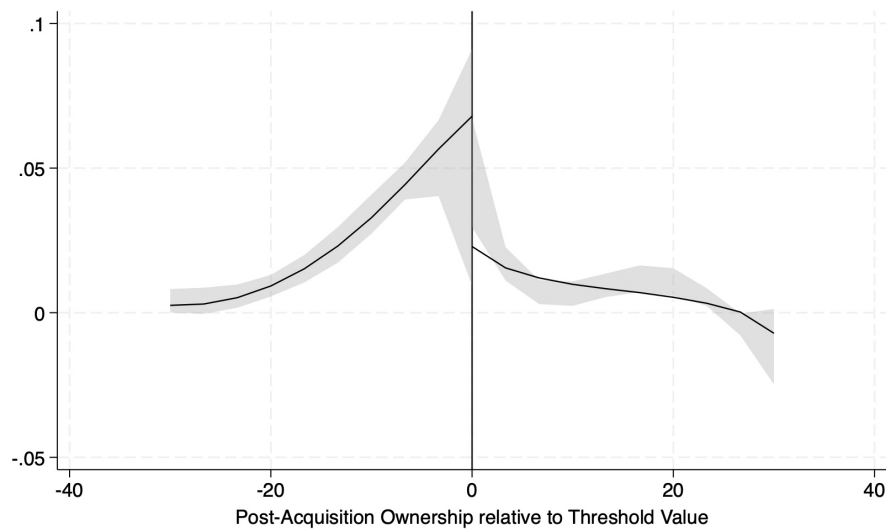


Figure 5-2. Manipulation Test for Deals after Adoption ($N = 1,218$)

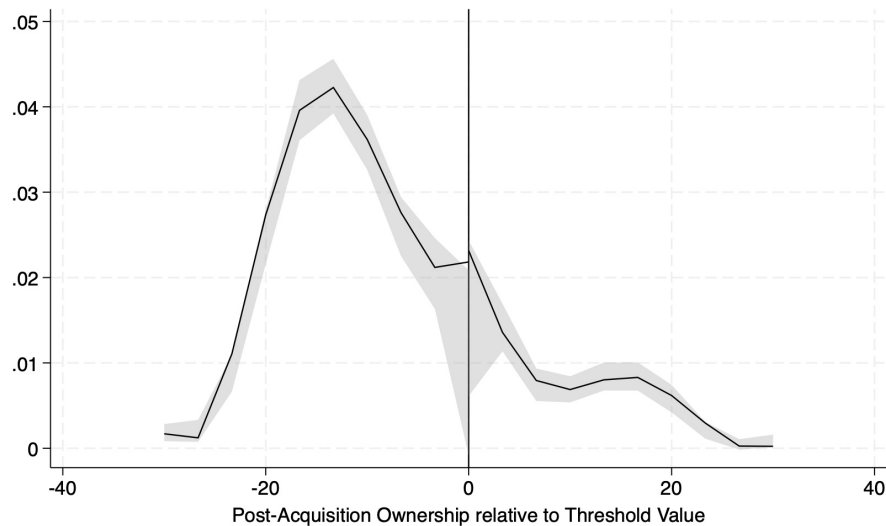


Figure 6. MBR and Deal Frequency (U.K. versus U.S.)

This figure presents the average deal frequency (number of deals per year) in the U.S. (left-side bars) and the U.K. (right-side bars). Black bars represent the number of deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For the U.S., a deal is classified as above the threshold if post-acquisition ownership exceeds 30%, the same threshold applied in the U.K.

