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Antitrust merger review costs and acquirer lobbying

Jana P. Fidrmuc^{a,*}, Peter Roosenboom^b, Eden Quxian Zhang^c^aWarwick Business School, University of Warwick, Coventry CV4 7AL, United Kingdom, E-mail: Jana.Fidrmuc@wbs.ac.uk^bFinance Department, RSM Erasmus University, P.O. Box 1738, 3000 DR Rotterdam, the Netherlands, e-mail: proosenboom@rsm.nl^cBanking and Finance Department, Monash Business School, Monash University, 900 Dandenong Road, Caulfield East, VIC 3145, Australia, e-mail: eden.zhang@monash.edu**Abstract**

Documenting the US antitrust review process for M&As in rich detail, we unveil that regulatory costs and risks are significant and that mitigating these risks via lobbying by acquirers may benefit shareholders. Our results show that an adverse antitrust review outcome leads to a decline of 2.8 percent in acquirer firm value. Further, we show that lobbying before deal announcements is associated with more favorable review outcomes. Finally, higher pre-announcement lobbying is valued by shareholders, especially in horizontal deals and deals with a larger expected change in market concentration, which have higher antitrust concerns. However, this positive value effect of lobbying applies only in firms with strong corporate governance. Our results highlight the role of political connections and lobbying for corporate investments when facing regulatory costs and risks.

JEL Classification: G34, G38*Keywords:* Mergers and acquisitions, Antitrust, Corporate lobbying**1. Introduction**

In 2011, AT&T proposed to acquire T-Mobile USA in a \$39-billion deal.¹ The proposed merged company would take a 43% share in the wireless market, which raised concerns with the Antitrust Division in the Department of Justice (DOJ). The DOJ eventually blocked the deal, and AT&T stock price dropped by 4% on the DOJ announcement. In addition, AT&T had to pay a reverse breakup fee of around \$4.2 billion (almost 10% of its market value) to the target.

All large deals face regulatory costs and risks during the antitrust merger review process.² Although acquiring firms in successful deals avoid paying termination fees, they may need to offer asset divestitures or restrictive agreements to address antitrust concerns. Such negotiated concessions are costly because they reduce projected deal synergies. In addition, the regulatory process gives rise to indirect costs associated with increased interim uncertainty (Bhagwat et al., 2016).³ This paper investigates the costs and risks associated with the antitrust review process and how they may motivate acquirer firms to directly influence regulators through lobbying around deal announcements.

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¹http://money.cnn.com/2011/09/01/technology/att_tmobile_lawsuit/²According to the 2011 Hart-Scott-Rodino (HSR) Annual Report reported by the Federal Trade Commission (FTC) and the DOJ (<http://www.ftc.gov/os/2012/06/2011hsrreport.pdf>) as much as 40% of all large merger deals with deal value larger than \$1 billion in 2011 were reviewed in detail and over 15% received a Second Request.³“Companies in a number of recent mergers have been waiting upward of a year or longer for a final verdict, and some deals have fallen apart because of government concerns... As time passes, merging firms can become increasingly worried about completing a deal. They have to ensure financing remains in place, and that can cost money. They can begin to lose employees nervous about the future, as well as customers.” See “U.S. Antitrust Reviews of Mergers Get Longer,” WSJ, June 7, 2015.

Our paper starts with a rich description of the antitrust review process. We collect detailed information on this process for 370 merger transactions above \$100 million during the period from 2008 to 2014. Pursuant to the Hart-Scott-Rodino (HSR) Act of 1976, both the acquirer and the target submit their premerger filings to antitrust agencies shortly after the public announcement of the deal and wait a statutory period of 30 days for their review outcome. For favorable antitrust review outcomes, merging firms clear the antitrust review at the end of the waiting period (Natural Expiration, 139 deals), or antitrust agencies terminate the period even before the end of the waiting period (Early Termination, 138 deals). Deal failure risk associated with these deals is low – only 6 percent of them are later withdrawn and abandoned. In addition, a group of 31 firms receive an Early Termination or Natural Expiration decision after having withdrawn and refiled their HSR premerger documents to allow antitrust agencies extra time to review their case. We label them Pull&Refile. While maintaining a 6 percent withdrawal rate, Pull&Refiles prolong the deal completion time by 29 percentage points. Antitrust agencies initiate a full-scale investigation into the antitrust nature of 62 deals and request extensive additional information, a so-called Second Request. Out of the 62 deals with a Second Request, 24 deals are Challenged with a complaint filed against the merging parties, while 38 deals stay Unchallenged and achieve clearance to proceed without a filed complaint. Second Requests, both Challenged and Unchallenged, face substantially higher regulatory costs and risks. The antitrust agencies consider Challenged Second Requests as anticompetitive and, therefore, question sources of potential benefits from these mergers. However, Unchallenged Second Requests also face high costs associated with extra filing requests and longer time to deal completion. Second Requests take on average 237 days from announcement to completion, while it takes only 98 days to complete deals with favorable outcomes. Also, 19 percent of deals with Second Requests fail in comparison to the 6 percent for the favorable outcomes. We believe this detailed classification of antitrust review outcomes contributes to the understanding of the review process and associated costs and risks.

The antitrust review process is closely followed by the stock market. For the acquirers, receiving a Second Request is associated with a significant -2.8 percent abnormal return, while Early Terminations and Natural Expirations exhibit insignificant announcement abnormal returns. This is an economically sizeable market adjustment that reflects increased costs and risks of complying with Second Requests. Moreover, we show that the negative market reaction is more pronounced for deals for which the market imputed a higher probability of deal completion at the time of announcement and for deals with higher antitrust concerns.

Next, we explore acquirer lobbying activities before and after merger announcements and their link with antitrust review outcomes. We focus on lobbying because it is the main channel through which firms influence regulators and legislators. Corporate lobbying also has an advantage of being regularly reported on a quarterly basis and of being the largest part of corporate political activities (Kerr et al., 2014). Our analysis suggests that higher acquirer lobbying is associated with more favorable review outcomes and this relationship is mostly driven by long-term lobbying patterns rather than changes in lobbying immediately before deal announcements.

The last part of our analysis explores the value implications of lobbying for M&A deals. We show that the market recognizes the value of lobbying as means to manage regulatory costs and risks: acquirer and target-acquirer combined deal announcement abnormal returns are significantly higher for firms with higher disclosed pre-announcement lobbying. A one-standard-deviation increase in lobbying expenditure, reported over four quarters before the deal public announcement, increases the acquirer and combined abnormal returns by 1.3 and 2.3 percentage points, respectively. Further analysis reveals that the positive value consequence of lobbying applies only for deals with higher antitrust concerns. Lobbying also increases the (perceived) probability of deal completion at the deal announcement. Importantly, lobbying positively impacts acquirer returns only when it is likely to be used for the benefit of shareholders (in firms with strong corporate governance) rather than to pursue empire building behavior (in firms with weak corporate governance).

Our paper's contribution to the literature is threefold. First, it contributes to the literature on the impact of regulatory risks on individual firms and on their M&A activities. Regulatory risks are documented, for example, through negative value consequences of European regulator

interventions in announced business combinations (Aktas et al., 2004). We add to this literature by describing in detail the antitrust review process and its outcomes. Our contribution is in showing that the antitrust review process takes substantially longer for deals with Second Requests and that Second Requests increase the probability of withdrawal even if they are not officially challenged. Mehta et al. (2017) also study antitrust review outcomes, but only for completed deals. Moreover, we contribute to the literature by measuring the direct impact on shareholder wealth around the revelation of antitrust review outcomes and showing that the value loss for Second Requests, especially for deals with antitrust concerns, is up to a half of their announcement synergy gains. Previous studies document a negative effect of regulatory enforcement on the probability of future mergers in the same industry,⁴ but we document the existence of regulatory costs and risks at the firm level when receiving a Second Request. Given our results that regulatory risks in M&As have substantial economic consequences, we also contribute to the recent research on interim uncertainty (Bhagwat et al., 2016).

Second, we contribute to the growing literature concerning the impact of political economy on corporate finance. Recently, Akey (2015) shows a positive causal relationship between firm political donations to winning candidates and firm value, which suggests that corporate political donations are effective in influencing policy decisions and represent an investment in valuable political capital.⁵ Corporate lobbying is the largest and most common form of corporate political activity with total expenditures far outnumbering contributions to political action committees. Cao et al. (2018) shows a positive relationship between corporate lobbying and firm performance, but only for growth firms. However, Kerr et al. (2014) argue that corporate lobbying is highly persistent, which is a result of high costs of setting up lobbying operations and of the fact that benefits from lobbying increase with experience.

A stream of papers attempts to identify channels through which political connections, including lobbying, may enhance firm value. For example, politically connected firms manage to secure more government contracts, and their financial gains from the contracts are economically large (Tahoun, 2014; Goldman et al., 2013). Also, politically connected firms are more likely to receive government assistance or funding in periods of distress (Faccio et al., 2007; Duchin and Sosyura, 2012; Adelino and Dinc, 2014) or have better access to bank credit in countries with weaker institutions (Dinc, 2005; Khwaja and Mian, 2005; Claessens et al., 2008). Political connections may shield firms from regulatory actions (Correia, 2014; Lambert, 2018) and labor litigation costs (Unsal et al., 2017). Complementing this literature, we explore the effect of lobbying on firm value through corporate investment activities. Focusing on M&As, which are the largest and most value-consequential corporate investments with high regulatory risks and costs, we show that firms rely on their political connections through lobbying to mitigate regulatory uncertainty and, as a result, increase firm value.⁶ We also show that outside investors recognize the value of lobbying when reacting to deal announcements. Related to our analysis, Mehta et al. (2017) establish that political connections through political representation on influential congressional committees lead to more favorable antitrust review outcomes for completed deals. Ferris et al. (2016) document higher deal announcement abnormal returns for acquirers with politicians on their boards. Croci et al. (2017) show that politically connected target firms are less likely to be acquired and receive a higher takeover premium. Our analysis focuses on the antitrust review process in detail and explores pre- and post-announcement lobbying activity. Lobbying is supplementary to political representation on influential congressional committees or to political connections through board seats (Akey, 2015).

This stream of literature also points to the potential costs of political connections to firm value. For example, firms actively engaging in political activities tend to suffer weaker corporate

⁴Clougherty and Seldeslachts (2012); Seldeslachts et al. (2009)

⁵Other references include, for example, Goldman et al. (2008); Cooper et al. (2010); Amore and Bennedsen (2013).

⁶We mainly focus on the impact of the regulatory process on individual deals and firms. Research on general consequences for merger waves and economic surplus include Eckbo (1992); Eckbo and Wier (1985); Seldeslachts et al. (2009).

governance (Aggarwal et al., 2012) and political connections may allow firms to engage in unethical practices and misconduct (Yu and Yu, 2011; Borisov et al., 2016; Unsal et al., 2016; Lockhart and Unlu, 2018). We add to this literature by showing that lobbying increases acquirer returns only for firms with stronger corporate governance.

Finally, the current paper contributes to the literature on political risk in investment activities, which shows that regulatory risks discourage future merger activities (Seldeslachts et al., 2009) or that banks direct their merger activities to countries with lower regulatory frictions (Karolyi and Taboada, 2015). Adding to the previous evidence, we show that acquiring firms use lobbying in a strategic way to lower regulatory costs and risks associated with the antitrust review process. We show that firms actively manage regulatory risk in investment activities.

The paper is organized as follows. Section 2 describes our data and provides summary statistics concerning the antitrust review outcomes and lobbying activities around merger announcements. Section 3 shows our results and Section 4 concludes.

2. Data

We investigate a sample of economically significant US mergers. Our merger sample comes from the SDC M&A database and meets the following requirements: (i) the deal value is at least \$100 million and the percentage of shares sought in the deal is at least 50%; (ii) the announcement date is between January 1, 2008 and December 31, 2014; (iii) the acquirer and the target are publicly-traded US companies that can be matched to CRSP stock information at the time of the announcement and to Compustat, with at least one year accounting information before the merger announcement; (iv) both the acquirer and the target are not operating in the financial industry;⁷ (v) the deal is not a leveraged buyout, spinoff, recapitalization, self-tender, exchange offer, repurchase, acquisition of remaining interest, or a privatization. We focus on domestic US M&A deals so that all firms in our sample face the same regulatory framework. The sample period starts in 2008 due to the availability of quarterly lobbying data. In total, we end up with 432 deals that meet all the above requirements, but we are not able to find any information concerning the antitrust review process for 62 deals. Industry and year distributions of the final sample of 370 deals are reported in Table I.1 in the internet appendix. Appendix A briefly introduces the institutional background of the antitrust merger review process.

Panel A of Table 1 reports summary statistics for deal and acquirer characteristics. All variables are defined in Appendix B. The average transaction value is \$3 billion, which is significantly larger than an average transaction value of \$1.5 billion in Malmendier et al. (2016) representing a recent broad M&A sample, but comparable to large deals in Barraclough et al. (2013). The transaction value is 28 percent of the acquirer's market value. The average takeover premium is 42 percent relative to target stock price eight weeks before the public deal announcement, which is comparable to the literature. All cash deals represent 57 percent of our sample, which is more than for an average deal in Malmendier et al. (2016).

Using Hoberg and Phillips (2016) to define industry peers, 55 percent of target firms operate in the same product market as the acquirer and we label the deals as horizontal. Still, the expected change in product market concentration is very small. The pairwise similarity reflecting the closeness of target's and acquirer's product markets is 0.046, which is markedly smaller to the average pairwise similarity of 0.114 reported in Hoberg and Phillips (2010) for a general takeover sample. The difference suggests that large deals, which have to clear antitrust reviews, are tilted towards less closely related target-acquirer pairs. The difference may also stem from the fact that the merging firms are larger and more diversified. Fluidity measures product changes in peer firms and captures potential rather than existing competition (Boone et al., 2016). Target fluidity of 8.3 is slightly higher than the average of 6.9 in Hoberg et al. (2014), which indicates that target firms are operating in a changing and dynamic environment.

⁷M&As in financial industry need approvals from financial supervisory agencies, such as the Federal Reserve Board.

Insert Table 1 about here.

Deal hostility and bidding competition after the public announcement are low, but representative of general takeover population. 32 percent of acquirers have more than four anti-takeover provisions and are considered to have poor corporate governance. Termination fees that the target firm agrees to pay are not so common in our data set: on average only 2.8 percent of the deal value. Reverse termination fees promised by acquirers are even lower (1.3 percent of deal value on average). Around the deal announcement, target stock prices adjust by 31 percent, while the acquirer market reaction is virtually zero. Combined abnormal announcement effect is 4 percent. The average expected completion probability at the deal announcement is 95 percent. The acquirer statistics show that acquirers in our sample are large firms with a market-to-book ratio of 1.9.

2.1. The antitrust review process

In order to get a detailed picture of the antitrust review process, we collect information concerning individual submissions of HSR premerger filings, public announcements of antitrust review outcomes or announcements certifying substantial compliance with Second Requests. We search through related SEC filings as well as press releases on Factiva looking for keywords: “antitrust,” “second request,” “early termination,” “challenge,” and “HSR.” Most firms disclose information concerning at least one date related to their antitrust review because it concerns material information regarding the completion and timing of merger transactions. Appendix C illustrates our data collection using SEC filings and press releases. Out of 432 mergers, we have antitrust review information for 370 mergers.⁸ We identify Challenged deals by manually collecting merger information from the Hart-Scott-Rodino Annual Congress Report from 2008 to 2015, and the antitrust case filings on the DOJ and FTC websites.⁹ In congressional reports, the antitrust agencies describe every officially challenged deal during the current year. In total, we are able to identify 24 Challenged Second Requests.

Panel A of Figure 1 shows an overview of the antitrust review process with the median days taken in each step of the process across different review outcomes. On average, merger firms file the HSR documents 13 days after the public announcement date.¹⁰ In 46 deals, merging firms strategically pull the HSR premerger filing just before the expiration of the 30-day waiting period and refile it again to start a new 30-day waiting period. In most cases, firms explicitly state in their SEC filings that they do this to provide extra time to the antitrust agencies to review their case. This suggests that merging firms intentionally avoid Second Requests.

After submitting their HSR premerger filings, most firms clear the antitrust review without any additional request for information. In the first group, 156 deals receive an Early Termination within 12 days after they submit their HSR premerger filings. A majority of these deals (147) completes in additional 60 days, while the remaining nine deals are withdrawn in 78 days. The second set of 152 deals clears the antitrust review as the compulsory 30-day waiting period expires. This outcome is referred to as Natural Expiration. In this group, 143 deals are completed in additional 31 days, and nine deals are withdrawn in 49 days.

