Beyond the Target:

M&A Decisions and Rival Ownership*

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Abstract

Diversified acquirer shareholders can profit from value-destroying acquisitions not only through their target stakes, but also through their stakes in non-merging rival firms. We find that announcement losses are largely mitigated for the average acquirer shareholder when accounting for wealth effects on their rival stakes. Close to a third of acquirer shareholders benefit from bad acquisitions at the industry portfolio level. Rival ownership by acquirer shareholders is negatively associated with acquirer CAR and deal synergies, while positively associated with the probability of bad deal completion. These results help explain why shareholders often lack incentives to monitor against value-destroying acquisitions.

Keywords: Common Ownership, M&A, Synergies, Institutional Investors.

JEL Codes: G23, G30, G34

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1 Introduction

It is a well-known fact that average returns to acquiring firms are negative around merger announcements, while average returns to target firms are positive. This finding has been interpreted as evidence of empire building, CEOs pursuing a personal agenda or CEOs' overconfidence.[1] Why don't acquirer shareholders stand up and fight against value-destroying acquisitions?[2] Matvos and Ostrovsky (2008) (MO) provide an explanation to this puzzle by examining common ownership: acquirer's institutional investors may hold shares in the target and, therefore, the increase in value of the target may offset the losses on the acquirer side. This explanation was contested by Harford, Jenter and Li (2011) (HJL), who argued that cross-ownership at the shareholder level was not large enough to compensate the acquirer shareholders in value-reducing acquisitions.

This paper sheds new light on this puzzle by considering the role of common ownership by acquirer shareholders in non-merging rival firms. While the debate so far has focused on the returns of the acquiring and target firms[3], mergers generally have effects beyond them, impacting other rivals in the industry that are not involved directly in the acquisition. Indeed, extensive empirical evidence documents a positive effect of takeover announcements on rival firm stock returns (Eckbo, 1983, 1985; Mitchell and Mulherin, 1996; Song and Walkling, 2000; Shahrur, 2005).

When an acquirer firm conducts a value-destroying horizontal merger, its non-merging industry rivals can gain because of improved efficiency at the expense of the merging firms,

[1] See Jensen and Ruback (1983); Jarrell, Brickley and Netter (1988); Morck, Shleifer and Vishny (1990); Andrade, Mitchell and Stafford (2001); Moeller, Schlingemann and Stulz (2004, 2005); Roll (1986); Malmendier and Tate (2008). Using structural estimation, Wang (2018) has suggested that the negative return could be partly due to the market's reassessment of the acquirer's standalone value based on the acquisition decision.

[2] It is common knowledge that many institutional investors have been slow to stand up and fight value-destroying deals, see Braithwaite, Tom, June 28, 2019, Shareholders need to stand up and fight bad M&A, *Financial Times*.

[3] See Hansen and Lott (1996) for the initial discussion on how cross-ownership of target and rival may help explain the negative announcement return puzzle. More recently, Brooks, Chen and Zeng (2018) examines the impact of target ownership by acquirer shareholders on M&A deal characteristics.

increased market power due to a smaller number of industry participants (Eckbo, 1983, 1985), or higher probability of becoming a target amid the acquisition revealing industry-wide information (Song and Walkling, 2000). Both empirical evidence and theoretical insights point to the need of incorporating rival ownership by acquirer shareholders into the analysis of M&A decisions. Building upon the conjecture of Matvos and Ostrovsky (2008), we argue that diversified acquirer shareholders who hold broader portfolios of industry firms can internalize such rival gains, leading to decreased incentives to monitor against bad acquisitions. Many diversified acquirer shareholders hold a large amount of rivals who provide substantially more important wealth effect implications than their target ownership, if any, during merger announcements.

Consider the following example: when Microsoft announced the $26.2 billion acquisition of LinkedIn in June 2016, the largest acquisition made by Microsoft to date, the deal was perceived as value-destroying by the market and led to a loss of 1.46% for Microsoft shareholders in the 3-day window around the acquisition announcement. With a market capitalization of over $400 billion at the time, the losses for large Microsoft shareholders were substantial. However -and this is the point of this paper- eight of Microsoft's top ten institutional shareholders obtained a net gain thanks to their ownership in target and rival firms, with the latter being quantitatively more important.

During the announcement window, BlackRock, State Street, Royal London, JP Morgan, Oddo Meriten, Northern Trust, AMVESCAP, Franklin Resources, Geode Capital, and Valueact Capital suffered losses ranging from $43 million to $343 million, as shown in Figure 1. Eight of these top ten shareholders also owned shares in the target, LinkedIn. LinkedIn was not a small target. It was ranked twenty-first with a market capitalization of $16 billion in an industry of 407 firms at the time. While LinkedIn did enjoy a large announcement gain of 45.97%, only Royal London was able to offset its loss on Microsoft with a gain from LinkedIn.

However, seven more of the top ten Microsoft shareholders were able to generate a net gain from this deal announcement after accounting for their ownership in non-merging rivals in the computer programming services industry, such as Oracle, Alibaba, Adobe, PayPal, and Ya-

hoo. Among Microsoft's top twenty industry rivals measured by market capitalization, fifteen gained during the 3-day window around this announcement, supporting the idea that rival ownership matters to acquirer shareholders. The deal was eventually completed in December 2016.

Moving beyond this particular example, for a sample of 1,800 horizontal mergers among public firms from 1988 till 2016, we find that the returns on rival stakes are on average positive for the acquirer shareholder.[4] The majority of large acquirer shareholders (78%) put more weight on non-merging rivals than the acquirer in their industry portfolios. When the return for the non-merging rivals is added to the adjusted-return of acquirer plus target, the industry portfolio return is no longer negative for the average acquirer shareholder. The effect of rival ownership is particularly pronounced in bad deals, defined as those deals with negative acquirer announcement returns. For such bad deals, the returns of the non-merging rivals are much stronger and, therefore, their offsetting impact on the acquirer industry portfolio is even larger.

When we focus on bad deals, nearly one third of the acquirer shareholders are able to achieve positive net gains when accounting for stakes in both the target and non-merging rivals. That is, these bad deals are not value-destroying for an important subset of acquirer shareholders.[5] Given that shareholders on average do not lose value thanks to their ownership stakes in non-merging rivals, we explore the implications for M&A activity and the characteristics of the deals. We first find that target ownership of acquirer shareholders is positively associated with acquirer CAR and deal synergies. This supports the notion that target ownership cannot explain why acquirer shareholders do not monitor against bad acquisitions (Harford, Jenter and Li, 2011), as well as that acquirer shareholders with target stakes actually have

[4] Harford, Humphery-Jenner and Powell (2012) shows that a key source of value destruction of mergers comes from the avoidance of private targets, which are often associated with value creation. We start the sample in 1988 because historical Compustat SIC codes are available only from 1987.

[5] These results are robust to different industry classifications as well as the use of the three-factor model for computing the CARs. We use historical Compustat 3-digit SIC codes for our baseline analyses, and 4-digit, 2-digit SIC codes, as well as Hoberg&Phillips industry codes (Hoberg and Phillips, 2010, 2016) as alternative robustness checks.

stronger incentives to exert more scrutiny on acquisition decisions and facilitate better deals (Brooks, Chen and Zeng, 2018).

We then show that acquirer shareholders' ownership in non-merging industry rivals is negatively associated with acquirer CAR and deal synergies. Acquisitions appear to create less shareholder wealth and combined value when acquirer shareholders have more stakes in non-merging industry rivals. Furthermore, we find that bad deals are more likely to be eventually completed when acquirer shareholders' rival ownership is higher. A firm whose shareholders have more ownership in its industry rivals is more likely to announce an acquisition. After an acquisition announcement, acquirer shareholders are more likely to sell their investments in the acquirer firm if it is a bad deal. However, our results indicate that acquirer shareholders with high gains from their industry portfolio (accounting for wealth effects on target and rival ownership) are unlikely to exhibit such exit behavior, whereas there is no significant effect from high combined acquirer and target gains.

Finally, we examine acquisitions that do and do not require shareholder voting. Bad deals in which acquirer shareholders have more target ownership are less likely to be completed when they do not require shareholder voting. This supports the idea that managers structure bad deals to avoid the discipline of shareholder voting (Li, Liu and Wu, 2018) while shareholders with more cross-ownership have more incentives and information to scrutinize such deals even without voting (Brooks, Chen and Zeng, 2018). In bad deals that do require shareholder voting, more target ownership is linked to higher completion probability which is consistent with the findings of Matvos and Ostrovsky (2008). Acquirer managers can be structuring deals to be financed by more equity, which require shareholder voting, after they communicate with shareholders who have target ownership and get a good understanding of such shareholders' interests.

Meanwhile, the link between acquirer shareholder rival ownership and bad deal completion is only pronounced in bad deals that do not require shareholder voting whereas it is insignificant for those that do require voting. Since deals that require voting tend to be less

value-destroying for acquirer shareholders (Becht, Polo and Rossi, 2016; Li, Liu and Wu, 2018), acquirer shareholders are already losing less in such acquisitions without considering any rival ownership. Accounting for rival ownership becomes less relevant in this case. The incentive hypothesis is mainly pronounced for bad deals in which direct shareholder monitoring (voting) is absent. The combination of this evidence supports our hypothesis that diversified acquirer shareholders internalize rival gains at the portfolio level from bad acquisitions and have less incentives to monitor against bad deals.

Alternatively, another explanation for the association between acquirer shareholder rival ownership and bad deals is investor inattention. Investor monitoring is a scarce resource and investors cannot allocate equal resources in monitoring each firm they hold in their portfolios (Kempf, Manconi and Spalt, 2016). When acquirer shareholders hold more firms in one industry, they can be spread too thin and monitor less against managerial discretion. However, the existing evidence in the common ownership literature shows that shareholders actually monitor better when holding more firms within the industry, because they have more superior industry-wide information and governance experience (He, Huang and Zhao, 2017; Kang, Luo and Na, 2018). We empirically test for this alternative hypothesis and find no significant evidence supporting it.

A second alternative hypothesis for the association between acquirer shareholder rival ownership and bad deals is the anticompetitive motive of common ownership. Prior studies argue that common owners can have the incentives to facilitate more firm coordination and reduce competition within the industry (Azar, Schmalz and Tecu, 2018). This can be linked to the collusion hypothesis of horizontal mergers (Eckbo, 1983). We first show that in value-destroying deals, diversified acquirer shareholders benefit not only from their rival stakes, but also their stakes in corporate suppliers and customers. This goes against the collusion hypothesis because the increase in market power implied by this theory should lead to gains by rivals but losses for suppliers and customers. Furthermore, we show that the links between rival ownership and acquirer CAR, bad deal completion, as well as deal synergies are not driven by deals

in concentrated industries. Such results indicate that our findings are mainly associated with the incentive hypothesis and unlikely to be driven by the anticompetitive motive of common ownership.

Overall, we build upon prior studies (Hansen and Lott, 1996; Matvos and Ostrovsky, 2008; Harford, Jenter and Li, 2011) and conduct a more comprehensive analysis on the link between common ownership and acquisition decisions. The results of our analyses indicate that value creation by an acquisition can matter less to diversified acquirer shareholders since they are likely to profit from the announcement at the industry portfolio level. Our findings provide a rationale to why acquirer shareholders remain largely inactive in monitoring against value-destroying acquisitions, which is that they often actually benefit from such deals at the portfolio level.

2 Theoretical Background

2.1 How are non-merging industry rivals affected by M&A deals?

Horizontal mergers can have wealth effects beyond the merging firms. Eckbo (1983, 1985) hypothesize that rivals can be affected when the merger leads to either more productive efficiency or stronger market collusion. The collusion hypothesis predicts that rivals will gain because the newly merged firm can have more market power leading to increased markup in the overall industry. The efficiency hypothesis predicts that rivals can be affected because of the creation of a more or less efficient competitor. Later empirical work finds evidence supporting the efficiency hypothesis but little evidence for the collusion hypothesis (Fee and Thomas, 2004; Shahrur, 2005). Song and Walkling (2000) identify another explanation for rival gains via the information signal of the merger. They show that a merger signals new information about the merging firms' relevant industry peers and increases the future takeover probability for these peers.

2.2 How does ownership in industry rivals affect acquirer shareholders?

In the existing M&A literature, the causes of value-destroying acquisitions have been mostly associated with managers' empire-building behavior (Jensen, 1986) and overconfidence (Malmendier and Tate, 2008), particularly when they can be considered partly entrenched (Masulis, Wang and Xie, 2007). Harford, Humphery-Jenner and Powell (2012) show that the selection of low-synergy public targets is often how such entrenched managers destroy acquirer shareholder value. However, why acquirer shareholders are largely inactive in taking actions against such value-destroying deals remains unclear.

The Incentive Hypothesis. Diversified shareholders often own shares in multiple firms within the same industry. Hansen and Lott (1996) argue that such diversified shareholders focus on portfolio value maximization when evaluating an individual firm's decisions, because they internalize the externalities of these decisions. Matvos and Ostrovsky (2008) show empirically that gains from target ownership by the acquirer shareholders can rationalize why these shareholders often do not take actions to block value-destroying acquisitions. However, this result is based on the assumption that all acquirer shareholders have aligned interests and act as a coalition when evaluating the firm's acquisition decision. The follow-up work by Harford, Jenter and Li (2011) points out that the gain on target stake is not nearly sufficient enough to offset the loss on acquirer stake when evaluating acquirer shareholders at the individual shareholder level.

We build on their work and extend our analyses to include the merger wealth effects on acquirer shareholders' ownership in non-merging industry rivals. Recent work in the common ownership literature has shown more empirical evidence in support of the argument by Hansen and Lott (1996), that common institutional shareholders can influence the product market strategies of firms they hold within the same industry to enhance the combined value of their holdings (He and Huang, 2017; Azar, Schmalz and Tecu, 2018). In a value-destroying deal, non-merging industry rivals can gain because of the acquirer's efficiency loss, potential

increased collusion opportunities, or the deal's signaling on industrywide information. Regardless of the source of gain for rivals, acquirer shareholders will be able to internalize such gains and potentially offset the losses on their acquirer stakes. As a result, managers are more likely to announce value-destroying acquisitions because such diversified acquirer shareholders lack the incentive to prevent them from pursuing bad deals.

The Inattention Hypothesis. We recognize two alternative hypotheses that can explain a relationship between value-destroying acquisitions and acquirer shareholder rival ownership. Another reason why acquirer shareholders' rival ownership can be related to bad acquisitions is that it can affect these shareholders' ability to monitor against managerial agency costs. Kempf, Manconi and Spalt (2016) argue that monitoring capacity is a scarce resource and shareholders are often subject to limited attention when they become more diversified. Therefore, an explanation for why acquirer shareholders do not interfere with value-destroying acquisitions can be simply that they are spread too thin by more ownership in other industry firms, and lack the ability to monitor against such behavior. However, the common ownership literature points to the other side of the story. Common owners benefit from industrywide information and governance experience when they have more ownership in the firm's industry peers, resulting in more effective monitoring against managerial agency costs (He, Huang and Zhao, 2017; Kang, Luo and Na, 2018). There should be fewer value-destroying acquisitions as a result. In addition, the distraction of shareholder monitoring identified by Kempf, Manconi and Spalt (2016) comes from another broadly defined industry instead of ownership in other industry firms. Overall, the prediction of the inattention theory on the relationship between value-destroying acquisitions and rival ownership is unclear.

The Anticompetitive Hypothesis. The collusion hypothesis explaining why rivals can gain from horizontal mergers between other firms (Eckbo, 1983, 1985) can be related to the anticompetitive hypothesis in the common ownership literature (Azar, Schmalz and Tecu, 2018). A horizontal merger can lead to reduced competition and stronger market power for remaining firms in the industry. As a result, acquirer shareholders should benefit from their ownership in

non-merging industry peers and gain from the acquisition even when it destroys shareholder value. However, prior literature does not find empirical evidence supporting the collusion hypothesis (Eckbo, 1983, 1985; Fee and Thomas, 2004; Shahrur, 2005). Therefore, the extent to which rivals can benefit from collusion fostered by a horizontal merger, if any, is doubtful. This evidence suggests that a relationship between value-destroying acquisitions and acquirer shareholder rival ownership is unlikely to be related to anticompetitive motives.