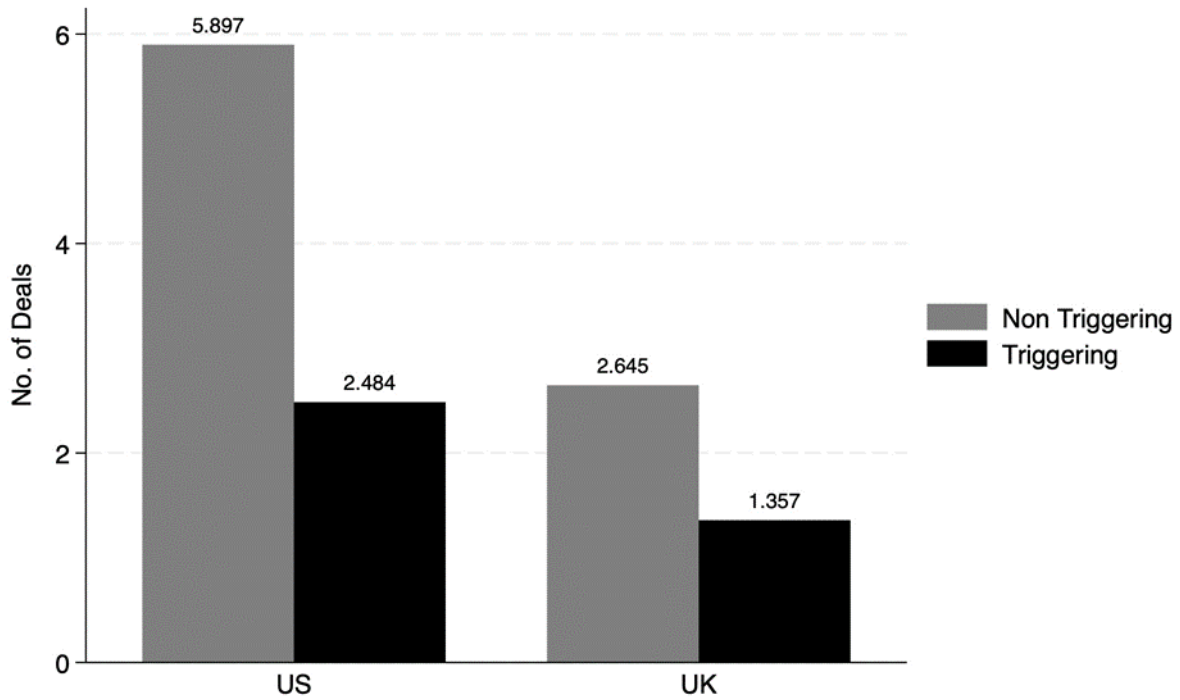


Table 1. Summary Statistics

This table presents the summary statistics of outcome variables and covariates (firm and deal characteristics) from two sets of samples used in the study. Panel A details the sample used to analyze the impact on control premiums and private benefits of control, while Panel B describes the sample used to investigate the effects on post-acquisition ownership. The MBR adopter sample in each panel includes transactions from 1985 to 2022 in countries that adopted MBR during this period. In contrast, the MBR non-adopter sample comprises their nearest neighbor matches in countries that did not adopt MBR at any time during this period. For each transaction in the MBR adopter sample in Panel A, Mahalanobis matching is employed to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year and involve target firms incorporated in countries with the same legal origin. For the samples in Panel A, matches are further conditioned to have the same rule-triggering indicator value (1 if triggered, 0 otherwise). The Appendix provides definitions for each variable listed in the table.

Panel A: Sample Used for Cost of Control Premium Analyses

	MBR Adopter Sample						MBR Non-Adopter Sample					
	Mean	SD	25%	50%	75%	Obs.	Mean	SD	25%	50%	75%	Obs.
Acq. Cost (1 day after)	0.078	0.179	0.001	0.019	0.062	618	0.113	0.213	0.001	0.025	0.120	1236
Acq. Cost (2 days after)	0.073	0.169	0.001	0.019	0.060	618	0.111	0.210	0.001	0.027	0.115	1236
Firm Size	12.247	1.862	10.881	12.216	13.500	618	12.081	1.640	10.972	11.891	13.160	1236
Leverage	0.256	0.210	0.081	0.229	0.400	618	0.258	0.214	0.072	0.229	0.397	1236
Profitability	0.078	0.177	0.031	0.092	0.152	618	-0.011	0.280	-0.044	0.060	0.121	1236
Toehold	6.947	17.318	0.000	0.000	0.190	618	2.593	8.968	0.000	0.010	0.040	1236
Attitude	0.636	0.482	0.000	1.000	1.000	618	0.760	0.427	1.000	1.000	1.000	1236
All Cash	0.388	0.488	0.000	0.000	1.000	618	0.375	0.484	0.000	0.000	1.000	1236
Diversify	0.806	0.396	1.000	1.000	1.000	618	0.778	0.416	1.000	1.000	1.000	1236
Cross-country	0.439	0.497	0.000	0.000	1.000	618	0.215	0.411	0.000	0.000	0.000	1236

Panel B: Sample Used for Post-Acquisition Ownership

	MBR Adopter Sample						MBR Non-Adopter Sample					
	Mean	SD	25%	50%	75%	Obs.	Mean	SD	25%	50%	75%	Obs.
Post-acq. Ownership	30.512	19.163	16.000	25.300	38.100	697	25.024	13.848	14.800	21.200	31.600	1394
Firm Size	12.261	1.846	10.905	12.246	13.525	697	12.106	1.645	10.972	12.017	13.186	1394
Leverage	0.255	0.207	0.083	0.229	0.394	697	0.257	0.208	0.073	0.235	0.393	1394
Profitability	0.076	0.185	0.033	0.093	0.151	697	0.000	0.241	-0.040	0.060	0.121	1394
Toehold	7.459	17.335	0.000	0.000	2.860	697	3.231	9.671	0.000	0.010	0.040	1394
Attitude	0.638	0.481	0.000	1.000	1.000	697	0.760	0.427	1.000	1.000	1.000	1394
All Cash	0.400	0.490	0.000	0.000	1.000	697	0.358	0.480	0.000	0.000	1.000	1394
Diversify	0.803	0.398	1.000	1.000	1.000	697	0.773	0.419	1.000	1.000	1.000	1394
Cross-country	0.445	0.497	0.000	0.000	1.000	697	0.214	0.411	0.000	0.000	0.000	1394

Table 2. MBR and Control Premium (DDD, MBR Adopter Sample)