Insert Figure 1 about here.

The third group of 62 deals receives a Second Request – after the expiration of the 30-day waiting period, these deals are requested to provide additional detailed information. Out of these 62 deals, only 24 deals are officially Challenged as anticompetitive. An official complaint against

⁸The 62 mergers without any dates include nine deals with exemptions to submit HSR premerger filings and two deals with antitrust approvals before their deal announcements. The exemptions include acquisitions of raw lands, or foreign assets, of which sales in the US are no more than \$50 million.

⁹We consult <http://www.justice.gov/atr/cases/index.html> and <http://www.ftc.gov/enforcement/cases-proceedings> for DOJ and FTC, respectively.

¹⁰We have three mergers that file the HSR premerger filing before the public announcement, but only one deal has the review outcome revealed before the deal announcement.

the merging parties is filed with a relevant court. Only three of the 24 Challenged deals withdraw in 101 days, while the remaining 21 deals complete within 96 days from the Second Request outcome. The completed Challenged Second Requests usually pledge to divest some assets to address their antitrust issues. The remaining 38 Second Requests are Unchallenged: 29 deals manage to provide all relevant additional information and complete in 150 days, while nine deals withdraw in 135 days. Even though these Unchallenged deals do not get an official complaint, it takes them roughly three times as long to complete (or withdraw) than deals with Natural Expiration or Early Termination.

Panel B of Figure 1 focuses on the process of gathering extra information after a Second Request. Often, this process happens behind closed doors and not much information is released to the public domain. Therefore, we are able to collect information only on a subset of 19 deals with Second Requests (31 percent of all Second Requests) – ten Challenged and nine Unchallenged deals. On average, these firms announce a substantial compliance with their Second Request in 55 days from the initial outcome day. Subsequently, 14 deals are completed in 149 days (eight Challenged and six Unchallenged), while five deals are withdrawn after 65 days. These time statistics are perhaps not representative of all Second Requests, but suggest that compliance with a Second Request is costly not only for Challenged deals that are, for example, analyzed in Ferris et al. (2016), but also for Unchallenged Second Requests.¹¹

In summary, Figure 1 shows that most of the large deals in our sample manage to get a favorable outcome of Early Termination (42 percent) or Natural Expiration (41 percent). Only around 17 percent of deals receive a Second Request and only 39 percent of Second Requests are Challenged. Also, on average 8 percent of acquirers withdraw their offer; they abandon and do not complete their announced deal. Withdrawals happen across all three main review outcomes but are more common for Second Requests (19 percent) than for Early Terminations and Natural Expirations (6 percent each). Later in the analysis, we refer to this group of three review outcomes – Early Termination, Natural Expiration, and Second Request – as the first-stage review outcomes.

To complete the picture, we note that 18 of Early Terminations and 13 of Natural Expirations end up with these outcomes after strategic Pull&Refiles of their original HSR premerger filings. This means that they choose to get extra 30 days in the waiting period to get a favorable outcome. Because of the strategic nature of this move and its potential correlation with lobbying, we treat this group of 31 Pull&Refile deals as an extra category in our lobbying-spending analysis below.¹² We also keep track of Challenged and Unchallenged Second Requests as it is possible that their lobbying patterns are different. Altogether, we form a mutually exclusive *granular set of five review outcomes* – Early Termination (without Pull&Refile), Natural Expiration (without Pull&Refile), Pull&Refile (without Second Requests), Unchallenged Second Requests, and Challenged Second Requests – that reflects in-depth features of the US antitrust review process.

Panel B of Table 1 summarizes the review outcome frequencies. As mentioned above, we see that across all review outcomes, we have 8 percent of withdrawn deals. The frequencies for Early Terminations and Natural Expirations (37 and 38 percent, respectively) are slightly smaller compared to Figure 1 because we report Pull&Refile as a separate outcome category with a frequency of 8 percent (31 deals). 17 percent of deals receive a Second Request, but only 7 percent (24 deals) are Challenged. The remaining category of 38 deals (10 percent of the sample) represents Unchallenged Second Requests. On average, it takes 123 calendar days from the public announcement to deal completion or withdrawal, while Malmendier et al. (2016) report only 109 days for an average

¹¹Collected SEC filings describe the process of compliance as very time-consuming and involving disclosure of proprietary information. For example, Avis Budget Group describes in its SEC filings for the acquisition of Dollar Thrifty that it “submitted over a million pages of documents and vast quantities of data in response to the FTC’s Second Request.” Gotts (2006) (page 154) describes that a Second Request “consists of both document requests and interrogatories. . . . It is the company’s responsibility to gather the necessary information and to prepare a narrative response. Gathering the information and documents called for by a Second Request can be time-consuming and expensive for the parties. Business people often react initially that it would be impossible to comply.”

¹²Note that the remaining 15 deals that strategically refile their HSR premerger documents end up with a Second Request. As they fall equally across Challenged and Unchallenged deals and do not seem to differ from the rest of Second Requests, we decide to pool them with the other Second Requests.

sample without antitrust issues.¹³

2.2. Lobbying data

One of the aims of this paper is to explore effects of corporate lobbying in the context of antitrust review outcomes. We focus on corporate lobbying because it constitutes a primary channel for influencing politicians and regulators and the total lobbying expenditures far exceed corporate contributions to political action committees (Kerr et al., 2014; Chen et al., 2015; Cao et al., 2018). Moreover, lobbying expenditures are reported quarterly and allow, therefore, for a timely analysis.

Our lobbying data come from the Senate Office of Public Records (SOPR) and the Center for Responsive Politics (CRP). CRP uses publicly-available lobbying disclosure data filed by lobbyists from the SOPR, but standardizes company names and identifies ultimate parent firms for individual lobbying clients. The database of lobbying disclosures contains lobbying income reports of individual lobbyists from 1999 until the present. Before 2008, the individual reports are filed on a semi-annual basis, but since approval of the Honest Leadership and Open Government Act in 2007 the reports are quarterly. We match the lobbying client names with firm names.¹⁴

Panel C of Table 1 shows summary statistics for acquirer quarterly lobbying expenditures. To start with, the active lobbyist dummy shows that almost 80 percent of all acquirers have lobbied at least once over the period from 2007 until 2015. Still, 34 percent of acquirers do not have any lobbying experience for at least 12 quarters (3 years) before quarter -4 relative to the current deal announcement. Note that this does not necessarily mean that their lobbying is zero starting with quarter -4 . On average, acquirers spend on lobbying around \$3 million over the four quarters before as well as four quarters after the deal announcement. This means that they spend on average \$750 thousand on lobbying per quarter. When we scale the lobbying dollars by the acquirer market capitalization (lobbying ratio), we see that acquirers do not spend a large fraction of their value on lobbying: on average 1.5 and 1.6 basis points of their market capitalization before and after the deal announcement, respectively. The lobbying dummy variables indicate that 64 and 67 percent of acquirers spend a positive amount on lobbying during the year before and after the deal announcement, respectively. The disclosed lobbying ratio adjusts for lobbying expenditure that has not been reported before the deal public announcement so that it reflects only information available to the market at the time. It is slightly smaller than the pre-announcement lobbying ratio, which suggests delays in lobbying expenditure reporting. Lobbying spending in our sample is larger relative to other studies in the literature: only 12 percent of firms in Chen et al. (2015) spend on lobbying in 2005 and Adelino and Dinc (2014) report average lobbying expenditures of \$437 thousand in the first quarter of 2009 in their full sample. The differences reflect that our acquirers are larger firms.

In order to reflect on acquirers' lobbying activities in a context of lobbying activities of other firms in the market, Figure 2 shows the time pattern for the lobbying ratio eight quarters before and eight quarters after the deal announcement date for acquirers and their matched firms. We see that acquirers increase their lobbying expenditures over the eight quarters before the deal announcement and then keep them high for several quarters after the announcement, while their peers do not.¹⁵ This development suggests a strong link between lobbying expenditures and firms'

¹³We have to adjust their number because it is reported in trading rather than calendar days.

¹⁴CRP often identifies the acquirer as the parent of the target even for filings before the acquisition. We check our matching results with the original filing records, location information of lobbying clients from SOPR, and historical location and names of firms to make sure that we correctly match lobbying filings to firms. For lobbying filings filed under the target name one year post deal-completion dates, we allocate the lobbying expenditures to the acquirer assuming that the target firm has operated as a subsidiary of the acquirer. Following Adelino and Dinc (2014), we assume that the lobbying expenditure is zero for firms that do not have a matching lobbying client in the lobbying data.

¹⁵We test for statistical significance of the differences between acquirers and their peers in each quarter relatively to the announcement quarter ($t = 0$). The difference is significant at the 10-percent level at $t = -4, -2, -1, 0, 2, 3$. If we test on a yearly/four-quarter level, acquirers lobby significantly more than their peers both in the year before (quarters -4 to -1) and after the deal announcement (quarters 0 to 3). But they do not lobby significantly more than their peers over the quarters -8 to -5 or over the quarters 4 to 7.

takeover activities for the year before and the year after the deal announcement.

Insert Figure 2 about here.

In order to provide a full picture of lobbying around merger announcements and control for possible coordinated actions by firms to build political networks (Akey, 2015), we also consider political action committee (PAC) contributions and ownership by politicians. The average PAC contributions are only \$7 thousand, and only 37 percent of our acquirers do this type of lobbying. Ownership by congressmen on the antitrust subcommittees is very skewed – only 14 percent of acquirers do have any politicians as owners and the value of their stake is only \$19 thousand. Similar to Chen et al. (2015), we see that these extra channels of political influence are less important than direct lobbying expenditures that can be fine-tuned more specifically around the antitrust review dates. The last set of statistics in Panel C of Table 1 refers to target lobbying variables. Target firms lobby less frequently compared to the acquiring firms: only 27 (24) percent of target firms exhibit positive lobbying expenditures compared to 64 (67) percent of acquiring firms over four quarters before (four quarters after) the deal announcement. The main reason for this larger difference is most likely the firm size – larger firms lobby more (Kerr et al., 2014).

3. Results

3.1. Antitrust review costs and risks

In this section, we explore acquirer costs and risks associated with the antitrust review process. As a first step, we apply the event study methodology around the review outcome dates to detect the markets' evaluation of the antitrust review costs and risks. In this part of the analysis, we focus on the three first-stage review outcomes as shown in Figure 1: Early Termination, Natural Expiration, and Second Request. At this stage, we do not distinguish Pull&Refile deals among Early Termination and Natural Expiration deals. We also pool Challenged and Unchallenged Second Requests into one group of Second Request. The first-stage review outcomes are clearly communicated and, therefore, easily observed and interpreted by market participants. In addition, these three first-stage review outcomes all materialize within a fixed time frame. Firms usually file their HSR premerger documents shortly after the deal public announcement and normally receive the outcome by the end of the 30-day waiting period. The three first-stage review outcomes allow us to directly compare the value impact of Second Requests versus the favorable outcomes of Early Termination and Natural Expiration.

The market reaction around the review outcome date reflects the adjustment to firm value based on new information revealed through the review outcome. The price adjustment contains two essential elements – an adjustment to the deal completion probability and an adjustment to the expected takeover gain or compliance cost. We conjecture that unexpected Second Requests increase the compliance costs and the interim uncertainty of announced but not yet completed deals. This is because of extra concessions merging firms may need to agree to, extra documents merging firms are requested to provide, and the time it takes to do so. Moreover, extended time to completion may be associated with other related costs, such as costs of keeping financing for the deal in place and keeping anxious employees and customers on board (Bhagwat et al., 2016). We should, therefore, see the unexpected costs and risks to be reflected in negative abnormal returns for Second Requests relative to the two more favorable review outcomes.

We calculate acquirer, target and combined abnormal returns for 41 trading days around the review outcome revelation dates using the Fama-French three-factor benchmark.¹⁶ For some deals, this (−20, +20) review outcome event window may overlap with the deal announcement and bias

¹⁶We use a 254-day estimation window that ends eight weeks prior to the deal public announcement and require at least 100 observations in the estimation window. For robustness, we also use the market-model benchmark and report the results in Table I.2 in the internet appendix.

our abnormal returns. In order to mitigate this deal announcement effect, we exclude all observations for which the $(-20, +20)$ review outcome event window overlaps with the $(-5, +5)$ deal announcement event window. Figure 3 shows the development of abnormal returns in the window of $(-20, +20)$ around the review outcome dates. We see that stock prices evolve differently across the three first-stage antitrust review outcomes. Uncertainty is resolved the fastest for Early Terminations, which is reflected in stable abnormal returns especially for acquirers and combined firms. Natural Expirations and Second Requests first drop somewhat together, but then Natural Expirations stabilize, while Second Requests drop significantly further. This suggests that the market is reassured about a positive outcome in the days before HSR outcome revelation, while it becomes more aware of negative consequences for eventual Second Requests.¹⁷ We also see that the negative review outcome effect for Second Requests is not reversed within 20 days after the outcome date.

Insert Figure 3 about here.

Table 2 confirms these conclusions. Panel A reports the acquirer, target, and combined average abnormal returns across the three review outcomes for the 7- and 12-day windows around the review outcome dates: $(-5, +1)$ and $(-10, +1)$. We do not see any significant stock price movement for Early Terminations and Natural Expirations. In contrast, abnormal returns for Second Requests are all negative. Over the 12 days around the Second Request outcome date, abnormal returns for both acquirer and target companies drop by at least 2.6 percent. The drop is statistically significant and is also reflected in a significant drop for the combined entity. Its economic significance is also high given the 0.5 and 4.3 percent deal announcement acquirer and combined abnormal returns, respectively. The last two columns in Panel A of Table 2 show that the drop in abnormal returns for Second Requests is statistically significantly different from the change for the other two favorable outcomes combined.

Insert Table 2 about here.

In Panel B of Table 2, we explore whether the market evaluation of extra costs and risks varies with deal characteristics. As in Panel A, we contrast Second Request versus the two favorable outcomes of Early Termination and Natural Expiration together, but now conditional on high versus low values across different deal characteristics. First, we partition across high versus low values of expected completion probability at the time of the deal announcement. The expected completion probability compares the initial offer price with the target stock price just after the public announcement. The closer the market's assessment of target value (conditional on all public deal-related information) to the offer price, the higher is the expected probability of the target being successfully acquired (Samuelson and Rosenthal, 1986). We conjecture that the market reaction to a Second Request revelation is more (negatively) pronounced when the adverse outcome is less expected at the deal announcement – that is when the initial assessment of the completion probability is high. The first set of partitions in Panel B confirms this conjecture. We see that the difference in the market reaction between Second Request and the favorable outcomes is significantly negative for deals with a high initial probability of completion (-3.77 and -4.09 percentage points for the acquirer and the combined firm, respectively). The more negative abnormal returns reflect an increase in the failure probability and an upward adjustment in compliance costs.

The other two partitions in Panel B focus directly on the adverse review outcome lowering expected deal benefits and increasing compliance costs. Horizontal mergers are associated with higher merger synergies due to higher asset complementarities between targets and acquirers (Hoberg and Phillips, 2010). Similarly, expected synergies are also higher for firms with a higher expected increase in product market concentration (high expected Δ HHI). If Second Requests are associated

¹⁷We find anecdotal evidence that merging firms issue reassuring public statements expressing their expectations that the review process will be favorable. Also, the antitrust agencies often contact third parties to resolve sticky issues, which might leak to the public domain.

with more compliance concessions concerning the particular fit in assets, the effect of a Second Request revelation should be more negative for horizontal mergers and when the expected change in product market concentration is larger. Our conjecture is confirmed in the data – for both horizontal and high expected Δ HHI deals, the acquirer abnormal returns for Second Request are significantly more negative than for the two favorable review outcomes. The difference in the market reaction for acquirers is -2.53 and -2.77 percentage points for horizontal and high expected Δ HHI mergers, respectively. The market participants adjust their expectation of deal synergies downwards and compliance cost upwards.

As a next step of the regulatory cost analysis, in Table 3 we use the number of days to complete a deal and the probability to withdraw a takeover offer to measure the review process costs and risks and regress them on review outcomes. In all specifications, we control for a set of deal and firm characteristics and include time and industry dummies. Specifications 1 and 2 in Panel A with the log of days to complete show that Second Requests take longer time in the merger process than the favorable outcomes of Early Termination and Natural Expiration. The coefficient for the Second Request dummy is positive and significant at the 1-percent level. The economic effect is also large. In specification 1, Second Request deals take 140 percent ($e^{0.877} \times 100\% - 100\%$) longer to complete than the reference category of favorable outcomes. The effect is somewhat smaller when controlling for deal characteristics in specification 2: Second Request takes double the time of favorable outcomes.

