

Beyond the Target: M&A Decisions and Rival Ownership*

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This Draft: August 7, 2019

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 shareholders when accounting for wealth effects on their rival stakes. As rival ownership increases, deal synergies required to merge become lower. These results help explain why value-destroying acquisitions might not get blocked by acquirer shareholders and why a high common ownership environment is correlated with higher M&A frequency.

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

JEL Codes: G23, G30, G34

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Introduction

It is a well-known fact that mean 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 acquisitions²? [Matvos and Ostrovsky \(2008\)](#) (MO) provide an explanation for this puzzling behavior by examining common ownership: acquirer's institutional investors may hold shares in the target and, consequently, 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 argue that cross-ownership at the shareholder level is 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 thus far has focused on the returns of the acquiring and target firms³, mergers generally have effects beyond these players, 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](#); [Servaes and Tamayo, 2013](#)).

The theoretical literature has shown that in most oligopolistic settings a merger of two firms yields positive spillovers in non-merging rivals. An extreme example is the case of a symmet-

¹See [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 \(2018\)](#) suggests that the negative return could be partly due to the market's reassessment of the acquirer's standalone value based on the acquisition decision.

²It 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*.

³See [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 \(2018\)](#) examine the impact of target ownership by acquirer shareholders on M&A deal characteristics.

ric Cournot industry, where *all* the gains from a merger between two firms are captured by the non-merging rivals, while the merging firms paradoxically experience a decline in profits.⁴ While positive spillovers for rivals are most abundant in this classic Cournot scenario, non-merging rival firms also capture gains via mergers when firms in an industry compete in prices with differentiated products (Deneckere and Davidson, 1985), and when firms compete in quantities subject to capacity constraints (Perry and Porter, 1985).

As such, both empirical evidence and theoretical insights point to the need to incorporate rival ownership by acquirer shareholders into the analysis of M&A decisions. Consider the following example: when AT&T announced the \$67 billion acquisition of BellSouth in 2006 (the second largest M&A deal and the largest horizontal deal in the U.S. during the early 2000s), the deal was perceived as value-destroying by the market and led to a loss of 3.26% for AT&T shareholders in the three-day window around the acquisition announcement. Nonetheless, all of AT&T's top ten institutional shareholders obtained a net gain thanks to their ownership in target and rival firms.

During the announcement window, Barclays, State Street, Morgan Stanley, Wellington, AXA, Northern Trust, Bank of America, UBS, Mellon, and Lord Abbett suffered losses ranging from \$33 million to \$ 136 million, as shown in Figure 1. While the gain on target stake did offset the loss on acquirer stake for four of these top ten shareholders, all ten were able to generate a large net gain from the deal announcement after accounting for their ownership in non-merging rivals, such as Vodafone which experienced a 12.95% gain, Sprint with a 4.52% gain, and Qwest with a 6.65% gain. Among AT&T's top 20 industry rivals measured by market capitalization, 16 gained during the three-day window around the announcement, supporting the idea that rival ownership matters to acquirer shareholders. Our paper aims to examine this seemingly paradoxical trend.

Moving beyond this particular example, for a sample of 1,154 horizontal mergers among

⁴This result is known in the industrial organization literature as the "Cournot merger paradox" (Salant, Switzer and Reynolds, 1983).

public firms from 1980 until 2016, we find that the returns on rival stakes are on average positive for the acquirer shareholder.⁵ 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 acquirer shareholders, both separately and in coalition. 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 impact on the acquirer industry portfolio is even larger.

When we examine focus on bad deals, nearly one third of the acquirer shareholders are able to achieve positive net gains when accounting for stakes in non-merging rivals. That is, these bad deals are not value-destroying for an important subset of acquirer shareholders.⁶ These "winner" acquirer shareholders are more diversified within the industry; they put smaller weight on the acquirer, larger weight on rivals, and cover a larger portion of the industry. They hold on average 38% of the firms in the industry, which represent 62% of the total industry market capitalization. Most importantly, when we look into the level of control power, "winner" shareholders control more than 50% of the known voting power in over a quarter of bad deals.

Given that shareholders on average do not lose value because of their ownership stakes in non-merging rivals, we explore the implications for M&A activity and the characteristics of the deals. We hypothesize that high levels of common ownership within an industry may be associated with high M&A activity, since they allow acquiring shareholders to internalize some of the benefits captured by rivals. We find a positive relationship between concentrated common ownership within an industry and the likelihood of merger activity. We also find that when we differentiate between rival and target common ownership, it is mostly rival common own-

⁵Harford, 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.

⁶These results are robust to different industry classifications as well as the use of the three-factor model for computing the CARs. We use historical CRSP 4-digit SIC codes for our baseline analyses, and historical COMPUSTAT 4-digit SIC codes and Hoberg&Phillips industry codes (Hoberg and Phillips, 2010, 2016) as alternative robustness checks.

ership that has implications for deal synergies. Higher rival common ownership is associated with lower level of synergies.

The evidence shows that for horizontal mergers, rival ownership matters in terms of offsetting losses, and therefore, those deals that are bad from an acquirer standpoint, might not be value-destroying from an industry portfolio perspective. In the same spirit, we further look at the wealth effects of acquisition announcements on acquirer shareholders' overall portfolio holdings. Firstly, this allows us to also examine diversifying deals. In addition, [Shahrur \(2005\)](#); [Fee and Thomas \(2004\)](#) present evidence that M&A announcements have wealth effects beyond industry rivals and affect firms in supplier and corporate customer industries. Recent research also argues that technology peers of the targets, which are not necessarily industry peers, also experience announcement gains ([Cai et al., 2019](#)).

The results of our previous analyses on horizontal mergers remain consistent when we extend the analyses to look at acquirer shareholders' overall portfolio holdings. Announcement losses are almost completely wiped out for the average acquirer shareholders in bad deals after accounting for wealth effects on all their other portfolio firms. As the acquirer shareholder puts more weight on her other portfolio firms, synergies created by the deal decrease. This indicates that value creation by the merger matters less to diversified acquirer shareholders, as they are likely to profit from the announcement at not just the industry portfolio level, but also the overall portfolio level. Ultimately, our findings suggest that the reason acquirer shareholders often fail to stand up and fight against value-destroying acquisitions may be that they actually benefit from such deals at the portfolio level.

The rest of this paper is organized as follows. Section [I](#) presents the sample data and empirical analyses using the event study method. Section [II](#) presents evidence of how common ownership is associated with industry M&A activities and combined value creation of merger deals. Section [III](#) takes a look at wider industry classifications, as well as accounting for wealth effects of M&A deals on acquirer shareholders' all other portfolio firms. Section [IV](#) concludes.

I Empirical Analysis

A Data Description and Sample Characteristics

Our sample includes all horizontal deals from 1980 to 2016 from Thomson-Reuters SDC⁷. 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. We define a horizontal M&A deal based on historical CRSP 4-digit SIC codes, however we also conduct robustness analyses with historical Compustat 4-Digit SIC codes and Hoberg&Phillips FIC-400 codes (Hoberg and Phillips, 2010, 2016), as well as wider classifications including CRSP/Compustat 2-digit SIC codes and Fama-French 48 industry codes. We match this sample with financial information from Compustat, pricing from CRSP, and institutional ownership from the Thomson Reuters 13F database. Asset managers are aggregated at the family level. The final sample is comprised of 1,154 horizontal mergers.

Table I 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)⁸ for a (-1,+1) 3-day window around the announcement of the deal is -1.34% for acquirers and 18.02% for targets. The average CAR across rivals within an industry is 0.21%. For 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 2.01% and the average dollar value of synergy gain is \$46 million. The median acquirer share of synergy gain is 20% for deals with positive synergies, indicating that 80% 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

⁷Note that MO cover deals from 1981 to 2003 and HJL cover deals from 1984 to 2006. Hence, we are examining at least ten additional years of merger activity and changes in ownership structure.

⁸The 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.

(53%) than for the target firm (39%), which is in line with the fact that target firms tend to be smaller in size.

B Stakes in Acquirer, Target, and Industry Rivals

Table II 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 by the acquirer only⁹. 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 2.8% of the acquirer and only 0.7% of the target.

For the same ranked shareholders we also show the relevant ownership stakes in industry rivals. On average, they hold 1.58% per rival, which is double relative to the stake in the target. We use historical CRSP 4-digit SIC codes to identify industry rivals and provide robustness analyses based on different industry classifications in Section 4. We show that the largest acquirer shareholders hold a large number of rivals: on average they hold 25 rivals, which correspond to a total of 33% of the firms within the industry (including the acquirer and the target). Industry rivals are mainly large firms, translating to 54% of the industry market capitalization. If the top ten shareholders were to act in coalition, their joint average stake in each rival firm would be 6.51% and they would cover 86% of firms in the industry. When translated into % of industry market capitalization, the top ten acquirer shareholders would jointly cover 96% of the industry market capitalization.

It is necessary to understand the relevance of the acquirer's 1.58% average ownership on rivals from a portfolio weight perspective. We calculate the portfolio weights for each acquirer shareholder across acquirer, target, and rivals in Table III. These weights are based on the dollar

⁹In 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.

value of the combined holdings in the industry, as we are focusing on horizontal mergers. Table III shows 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 comparatively small, consistent with HJL. From an industry portfolio perspective, 71% of the top ten largest acquirer shareholders have larger weight on the set of rival firms than on the acquirer. Including the weight on the target firm only increases this percentage to 72%. 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 extensive empirical literature (Song and Walkling, 2000; Shahrur, 2005; Servaes and Tamayo, 2013).

C 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.

$$r = \frac{\alpha_a V_a CAR_a + \alpha_t V_t CAR_t + \sum_{j \in J} \alpha_j V_j CAR_j}{\alpha_a V_a + \alpha_t V_t + \sum_{j \in J} \alpha_j V_j} \quad (1)$$

Equation 1 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 three-day cumulative abnormal return around the announcement date.

Table IV Panel A shows the top acquirer shareholders' returns from the M&A announcements for all horizontal deals. Columns 1 to 3 report the top acquirer shareholder's CAR (-1, +1) on the acquirer, target, and rival stakes. It is worth noting that the return on the rivals are positive and significant. For the average top ten acquirer shareholder the return on rivals is a significant 0.35%. In Column 4 we adjust the acquirer returns by taking into account the gains

in the target, as is done in MO and HJL. Consistent with HJL, we show that target ownership does mitigate loss on acquirer stake for the average top ten acquirer shareholder, but the net return is still negative, around -0.35%, and significant. Next, in Column 5, we further adjust the return to account for a gain or a loss in the non-merging rivals and show that the net return is no longer negative. 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 2. i is an individual shareholder within the set I of the top ten largest or all acquirer shareholders.

$$r = \frac{(\sum_{i \in I} \alpha_a) V_a CAR_a + (\sum_{i \in I} \alpha_t) V_t CAR_t + \sum_{j \in J} (\sum_{i \in I} \alpha_j) V_j CAR_j}{(\sum_{i \in I} \alpha_a) V_a + (\sum_{i \in I} \alpha_t) V_t + \sum_{j \in J} (\sum_{i \in I} \alpha_j) V_j} \quad (2)$$

When we treat the top ten 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's 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 further: 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 IV Panel B, the CARs are significantly more negative with a mean of -5.46% for the top ten largest acquirer shareholders and -5.24% for the average shareholder. Most strikingly, we observe that the returns on non-merging rivals are much stronger than in Panel A and double the target returns in Column 2. Non-merging rivals benefit substantially in deals that the market perceives as value-destroying for the acquirer. In Column 4, we adjust acquirer returns for gains from target ownership and show that it only improves by an average of 1.32% (Column 2), and remains substantially negative with an average of -4.13%. How-

ever, rival and target ownership combined do appear to significantly improve returns for these acquirer shareholders. For an average top ten acquirer shareholder in a bad deal, common ownership improves its return by 3.93% (Columns 2 + 3). While it cannot completely offset the loss on the acquirer stake, common ownership cuts the loss substantially to an average of -1.53%. This is on average a 72% loss reduction, while accounting for target ownership only leads to an average of 24% reduction. If acquirer shareholders form coalitions, target ownership only improves the return by 1.53% while common ownership improves the return by a striking 4.53%. Figure 2 visually shows the magnitude of these improvements.