This table presents estimates from triple differencing models that compare the control premium for deals above and below the threshold, both before and after the adoption of the rule, relative to other countries that adopted MBR (Equation (1)). The analysis is restricted to deals where the target firm's country of incorporation adopted a mandatory bid rule at any point of time from 1985 to 2022 (618 firms). Columns (1) to (3) use the control premium based on the share price one day after the announcement (Control Premium (1 day after)), whereas columns (4) to (6) use the control premium based on the share price two days after the announcement (Control Premium (2 days after)). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. For years before a country adopts the rule, the value of *Trigger* is set using the threshold the country will later implement. Regarding the inclusion of control variables, columns (1) and (4) include year and country-fixed effects but do not include firm and deal characteristics. Columns (2) and (5) include country-fixed effects and firm and deal characteristics but omit year-fixed effects. Columns (3) and (6) include all controls. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Control Premium (1 day after)			Control Premium (2 days after)		
	(1)	(2)	(3)	(4)	(5)	(6)
Post MBR	0.166*	0.140*	0.224**	0.176*	0.144*	0.237**
	(0.087)	(0.074)	(0.091)	(0.089)	(0.074)	(0.093)
Trigger	0.401***	0.404***	0.394***	0.386***	0.399***	0.384***
	(0.082)	(0.096)	(0.097)	(0.083)	(0.096)	(0.096)
Post MBR × Trigger	-0.434**	-0.448***	-0.435**	-0.445**	-0.461***	-0.446***
	(0.168)	(0.134)	(0.161)	(0.169)	(0.133)	(0.163)
Firm Size		-0.021	-0.023		-0.012	-0.013
		(0.015)	(0.016)		(0.016)	(0.018)
Leverage		0.517***	0.525***		0.514**	0.526***
		(0.184)	(0.167)		(0.191)	(0.175)
Profitability		-0.170	-0.114		-0.182	-0.131
		(0.214)	(0.223)		(0.202)	(0.212)
Toehold		0.001	-0.000		0.001	-0.000
		(0.002)	(0.002)		(0.002)	(0.002)
Attitude		-0.025	-0.011		-0.032	-0.019
		(0.052)	(0.046)		(0.052)	(0.046)
All Cash		-0.044	-0.047		-0.047	-0.050
		(0.044)	(0.049)		(0.047)	(0.054)
Diversify		-0.058	-0.050		-0.048	-0.039
		(0.100)	(0.117)		(0.103)	(0.119)
Cross-acquisition		0.112*	0.105		0.112*	0.106
		(0.062)	(0.063)		(0.064)	(0.068)
Year F.E.	Yes	No	Yes	Yes	No	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.058	0.074	0.076	0.049	0.067	0.066
No. of Observations	618	618	618	618	618	618

Table 3. MBR and Control Premium (Full Sample)

This table displays estimates from models that further differentiate the triple differencing model, comparing MBR-adopting and MBR non-adopting countries (Equation (2)). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. $Adopt_k$ equals one if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in MBR-adopting countries. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. Columns (1) to (3) use the control premium based on the share price one day after the announcement (Control Premium (1 day after)), whereas columns (4) to (6) use the control premium based on the share price two days after the announcement (Control Premium (2 days after)). Regarding the inclusion of control variables, columns (1) and (4) include year and country-fixed effects but do not include firm and deal characteristics. Columns (2) and (5) include country-fixed effects and firm and deal characteristics but omit year-fixed effects. Columns (3) and (6) include all controls. Adopt coefficients are absorbed into country-fixed effects. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Control Premium (1 day after)			Control Premium (2 days after)		
	(1)	(2)	(3)	(4)	(5)	(6)
Post MBR	-0.123 (0.105)	-0.389*** (0.011)	-0.116 (0.102)	-0.125 (0.111)	-0.398*** (0.010)	-0.116 (0.107)
Trigger	-0.094 (0.158)	-0.154 (0.240)	-0.152 (0.226)	-0.138 (0.180)	-0.200 (0.260)	-0.197 (0.253)
Adopt \times Post MBR	0.625*** (0.113)	0.494*** (0.071)	0.630*** (0.133)	0.637*** (0.120)	0.502*** (0.071)	0.642*** (0.142)
Adopt \times Trigger	0.534** (0.254)	0.518** (0.237)	0.526* (0.311)	0.569** (0.277)	0.554** (0.254)	0.562 (0.339)
Post MBR \times Trigger	0.234 (0.187)	0.253 (0.269)	0.229 (0.230)	0.262 (0.215)	0.279 (0.296)	0.255 (0.262)
Adopt \times Post MBR \times Trigger	-0.698** (0.297)	-0.690** (0.287)	-0.674** (0.321)	-0.740** (0.321)	-0.729** (0.311)	-0.713** (0.351)
Firm Deal Controls	No	Yes	Yes	No	Yes	Yes
Year F.E.	Yes	No	Yes	Yes	No	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.123	0.049	0.155	0.123	0.046	0.153
No. of Observations	1854	1854	1854	1854	1854	1854

Table 4. MBR and Private Benefits of Control (DDD, MBR Adopter Sample)