Insert Table 3 about here.

In specifications 3 and 4, we partition all Second Requests into Challenged and Unchallenged Second Requests. We see that both of the coefficients are significant at the 1-percent level and similar in size. Taking the coefficient estimates in specification 4 with a full set of control variables, we see that Challenged Second Requests take 110% and Unchallenged Second Requests 100% longer than the favorable outcomes. The last two specifications include the granular set of review outcome dummy variables with Natural Expiration as the reference category. The coefficient for Early Termination is the smallest, and the effect is not statistically or economically significant. It indicates that Early Terminations take as long to complete as Natural Expirations ($e^{0.019} = 1.02$). Pull&Refiles, Unchallenged and Challenged deals take 29%, 107% and 117% longer, respectively, than Natural Expiration and all the effects are statistically significant. The increase between Pull&Refile and the two types of Second Requests is economically large. In summary, our results suggest that Second Request outcomes, regardless whether or not they are subsequently Challenged, are associated with longer time to complete. It is reasonable to argue that longer time to complete is strongly associated with higher regulatory costs due to higher interim uncertainty. This is important because focusing only on Challenged deals (as for example in Ferris et al., 2016) may not fully capture regulatory costs and all costly review outcomes.

Panel B of Table 3 shows average marginal effects for logistic regressions with the dependent variable equal to one for all withdrawn deals and zero for all completed deals. The first two specifications show that Second Requests increase the probability of a withdrawal by at least 5 percentage points, significant at the 10-percent level. This a sizable effect given the unconditional probability of withdrawal is 8 percent. Specifications 3 to 6 suggests that both Challenged and Unchallenged Second Requests are associated with higher probability of withdrawals, though Challenged deals suffer higher standard errors and, therefore, their marginal probabilities are not significant.¹⁸ We conclude that Second Requests are associated with higher deal failure probability.

3.2. Lobbying and review outcomes

In this section, we explore the dynamic relationship between lobbying and review outcomes. Figure 2 shows that acquirers increase their lobbying expenditure around deal announcements. It is likely that lobbying strategies change over the merger process because merging parties receive

¹⁸It is also possible that acquirers decide to withdraw before they are Challenged.

more precise information about their deals and the antitrust review process as time passes. To capture the dynamics of lobbying, we differentiate the effect of lobbying expenditure before and after deal announcements.

We first run multinomial logistic regressions that assess the link between the pre- and post-announcement lobbying spending by acquirers and the probability of each of the five mutually-exclusive granular antitrust review outcomes – Early Termination, Natural Expiration, Pull&Refile, Unchallenged and Challenged Second Request.¹⁹ Distinguishing Challenged Second Request is in line with the literature (Ferris et al., 2016). However, in contrast to the literature, we highlight the need to differentiate the four review outcomes that are not challenged. Unchallenged Second Request is associated with long delays in completion time. Pull&Refile represents a very specific category, where the merging parties strategically play with the HSR premerger filing process and clear the antitrust review with a delay. Early Termination is associated with few anticompetitive concerns and achieves antitrust review clearance fast.

Given that we have a set of five outcomes that are not necessarily ordered with equal distances between them, a multinomial logistic model fits the setup better than an ordered probit.²⁰ We estimate the model using Natural Expiration as the reference category and include a full set of control variables – target pre- and post-announcement lobbying dummies, alternative acquirer political connections, deal characteristics, product-market conditions, and acquirer characteristics. Our results are robust to excluding the target lobbying dummies and alternative acquirer political connections from the model. We also include Fama-French five-sector and year fixed effects. Table 4 reports the average marginal effects of the lobbying variables on the probability of all five granular review outcomes. The average marginal effects for control variables are reported only in Panel A to save on space.

Panel A of Table 4 focuses on the pre-announcement lobbying – acquirer lobbying expenditure for the four quarters just before the deal announcement scaled by the acquirer market capitalization. We can see that the average marginal effect is significantly negative for Challenged Second Request and significantly positive for Unchallenged Second Request, Pull&Refile and Natural Expiration. This suggests that high pre-announcement lobbying is associated with a higher probability of Unchallenged Second Request, Pull&Refile and Natural Expiration and with a lower probability of Challenged Second Request. Pull&Refile and Natural Expiration are favorable review outcomes. Also, Unchallenged Second Request represents a more favorable review outcome than Challenged Second Request.²¹ In economic terms, a one-standard-deviation increase in the lobbying ratio of 3.8 basis points (as reported in Table 1) is associated with a change of +4.2, +3.0, and +3.8 percentage points in the probabilities of Unchallenged Second Request, Pull&Refile, and Natural Expiration, respectively. This is large relative to the unconditional probabilities of 10.3, 8.4, and 37.6 percent, respectively.

Insert Table 4 about here.

The average marginal effect for the pre-announcement target lobbying dummy shows that also target lobbying matters for antitrust review outcomes, but only complementary to acquirer lobbying activities. We see that the only significant effect of target lobbying is through reducing the probability of Challenged outcomes. This result complements Croci et al. (2017) who show that politically connected target firms are less likely to be acquired and receive higher takeover premium.

¹⁹Their unconditional average probabilities are reported in Panel B of Table 1.

²⁰Given that we have five alternative outcomes, a multinomial probit model is infeasible due to its limitations and complexities of joint probability functions (see Wooldridge, 2002, p. 502). We are unable to achieve converged estimations with a full set of controls. Multivariate probit models with fewer control variables yield similar results.

²¹Unchallenged Second Requests are associated with higher withdrawal rate, which may contradict their lower review costs. Panel A of Table I.3 in the internet appendix reconciles this issue by further splitting Unchallenged Second Requests into Withdrawn versus Completed Unchallenged Second Requests. This means that we run multinomial logistic regressions with six instead of five alternative review outcomes. The results confirm that the positive effect of pre-announcement lobbying is not driven by Withdrawn Unchallenged Second Requests.

Panel B of Table 4 shows the estimated average marginal effects for the post-announcement lobbying ratio, which is over four quarters including the announcement quarter. Note that this period overlaps with the antitrust review process. We see that Early Termination is significantly more likely when the post-announcement lobbying is low, while Pull&Refile and Unchallenged Second Request are significantly more likely when the post-announcement lobbying is high.²² These results suggest that acquirers are contemporaneously responsive to their deal situation and to new information arriving as the review process moves on. Early Terminations do not need any further lobbying because they raise few antitrust concerns. However, we see high lobbying expenditures for deals with significant antitrust concerns and for deals with room to avoid an official challenge. The post-announcement lobbying results also highlight the Pull&Refile outcome as a special category compared to Natural Expiration and Early Termination. For this category, acquirers lobby most actively during the antitrust review process to achieve clearance without a Second Request.

To better understand the dynamics of lobbying around deal announcements, we explore the effect of post-announcement lobbying conditional on low versus high pre-announcement lobbying. Accordingly, the model in Panel C includes two interaction terms for post-announcement lobbying ratio with low and high pre-announcement lobbying dummies.²³ To start with, the results show that higher pre-announcement lobbying is associated with lower probabilities of Challenged Second Request and Pull&Refile and higher probabilities of Natural Expiration and Early Termination. This is consistent with Panel A, except for Pull&Refile. Interestingly, the two post-announcement marginal effects for Pull&Refile are the most pronounced: the marginal effect is much stronger when pre-announcement lobbying is low (0.167) than when it is high (0.008). This suggests that firms with low pre-announcement lobbying are catching up and lobby more. The post-announcement lobbying follows the lack of lobbying before the announcement. Finally, we also see that high post-announcement lobbying for Unchallenged Second Requests follows after high pre-announcement lobbying, which is not the case for Challenged Second Requests. Lobbying associated with Challenged Second Requests seems to be quite low.

Table 5 reports results for logistic models equivalent to the multinomial logit models in Table 4. In particular, we contrast Challenged Second Request in specifications 1-3 and Pull&Refile in specifications 4-6 to all other outcomes grouped together. We employ the same set of control variables but again do not report them to save on space. Specification 1 shows that higher pre-announcement lobbying is associated with lower probability of Challenged Second Requests, which is in line with the multinomial logit results. The post-announcement lobbying in specification 2 is not significant. Specification 3 shows that Challenged Second Requests are associated with lower pre-announcement lobbying, and the effect of post-announcement lobbying is positive for deals with low pre-announcement lobbying but negative for deals with high pre-announcement lobbying. This suggests that firms with official challenges catch up with their lobbying post announcement in order to manage the complicated review process and to complete their deal successfully. Specifications 4-6 contrast Pull&Refile with all other review outcomes and confirm that Pull&Refile represents a special category of favorable outcomes when acquirers lobby more after the deal announcement to avoid a costly adverse outcome.²⁴

Insert Table 5 about here.

In summary, the results in this section suggest that high pre-announcement lobbying is associ-

²²Panel B of Table I.3 in the internet appendix shows that the positive effect for Unchallenged Second Requests is due to the completed deals.

²³The cut-off point is based on the median value of pre-announcement lobbying ratio. This specification imitates exploring the post-announcement lobbying effect in two separate subsamples. We estimate the average marginal effects and standard errors for the interaction terms according to Ai and Norton (2003). Since the procedure suggested in Norton et al. (2004) only applies to regressions with one interaction term, we follow Berger and Bouwman (2013).

²⁴Table I.4 in the internet appendix shows a direct effect of lobbying on the probability of withdrawn deals and the number of days to completion. We observe a significantly negative effect of pre- and post-announcement lobbying on the probability of withdrawals and a positive effect of post-announcement lobbying on the number of days to complete.

ated with more favorable outcomes. Acquiring firms seem to lobby preemptively to accommodate the expected antitrust review process. Pull&Refile clearly stands out as a special group that manages to avoid a Second Request by strategically pulling the HSR pre-merger filing and engaging in significantly high lobbying concurrently with the antitrust review process. Acquirers receiving Challenged Second Requests seem to lobby less the year before their deal announcement, but intensify their lobbying as they get drawn into the antitrust review process, especially when their pre-announcement lobbying is low.

Table 6 controls for potential biases due to identification issues. When considering the relationship between lobbying expenditures and antitrust review outcomes, due to firms thinking and behaving in a strategic way and triggering lobbying based on expectations of review outcomes, causality may flow both ways. It is likely that acquiring firms increase their lobbying expenditures and then, as a result, receive a favorable review outcome. It is, however, equally likely that the expectation of a “rough ride” triggers higher lobbying expenditures implying causality from (expected but then also realized) outcomes to lobbying. Nevertheless, our research question does not necessarily conjecture a causal relationship between lobbying and review outcomes. It encompasses both preemptive lobbying reflected in the link from lobbying to review outcomes as well as triggered lobbying with its reverse causality.

Still, we need to consider potential biases due to omitted variables or unobserved heterogeneity that may cause correlation between our lobbying measures and the error term or represent a source of spurious correlation. To remove any time-invariant industry characteristics causing spurious correlation between lobbying expenditure and review outcomes, we include industry fixed effects. As a result, the estimated coefficients reflect correlations between deviations from industry means. Similarly, to exclude cases of spurious correlation due to shocks to all firms at the same point in time, like the financial crisis, we include also time fixed effects. To further control for omitted variables that may drive both lobbying and antitrust review process, we use the instrumental-variable approach.

The usual challenge is to find a suitable instrument that is correlated with our lobbying measures but is correlated with review outcomes only indirectly through the pre- and post-announcement lobbying. We opt for past lobbying expenditure (scaled by market capitalization) as our instrument.²⁵ Lobbying expenditure is highly persistent (Kerr et al., 2014), which ensures that the relevance condition of a strong correlation between the instrument and our main explanatory variable holds. To ensure the exclusion condition that past lobbying is not directly related to antitrust review outcomes of the current merger, we require a one-year gap between the fourth quarter before the deal announcement and the past lobbying instrument. In other words, the past lobbying ratio, our instrumental variable, covers lobbying by the acquirer over quarters $(-12, -9)$ relative to the deal announcement. The median number of calendar days from the deal initiation to the public announcement is around 209,²⁶ which is within the four quarters, $(-4, -1)$, covered by the pre-announcement lobbying. This means that lobbying within quarters $(-12, -9)$ is most likely not directly associated with the future M&A deal (and its antitrust review process), because the deal is not yet planned or expected that far back in time. Therefore, past lobbying should reflect exogenous reasons for lobbying that are not directly related to a particular merger case.

Insert Table 6 about here.

Table 6 reports two-stage IV probit models with Challenged Second Request and Pull&Refile as dependent variables. The first stage confirms that past lobbying is highly correlated with pre- and post-announcement lobbying. Concerning the second stage, we see that for Challenged Second Request the average marginal effect of pre-announcement lobbying increases both in magnitude

²⁵Igan et al. (2012) argue for the distance to Washington D.C. as a suitable instrument for lobbying in a cross-section of firms. Unfortunately, the distance to Washington D.C. is in our case very weak in correlating with acquirer lobbying ratio perhaps because we have only large firms that always lobby more.

²⁶This statistic is computed using data in Fidrmuc and Xia (2018) for bidder initiated deals with transaction value larger than \$100 million over 2005-2011.

and significance when compared with the non-IV results in Table 5. The post-announcement lobbying effect remains insignificant. For Pull&Refile, the exogenous pre-announcement lobbying effect is not significant, but we see a significant positive effect for post-announcement lobbying. In summary, the IV approach highlights the fact that acquiring companies in their antitrust reviews benefit from time persistent lobbying – it is the companies with historically high lobbying that benefit from favorable review outcomes. Or, looking from the other side, companies with low past lobbying are more likely to face a Challenged review. Historically high lobbying expenditure is also important for Pull&Refile. It is econometrically unfeasible to apply the IV approach for the five-outcome multinomial logit model reported in Table 4, but we believe that the results for the binomial IV probits in Table 6 provide enough evidence that our setup does not suffer the omitted variable bias.

3.3. Value implications of lobbying

In this section, we show value consequences of lobbying. In particular, we conjecture that the market takes acquirer lobbying into account when assessing value consequences of announced mergers. If higher lobbying is associated with more favorable review outcomes that are in turn less costly and less risky for acquiring firms, this should also show in differential market evaluations of deals on their announcement. Table 7 shows the effect of pre-announcement lobbying on acquirer and combined deal announcement abnormal returns over the $(-1,+1)$ event window. The last column concerns the lobbying effect on the expected completion probability, which compares the initial offer price with the target stock price just after the public announcement. Due to delays in reporting of lobbying expenditures, we consider only lobbying expenditure based on information available to investors at the time of the deal announcement. Therefore, the disclosed lobbying ratio cumulates all acquirer lobbying expenditures disclosed during the four quarters before the deal public announcement, $(-4,-1)$, and scales it by the market capitalization as of eight weeks before the announcement.

Insert Table 7 about here.

Table 7 shows, in line with our conjecture, that higher acquirer disclosed lobbying is associated with significantly higher acquirer (column 1) and combined (column 6) announcement abnormal returns. Specifications 2 to 5 further suggest that the positive valuation effect of lobbying for acquiring firms is significant only for horizontal deals and deals with high expected change in market concentration (high expected Δ HHI) – that is for deals with higher antitrust concerns, where lobbying is expected to be more valuable. The economic significance of the lobbying effects is illustrated based on a one-standard-deviation increase in the lobbying ratio (3.3 basis points as reported in Table 1), which results in a 1.3 and 2.3 percentage points increase in announcement abnormal returns for the acquirer and combined firm, respectively. The effect of lobbying on the expected completion probability in the last specification is also significantly positive suggesting that lobbying increases the market’s perception of completion probability.