3 Empirical Analyses

3.1 Measuring common ownership

We measure common ownership as the weight that acquirer firm shareholders put on the value of the target and rival firms. Following Azar (2012, ch.5) and Lewellen and Lowry (2019), we first create firm pairs for focal firm j with its industry peers, measuring the weights firm j shareholders put on each rival firm k:

$$CO_{jk} = \sum_{i=1}^{I} \beta_{ij}\beta_{ik} \tag{1}$$

where $i = 1, \ldots, I$ is the set of shareholders of firm j, β_{ij} is the ownership share of shareholder i in firm j, and β_{ik} is the ownership share of shareholder i in firm k. We then calculate a market value weighted average CO_j across all firm pairs for firm j as firm level common ownership:

$$CO_j = \sum_{k=1}^{K} \sum_{i=1}^{I} w_k \beta_{ij}\beta_{ik} \tag{2}$$

For target ownership we measure ownership overlap at the firm pair level with Equation 1 and for rival ownership we measure ownership overlap at the firm level using Equation 2, excluding the target. We further employ two alternative measures for robustness check. The

first alternative measure follows HJL which scales our previous measure with a denominator:

$$CO_j^{HJL} = \sum_{k=1}^{K} \sum_{i=1}^{I} w_k \frac{\beta_{ij}\beta_{ik}}{\beta_{ij} + \beta_{ik}} \tag{3}$$

In addition, we also use the measure used by He and Huang (2017) which simply uses a dummy variable CommonBlock_Target to indicate that there is an acquirer shareholder holding a block in both the acquirer and the target, and a dummy variable CommonBlock_Non-Merging Peers indicating that there is at least one acquirer blockholder holding a block in one of the non-merging industry peers. We further measure the number of such common blockholders for the target and industry peers, as well as the number of industry peers connected to the acquirer through such common blockholders.

3.2 Data description and sample characteristics

Our sample includes all horizontal deals from 1988 to 2016 from SDC Thomson-Reuters. We keep a deal if the acquirer owns less than 50% of the target prior to the announcement and is seeking to own more than 50% of the target. Mergers involving firms with multiple securities are dropped, as in MO. We define a horizontal M&A deal based on historical Compustat 3-digit SIC codes, however we also conduct robustness analyses with the narrower historical Compustat 4-digit SIC codes, and the 10K text-based industry classifications developed by Hoberg&Phillips (FIC-300 codes) (Hoberg and Phillips, 2010, 2016), as well as the wider Compustat 2-digit SIC classification. We match this sample with financial information from Compustat, stock pricing from CRSP, and institutional ownership from the Thomson Reuters 13F database. Institutional ownership data after 2012 are corrected and asset managers are aggregated at the family level following Azar, Schmalz and Tecu (2018). We exclude deals in financial and utility industries. The final sample is comprised of 1,800 horizontal mergers.

Table 1 presents the summary statistics of the deals in our sample. Horizontal acquisitions are on average value-destroying for acquirers and value-enhancing for targets in accordance

to prior literature. The average cumulative abnormal return (CAR)[6] for a (-1,+1) 3-day window around the announcement of the deal is -1.56% for acquirers and 21.62% for targets. The average CAR across rivals within an industry is 0.14%. For rival firms with multiple securities, we calculate the CARs and the dollar gain/loss as a value weighted average at the firm level. Synergies are calculated as the CAR (-1,+1) of the value weighted portfolio of the acquirer and target following HJL. The average synergy gain is 1.76% and average dollar value of synergy gain is $48 million. The median acquirer share of synergy gain is 32% for deals with positive synergies, indicating that around 70% of the synergy gain should be attributed to the target, consistent with that in HJL. The level of institutional ownership is higher for the acquirer firm (58%) than the target firm (47%), which is in line with the fact that target firms tend to be smaller in size. CO_Target and CO_Rivals are common ownership measures calculated following Equation 1 and 2. CO_Target measures how much acquirer shareholders have at stake in the target and CO_Rivals measures how much acquirer shareholders have at stake in non-merging industry peers.

3.3 Stakes in acquirer, target and industry rivals

Panel A of Table 2 shows the average stakes held by the largest acquirer shareholders across the acquirer, the target, and rival firms in the same industry. For each deal, the acquirer shareholders are ranked based on the controlling shares held in the acquirer only.[7] As HJL document, large acquirer shareholders have on average small stakes in the target. Since target firms are usually much smaller than acquirers, market value gains on targets may not offset completely the losses on the acquirer side. An average top ten acquirer shareholder owns 3.21% of the acquirer and only 0.87% of the target.

[6]The CAR is calculated with the market model. We also conduct our analyses with the Fama-French model in our robustness check and obtain similar results.

[7]In some deals certain acquirer shareholders hold the same amount of shares with voting power, for example, there are more No.1-ranked acquirer shareholders than the number of acquisitions in the sample. In addition, we set an ownership threshold of 0.1% for the shareholder to be included in the sample. Therefore, the number of observations for the average top 10 acquirer shareholders is 17,640 instead of 18,000.

For the same ranked shareholders we also show the relevant ownership stakes in industry rivals. On average a top 10 acquirer shareholder holds 1.82% per rival, which is double relative to the stake in the target. We use historical Compustat 3-digit SIC codes to identify industry rivals. We show that the largest acquirer shareholders (top 10) hold a large number of rivals: on average they hold 44 rivals which correspond to a total of 29% of the firms within the industry (including the acquirer and the target). It is necessary to understand how relevant is the acquirer's average ownership in rivals from a portfolio weight perspective. We calculate the portfolio weights for each acquirer shareholder across acquirer, target, and rivals in Panel B of Table 2. These weights are based on the dollar value of the combined holdings in the industry because we are focusing on horizontal mergers. The results show that for the largest shareholders, the portfolio weight on rivals is on average larger than the weight on the acquirer firm. As well, the weight on the target is very small, consistent with HJL. From an industry portfolio perspective, 78% of the top 10 largest acquirer shareholders have larger weight on the set of rival firms than on the acquirer. Including the weight on the target firm does not change this percentage. On average the acquirer shareholder's portfolio holdings in the industry in which the merger takes place weighs 5% of her overall portfolio. This indicates the importance of taking rival ownership into account, and the potential overall value-improvement for acquirer shareholders, given that rivals tend to gain from value-destroying M&A deals as shown by the existing empirical literature (Song and Walkling, 2000; Shahrur, 2005).

3.4 Acquirer return and adjustments for rival ownership

Having established the relevance of holdings in rival firms, we now proceed to compute the total industry return for each acquirer shareholder.

$$r = \frac{\alpha_a V_a CAR_a + \alpha_t V_t CAR_t + \sum_{j \in J} \alpha_j V_j CAR_j}{\alpha_a V_a + \alpha_t V_t + \sum_{j \in J} \alpha_j V_j} \tag{4}$$

Equation 4 shows the return calculation for each acquirer shareholder. α stands for the

shareholder's ownership percentage in the acquirer, target, and non-merging rival firms in the industry, respectively indexed by a, t, and j, with J representing the set of non-merging industry firms. V is the market capitalization two days prior to the announcement while CAR is the 3-day cumulative abnormal return around the announcement date.

Table 3 Panel A shows the acquirer shareholders' returns from the M&A announcements for all horizontal deals. Column 1 reports the average return on acquirer stake for the average top 5, top 10, and all acquirer shareholders. In column 2 we adjust the announcement return factoring in gains/losses from the acquirer shareholders' target stakes, if any. Column 3 further adjusts for gains/losses from both target and rival ownership as in Equation 4. Consistent with HJL, we show that for the average top 5 and top 10 acquirer shareholder, target ownership does offset part of the loss on acquirer. However, the return remains significantly negative. After accounting for rival ownership, the announcement return is close to zero and no longer significant for the average top 5 shareholders. It is only marginally significant and negative for the average top 10 shareholder (-0.04 at the 10% level). Column 5 indicates that the average acquirer shareholder indeed gain from ownership in non-merging industry peers. These results indicate that rival ownership plays an important role in offsetting the losses for acquirer shareholder's stake.

Next, we include the possibility of a coalition among both the top ten, and all acquirer shareholders, as assumed by MO, which is reflected in Equation 5. i is an individual shareholder within the set I of the top ten largest or all acquirer shareholders.

$$r = \frac{(\sum_{i\in I}\alpha_a)V_aCAR_a + (\sum_{i\in I}\alpha_t)V_tCAR_t + \sum_{j\in J}(\sum_{i\in I}\alpha_j)V_jCAR_j}{(\sum_{i\in I}\alpha_a)V_a + (\sum_{i\in I}\alpha_t)V_t + \sum_{j\in J}(\sum_{i\in I}\alpha_j)V_j} \tag{5}$$

When we treat the top 5 or top 10 acquirer shareholders as a block with aligned interests, target ownership makes the net return from the deal statistically insignificant, which is in line with MO findings. This is one of the main critiques of HJL to MO: that shareholders do not act as a block or coalition. Our results confirm the findings of both HJL and MO, and go beyond:

even if shareholders do not act in coalition (as HJL point out), when they internalize the gains in rivals, the net return is no longer negative.

To better understand why value-destroying acquisitions may not get blocked, we now focus our analysis solely on bad horizontal deals and restrict our sample to deals with negative CAR (-1,+1). As shown in Table 3 Panel B, the CARs are significantly more negative with a mean of -6.44% for the top 10 largest acquirer shareholders and -5.93% for the average shareholder. Most strikingly, we observe that the returns on rival ownership (column 5) are much stronger than in panel A and more than double the target returns in column 4. Non-merging rivals benefit substantially in deals that the market perceives as value-destroying for the acquirer. In Column 2 we adjust acquirer returns for gains from target ownership and show that it only improves by an average of 1.33% to 1.60% (Column 4), and remain substantially negative with an average of -5.07% to -4.33%. However, rival and target ownership combined do appear to significantly improve returns for these acquirer shareholders. For an average top 10 acquirer shareholder in a bad deal, common ownership improves its return by 4.98% (Columns 4 + 5). While it cannot completely offset the loss on the acquirer stake, common ownership cuts the loss substantially to an average of -1.45%. This is on average a 77% loss reduction while accounting for target ownership only leads to an average of 21% reduction. If the top 10 acquirer shareholders form coalitions, target ownership only improves the return by 1.71% while common ownership improves return by a striking 5.80%.

Figure 2 visually shows the magnitude of the improvements described above. Figure 3 further shows the annual average of these returns over the full sample period. The average acquirer CAR is mostly negative before 2010. While adjusting for target ownership marginally improves on the return for acquirer shareholders, the return adjusted for both target and rival ownership consistently hovers around zero. This difference becomes more obvious when we focus solely on deals with negative announcement returns. Accounting for rival ownership largely offset the announcement losses for acquirer shareholders while accounting for target ownership only leads to marginal improvements.

In sum, for all horizontal deals, return adjusted for common ownership (target+rival) mainly hovers around zero while acquirer CAR and return adjusted for target ownership are negative. For horizontal deals with negative announcement returns, the difference between acquirer CAR and return adjusted for common ownership is substantial while target ownership barely mitigates the acquirer loss. To make sure that our results are not driven by outliers, we perform a K-density estimation for acquirer shareholder returns, and plot it in Figure 4. The plots of the medians also show the same patterns, indicating that indeed our results are not driven by outliers. This evidence could suggest that large acquirer shareholders may not block value-destroying acquisitions because they can offset the losses of the deal with their combined stakes in target and rival companies.

Finally, to better illustrate the magnitude of the announcement returns, we look at gains and losses in dollar value for bad horizontal deals. According to Panel C of Table 3, on average a top 10 acquirer shareholder loses $13.67 million from its acquirer ownership in a bad deal. When accounting for target ownership only 10% of large shareholders achieve a net gain from the deal, which is consistent with HJL's results. However, when we take rival ownership into account, the percentage triples: 31% of the top 10 acquirer shareholders achieve a net dollar gain from a bad deal. This can shed some light as to why large shareholders of acquirers may not block value-destroying acquisitions: almost a third of them achieve a net gain for their overall industry portfolios.

3.5 Alternative industry classifications

To check for the possibility that the results identified above are driven by a specific type of industry classification, in this section we present the same analyses using various alternative industry classifications. First, investors can have a narrower focus on their industry portfolios. We follow He and Huang (2017) and use historic 4-digit Compustat SIC codes to classify firm industries. Row 5 to 8 in Table 4 show that using this approach leads to similar but slightly weaker results to those based on the 3-digit SIC codes (row 1 to 4). Return adjusted for target

and rival ownership is still only marginally less than zero for the average top 10 acquirer shareholder. In value-destroying deals, gains from common ownership (target+rival) mitigate 69% of the loss on acquirer and 27% of the top 10 acquirer shareholders end up with a net gain.

We then repeat our analyses using a wider industry classification, the 2-digit SIC codes. This approach allows the inclusion of a broader set of related firms, including upstream supplier and downstream customer firms. Horizontal mergers can not only influence closely related rivals sharing the same product market, but also corporate suppliers and customers. Shahrur (2005) shows evidence that horizontal mergers lead to positive abnormal returns on non-merging rivals, as well as corporate suppliers and customers. In the next section we will explore supplier and customer firms from different 2-digit SIC industries. Column 9 to 12 of Table 4 present the results based on 2-digit SIC industry classifications. In deals that are seemingly value-destroying to acquirer shareholders, accounting for common ownership leads to an 85% loss reduction from acquirer ownership for the average top 10 acquirer shareholder, and 34% of such shareholders end up with a net gain. These results are similar or even better than our baseline results.

The 10K text-based industry classification developed by Hoberg and Phillips (2010, 2016) captures product similarity better and firms are reassigned every year based on changes in their product descriptions. We therefore also adopt this classification as a more dynamic industry definition. Based on column 13 to 16, the results using this HP classification are again similar to our baseline results. Announcement return for the average top 10 acquirer shareholder becomes only marginally less than zero after accounting for common ownership. In bad deals, accounting for common ownership leads to a loss reduction of 75% for the average top 10 acquirer shareholders and 29% of such shareholders end up with a net gain. Overall, results presented in this section indicate that our baseline results are robust to different industry classifications.

3.6 Ownership in corporate suppliers and customers

In this section we examine the wealth effects from acquirer shareholders' ownership in the acquirer's corporate suppliers and customers. Shahrur (2005) uses horizontal merger wealth effects on suppliers and customers to disentangle whether the mergers have efficiency or collusion implications, with results supporting the efficiency hypothesis. In the same spirit, examining wealth effects from acquirer shareholders' ownership in corporate suppliers and customers helps disentangle whether the relationship between bad acquisitions and shareholder rival ownership can be driven by acquirer shareholders' anticompetitive motives. If shareholders do not prevent the manager from pursuing a bad horizontal acquisition because this acquisition can lead to increased market power for other firms they hold in the industry, as the anticompetitive hypothesis suggests, then we should expect to see rivals gain whereas suppliers and customers lose.

We use two different data sources to identify corporate suppliers and customers. First, we follow Shahrur (2005) and use the input-output account data provided by the U.S. Bureau of Economic Analysis (BEA) to identify industries that are suppliers or customers of the merging firms' industry. We focus on corporate suppliers and customers from industries with different 2-digit SIC codes to the merger industry. Based on the 1,800 horizontal deals in the baseline sample, this approach leaves us with 369 deals and 208 value-destroying deals. Second, we use the Factset Relationship data which allows us to identify firm-specific supplier/customer relationships from 2003 to 2016. With this approach we end up with 261 horizontal deals and 137 bad horizontal deals that can be matched to the data from the baseline deal sample.