This table presents estimates from triple-differencing models that compare lower bounds of private benefits of control for deals above and below the threshold, both before and after the adoption of the rule, relative to other countries that adopted MBR (Equation (1)). The analysis is restricted to deals where the target firm's country of incorporation adopted a mandatory bid rule at any point of time from 1985 to 2022 (618 firms). The lower bound of private benefits of control is calculated as the product of the control premium paid and the proportion of shares acquired in the transaction. For calculating private benefits of control, columns (1) to (3) apply the control premium based on the share price one-day post-announcement (PBC (1 day after)), while columns (4) to (6) use the control premium based on the share price two days post-announcement (PBC (2 days after)). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. For years before a country adopts the rule, the value of *Trigger* is set using the threshold the country will later implement. Regarding the inclusion of control variables, columns (1) and (4) include year and country-fixed effects but do not include firm and deal characteristics. Columns (2) and (5) include country-fixed effects and firm and deal characteristics but omit year-fixed effects. Columns (3) and (6) include all controls. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	PBC (1 day after)			PBC (2 days after)		
	(1)	(2)	(3)	(4)	(5)	(6)
Post MBR	0.039 (0.024)	0.033* (0.019)	0.050** (0.023)	0.038 (0.023)	0.030 (0.019)	0.049** (0.022)
Trigger	0.133*** (0.021)	0.132*** (0.027)	0.131*** (0.026)	0.119*** (0.020)	0.118*** (0.026)	0.118*** (0.024)
Post MBR × Trigger	-0.107** (0.048)	-0.111** (0.042)	-0.108** (0.045)	-0.104** (0.043)	-0.106*** (0.038)	-0.105** (0.041)
Firm Size		-0.007 (0.004)	-0.008 (0.005)		-0.004 (0.004)	-0.005 (0.005)
Leverage		0.127** (0.050)	0.130*** (0.047)		0.116** (0.047)	0.119** (0.044)
Profitability		-0.016 (0.044)	-0.002 (0.047)		-0.019 (0.040)	-0.006 (0.043)
Toehold		-0.000 (0.000)	-0.000 (0.001)		-0.000 (0.000)	-0.000 (0.000)
Attitude		-0.012 (0.015)	-0.008 (0.013)		-0.012 (0.014)	-0.009 (0.012)
All Cash		-0.009 (0.012)	-0.008 (0.012)		-0.010 (0.011)	-0.010 (0.011)
Diversify		-0.019 (0.025)	-0.014 (0.029)		-0.016 (0.024)	-0.013 (0.027)
Cross-acquisition		0.031* (0.015)	0.030* (0.015)		0.030* (0.015)	0.029* (0.015)
Year F.E.	Yes	No	Yes	Yes	No	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.065	0.084	0.079	0.060	0.079	0.072
No. of Observations	618	618	618	618	618	618

Table 5. MBR and Private Benefits of Control (Full Sample)

This table displays estimates from models that further differentiate the triple differencing model, comparing MBR-adopting and MBR non-adopting countries (Equation (2)). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. $Adopt_k$ equals one if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR and as either above-threshold or below-threshold, depending on the timing and the post-acquisition ownership levels of matched transactions in MBR-adopting countries. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. For calculating private benefits of control, columns (1) to (3) use the control premium based on the share price one day after the announcement (PBC (1 day after)), whereas columns (4) to (6) use the control premium based on the share price two days after the announcement (PBC (2 days after)). Regarding the inclusion of control variables, columns (1) and (4) include year and country-fixed effects but do not include firm and deal characteristics. Columns (2) and (5) include country-fixed effects and firm and deal characteristics but omit year-fixed effects. Columns (3) and (6) include all controls. Adopt coefficients are absorbed into country-fixed effects. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	PBC (1 day after)			PBC (2 days after)		
	(1)	(2)	(3)	(4)	(5)	(6)
Post MBR	-0.010 (0.020)	-0.067*** (0.004)	-0.009 (0.018)	-0.007 (0.020)	-0.064*** (0.004)	-0.006 (0.018)
Trigger	0.035 (0.025)	0.031 (0.046)	0.026 (0.038)	0.026 (0.025)	0.021 (0.046)	0.017 (0.038)
Adopt × Post MBR	0.120*** (0.027)	0.090*** (0.018)	0.121*** (0.029)	0.113*** (0.027)	0.083*** (0.018)	0.114*** (0.029)
Adopt × Trigger	0.099** (0.048)	0.094* (0.048)	0.097* (0.057)	0.093* (0.048)	0.090* (0.047)	0.093 (0.057)
Post MBR × Trigger	0.053* (0.030)	0.049 (0.053)	0.050 (0.038)	0.054 (0.033)	0.051 (0.056)	0.052 (0.041)
Adopt × Post MBR × Trigger	-0.159** (0.064)	-0.158** (0.063)	-0.156** (0.065)	-0.157** (0.063)	-0.156** (0.063)	-0.154** (0.065)
Firm & Deal Controls	No	Yes	Yes	No	Yes	Yes
Year F.E.	Yes	No	Yes	Yes	No	Yes
Country F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.124	0.067	0.149	0.126	0.062	0.149
Observations	1854	1854	1854	1854	1854	1854

Table 6. MBR and Post-Acquisition Ownership Size (DDD, MBR Adopter Sample)