In sum, for all horizontal deals, return-adjusted for common ownership 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 ensure our results are not driven by outliers, we perform a K-density estimation for acquirer shareholder returns and plot it in Figure 3. The plots of the medians exhibit the same patterns, indicating that our results are not driven by outliers. This evidence could suggest that large acquirer shareholders may not block value-destroying acquisitions as they can hedge the losses of the deal with their combined stakes in target and rival companies.

D Wealth Effects for Acquirer Shareholders

To better illustrate the magnitude of the announcement returns, we look at gains and losses in dollar value for bad horizontal deals. According to Table V, on average, a large acquirer shareholder loses \$11.53 million from its acquirer ownership in a bad deal. When accounting for target ownership, only 10% of large shareholders achieve a net gain from such deals, which is consistent with HJL's results. However, when we take rival ownership into account, the percentage triples: 30% of the acquirer shareholders achieve a net dollar gain from a bad deal. This can shed light on why large shareholders of acquirers may not block value-destroying acquisitions: almost a third of these shareholders achieve a net gain for their overall industry

portfolios.

In Table VI we show the characteristics of large acquirer shareholders who win versus those that lose in bad deals. "Winners in bad deals" refers to those top ten acquirer shareholders with gains on target and rivals that completely compensate the losses on their acquirer stakes. "Losers in bad deals" refers to top ten acquirer shareholders with gains on target and rival stakes compensating none or even exacerbating the losses on acquirer stakes.

Winners in bad deals -i.e. the 30% of large acquirer shareholders that achieve a net gain from the value-destroying horizontal deals on the combined holding of acquirer, target, and rivals- have higher weights on rivals in their portfolio (84.2%) than the ones who lose (63.3%). These winning shareholders also hold higher numbers of rivals, 38 versus 26 in the losers group, indicating that they have more diversified industry portfolios. As a result, when evaluating mergers, such shareholders should pay more attention to overall industry gains rather than focusing only on losses from the acquirers.

Ultimately, the ability to block a merger does not depend on a shareholder's ownership but on a shareholder's control. Hence, we calculate voting share as shares with voting power held by the shareholder divided by all known shares with voting power based on the Thomson Reuters 13F database. This measure focuses our attention to only institutional shareholders and provides an estimate of the influence a specific shareholder may have among the known subset of institutional shareholders within the focal firm. Interestingly, while the winners have smaller stakes in the acquirer than the losers, there is no significant difference in voting power between the winners and the losers. The influential power of the two groups appears to be similar, while the winners have less at stake in the acquirer. This further supports the idea that such winning shareholders have the incentive and capability to push value-destroying deals to go through.

Investment horizon can influence acquirer shareholders' ability to monitor against value-destroying acquisitions (Gaspar, Massa and Matos, 2005). We proxy investment horizon with the investor's investment turnover as measured by the churn ratio calculated following Gaspar,

Massa and Matos (2005). A higher churn ratio indicates that the investor has higher portfolio turnover and tends to have a shorter investment horizon. Short-term shareholders generally have weaker monitoring and bargaining power, which leads to bad acquisitions. We see no significant difference between the churn ratios of the winners and the losers. The winning and losing acquirer shareholders in bad deals do not appear to differ in their incentives and ability to get involved in these deals based on their investment horizons.

For the winning shareholders in bad deals, instead of losing an average of \$7.16 million on their acquirer stakes, they achieve an average net gain of \$39.08 million, thanks to their stakes in the target and industry rivals. Based on Panel B, in over a quarter (27%) of the sample bad deals, winning shareholders hold more than 50% of the known voting power in the acquirer. Meanwhile, if we only adjust returns to acquirer shareholders with gains from target ownership, only in 5% of the bad deals do winning shareholders hold more than 50% of the known voting power in the acquirer. For robustness, we also use the Banzhaf voting power index method to better identify voters with swing votes that have a higher probability of changing the outcomes of the voting game, based on Monte Carlo simulation. This method gives us very similar results to those obtained using the raw voting power. Such evidence suggests that in many bad deals, shareholders with major voting power actually benefit at the industry portfolio level, and thus lack incentive to take action in blocking such deals.

We cited the recent high profile example of the controversial \$67 billion merger of AT&T and BellSouth in 2006 in the introduction. Interestingly, in another well-known "bad deal" in the same industry in 2005, Verizon's acquisition of MCI, six of Verizon's top ten institutional shareholders ended up with a positive gain after accounting for common ownership. Three investors who gained from the AT&T BellSouth deal based on their diversified industry holdings, Morgan Stanley, Mellon, and Lord Abbett, were also among the winners of this deal after accounting for common ownership. Such presence of diversified shareholders with strong common ownership might shed light on the approval of deals like these which are value-destroying for pure shareholders of AT&T and Verizon.

II Common Ownership, M&A Likelihood, and M&A Deal Characteristics

A Likelihood of M&A Activities in the Industry

The evidence we have provided thus far with our event study implies that common ownership allows many acquirer shareholders to internalize the gains with not just the target but also with non-merging rivals of the acquirer from the merger, even in deals that are seemingly value-destroying to the acquirer. This leads naturally to a suggestive hypothesis that higher common ownership environments are associated with higher frequency of M&A activity within an industry. To test this hypothesis 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 :

$$CO_{jk} = \sum_{i=1}^I \beta_{ij} \beta_{ik} \quad (3)$$

where $i = 1, \dots, I$ 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:

$$CO_j = \sum_{k=1}^K \sum_{i=1}^I w_k \beta_{ij} \beta_{ik} \quad (4)$$

To obtain the industry level common ownership, we value weight each CO_j within the industry by its market capitalizations for each industry:

$$\overline{CO} = \sum_{j=1}^J \sum_{k \neq j}^K \sum_{i=1}^I w_j w_k \beta_{ij} \beta_{ik} \quad (5)$$

We first examine whether there is an association between industry common ownership and the probability of having an M&A deal within the industry. We run a probit regression with an industry/year panel based on our baseline industry definition, the historical CRSP 4-Digit SIC codes. The dependent variable is a *Merger Dummy*, which equals one if there is any M&A deal in the industry during the given year. The main variable of interest is the industry level common ownership measure \overline{CO} , lagged one year. \overline{CO} is rank-transformed for comparability across industries¹⁰. We also run this regression using both the historical COMPUSTAT 4-Digit SIC codes and Hoberg&Phillips (HP) FIC-400 codes as robustness checks. We restrict the sample to industry/year groups with number of firms greater than one. We control for the number of firms in the industry, industry growth opportunities, industry size, industry profitability, and industry capital structure. All explanatory variables are lagged one year to avoid simultaneity. The results are shown in Table VII.

Higher \overline{CO} does appear to increase the likelihood of M&A activities within the industry, consistent with our prediction that M&A deals are more likely to be approved since diversified acquirer shareholders can internalize the gains by non-merging rivals. The empirical results show that when an industry has higher common ownership, it is more likely to experience a merger within the industry. This link is robust to the inclusion of industry and time effects across different industry definitions. Column 3 presents the baseline result using our main industry definition (historical 4-Digit CRSP) with both industry and year effects. The marginal effect indicates that compared to industries with low \overline{CO} , those with high \overline{CO} (an interquartile increase) have a 3% higher likelihood of having M&A activity.

Although \overline{CO} lacks enough statistical power when both industry and year effects are included in the regressions using HP industry classifications, it is likely due to the annual industry reassignments based on similarities in firm 10-K product descriptions. Industry assignments are, to a large extent, more consistent over time in both CRSP and COMPUSTAT SIC

¹⁰Rank-transformation is common in the literature due to difficulties in comparing concentration measures across industries. Our results are robust to non-rank-transformed measures, as well as equal-weighted instead of value-weighted common ownership.

codes. Therefore, industry effect can be capturing constantly varying groups in many occasions using the HP codes, explaining the loss of statistical significance. Moreover, the relationship between common ownership and M&A activities appears to be more pronounced in the cross section, while it is generally weaker within group dimension, even for the other two industry definitions. The Pseudo R even decreases after including industry fixed effect. Industries characterized by higher common ownership tend to have more M&A activities, while variation of common ownership within the industry has a weaker link to M&A.

Among the industry level control variables, we use the log of total industry assets to proxy for industry size. Larger industries offer more opportunities for firms to merge. Industries with more firms ($\ln N$) are more likely to experience consolidations, and therefore also experience more mergers. When industry concentration level (HHI) is high, it is more difficult for firms to merge due to anti-trust regulatory restrictions. Finally, we control for more industry characteristics by taking the market value weight average for profitability (ROA), market-to-book, and capital structure (leverage) across all firms within the industry. More profitable industries appear to have more M&A activities, while the other two controls lack consistent significance.

Figure 4 visually illustrates the relationship between M&A activity and common ownership. We calculate the average number of horizontal M&As deflated by the number of firms in the industry for each decile of \overline{CO} . The average number of horizontal mergers increases as \overline{CO} level increases, except when \overline{CO} reaches the highest level, providing further evidence that common ownership can lead to higher merger activity within the industry. When \overline{CO} is very high, there are almost no separate owners and the association of common ownership and M&A activity is no longer distinguishable, as the value is already close to being constant.

B Synergy Level and Acquirer CAR

In Section II we show that diversified acquirer shareholders can benefit from non-merging rivals' positive wealth effects during merger announcements. The results of the previous section support the idea that higher common ownership is associated with more M&A activity.

In this section we investigate how common ownership is related to the characteristics of M&A deals. We first analyze the synergies created from the horizontal M&A deals in our sample and the level of common ownership their acquirers' shareholders have. A horizontal deal with negative synergies means the merged firm will lose value compared to when the two original firms are combined. Non-merging rivals gain at the expense of the merged firm. Since acquirer shareholders with high rival ownership can internalize such rival gains, we expect synergies to be lower for deals in which acquirer shareholders have high stakes in non-merging rivals.

Again, synergies are calculated as the abnormal percentage increase in market value for the value weighted portfolio of the acquirer and the target in the (-1,+1) window around deal announcement, with target adjusted for toehold (HJL). This is the value creation from the deal for the merged firm as perceived by the market. We then want to see whether having high target ownership and rival ownership affects the synergy level of the deal. If our prediction is correct, acquirer shareholders having high rival ownership should be associated with lower synergies, as such shareholders are willing to require less value creation for the merged firm. *CO_Target* measures the stake acquirer shareholders have on the target, following Equation 3. *CO_NonMerging Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals, weighted by market value following Equation 5. The two measures are lagged one quarter prior to deal announcement and standardized. In addition, we include a list of variables on deal, acquirer, and target characteristics as controls.

Column 1 to 3 of Table VIII present the results of regressing deal synergies on the two common ownership variables, *CO_Target* and *CO_NonMerging Rivals*, controlling for deal and firm characteristics. We also include industry¹¹ and announcement year fixed effects, with standard errors clustered at the acquirer firm level. Based on Column 1, having high target ownership does not appear to lead to deals with lower synergy level. In the COMPUSTAT and HP samples, the coefficients are significantly positive. This is consistent with the finding of

¹¹In this analysis, since we still use 4-Digit SIC codes for more stringent industry fixed effects, some observations are lost.

Brooks, Chen and Zeng (2018) that higher target ownership by acquirer shareholders actually leads to a deal with better combined value due to lower transaction costs. Meanwhile, having high rival ownership is significantly associated with lower synergies, supporting our prediction that acquirer shareholders require less value creation for the merged firm when they can internalize gains from their rival ownership and profit at the portfolio level. When the deal's acquirer shareholders have one standard deviation higher rival ownership, it is associated with an average decrease of 0.9% in deal synergies, which is of very strong economic significance regarding the sample mean of 2.01%. For the two alternative industry classifications, this relationship is even more statistically significant.

Since non-merging rivals can generally benefit from a value-destroying merger in the industry, and diversified acquirer shareholders can internalize such gains, they should be more willing to accept an M&A deal with a lower acquirer return. Therefore, we expect deals with lower acquirer CAR when acquirer shareholders have higher ownership in non-merging rivals. Based on results reported in Columns 4 to 6, there is no such association between target ownership and acquirer CAR, which is again consistent with the argument of HJL that target stakes are usually too small to matter. There is indeed a significant negative relationship between rival ownership and acquirer CAR, although it is weaker in economic and statistical significance than that with synergies. M&A deals in which acquirer shareholders have high ownership in non-merging rivals appear to have lower announcement returns to the acquirers, suggesting that these shareholders are willing to accept a bad deal since they can offset the loss from their rival holdings. However, we have to interpret this result with caution, as it is not statistically significant for the CRSP definition.