Table 5 presents the results of incorporating acquirer shareholders' ownership in corporate suppliers and customers. Panel A presents results based on the BEA database. Panel B presents results based on the Factset Relationship data. The analyses in this section focus on value-destroying acquisitions, i.e. deals with negative announcement CARs. The results in Panel A are consistent with our baseline results on bad deals. The average return on rival own-

ership is positive and significant for acquirer shareholders, largely mitigating their losses on the acquirer. Column 4 shows that adjusting for ownership in suppliers and customers can further mitigate the average acquirer shareholder's loss on the acquirer. Column 7 indicates that suppliers and customers have significant and positive returns during the announcement window. For the average top 10 acquirer shareholders in bad deals, adjusting for target ownership can mitigate acquirer loss by 27%, adjusting for target and rival ownership can lead to a loss reduction of 71%, further accounting for supplier and customer ownership can offset 81% of the acquirer loss in total.

These results do not support the anticompetitive hypothesis which conjectures that acquirer shareholders do not prevent bad acquisitions because they can lead to increased market power within the industry. This hypothesis and the collusion hypothesis in the M&A literature predict that a horizontal merger will lead to positive wealth effects for rivals whereas negative wealth effects for the acquirer's suppliers and customers. However, our results are more in favor of the efficiency hypothesis that a bad acquisition leads to decreased efficiency for the acquirer firm, which in turn increases the bargaining power of its rivals, suppliers, and customers.

Results based on the Factset data shown in Panel B are similar to those in Panel A. For the average top 10 acquirer shareholders, adjusting for target ownership can mitigate acquirer loss by 33%, adjusting for target and rival ownership can lead to a loss reduction of 83%, further accounting for supplier and customer ownership can offset 85% of the acquirer loss in total. The overall evidence supports the notion that corporate suppliers and customers, alongside with industry rivals, gain at the efficiency loss from bad acquisitions conducted by the acquirer firm. Acquirer shareholders with ownership in these firms internalize such gains, allowing them to largely offset the losses from their acquirer stakes. As a result, they do not have strong incentives to actively prevent managers from pursuing value-destroying acquisitions. This is consistent with the incentive hypothesis and against the alternative anticompetitive hypothesis.

4 Common Ownership, M&A Deal Characteristics, and Acquisition Probability

4.1 M&A deal characteristics

In this section we conduct multivariate regression analyses on the relationship between acquisition characteritics and common (target/rival) ownership, controlling for deal and firm characteristics that can also influence value creation of an acquisition. The results of Matvos and Ostrovsky (2008) imply that there can be more value-destroying acquisitions when acquirer shareholders have more target ownership, i.e. a negative association between acquirer CAR and target ownership. Harford, Jenter and Li (2011) find that the relationship between acquirer CAR and target ownership is statistically insignificant and even positive. He and Huang (2017) argue that such cross-ownership can actually lead to more efficient mergers because there is a reduction of information asymmetry. We follow the empirical specification of HJL and factor in acquirer shareholders' ownership in non-merging industry rivals, to examine how acquirer CAR is associated with both target and rival ownership.

$$CAR_{acquirer} = CO_{target} + CO_{rivals} + \delta' X + Year + Industry + \epsilon \tag{6}$$

CO_{target} measures firm pair level ownership overlap between the acquirer and the target, calculated using Equation 1. CO_{rivals} measures how much acquirer shareholders have at stake in non-merging industry rivals, calculated using Equation 2. We rank CO_{target} and CO_{rivals} into deciles in the full deal sample then scale them by ten into scores from zero to one. X is a list of deal, acquirer, and target characteristic controls following HJL. The ownership variables, including institutional ownership percentage in the acquirer and the target, are measured at the quarter end prior to the announcement quarter of the acquisition. All other firm financial variables are measured at the fiscal year end prior to the acquisition announcement year. Year

and industry fixed effects are included. We further conduct a probit analysis on the relationship between the probability of deal completion and target/rival ownership, with the same explanatory variables. Finally, we also examine the combined wealth creation of the merger by substituting the dependent variable in Equation 6 with synergies.

Table 6 presents the results of these regression analyses. Based on column 1 to 3, when acquirer shareholders have more at stake in the target, acquisitions are more likely to be value-enhancing. This is consistent with the idea that these shareholders can foster a reduction of information asymmetry between the acquirer and the target, leading to a more efficient merger. A one decile increase in target ownership is on average associated with a 0.4% increase in acquirer CAR (column 3). Synergy level is also positively associated with target ownership (column 6), consistent with the findings of Brooks, Chen and Zeng (2018) that acquirer shareholders with more target ownership are likely to scrutinize the deal more to increase the combined wealth creation, because they have interests in both firms.

Rival ownership has the opposite relationships with these two variables. Acquirer shareholders' having more rival ownership is associated with lower acquirer CARs. A one decile increase in rival ownership is on average associated with a 0.4% decrease in acquirer CAR. Acquisitions are more likely to be value-destroying when acquirer shareholders have more interests in non-merging rivals. This provides support to the incentive hypothesis that losses on acquirer are less concerning to acquirer shareholders when they can internalize gains from ownership in the industry rivals. Rival ownership also has a negative relationship with synergies. It appears that when acquirer shareholders have more ownership in other firms in the industry, the combined value of the newly merged firm matters less to them because the other rivals they own can gain at the expense of the merging firms.

More interestingly, bad deals are more likely to be completed when acquirer shareholders have more rival ownership. A one decile increase in rival ownership is on average associated with a 2% higher completion likelihood of a bad deal. This suggests that acquirer shareholders with more rival ownership are less likely to actively prevent bad acquisitions both *ex ante* and

ex post. In Table 7 we repeat the analyses using alternative industry classifications and obtain similar results (the result on bad deal completion is weaker for the 2-digit SIC sample).

In Table A.1 we further repeat the acquirer CAR regression with the two alternative ownership measure approaches by HJL and He and Huang (2017), as well as alternative estimation windows and model for acquirer CAR. The results remain robustly similar to our results in Table 6, even when we restrict ownership measures to only include common blockholders (column 6 to 8), as in He and Huang (2017). Having an acquirer blockholder also owning a block in the target is associated with a 1.9% higher acquirer CAR, while having an acquirer blockholder also owning a block in at least one non-merging industry peer is associated with a 1.3% lower acquirer CAR. When the acquirer is connected to more non-merging industry peers by common blockholders, its acquisition CAR is lower.

4.2 Probability of announcing an acquisition

The previous results suggest that managers are less likely to face shareholder scrutiny on pursuing value-destroying acquisitions when their shareholders have more ownership in other industry firms. In this section we examine whether whether firm managers are more likely to pursue a horizontal acquisition when their shareholders have more diversified holdings across other firms in the industry. We define a dummy variable, *Acquisition*, that equals one if the firm announces an acquisition during the year. We create another dummy variable, *High CO* that equals one if the firm has a *CO* in the top quartile among all firms in the given year. *CO* measures how much interests the firm's shareholders have on its industry rivals, calculated using Equation 2. Figure 5 shows that as a firm's *CO* increases, it is also more likely to announce an acquisition in the year after. We then regress *Acquisition* on lagged *High CO*, in both probit and linear probability models.

Table 8 present the results of these regressions. A firm is indeed more likely to pursue a horizontal acquisition when its shareholders have more ownership in its industry rivals. This relationship is robust to the inclusion of controlling for both time-invariant firm-specific char-

acteristics (firm fixed effect), and industry-specific shocks (industry×year fixed effect), as presented in column 3. When a firm's shareholders have high level of ownership in its industry rivals, its probability of announcing a horizontal acquisition is 0.4% higher. The sample average of *Acquisition* is 0.012, indicating that firms with high *CO* have a one-third higher propensity to pursue a horizontal acquisition than other firms. This relationship remains mostly robust to alternative industry classifications as presented in column 4 to 9 in Table 8 (although the coefficient loses statistical power when including firm fixed effect in the 2-digit SIC specification).

4.3 Common ownership of all portfolio peers

The associations of rival ownership with M&A value creation and acquisition likelihood that we have identified so far can be related to both the incentive hypothesis and the two alternative hypotheses. In these two following sections we attempt to disentangle these two alternative hypotheses. We first examine the inattention hypothesis that when acquirer shareholders have more diversified ownership across other firms in the industry, they are spread too thin and therefore unable to monitor against managers' pursuits of value-destroying acquisitions. If this were to be the explanation to the results we have identified so far, we should expect to see this link extending beyond just industry common ownership. When the acquirer firm's shareholders have more ownership in not only its industry rivals, suppliers, customers, but also other cross-industry peers that are unaffected by the merger, these shareholders' monitoring capacity should be spread even thinner. if the inattention hypothesis were to explain our results, we should see an even strong relationship between M&A characteristics and acquirer shareholders' common ownership of all portfolio peer firms.

To test this, we identify all firms connected to the acquirer through acquirer shareholders, both within-industry and cross-industry peers. We then calculate the acquirer firm's *CO* of all such portfolio peers, weighted by market value and excluding the target firm. A higher *CO* in this case indicates that acquirer shareholders have more diversified interests in other firms. The inattention hypothesis indicates that this *CO* should be even more negatively associated

with acquirer CAR and deal synergies. We repeat the analyses in Table 6 with this measure. The results are reported in Table 9.

Contrary to the prediction of the inattention hypothesis, common ownership of portfolio peers does not have a statistically significant relationship with acquirer CAR or synergies. The economic magnitudes of the coefficients are also smaller in comparison to those of common ownership of industry peers. There is no significant difference between *CO* in industry peers and *CO* in portfolio peers in the analysis of bad deal completion. For robustness we again repeat the acquirer CAR regression with alternative estimation windows and common ownership measures. Based on Table A.2, *CO* of portfolio peers has a weaker and statistically insignificant relationship with acquirer CAR in comparison to *CO* of industry peers, for the Fama-French estimation model, the (-5, +5), the (-10, +10) estimation window, and the HJL common ownership measure. Only in the case of a more extended window, (-20, +20), does *CO* of portfolio peers have a slightly stronger coefficient. Column 6 also indicates a weaker relationship, factoring in blockholdings by acquirer shareholders in cross-industry peers does not appear to be associated with more negative acquirer CARs. The combined evidence suggests that the inattention hypothesis is unlikely to explain our main results.

4.4 Concentrated industries

In Section 3.6, results from return analyses incorporating acquirer shareholder ownership in corporate suppliers and customers suggest that the anticompetitive hypothesis is unlikely to explain our results. We aim to further examine this alternative hypothesis with multivariate analyses focusing on concentrated industries in this section. A horizontal merger can lead to a more substantial increase in market power within a concentrated industry. The anticompetitive hypothesis predicts that acquirer shareholders can tolerate value-destroying acquisitions in such industries, because they are more likely to benefit from increased monopoly rents for rival firms they own and an overall increase in industry wealth.

We identify concentrated industries based on number of firms in the industry and the

Herfindahl index (HHI). Industries with a smaller number of firms or a higher HHI are considered to be more concentrated. We first repeat the analyses in Table 6 with cross-section variation based on industry concentration. *Low N* is a dummy variable that equals one if the merger industry is in the bottom quartile of the full deal sample distribution. *High HHI* is a dummy variable that equals one if the merger industry is in the top quartile of the full deal sample distribution.

Based on column 3 of Table 10, the interaction term between CO_{rivals} and *Low N* has a negative but insignificant coefficient, whereas the standalone CO_{rivals} still has a negative and significant coefficient. There does not appear to be a significant difference in the relationship between CO_{rivals} and acquirer CAR for acquirers in concentrated industries. However, the linear combination of CO_{rivals} and its interaction with *Low N* does indicate that the link is slightly stronger for acquirer firms in concentrated industries. Column 4 shows that using *High HHI* as a proxy for industry concentration produces similar and even weaker results. The results are similar for the synergies regression (column 11 and 12). For the bad deal completion regression, the two proxy variables lead to conflicting results. Overall the evidence indicates that our main results remain significant in the absence of anticompetitive motives. Anticompetitive motives can at most marginally increase the associations we have identified.

We also repeat the analyses in Table 8 in the context of industry concentration. Table 11 shows results contrary to the predictions of the anticompetitive hypothesis. The positive relationship between high common ownership in industry rivals and the probability of pursuing horizontal acquisitions disappears in concentrated industries, robust to a rich set of fixed effects. The cross-sectional tests in this section suggest that the main results we have identified have limited, if any, connection to the anticompetitive hypothesis of common ownership.

4.5 Institutional trading after M&A announcements

Only acquisitions involving an equity issuance of more than 20% of outstanding shares require mandatory shareholder voting in the acquirer firms. Absent formal voting procedures,

institutional investors can influence acquisitions through voice or exit. While the voice channel is difficult to examine quantitatively, in this section we analyze holding changes by acquirer shareholders before and after acquisition announcements following Kempf, Manconi and Spalt (2016). Managers are considered to be less disciplined *ex ante* if investors are less likely to sell *ex post*. This analysis can further help disentangle the incentive hypothesis and the inattention hypothesis. The results are presented in Table 12 and 13.

An acquisition is defined as a bad deal if it is in the bottom quintile among all sample horizontal deals based on the 3-digit SIC codes. *Sell* is the absolute value of the negative percentage change in ownership percentage the investor has in firm i from q-1 to q. *Sell* equals zero if there is no negative change in ownership. *Exit* is a dummy variable that equals one if the investor liquidates the whole ownership in the acquirer. Ind. Portfolio Return is the investor's announcement return adjusted for target and rival ownership. High Ind. Portfolio Return is a dummy variable that equals one if the investor's acquirer+target+rival adjusted return is in the top quintile of the full sample distribution. Acq+Target Return is the investor's announcement return adjusted for target ownership. High Acq+Target Return is a dummy variable that equals one if the investor's target adjusted return is in the top quintile of the full sample distribution.

Target ownership is the investor's ownership percentage in the target firm prior to announcement. Rivals ownership is the market value weighted sum of the investor's ownership percentage across non-merging industry peers, also in the quarter end prior to announcement. We control for the firm's current stock return, stock return from the prior quarter, current, one quarter lagged, and one year lagged stock turnover, book-to-market, days between acquisition announcement and the quarter end, the investor's ownership percentage prior to announcement, the firm's weight in the investor's portfolio, investor size, industry$\times$year fixed effect, fiscal quarter fixed effect, as well as investor fixed effect. Standard errors are clustered at the invest$\times$year-quarter level.

The results first show that acquirer investors are indeed more likely to sell, and even completely exit following the announcement of a bad acquisition. Column 2 and 8 of Table 12

indicate that the acquirer shareholder is less likely to sell or exit after a bad deal announcement if she manages to have a high gain from her industry portfolio, i.e. a high return adjusted for target and rival ownership as in column 3 of Panel B Table 3. Gaining a high return from a bad deal based on target ownership does not have this connection to the acquirer shareholder's selling activity. We further examine investor hetergeneity in this analysis. The results are mainly pronounced for non-index investors (column 4 and 10). As expected, index acquirer shareholders, i.e. BlackRock, Barclays Global Investors, State Street, and Vanguard, do not sell even after a bad deal announcement. High returns at the industry portfolio level do not change this result (column 3 and 9). We then categorize acquirer shareholders into long term and short term investors based on their average portfolio turnovers in the prior year, using the churn ratios following Gaspar, Massa and Matos (2005). The result remains significant for both long term and short term acquirer shareholders. These results provide further support to the incentive hypothesis that acquirer shareholders pay attention to the overall wealth implications for their industry portfolios when evaluating corporate acquisitions.

In Table 13 we use this approach to test the inattention hypothesis. Kempf, Manconi and Spalt (2016) show that acquirer shareholders who are distracted by shocks in other industries within their portfolios are less likely to sell after bad deal announcements. With the inattention hypothesis, acquirer shareholders with more rival ownership prior to a bad deal announcement should be less likely to sell after the announcement, because their attention to monitor has been spread too thin. The results in this table do not provide meaningful support to this argument. The interaction between bad deal and rival ownership is only marginally significant in column 6 but it is not robust to any other investor specification. In conclusion, the evidence presented in this section provide further support to our main hypothesis, which conjectures that shareholders remain largely inactive in preventing managers from pursuing value-destroying acquisitions because many of them internalize the gains by industry rivals and benefit from even bad acquisitions at the portfolio level.