This table presents results from triple differencing models that measure how the size of post-acquisition ownership changes in MBR-adopting countries following their implementation, compared to the changes observed in MBR non-adopting countries (Equation (3)). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. $Adopt_k$ equals 1 if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR depending on the timing of matched transactions in MBR-adopting countries. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. Column (1) omits firm and deal characteristics, column (2) leaves out fixed effects, column (3) does not include country-fixed effects, and column (4) incorporates all controls. The Adopt coefficients are absorbed into country-fixed effects. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Post-Acq. Ownership			
	(1)	(2)	(3)	(4)
Post MBR	0.002 (0.010)	-0.001 (0.001)	0.011* (0.006)	0.008 (0.006)
Adopt		0.043*** (0.010)	0.045*** (0.010)	
Post MBR × Adopt	-0.004 (0.028)	-0.028** (0.012)	-0.028* (0.014)	-0.033** (0.014)
Firm Size		-0.004** (0.002)	-0.004 (0.002)	-0.004 (0.003)
Leverage		0.025 (0.020)	0.026 (0.023)	0.028 (0.021)
Profitability		0.010 (0.008)	-0.006 (0.011)	-0.009 (0.013)
Toehold		0.009*** (0.000)	0.009*** (0.000)	0.009*** (0.000)
Attitude		-0.012* (0.007)	-0.008 (0.006)	-0.008 (0.007)
All Cash		0.004 (0.014)	0.004 (0.012)	0.004 (0.012)
Diversify		-0.007 (0.007)	-0.001 (0.009)	0.000 (0.009)
Cross-acquisition		-0.017*** (0.006)	-0.019** (0.010)	-0.016 (0.010)
Year F.E.	Yes	No	Yes	Yes
Country F.E.	Yes	No	No	Yes
Adjusted R ²	0.122	0.560	0.579	0.585
No. of Observations	2091	2091	2091	2091

Table 7. MBR and Choice of Post-Acquisition Ownership

This table presents results from linear probability models that estimate the likelihood of a transaction's post-acquisition ownership exceeding the mandatory bid rule threshold. *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. $Adopt_k$ equals one if the target firm i 's country of incorporation k adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise. Columns (1) to (4) report results from triple differencing models that measure how the likelihood of post-acquisition ownership exceeding the threshold changes in MBR-adopting countries following their implementation, compared to the changes observed in MBR non-adopting countries (Equation (3)). In countries without a mandatory bid rule, transactions are categorized as either Pre-MBR or Post-MBR depending on the timing of matched transactions in MBR-adopting countries. We employ Mahalanobis matching to identify two nearest neighbors in terms of firm size, profitability, and leverage. Additionally, these matches are conditioned to have occurred in the same year, have the same rule-triggering indicator value (1 if triggered, 0 otherwise), and involve target firms incorporated in countries with the same legal origin. Columns (5) to (8) provide findings from double differencing models that analyze how the likelihood of post-acquisition ownership exceeding the threshold varies following the adoption of mandatory bid rules, compared to changes observed in other MBR-adopting countries (Equation (4)). The analyses in columns (5) to (8) are restricted to deals from countries that implemented an MBR at any time between 1985 and 2022, encompassing 697 transactions. In each analysis, columns (1) and (5) exclude fixed effects; columns (2) and (6) do not incorporate country fixed effects; columns (3) and (7) exclude year fixed effects; and columns (4) and (8) are comprehensive, including all variables. Adopt coefficients are absorbed into country-fixed effects. Definitions of the variables are provided in Appendix B. Robust standard errors are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Pr</i> (Post-acq. ownership > Threshold)							
	Full Sample				MBR Adopter Sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post MBR	-0.059 (0.037)	-0.018 (0.036)	-0.050 (0.036)	-0.006 (0.035)	-0.195*** (0.057)	-0.172*** (0.063)	-0.141** (0.070)	-0.119 (0.082)
Adopt	0.101* (0.054)	0.110** (0.054)						
Post MBR × Adopt	-0.101** (0.048)	-0.099** (0.047)	-0.079 (0.059)	-0.048 (0.062)				
Firm Size	-0.017*** (0.006)	-0.017*** (0.006)	-0.014** (0.006)	-0.015** (0.007)	-0.019* (0.010)	-0.023** (0.010)	-0.016 (0.011)	-0.019* (0.011)
Leverage	0.087* (0.048)	0.080 (0.049)	0.084* (0.050)	0.075 (0.050)	-0.012 (0.085)	0.006 (0.087)	-0.041 (0.092)	-0.004 (0.094)
Profitability	0.074 (0.047)	0.037 (0.048)	0.066 (0.047)	0.016 (0.050)	0.037 (0.093)	0.066 (0.098)	-0.054 (0.097)	-0.018 (0.102)
Toehold	0.005*** (0.001)	0.004*** (0.001)	0.006*** (0.001)	0.005*** (0.001)	0.002** (0.001)	0.002** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Attitude	-0.015 (0.021)	-0.008 (0.021)	-0.027 (0.021)	-0.020 (0.021)	0.012 (0.035)	0.006 (0.037)	-0.008 (0.037)	-0.011 (0.039)
All Cash	0.021 (0.019)	0.032 (0.020)	0.022 (0.019)	0.032 (0.020)	0.017 (0.033)	0.006 (0.035)	0.014 (0.034)	0.001 (0.036)
Diversify	0.034 (0.023)	0.042* (0.023)	0.044* (0.023)	0.053** (0.024)	-0.040 (0.041)	-0.040 (0.042)	-0.025 (0.043)	-0.034 (0.044)
Cross-acquisition	-0.025 (0.022)	-0.032 (0.022)	-0.037 (0.023)	-0.040* (0.023)	0.013 (0.034)	0.013 (0.036)	0.017 (0.036)	0.018 (0.037)
Year F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Country F.E.	No	No	Yes	Yes	No	No	Yes	Yes
Pseudo R ²	0.035	0.066	0.066	0.099	0.032	0.062	0.104	0.141
No. of Observations	2091	2091	2046	2046	697	679	652	635

Table 8. MBR and Deal Frequency (DiD, U.K. versus U.S.)