The overall results in Table VIII indicate that the value created by a merger matters less to diversified acquirer shareholders who also own shares across non-merging rivals of the merging firms. Therefore, the synergy level required for a merger to take place is lower from the perspective of such shareholders. Finally, the CRSP industry definition appears to provide relatively more conservative estimates in comparison to the other two industry definitions for the

regressions of synergies and acquirer CAR. This provides strong support that our results are robust to various industry definitions. In the appendix we further conduct robustness checks on our event study results with alternative industry definitions.

III Wider Industry Classifications and Acquirer Shareholder Overall Portfolio Holdings

Shareholders may not block mergers because they internalize the gains in industry rivals. However, the overall effect of the rest of the holdings in shareholders' portfolios has yet to be considered. Indeed, shareholders want to maximize the return of their entire portfolios. As previously mentioned, the empirical evidence shows the strong effect of M&A announcements on target rivals. There is certain evidence that a merger may have wealth effects beyond industry rivals. For example, [Shahrur \(2005\)](#); [Fee and Thomas \(2004\)](#) show that M&A announcements affect the returns of both suppliers and customers of the merging firms. [Cai et al. \(2019\)](#) show that technologically similar firms gain around merger announcements, even if they are not in the same industry. In this section, we study the implications for our analysis of broadening the set of firms. We first analyze returns using 2-digit SIC codes, instead of 4-digit SIC codes. We then consider the excess returns of shareholder' overall portfolios around merger announcements.

Table IX Rows 1 to 4 present the baseline results using historical CRSP 4-Digit SIC codes from Table IV and Table V. Results based on CRSP and Compustat 2-Digit SIC codes are very similar. Accounting for ownership of industry rivals based on wider industry classifications provide results consistent with our baseline analysis. Using Fama-French 48 industry codes again provides consistent results. While in the baseline analysis accounting for common ownership (target+rival) on average leads to a 72% loss reduction for the average top ten acquirer shareholder in a value-destroying deal, using wider industry classifications leads to an average loss reduction of 85%. Compared to the 30% of top ten acquirer shareholders who end up

with a net gain in bad deals after accounting for common ownership using CRSP 4-Digit codes, 34% to 35% of such shareholders end up "winning" when using wider industry classifications. This implies that the marginal contribution to the overall shareholder return around merger announcements of firms outside the industry is small.

In Table X we repeat the synergy and acquirer CAR regressions in Table VIII also using wider industry classifications. The association between synergies created by the merger and rival ownership is consistently significant, as in our baseline results. The effect on acquirer CAR is also consistently negative, though not always statistically significant. In conclusion, we find robust support for the notion that when acquirer shareholders are diversified and own more shares in non-merging industry rivals, value creation from the merger appears to matter less to them when evaluating the wealth effect of the deal.

We then turn to look at the M&A wealth effects on acquirer shareholders' overall portfolio holdings. We calculate peer wealth effects with peers of the acquiring firms classified as all other firms held by the acquirer shareholders during the merger announcements. Rows 17 to 20 in Table IX present the wealth effects of M&A deals for acquirer shareholders after accounting for gains or losses from ownership in the target, as well as other portfolio firms. The results are similar to our baseline results (Rows 1 to 4) in Table IV and Table V. Looking at deals with negative announcement returns, the average top ten acquirer shareholder loses 5.15% during the announcement window. Accounting for target ownership on average offsets this loss by 22%, which is consistent with Table IV Panel B (24%). However, after accounting for the wealth effects on the average top ten acquirer shareholder's other portfolio firms during the announcement window, the loss on acquirer stake is almost completely wiped out. Return adjusted for target and portfolio peer ownership is close to zero (-0.2%), representing an average of 96% correction from acquirer loss. 32% of the sample top ten acquirer shareholders in bad deals can walk away with a net gain after adjusting for wealth effects on their holdings in the target and other portfolio firms, a result which is also better than that of the baseline analyses in Table V (30%).

In Columns 4 and 8 of Table X, we examine how acquirer shareholders' overall portfolio holdings are associated with value creation of the M&A deals in a multivariate analysis. *CO_Portfolio Peers* measures how much stakes the acquirer's shareholders have in their other portfolio firms and is calculated similarly to *CO_NonMerging Rivals* following Equation 5. Industry fixed effect uses the historical CRSP 2-Digit SIC codes of the acquirers, as this sample includes diversifying deals as well.

Firstly, the positive coefficient for target ownership on deal synergy level again resonates with the finding of Brooks, Chen and Zeng (2018) that investors with stakes in both the acquirer and the target scrutinize the deal more to ensure the combined wealth effect is better. The results of ownership in portfolio peers are consistent with previous results on industry rivals in horizontal deals. A one standard deviation increase of acquirer shareholders' overall stakes in their other portfolio firms leads to a 1.1% decrease in synergies created by the deal. There is also weak significance of a similar relationship between acquirer CAR and *CO_Portfolio Peers*. This again supports the notion that diversified acquirer shareholders on average do not really take a hit from bad mergers at the portfolio level. Therefore, they may lack incentives to stand up and fight against bad M&A deals that destroy value. In addition, the evidence provided in this section supports once more that the results in our baseline analyses are robust and are relatively more conservative estimates.

IV Conclusion

We show empirical evidence that positive returns for rival firms— together with common ownership of rivals— can help rationalize why acquirer shareholders oftentimes do not stand up and fight 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 such “bad deals” end

up with a net gain in their overall industry portfolios during the three-day window around the merger announcements. Over a quarter (26%) of the bad deals have these “winner” acquirer shareholders holding more than 50% of the known voting shares.

We also find a positive correlation between common ownership and the likelihood of future mergers within an industry. The synergy level required for mergers is lower as acquirer shareholders’ rival ownership increases. We interpret this evidence as suggesting that a high common ownership environment is a contributing factor to high M&A activity. Acquisitions also have wealth effects on firms outside of the industries of the merging firms. We further show that as acquirer shareholders become more diversified and put more weight on other portfolio firms, even firms outside of the merging firms’ industries, synergies created by the merger appear to matter less to them. Overall, our findings suggest that acquirer shareholders may lack the incentive to stand up and fight against value-destroying acquisitions because they often benefit from such "bad deals" at the portfolio level.

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V Figures

Figure 1: **Return to Top 10 Acquirer Shareholders in AT&T Acquisition of BellSouth.** This figure shows the announcement return to AT&T's top ten largest shareholders during the (-1,+1) window around the announcement of its acquisition of BellSouth in 2006. Raw return, return adjusted for target ownership, and return adjusted for target and rival ownership are presented.

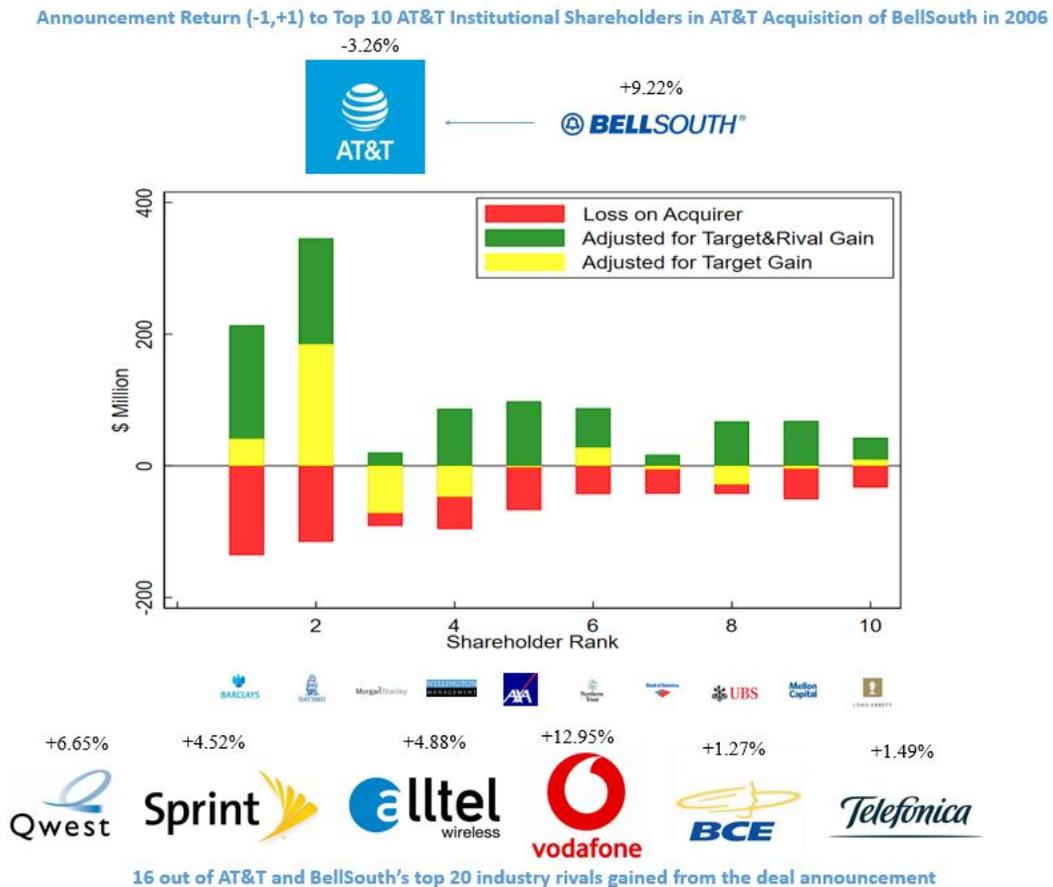


Figure 2: Average Acquirer Shareholder Returns in All Horizontal Deals and Bad Horizontal Deals. This figure shows the average return from acquirer ownership (acquirer CAR(-1,+1)), return from acquirer and target-ownership, return from acquirer, target, and rival ownership, for the top ten largest shareholders 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 CRSP 4-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 all horizontal and bad horizontal deal samples.

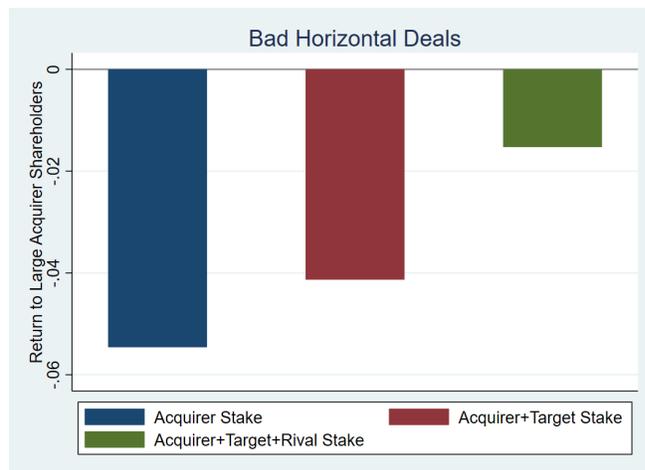
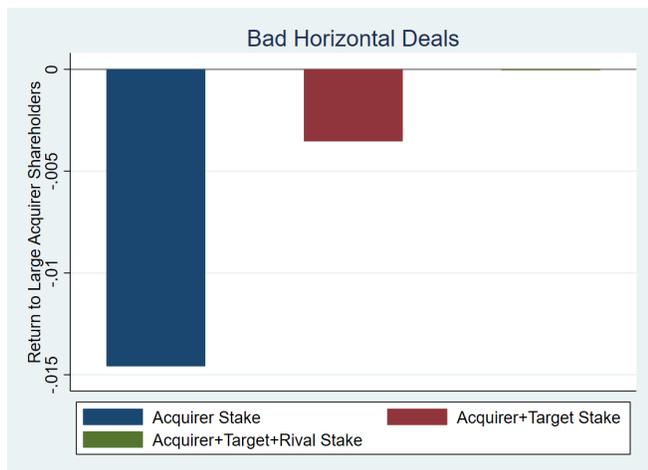


Figure 3: **Kernel Density Estimation for Acquirer Shareholder Returns in All Horizontal Deals and Bad Horizontal Deals.** This figure shows the kernel density estimation of return from acquirer ownership (acquirer CAR(-1,+1)), return from acquirer and target-ownership, return from acquirer, target, and rival ownership, for the top ten 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 CRSP 4-digit SIC code. Bad deals are defined as deals with negative acquirer CAR(-1,+1) which results in a loss for the acquirer shareholders.