4.6 Deals requiring mandatory shareholder voting

Only deals financed by common stock issuance of more than 20% of the acquirer firms' outstanding shares require mandatory shareholder voting. Becht, Polo and Rossi (2016) and Li, Liu and Wu (2018) show that deals that require mandatory shareholder voting tend to have higher quality (higher acquirer CAR). Voting gives acquirer shareholders a direct channel to scrutinize the acquisition, disciplining the manager from pursuing a bad deal. Kempf, Manconi and Spalt (2016) show that managers are more likely to structure deals that do not require shareholder voting when they have distracted shareholders, because a formal voting procedure will inevitably attract shareholder scrutiny even when they are distracted. We have previously shown that bad deals are more likely to be completed when acquirer shareholders have more rival ownership in Section 4.1. In this section, we examine whether this association differs for deals that require shareholder voting and those that do not.

We follow Kempf, Manconi and Spalt (2016) to calculate acquirer share issuance for the deal. The percentage of common stocks issued to finance the transaction is calculated as the total deal value times the percentage financed through common stock as reported in SDC, divided by the market capitalization of the acquirer measured at the end of the last trading day prior to the announcement. Deals financed with share issuance of over 20% based on this calculation should require shareholder voting. We run the probit regression of bad deal completion on target and rival ownership for the voting and no voting subsamples. Table 14 column 1 and 2 present the baseline results with the 3-digit SIC classification. For robustness check, we also repeat this analysis for the narrower 4-digit SIC classification and the wider 2-digit SIC classification. Column 3 and 4 present results for the 4-digit SIC classification and column 5 and 6 present results for the 2-digit SIC classification.

Column 1 indicates that when a bad deal does not require shareholder voting, it is less likely to be completed when acquirer shareholders have higher target ownership. This is in line with the results of Brooks, Chen and Zeng (2018) and the argument that shareholders

holding more shares in both merging firms are more incentivized to scrutinize bad deals, even without a formal voting procedure. Interestingly, column 2 indicates that when acquirer shareholders have more ownership in the target and the acquisition requires shareholder voting, a value-destroying deal is more likely to be completed. This is consistent with the findings of Matvos and Ostrovsky (2008) that fund managers in fund families with more target ownership are more likely to vote for the approval of the acquisition even when it is bad. Managers can manage the financing structure of acquisitions to decide whether they have to go through shareholder voting or not, based on their interpretations of shareholder interests or attention (Kempf, Manconi and Spalt, 2016; Li, Liu and Wu, 2018). One interpretation of our results can be that managers communicate with shareholders who have target ownership through the "voice" channel *ex ante*, and only structure deals that require shareholder voting when they have a good understanding of such shareholders' interests.

There is a significant and positive relationship between bad deal completion and acquirer shareholder rival ownership for deals that do not require shareholder voting, whereas this relationship is insignificant for those that do require shareholder voting. The main conjecture of the incentive hypothesis is based on the idea that diversified acquirer shareholders can benefit from seemingly value-destroying acquisitions with gains on their rival ownership, hence, have less incentives to prevent bad deals. Since deals that require shareholder voting tend to be less value-destroying for acquirer shareholders (Becht, Polo and Rossi, 2016; Li, Liu and Wu, 2018), the rationale provided by the incentive hypothesis should be less important in the case of these deals. Firstly, shareholders are already losing less from such acquisitions without considering any rival ownership. In addition, rivals they hold can end up gaining less due to less efficiency gain when the acquirer firms make less value-destroying deals. As a result, accounting for rival ownership becomes less relevant and it is not surprising to see an insignificant result for these deals. The incentive hypothesis is mainly pronounced for bad deals in which direct shareholder monitoring (voting) is absent. The results are similar for the other two industry classifications although *CO_Target* is not significant in the 2-digit SIC sample (The coefficients are, however,

very close to having enough statistical power).

5 Conclusion

We show empirical evidence that positive returns for rival firms– together with common ownership of rivals– can help rationalize why acquirer shareholders often times remain inactive in monitoring against value-destroying acquisitions. Taking into account common ownership of both the target firm and rivals offsets the negative announcement return on the acquirer. Common ownership largely mitigates announcement losses to acquirer shareholders in value-destroying deals. Specifically, 30% of the large acquirer shareholders in acquisitions that are seemingly value-destroying end up with a net gain in their overall industry portfolios during the three-day window around the merger announcements. Deals in which acquirer shareholders have more ownership in non-merging industry rivals have lower acquirer CARs and synergies. Bad deals are also more likely to be completed when acquirer shareholder rival ownership is high.

Our results show that the relationships we have identified between rival ownership and deal qualities are unlikely to be due to acquirer shareholders being spread too thin or their anticompetitive motive to increase market power for their industry portfolios. The findings support our main conjecture that diversified acquirer shareholders can lack the incentives to monitor against bad acquisitions because they often profit from such bad deals at the industry portfolio level, by internalizing rival gains at the expense of the acquirer firms.

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6 Figures

Figure 1: **Return to Top 10 Acquirer Shareholders in Microsoft Acquisition of LinkedIn.** This figure shows the announcement return to Microsoft's top 10 largest shareholders during the (-1,+1) window around the announcement of its acquisition of LinkedIn in 2016. Raw return, return adjusted for target ownership, and return adjusted for target and rival ownership are presented.

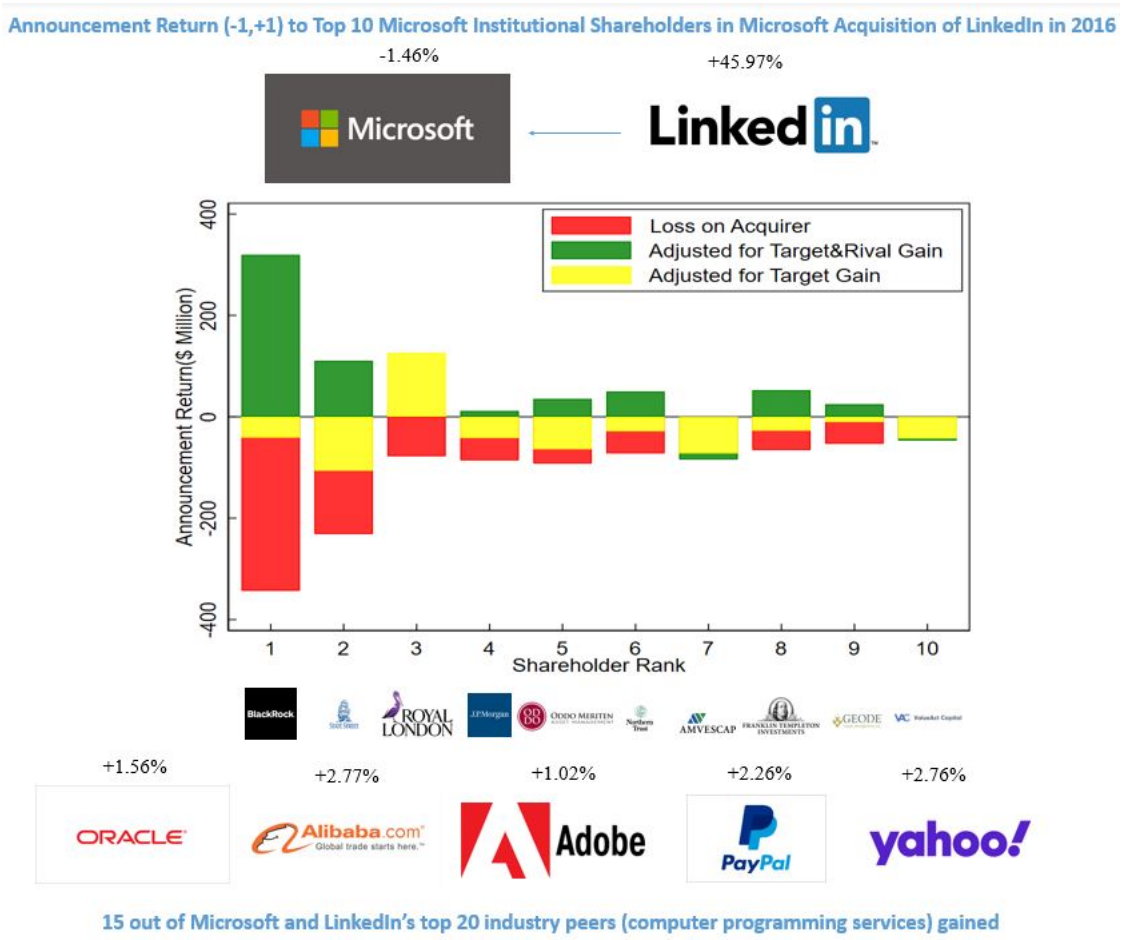


Figure 2: **Average Acquirer Shareholder Returns in All Horizontal Deals and Bad Horizontal Deals.** This figure shows the average return from acquirer ownership (acquirer CAR(-1,+1)), return from acquirer and target-ownership, return from acquirer, target, and rival ownership, for the top 10 largest shareholders in our sample deals. All horizontal merger deals are shown in the first chart, bad horizontal deals are shown in the second chart. A deal is identified as horizontal when the acquirer and target have the same historical Compustat 3-digit SIC code. Bad deals are defined as deals with negative acquirer CAR(-1,+1) which results in a loss for the acquirer shareholders. The three types of returns are averaged over the whole sample period for both the all horizontal and bad horizontal deal samples.

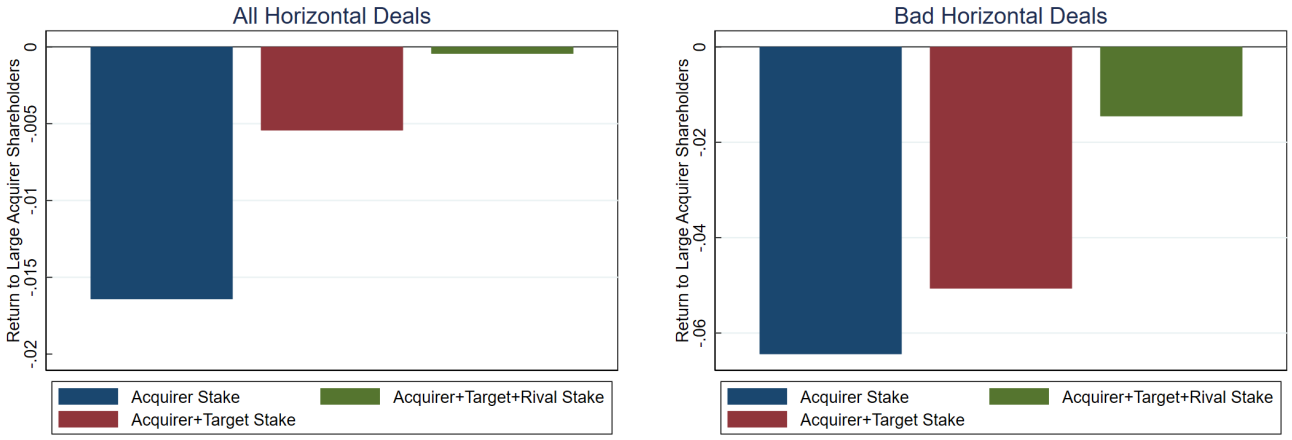
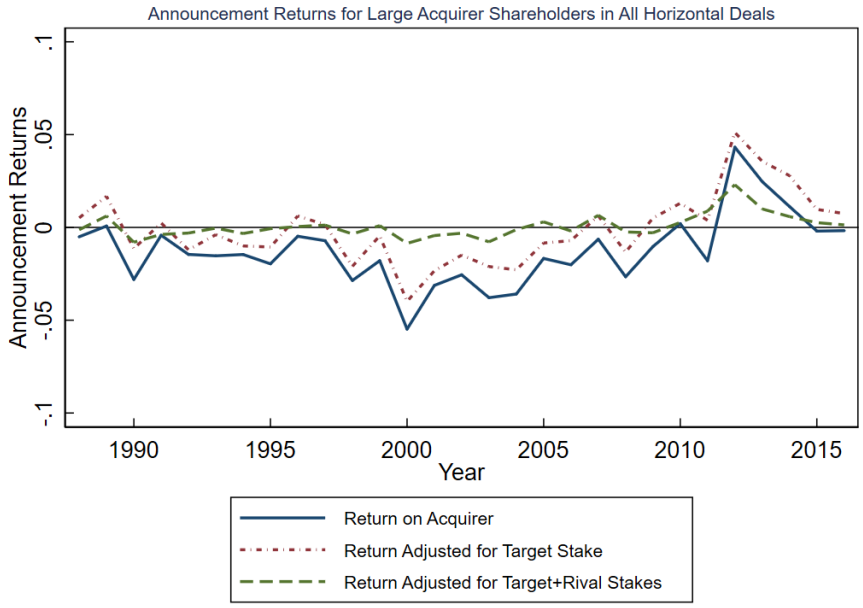


Figure 3: **1988-2016 Annual Average Acquirer Shareholder Returns in All Horizontal Deals and Bad Horizontal Deals.** This figure shows the annual average return from acquirer ownership (acquirer CAR(-1,+1)), return from acquirer and target-ownership, return from acquirer, target, and rival ownership, for the top 10 largest shareholders across each year in our sample. All horizontal merger deals are shown in the first chart, bad horizontal deals are shown in the second chart. A deal is identified as horizontal when the acquirer and target have the same historical Compustat 3-digit SIC code. Bad deals are defined as deals with negative acquirer CAR(-1,+1) which results in a loss for the acquirer shareholders. The three types of returns are averaged over each sample year for both the all horizontal and bad horizontal deal samples.



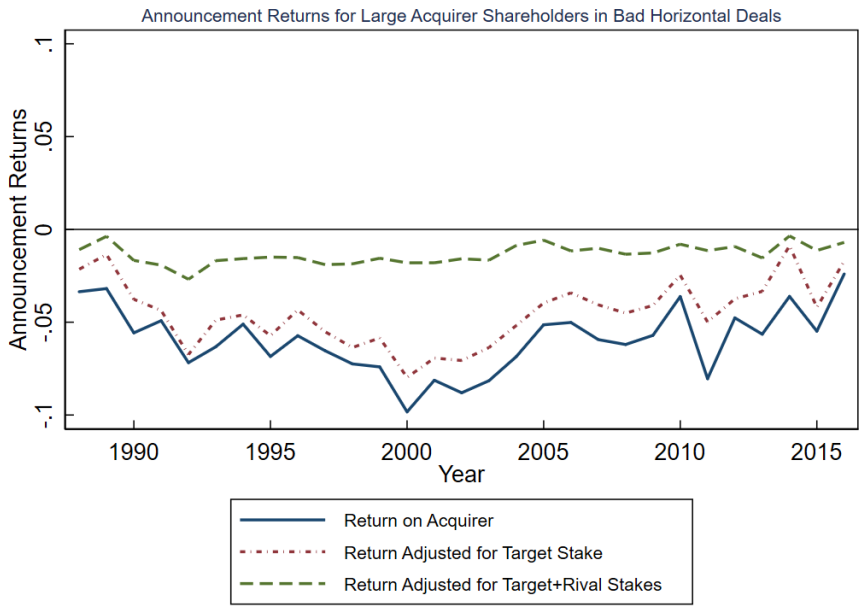
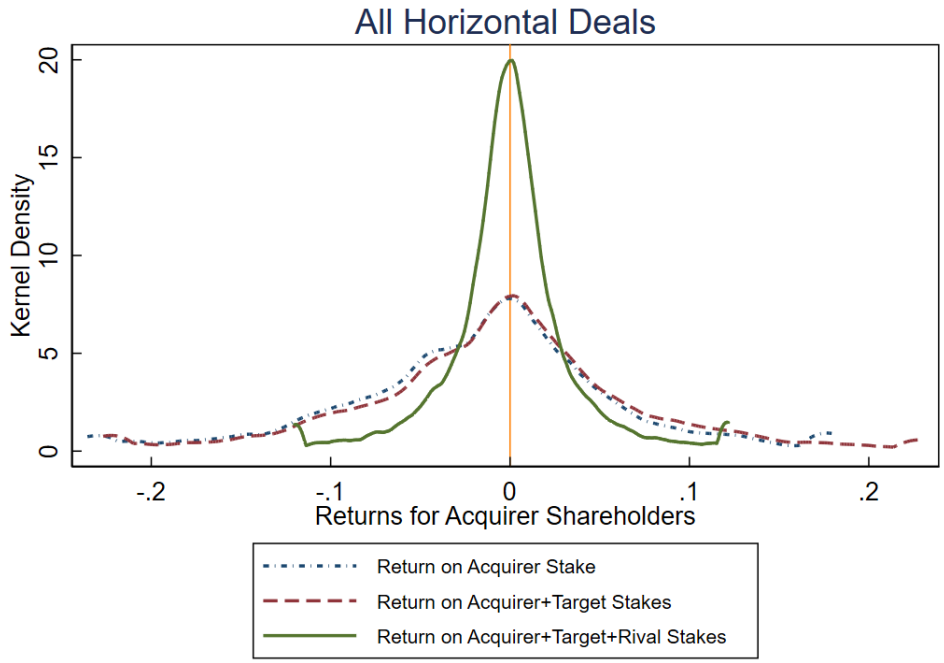


Figure 4: **Kernel Density Estimation for Acquirer Shareholder Returns in All Horizontal Deals and Bad Horizontal Deals.** This figure shows the kernel density estimation of return from acquirer ownership (acquirer CAR(-1,+1)), return from acquirer and target-ownership, return from acquirer, target, and rival ownership, for the top 10 largest shareholders in our sample deals. All horizontal merger deals are shown in the first chart, bad horizontal deals are shown in the second chart. A deal is identified as horizontal when the acquirer and target have the same historical Compustat 3-digit SIC code. Bad deals are defined as deals with negative acquirer CAR(-1,+1) which results in a loss for the acquirer shareholders.