This table presents the results from difference-in-differences models estimating the difference between the number of deals below and above the threshold in the U.K. (Equation (5)) compared to those in the U.S. For the U.S., a deal is classified as above the threshold if post-acquisition ownership exceeds 30%, the same threshold applied in the U.K. Column (1) omits year fixed effects, while column (2) includes them. Robust standard errors are displayed in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	No. of Deals	
	(1)	(2)
U.K.	-3.252*** (0.733)	-3.614*** (0.703)
Trigger	-3.414*** (0.678)	-3.979*** (0.689)
U.K. × Trigger	2.126*** (0.808)	1.771* (0.947)
Constant	5.897*** (0.627)	1.000*** (0.000)
Year F.E.	No	Yes
Adjusted R ²	0.286	0.354
No. of Observations	115	115

Appendix A. Mandatory Bid Rule around the World

This Appendix details the rule-triggering threshold and the adoption date of the mandatory bid rule across 41 countries. We exclude countries where the threshold exceeds 50%, such as Chile and Japan, each with a threshold of 66.67%. In these countries, deals triggering the mandatory bid obligation are unlikely control transferring deals, which are the focus of this study. Additionally, China is excluded due to its extensive allowances for exceptions to the rule (Cai, 2000). We also remove Australia and New Zealand from our study. Australia allows acquirers to increase their shareholding beyond the threshold through creeping acquisitions by up to 3% every six months, while New Zealand permits acquirers to make partial offers below 50%. Lastly, we leave out Canada, where we lack information on the state of incorporation of target firms. In the case of Canada, individual provinces have adopted the mandatory bid rule before nationwide adoption in 2011. In cases where specific implementation dates are unavailable, we assume that the rule was implemented from January 1st. Our primary source is the OECD Corporate Governance Fact Book 2017. This information is supplemented by various other sources, including the Centre for Business Research's CBR Extended Shareholder Protection Index from the University of Cambridge (January 2016), the Common Legal Framework for Takeover Bids in Europe (December 2008), Thomson Reuters Practical Law, the Economist Intelligence Unit Country Surveys, and research by Dyck and Zingales (2004).

Country	Threshold (%)	Date	Statues and Codes
Asia			
Hong Kong	35	1981.01.01	Takeover Code
	30	2001.10.01	Rule 26 of the Code
India	25	2011.10.01	Substantial Acquisition of Shares and Takeovers Regulations
Indonesia	50	2000.03.13	Bapepam Regulation No. IX.H.1
Pakistan	25	2002.10.01	s.12 and s.14 of the Listed Companies (Substantial Acquisition of Shares and Takeovers) Regulation 2008
Saudi Arabia	50	2007.10.03	Article 12 (a) of the Mergers and Acquisitions Regulation
Singapore	25	1985.01.01	City Code
	30	2002.01.01	City Code
Africa			
South Africa	35	1993.08.13	Securities Regulation Code on Takeovers and Mergers
Europe			
Austria	30	2006.05.20	Section 22 of the Austrian Takeover Act
Belgium	30	2007.09.01	Article 5 of La Loi relative aux offres publiques d'acquisition
Bulgaria	50	2003.01.01	The Public Offering of Securities Act
Croatia	25	2007.11.01	-
Cyprus	30	2007.04.05	Article 13 of the Law 41[I]/2007
Czech Republic	50	1996.05.30	SS. 183b (1), 66a (1), (2) of the Commercial Code
	30	2001.01.01	Section 2(6) of the Takeover Act
Denmark	33	1987.11.03	Paragraph 4.1 of the Code of Ethics
Estonia	50	2002.01.01	S166 of the Securities Market Act 2002
Finland	30	2006.07.01	Chapter 11 Section 19 of the Securities Markets Act
France	33	1989.08.02	La Loi 89-531
	30	2010.10.01	Article L. 233-10 of the Commercial Code
Germany	30	2002.01.01	Sections 29(2), 35-39 of the Securities Acquisition and Takeover Act