The results in Table 7 are, however, also in line with an alternative explanation that acquiring firms simply lobby more for deals that create shareholder value (good deals). In other words, we find a positive link between abnormal returns and lobbying because acquiring firms with high synergies lobby more and not because lobbying expenditure as such adds value for shareholders. Although we are not able to fully rule out this alternative explanation, we show further evidence supporting our interpretation for the link between lobbying and acquirer shareholder wealth. First, as discussed above, columns 4 and 5 show that the positive correlation between the market reaction and lobbying expenditure is strong exactly for deals with large expected change in market concentration. These are deals with potentially higher antitrust issues and likely to be associated with higher antitrust costs and risks, which usually decrease deal value to shareholders. Moreover, the coefficient for the expected change in HHI in column 1 is insignificant, suggesting that shareholders do not value market power increasing deals. These results support our interpretation – lobbying accommodates a smoother antitrust review process especially for deals with higher antitrust issues, which is associated with extra value to shareholders. Our second argument concerns column 7 showing

that lobbying expenditure is positively associated with the expected completion probability. The completion probability is highly dependent on the antitrust review outcomes (Table 3), which suggests that shareholders value lobbying because of its link to more favorable review outcomes with higher success rates. Also, Table I.4 in the internet appendix shows that acquirers who lobby three years before the deal announcement benefit from a lower probability of deal withdrawal. The IV analysis in Table I.4 highlights an important role for long-term, persistent lobbying in achieving deal success but also highlights lower effectiveness of lobbying around deal announcements for firms without established lobbying relationships (on the extensive margin). This further supports our interpretation of results in Table 7.

Next, we attempt to reconcile a conjecture suggested in the literature that lobbying may also be associated with poor corporate governance and unethical practices (Aggarwal et al., 2012; Borisov et al., 2016; Unsal et al., 2016; Lockhart and Unlu, 2018). Managers in poorly-governed firms may (mis)use corporate political resources for private benefits, which in our setup may imply that lobbying facilitates empire-building mergers that destroy rather than create value for their shareholders. Therefore, we want to differentiate the value effect of lobbying in poor versus good corporate governance acquiring firms. In Table 8, we include a dummy variable indicating entrenched management teams and partition the disclosed lobbying effect in entrenched versus not entrenched acquiring firms. Following Bebchuk et al. (2009), we identify a firm as entrenched if it has at least four from the following six anti-takeover provisions: staggered board, limits to amend bylaws, limits to amend charter, super-majority, golden parachutes and poison pill. Our sample includes 32 percent of entrenched acquirers.

Insert Table 8 about here.

The entrenched acquirer dummy is not significant. However, the disclosed lobbying effect is significant only in firms that are not entrenched, while it remains insignificant for entrenched acquirers. The market does not recognize lobbying in entrenched firms as a value-increasing mechanism, which is consistent with the literature (Aggarwal et al., 2012; Borisov et al., 2016). We can also see that the positive effect of lobbying on acquirer announcement abnormal returns in well-governed firms is larger than the effect in Table 7.

As a final point, we note that our results raise an intriguing question of why every acquirer does not lobby more. We believe the answer to this question is linked to Kerr et al. (2014) and Drutman (2015). They argue that lobbying is highly persistent (especially on the extensive margin) and that the high state dependence in lobbying is due to high costs of setting up corporate lobbying activities and the fact that benefits to corporate lobbying increase with experience. In our case, acquiring firms that have long-term experience with corporate lobbying activities do intensify their lobbying to improve their chances of favorable antitrust review outcomes (lobbying on the intensive margin), but firms without past lobbying (lobbying on the extensive margin) cannot use this channel. In other words, high entry costs to lobbying mean that not all acquiring firms can use corporate lobbying around their M&A deals. Our IV regressions in Table 6 are in line with this explanation.²⁷

3.4. Other lobbying measures

In this section, we explore other alternative measures of lobbying expenditure. First, we differentiate between lobbying that targets government agencies with versus without possible influence over the antitrust review process. The Senate, House of Representatives, Department of Justice and Federal Trade Commission are identified as agencies with possible influence. Unrelated agencies are listed in Appendix D. The results replicating Table 4 with multinomial logistic regression for the set of five antitrust review outcomes are reported in Panels A and B of Table I.6 in the internet

²⁷We also note that further OLS tests in Table I.5 in the internet appendix suggest that higher lobbying is not associated with anti-competitive outcomes.

appendix. In line with our expectations, only related lobbying to agencies with potential influence affects antitrust review outcomes, while unrelated lobbying does not show significant effects.

Table I.6 further considers (i) lobbying expenditure scaled by the total assets instead of market capitalization in Panel C; (ii) acquirer lobbying dummy in Panel D; and (iii) lobbying expenditure limited to the quarter just before the deal announcement and in the announcement quarter instead of four quarters both sides of the announcement in Panel E. All these results are consistent with our conclusions in section 3.2. Note that Table I.7 provides summary statistics for the alternative lobbying measures. Using the same alternative lobbying measures, Table I.8 supports our conclusions in section 3.3 concerning value implications of lobbying.

4. Conclusions

This paper investigates in detail the costs and risks associated with the antitrust review process following M&A announcements and the role of lobbying for the review outcomes. In the US, M&As go through an elaborate regulatory review process and need to be approved by antitrust agencies. This process exposes merging firms to regulatory risks and costs that firms aim to mitigate via the use of political connections. Our analysis uses lobbying expenditure as it represents a prime measure of political connections. Moreover, lobbying expenditure is reported at a quarterly frequency and therefore allows for a timely analysis of the question of whether and how political connections influence corporate investments when firms face regulatory costs and risks.

First, we argue and show that these regulatory risks and costs are economically significant. Merging firms bear direct costs (filing costs, costs of lawyers, in case of deal failure the payment of breakup fees) and indirect costs (getting stuck in lengthy review processes, interim uncertainty that makes it difficult to keep the financing for the deal in place and/or to retain anxious employees and customers), which increase with adverse review outcomes. We show that receiving a Second Request, an adverse review outcome that requires a full-scale investigation into the antitrust nature of the deal, triggers a significant and negative stock-price reaction of -2.8 percent for the acquirer. In addition, adverse review outcomes are associated with lengthier regulatory review processes and a higher probability of deal failure. Second, we show that higher pre-announcement lobbying expenditure is associated with more favorable review outcomes. At the same time, acquiring firms are more likely to step up their lobbying expenditure in the post-announcement period in case they run higher risk of getting adverse review outcomes. Third, higher disclosed acquirer lobbying expenditure before deal announcement is associated with significantly higher acquirer and combined announcement abnormal returns. This suggests that the market acknowledges lobbying as a value increasing factor. We also show that the positive value effect of lobbying applies only for deals with higher potential regulatory risks and costs – horizontal mergers and deals with high expected change in product market concentration. At the same time, lobbying positively impacts returns only when it is likely to be used for the benefit of shareholders (in firms with strong corporate governance) rather than to pursue empire-building behavior (in firms with weak corporate governance).

Taken together, our paper documents the regulatory costs and risks in M&As, shows evidence suggesting that firms actively manage these regulatory risks, adds to the understanding of the merger review process and provides further insights into the benefits and costs of corporate lobbying.

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Appendices

Appendix A Regulatory background

According to US laws, the antitrust agencies' objective is to "identify and challenge competitively harmful mergers while avoiding unnecessary interference with mergers that are either competitively beneficial or neutral" (see DOJ and FTC, 2010, p. 1). The antitrust review is designed to protect consumers and ensure that mergers do not result in higher prices, fewer choices or reduced rates of innovation.²⁸ Overall, the US antitrust review process is wide-reaching and applies to almost all economically significant deals involving US targets.

Merging firms need to clear antitrust review if their deal value is above a certain threshold. The size threshold is adjusted yearly based on the GNP growth rate and ranges between \$50 million and \$100 million. Both the bidder and the target are required to submit an HSR premerger filing.²⁹ The submission of the HSR premerger filings is usually done after the public merger announcement and starts a statutory waiting period of 30 days.³⁰ The merging firms cannot consummate their deal before the expiration of this waiting period. The information in the HSR premerger filing is not public, but merger firms often voluntarily disclose the status and timings of their filings, especially when the target has a public listing. After receiving HSR filings from both merging parties, the antitrust agencies may request additional information from the merging companies (such as lists of customers and suppliers).³¹ The agencies may also reach out to third parties, such as rivals, customers, and suppliers, for their opinions on the transaction.

The first stage of the antitrust review process results in one of the following three outcomes: (i) the waiting period is terminated before the 30-day waiting period (Early Termination); (ii) the 30-day waiting period expires naturally (Natural Expiration); and (iii) a full-scale investigation is initiated and the antitrust agency issues a request to the merging firms for additional information (Second Request). Early Termination and Natural Expiration imply that merger firms have cleared the antitrust review and are free to complete the deal. The issuance of a Second Request resets the waiting period. Once the firms certify substantial compliance with the Second Request, the agency starts a new 30-day waiting period to review the newly submitted information.³²

A positive outcome of the review after a Second Request is confirmed in an antitrust clearance, and the deal is then allowed to complete. However, if the agency finds a deal to be anticompetitive, it is "Challenged." The DOJ files a complaint against the merging parties in a federal court to block the transaction. The FTC proceeds with an administrative complaint in front of an Administrative Law Judge while seeking a preliminary injunction from a federal court to stop the deal from consummation. Remedy negotiation for Challenged deals is a lengthy, often multi-month process that requires extensive discussions and provision of additional information.³³ If it works out,

²⁸In addition to antitrust clearance, merging firms sometimes need to get approval from industry specific agencies. For example, mergers involving a telecommunications company often require the permission of transferring communication licenses from the Federal Communications Commission. Sometimes, firms also need to get approvals from foreign antitrust agencies if the parties do business in other countries.

²⁹The Premerger Notification and Report form, pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, requires information including the identity of the involved parties, financial statements, valuation, filings submitted to SEC, and information of operation and production.

³⁰The waiting period is 15 days for cash tender offers or bankruptcy sales.

³¹In most cases, the antitrust agencies involved are FTC's Bureau of Competition or DOJ's Antitrust Division. The requests for additional information occurs during the waiting period either in a "voluntary access letter" or in phone calls and emails. Firms can also invite the agency to presentations to address the antitrust concerns.

³²The waiting period is 10 days for cash tender offers or bankruptcy sales. The actual time between the issuance of a Second Request and the expiration date of the new waiting period is usually much longer than 30 days since it takes significant time and effort to fulfill the information requirements.

³³To address the agencies' antitrust concerns, the merger parties may consider to offer asset or business divestitures or to execute restriction agreements. Note that negotiations with the agencies may take place at any stage, even before receiving Second Request. For example, in the Ahold/Delhaize merger, the merging parties proposed to sell 80+ supermarkets in the US. Our sample contains five mergers with a consent agreement without triggering Second Requests. We do not consider them as being officially challenged.

firms sign a “consent order” issued by the FTC or a “consent decree” with DOJ, issued by a federal court. If a settlement has been reached, a proposed consent decree can be filed simultaneously with the antitrust complaint. Alternatively, firms may decide to abandon the transaction or choose to litigate against the agency’s decision in federal court or before an administrative law judge.

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Appendix B Variable definitions

The table uses the following abbreviations: HPDL for Hoberg-Phillips data library; HSR for HSR annual reports (see <http://cwis.usc.edu/projects/industrydata/>); CRP for the Center for Responsive Politics <https://www.opensecrets.org/>; SOPR for the Senate Office of Public Records (see https://www.senate.gov/legislative/Public_Disclosure/LDA_reports.htm); and FEC for the Federal Election Commission webpage (see <http://www.fec.gov>).

Variable	Definition	Source
Deal characteristics		
Deal value	Value of the takeover deal in \$million. In regressions used in a logarithmic transformation: $\log(1 + \text{deal value})$.	SDC
Relative size	The deal value divided by the market capitalization of the acquirer eight weeks before the announcement date.	SDC
Takeover premium	The offer price relative to the target stock price eight weeks before the deal announcement minus one: $\frac{P_{\text{offer}}}{P_{-42}} - 1$.	SDC
All cash	A dummy variable indicating 100% of the payment consideration in cash.	SDC
Horizontal merger	A dummy variable indicating that the acquirer and the target are in the same TNIC3 industry. See Hoberg and Phillips (2010, 2014) for the definition of TNIC industries.	HPDL
Expected Δ HHI	Expected change in concentration in the acquirer TNIC3 industry for horizontal mergers one year prior to the deal announcement. Following Eckbo (1992): $2 \times \text{market share}_{\text{acquirer}} \times \text{market share}_{\text{target}}$. For diversifying mergers, the value is zero. High expected Δ HHI is set to one for all values above median and zero otherwise.	Compustat, HPDL
Pairwise similarity	The pairwise product similarity score between the acquirer and the target in the year prior to the announcement date.	HPDL
Target HHI	Herfindahl-Hirschman index in the target TNIC3 industry one year before the merger announcement.	HPDL
Target similarity	The sum of the pairwise similarities between the target and all other peers in its TNIC3 industry one year before the merger announcement.	HPDL
Target fluidity	The degree of competitive threat and competitors' product market change in the target TNIC3 industry one year before the merger announcement.	HPDL
Tender offer	A dummy variable indicating the initial bid is a tender offer.	SDC
Hostile	A dummy variable indicating target's response is hostile rather than friendly or neutral.	SDC
Bidding contest	A dummy variable indicating that the number of bidders (including the acquirer) after the deal announcement is larger than one.	SDC
Entrenched acquirer	A dummy variable indicating that the acquirer has at least four from the following six anti-takeover provisions: staggered board, limits to amend bylaws, limits to amend charter, super-majority, golden parachutes and poison pill. Missing values are replaced with zeros.	RiskMetrics
Termination fee (target)	The fee that the target firm agrees to pay in case it is not able to merge with the acquirer, scaled by the deal value. Missing values are replaced with zeros.	SDC
Reverse termination fee (acquirer)	The fee that the acquirer agrees to pay in case it is not able to merge with the target, scaled by the deal value. Missing values are replaced with zeros.	SDC
Acquirer (target) announcement AR	The 3-day cumulative abnormal return $(-1,+1)$ around the deal announcement date for the acquirer (target), computed using the Fama-French three-factor model.	CRSP
Combined announcement AR	The average of the acquirer and target announcement abnormal returns $(-1,+1)$ around the deal announcement date, weighted by the respective market capitalizations eight weeks prior to the deal announcement date.	CRSP
Expected completion probability	Target stock price at the end of the deal-announcement day over takeover premium, both adjusted by the target stock price eight weeks before the deal announcement; following Samuelson and Rosenthal (1986): $\frac{P_{+1} - P_{-42}}{P_{\text{offer}} - P_{-42}}$. High expected completion probability is set to one for all values above median and zero otherwise.	SDC
Acquirer characteristics		

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Variable	Definition	Source
Acquirer market cap	Market capitalization four weeks prior to the announcement dates of the acquiring company in \$million; in regressions used in a logarithmic transformation: $\ln(\text{market cap})$.	Compustat
Acquirer market-to-book ratio	Acquirer market capitalization over total assets: $\frac{PRCC \times CSHO + AT - CEQ}{AT}$.	Compustat
Acquirer leverage	Debt over market value of total assets: $\frac{DLC + DLTT + PSTK}{DLC + DLTT + PSTK + PRCC \times CSHO}$.	Compustat
Acquirer tangibility	Book value of property, plant and equipment over the book value of total assets: $\frac{PPENT}{AT}$.	Compustat
Acquirer cash liquidity	The book value of cash and marketable securities plus receivables over the book value of total assets: $\frac{CHE + RECT}{AT}$.	Compustat
Antitrust review outcomes		
Withdrawn	A dummy variable indicating that the acquirer or the target withdraw from the deal and do not complete the merger.	SDC
Early Termination	A dummy variable indicating that the merging firms receive an Early Termination outcome in the antitrust review process before the standard 30-day waiting period expires and do not pull and refile the HSR premerger filing. It represents a favorable review outcome. Note that the analysis in Table 2 and Figure 3 includes pull and refiles for this category.	SEC
Natural Expiration	A dummy variable indicating that the merging firms clear antitrust review without receiving an Early Termination or a Second Request and do not pull and refile the HSR premerger filing. It represents a favorable review outcome. Note that the analysis in Table 2 and Figure 3 includes pull and refiles for this category.	SEC
Pull&Refile	A dummy variable indicating that the merging firms pull back and then refile their HSR premerger filings to restart the 30-day waiting period and eventually clear antitrust review without receiving a Second Request. Such an action provides more time for the antitrust agencies to review the submitted documents without issuing a Second Request.	SEC
Second Request	A dummy variable indicating that the merging firms receive a request for additional information in the antitrust review process. It means the antitrust agencies suspect market-power issues and will take further steps investigating the merger. It represents an adverse review outcome.	SEC
Challenged Second Request	A dummy variable indicating that the antitrust agencies file an official complaint against the merging parties. Remedy negotiations follow. It represents an adverse review outcome.	HSR
Unchallenged Second Request	A dummy variable indicating that a deal with a Second Request gets through the antitrust review without the antitrust agencies filing an official complaint against the merging parties. It represents an adverse review outcome.	HSR
Days to complete	The number of calendar days to complete the merger from the deal announcement to the deal completion or withdrawal date. In regressions used in a logarithmic transformation: $\log(1 + \#\text{days})$.	SDC
Acquirer (target) outcome AR	The cumulative abnormal return around the review outcome revelation date for the acquirer (target). Abnormal returns are computed using the Fama-French three-factor model. In the internet appendix we use the market model.	CRSP
Combined outcome AR	The average of the acquirer and target outcome abnormal returns around the review outcome revelation date, weighted by the respective market capitalizations eight weeks prior to the deal announcement date.	CRSP
Lobbying variables		
Active lobbyist	A dummy variable indicating a positive lobbying expenditure by acquirers over 2007-2015. We combine the semi-annual lobbying data before 2008 together with the quarterly data after 2008.	CRP, SOPR
No previous lobbying	A dummy variable indicating that the acquirer does not lobby during 12 quarters prior quarter -4 relative to the deal announcement, (-16,-5).	CRP, SOPR
Lobbying dollars	Total corporate spending on lobbying by the acquirer during the specified four quarters relative to the deal announcement in \$thousand.	CRP, SOPR