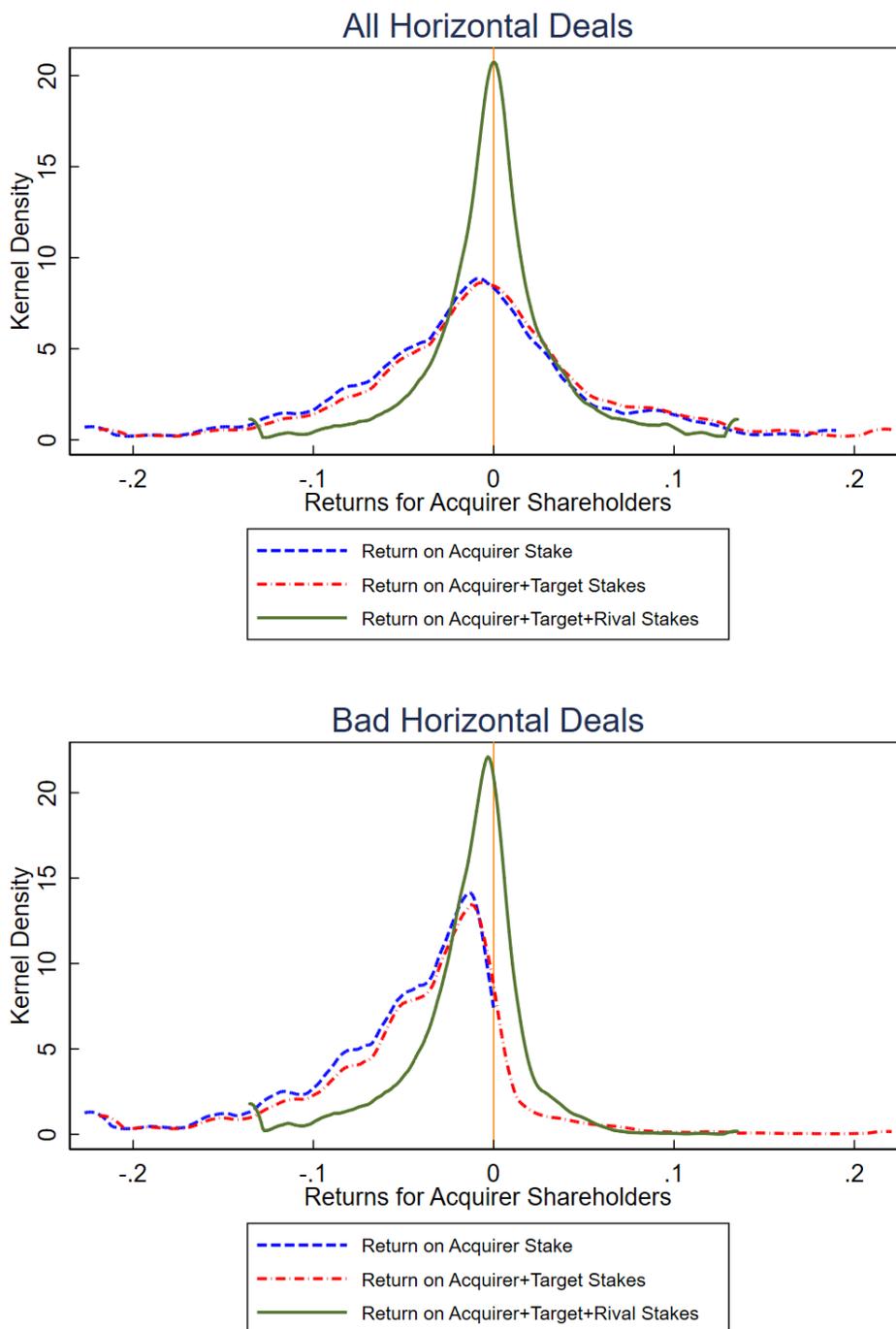


Figure 4: **Merger Activity Level and Industry Common Ownership Level.** This figure shows the average number of mergers scaled by number of firms (M&A deals per industry firm) within the industries in which the mergers take place, at each level of industry common ownership. The market value weighted average common ownership, \overline{CO} , measures common ownership within the industry, which is calculated with Equation 3, 4 and 5. The \overline{CO} s are ranked into deciles.

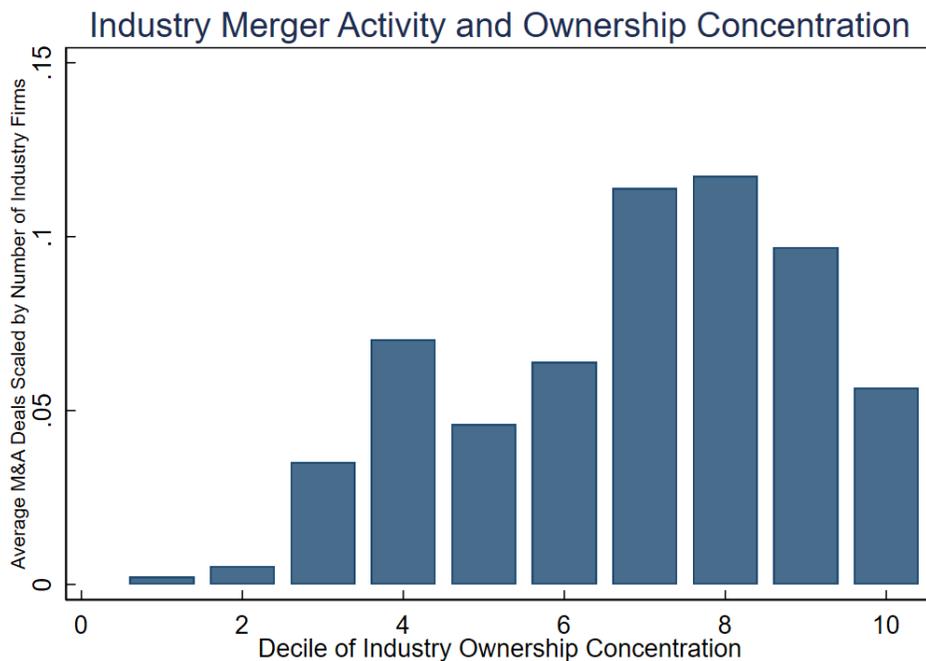


Table I: Summary Statistics

This table presents the horizontal sample, consisting of 1,154 acquisition attempts announced from 1980 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 more 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. A deal is considered diversifying if the target has a different SIC code than the acquirer. Following Harford, Jenter and Li (2011), the 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 the CAR (-1,+1) of the value weighted portfolio 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.

Variable	Obs	Mean	Median	Std. Dev	5th Perc.	95th Perc.
Acquirer CAR(%)(-1,+1)	1,154	-1.34%	-1.15%	7.09%	-13.02%	10.64%
Target CAR(%)(-1,+1)	1,154	18.02%	13.71%	21.15%	-6.49%	57.95%
Rival CAR(%)(-1,+1)	1,154	0.21%	0.17%	1.75%	-2.67%	3.29%
Synergies(%)	1,154	2.01%	1.17%	6.98%	-8.52%	15.27%
Synergies(\$million)	1,154	46.4	7.8	872.2	-606.2	1,061.1
Acquirer share of synergies(%)	712	-86.8%	20.1%	428.1%	-615.2%	98.5%
Acquirer total institutional ownership(%)	1,154	53.0%	52.6%	28.7%	6.7%	96.2%
Target total institutional ownership(%)	1,154	39.5%	34.2%	27.6%	2.4%	86.7%
Premium(%)	963	41.49%	33.16%	39.71%	-6.46%	115.28%
Complete	1,154	0.762	1.000	0.426	0.000	1.000
Competing	1,154	0.087	0.000	0.281	0.000	1.000
Toehold	1,154	0.006	0.000	0.040	0.000	0.004

Table II: Target and Rival Cross-holding by Acquirer Shareholders

This table presents the holdings in the acquirer, target, and rival by the largest institutional shareholders of the acquirer. The sample consists of 1,154 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 CRSP 4-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. Held-firm mkt cap as % of industry mkt cap is the sample average of market capitalization of firms held by the shareholder divided by the total market capitalization of the industry. The bottom rows include the possibility of the top ten acquirer shareholders and all acquirer shareholders acting as a block. The stakes and number of unique rivals held are aggregated in these cases. All numbers are winsorized at the 1st and 99th percentile.

Shareholder Rank in Acquirer	Obs	Stake in Acquirer		Stake in Target		Avg stake in Rival		Number of Rivals Held		% of Industry Firms Held		Held-Firm Mkt Cap as % of Industry Mkt Cap	
		Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Rank													
1	1,174	6.04%	6.58%	1.20%	0.00%	2.37%	1.93%	23	9	32%	20%	51%	50%
2	1,140	4.39%	4.16%	1.06%	0.00%	2.07%	1.75%	28	11	36%	26%	56%	60%
3	1,147	3.40%	3.18%	0.83%	0.00%	1.78%	1.41%	27	10	34%	24%	55%	60%
4	1,123	2.80%	2.58%	0.71%	0.00%	1.64%	1.28%	25	8	32%	22%	53%	55%
5	1,120	2.38%	2.24%	0.59%	0.00%	1.49%	1.14%	26	10	34%	24%	55%	58%
6	1,107	2.10%	1.95%	0.56%	0.00%	1.39%	1.05%	24	8	32%	21%	52%	53%
7	1,090	1.87%	1.73%	0.56%	0.00%	1.34%	1.00%	26	10	33%	22%	55%	60%
8	1,096	1.68%	1.58%	0.47%	0.00%	1.26%	0.91%	22	8	31%	20%	53%	55%
9	1,075	1.56%	1.45%	0.52%	0.00%	1.24%	0.93%	24	8	32%	21%	53%	54%
10	1,066	1.41%	1.30%	0.45%	0.00%	1.09%	0.83%	25	9	32%	22%	55%	59%
Avg. Top 10 Sh.	11,138	2.80%	2.17%	0.70%	0.00%	1.58%	1.16%	25	9	33%	22%	54%	56%
Avg. All Sh.	67,797	0.86%	0.36%	0.30%	0.00%	0.87%	0.50%	16	5	27%	17%	49%	48%
Coalition of Top 10	1,154	27.05%	26.99%	6.79%	5.58%	6.51%	5.62%	80	46	86%	88%	96%	99%
Coalition of All	1,154	50.61%	50.29%	17.79%	12.93%	16.00%	12.65%	93	52	86%	88%	96%	99%

Table III: Industry Portfolio Weights on Acquirer, Target, and Rivals

This table shows the portfolio weight an acquirer shareholder puts on its stake on the acquirer, target, and industry rivals relative to its overall industry portfolio. Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). The industry holding portfolio is the shareholder’s combined holding of the acquirer, the target, and the industry rivals. 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.