Country	Threshold (%)	Date	Statues and Codes
Greece	33	2006.05.30	Article 7 of the Takeover Law
Iceland	50	1998.04.21	Act No.34/1998
	30	2009.03.17	Article 100 of Act on Securities Transactions No. 108/2007
Ireland	30	1997.03.12	Rule 9 of the Takeover Rules
Italy	30	1998.05.14	Legislative Decree 58 on Italy Takeovers
	25	2014.08.20	Legislative Decree 58 on Italy Takeovers
Latvia	50	2006.07.13	Law of the Financial Instruments Market 2004
	30	2016.06.29	
Lithuania	50	1996.01.16	Article 10 of the Law on Public Trading in Securities
	40	2002.01.01	Article 32 of the Law on Securities Market
	33	2007.02.01	Article 31 of the Law on Securities Market
Luxembourg	33.34	2006.05.22	Article 5 of the Takeover Act
Malta	50	2006.06.19	Listing Rule 11.8
Netherlands	30	2007.10.28	Chapter 5 of the Financial Supervision Act
Norway	45	1985.06.24	Lov om Verdipapirsentral
	40	1997.12.01	Section 6-1(1) of the Securities Trading Act
	33.34	2008.01.01	Section 6-6(1) of the Securities Trading Act
Poland	50	1991.04.12	Article 87 of the Act on Public Trading in Securities and Trust Funds
	33	2005.07.29	Article 73 of the Act on Public Offering and Public Companies
Portugal	33	2000.03.02	Article 187(1) of the PSC (Portuguese Securities Code) entities whose holdings in a public company exceed, directly or in accordance with Article 20(1)
Romania	33	2004.07.29	Article 203(1) of the Capital Markets Law
Russian Fed	30	1995.12.26	Article 80 of the JSC Law
Slovak Republic	30	1994.04.01	Act No. 88/1994 Coll.
Slovenia	25	1997.08.01	Article 4 of the Takeovers Act of 1997
	33	2012.05.01	Takeovers Act of 2006
Spain	25	1991.08.01	The Royal Decree 1197/1991 on Public Bids
	30	2007.08.01	Article 60 of the Stock Market Act 1998, Royal Decree 1066/2007
Sweden	30	2003.09.01	Chapter 3 Section 1 of the Law on public bids on the stock market
Switzerland	33	1998.01.01	Federal Act on Stock Exchanges and Securities Trading
Turkey	50	2012.12.06	Article 26 (1-2) of the Capital Markets Law No: 6362
United Kingdom	30	1972.01.18	Rule 9.1. of the City Code
America			
Argentina	50	2002.03.26	Article 23 of Decree 677/2001 (later contained in Article 86 of the Stock Market Act 2012)
Brazil	50	2002.01.01	Article 12 of New art. 254 Law 10303/01. It stipulates that the rule is triggered in cases of "acquisitions of control or control over the board" of the company, which we interpret as "acquisition of shares above 50%."

Appendix B. Variable Definition

Variables	Definition	Sources
<i>Control Premium (i day after)</i>	Share price offered / share price that prevailed <i>i</i> days after the deal announcement	SDC, Datastream
<i>PBC (i day after)</i>	The lower bound of private benefits of control, expressed as a fraction of total market capitalization. It is the product of the control premium paid by the acquirer and the proportion of shares acquired in a privately negotiated acquisition. The control premium is computed using the share price offered and the share price that prevailed <i>i</i> days after the deal announcement.	SDC, Datastream
<i>Proportion of Shares Acquired</i>	The proportion of shares that the acquirer newly purchased through the transaction.	SDC
<i>Deal Value</i>	The deal's dollar value, expressed in millions of U.S. dollars.	SDC
<i>Post-Acq. Ownership</i>	The total proportion of shares that the acquirer owns after the transaction is completed	SDC
<i>No. of Deals</i>	The total number of transactions that occurred within a specific country-year.	SDC
<i>Adopt</i>	Equals one if the target firm's country of incorporation adopted a mandatory bid rule at any time during 1985-2022, and 0 otherwise.	OECD(2017)
<i>Post MBR</i>	Equals one if the mandatory bid rule is in effect in the target firm's country of incorporation at the time of the deal announcement and 0 otherwise.	OECD(2017)
<i>Trigger</i>	Equals one if the deal triggers the mandatory bid obligation and 0 otherwise. The mandatory bid obligation is triggered if (i) the pre-acquisition ownership is less than 50% and (ii) the post-acquisition ownership exceeds the threshold.	OECD(2017)
<i>Firm Size</i>	$\ln(\text{Total Assets}_{t-1})$	Worldscope
<i>Leverage</i>	$(\text{Total Debt}_{t-1} / \text{Total Assets}_{t-1})$	Worldscope
<i>Profitability</i>	$(\text{EBITDA}_{t-1} / \text{Total Assets}_{t-1})$	Worldscope
<i>Toehold</i>	Total percentage of shares owned after the deal – percentage of shares acquired from the deal.	SDC
<i>Attitude</i>	Equals one if the deal attitude is identified as <i>friendly</i> , and 0 otherwise.	SDC
<i>All Cash</i>	Equals one if the deal is paid entirely in cash, and 0 otherwise.	SDC
<i>Diversity</i>	Equals one if the target firm is acquired by a firm from a different industry, determined by the first three digits of the SIC code, and 0 otherwise.	SDC
<i>Cross-country</i>	Equals one if the target firm is acquired by a firm from a different country and 0 otherwise.	SDC

Appendix C

Figure C1. MBR and Proportion of Shares Acquired

This figure illustrates the average proportion of shares acquired for transactions involving target companies whose countries of incorporation implemented a mandatory bid rule at any time between 1985 and 2022, encompassing 618 transactions. The Y-axis measures the average proportion of shares acquired, where 0.1 signifies a 10-percentage point ownership. It compares the proportion of shares acquired before (Pre-MBR) and after (Post-MBR) the adoption of the rule. Black bars represent the proportion of deals that exceed the rule-trigger threshold, while grey bars indicate those that do not. For years before a country adopts the rule, a deal is classified as rule-triggering if post-acquisition ownership exceeds the threshold that the country later implements.