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Variable	Definition	Source
Lobbying ratio	Acquirer lobbying dollars scaled by acquirer market capitalization, in basis points.	CRP, SOPR
Disclosed lobbying ratio	Acquirer lobbying dollars filed during the four quarters prior to the deal announcement, $(-4, -1)$, scaled by firm market capitalization and reported in basis points.	CRP, SOPR
Lobbying dummy	A dummy variable indicating a positive lobbying expense by the acquirer in a given 4-quarter period relative to the deal-announcement date.	CRP, SOPR
Related lobbying ratio	Total corporate spending on lobbying scaled by firm market capitalization targeting at related government agencies during the specified four quarters relative to the deal announcement in \$thousand. The overall lobbying dollars of a given quarterly lobbying filing are classified as related if at least one government agency is US Senate, US House, Department of Justice, or Federal Trade Commission. The overall lobbying dollars are classified as unrelated only if none of the targeted government agencies in the quarterly filing is one of these four agencies. See Appendix D for an overview of unrelated government agencies.	CRP, SOPR
Lobbying scaled by total assets	Acquirer lobbying dollars scaled by acquirer total assets, reported in basis points.	CRP, SOPR
One-quarter lobbying	Total corporate spending on lobbying by the acquirer during the specified quarter relative to the deal announcement, scaled by the acquirer market capitalization and reported in basis points.	CRP, SOPR
Politicians' ownership dollars	Dollar ownership of acquirer stock by all congressmen serving in the antitrust subcommittees (of congressional judiciary committees) in the deal-announcement year.	CRP, FEC
Politicians' ownership dummy	A dummy variable indicating that any congressman serving in the antitrust subcommittees (of congressional judiciary committees) in the deal-announcement year holds any acquirer stock.	CRP, FEC
PAC contribution dollars	Total campaign contributions to current antitrust subcommittee members by the acquirer company in the previous election cycle.	CRP, FEC
PAC contribution ratio	Acquirer PAC contribution dollars scaled by the acquirer market capitalization, in basis points.	CRP, FEC
PAC contribution dummy	A dummy variable indicating positive acquirer PAC contribution dollars.	CRP, FEC
Target lobbying dummy	A dummy variable indicating a positive lobbying expense by the target in a given 4-quarter period relative to the deal-announcement date.	CRP, SOPR

Appendix C Example SEC filings for antitrust review

On November 23, 2009, Green Mountain Coffee Roasters Inc. (GMCR, Parent, or Purchaser) announced a friendly all-cash acquisition of Diedrich Coffee, Inc. (the Company). The deal value was around \$290 million. The following quote from SEC filing Form SC TO-T filed by both GMCR and Diedrich Coffee on December 11, 2009 shows the date of the premerger filing:

Pursuant to the requirements of the HSR Act, the Company (“Diedrich Coffee”) filed a Notification and Report Form with respect to the Offer and the Merger on December 8, 2009 and Parent (“GMCR”), on behalf of itself and the Purchaser, filed a Notification and Report Form with respect to the Offer and the Merger with the FTC and the DOJ on December 9, 2009. As a result, the waiting period applicable to the purchase of Shares pursuant to the Offer is scheduled to expire at 11:59p.m., Eastern Time, on December 24, 2009.

This quote from SEC filing Form SC TO-T/A filed by both GMCR and Diedrich Coffee on Dec 24, 2009 shows the reasons for pulling and refileing the premerger filing by the merging companies:

Effective December 24, 2009, following consultation with the FTC staff, Parent voluntarily withdrew its HSR Act filing. On or before December 29, 2009, Parent expects to re-file its HSR Act filing. This withdrawal and re-filing is being undertaken in order to provide the FTC with additional time to review the information submitted by Parent and the Company.

The SEC filing Form SC TO-T/A filed by both GMCR and Diedrich Coffee on Jan 13, 2010 and a press release issued on the same date suggests an outcome of a Second Request:

WATERBURY, Vt. and IRVINE, Calif. – January 13, 2010 – Green Mountain Coffee Roasters, Inc. (NASDAQ: GMCR) (“GMCR”) and Diedrich Coffee, Inc. (Nasdaq: DDRX) (“Diedrich Coffee”) today announced that they have each received a request for additional information (“Second Requests”) from the U.S. Federal Trade Commission (“FTC”) with respect to the previously announced \$35.00 per share cash tender offer by Pebbles Acquisition Sub, Inc. (the “Purchaser”), a wholly owned subsidiary of GMCR, to purchase all of the outstanding shares of common stock of Diedrich Coffee. . . . GMCR and Diedrich Coffee expect to promptly respond to their respective Second Requests, and to continue to work cooperatively with the FTC as it conducts its review of the proposed transaction. The transaction is expected to be completed in early 2010. As previously announced, the tender offer is scheduled to expire at midnight, New York City time, on Friday, February 5, 2010. The Purchaser will extend the tender offer’s expiration time as necessary to occur concurrently with the HSR waiting period’s expiration time.

This quote from SEC filing Form SC TO-T/A filed by both GMCR and Diedrich Coffee on May 3, 2010 (and a press release issued on the same date) suggests compliance with FTC’s requests for additional information and associated clearance to complete the merger:

GMCR also noted that, on Friday, April 30, 2010, GMCR certified to the U.S. Federal Trade Commission (the “FTC”) that it has substantially complied with the FTC’s request for additional information under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (“Second Request”), in connection with GMCR’s offer to purchase all of the outstanding shares of Diedrich Coffee common stock. As a result, GMCR and Purchaser expect the waiting period applicable to the purchase of the outstanding shares of Diedrich Coffee common stock pursuant to the tender offer to expire at 11:59 p.m., New York City time, on Monday, May 10, 2010.

The transaction was completed and effective on *May 11, 2010*.

Appendix D Government agencies

This table shows count and frequency (in percent) of targeted government agencies among lobbying filings of merging firms in our sample between 2007 and 2015. The category of unrelated government agencies shows only the top 15 agencies and all unreported agencies have a frequency under 1%.

Agencies	Count	Frequency
Related government agencies		
US Senate	68043	27.64
US House of Representatives	67730	27.51
Dept of Justice	2173	0.88
Federal Trade Commission	1410	0.57
Unrelated government agencies		
Dept of Defense	9440	3.83
Dept of Health & Human Services	6725	2.73
Dept of Commerce	6681	2.71
Executive Office of the President	5550	2.25
Dept of the Treasury	5550	2.25
Office of US Trade Representative	4770	1.93
Dept of State	4348	1.76
Dept of Energy	4237	1.72
White House	4228	1.71
Environmental Protection Agency	3771	1.53
Federal Communications Commission	3562	1.44
Dept of Homeland Security	3508	1.42
Centers for Medicare & Medicaid Services	2630	1.06
Dept of Transportation	2515	1.02
Office of Management & Budget	2514	1.02

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Table 1. Summary statistics

This table reports the mean, standard deviation, 25th, 50th and 75th percentiles for three groups of variables: concerning the deal and acquirer characteristics (Panel A), antitrust review outcomes (Panel B) and lobbying expenditure (Panel C). All variables are defined in Appendix B and winsorized at the 1th and 99th percentiles.

Variable	# obs.	Mean	St.dev.	25 th perc.	Median	75 th perc.
<i>Panel A: deal and acquirer characteristics</i>						
Deal value (\$million)	370	3,025	5,952	387	1,172	3,055
Deal value (log)	370	7.079	1.323	5.961	7.067	8.025
Relative size	370	0.281	0.362	0.036	0.157	0.397
Takeover premium	361	0.423	0.383	0.218	0.340	0.518
All cash	370	0.568	0.496	0.000	1.000	1.000
Horizontal merger	370	0.554	0.498	0.000	1.000	1.000
Expected Δ HHI ($\times 1000$)	370	1.352	5.438	0.000	0.001	0.090
Pairwise similarity	370	0.046	0.066	0.000	0.015	0.082
Target HHI	370	0.226	0.223	0.095	0.146	0.265
Target similarity	356	5.661	6.936	1.557	2.761	6.037
Target fluidity	347	8.289	4.037	5.264	7.468	10.492
Tender offer	370	0.343	0.475	0.000	0.000	1.000
Hostile	370	0.043	0.204	0.000	0.000	0.000
Bidding contest	370	0.070	0.256	0.000	0.000	0.000
Entrenched acquirer	370	0.319	0.467	0.000	0.000	1.000
Termination fee	370	0.028	0.012	0.024	0.031	0.036
Reverse termination fee	370	0.013	0.023	0.000	0.000	0.023
Target announcement AR	370	0.314	0.291	0.133	0.264	0.410
Acquirer announcement AR	370	0.005	0.075	-0.027	0.001	0.034
Combined announcement AR	370	0.043	0.075	-0.003	0.027	0.079
Expected completion probability	361	0.949	0.552	0.893	0.968	1.000
Acquirer market cap (\$million)	370	28,200	49,850	2,031	6,643	26,271
Acquirer market-to-book	370	1.858	0.813	1.284	1.639	2.247
Acquirer leverage	366	0.205	0.195	0.064	0.139	0.286
Acquirer tangibility	370	0.235	0.216	0.072	0.150	0.351
Acquirer cash liquidity	370	0.301	0.184	0.166	0.269	0.404
<i>Panel B: antitrust review outcomes</i>						
Withdrawn	370	0.081	0.273	0.000	0.000	0.000
Early Termination	370	0.373	0.484	0.000	0.000	1.000
Natural Expiration	370	0.376	0.485	0.000	0.000	1.000
Pull&Refile	370	0.084	0.277	0.000	0.000	0.000
Second Request	370	0.168	0.374	0.000	0.000	0.000
Challenged Second Request	370	0.065	0.247	0.000	0.000	0.000
Unchallenged Second Request	370	0.103	0.304	0.000	0.000	0.000
Days to complete	370	122.562	92.657	56.000	93.000	158.000
<i>Panel C: lobbying data</i>						
Active lobbyist	370	0.795	0.405	1.000	1.000	1.000
No previous lobbying	370	0.341	0.475	0.000	0.000	1.000
Lobbying dollars (-4, -1) (\$000s)	370	2,923	6,108	0	220	2,750
Lobbying dollars (0, +3) (\$000s)	370	3,028	6,030	0	240	3,020
Lobbying ratio (-4, -1) (b.p.)	370	1.512	3.793	0.000	0.302	1.213
Lobbying ratio (0, +3) (b.p.)	370	1.637	3.945	0.000	0.289	1.286
Lobbying dummy (-4, -1)	370	0.641	0.480	0.000	1.000	1.000
Lobbying dummy (0, +3)	370	0.665	0.473	0.000	1.000	1.000
Disclosed lobbying ratio (b.p.)	370	1.325	3.303	0.000	0.276	1.052
PAC contribution dollars (\$000s)	370	6.842	14.093	0.000	0.000	6.000
PAC contribution ratio (b.p.)	370	0.003	0.009	0.000	0.000	0.003
PAC contribution dummy	370	0.373	0.484	0.000	0.000	1.000
Politicians' ownership dollars (\$000s)	370	19.111	89.919	0.000	0.000	0.000
Politicians' ownership dummy	370	0.141	0.348	0.000	0.000	0.000
Target lobbying dummy (-4, -1)	370	0.273	0.446	0.000	0.000	1.000
Target lobbying dummy (0, +3)	370	0.241	0.428	0.000	0.000	0.000

Table 2. Abnormal returns around the review outcome date

This table shows acquirer, target and combined abnormal returns in percent around the review outcome dates separately for the three first-stage review outcomes. We have 155, 151 and 61 deals for the review outcome of Early Termination, Natural Expiration and Second Request, respectively. The abnormal returns are adjusted using the Fama-French three-factor model where the estimation window is a 254-day period ending eight weeks prior to the deal announcement date. They are winsorized at the 1th and 99th percentiles. The product market variables are defined in Appendix B. Standard errors are reported in parentheses. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

<i>Panel A: cumulative abnormal returns by review outcome</i>								
	SR		NE		ET		SR-(ET&NE)	
CAR(-5, +1) (%)								
Acquirer	-1.32 ^c	(0.68)	0.02	(0.31)	-0.09	(0.40)	-1.28 ^c	(0.73)
Target	-2.12 ^b	(0.84)	-0.30	(0.46)	0.15	(0.32)	-2.05 ^b	(0.88)
Combined	-1.48 ^b	(0.66)	0.12	(0.29)	-0.14	(0.31)	-1.47 ^b	(0.70)
CAR(-10, +1) (%)								
Acquirer	-2.78 ^b	(1.17)	-0.52	(0.42)	-0.20	(0.47)	-2.42 ^c	(1.21)
Target	-2.57 ^b	(1.04)	-0.52	(0.55)	-0.27	(0.42)	-2.18 ^c	(1.09)
Combined	-2.65 ^a	(0.96)	-0.33	(0.39)	-0.27	(0.38)	-2.35 ^b	(1.00)

<i>Panel B: CAR(-10, +1) by review outcome and deal characteristics</i>								
	High expected completion prob.				Low expected completion prob.			
	SR	ET&NE	Diff.	s.e.	SR	ET&NE	Diff.	s.e.
Acquirer	-4.21	-0.43	-3.77 ^b	(1.59)	-0.91	-0.48	-0.43	(1.18)
Target	-5.33	-0.85	-4.48 ^c	(2.20)	-0.96	-0.18	-0.78	(1.10)
Combined	-4.41	-0.32	-4.09 ^b	(1.54)	-1.10	-0.43	-0.67	(1.02)
# obs.	21	159			39	139		
	Horizontal				Diversifying			
	SR	ET&NE	Diff.	s.e.	SR	ET&NE	Diff.	s.e.
Acquirer	-3.06	-0.53	-2.53 ^c	(1.31)	-0.11	-0.28	0.17	(0.79)
Target	-2.96	-1.01	-1.96	(1.49)	-1.45	0.17	-1.62	(1.01)
Combined	-3.07	-0.69	-2.38 ^c	(1.20)	-0.61	0.10	-0.71	(0.71)
# obs.	41	166			20	140		
	High expected Δ HHI				Low expected Δ HHI			
	SR	ET&NE	Diff.	s.e.	SR	ET&NE	Diff.	s.e.
Acquirer	-3.05	-0.28	-2.77 ^b	(1.36)	-0.40	-0.54	0.14	(0.86)
Target	-2.99	-0.78	-2.21	(1.54)	-1.54	-0.19	-1.34	(1.05)
Combined	-3.07	-0.40	-2.67 ^b	(1.24)	-0.83	-0.26	-0.57	(0.79)
# obs.	39	144			22	162		