Shareholder Rank in Acquirer		Weight on Acquirer		Weight on Target		Weight on Rivals		% of cases where weight on rivals larger than acquirer	% of cases where weight on target and rivals larger than acquirer	Weight of <i>Merging Industry</i> relative to Overall Portfolio	
										Mean	Median
Rank	Obs	Mean	Median	Mean	Median	Mean	Median			Mean	Median
1	1,174	40%	26%	2%	0%	57%	71%	64%	65%	7%	2%
2	1,140	34%	17%	2%	0%	64%	81%	71%	72%	4%	2%
3	1,147	33%	17%	2%	0%	65%	81%	71%	73%	4%	2%
4	1,123	34%	19%	2%	0%	64%	80%	70%	71%	4%	2%
5	1,120	32%	16%	2%	0%	66%	82%	72%	73%	3%	1%
6	1,107	33%	18%	2%	0%	65%	80%	72%	73%	4%	2%
7	1,090	31%	14%	3%	0%	67%	84%	73%	74%	4%	1%
8	1,096	32%	16%	2%	0%	66%	82%	73%	74%	3%	1%
9	1,075	32%	16%	2%	0%	66%	82%	72%	74%	4%	2%
10	1,066	33%	15%	2%	0%	65%	82%	71%	73%	3%	1%
Avg. Top 10 Sh.	11,138	33%	17%	2%	0%	64%	80%	71%	72%	4%	2%
Avg. All Sh.	67,797	36%	19%	3%	0%	62%	79%	69%	70%	4%	2%

Table IV: Returns for Largest Shareholders of Acquirers around Horizontal M&A Announcements

This table presents the returns for 1,154 Horizontal M&A announcements from 1980 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 4 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 5 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 ten shareholders and all shareholders regardless of ownership percentage. We also include the possibility of the top ten 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). *, **, 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)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	1,174	-0.0146***	0.0099***	0.0023	-0.0047**	-0.0024**
2	1,140	-0.0134***	0.0109***	0.0025	-0.0024	0.0001
3	1,147	-0.0137***	0.0101***	0.0039**	-0.0036*	0.0003
4	1,123	-0.0138***	0.0114***	0.0032**	-0.0024	0.0008
5	1,120	-0.0144***	0.0098***	0.0046***	-0.0046**	0.0000
6	1,107	-0.0152***	0.0099***	0.0046***	-0.0054**	-0.0008
7	1,090	-0.0158***	0.0124***	0.0038**	-0.0033	0.0004
8	1,096	-0.0145***	0.0106***	0.0040**	-0.0039*	0.0001
9	1,075	-0.0151***	0.0124***	0.0023	-0.0027	-0.0005
10	1,066	-0.0154***	0.0134***	0.0038**	-0.0021	0.0017
Avg. Top 10 Sh.	11,138	-0.0146***	0.0110***	0.0035***	-0.0035***	-0.0000
Avg. All Sh.	67,797	-0.0141***	0.0121***	0.0026***	-0.0020***	0.0007***
Coalition of Top 10	1,154	-0.0140***	0.0162***	-0.0010	0.0022	0.0012
Coalition of All	1,154	-0.0140***	0.0191***	-0.0033	0.0051*	0.0019**

Panel B. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals						
Shareholder Rank in Acquirer		(1)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	711	-0.0548***	0.0116***	0.0229***	-0.0432***	-0.0202***
2	682	-0.0540***	0.0134***	0.0248***	-0.0406***	-0.0158***
3	685	-0.0552***	0.0115***	0.0286***	-0.0437***	-0.0151***
4	678	-0.0540***	0.0140***	0.0249***	-0.0400***	-0.0150***
5	677	-0.0549***	0.0109***	0.0288***	-0.0441***	-0.0153***
6	671	-0.0543***	0.0128***	0.0267***	-0.0415***	-0.0147***
7	663	-0.0553***	0.0150***	0.0266***	-0.0402***	-0.0136***
8	665	-0.0536***	0.0128***	0.0269***	-0.0408***	-0.0139***
9	647	-0.0553***	0.0146***	0.0245***	-0.0406***	-0.0161***
10	648	-0.0544***	0.0160***	0.0257***	-0.0384***	-0.0126***
Avg. Top 10 Sh.	6,727	-0.0546***	0.0132***	0.0261***	-0.0413***	-0.0153***
Avg. All Sh.	40,644	-0.0524***	0.0155***	0.0225***	-0.0370***	-0.0145***
Coalition of Top 10	695	-0.0543***	0.0153***	0.0300***	-0.0390***	-0.0090***
Coalition of All	695	-0.0543***	0.0191***	0.0283***	-0.0352***	-0.0069***

Table V: Wealth Improvements from Target and Rival Ownership for Acquirer Shareholders in Bad Horizontal Deals

This table presents the overall wealth effects for acquirer shareholders in bad deals (defined as deals with negative CAR(-1,+1)). Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). 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. All gains and losses are calculated with abnormal announcement period returns over days (1, +1), where day 0 is the date of the initial bid announcement by the acquiring firm. Daily abnormal stock returns are computed using the market model and the estimation window is days (200, 60) prior to the acquisition announcement.

Shareholder Rank in Acquirer	Loss on acquirer stake (in 'millions)	Cases in which target ownership compensates for given % of loss on acquirer stake			Cases in which target and rival ownership compensates for given % of loss on acquirer stake				
		Rank	Obs	Mean	Median	None	> 50%	> 100%	None
1	711	-24.93	-2.74	67%	13%	10%	56%	30%	25%
2	682	-17.66	-1.85	65%	16%	11%	55%	33%	30%
3	685	-14.08	-1.46	69%	14%	11%	55%	33%	29%
4	678	-10.79	-1.14	67%	16%	10%	54%	35%	31%
5	677	-9.33	-1.05	70%	14%	10%	58%	34%	30%
6	671	-9.16	-0.95	71%	14%	10%	53%	36%	30%
7	663	-7.70	-0.85	70%	16%	12%	55%	35%	30%
8	665	-6.86	-0.75	71%	15%	10%	56%	35%	29%
9	647	-7.55	-0.72	70%	17%	12%	56%	36%	31%
10	648	-5.94	-0.63	71%	15%	11%	56%	36%	32%
Avg. Top 10 Sh.	6,727	-11.53	-1.11	69%	15%	10%	55%	34%	30%
Avg. All Sh.	40,644	-4.36	-0.37	75%	16%	12%	57%	35%	30%
Coalition of Top 10	695	-111.64	-11.23	26%	22%	14%	48%	42%	37%
Coalition of All	695	-255.14	-22.06	22%	27%	17%	48%	44%	39%

Table VI: Characteristics of Winning and Losing Acquirer Shareholders in Bad Horizontal Deals

Panel A of this table shows the average characteristics of the top ten largest acquirer shareholders for each bad horizontal deal (deals with negative announcement returns to acquirer shareholders). Acquirer shareholders are ranked based on their controlling ownership percentage (shares held with voting power). Two groups of shareholders are reported: "Winners in bad deals" refer to acquirer shareholders with gains on target and rivals compensating greater than 100% the losses on their acquirer stakes; "Losers in bad deals" refer to acquirer shareholders with gains on target and rival stakes compensating none or even exacerbating the losses on acquirer stakes. Voting share is calculated as shares with voting power held by the shareholder divided by all known shares with voting power based on the Thomson Reuters 13F database. Panel B shows how influential winner acquirer shareholders can be in bad deals. The full known acquirer shareholder base is used instead of just the top ten largest acquirer shareholders in this analysis. Average % of acquirer shareholders who end up winning is the average of number of acquirer shareholders who have a net gain after accounting for their target and rival ownership divided by the number of known shareholders of the acquirer in each deal across all 695 bad deals. Average combined voting power of winner shareholders is the average of combined voting shares held by those acquirer shareholders who have a net gain after accounting for their target and rival ownership in each deal across all 695 bad deals. Raw voting power based on known voting shares is again calculated as shares with voting power held by the shareholder divided by all known shares with voting power based on the 13F database. For robustness, we also use the Banzhaf voting power index method to better identify voters with swing votes that have higher probability of changing the outcomes of the voting game, based on Monte Carlo simulation.

Panel A: Characteristics of Winners and Losers in Value-Destroying Deals

	Winners in Bad Deals			Losers in Bad Deals			Difference of Means
	Obs	Mean	Median	Obs	Mean	Median	
Weight on acquirer	1,998	12.9%	5.5%	3,730	35.5%	17.1%	-22.6%***
Weight on target	1,998	2.9%	0.0%	3,730	1.2%	0.0%	1.7%***
Weight on rivals	1,998	84.2%	93.5%	3,730	63.3%	81.3%	20.9%***
Number of rivals held	1,998	38	19	3,730	26	9	12***
% of industry firms held	1,998	38%	32%	3,730	29%	18%	9%***
Held-firm mkt cap as % of industry mkt cap	1,998	62%	72%	3,730	50%	48%	11%***
Ownership share of acquirer	1,998	2.57%	1.92%	3,730	2.82%	2.17%	-0.25%***
Voting share of acquirer	1,998	6.55%	4.40%	3,730	6.63%	4.48%	-0.08%
Investment horizon (churn ratio)	1,979	0.18	0.17	3,707	0.18	0.17	-0.00
Acquirer CAR (-1,+1)	1,998	-4.6%	-3.0%	3,730	-5.8%	-4.2%	1.1%***
Target CAR(-1,+1)	1,998	19.5%	15.7%	3,730	14.5%	11.2%	5.0%***
Rival CAR(-1,+1)	1,998	0.6%	0.5%	3,730	-0.4%	-0.3%	1.0%***
Loss on acquirer (\$millions)	1,998	-7.16	-0.56	3,730	-10.05	-1.10	2.88***
Gain on target (\$millions)	1,998	6.40	0.00	3,730	0.69	0.00	5.71***
Net gain from industry portfolio (\$millions)	1,998	39.08	40.25	3,730	-34.78	-42.75	73.86***

Panel B: Influential Potential of Winner Acquirer Shareholders in Value-Destroying Deals and All Sample Deals

	Number of Bad Deals	Adjusted for Target Ownership	Adjusted for Target+Rival Ownership	Number of All Deals	Only Acquirer Ownership	Adjusted for Target Ownership	Adjusted for Target+Rival Ownership
<i>Average combined voting power of winner shareholders:</i>							
Raw voting power	695	10%	30%	1,154	40%	46%	49%
Banzhaf voting power index	695	10%	29%	1,154	40%	45%	48%
<i>Deals in which winners have >50% voting power:</i>							
Raw voting power	695	5%	26%	1,154	40%	42%	48%
Banzhaf voting power index	695	5%	25%	1,154	40%	42%	47%

Table VII: Industry M&A Likelihood and Common Ownership

This table presents the results of the industry/year probit regressions of the *Merger Dummy* on \overline{CO} for industries with more than one firm. *Merger Dummy* equals one if an industry has an M&A deal in a given year. \overline{CO} is industry level common ownership calculated as the market value weighted average common ownership across the industry in a given year. Column 1 to 3 use our baseline industry definition, the historical CRSP 4-Digit SIC codes. Column 4 to 6 use the historical COMPUSTAT 4-Digit SIC codes while Column 7 to 9 use the Hoberg and Phillips FIC 400 codes for robustness checks. *lnN* is the natural log of the number of firms in the industry in the given year. *HHI* measures industry concentration level based on COMPUSTAT market shares. Market-to-Book is the market value weighted average industry market-to-book ratio. Size is measured as the log of total asset of the industry. Profitability is the market value weighted average industry ROA. Capital structure is the market value weighted average industry leverage ratio. All explanatory variables are lagged one year. T-statistics are displayed in parentheses. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

	Y=Merger								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
\overline{CO}	0.482*** (4.921)	0.535*** (5.184)	0.446*** (2.651)	0.575*** (6.845)	0.516*** (5.989)	0.462*** (3.672)	0.463*** (3.810)	0.325** (2.539)	0.134 (0.679)
Marginal Effect	0.028	0.030	0.060	0.068	0.060	0.076	0.064	0.044	0.026
LnN	0.578*** (18.10)	0.584*** (16.90)	1.085*** (11.78)	0.679*** (19.15)	0.613*** (16.28)	0.864*** (8.685)	0.762*** (14.40)	0.668*** (11.88)	1.226*** (6.793)
HHI	-0.309** (-2.260)	-0.341** (-2.429)	-0.071 (-0.267)	-0.490*** (-3.142)	-0.538*** (-3.400)	-0.680** (-2.460)	-0.326* (-1.657)	-0.432** (-2.156)	-0.169 (-0.469)
Size	0.080*** (6.270)	0.092*** (6.055)	-0.011 (-0.208)	0.019 (1.380)	0.067*** (4.137)	0.020 (0.413)	-0.021 (-0.915)	0.052** (1.980)	-0.036 (-0.512)
Profitability	0.333 (1.110)	0.723** (2.240)	0.865 (1.456)	1.345*** (3.954)	1.300*** (3.728)	1.448** (2.501)	1.083*** (2.778)	0.954** (2.391)	1.098 (1.617)
Market-to-Book	0.020 (1.020)	-0.007 (-0.312)	0.015 (0.426)	-0.026 (-1.231)	-0.017 (-0.779)	-0.030 (-0.916)	0.027 (1.244)	0.021 (0.934)	0.025 (0.713)
Capital Structure	0.036 (0.218)	-0.039 (-0.226)	-0.505 (-1.389)	0.225 (1.435)	0.114 (0.700)	0.101 (0.322)	-0.286 (-1.262)	-0.593** (-2.466)	-0.990** (-1.992)
Intercept	-4.109*** (-25.49)	-4.719*** (-18.52)	-6.636*** (-8.402)	-3.641*** (-21.80)	-4.337*** (-17.92)	-4.757*** (-7.117)	-3.258*** (-16.85)	-3.071*** (-14.80)	-4.270*** (-5.338)
Industry Definition	CRSP	CRSP	CRSP	COMP	COMP	COMP	HP	HP	HP
N	18,564	18,376	5,960	10,847	10,788	6,364	5,381	5,381	2,948
Industry FE	No	No	Yes	No	No	Yes	No	No	Yes
Year FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Pseudo R ²	0.33	0.35	0.32	0.26	0.28	0.29	0.33	0.35	0.31

Table VIII: M&A Deal Characteristics and Common 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 and 4 present the baseline analyses using historical CRSP 4-Digit SIC industry definition, while Column 2 and 5 present results using the historical Compustat 4-Digit SIC codes and Column 3 and 6 using the Hoberg&Phillips FIC-400 codes for robustness check. *CO_Target* measures the stake acquirer shareholders have on the target, following Equation 3. *CO_NonMerging Rivals* measures the average stake acquirer shareholders have on the acquirer's non-merging rivals, weighted by market value following Equation 5. The two common ownership measures are standardized. All cash is a dummy variable that equals one if the deal is an all cash offer, while all stock is a dummy variable 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. 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.