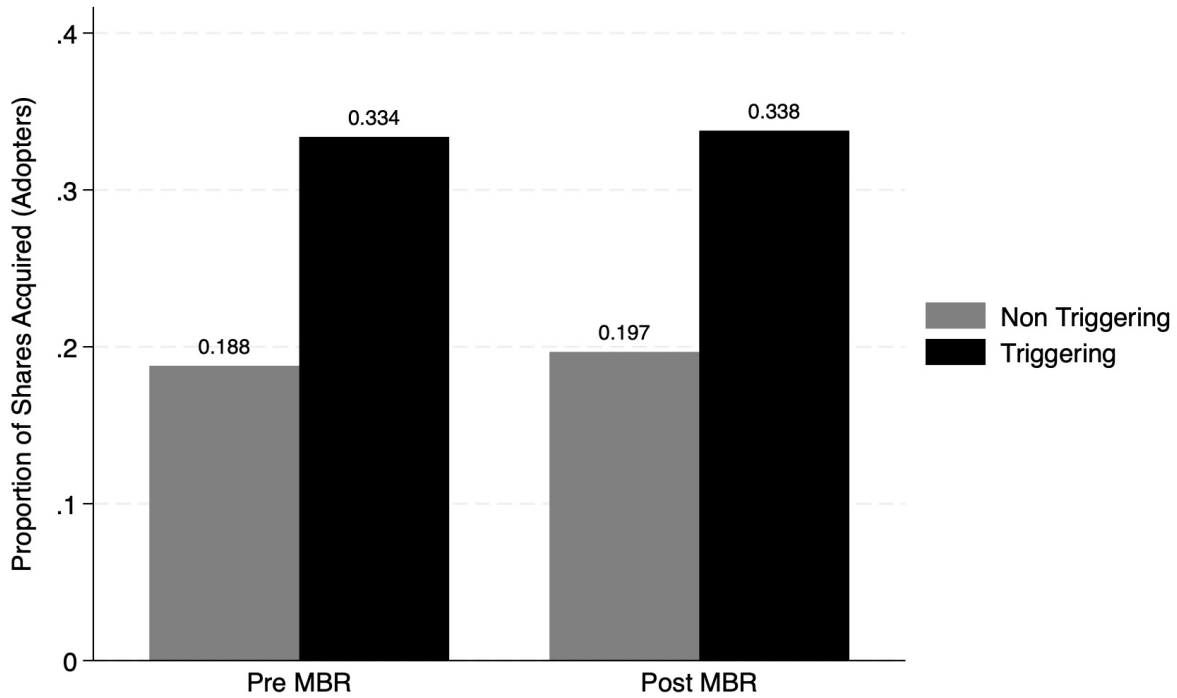


Table C1. MBR and Proportion of Shares Acquired (DDD, MBR Adopter Sample)

This table presents estimates from triple differencing models that compare the proportion of shares acquired for deals above and below the threshold, both before and after the adoption of the rule, relative to other countries that adopted MBR. The analysis is restricted to deals where the target firm's country of incorporation adopted a mandatory bid rule at any point of time from 1985 to 2022 (618 firms). *Post MBR* captures two-way fixed effects (TWFE) that equals one if the mandatory bid rule is in effect in country k at time t , and 0 otherwise. *Trigger* is another binary indicator that equals one if the post-acquisition ownership of acquirer j in target firm i in country k at time t exceeds the rule-triggering threshold of country k at time t , and 0 otherwise. For years before a country adopts the rule, the value of *Trigger* is set using the threshold the country will later implement. Column (1) omits firm and deal characteristics, column (2) leaves out fixed effects, column (3) does not include country-fixed effects, and column (4) incorporates all controls. Definitions of the variables are provided in Appendix B. Standard errors, clustered at the country level, are shown in parentheses. Symbols ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Proportion of Shares Acquired			
	(1)	(2)	(3)	(4)
Post MBR	0.004 (0.014)	0.010 (0.025)	-0.000 (0.016)	0.000 (0.014)
Trigger	0.186*** (0.020)	0.143*** (0.037)	0.173*** (0.024)	0.186*** (0.021)
Post MBR × Trigger	-0.041* (0.022)	-0.001 (0.037)	-0.025 (0.026)	-0.042* (0.023)
Firm Size		-0.001 (0.002)	-0.004 (0.003)	-0.004 (0.003)
Leverage		-0.004 (0.021)	0.013 (0.029)	0.016 (0.030)
Profitability		0.021 (0.018)	0.035* (0.019)	0.036* (0.020)
Toehold		-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Attitude		-0.006 (0.007)	-0.010 (0.007)	-0.010 (0.007)
All Cash		0.001 (0.006)	0.000 (0.007)	0.000 (0.008)
Diversify		-0.011 (0.007)	-0.011 (0.007)	-0.009 (0.008)
Cross-acquisition		-0.011 (0.007)	-0.006 (0.007)	-0.003 (0.008)
Year F.E.	Yes	No	No	Yes
Country F.E.	Yes	No	Yes	Yes
Adjusted R2	0.276	0.283	0.318	0.304
No. of Observations	618	618	618	618