Table 3. Review outcomes and regulatory costs and risks

This table reports regression estimates that characterize the relationship between antitrust review outcomes and regulatory costs and risks in M&As. Panel A reports regression estimates for OLS regressions with the log of the number of days from the public deal announcement to completion or withdrawal of the deal as the dependent variable. Panel B reports average marginal effects for logit regressions with a dummy variable equal to one for withdrawn deals and zero for completed deals as the dependent variable. Target industry (Fama-French five sectors) and year fixed effects are included in all specifications. Standard errors are reported in parentheses. All variables are defined in Appendix B, winsorized at the 1st and 99th percentiles. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: log days to complete</i>						
Second Request	0.877 ^a (0.083)	0.709 ^a (0.037)				
Challenged Second Request			0.904 ^a (0.118)	0.735 ^a (0.096)	0.976 ^a (0.098)	0.777 ^a (0.116)
Unchallenged Second Request			0.859 ^a (0.066)	0.691 ^a (0.025)	0.929 ^a (0.054)	0.727 ^a (0.033)
Pull&Refile					0.287 ^b (0.090)	0.253 ^b (0.056)
Early Termination					0.093 (0.055)	0.019 (0.044)
Deal value		0.076 ^a (0.015)		0.076 ^a (0.015)		0.071 ^a (0.014)
Relative size		0.242 ^a (0.025)		0.240 ^a (0.024)		0.252 ^a (0.023)
All cash		-0.190 ^b (0.043)		-0.193 ^b (0.046)		-0.198 ^b (0.052)
Horizontal merger		0.001 (0.022)		-0.000 (0.020)		-0.002 (0.017)
Tender offer		-0.426 ^a (0.068)		-0.426 ^a (0.068)		-0.429 ^a (0.071)
Hostile		0.321 ^c (0.147)		0.328 ^c (0.148)		0.327 ^c (0.138)
Bidding contest		0.011 (0.095)		0.012 (0.095)		0.002 (0.121)
Termination fee		-0.457 (1.104)		-0.450 (1.045)		-0.180 (0.909)
Reverse termination fee		1.239 (1.139)		1.198 (1.169)		1.021 (1.031)
Expected Δ HHI		2.517 (3.865)		2.430 (3.936)		2.327 (3.371)
Target HHI		-0.015 (0.101)		-0.011 (0.094)		0.013 (0.087)
Target similarity		-0.008 (0.005)		-0.008 (0.005)		-0.007 (0.004)
Target fluidity		0.006 (0.011)		0.006 (0.011)		0.008 (0.011)
Constant	4.575 ^a (0.098)	4.118 ^a (0.154)	4.576 ^a (0.099)	4.120 ^a (0.154)	4.506 ^a (0.082)	4.113 ^a (0.174)
# obs.	370	344	370	344	370	344
Adjusted R^2	0.373	0.603	0.371	0.602	0.382	0.610

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	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel B: withdrawn</i>						
Second Request	0.086 ^b (0.038)	0.053 ^c (0.028)				
Challenged Second Request			0.036 (0.060)	0.053 (0.039)	0.032 (0.073)	0.049 (0.039)
Unchallenged Second Request			0.113 ^a (0.026)	0.052 ^b (0.021)	0.109 ^a (0.033)	0.046 ^b (0.022)
Pull&Refile					-0.003 (0.037)	-0.021 (0.042)
Early Termination					-0.007 (0.036)	-0.004 (0.028)
Deal value		-0.024 ^a (0.009)		-0.024 ^b (0.009)		-0.024 ^b (0.011)
Relative size		-0.009 (0.046)		-0.009 (0.047)		-0.009 (0.048)
All cash		-0.035 ^c (0.021)		-0.035 (0.021)		-0.036 ^b (0.018)
Horizontal merger		0.013 (0.025)		0.013 (0.025)		0.010 (0.020)
Tender offer		-0.057 ^a (0.020)		-0.057 ^a (0.021)		-0.054 ^a (0.014)
Hostile		0.142 ^a (0.046)		0.143 ^a (0.050)		0.142 ^a (0.042)
Bidding contest		0.154 ^a (0.034)		0.154 ^a (0.034)		0.153 ^a (0.032)
Termination fee		-1.227 (1.266)		-1.228 (1.250)		-1.251 (1.121)
Reverse termination fee		0.178 (0.278)		0.176 (0.308)		0.185 (0.292)
Expected Δ HHI		2.893 (2.042)		2.889 (2.098)		2.966 ^c (1.794)
Target HHI		-0.326 ^c (0.171)		-0.325 ^c (0.174)		-0.325 ^c (0.176)
Target similarity		0.002 (0.005)		0.002 (0.005)		0.002 (0.005)
Target fluidity		-0.003 (0.005)		-0.003 (0.005)		-0.003 (0.005)
# obs.	370	344	370	344	370	344
Pseudo R^2	0.152	0.501	0.163	0.501	0.163	0.502

Table 4. Lobbying and the granular set of review outcomes: multinomial logistic models

This table shows estimated average marginal effects for lobbying variables on the probability of each of the five mutually-exclusive granular review outcomes using multivariate logistic regressions. All specifications include controls for deal characteristics (deal value, relative size, all cash, horizontal merger, expected Δ HHI, target HHI, target similarity, target fluidity tender offer, hostile, bidding contest, termination fee, reverse termination fee) and acquirer characteristics (acquirer size, acquirer market-to-book, acquirer leverage, acquirer tangibility, acquirer cash liquidity), but they are reported only in Panel A. All specifications include Fama-French five-sector and year fixed effects. Following Ai and Norton (2003), we report the correct average marginal effects for the two interaction terms in Panel C. All models include 340 observations. Robust standard errors reported in parentheses are based on the Delta method. All variables are defined in Appendix B and winsorized at the 1st and 99th percentiles. “LR” stands for lobbying ratio. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1) Challenged Second Req.	(2) Unchallenged Second Req.	(3) Pull& Refile	(4) Natural Expiration	(5) Early Termination
<i>Panel A: pre-announcement lobbying</i>					
Lobbying ratio (-4, -1) (b.p.)	-0.020 ^c (0.011)	0.011 ^a (0.003)	0.008 ^a (0.002)	0.010 ^b (0.005)	-0.009 (0.007)
Target lobbying dummy (-4, -1)	-0.100 ^a (0.029)	0.010 (0.044)	0.005 (0.052)	-0.004 (0.103)	0.089 (0.083)
Target lobbying dummy (0, +3)	0.158 ^a (0.038)	-0.064 (0.072)	0.040 (0.082)	-0.106 (0.107)	-0.028 (0.062)
Politicians' ownership dummy	-0.022 (0.028)	0.060 ^c (0.033)	-0.008 (0.023)	0.038 (0.049)	-0.067 (0.067)
PAC contribution ratio	0.022 (0.033)	-0.062 ^a (0.013)	0.084 ^c (0.046)	0.074 ^a (0.023)	-0.118 ^a (0.045)
Deal value	0.024 (0.033)	0.039 (0.030)	0.031 (0.020)	-0.006 (0.036)	-0.087 ^a (0.019)
Relative size	-0.032 (0.065)	-0.031 (0.020)	-0.166 (0.110)	-0.004 (0.102)	0.234 ^b (0.097)
All cash	0.035 (0.044)	-0.110 ^b (0.053)	0.037 (0.038)	0.095 (0.075)	-0.057 (0.041)
Horizontal merger	0.064 ^a (0.025)	0.049 ^a (0.012)	-0.004 (0.016)	-0.019 (0.065)	-0.090 (0.055)
Tender offer	0.020 (0.016)	0.019 (0.016)	0.009 (0.018)	0.086 (0.058)	-0.134 ^c (0.081)
Hostile	0.001 (0.058)	0.228 ^a (0.064)	-0.050 (0.052)	-0.024 (0.103)	-0.155 ^c (0.089)
Bidding contest	-0.011 (0.071)	0.015 (0.022)	0.023 ^c (0.013)	0.067 (0.155)	-0.094 (0.119)
Termination fee	0.263 (1.427)	0.763 (1.833)	-2.116 ^b (0.950)	-2.281 (2.126)	3.370 (2.628)
Reverse termination fee	1.534 ^a (0.319)	0.916 (0.745)	-0.263 (0.389)	0.099 (0.218)	-2.287 ^a (0.675)
Target HHI	0.059 (0.144)	0.131 ^a (0.031)	-0.229 ^b (0.110)	0.161 (0.203)	-0.121 (0.207)
Expected Δ HHI	-0.228 (1.265)	-1.531 (1.559)	1.495 (2.816)	7.578 ^c (4.147)	-7.314 ^c (3.915)
Target similarity	-0.008 ^b (0.004)	-0.009 (0.013)	-0.003 ^b (0.001)	0.004 (0.007)	0.015 ^a (0.004)
Target fluidity	0.002 (0.004)	0.006 (0.008)	-0.006 ^a (0.002)	-0.006 (0.010)	0.005 (0.009)
Acquirer size	-0.004 (0.027)	0.005 (0.017)	-0.021 (0.029)	0.006 (0.034)	0.014 (0.026)
Acquirer market-to-book	-0.028 (0.020)	-0.027 (0.033)	0.014 (0.011)	-0.063 ^b (0.031)	0.105 ^a (0.025)
Acquirer leverage	0.051 (0.104)	-0.145 ^b (0.073)	0.160 (0.166)	-0.054 (0.225)	-0.012 (0.246)
Acquirer tangibility	-0.010 (0.064)	0.075 (0.090)	-0.282 (0.286)	0.216 (0.183)	0.001 (0.267)
Acquirer cash liquidity	0.006 (0.052)	0.051 (0.110)	-0.047 (0.062)	0.227 (0.160)	-0.237 (0.188)
Pseudo R^2	0.257				

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	(1) Challenged Second Req.	(2) Unchallenged Second Req.	(3) Pull& Refile	(4) Natural Expiration	(5) Early Termination
<i>Panel B: post-announcement lobbying</i>					
Lobbying ratio (0, +3) (b.p.)	-0.004 (0.004)	0.012 ^b (0.006)	0.010 ^a (0.002)	-0.004 (0.006)	-0.014 ^b (0.007)
Target lobbying dummy (-4, -1)	-0.111 ^a (0.030)	0.009 (0.043)	-0.001 (0.055)	0.008 (0.104)	0.094 (0.082)
Target lobbying dummy (0, +3)	0.162 ^a (0.043)	-0.073 (0.066)	0.032 (0.082)	-0.095 (0.108)	-0.026 (0.065)
Politicians' ownership dummy	-0.033 (0.029)	0.064 ^b (0.029)	-0.017 (0.024)	0.049 (0.048)	-0.063 (0.070)
PAC contribution ratio	0.004 (0.039)	-0.062 ^a (0.014)	0.081 (0.052)	0.092 ^a (0.026)	-0.115 ^b (0.045)
Pseudo R^2	0.261				
<i>Panel C: conditional on pre-announcement lobbying</i>					
High lobbying ratio (-4, -1)	-0.037 ^c (0.022)	0.043 (0.037)	-0.254 ^a (0.039)	0.168 ^a (0.020)	0.081 ^a (0.026)
Lobbying ratio (0, +3) × low LR (-4, -1)	-0.010 (0.019)	-0.031 (0.062)	0.167 ^b (0.080)	-0.032 (0.073)	-0.093 (0.121)
Lobbying ratio (0, +3) × high LR (-4, -1)	-0.006 (0.004)	0.015 ^b (0.007)	0.008 ^a (0.001)	-0.005 (0.005)	-0.012 (0.008)
Target lobbying dummy (-4, -1)	-0.082 ^a (0.023)	0.003 (0.040)	-0.001 (0.064)	-0.007 (0.107)	0.087 (0.074)
Target lobbying dummy (0, +3)	0.138 ^a (0.046)	-0.073 (0.072)	0.042 (0.076)	-0.092 (0.113)	-0.015 (0.076)
Politicians' ownership dummy	-0.018 (0.027)	0.063 ^c (0.034)	-0.013 (0.016)	0.040 (0.051)	-0.072 (0.070)
PAC contribution ratio	0.021 (0.036)	-0.064 ^a (0.015)	0.083 ^c (0.044)	0.085 ^a (0.027)	-0.126 ^b (0.056)
Pseudo R^2	0.280				

Table 5. Lobbying and review outcomes: logistic models

This table reports average marginal effects for lobbying variables on the probability of a Challenged Second Request in specifications 1–3, and Pull&Refile in specifications 4–6. All specifications include 340 observations and control for deal characteristics (deal value, relative size, all cash, horizontal merger, expected Δ HHI, target HHI, target similarity, target fluidity, tender offer, hostile, bidding contest, termination fee, reverse termination fee), acquirer characteristics (acquirer size, acquirer market-to-book, acquirer leverage, acquirer tangibility, acquirer cash liquidity) and Fama-French five-sector and year fixed effects. Following Ai and Norton (2003), we report the correct average marginal effects for the two interaction terms in specifications 3 and 6. Robust standard errors reported in parentheses are clustered at the target-industry level. All variables are defined in Appendix B and winsorized at the 1st and 99th percentiles. “LR” stands for lobbying ratio. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1)	(2)	(3)	(4)	(5)	(6)
	Challenged Second Request			Pull&Refile		
Lobbying ratio (−4, −1) (b.p.)	-0.019 ^c (0.011)			0.006 ^a (0.001)		
Lobbying ratio (0, +3) (b.p.)		-0.005 (0.003)			0.010 ^a (0.002)	
High lobbying ratio (−4, −1)			-0.087 ^a (0.030)			-0.256 ^a (0.050)
Lobbying ratio (0, +3) × low LR (−4, −1)			0.011 ^b (0.005)			0.167 ^b (0.066)
Lobbying ratio (0, +3) × high LR (−4, −1)			-0.007 ^c (0.003)			0.008 ^a (0.001)
Target lobbying dummy (−4, −1)	-0.092 ^b (0.040)	-0.104 ^b (0.044)	-0.080 ^a (0.030)	0.017 (0.047)	0.006 (0.049)	0.004 (0.059)
Target lobbying dummy (0, +3)	0.152 ^b (0.064)	0.158 ^b (0.070)	0.135 ^b (0.068)	0.033 (0.080)	0.028 (0.078)	0.036 (0.075)
Politicians’ ownership dummy	-0.028 (0.020)	-0.045 ^c (0.024)	-0.026 (0.020)	-0.011 (0.016)	-0.021 (0.016)	-0.016 (0.011)
PAC contribution ratio	0.018 (0.026)	-0.001 (0.035)	0.016 (0.024)	0.085 (0.054)	0.081 (0.059)	0.082 (0.053)
Pseudo R^2	0.335	0.311	0.352	0.244	0.271	0.317

Table 6. Lobbying and review outcomes: instrumental variable approach

This table shows the average marginal effects of lobbying variables on the probability of Challenged Second Requests (specifications 1 and 2) and Pull&Refiles (specifications 3 and 4) using the instrumental variable probit approach. The first stage uses lobbying ratio over four quarters three years prior to deal announcement ($-12, -9$) as the instrument in all specifications. All specifications include 340 observations and control for deal characteristics (deal value, relative size, all cash, horizontal merger, expected Δ HHI, target HHI, target similarity, target fluidity, tender offer, hostile, bidding contest, termination fee, reverse termination fee), acquirer characteristics (acquirer size, acquirer market-to-book, acquirer leverage, acquirer tangibility, acquirer cash liquidity), Fama-French five-sector fixed effects, and year fixed effects. Standard errors reported in parentheses are clustered at the target-industry level. All variables are defined in Appendix B, winsorized at the 1st and 99th percentiles. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1)	(2)	(3)	(4)
	Challenged Second Request		Pull&Refile	
Lobbying ratio ($-4, -1$) (b.p.)	-0.031 ^a (0.009)		0.003 (0.003)	
Lobbying ratio (0, +3) (b.p.)		0.001 (0.008)		0.015 ^a (0.003)
Target lobbying dummy ($-4, -1$)	-0.101 ^a (0.036)	-0.108 ^a (0.034)	0.005 (0.052)	-0.004 (0.050)
Target lobbying dummy (0, +3)	0.157 ^a (0.057)	0.165 ^a (0.051)	0.040 (0.081)	0.032 (0.077)
Politicians' ownership dummy	-0.018 (0.015)	-0.032 ^b (0.015)	-0.004 (0.016)	-0.014 (0.014)
PAC contribution ratio	0.026 (0.025)	0.015 (0.028)	0.092 ^b (0.046)	0.092 ^b (0.045)
	<i>First stage</i>			
Lobbying ratio ($-12, -9$) (b.p.)	0.960 ^a (0.052)	0.840 ^a (0.096)	0.960 ^a (0.052)	0.840 ^a (0.096)
Target lobbying dummy ($-4, -1$)	0.113 (0.221)	0.369 (0.394)	0.113 (0.221)	0.369 (0.394)
Target lobbying dummy (0, +3)	0.251 (0.279)	0.860 ^b (0.347)	0.251 (0.279)	0.860 ^b (0.347)
Politicians' ownership dummy	-0.071 (0.085)	0.066 (0.302)	-0.071 (0.085)	0.066 (0.302)
PAC contribution ratio	0.585 ^a (0.131)	0.287 ^c (0.170)	0.585 ^a (0.131)	0.287 ^c (0.170)
Constant	0.935 (0.840)	3.300 ^a (0.802)	0.935 (0.840)	3.300 ^a (0.802)
Wald χ^2	1.295	1.883	0.122	2.588
Wald p -Value	0.255	0.170	0.727	0.108