	Synergy (%)			Acquirer CAR (-1, +1)		
	(1)	(2)	(3)	(4)	(5)	(6)
CO_Target	0.001	0.008***	0.006**	-0.001	0.006**	0.003
	(0.243)	(2.918)	(2.434)	(-0.408)	(2.471)	(1.155)
CO_Non-Merging Rivals	-0.009*	-0.007**	-0.007***	-0.005	-0.005*	-0.005*
	(-1.941)	(-2.236)	(-2.721)	(-0.975)	(-1.811)	(-1.886)
Relative Size	-0.002	0.006	0.012***	-0.009*	-0.003	0.002
	(-0.353)	(1.628)	(2.613)	(-1.741)	(-0.694)	(0.345)
All Cash	0.018***	0.020***	0.015***	0.025***	0.027***	0.024***
	(2.876)	(3.463)	(2.793)	(4.141)	(4.786)	(4.729)
All Stock	-0.002	-0.007	-0.012**	-0.001	-0.001	-0.000
	(-0.427)	(-1.459)	(-2.468)	(-0.237)	(-0.191)	(-0.029)
Competing	0.003	0.004	-0.003	0.001	-0.013*	-0.009
	(0.423)	(0.473)	(-0.325)	(0.102)	(-1.656)	(-1.183)
Acquirer Market-to-Book	-0.005*	-0.004*	-0.005**	-0.003	-0.002	-0.004
	(-1.958)	(-1.918)	(-1.980)	(-1.173)	(-0.835)	(-1.393)
Target Market-to-Book	0.002	0.000	-0.003	0.004	0.004	-0.000
	(0.876)	(0.014)	(-0.867)	(1.542)	(1.475)	(-0.043)
Acquirer Total Institutional Ownership	-0.013	-0.025**	-0.008	-0.013	-0.024*	0.006
	(-0.982)	(-2.050)	(-0.707)	(-0.926)	(-1.942)	(0.526)
Target Total Institutional Ownership	0.026*	0.004	0.001	0.012	-0.011	-0.016
	(1.912)	(0.368)	(0.139)	(0.853)	(-1.062)	(-1.632)
Acquirer Return on Assets	-0.005	0.011	0.048*	0.028	0.037	0.068**
	(-0.139)	(0.350)	(1.648)	(0.829)	(1.064)	(2.129)
Target Return on Assets	-0.023	-0.014	-0.014	-0.064**	-0.040*	-0.059***
	(-0.841)	(-0.707)	(-0.687)	(-2.243)	(-1.957)	(-2.786)
Acquirer Market Capitalization	-0.000	-0.000	-0.000	0.000	0.000	0.000**
	(-1.144)	(-1.497)	(-0.552)	(0.033)	(0.487)	(2.261)
Target Market Capitalization	0.000	-0.000	-0.000*	-0.000	-0.000	-0.000*
	(0.061)	(-1.022)	(-1.693)	(-0.017)	(-0.733)	(-1.847)
Acquirer Market Leverage	0.001	0.001	0.000	0.001	0.000	0.001
	(0.926)	(0.557)	(0.511)	(1.336)	(0.246)	(1.118)
Target Market Leverage	-0.001	-0.003**	-0.002	-0.002*	-0.002**	-0.000
	(-1.355)	(-2.276)	(-1.345)	(-1.893)	(-1.983)	(-0.132)
Acquirer Stock Return	-0.002	-0.003	0.002	-0.001	-0.004	0.002
	(-0.459)	(-0.553)	(0.414)	(-0.270)	(-0.908)	(0.382)
Target Stock Return	0.004	0.000	0.004	0.004	0.002	0.005
	(0.793)	(0.012)	(0.806)	(0.679)	(0.370)	(0.959)
Intercept	0.022**	0.045***	0.031***	-0.012	0.003	-0.017*
	(2.180)	(4.815)	(3.378)	(-1.191)	(0.339)	(-1.732)
Industry Definition	CRSP	COMP	HP	CRSP	COMP	HP
N	1,037	1,464	1,410	1,037	1,464	1,410
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.10	0.11	0.12	0.11	0.08	0.09

Table IX: Wider Industry Classifications and Overall Portfolio Holdings of Acquirer Shareholders

This table presents the results of return comparisons based on wider industry classifications. Horizontal M&A deals and industry rivals are identified using historical CRSP 2-Digit SIC codes, Compustat 2-Digit SIC codes, and Fama-French 48 industry codes. Furthermore, we also account for all other firms held by acquirer shareholders, portfolio peers, adjusting the announcement return with the gains/losses of such peers at the overall portfolio level for acquirer shareholders. We provide the results with CRSP 4-Digit SIC codes from Table IV for comparison. Return on acquirer is the cumulative abnormal return (CAR) for the acquirer during deal announcement. 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. Return adjusted for target ownership is the combined net gain/loss on acquirer and target divided by the combined holding value in acquirer and target for each shareholder. Return adjusted for common ownership (target+rival) is the net gain/loss on acquirer, target and industry rivals (portfolio peers, in the case of overall portfolio holdings), divided by the combined holding value of these firms by the shareholder. Bad deals are defined as deals with negative announcement returns for acquirers. We also report cases in which the acquirer shareholder has gains from her target and industry rival (portfolio peer) ownership, completely offsetting the announcement loss on her acquirer stake in bad deals. ***, **, and * indicate p-values of 1%, 5%, and 10%, respectively.

Returns Around Announcement (-1,+1)	Acquirer Shareholders							
	All Deals				Bad Deals			
	Avg. Top 10 Sh.		Avg. All Sh.		Avg top 10		Avg All Sh	
	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean
CRSP SIC4								
(1) Return on Acquirer	11,138	-0.0146***	67,797	-0.0141***	6,727	-0.0546***	40,644	-0.0524***
(2) Return Adjusted for Target Ownership	11,138	-0.0035***	67,797	-0.0020***	6,727	-0.0413***	40,644	-0.0370***
(3) Return Adjusted for Target+Rival Ownership	11,138	-0.0000	67,797	0.0007***	6,727	-0.0153***	40,644	-0.0145***
(4) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	6,727	30%	40,644	30%
CRSP SIC2								
(5) Return on Acquirer	20,460	-0.0140***	126,272	-0.0118***	12,471	-0.0507***	74,722	-0.0487***
(6) Return Adjusted for Target Ownership	20,460	-0.0039***	126,272	-0.0010***	12,471	-0.0378***	74,722	-0.0347***
(7) Return Adjusted Target+Rival Ownership	20,460	-0.0010***	126,272	-0.0004***	12,471	-0.0077***	74,722	-0.0075***
(8) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	12,471	34%	74,722	35%
Compustat SIC2								
(9) Return on Acquirer	23,814	-0.0137***	146,714	-0.0124***	14,103	-0.0524***	85,804	-0.0498***
(10) Return Adjusted for Target Ownership	23,814	-0.0032***	146,714	-0.0013***	14,103	-0.0389***	85,804	-0.0354***
(11) Return Adjusted for Target+Rival Ownership	23,814	-0.0012***	146,714	-0.0008***	14,103	-0.0079***	85,804	-0.0077***
(12) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	14,103	34%	85,804	35%
Fama-French 48								
(13) Return on Acquirer	24,077	-0.0133***	150,079	-0.0124***	14,413	-0.0504***	88,867	-0.0482***
(14) Return Adjusted for Target Ownership	24,077	-0.0030***	150,079	-0.0015***	14,413	-0.0375***	88,867	-0.0344***
(15) Return Adjusted for Target+Portfolio Peer Ownership	24,077	-0.0010***	150,079	-0.0007***	14,413	-0.0078***	88,867	-0.0076***
(16) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	14,413	35%	88,867	35%
Overall Portfolio Holdings								
(17) Return on Acquirer	49,360	-0.0122***	310,767	-0.0124***	28,736	-0.0515***	181,231	-0.0487***
(18) Return Adjusted for Target Ownership	49,360	-0.0033***	310,767	-0.0033***	28,736	-0.0403***	181,231	-0.0370***
(19) Return Adjusted for Target+Portfolio Peer Ownership	49,360	-0.0013***	310,767	-0.0013***	28,736	-0.0020***	181,231	-0.0019***
(20) Cases in which target and rival gains compensate >100% of acquirer loss	-	-	-	-	28,736	32%	181,231	34%

Table X: M&A Deal Characteristics and Common Ownership - Wider Industry Classifications and Overall Portfolio Holdings of Acquirer Shareholders'

This table presents the results of the regression of M&A synergies and acquirer CAR on target and rival common ownership for all horizontal deals based on wider industry classifications. We further account for acquirer shareholders' stakes in other portfolio firms and evaluate their diversified interest at the overall portfolio level during deal announcement. 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). The industry classifications are CRSP 2-Digit SIC, Compustat 2-Digit SIC, and Fama-French 48 industry codes respectively. CO_Target measures the stake acquirer shareholders have on the target, following Equation 3. $CO_NonMerging Rivals$ measures the average stake acquirer shareholders have on the acquirer's non-merging rivals, weighted by market value following Equation 5. $CO_Portfolio Peers$ measures the average stake acquirer shareholders have on other firms in their overall portfolios, weighted by market value and calculated similar to that on industry rivals. The three common ownership measures are standardized. All control variables follow Table VIII. Industry fixed effect for all holdings uses CRSP 2-Digit SIC codes of the acquirers'. 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.