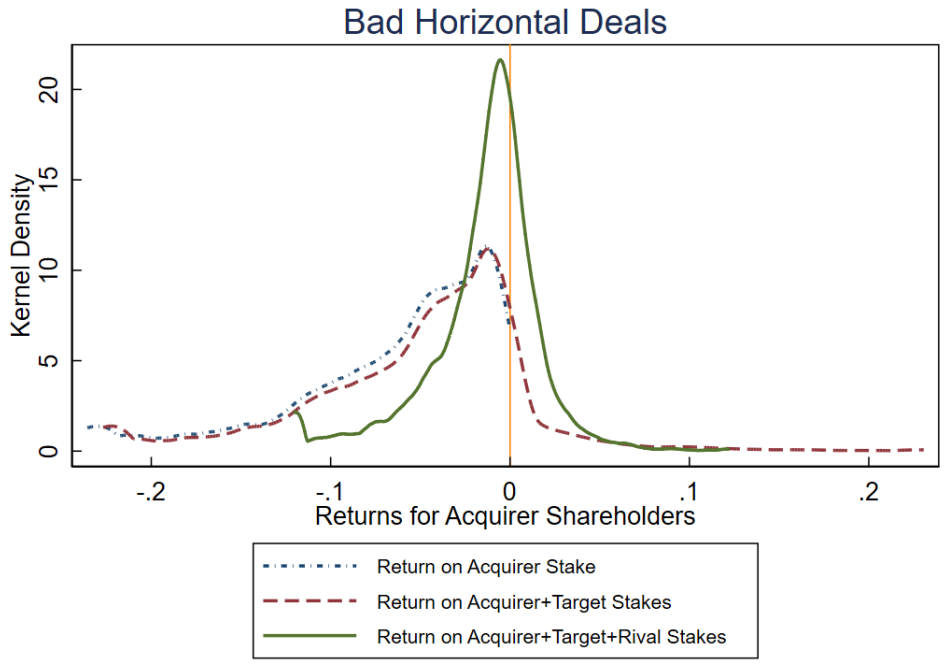


Figure 5: **Probability of Announcing an Acquisition and Rival Ownership Level.** This figure shows the average propensity of announcing an acquisition, at each level of rival ownership (lagged one year). The market value weighted average common ownership, *CO*, measures how much the firm's shareholders have at stake across its industry rivals in a given year, which is calculated with Equation 2. The *CO*s are ranked into deciles for each sample year.

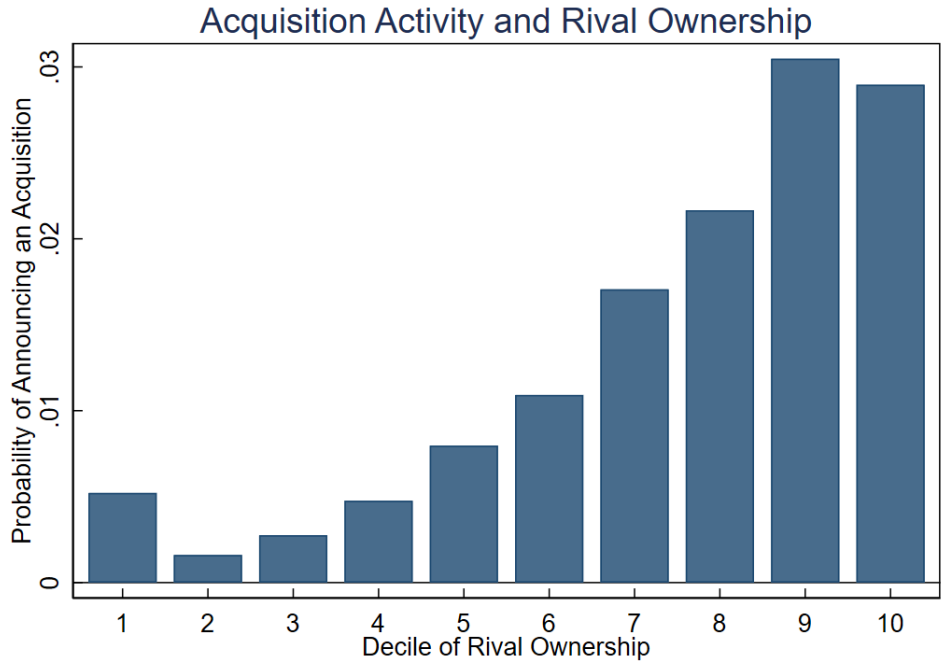


Table 1: **Summary Statistics.**

This table presents the horizontal sample, consisting of 1,800 acquisition attempts announced from 1988 to 2016. Both the acquirers and targets can be matched with data in CRSP, Compustat, and CDA/Spectrum database. An acquisition is kept if the acquirer owns less than 50% of the target prior to announcement and is seeking to own greater than 50% of the target. For a completed deal to be included, the acquirer has to own more than 90% of the target upon completion. Following Harford, Jenter and Li (2011), CAR(-1,+1) is calculated using the market model with an estimation window of (-200, -60) prior to the announcement date. Rival CARs are calculated as the average CAR across all rivals in the industry. Synergies(%) is CAR (-1,+1) of the value weighted porfolio of the acquirer and target, with target adjusted for toehold. Synergies($) is synergies percentage times the combined market value of the acquirer and target two days prior to the announcement, with target market value adjusted for toehold. The acquirer share of synergies is calculated as the abnormal increase in acquirer market value divided by synergy dollar value during the (-1,+1) window. It is calculated for deals with positive synergies only and is winsorized at the 1% level.

Horizontal M&A Deal Sample (1988-2016)						
Variable	Obs	Mean	Median	Std. Dev	5th Perc.	95th Perc.
Acquirer CAR (%)(-1,+1)	1,800	-1.56	-0.88	8.03	-15.74	11.69
Target CAR (%)(-1,+1)	1,800	21.62	17.24	24.06	-8.92	66.80
Rival CAR (%)(-1,+1)	1,800	0.14	0.09	1.90	-2.97	3.41
Synergies (%)	1,800	1.76	1.17	7.60	-10.94	15.26
Synergies ($million)	1,800	48.03	8.87	955.36	-990.04	1,272.27
Acquirer share of synergies (%)	1,074	-34.31	32.37	290.86	-360.51	105.07
Acquirer total institutional ownership (%)	1,800	57.88	59.83	25.45	10.39	95.40
Target total institutional ownership (%)	1,800	46.99	46.40	28.76	3.77	93.00
CO_Target ($\times$10,000)	1,800	51.92	28.96	62.55	0.33	175.43
CO_Rivals ($\times$10,000)	1,800	53.66	43.43	42.28	4.05	135.32
Premium (%)	1,572	46.37	39.08	42.61	-7.30	131.22
Complete	1,800	0.762	1.000	0.426	0.000	1.000
Competing	1,800	0.097	0.000	0.296	0.000	1.000
All cash	1,800	0.271	0.000	0.445	0.000	1.000
All stock	1,800	0.334	0.000	0.472	0.000	1.000
Toehold (%)	1,800	0.72	0.00	4.13	0.00	1.50

Table 2: **Target and Rival Ownership by Acquirer Shareholders.**

Panel A of this table presents the holdings in the acquirer, target and rival by the largest institutional shareholders of the acquirer. The sample consists of 1,800 horizontal deals. Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). The stake in rivals is calculated as the average stake the shareholder holds in companies within the same historical Compustat 3-digit SIC code. We also report the number of rival firms held by the acquirer shareholders. % of industry firms held is the sample average of number of firms held by the shareholder divided by the total number of firms in the industry. All numbers are winsorized at the 1st and 99th percentile. Panel B shows the portfolio weight an acquirer shareholder puts on its stake on the acquirer, target, and industry rivals relative to its overall industry portfolio. The portfolio weights are calculated as the dollar value holding of the acquirer, the target, or the rivals, respectively divided by the combined dollar value holding of the industry portfolio. We report the percentages of scenarios when an acquirer shareholder puts a larger weight on rivals than on the acquirer, and when an acquirer shareholder puts a larger weight on target and rivals combined.

Panel A: Acquirer Shareholder Stakes in Acquirer, Target, and Industry Rivals

Shareholder Rank in Acquirer		Stakes in Acquirer		Stakes in Target		Stakes in Each Rival		Number of Rivals Held		% of Industry Held (# of Firms)	
Rank	Obs	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
1	1,827	7.87%	6.92%	1.55%	0.00%	2.87%	2.36%	43	13	29%	20%
2	1,793	5.01%	4.56%	1.18%	0.00%	2.32%	1.84%	45	13	30%	20%
3	1,783	3.81%	3.55%	0.97%	0.00%	2.01%	1.60%	44	13	29%	20%
4	1,783	3.09%	2.89%	0.95%	0.00%	1.89%	1.45%	46	13	29%	20%
5	1,772	2.63%	2.49%	0.78%	0.00%	1.70%	1.32%	44	13	29%	21%
6	1,755	2.28%	2.16%	0.74%	0.00%	1.62%	1.22%	44	12	28%	19%
7	1,729	2.05%	1.94%	0.74%	0.00%	1.52%	1.13%	43	13	28%	19%
8	1,750	1.82%	1.71%	0.60%	0.00%	1.43%	1.08%	46	12	28%	19%
9	1,721	1.69%	1.56%	0.61%	0.00%	1.48%	1.04%	46	13	28%	20%
10	1,727	1.50%	1.42%	0.50%	0.00%	1.33%	1.00%	44	13	27%	19%
Avg. Top 5 Sh.	8,958	4.50%	3.67%	1.09%	0.00%	2.16%	1.64%	44	13	29%	20%
Avg. Top 10 Sh.	17,640	3.21%	2.37%	0.87%	0.00%	1.82%	1.35%	44	13	29%	20%
Avg. All Sh.	114,296	0.91%	0.36%	0.36%	0.00%	1.01%	0.59%	30	8	21%	13%

Panel B: Industry Portfolio Weights of Acquirer Shareholders on Acquirer, Target, and Industry Rivals

Shareholder Rank in Acquirer		Weight on Acquirer		Weight on Target		Weight on Rivals		% with larger weight on rivals than on acquirer	% with larger weight on target and rivals than on acquirer	Weight on Merger Industry Portfolio Holdings in Overall Portfolio	
Rank	Obs	Mean	Median	Mean	Median	Mean	Median			Mean	Median
1	1,827	32%	16%	2%	0%	67%	82%	73%	74%	6%	3%
2	1,793	30%	15%	1%	0%	69%	84%	76%	77%	5%	3%
3	1,783	28%	13%	1%	0%	70%	85%	77%	78%	5%	2%
4	1,783	27%	13%	1%	0%	71%	86%	77%	78%	5%	3%
5	1,772	26%	12%	2%	0%	72%	87%	79%	80%	5%	2%
6	1,755	27%	12%	2%	0%	71%	86%	78%	79%	5%	2%
7	1,729	26%	11%	2%	0%	72%	87%	79%	80%	5%	2%
8	1,750	27%	11%	1%	0%	72%	87%	78%	79%	4%	2%
9	1,721	26%	11%	2%	0%	72%	87%	78%	79%	5%	2%
10	1,727	26%	11%	1%	0%	73%	88%	80%	80%	4%	2%
Avg. Top 5 Sh.	8,958	29%	14%	2%	0%	70%	85%	77%	77%	5%	3%
Avg. Top 10 Sh.	17,640	28%	13%	2%	0%	71%	86%	78%	78%	5%	3%
Avg. All Sh.	114,296	29%	13%	2%	0%	69%	85%	76%	77%	5%	3%

Table 3: **Returns for Acquirer Shareholders around Horizontal M&A Announcements.**

This table presents the returns for 1,800 Horizontal M&A announcements from 1988 to 2016 for the largest shareholders of the acquirer. Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). For each shareholder, returns are displayed across her portfolio in the industry: the returns delivered via the acquirer, the target and the rivals. The CARs are computed for the (-1,+1) window, and are calculated using the market model with an estimation window of (-200, -60) prior to the announcement date. Column 2 reports the return adjusted for target ownership as the combined net gain/loss on acquirer and target divided by the combined holding value in acquirer and target for each shareholder. Column 3 reports the return adjusted for common ownership as the net gain/loss on acquirer, target and industry rivals, divided by the combined holding value of these firms by the shareholder. We report statistics for the the average top 5, top 10 shareholders, and all shareholders. As well we include the possibility of the top 10 acquirer shareholders or all acquirer shareholders acting as a block or coalition. Panel B presents the same statistics for the sub-sample of bad deals, that is, those deals with negative CAR(-1,+1). Panel C presents the overall wealth effects for acquirer shareholders in bad deals (defined as deals with negative CAR(-1,+1)). Dollar value losses are reported for the top ten largest acquirer shareholders, as well as all shareholders. We also report the percentage of deals in which the acquirer losses are offset by the target gains and by the combined gains in target and industry rivals. Three measures are provided: the percentage of cases in which the acquirer shareholders' gains from their stakes in the target (or target plus rival) compensate zero, more than 50%, or more than 100% of the loss on their acquirer stake.*, **, and *** note significance at the 10%, 5%, and 1% level respectively.