Table 7. Lobbying and the deal announcement market reaction

This table shows coefficient estimates when regressing deal announcement abnormal returns (expected completion probability) on disclosed lobbying ratio in specifications 1 to 6 (7). Disclosed lobbying ratio refers to lobbying expenditure reported over four quarters before the deal announcement, $(-4, -1)$ scaled by the acquirer market capitalization. All specifications control for deal characteristics (deal value, relative size, all cash, horizontal merger, expected Δ HHI, target HHI, target similarity, target fluidity, tender offer, hostile, bidding contest, termination fee, reverse termination fee), acquirer characteristics (acquirer size, acquirer market-to-book, acquirer leverage, acquirer tangibility, acquirer cash liquidity), Fama-French five-sector and year fixed effects. Standard errors reported in parentheses are clustered at the target-industry level. All variables are defined in Appendix B and winsorized at the 1st and 99th percentiles. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Acquirer announcement AR					Combined ann.AR	Expected compl.prob.
	pooled	horizontal	diversifying	high Δ HHI	low Δ HHI		
Disclosed lobbying ratio	0.004 ^a (0.001)	0.004 ^b (0.002)	0.003 (0.002)	0.007 ^a (0.001)	0.002 (0.001)	0.007 ^a (0.001)	0.017 ^c (0.007)
Target lobbying dummy	0.015 (0.010)	0.007 (0.011)	0.015 (0.007)	0.000 (0.013)	0.014 (0.007)	0.002 (0.008)	-0.068 (0.047)
Politicians' ownership dummy	0.012 (0.006)	0.003 (0.015)	0.017 (0.010)	0.010 (0.011)	0.010 (0.016)	-0.004 (0.004)	0.036 (0.093)
PAC contribution ratio	-0.006 (0.017)	-0.003 (0.023)	0.002 (0.011)	-0.004 (0.024)	0.005 (0.011)	-0.026 (0.019)	0.008 (0.081)
Deal value	-0.008 ^b (0.003)	-0.008 ^b (0.002)	-0.006 (0.010)	-0.008 ^b (0.002)	-0.002 (0.006)	-0.007 ^c (0.003)	0.007 ^c (0.044)
Relative size	0.006 (0.012)	-0.001 (0.021)	0.011 (0.034)	-0.031 (0.022)	0.025 (0.015)	0.028 ^c (0.010)	0.070 (0.174)
All cash	0.034 ^b (0.010)	0.039 ^b (0.011)	0.016 (0.018)	0.019 ^c (0.009)	0.044 (0.023)	0.030 ^c (0.012)	-0.107 (0.086)
Horizontal merger	0.017 ^b (0.006)					0.006 (0.010)	0.125 ^c (0.045)
Tender offer	0.004 (0.010)	0.019 (0.017)	-0.007 ^c (0.003)	0.015 (0.013)	-0.007 (0.006)	0.011 (0.012)	0.106 (0.066)
Hostile	-0.020 (0.031)	-0.014 (0.037)	0.007 (0.011)	-0.014 (0.033)	-0.012 (0.014)	-0.025 (0.027)	-0.178 (0.121)
Bidding contest	0.044 ^c (0.017)	0.048 (0.023)	0.046 (0.041)	0.034 (0.018)	0.047 (0.032)	0.014 (0.019)	0.280 (0.201)
Termination fee	-0.373 (0.361)	-0.229 (0.342)	-0.244 (0.747)	-0.638 ^c (0.242)	-0.338 (0.571)	-0.477 (0.353)	3.793 (2.828)
Reverse termination fee	0.425 ^a (0.090)	0.658 ^b (0.193)	0.009 (0.388)	0.761 ^a (0.131)	0.244 (0.333)	0.474 ^a (0.078)	-0.487 (1.764)
Target HHI	-0.004 (0.033)	0.054 (0.042)	-0.041 (0.050)	0.044 (0.047)	-0.038 (0.047)	-0.022 (0.021)	-0.164 (0.147)
Expected Δ HHI	-0.295 (0.176)					0.277 (0.544)	-6.903 (3.645)
Target similarity	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.002)	0.000 (0.001)	0.000 (0.001)	-0.001 ^c (0.001)	-0.011 ^c (0.005)
Target fluidity	-0.003 ^b (0.001)	-0.004 ^c (0.002)	-0.002 (0.003)	-0.005 ^b (0.001)	-0.003 (0.002)	-0.002 ^b (0.001)	-0.024 (0.013)
Acquirer size	-0.003 (0.002)	-0.005 (0.003)	-0.002 (0.006)	-0.008 (0.005)	-0.002 (0.005)	-0.011 ^a (0.001)	0.035 (0.021)
Acquirer market-to-book	-0.001 (0.005)	-0.012 ^b (0.004)	0.011 (0.007)	-0.012 ^b (0.003)	0.006 (0.007)	-0.001 (0.003)	-0.020 (0.079)
Acquirer leverage	0.011 (0.022)	-0.017 (0.030)	0.030 (0.053)	-0.034 (0.034)	0.039 (0.048)	0.045 (0.028)	-0.102 (0.263)
Acquirer tangibility	0.038 (0.030)	0.046 (0.054)	0.017 (0.060)	0.052 (0.049)	-0.003 (0.044)	0.020 (0.035)	0.245 (0.207)
Acquirer liquidity	-0.029 (0.023)	-0.088 ^c (0.037)	0.019 (0.055)	-0.086 (0.064)	-0.019 (0.036)	0.001 (0.022)	0.051 (0.225)
Constant	0.110 (0.052)	0.187 ^c (0.075)	0.080 (0.051)	0.238 ^b (0.073)	0.048 (0.061)	0.110 ^c (0.049)	1.343 ^a (0.229)
# obs.	340	202	138	177	163	340	331
Adjusted R^2	0.133	0.189	-0.001	0.214	0.054	0.252	0.012

Table 8. Lobbying and the deal announcement market reaction with entrenchment

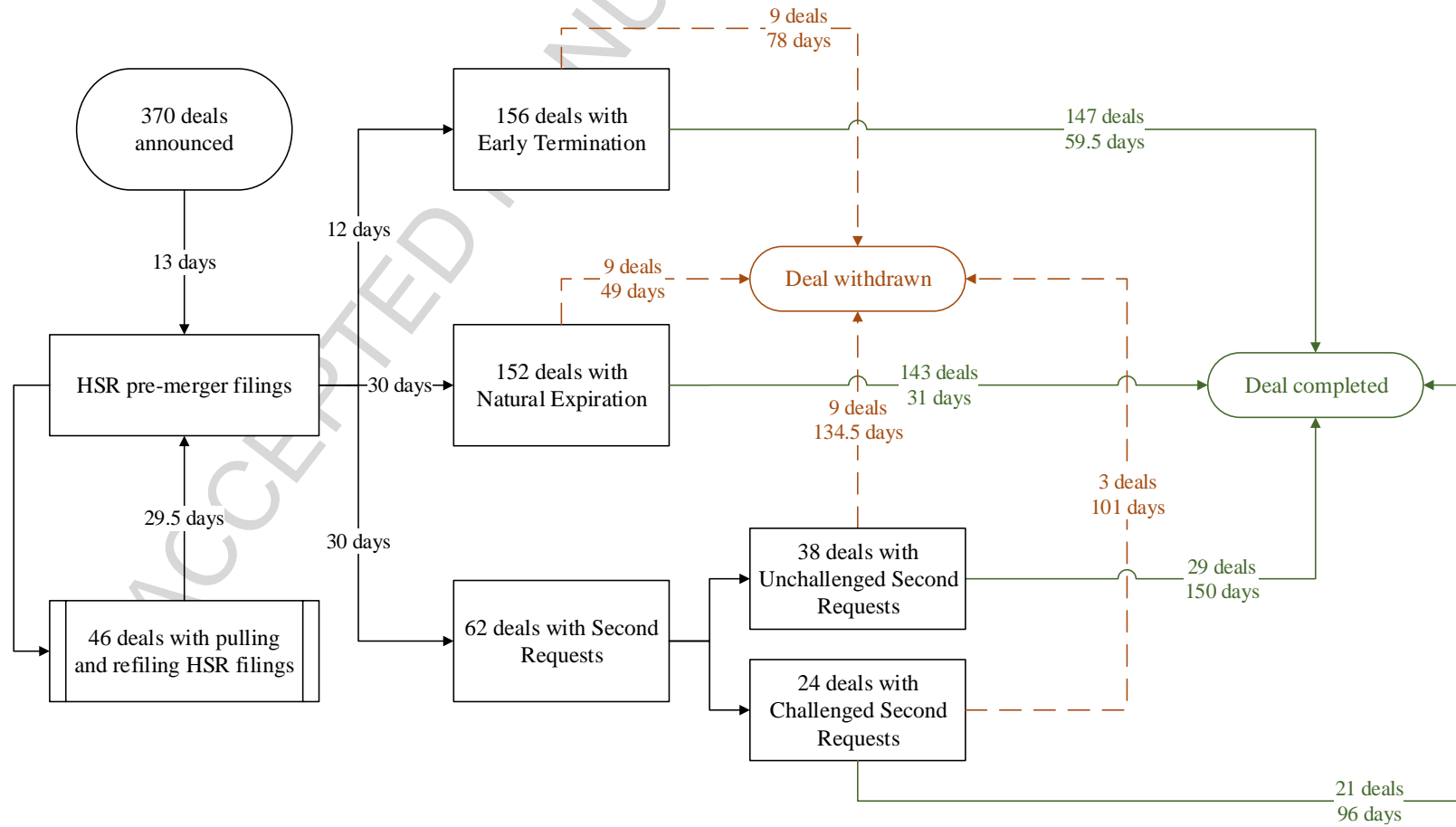
This table shows coefficient estimates when regressing deal announcement abnormal returns on disclosed lobbying ratio partitioned by entrenched acquirer dummy. Disclosed LR (lobbying ratio) refers to lobbying expenditure reported over four quarters before the deal announcement, $(-4, -1)$ scaled by the acquirer market capitalization. Entrenched acquirer has at least four from six anti-takeover provisions. All specifications control for Fama-French five-sector and year fixed effects. Standard errors reported in parentheses are clustered at the target-industry level. All variables are defined in Appendix B and winsorized at the 1st and 99th percentiles. ^a, ^b and ^c indicate significance at the one-, five- and ten-percent levels.

	(1)	(2)	(3)	(4)
	Acquirer announcement AR		Combined announcement AR	
Entrenched acquirer	0.001 (0.009)	0.002 (0.009)	-0.001 (0.008)	0.001 (0.008)
Disclosed LR × entrenched acquirer	0.001 (0.002)	0.001 (0.001)	0.001 (0.002)	0.001 (0.002)
Disclosed LR × nonentrenched acquirer	0.006 ^b (0.001)	0.006 ^b (0.002)	0.007 ^b (0.002)	0.008 ^b (0.002)
Target lobbying dummy		0.008 (0.009)		0.005 (0.013)
Politicians' ownership dummy		0.010 ^b (0.002)		0.009 ^b (0.002)
PAC contribution ratio		-0.004 (0.022)		-0.021 (0.017)
Deal value	-0.004 (0.003)	-0.005 (0.003)	0.004 (0.003)	0.003 (0.004)
Relative size	-0.017 (0.016)	-0.019 (0.016)	0.015 (0.007)	0.020 (0.010)
All cash	0.030 ^b (0.010)	0.030 ^c (0.011)	0.026 (0.013)	0.026 (0.014)
Horizontal merger	0.014 ^b (0.003)	0.015 ^b (0.003)	0.012 (0.006)	0.012 ^c (0.006)
Tender offer	0.000 (0.014)	-0.000 (0.013)	0.002 (0.013)	0.001 (0.013)
Hostile	-0.022 (0.028)	-0.020 (0.028)	-0.022 (0.033)	-0.022 (0.032)
Bidding contest	0.014 (0.019)	0.015 (0.021)	0.010 (0.020)	0.011 (0.022)
Termination fee	-0.743 (0.490)	-0.761 (0.504)	-0.526 (0.470)	-0.589 (0.533)
Reverse termination fee	0.272 (0.139)	0.272 (0.136)	0.293 (0.174)	0.315 (0.185)
Target HHI	-0.026 (0.042)	-0.023 (0.045)	-0.012 (0.030)	-0.012 (0.032)
Expected ΔHHI	-0.097 (0.513)	-0.118 (0.561)	1.063 (1.149)	0.905 (1.164)
Target similarity	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Target fluidity	-0.003 ^b (0.001)	-0.003 ^c (0.001)	-0.002 ^b (0.001)	-0.002 ^a (0.000)
Acquirer size	-0.006 ^c (0.003)	-0.007 (0.004)	-0.016 ^a (0.002)	-0.016 ^a (0.003)
Acquirer market-to-book	0.001 (0.005)	-0.000 (0.005)	-0.004 (0.003)	-0.006 (0.003)
Acquirer leverage	0.000 (0.043)	0.003 (0.045)	0.044 (0.027)	0.044 (0.029)
Acquirer tangibility	0.014 (0.057)	0.016 (0.059)	-0.005 (0.061)	0.002 (0.063)
Acquirer liquidity	-0.045 (0.039)	-0.041 (0.035)	-0.010 (0.043)	-0.010 (0.040)
Constant	0.163 (0.084)	0.173 (0.090)	0.191 ^c (0.074)	0.194 ^c (0.085)
# obs.	264	264	264	264
Adjusted R^2	0.157	0.151	0.292	0.297

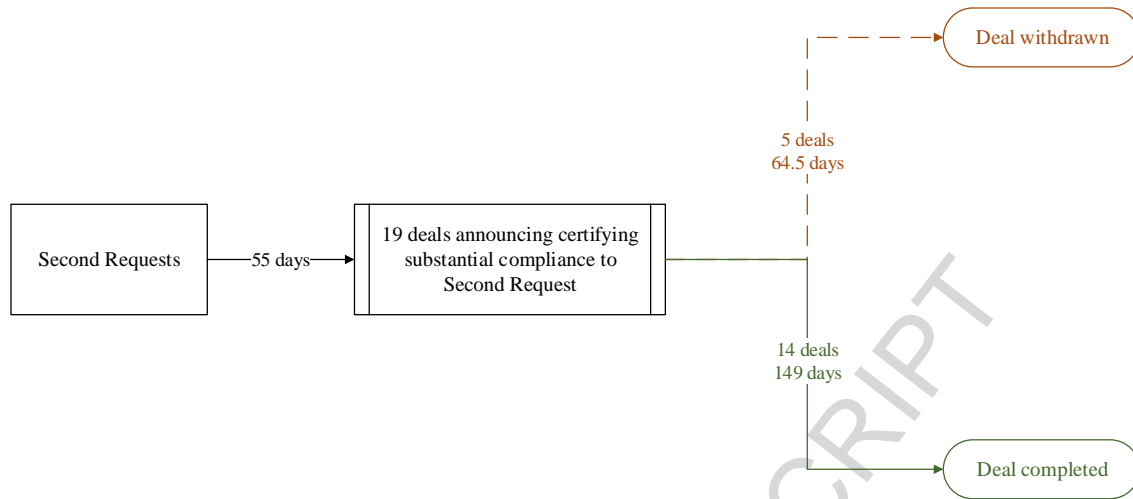
Figure 1. Antitrust review process

This figure shows two flow charts of the antitrust review process with the median number of days spent between the individual nodes. Panel A shows the full process for 370 deals from their deal public announcement until completion or withdrawal. Panel B shows the process from receiving a Second Request until completion or withdrawal, but only for a limited sample of 19 deals with available data.

Panel A: the full flow chart



Panel B: extra data for Second Requests

**Figure 2.** Lobbying expenditure around deal announcements

This graph shows average quarterly lobbying ratios for acquirers and their matched firms in basis points eight quarters before and eight quarters after the deal announcement date. Zero quarter (on the horizontal axis) is the merger announcement quarter. We match each acquirer firm with its 3-digit SIC peers and consider only those peers that are in the lowest quartile of absolute deviations ($|X_{acq} - X_{peer}|$) by both market capitalization and market-to-book ratio ($X = \{MarketCap, MBRatio\}$). We control for total assets, market-to-book ratio, leverage, ratio of tangible assets and cash ratio.