	Synergy (%)				Acquirer CAR (-1, +1)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CO_Target	0.002	0.002	0.003	0.007***	-0.001	0.000	0.001	0.004***
	(0.942)	(1.107)	(1.312)	(4.874)	(-0.469)	(0.235)	(0.340)	(2.684)
CO_Non-Merging Rivals	-0.006**	-0.007***	-0.007***		-0.004*	-0.003	-0.002	
	(-2.380)	(-2.821)	(-2.970)		(-1.649)	(-1.212)	(-0.789)	
CO_Portfolio Peers				-0.011***				-0.004*
				(-5.161)				(-1.802)
Relative Size	0.005	0.009***	0.008**	0.003	-0.006*	-0.003	-0.003	-0.006**
	(1.503)	(2.808)	(2.541)	(1.458)	(-1.708)	(-0.775)	(-0.874)	(-2.515)
All Cash	0.021***	0.024***	0.022***	0.012***	0.022***	0.025***	0.023***	0.014***
	(5.082)	(5.435)	(5.716)	(4.808)	(5.775)	(6.155)	(6.684)	(5.684)
All Stock	-0.013***	-0.012***	-0.012***	-0.014***	-0.008**	-0.007	-0.006	-0.010***
	(-3.379)	(-2.909)	(-3.466)	(-5.462)	(-2.021)	(-1.533)	(-1.574)	(-4.075)
Competing	-0.000	0.000	-0.001	0.003	-0.004	-0.005	-0.007	-0.004
	(-0.0202)	(0.0739)	(-0.223)	(0.861)	(-0.750)	(-0.948)	(-1.306)	(-1.219)
Acquirer Market-to-Book	-0.004**	-0.004***	-0.004***	-0.004***	-0.000	-0.000	-0.001	-0.002
	(-2.212)	(-2.700)	(-2.668)	(-3.469)	(-0.200)	(-0.226)	(-0.627)	(-1.551)
Target Market-to-Book	-0.003	-0.004**	-0.004*	-0.004***	-0.001	-0.003	-0.002	-0.002
	(-1.619)	(-2.368)	(-1.941)	(-3.662)	(-0.735)	(-1.634)	(-1.249)	(-1.347)
Acquirer Total Institutional Ownership	0.005	0.007	0.001	-0.006	0.001	-0.003	-0.008	-0.002
	(0.546)	(0.696)	(0.133)	(-0.876)	(0.113)	(-0.295)	(-0.911)	(-0.348)
Target Total Institutional Ownership	0.012	0.009	0.007	0.007	-0.005	-0.013*	-0.016**	-0.016***
	(1.598)	(1.103)	(0.943)	(1.299)	(-0.593)	(-1.662)	(-2.274)	(-3.185)
Acquirer Return on Assets	0.026	0.020	0.013	0.022	0.068***	0.046*	0.041	0.033**
	(1.087)	(0.827)	(0.558)	(1.491)	(2.704)	(1.796)	(1.643)	(2.123)
Target Return on Assets	0.016	0.005	0.009	0.008	-0.024	-0.015	-0.015	-0.016*
	(1.048)	(0.371)	(0.600)	(0.875)	(-1.611)	(-1.147)	(-1.093)	(-1.783)
Acquirer Market Capitalization	-0.000***	-0.000**	-0.000**	-0.000***	-0.000	0.000	0.000	0.000
	(-3.601)	(-2.279)	(-2.145)	(-4.059)	(-0.883)	(0.759)	(1.390)	(1.570)
Target Market Capitalization	0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.490)	(-0.263)	(-0.538)	(-0.663)	(0.573)	(-0.544)	(-1.057)	(-1.381)
Acquirer Market Leverage	0.001	0.001	0.001**	0.000	0.002**	0.002	0.002***	0.000
	(1.568)	(1.078)	(2.060)	(0.015)	(1.970)	(1.484)	(2.963)	(0.484)
Target Market Leverage	-0.001**	-0.001	-0.001*	-0.001**	-0.001**	-0.001	-0.001*	-0.001*
	(-2.042)	(-1.556)	(-1.896)	(-1.973)	(-1.967)	(-1.377)	(-1.721)	(-1.663)
Acquirer Stock Return	0.001	-0.002	0.001	0.004	0.001	-0.000	0.000	0.001
	(0.197)	(-0.382)	(0.325)	(1.372)	(0.173)	(-0.090)	(0.074)	(0.458)
Target Stock Return	-0.000	-0.002	-0.002	-0.001	0.005	0.002	0.003	0.000
	(-0.003)	(-0.730)	(-0.715)	(-0.575)	(1.242)	(0.472)	(0.994)	(0.190)
Constant	0.020***	0.024***	0.026***	0.034***	-0.016**	-0.007	-0.003	0.004
	(2.778)	(3.112)	(3.769)	(7.171)	(-2.289)	(-0.912)	(-0.496)	(0.705)
Industry	CRSP2	COMP2	FF48	AllHoldings	CRSP2	COMP2	FF48	AllHoldings
N	1,977	1,908	2,318	4,858	1,977	1,908	2,318	4,858
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.09	0.09	0.09	0.09	0.10	0.09	0.07	0.07

Appendix

A Alternative Industry Classifications and Estimation Model

Since industry classifications are key to identifying horizontal deals and rival ownership, we provide more robustness analyses for two additional industry classifications in the appendix section. As in the above section, we use the historical COMPUSTAT 4-digit SIC codes and, most importantly, Hoberg&Phillips FIC-400 industry codes. Although we have already provided results for repeating the baseline analyses in Table IX and X based on alternative industry classifications, in this section we repeat the analyses of the event study to further ensure that our findings are unlikely to be subject to a specific kind of industry classification. The results remain similar. We require both the acquirer and target to have non-missing industry codes. COMPUSTAT started reporting historical SIC codes from 1986, while the HP codes are recorded only from 1997.

Table A.1 presents the return comparisons using historical COMPUSTAT 4-digit SIC codes. Column 4 shows that target ownership alone is enough to completely offset the loss on the acquirer stake for the top ten shareholders. Return on rivals does not seem to matter. When restricted to only bad horizontal deals, target ownership only mitigates a small portion of the acquirer loss, while common ownership substantially offset the -5.95% acquirer CAR by 3.92% for the average top ten acquirer shareholder. This is a loss reduction of 24% from target ownership and 66% from common (target plus rival) ownership, a magnitude slightly smaller yet largely similar to our baseline results. Table A.2 presents the return comparisons using H&P industry codes. As in the prior cases, the return adjusted for common ownership improves noticeably relative to the adjustment for only target ownership. In Panel A, the remaining -0.24% loss is substantially smaller than the -1.72% acquirer CAR for the average top ten shareholder. In Panel B, common ownership offsets the -6.03% acquirer CAR by 4.45% while target ownership only provides a 1.54% correction. Again, this is a loss reduction of 26% from target

ownership and 74% from common (target plus rival) ownership, a magnitude even slightly larger than our baseline results.

Table A.3 Panel A presents the wealth improvement on bad horizontal deals for acquirer shareholders based on the two alternative industry classifications. Large acquirer shareholders suffer a smaller average loss on their acquirer stakes in the COMPUSTAT SIC sample, while target ownership completely offsets the loss for 10% of these shareholders and common ownership does so for 25% of them. Using the H&P sample, gains on common ownership compensates for over 100% of the acquirer loss for 29% of the large acquirer shareholders, which is consistent with the results of Table V. Overall, we conclude that results based on the two alternative industry classifications are in line with our baseline findings that, in value-destroying horizontal deals, gains on common ownership mitigate the loss due to the acquirer stake for large shareholders. Moreover, over a quarter of such shareholders end up with a positive net gain after accounting for common ownership.

Finally, we provide a robustness analysis using the Fama-French three factor model to compute the CARs. Table A.4 and A.5 present results of return comparisons and wealth improvement in bad deals using this alternative estimation model based on the historical CRSP 4-digit SIC codes. Again, results are consistent. For all horizontal deals, return to an average top ten acquirer shareholder only becomes statistically insignificant after accounting for common ownership. Common ownership mitigates the loss on acquirer stake of -5.38% by 3.92% while target ownership only provides a 1.34% improvement in bad horizontal deals. 30% of the top ten acquirer shareholders achieve a positive net gain after accounting for common ownership in bad horizontal deals, in line with our baseline results.

Table A.1: Return Comparisons using Historical COMPUSTAT 4-Digit SIC Codes

The sample using historical COMPUSTAT SIC codes starts from 1986 to 2016, including 1,589 horizontal mergers. Horizontal deals are defined as deals in which acquirer and target have the same SIC codes. Bad horizontal deals are defined as horizontal deals with negative CAR(-1,+1). Following Harford, Jenter, and Li (2011), the acquirer CAR(-1,+1) is calculated using the market model with an estimation window of (-200, -60) prior to the announcement date. Return adjusted for target ownership is calculated as the net of gain/loss on acquirer stake and gain/loss on target stake, divided by the combined holding value in acquirer and target by the shareholder. Return adjusted to common ownership is calculated as the net of gain/loss on acquirer stake, gain/loss on target stake, and gain/loss on stake in industry rivals, divided by the combined holding value of these firms held by the shareholder. Average top ten shareholders is the average of the sample with all top ten shareholders of each acquirer. Average all shareholders is the sample with all acquirer shareholders, regardless of ownership percentage. *, **, 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)	(2)	(3)	(4)	(5)	
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership	
Rank	Obs	Mean	Mean	Mean	Mean	Mean	Mean
1	1,617	-0.0117***	0.0097***	-0.0011	-0.0020	-0.0031***	
2	1,587	-0.0108***	0.0101***	-0.0004	-0.0007	-0.0011	
3	1,571	-0.0113***	0.0099***	-0.0007	-0.0014	-0.0021**	
4	1,572	-0.0113***	0.0111***	-0.0020	-0.0002	-0.0022**	
5	1,556	-0.0116***	0.0115***	-0.0014	-0.0001	-0.0016	
6	1,548	-0.0126***	0.0119***	-0.0022	-0.0007	-0.0029***	
7	1,527	-0.0124***	0.0134***	-0.0027*	0.0009	-0.0017*	
8	1,536	-0.0124***	0.0109***	-0.0005	-0.0015	-0.0020**	
9	1,512	-0.0124***	0.0118***	-0.0008	-0.0006	-0.0014	
10	1,510	-0.0128***	0.0127***	-0.0007	-0.0001	-0.0008	
Avg. Top 10 Sh.	15,536	-0.0119***	0.0113***	-0.0013***	-0.0006	-0.0019***	
Avg. All Sh.	98,740	-0.0137***	0.0124***	-0.0005***	-0.0012***	-0.0017***	

Panel B. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals							
Shareholder Rank in Acquirer		(1)	(2)	(3)	(4)	(5)	
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership	
Rank	Obs	Mean	Mean	Mean	Mean	Mean	Mean
1	926	-0.0596***	0.0117***	0.0235***	-0.0479***	-0.0243***	
2	907	-0.0588***	0.0125***	0.0256***	-0.0463***	-0.0207***	
3	895	-0.0601***	0.0131***	0.0267***	-0.0470***	-0.0203***	
4	897	-0.0592***	0.0139***	0.0237***	-0.0453***	-0.0216***	
5	887	-0.0596***	0.0142***	0.0258***	-0.0454***	-0.0196***	
6	888	-0.0567***	0.0153***	0.0231***	-0.0443***	-0.0212***	
7	881	-0.0593***	0.0165***	0.0239***	-0.0428***	-0.0189***	
8	883	-0.0592***	0.0130***	0.0273***	-0.0462***	-0.0189***	
9	861	-0.0599***	0.0139***	0.0264***	-0.0460***	-0.0196***	
10	872	-0.0593***	0.0159***	0.0259***	-0.0434***	-0.0175***	
Avg. Top 10 Sh.	8,897	-0.0595***	0.0140***	0.0252***	-0.0455***	-0.0203***	
Avg. All Sh.	57,245	-0.0566***	0.0158***	0.0218***	-0.0408***	-0.0190***	

Table A.2: Return Comparisons using Hoberg and Phillips Industry Classification

The sample using Hoberg&Phillips industry codes starts from 1997 to 2016, including 1,510 horizontal mergers. Horizontal deals are defined as deals in which acquirer and target have the same H&P codes. Bad horizontal deals are defined as horizontal deals with negative CAR(-1,+1) which results in a loss for acquirer shareholders. Following Harford, Jenter, and Li (2011), the acquirer CAR(-1,+1) is calculated with the market model with an estimation window of (-200, -60) prior to the announcement date. Return adjusted for target ownership is calculated as the net of gain/loss on acquirer stake and gain/loss on target stake, divided by the combined holding value in acquirer and target by the shareholder. Return adjusted for common ownership is calculated as the net of gain/loss on acquirer stake, gain/loss on target stake, and gain/loss on stake in industry rivals, divided by the combined holding value of these firms held by the shareholder. Average top 10 shareholders is the average of the sample with all top 10 shareholders of each acquirer. Average all shareholders is the sample with all acquirer shareholders, regardless of ownership percentage. *, **, 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)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	1,523	-0.0173***	0.0114***	0.0020	-0.0058***	-0.0039***
2	1,502	-0.0161***	0.0115***	0.0021	-0.0046**	-0.0024**
3	1,512	-0.0172***	0.0111***	0.0033**	-0.0061**	-0.0028***
4	1,486	-0.0168***	0.0124***	0.0019	-0.0044**	-0.0025**
5	1,497	-0.0173***	0.0124***	0.0036**	-0.0049**	-0.0013
6	1,484	-0.0177***	0.0125***	0.0023	-0.0052***	-0.0029***
7	1,466	-0.0172***	0.0122***	0.0036**	-0.0050**	-0.0014
8	1,455	-0.0179***	0.0126***	0.0030*	-0.0053***	-0.0022**
9	1,442	-0.0175***	0.0128***	0.0021	-0.0047**	-0.0026***
10	1,432	-0.0175***	0.0125***	0.0031*	-0.0050**	-0.0019**
Avg. Top 10 Sh.	14,799	-0.0172***	0.0121***	0.0027***	-0.0051***	-0.0024***
Avg. All Sh.	93,943	-0.0153***	0.0130***	0.0007***	-0.0023***	-0.0016***