Panel A. Returns for Largest Shareholders of Acquirers in All Horizontal Deals

Shareholder Rank in Acquirer		(1) Return on Acquirer(%)	(2) Return Adj. Target Ownership(%)	**(3) Return Adj. Target+Rival Ownership(%)**	(4) Return on Target(%) (2) - (1)	**(5) Return on Rivals(%) (3) - (2)**
Rank	N	Mean	Mean	**Mean**	Mean	**Mean**
Avg. Top 5 Sh.	8,958	-1.59***	-0.55***	**-0.06**	1.04***	**0.50*** **
Avg. Top 10 Sh.	17,640	-1.64***	-0.54***	**-0.04***	1.10***	**0.50*** **
Avg. All Sh.	114,296	-1.62***	-0.38***	**-0.03*** **	1.24***	**0.35*** **
Coalition of Top 5	1,800	-1.43***	-0.29	**0.04**	1.14***	**0.34**
Coalition of Top 10	1,800	-1.43***	-0.17	**0.07**	1.26***	**0.25**
Coalition of All	1,800	-1.43***	0.20	**0.13****	1.63***	**-0.01**

Panel B. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals

Shareholder Rank in Acquirer		(1) Return on Acquirer(%)	(2) Return Adj. Target Ownership(%)	**(3) Return Adj. Target+Rival Ownership(%)**	(4) Return on Target(%) (2) - (1)	**(5) Return on Rivals(%) (3) - (2)**
Rank	N	Mean	Mean	**Mean**	Mean	**Mean**
Avg. Top 5 Sh.	5,156	-6.45***	-5.12***	**-1.53*** **	1.33***	**3.59*** **
Avg. Top 10 Sh.	10,193	-6.44***	-5.07***	**-1.45*** **	1.37***	**3.61*** **
Avg. All Sh.	66,379	-5.93***	-4.33***	**-1.36*** **	1.60***	**2.97*** **
Coalition of Top 5	1,035	-6.61***	-5.02***	**-0.96*** **	1.58***	**4.07*** **
Coalition of Top 10	1,035	-6.61***	-4.89***	**-0.80*** **	1.71***	**4.09*** **
Coalition of All	1,035	-6.61***	-4.39***	**-0.59*** **	2.22***	**3.80*** **

Panel C. Wealth Effect for Acquirer Shareholders in Bad Horizontal Deals

Shareholder Rank in Acquirer		(1) Loss on Acquirer Stake (in $'millions)	(2) Deals in which target ownership compensates for given % of loss on acquirer stake			(3) Deals in which target and rival ownership compensates for given % of loss on acquirer stake		
Rank	N	Mean	None	> 50%	> 100%	None	> 50%	> 100%
Avg. Top 5 Sh.	5,156	-18.63	66%	14%	10%	56%	35%	30%
Avg. Top 10 Sh.	10,193	-13.67	67%	14%	10%	56%	35%	31%
Avg. All Sh.	66,379	-4.86	75%	15%	11%	57%	35%	32%
Coalition of Top 5	1,035	-92.80	32%	20%	12%	51%	42%	37%
Coalition of Top 10	1,035	-134.66	22%	21%	13%	51%	42%	38%
Coalition of All	1,035	-311.60	17%	27%	16%	52%	44%	39%

Table 4: **Returns for Acquirer Shareholders around Horizontal M&A Announcements - Alternative Industry Classifications.**

This table presents the returns for Horizontal M&A announcements from 1988 to 2016 for the largest shareholders of the acquirer, defined with different industry classifications. HP classifications are the FIC-300 codes developed by Hoberg and Phillips. Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). For each shareholder, returns are displayed across her portfolio in the industry: the returns delivered via the acquirer, the target and the rivals. The CARs are computed for the (-1,+1) window, and are calculated using the market model with an estimation window of (-200, -60) prior to the announcement date. We report the return adjusted for target ownership as the combined net gain/loss on acquirer and target divided by the combined holding value in acquirer and target for each shareholder, as well as the return adjusted for common ownership as the net gain/loss on acquirer, target and industry rivals, divided by the combined holding value of these firms by the shareholder. We report statistics for the the average top 10 and all shareholders. Bad deals are deals with negative CAR(-1,+1).We also report the overall wealth effects for acquirer shareholders in bad deals (defined as deals with negative CAR(-1,+1)), the percentage of deals in which the acquirer losses are 100% offset by the combined gains in target and industry rivals. *, **, and *** note significance at the 10%, 5%, and 1% level respectively.

	Acquirer Shareholders							
	All Deals				Bad Deals			
Returns Around Announcement (-1,+1)	Avg. Top 10 Sh.		Avg. All Sh.		Avg top 10		Avg All Sh	
	N	Mean	N	Mean	N	Mean	N	Mean
SIC3								
(1) Return on Acquirer	17,640	-1.64***	114,296	-1.62***	10,193	-6.44***	66,379	-5.93***
(2) Return Adjusted for Target Ownership	17,640	-0.54***	114,296	-0.38***	10,193	-5.07***	66,379	-4.33***
(3) Return Adjusted for Target+Rival Ownership	17,640	**-0.04***	114,296	**-0.03*****	10,193	**-1.45*****	66,379	**-1.36*****
(4) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	10,193	31%	66,379	32%
SIC4								
(5) Return on Acquirer	14,114	-1.42***	88,765	-1.58***	8,042	-6.49***	51,546	-6.13***
(6) Return Adjusted for Target Ownership	14,114	-0.26***	88,765	-0.24***	8,042	-5.04***	51,546	-4.39***
(7) Return Adjusted Target+Rival Ownership	14,114	**-0.07***	88,765	**-0.07*****	8,042	**-2.02*****	51,546	**-1.87*****
(8) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	8,042	27%	51,546	28%
SIC2								
(9) Return on Acquirer	21,111	-1.53***	136,549	-1.49***	12,110	-6.23***	78,494	-5.74***
(10) Return Adjusted for Target Ownership	21,111	-0.39***	136,549	-0.22***	12,110	-4.78***	78,494	-4.09***
(11) Return Adjusted for Target+Rival Ownership	21,111	**-0.09*****	136,549	**-0.08*****	12,110	**-0.92*****	78,494	**-0.88*****
(12) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	12,110	34%	78,494	35%
HP								
(13) Return on Acquirer	11,030	-1.67***	74,264	-1.59***	6,318	-6.93***	42,276	-6.41***
(14) Return Adjusted for Target Ownership	11,030	-0.43***	74,264	-0.14***	6,318	-5.34***	42,276	-4.53***
(15) Return Adjusted for Target+Rival Ownership	11,030	**-0.08***	74,264	**-0.05*****	6,318	**-1.75*****	42,276	**-1.65*****
(16) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	6,318	29%	42,276	31%

Table 5: **Returns for Acquirer Shareholders around Bad Horizontal M&A Announcements - Effect from Ownership in Corporate Suppliers and Customers.**

This table presents the acquirer shareholder returns during announcements of value-destroying horizontal acquisitions, for deals that can be matched with corporate suppliers and customers. Bad deals are deals with negative announcement CAR(-1,+1) for the acquirer. Panel A uses BEA input-output data to identify suppliers and customers (208 deals), while Panel B uses Factset Relationship to identify suppliers and customers (137 deals). Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). For each shareholder, returns are displayed across her portfolio in the industry: the returns delivered via the acquirer, the target and the rivals. The CARs are computed for the (-1,+1) window, and are calculated using the market model with an estimation window of (-200, -60) prior to the announcement date. Column 2 reports the return adjusted for target ownership as the combined net gain/loss on acquirer and target divided by the combined holding value in acquirer and target for each shareholder. Column 3 reports the return adjusted for common ownership as the net gain/loss on acquirer, target and industry rivals, divided by the combined holding value of these firms by the shareholder. Column 4 reports the return adjusted for the net gain/loss on acquirer, target, industry rivals, and suppliers/customers, divided by the combined holding value of these firms by the shareholder. We report statistics for the the average top 5, top 10 shareholders, and all shareholders. *, **, and *** note significance at the 10%, 5%, and 1% level respectively.

Panel A. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals (BEA)

		(1)	(2)	**(3)**	**(4)**	(5)	**(6)**	**(7)**
		Return on Acquirer(%)	Return Adj. Target Ownership(%)	**Return Adj. Target+Rival Ownership(%)**	**Return Adj. Target+Rival+ Supplier+Customer Ownership(%)**	Return on Target(%) (2) - (1)	**Return on Rivals(%) (3) - (2)**	**Return on Suppliers Customers(%) (4) - (3)**
Rank	N	Mean	Mean	**Mean**	**Mean**	Mean	**Mean**	**Mean**
Avg. Top 5 Sh.	1,044	-5.78***	-4.36***	**-1.77*** **	**-1.17*** **	1.42***	**2.59*** **	**0.60*** **
Avg. Top 10 Sh.	2,081	-5.78***	-4.23***	**-1.67*** **	**-1.11*** **	1.55***	**2.56*** **	**0.56*** **
Avg. All Sh.	13,337	-5.56***	-3.77***	**-1.76*** **	**-1.19*** **	1.79***	**2.01*** **	**0.57*** **

Panel B. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals (Factset)

		(1)	(2)	**(3)**	**(4)**	(5)	**(6)**	**(7)**
		Return on Acquirer(%)	Return Adj. Target Ownership(%)	**Return Adj. Target+Rival Ownership(%)**	**Return Adj. Target+Rival+ Supplier+Customer Ownership(%)**	Return on Target(%) (2) - (1)	**Return on Rivals(%) (3) - (2)**	**Return on Suppliers Customers(%) (4) - (3)**
Rank	N	Mean	Mean	**Mean**	**Mean**	Mean	**Mean**	**Mean**
Avg. Top 5 Sh.	685	-4.45***	-2.82***	**-0.76*** **	**-0.66*** **	1.63***	**2.06*** **	**0.10*** **
Avg. Top 10 Sh.	1,372	-4.45***	-2.96***	**-0.75*** **	**-0.65*** **	1.49***	**2.21*** **	**0.10*** **
Avg. All Sh.	11,584	-4.29***	-2.61***	**-0.80*** **	**-0.73*** **	1.68***	**1.81*** **	**0.08*** **

Table 6: **M&A Deal Characteristics and Rival Ownership.**

This table presents the results of the regression of M&A synergies, acquirer CAR, and probability of bad deal completion on target and rival common ownership, for all horizontal deals in the sample. Synergies (%) is calculated following Harford, Jenter and Li (2011) as the CAR (-1,+1) of the value weighted portfolio of the acquirer and target, with target adjusted for toehold (combined abnormal increase in market value). Column (1) to (3) present the acquirer CAR regression, Column (4) and (5) present results on probit regression of bad deal completion and Column (6) presents the result on the synergy regression. *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 3. *CO_Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals in the quarter end prior to the announcement quarter, weighted by market value following Equation 5. These two ownership measures are each ranked into deciles in all sample deals and scaled into a range of zero to one. Bad (good) deals are deals with negative (positive) CARs. All cash is a dummy variable that equals one if the deal is an all cash offer, while all stock is a dummy that equals one if the deal is an all equity deal. Competing is a dummy variable that equals one if the deal has a competing bidder. All firm level control variables are taken from the fiscal year end prior to deal announcement. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. All non-dummy variables are winsorized at the 1st and 99th percentile. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR			Deal Completion		Synergies
	(1)	(2)	(3)	(4)	(5)	(6)
				Bad Deal	Good Deal	
CO_Target	0.025***	0.028***	0.043***	-0.111	0.369	0.043***
	(2.751)	(2.850)	(3.531)	(-0.345)	(0.987)	(3.551)
				-0.026	**0.09**	
CO_Rivals	-0.046***	-0.038***	-0.043***	0.899**	-0.333	-0.041***
	(-4.299)	(-2.737)	(-3.011)	(2.252)	(-0.798)	(-2.840)
				0.213**	**-0.081**	
Competing	-0.012*	-0.011*	-0.010	-1.108***	-1.056***	-0.008
	(-1.866)	(-1.818)	(-1.609)	(-6.661)	(-4.569)	(-1.349)
All Stock	-0.010*	-0.009*	-0.010*	0.176	0.813***	-0.018***
	(-1.939)	(-1.749)	(-1.886)	(1.345)	(4.799)	(-3.668)
All Cash	0.020***	0.019***	0.019***	-0.118	0.578***	0.020***
	(4.390)	(4.252)	(4.044)	(-0.714)	(3.594)	(4.242)
Acquirer Market Capitalization		-0.003*	0.004	0.137*	0.223***	-0.007**
		(-1.649)	(1.247)	(1.647)	(2.741)	(-2.049)
Acquirer Market-to-Book		0.000	-0.002	-0.040	-0.032	-0.002
		(0.078)	(-1.019)	(-0.882)	(-0.543)	(-0.975)
Acquirer Leverage		-0.001	0.006	0.465	-0.277	-0.007
		(-0.112)	(0.452)	(1.296)	(-0.744)	(-0.522)
Acquirer ROA		0.047**	0.046**	0.101	-0.678	0.037*
		(2.200)	(2.053)	(0.220)	(-1.180)	(1.694)
Acquirer Institutional Ownership		-0.009	-0.009	0.012	0.465	0.002
		(-0.767)	(-0.753)	(0.0341)	(1.346)	(0.204)
Acquirer Annual Stock Return		0.002	-0.000	-0.038	-0.071	0.003
		(0.394)	(-0.067)	(-0.504)	(-0.691)	(0.679)
Target Market Capitalization			-0.008**	-0.285***	-0.317***	0.002
			(-2.176)	(-3.265)	(-3.518)	(0.666)
Target Market-to-Book			0.001	0.089	0.029	-0.002
			(0.673)	(1.591)	(0.483)	(-0.854)
Target Leverage			-0.004	-0.667**	-0.209	-0.011
			(-0.399)	(-2.066)	(-0.633)	(-1.056)
Target ROA			-0.013	0.286	0.588	0.003
			(-1.053)	(0.821)	(1.559)	(0.217)
Target Institutional Ownership			-0.012	0.383	0.278	-0.002
			(-0.932)	(1.213)	(0.758)	(-0.200)
Target Annual Stock Return			0.003	0.116	0.053	0.000
			(0.688)	(1.075)	(0.467)	(0.047)
Intercept	-0.005	0.007	0.002	-0.546	0.469	0.066***
	(-0.730)	(0.643)	(0.165)	(-0.634)	(0.518)	(5.686)
N	1,795	1,779	1,763	968	697	1,763
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (Pseudo R-squared)	0.14	0.14	0.15	0.23	0.24	0.14

Table 7: **M&A Deal Characteristics and Rival Ownership - Alternative Industry Classifications.**

This table presents the results of the regression of M&A synergies, acquirer CAR, and probability of bad deal completion on target and rival common ownership, for horizontal deals using 4-digit SIC, 2-digit SIC, and Hoberg&Phillips FIC-300 industry classifications. Synergies (%) is calculated following Harford, Jenter and Li (2011) as the CAR (-1,+1) of the value weighted portfolio of the acquirer and target, with target adjusted for toehold (combined abnormal increase in market value). *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 3. *CO_Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals in the quarter end prior to the announcement quarter, weighted by market value following Equation 5. These two ownership measures are each ranked into deciles in all sample deals and scaled into a range of zero to one. Bad (good) deals are deals with negative (positive) CARs. Deal, acquirer, and target characteristic controls are the same list of control variables from Table 6. Industry fixed effect is at the 2-digit SIC level and FIC-300 level for the Hoberg&Phillips definition. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. All non-dummy variables are winsorized at the 1st and 99th percentile. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR			Bad Deal Completion			Synergies		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	SIC4	SIC2	HP	SIC4	SIC2	HP	SIC4	SIC2	HP
CO_Target	0.051***	0.038***	0.029*	-0.119	-0.078	-0.059	0.044***	0.039***	0.032*
	(3.621)	(3.653)	(1.667)	(-0.321)	(-0.272)	(-0.116)	(3.131)	(3.807)	(1.901)
				-0.028	**-0.019**	**-0.012**			
CO_Rivals	-0.048***	-0.035***	-0.047**	1.061**	0.580	1.056*	-0.038***	-0.044***	-0.032
	(-3.394)	(-2.689)	(-2.248)	(2.571)	(1.536)	(1.819)	(-2.636)	(-3.340)	(-1.553)
				0.250**	**0.141**	**0.223***			
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,414	2,114	1,051	745	1,174	503	1,414	2,114	1,051
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (Pseudo R-squared)	0.14	0.14	0.24	0.25	0.21	0.31	0.15	0.15	0.24