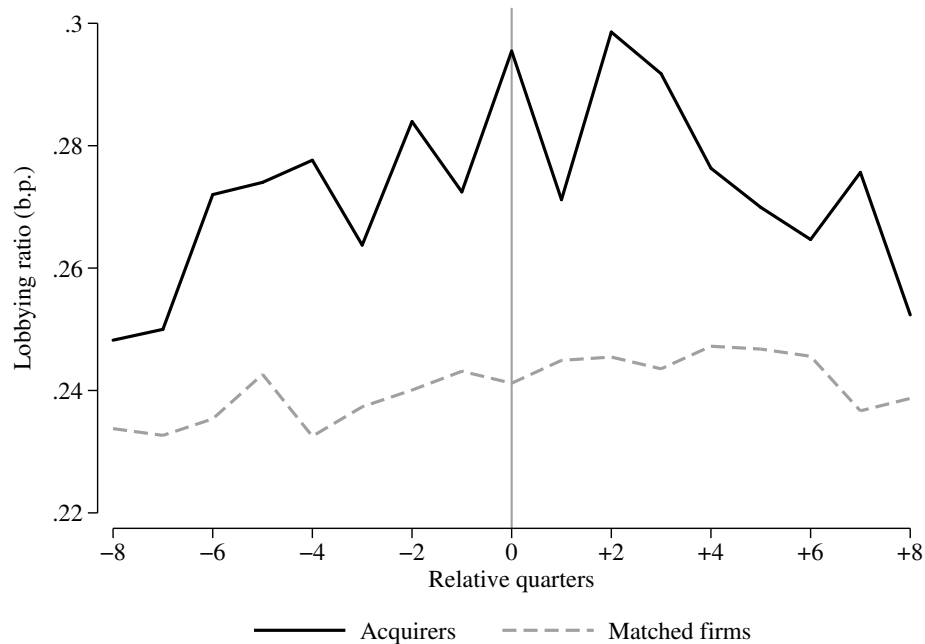
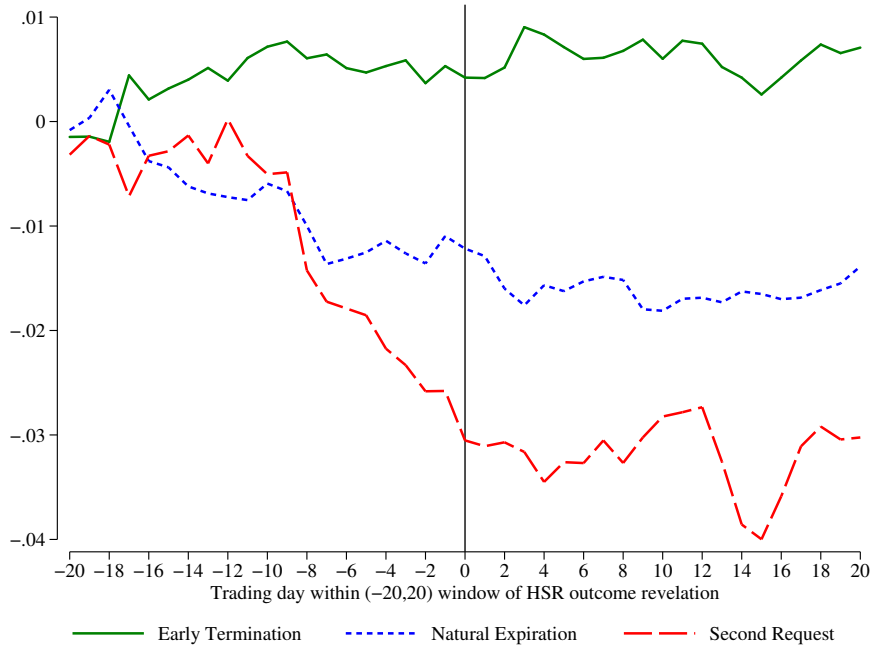
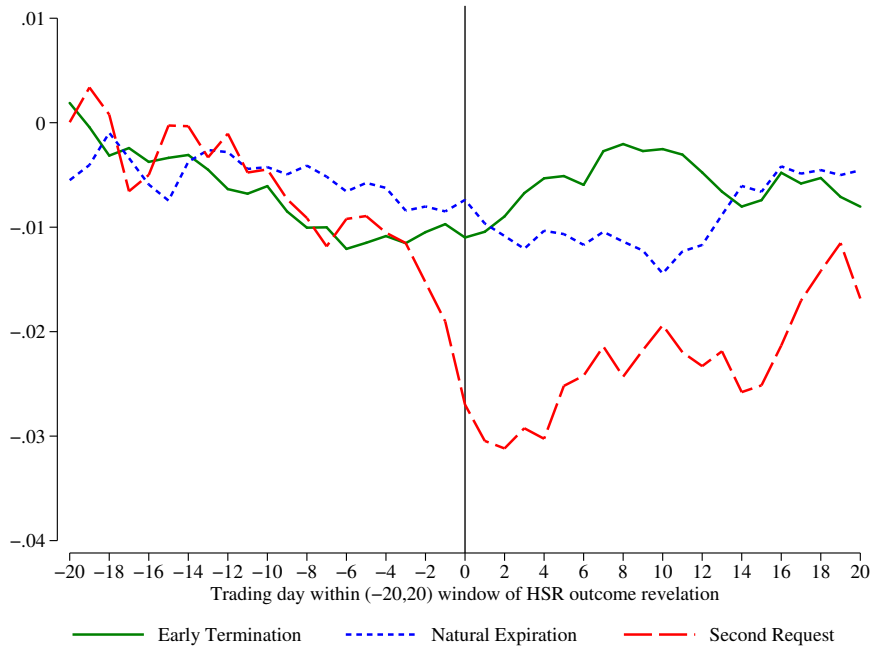
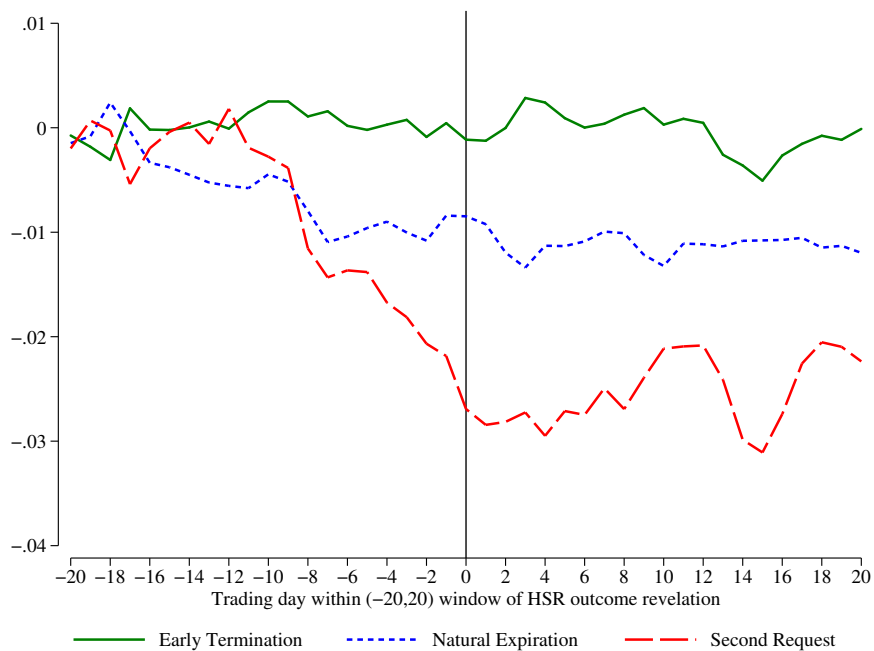


Figure 3. Abnormal returns around review outcome dates

This figure shows the acquirer, target and combined cumulative abnormal returns around the first-stage antitrust review outcomes for the three groups of Early Termination, Natural Expiration and Second Request. The abnormal returns are adjusted for Fama-French three-factor benchmark. The combined abnormal returns are calculated as a weighted average of the target and acquirer abnormal returns using the respective market capitalization eight weeks before the deal announcement. The green solid line represents Early Terminations, the blue dotted line represents Natural Expirations and the red dashed line represents Second Requests.

Panel A: acquirer abnormal returns*Panel B: target abnormal returns*

Panel C: combined abnormal returns



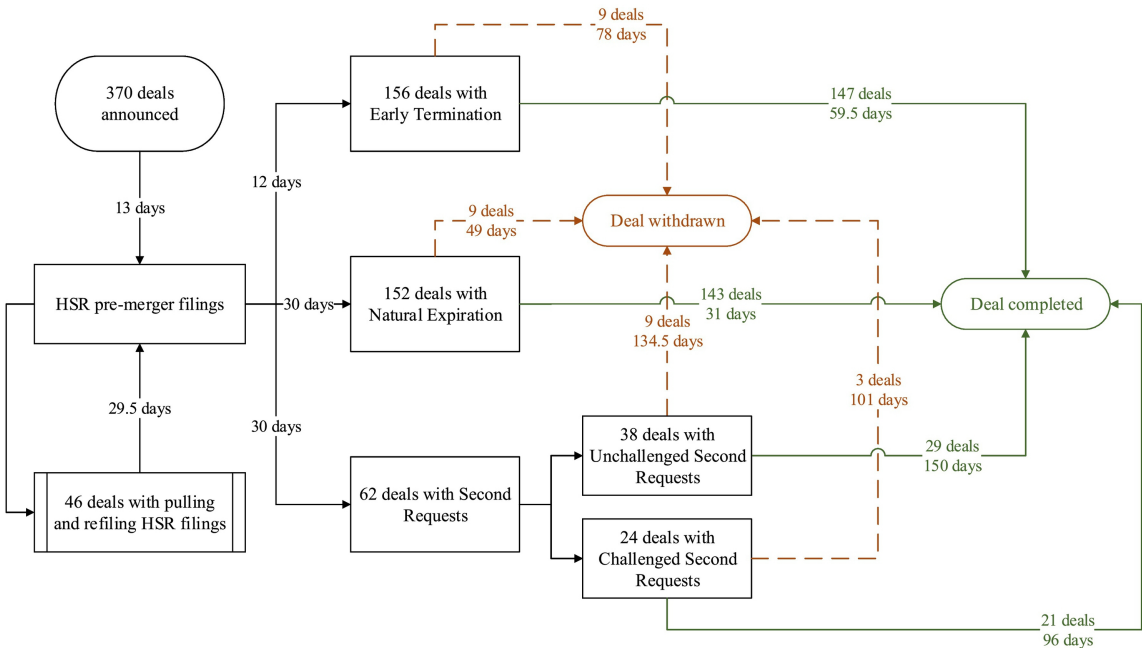
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Highlights

- We provide a rich and detailed description of the US antitrust review process.
- We show that an adverse review outcome leads to a decline in acquirer firm value.
- Lobbying before deal announcements is associated with favorable review outcomes.
- Higher pre-announcement lobbying is valued by shareholders.
- This is especially the case for deals with higher antitrust concerns.

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A: the full flow chart



B: extra data for Second Requests

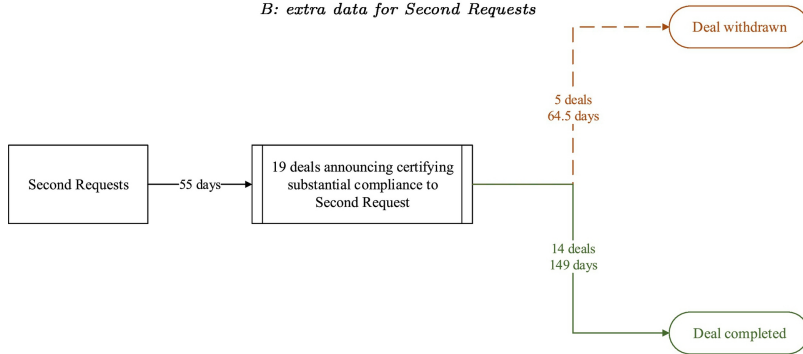


Figure 1

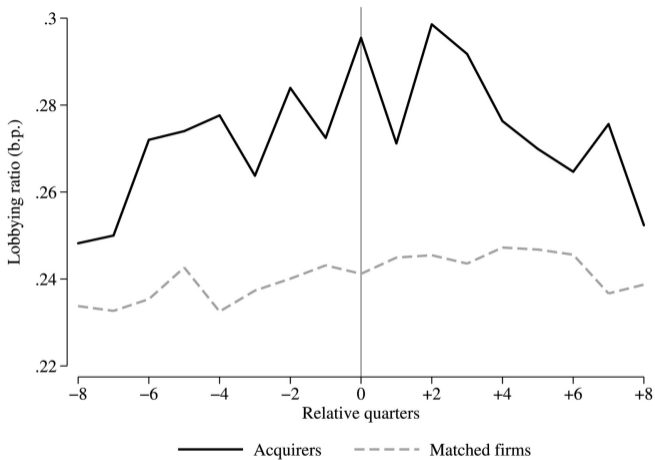
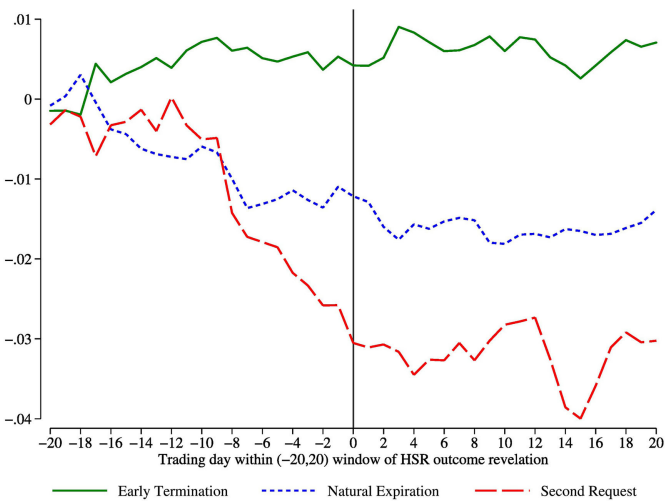
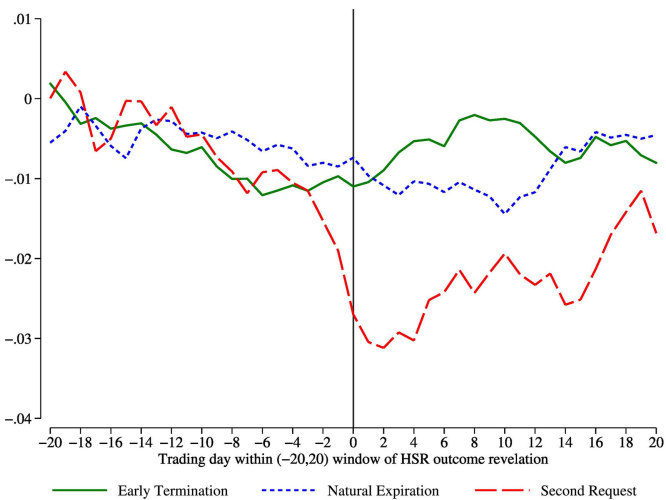


Figure 2

A: acquirer abnormal returns



B: target abnormal returns



C: combined abnormal returns

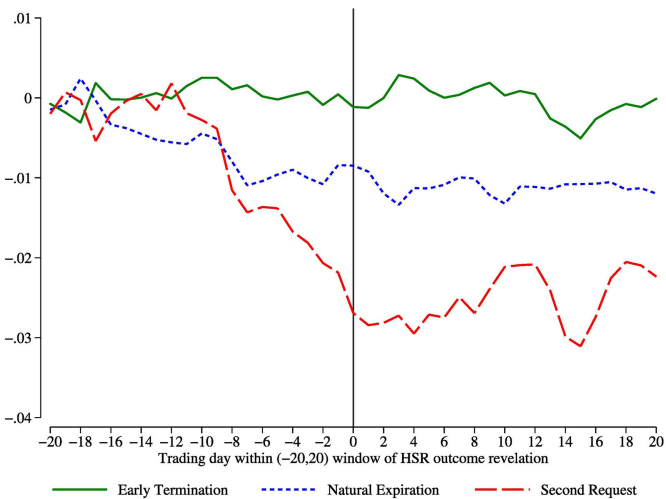


Figure 3