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

Shareholder Rank in Acquirer		(1)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	916	-0.0606***	0.0138***	0.0268***	-0.0468***	-0.0200***
2	895	-0.0599***	0.0147***	0.0284***	-0.0452***	-0.0168***
3	905	-0.0609***	0.0141***	0.0307***	-0.0469***	-0.0161***
4	894	-0.0596***	0.0158***	0.0271***	-0.0438***	-0.0168***
5	900	-0.0603***	0.0159***	0.0292***	-0.0444***	-0.0152***
6	894	-0.0607***	0.0167***	0.0278***	-0.0440***	-0.0163***
7	884	-0.0602***	0.0159***	0.0307***	-0.0443***	-0.0136***
8	877	-0.0606***	0.0156***	0.0309***	-0.0450***	-0.0141***
9	866	-0.0599***	0.0161***	0.0286***	-0.0438***	-0.0152***
10	862	-0.0598***	0.0152***	0.0305***	-0.0446***	-0.0141***
Avg. Top 10 Sh.	8,893	-0.0603***	0.0154***	0.0291***	-0.0449***	-0.0158***
Avg. All Sh.	55,163	-0.0575***	0.0166***	0.0254***	-0.0409***	-0.0155***

Table A.3: Wealth Improvement on Bad Horizontal Deals for Acquirer Shareholders based on Alternative Industry Classifications

This table presents the results of the same analysis conducted in Table V using historical COMPUSTAT 4-digit SIC codes in Panel A and Hoberg&Phillips industry codes in Panel B. Bad horizontal deals are defined as deals in which acquirer and target have the same industry codes, with negative acquirer CAR(-1,+1) which results in a loss for acquirer shareholders. Dollar value losses on acquirer stake are reported for the top ten largest shareholders of the acquirers respectively, as well as all acquirer shareholders in the whole sample. We also report the percentage of deals in which the acquirer dollar value losses are offset with target ownership or target plus rival ownership by zero, more than 50%, or more than 100%. Target ownership compensation is based on how much gain on target stake compensates for loss on acquirer stake. Target plus rival ownership compensation is based on how much gain on target stake, combined with gain/loss on rival stake, compensates for loss on acquirer stake. All gains and losses are calculated for the (-1,+1) window. Average top ten shareholders is the average of the sample with all top ten shareholders of each acquirer. Average all shareholders is the sample with all acquirer shareholders, regardless of ownership percentage.

Panel A: Horizontal Bad Deals based on Historical COMPUSTAT SIC Codes

Shareholder Rank in Acquirer		Loss on acquirer stake (in millions)		Deals in which target ownership compensates for given % of loss on acquirer stake			Deals in which target and rival ownership compensates for given % of loss on acquirer stake		
				None	> 50%	> 100%	None	> 50%	> 100%
Rank	Obs	Mean	Median	None	> 50%	> 100%	None	> 50%	> 100%
1	926	-25.01	-4.25	65%	13%	9%	60%	27%	22%
2	907	-17.39	-2.99	64%	16%	10%	58%	30%	25%
3	895	-13.90	-2.38	66%	16%	12%	60%	30%	25%
4	897	-11.00	-1.85	65%	14%	9%	61%	29%	24%
5	887	-9.31	-1.65	66%	15%	11%	60%	28%	25%
6	888	-8.55	-1.52	68%	16%	11%	62%	27%	24%
7	881	-7.43	-1.43	67%	17%	12%	61%	30%	26%
8	883	-7.02	-1.24	68%	15%	10%	60%	30%	25%
9	861	-6.96	-1.19	70%	16%	11%	60%	31%	26%
10	872	-6.01	-1.03	68%	16%	11%	59%	32%	27%
Top 10 Shareholders	8,897	-11.36	-1.78	67%	15%	10%	60%	29%	25%
All Shareholders	57,245	-3.98	-0.52	75%	15%	11%	61%	30%	26%

Panel B: Horizontal Bad Deals based on Hoberg&Phillips Industry Classification

Shareholder Rank in Acquirer		Loss on acquirer stake (in millions)		Deals in which target ownership compensates for given % of loss on acquirer stake			Deals in which target and rival ownership compensates for given % of loss on acquirer stake		
				None	> 50%	> 100%	None	> 50%	> 100%
Rank	Obs	Mean	Median	None	> 50%	> 100%	None	> 50%	> 100%
1	916	-26.38	-4.17	63%	15%	10%	60%	29%	25%
2	895	-18.44	-2.75	63%	17%	11%	59%	32%	29%
3	905	-14.43	-2.16	67%	15%	10%	60%	31%	29%
4	894	-11.43	-1.69	63%	16%	10%	59%	33%	29%
5	900	-9.52	-1.48	66%	16%	11%	60%	32%	28%
6	894	-8.70	-1.41	67%	16%	11%	59%	33%	30%
7	884	-7.83	-1.24	67%	15%	10%	57%	34%	29%
8	877	-7.01	-1.16	68%	15%	10%	60%	33%	29%
9	866	-6.93	-1.04	69%	15%	11%	58%	33%	30%
10	862	-6.02	-0.98	68%	16%	10%	58%	35%	32%
Top 10 Shareholders	8,893	-11.76	-1.65	66%	16%	11%	59%	32%	29%
All Shareholders	55,163	-4.21	-0.53	74%	16%	11%	59%	33%	29%

Table A.4: Return Comparisons using Fama-French Three Factor Model

This table presents the results of analyses conducted in Table IV and V using the Fama-French three factor model instead of the market model. Horizontal deals are defined as deals in which acquirer and target have the same historical CRSP 4-Digit SIC codes. Bad horizontal deals are defined as horizontal deals with negative CAR(-1,+1). The acquirer CAR(-1,+1) is calculated with the Fama-French three factor model with an estimation window of (-200, -60) prior to the announcement date. Return adjusted for target ownership is calculated as the net of gain/loss on acquirer stake and gain/loss on target stake, divided by the combined holding value in acquirer and target by the shareholder. Return adjusted to common ownership is calculated as the net of gain/loss on acquirer stake, gain/loss on target stake, and gain/loss on stake in industry rivals, divided by the combined holding value of these firms held by the shareholder. Average top ten shareholders is the average of the sample with all top ten shareholders of each acquirer. Average all shareholders is the sample with all acquirer shareholders, regardless of ownership percentage. *, **, 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)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	1,174	-0.0147***	0.0099***	0.0023	-0.0048**	-0.0025**
2	1,140	-0.0134***	0.0109***	0.0022	-0.0025	-0.0002
3	1,147	-0.0139***	0.0100***	0.0040**	-0.0039*	0.0000
4	1,123	-0.0140***	0.0113***	0.0033**	-0.0028	0.0005
5	1,120	-0.0147***	0.0099***	0.0046***	-0.0049**	-0.0003
6	1,107	-0.0153***	0.0099***	0.0047***	-0.0054***	-0.0007
7	1,090	-0.0162***	0.0123***	0.0041**	-0.0039*	0.0002
8	1,096	-0.0148***	0.0105***	0.0043***	-0.0043**	0.0001
9	1,075	-0.0151***	0.0124***	0.0022	-0.0028	-0.0005
10	1,066	-0.0157***	0.0131***	0.0041**	-0.0026	0.0015
Avg. Top 10 Sh.	11,138	-0.0148***	0.0110***	0.0036***	-0.0038***	-0.0002
Avg. All Sh.	67,797	-0.0144***	0.0121***	0.0028***	-0.0023***	0.0004***

Panel B. Returns for Largest Shareholders of Acquirers in Bad Horizontal Deals						
Shareholder Rank in Acquirer		(1)	(2)	(3)	(4)	(5)
		Return on Acquirer	Return on Target	Return on Rivals	Return Adj. Target Ownership	Return Adj. Target+Rival Ownership
Rank	Obs	Mean	Mean	Mean	Mean	Mean
1	717	-0.0540***	0.0117***	0.0225***	-0.0423***	-0.0198***
2	687	-0.0532***	0.0134***	0.0244***	-0.0398***	-0.0154***
3	691	-0.0544***	0.0117***	0.0285***	-0.0427***	-0.0142***
4	684	-0.0532***	0.0141***	0.0251***	-0.0391***	-0.0140***
5	682	-0.0543***	0.0114***	0.0279***	-0.0429***	-0.0150***
6	676	-0.0534***	0.0130***	0.0264***	-0.0404***	-0.0140***
7	673	-0.0545***	0.0152***	0.0262***	-0.0393***	-0.0131***
8	670	-0.0530***	0.0126***	0.0270***	-0.0403***	-0.0134***
9	654	-0.0543***	0.0148***	0.0244***	-0.0394***	-0.0151***
10	655	-0.0537***	0.0161***	0.0253***	-0.0376***	-0.0123***
Avg. Top 10 Sh.	6,789	-0.0538***	0.0134***	0.0258***	-0.0404***	-0.0147***
Avg. All Sh.	40,843	-0.0521***	0.0156***	0.0224***	-0.0365***	-0.0141***

Table A.5: Wealth Improvement on Bad Deals for Acquirer Shareholders based on Fama-French Three Factor Model

This table presents the results of the same analysis conducted in Table V using the Fama-French three factor model for all bad deals in Panel A and only bad horizontal deals in Panel B. Bad horizontal deals are defined as deals in which acquirer and target have the same industry codes, with negative acquirer CAR(-1,+1) which results in a loss for acquirer shareholders. Dollar value losses on acquirer stake are reported for the top ten largest shareholders of the acquirers respectively as well as all acquirer shareholders in the whole sample. We also report the percentage of deals in which the acquirer dollar value losses are offset with target ownership or common ownership (ownership of target and industry rivals combined) by none, more than 50%, or more than 100%. Target ownership compensation is based on how much gain on target stake compensates for loss on acquirer stake. Common ownership compensation is based on how much gain on target stake, combined with gain/loss on rival stake, compensates for loss on acquirer stake. All gains and losses are calculated for the (-1,+1) window. Average top ten shareholders is the average of the sample with all top ten shareholders of each acquirer. Average all shareholders is the sample with all acquirer shareholders, regardless of ownership percentage.

Shareholder Rank in Acquirer		Loss on acquirer stake (in millions)			Deals in which target ownership compensates for given			Deals in which target and rival ownership compensates for given		
					% of loss on acquirer stake			% of loss on acquirer stake		
Rank	Obs	Mean	Median	None	> 50%	> 100%	None	> 50%	> 100%	
1	717	-24.88	-2.54	67%	14%	9%	55%	29%	24%	
2	687	-17.71	-1.82	65%	16%	10%	54%	36%	29%	
3	691	-14.14	-1.29	69%	14%	11%	54%	36%	30%	
4	684	-10.73	-1.03	67%	15%	10%	54%	35%	31%	
5	682	-9.34	-0.92	68%	14%	10%	57%	35%	30%	
6	676	-9.06	-0.84	71%	14%	11%	53%	36%	31%	
7	673	-7.64	-0.78	70%	17%	12%	53%	37%	32%	
8	670	-6.81	-0.69	72%	15%	10%	56%	35%	30%	
9	654	-7.41	-0.67	70%	17%	13%	56%	36%	30%	
10	655	-5.89	-0.61	71%	15%	12%	55%	36%	32%	
Avg. Top 10 Sh.	6,789	-11.49	-1.04	69%	15%	11%	55%	35%	30%	
Avg. All Sh.	40,843	-4.36	-0.36	76%	16%	12%	56%	35%	31%	