Table 8: **Rival ownership and Probability of Announcing an Acquisition.**

This table presents the relationship between a firm's shareholders' ownership in its industry rivals and the probability of it announcing an acquisition in a given year. Acquisition is a dummy that equals one if the firm announces an acquisition in the sample year. Column (1) is a probit regression and the rest of the columns are linear probability regressions. *High CO* is a dummy variable that equals one if the firm has a *CO* that is in the top quartile among all firms in the sample year. *CO* measures how much the firm's shareholders have at stake in its industry rivals, calculated using Equation 3. Size is the log of total assets. All explanatory variables are lagged one year. Industry fixed effect is at the 2-digit SIC level and Hoberg&Phillips FIC-300 for the HP classifications. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquisition								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
High CO	0.131***	0.010***	0.004**	0.009***	0.004***	0.011***	0.002	0.009***	0.005**
	(4.598)	(8.148)	(2.488)	(7.112)	(2.603)	(7.439)	(1.392)	(5.328)	(2.378)
Size	0.166***	0.005***	0.003***	0.004***	0.002***	0.006***	0.004***	0.008***	0.001
	(17.28)	(10.45)	(4.126)	(9.000)	(2.736)	(11.74)	(5.127)	(11.56)	(0.792)
Market-to-Book	-0.040***	-0.001**	0.001*	-0.001*	0.001**	-0.001**	0.001	-0.002***	0.001**
	(-4.786)	(-2.557)	(1.844)	(-1.809)	(2.543)	(-2.091)	(1.467)	(-4.419)	(2.569)
Leverage	0.0189	0.002	-0.014***	0.004**	-0.012***	0.002	-0.017***	0.000	-0.018***
	(0.278)	(1.317)	(-4.348)	(2.141)	(-4.094)	(0.967)	(-4.881)	(0.006)	(-3.720)
ROA	0.147*	0.004**	0.005*	0.004**	0.008***	0.000	0.004	-0.002	0.006
	(1.699)	(2.044)	(1.761)	(2.343)	(3.200)	(0.185)	(1.588)	(-0.659)	(1.594)
Annual Stock Return	0.083***	0.002***	0.002**	0.002***	0.001*	0.003***	0.002***	0.003***	0.002**
	(4.900)	(3.808)	(2.398)	(3.879)	(1.705)	(4.665)	(2.601)	(3.518)	(2.188)
Institutional Ownership	0.263***	-0.001	0.004	0.002	0.004	-0.000	0.006*	-0.008**	0.005
	(4.331)	(-0.415)	(1.382)	(1.081)	(1.449)	(-0.127)	(1.957)	(-2.442)	(0.992)
Intercept	-3.731***	-0.020***	-0.005	-0.014***	-0.002	-0.022***	-0.007*	-0.026***	0.006
	(-11.76)	(-9.990)	(-1.469)	(-8.561)	(-0.545)	(-11.20)	(-1.917)	(-11.03)	(1.010)
N	100,330	113,756	111,640	112,569	110,960	113,765	112,182	68,535	66,975
Industry Classifications	SIC3	SIC3	SIC3	SIC4	SIC4	SIC2	SIC2	HP	HP
Industry FE	Yes	Yes	No	No	No	No	No	No	No
Year FE	Yes	Yes	No	No	No	No	No	No	No
Industry×Year FE	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	Yes	No	Yes	No	Yes	No	Yes
Pseudo R-squared	0.13	-	-	-	-	-	-	-	-
R-squared	-	0.02	0.18	0.07	0.19	0.03	0.15	0.06	0.19

Table 9: **M&A Deal Characteristics and Common Ownership - Common Ownership of All Portfolio Peers.**

This table presents the results of the regression of M&A synergies, acquirer CAR, and probability of bad deal completion on target and rival common ownership, for all horizontal deals in the baseline sample. Column (3) and (4) are probit regressions. Synergies (%) is calculated following Harford, Jenter and Li (2011) as the CAR (-1,+1) of the value weighted portfolio of the acquirer and target, with target adjusted for toehold (combined abnormal increase in market value). *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 3. *CO_NonMerging Peers* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals in the quarter end prior to the announcement quarter, weighted by market value following Equation 5. Column (1), (3), and (5) present the baseline analyses using only industry rivals as non-merging peers to calculate *CO_NonMerging Peers*. Column (2), (4), and (6) present the baseline analyses using all firms in acquirer shareholders' portfolios as non-merging peers to calculate *CO_NonMerging Peers*. These ownership measures are each ranked into deciles in all sample deals and scaled into a range of zero to one. Bad (good) deals are deals with negative (positive) CARs. The same list of deal, acquirer, and target characteristic controls from Table 6 are included. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. All non-dummy variables are winsorized at the 1st and 99th percentile. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR		Bad Deal Completion		Synergies	
	(1)	(2)	(3)	(4)	(5)	(6)
	Industry Rivals	Portfolio Peers	Industry Rivals	Portfolio Peers	Industry Rivals	Portfolio Peers
CO_Target	0.043***	0.040***	-0.111	-0.221	0.043***	0.038***
	(3.531)	(3.307)	(-0.345)	(-0.659)	(3.551)	(3.288)
			-0.026	**-0.052**		
CO_Non-Merging Peers	-0.043***	-0.028	0.899**	0.926**	-0.041***	-0.026
	(-3.011)	(-1.565)	(2.252)	(2.000)	(-2.840)	(-1.564)
			0.213**	**0.218*****		
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
N	1,763	1,763	968	968	1,763	1,763
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (Pseudo R-squared)	0.15	0.14	0.23	0.24	0.14	0.14

Table 10: **M&A Deal Characteristics and Common Ownership - Concentrated Industries.**

This table presents the results of the regression of M&A synergies, acquirer CAR, and probability of bad deal completion on target and rival common ownership, for all horizontal deals in the sample. Synergies (%) is calculated following Harford, Jenter and Li (2011) as the CAR (-1,+1) of the value weighted portfolio of the acquirer and target, with target adjusted for toehold (combined abnormal increase in market value). Column (1) to (3) present the acquirer CAR regression, Column (4) and (5) present results on probit regression of bad deal completion and Column (6) presents the result on the synergy regression. *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 3. *CO_Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals in the quarter end prior to the announcement quarter, weighted by market value following Equation 5. These two ownership measures are each ranked into deciles in all sample deals and scaled into a range of zero to one. *Low N* is a dummy variable that equals one if the firm is in an industry with number of firms in the bottom quartile in the full deal sample distribution. *High HHI* is a dummy variable that equals one if the firm is in an industry with HHI in the top quartile in the full deal sample distribution. Bad (good) deals are deals with negative (positive) CARs. The same list of deal, acquirer, and target characteristic controls from Table 6 are included. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. All non-dummy variables are winsorized at the 1st and 99th percentile. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR				Bad Deal Completion				Synergies			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CO_Target	0.043***	0.043***	0.032**	0.037***	-0.111	-0.095	-0.334	-0.027	0.040***	0.040***	0.034***	0.038***
	(3.565)	(3.541)	(2.520)	(2.918)	(-0.347)	(-0.297)	(-0.932)	(-0.075)	(3.517)	(3.470)	(2.729)	(3.102)
					-0.026	**-0.023**	**-0.079**	**-0.006**				
CO_Rivals	-0.042***	-0.043***	-0.033**	-0.040**	0.899**	0.904**	1.142**	0.716	-0.040***	-0.041***	-0.033**	-0.040***
	(-2.931)	(-3.015)	(-2.159)	(-2.564)	(2.250)	(2.276)	(2.517)	(1.593)	(-2.842)	(-2.927)	(-2.200)	(-2.659)
					0.213**	**0.214****	**0.270****	**0.169**				
Low N	0.022***		0.012		-0.020		-0.094		0.023***		0.019*	
	(3.758)		(1.053)		(-0.102)		(-0.269)		(3.804)		(1.805)	
High HHI		0.013**		0.005		-0.243		-0.421		0.009		0.006
		(2.396)		(0.430)		(-1.568)		(-1.282)		(1.600)		(0.515)
CO_Target×Low N			0.038**				0.754				0.022	
			(2.029)				(1.409)				(1.255)	
							0.178					
CO_Rivals×Low N			-0.021				-0.629				-0.016	
			(-1.076)				(-1.140)				(-0.837)	
							-0.149					
CO_Target×High HHI				0.022				-0.187				0.006
				(1.161)				(-0.349)				(0.349)
								-0.044				
CO_Rivals×High HHI				-0.007				0.543				-0.000
				(-0.329)				(1.043)				(-0.008)
								0.128				
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,763	1,763	1,763	1,763	968	968	968	968	1,763	1,763	1,763	1,763
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (Pseudo R-squared)	0.15	0.15	0.15	0.15	0.23	0.24	0.23	0.24	0.15	0.15	0.15	0.15
Linear Combinations												
CO_Target+CO_Target×Low N			0.070***				0.420				0.056***	
CO_Non-Merging Peers+CO_Non-Merging Peers×Low N			-0.054***				0.513				-0.049**	
CO_Target+CO_Target×High HHI				0.059***				-0.214				0.044**
CO_Non-Merging Peers+CO_Non-Merging Peers×High HHI				-0.046**				1.259**				-0.041**

Table 11: **Rival ownership and Probability of Announcing an Acquisition - Concentrated Industries.**

This table presents the relationship between a firm's shareholders' ownership in its industry rivals and the probability of it announcing an acquisition in a given year. Acquisition is a dummy that equals one if the firm announces an acquisition in the sample year. All results are based on linear probability regressions. *High CO* is a dummy variable that equals one if the firm has a *CO* that is in the top quartile among all firms in the sample year. *CO* measures how much the firm's shareholders have at stake in its industry rivals, calculated using Equation 3. *Low N* is a dummy variable that equals one if the firm is in an industry with number of firms in the bottom quartile among all industries in the sample year. *High HHI* is a dummy variable that equals one if the firm is in an industry with HHI in the top quartile among all industries in the sample year. The same list of control variables from Table 8 are included. All explanatory variables are lagged one year. Industry fixed effect is at the 2-digit SIC level and Hoberg&Phillips FIC-300 for the HP classifications. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquisition					
	(1)	(2)	(3)	(4)	(5)	(6)
High CO	0.010***	0.010***	0.015***	0.014***	0.005***	0.005***
	(8.152)	(8.156)	(9.199)	(8.788)	(2.933)	(2.902)
Low N	-0.005***		0.000		-0.004	
	(-3.471)		(0.166)		(-1.439)	
High HHI		-0.003***		0.000		-0.007***
		(-3.255)		(0.264)		(-2.691)
High CO×Low N			-0.016***		-0.006**	
			(-7.809)		(-2.483)	
High CO×High HHI				-0.014***		-0.006**
				(-6.375)		(-2.181)
N	113,756	113,756	113,756	113,756	111,640	111,640
Control	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	No	No
Industry×Year FE	No	No	No	No	Yes	Yes
Firm FE	No	No	No	No	Yes	Yes
R-squared	0.02	0.02	0.02	0.02	0.18	0.18

Table 12: **Shareholder Exit After Value-Destroying Acquisitions - Incentive to Monitor.**

This table presents regressions of investor selling activities following a bad acquisition. *Sell* is the absolute value of the negative percentage change in ownership percentage investor μ has in firm i from q-1 to q. *Sell* equals zero if there is no negative change in ownership. *Exit* is a dummy variable that equals one if the investor liquidates the whole ownership in the acquirer. Bad Deal is a dummy variable that equals one if the acquisition has an announcement acquirer CAR in the bottom quintile among all deals. Ind. Portfolio Return is the investor's announcement return adjusted for target and rival ownership. High Ind. Portfolio Return is a dummy variable that equals one if the investor's target+rival adjusted return is in the top quintile of the full sample distribution. Acq+Target Return is the investor's announcement return adjusted for target ownership. High Acq+Target Return is a dummy variable that equals one if the investor's target adjusted return is in the top quintile of the full sample distribution. Target ownership is the investor's ownership percentage in the target firm. Rivals ownership is the weighted sum of the investor's ownership percentage across non-merging industry peers, based on each peer's market value. Portfolio weight is calculated as the dollar value weight the firm has on the investor's full portfolio. Investor size is calculated as the log of its total dollar value holdings across all firms. Investors with churn ratios in the bottom (top) tercile among all investors in the previous year are classified as long (short) term investors. The churn ratio is calculated following Gaspar, Massa and Matos (2005). BlackRock, Barclays, State Street, and Vanguard are classified as index investors. Industry fixed effect is at the 2-digit SIC level. Standard errors are clustered at the investor×year-quarter level to obtain robust P-value. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Sell						Exit					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	All	Index	Non-Index	Long Term	Short Term	All	All	Index	Non-Index	Long Term	Short Term
Bad Deal	**0.014*** **	**0.019*** **	**-0.005**	**0.020*** **	**0.023*** **	**0.023*** **	**0.010*** **	**0.014*** **	**-0.014**	**0.015*** **	**0.022*** **	**0.016** **
	(3.890)	**(5.040)**	**(-0.428)**	**(5.170)**	**(2.759)**	**(3.586)**	**(2.640)**	**(3.536)**	**(-1.455)**	**(3.803)**	**(2.628)**	**(2.455)**
Bad Deal×High Ind_Portfolio Return		**-0.031*** **	**0.008**	**-0.032*** **	**-0.041***	**-0.030***		**-0.034*** **	**-0.010**	**-0.033*** **	**-0.051** **	**-0.033***
		(-2.953)	**(0.310)**	**(-2.900)**	**(-1.763)**	**(-1.725)**		**(-3.159)**	**(-0.622)**	**(-2.998)**	**(-2.330)**	**(-1.902)**
High Ind_Portfolio Return		-0.002	0.003	-0.003	0.002	-0.008		-0.004	0.004	-0.004	0.002	-0.008
		(-0.699)	(0.238)	(-0.832)	(0.237)	(-1.329)		(-1.103)	(0.444)	(-1.285)	(0.230)	(-1.430)
Bad Deal×High Acq + Target Return		**-0.002**	**-0.011**	**-0.001**	**-0.017**	**0.007**		**0.011**	**0.012**	**0.013**	**-0.009**	**0.020**
		(-0.162)	**(-0.434)**	**(-0.044)**	**(-0.750)**	**(0.294)**		**(0.765)**	**(0.782)**	**(0.855)**	**(-0.472)**	**(0.799)**
High Acq + Target Return		0.015***	0.001	0.017***	0.016**	0.015**		0.013***	-0.010	0.015***	0.009	0.014**
		(4.617)	(0.100)	(4.858)	(2.381)	(2.522)		(3.837)	(-1.553)	(4.353)	(1.353)	(2.373)
Target Ownership		-0.004***	0.002	-0.005***	-0.003	-0.004**		-0.003***	0.005	-0.004***	-0.001	-0.004**
		(-3.806)	(0.441)	(-4.539)	(-0.992)	(-2.233)		(-2.797)	(1.644)	(-4.490)	(-0.445)	(-2.083)
Rival Ownership		0.003*	0.005	0.001	0.002	0.002		0.010***	0.012***	0.004*	0.001	0.006**
		(1.726)	(1.331)	(0.527)	(0.286)	(0.514)		(5.623)	(3.331)	(1.870)	(0.148)	(2.235)
Return	-0.055***	-0.059***	-0.021	-0.060***	0.012	-0.098***	-0.069***	-0.072***	-0.018	-0.074***	0.013	-0.113***
	(-8.313)	(-8.757)	(-1.230)	(-8.629)	(0.764)	(-8.983)	(-10.28)	(-10.63)	(-1.373)	(-10.49)	(0.783)	(-10.10)
Lagged return	-0.038***	-0.038***	0.003	-0.040***	0.018	-0.069***	-0.047***	-0.046***	0.002	-0.049***	0.003	-0.070***
	(-5.563)	(-5.551)	(0.149)	(-5.670)	(1.192)	(-6.151)	(-6.821)	(-6.781)	(0.112)	(-6.887)	(0.233)	(-6.144)
Turnover	0.088***	0.086***	0.042**	0.088***	0.060***	0.090***	0.066***	0.064***	0.016	0.067***	0.041***	0.066***
	(16.40)	(16.15)	(2.517)	(15.92)	(4.813)	(10.44)	(12.01)	(11.78)	(1.050)	(11.77)	(3.281)	(7.400)
Lagged turnover	-0.008	-0.007	-0.015	-0.007	-0.003	-0.003	-0.013**	-0.012**	-0.021*	-0.012*	-0.006	-0.007
	(-1.353)	(-1.272)	(-1.007)	(-1.146)	(-0.191)	(-0.366)	(-2.149)	(-2.054)	(-1.801)	(-1.917)	(-0.462)	(-0.749)
One-year lagged turnover	-0.016***	-0.015***	-0.016	-0.015***	-0.023**	-0.021***	-0.013***	-0.013***	-0.001	-0.013***	-0.023**	-0.019**
	(-3.347)	(-3.164)	(-1.244)	(-3.073)	(-2.191)	(-2.763)	(-2.839)	(-2.671)	(-0.144)	(-2.659)	(-2.172)	(-2.431)
Book-to-market	0.028***	0.028***	0.019	0.030***	0.006	0.020	0.021***	0.021***	0.009	0.024***	-0.008	0.016
	(4.033)	(4.016)	(0.993)	(4.164)	(0.425)	(1.619)	(3.009)	(3.026)	(0.614)	(3.300)	(-0.601)	(1.287)
Days between announcement and qtr end	0.001	0.001	0.002	0.001	-0.000	0.002	0.001	0.001	0.001	0.001	-0.001	0.002
	(0.616)	(0.433)	(0.710)	(0.371)	(-0.004)	(0.731)	(0.603)	(0.445)	(0.194)	(0.407)	(-0.294)	(0.957)
Ownership before announcement	-1.865***	-1.861***	1.109***	-2.053***	-1.102***	-2.399***	-2.781***	-2.853***	0.250	-3.107***	-1.743***	-3.705***
	(-22.13)	(-22.24)	(3.249)	(-23.96)	(-4.308)	(-17.55)	(-34.48)	(-36.43)	(0.978)	(-38.59)	(-7.177)	(-27.99)
Weight in portfolio	-1.453***	-1.441***	-4.337***	-1.376***	-0.893***	-1.834***	-1.969***	-1.978***	-3.248***	-1.916***	-0.917***	-2.890***
	(-13.71)	(-13.60)	(-3.798)	(-12.95)	(-4.598)	(-9.203)	(-18.08)	(-18.14)	(-3.081)	(-17.52)	(-4.780)	(-13.63)
Investor size	-0.026***	-0.027***	-0.111***	-0.023***	-0.013*	-0.032***	-0.033***	-0.036***	-0.103***	-0.033***	-0.017**	-0.046***
	(-10.32)	(-10.46)	(-8.482)	(-9.003)	(-1.711)	(-7.976)	(-13.10)	(-13.88)	(-7.466)	(-12.61)	(-2.334)	(-10.99)
N	109,208	109,208	4,017	105,124	17,495	45,726	109,208	109,208	4,017	105,124	17,495	45,726
Industry×Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fiscal Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.18	0.18	0.29	0.18	0.21	0.18	0.17	0.17	0.27	0.17	0.20	0.19

Table 13: **Shareholder Exit After Value-Destroying Acquisitions - Ability to Monitor.**

This table presents regressions of investor selling activities following a bad acquisition. *Sell* is the absolute value of the negative percentage change in ownership percentage investor μ has in firm i from q-1 to q. *Sell* equals zero if there is no negative change in ownership. *Exit* is a dummy variable that equals one if the investor liquidates the whole ownership in the acquirer. Bad Deal is a dummy variable that equals one if the acquisition has an announcement acquirer CAR in the bottom quintile among all deals. Ind. Portfolio Return is the investor's announcement return adjusted for target and rival ownership. High Ind. Portfolio Return is a dummy variable that equals one if the investor's target+rival adjusted return is in the top quintile of the full sample distribution. Acq+Target Return is the investor's announcement return adjusted for target ownership. High Acq+Target Return is a dummy variable that equals one if the investor's target adjusted return is in the top quintile of the full sample distribution. Target ownership is the investor's ownership percentage in the target firm. Rivals ownership is the weighted sum of the investor's ownership percentage across non-merging industry peers, based on each peer's market value. Portfolio weight is calculated as the dollar value weight the firm has on the investor's full portfolio. Investor size is calculated as the log of its total dollar value holdings across all firms. Investors with churn ratios in the bottom (top) tercile among all investors in the previous year are classified as long (short) term investors. The churn ratio is calculated following Gaspar, Massa and Matos (2005). BlackRock, Barclays, State Street, and Vanguard are classified as index investors. Industry fixed effect is at the 2-digit SIC level. Standard errors are clustered at the investor×year-quarter level to obtain robust P-value. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Sell					Exit				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All	Index	Non-Index	Long Term	Short Term	All	Index	Non-Index	Long Term	Short Term
Bad Deal	**0.014*** **	**0.014**	**0.015*** **	**0.017** **	**0.019*** **	**0.010*** **	**-0.011**	**0.011*** **	**0.016** **	**0.013** **
	(3.951)	**(1.003)**	**(4.125)**	**(2.175)**	**(3.168)**	**(2.687)**	**(-0.788)**	**(2.864)**	**(2.047)**	**(2.052)**
Bad Deal×Target Ownership	**-0.006** **	**-0.014** **	**-0.006** **	**-0.004**	**-0.004**	**-0.005** **	**-0.005**	**-0.005** **	**-0.003**	**-0.006**
	(-2.287)	**(-2.204)**	**(-2.042)**	**(-0.284)**	**(-0.892)**	**(-2.081)**	**(-1.102)**	**(-1.997)**	**(-0.238)**	**(-1.272)**
Bad Deal×Rival Ownership	**-0.002**	**-0.003**	**0.004**	**0.012**	**0.005**	**-0.006** **	**0.001**	**-0.001**	**0.005**	**0.004**
	(-0.621)	**(-0.607)**	**(1.310)**	**(0.871)**	**(1.028)**	**(-2.287)**	**(0.244)**	**(-0.226)**	**(0.367)**	**(0.805)**
Target Ownership	-0.002**	0.004	-0.003***	-0.001	-0.003	-0.001	0.006*	-0.003**	-0.000	-0.002
	(-1.986)	(1.061)	(-2.709)	(-0.528)	(-1.357)	(-1.070)	(1.784)	(-2.553)	(-0.153)	(-0.980)
Rival Ownership	0.003*	0.005	0.000	-0.001	0.001	0.010***	0.012***	0.004*	-0.000	0.005*
	(1.724)	(1.343)	(0.114)	(-0.130)	(0.172)	(5.961)	(3.118)	(1.900)	(-0.0613)	(1.876)
Return	-0.055***	-0.020	-0.057***	0.016	-0.095***	-0.069***	-0.020	-0.071***	0.015	-0.110***
	(-8.323)	(-1.152)	(-8.169)	(1.012)	(-8.786)	(-10.31)	(-1.453)	(-10.12)	(0.922)	(-9.943)
Lagged return	-0.038***	0.002	-0.040***	0.018	-0.069***	-0.046***	0.002	-0.049***	0.004	-0.070***
	(-5.569)	(0.107)	(-5.694)	(1.187)	(-6.162)	(-6.791)	(0.108)	(-6.903)	(0.243)	(-6.161)
Turnover	0.088***	0.042**	0.090***	0.062***	0.091***	0.066***	0.015	0.068***	0.043***	0.067***
	(16.41)	(2.537)	(16.18)	(4.992)	(10.59)	(12.02)	(1.001)	(12.00)	(3.450)	(7.543)
Lagged turnover	-0.008	-0.015	-0.008	-0.004	-0.004	-0.013**	-0.021*	-0.013**	-0.007	-0.008
	(-1.381)	(-1.012)	(-1.254)	(-0.269)	(-0.431)	(-2.168)	(-1.804)	(-2.023)	(-0.552)	(-0.816)
One-year lagged turnover	-0.016***	-0.015	-0.016***	-0.024**	-0.022***	-0.013***	-0.001	-0.014***	-0.023**	-0.019**
	(-3.319)	(-1.168)	(-3.241)	(-2.259)	(-2.874)	(-2.803)	(-0.0637)	(-2.813)	(-2.240)	(-2.534)
Book-to-market	0.028***	0.020	0.030***	0.006	0.019	0.021***	0.009	0.023***	-0.008	0.015
	(3.963)	(1.037)	(4.091)	(0.441)	(1.565)	(2.978)	(0.569)	(3.230)	(-0.579)	(1.223)
Days between announcement and qtr end	0.001	0.002	0.001	0.000	0.002	0.001	0.000	0.001	-0.001	0.003
	(0.606)	(0.615)	(0.560)	(0.129)	(0.825)	(0.602)	(0.181)	(0.585)	(-0.213)	(1.055)
Ownership before announcement	-1.867***	1.124***	-2.057***	-1.089***	-2.402***	-2.864***	0.280	-3.114***	-1.732***	-3.711***
	(-22.38)	(3.350)	(-24.06)	(-4.213)	(-17.62)	(-36.70)	(1.105)	(-38.79)	(-7.084)	(-28.12)
Weight in portfolio	-1.454***	-4.399***	-1.393***	-0.905***	-1.846***	-1.984***	-3.126***	-1.928***	-0.917***	-2.898***
	(-13.73)	(-3.932)	(-13.12)	(-4.659)	(-9.264)	(-18.21)	(-3.073)	(-17.64)	(-4.779)	(-13.67)
Investor size	-0.027***	-0.111***	-0.023***	-0.012*	-0.032***	-0.036***	-0.103***	-0.033***	-0.017**	-0.046***
	(-10.46)	(-8.511)	(-9.028)	(-1.662)	(-7.976)	(-13.85)	(-7.507)	(-12.61)	(-2.305)	(-10.98)
N	109,208	4,017	105,124	17,495	45,726	109,208	4,017	105,124	17,495	45,726
Industry×Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fiscal Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.18	0.30	0.18	0.21	0.18	0.17	0.27	0.17	0.20	0.19

Table 14: **Bad Deal Completion, Common Ownership, and Mandatory Shareholder Voting.**

This table presents the results of the probit regression of bad deal completion probability on target and rival ownership, respectively for deals that do and do not require shareholder approval. A deal is defined as a bad deal if it has a negative acquirer CAR during the (-1, +1) announcement window. We follow Kempf, Manconi and Spalt (2016) to calculate acquirer share issuance for the deal. The percentage of common stocks issued to finance the transaction is calculated as the total deal value times the percentage financed through common stock as reported in SDC, divided by the market capitalization of the acquirer measured at the end of the last trading day prior to the announcement. We run the regression for the voting and no voting subsamples. *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 1. *CO_Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals in the quarter end prior to the announcement quarter, weighted by market value following Equation 3. These ownership measures are each ranked into deciles in all sample deals and scaled into a range of zero to one. Column (1) and (2) present the baseline results with the 3-digit SIC classification. Column (3) and (4) present results for the narrower 4-digit SIC classification and column (5) and (6) present results for the wider 2-digit SIC classification. The same list of deal, acquirer, and target characteristic controls from Table 6 are included. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. All non-dummy variables are winsorized at the 1st and 99th percentile. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Bad Deal Completion					
	(1)	(2)	(3)	(4)	(5)	(6)
	Voting Required?		Voting Required?		Voting Required?	
	No	Yes	No	Yes	No	Yes
CO_Target	-1.011**	1.488**	-1.050*	1.367*	-0.585	0.831
	(-2.185)	(2.106)	(-1.845)	(1.742)	(-1.457)	(1.536)
	-0.208**	**0.338****	**-0.208***	**0.339***	**-0.126**	**0.190**
CO_Rivals	1.146**	0.803	1.600***	0.194	1.133**	0.338
	(2.041)	(0.979)	(2.592)	(0.218)	(2.182)	(0.509)
	0.236**	**0.182**	**0.317*****	**0.048**	**0.244****	**0.077**
Industry Classifications	SIC3	SIC3	SIC4	SIC4	SIC2	SIC2
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
N	629	268	467	194	762	350
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.36	0.28	0.39	0.26	0.32	0.26

A Appendix

Table A.1: **Acquirer CAR and Common Ownership - Alternative Specifications.**

This table presents the results of the regression of acquirer CAR on common ownership, for all 3-digit SIC horizontal deals with alternative specifications. Column (1) uses the Fama-French three-factor model as the alternative estimation model for CAR. Column (2) to (4) use alternative estimation windows for CAR. *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 1. *CO_Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging peers in the quarter end prior to the announcement quarter, weighted by market value following Equation 2. Column (5) to (6) use alternative measures for target and rival ownership, *CO_Target_HJL* and *CO_Rivals_HJL*, following Equation 3. Ownership measures are each ranked into deciles in the full deal sample and scaled into a score from zero to one. *CommonBlock_Target* is a dummy equaling one if the acquirer has a blockholder owning a block in the target. *CommonBlock_Rivals* is a dummy equaling one if the acquirer has a blockholder owning a block in one of its industry peers. *NumCommonBlockholders_Target* is the log of one plus the number of shareholders who own blocks in both the acquirer and the target. *NumCommonBlockholders_Rivals* is the log of one plus the number of acquirer blockholders who own blocks in at least one of the non-merging industry peers. *NumCommonBlockRivals* is the log of one plus the number of industry peers connected to the acquirer by common blockholders. The same list of deal, acquirer, and target characteristic controls from Table 6 are included. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR							
	FF (-1,+1)	(-5,+5)	(-10,+10)	(-20,+20)	(-1,+1)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CO_Target	0.046***	0.032*	0.073***	0.102***				
	(3.816)	(1.920)	(3.476)	(3.408)				
CO_Rivals	-0.040***	-0.037*	-0.069***	-0.076**				
	(-2.828)	(-1.879)	(-2.778)	(-2.175)				
CO_Target_HJL					0.045***			
					(3.005)			
CO_Rivals_HJL					-0.044**			
					(-2.437)			
CommonBlock_Target						0.019***		0.020***
						(3.352)		(3.452)
CommonBlock_Rivals						-0.015***		
						(-3.305)		
NumCommonBlockholders_Target							0.025***	
							(3.556)	
NumCommonBlockholders_Rivals							-0.013***	
							(-2.930)	
NumCommonBlockRivals								-0.005***
								(-3.119)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1,763	1,762	1,762	1,761	1,763	1,763	1,763	1,763
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.15	0.10	0.12	0.11	0.14	0.15	0.14	0.15

Table A.2: **Acquirer CAR and Common Ownership - All Portfolio Peers.**

This table presents the results of the regression of acquirer CAR on target and rival common ownership with specifications in Table A.1. All ownership variables are calculated with not only industry peers but also all other peer firms connected to the acquirer through its shareholders' portfolios. Column (1) uses the Fama-French three-factor model as the alternative estimation model for the CAR. Column (2) to (4) use alternative estimation windows for the CAR. *CO_Target* measures the stake acquirer shareholders have on the target in the quarter end prior to the announcement quarter, following Equation 3. *CO_NonMerging Peers* measures the average stake acquirer shareholders have on the acquirer's non-merging portfolio peers in the quarter end prior to the announcement quarter, weighted by market value following Equation 5. Column (5) to (6) use alternative measures for target and rival ownership, *CO_Target_HJL* and *CO_NonMerging Peers_HJL*, following Harford, Jenter and Li (2011). Ownership measures are each ranked into deciles in the full deal sample and scaled into a score from zero to one. *CommonBlock_Target* is a dummy that equals one if the acquirer has a blockholder who also owns a block in the target. *NumCommonBlockPeers* is the log of one plus the number of peer firms other than the target that are connected to the acquirer by common blockholders. The same list of deal, acquirer, and target characteristic controls from Table 6 are included. Industry fixed effect is at the 2-digit SIC level. Year fixed effects are based on the deal announcement year. Standard errors are clustered at the acquirer firm level. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Acquirer CAR					
	FF (-1,+1)	(-5,+5)	(-10,+10)	(-20,+20)	(-1,+1)	
	(1)	(2)	(3)	(4)	(5)	(6)
CO_Target	0.043***	0.027*	0.067***	0.101***		
	(3.590)	(1.648)	(3.172)	(3.373)		
CO_Non-Merging Peers (All Portfolio Peers)	-0.027	-0.021	-0.047	-0.086**		
	(-1.567)	(-0.879)	(-1.534)	(-2.001)		
CO_Target_HJL					0.039***	
					(2.587)	
CO_Non-Merging Peers_HJL (All Portfolio Peers)					-0.006	
					(-0.264)	
CommonBlock_Target						0.019***
						(3.334)
NumCommonBlockPeers (All Portfolio Peers)						-0.002**
						(-2.537)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer and Target Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
N	1,763	1,762	1,762	1,761	1,763	1,763
Deal Size Decile Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.15	0.11	0.12	0.11	0.14	0.14