Investors' Activism and the Gains from Takeover Deals

Jie (Michael) Guo
Email: jie.guo@durham.ac.uk
Durham University Business School, Mill Hill Lane, Durham, DH1 3LB, UK

Krishna Paudyal
Email: krishna.paudyal@strath.ac.uk
Strathclyde Business School, 199 Cathedral Street, Glasgow, G4 0QU, UK

Vinay Utham
Email: vinay.utham@brunel.ac.uk
Brunel Business School, Kingston Lane, Uxbridge, UB8 3PH, UK

Xiaofei Xing
Email: x.xing@bham.ac.uk
Birmingham Business School, 116 Edgbaston Park Road, Birmingham, B15 2TY, UK

Abstract

We examine whether activists add value to the shareholders of targets and their acquirers. Several findings emerge. First, acquirers of targets that have activists outperform acquirers of other targets in both the short and long term. Second, the premium received by the shareholders of targets is not affected by activism. Third, superior gains achieved by the acquirers of targets with activists are driven by non-cash deals, while the average target benefits more from cash deals.

1. Introduction

It is known that activist shareholders, usually the institutional investors, seek seats on the company's board and exert influence on the decision-making process of the company. Several studies suggest that activists can enhance firm value by influencing several aspects of company management including business strategies and managerial freedom.[1] Becht et al. (2015), among others, report that activists force the firm's management to become takeover targets and the large positive abnormal returns received by the shareholders of such firms come in the form of a takeover premium. If the activists' intervention can make positive contributions to firms' business strategies and governance, then the acquisitions of such targets should be more value enhancing to the acquirers compared to the acquisitions of other targets. Whilst there is evidence to suggest that the shareholders of the activists' target firms benefit from takeover deals, the question of whether acquirers of firms that are subjected to investors' activism gain more remains to be investigated. Additionally, there is no evidence on whether the gain achieved by the acquirers of targets that are subjected to investors' activism is dependent on the methods of payment in takeover deals. This is important because the method of payment used in settling the deal signals the sustainability of value created by activism, if any. In cash only deals, activists have opportunities to 'cash and run' while in non-cash deals (including stocks and other securities) activists maintain their stake in the merged firms. The paper, therefore, aims to fill these voids in the literature. More specifically, we investigate three main issues: (i) do acquirers gain more by acquiring targets that have been subjected to activism by investors? (ii) do targets that

---

[1] For example, Brav et al. (2008) report evidence of activist hedge funds disciplining underperforming management as well as changing payout policies. Clifford (2008) reports evidence of the divestiture of under-performing assets by the firms that are subjected to activism. Klein and Zur (2009) suggest that activism creates value by transferring wealth from creditors to shareholders – activists tend to pursue the firms to issue long-term debts and repurchase stocks. Boyson and Mooradian (2011) suggest that hedge fund intervention can alleviate agency costs through reductions in excess cash. Brav et al. (2014) suggest firms are more likely to reshape corporate innovation after the intervention of activists. Brav, Jiang, and Kim (2015) report that firms influenced by activists tend to change business strategies and improve productivity. Overall, studies suggest that activists can create value by influencing the firms' financial policies, business strategies and managerial freedom.

are subjected to activism secure a higher takeover premium from their acquirers? and (iii) is the gain achieved by the acquirers of targets with activists dependent on the method of payment?

The analysis reveals several findings. First, after controlling for the firm and deal specific characteristics, acquirers of targets that are subjected to investors' activism outperform the acquirers of targets that do not have activists by about 2% on the announcement of the deal. This significant superior gain is driven by the gains from non-cash deals in which the activists maintain their stakes in merged firms. Similarly, activist involvement improves the median acquirer's performance by about 8% during the post-merger period after firm and deal characteristics are controlled for, indicating that the additional value created for acquirers by activists is sustained in the long run. Second, on the announcement of the deal, targets with activists received a 20% premium. However, the premium received by the activists' targets is not significantly different from the premium received by the shareholders of other target firms. Third, the acquirers of the targets that are subjected to activism benefit more in non-cash deals than in cash only deals ('cash and run').

The findings have several strategic implications. First, the acquirers can benefit more by acquiring targets that are subjected to shareholders' activism. Second, the takeover premiums received by the shareholders of targets with and without activists do not differ significantly. Therefore, contrary to the suggestion of some earlier studies, firms do not need to be sold to realize the value of the firm or be the subject of activism to realize the value of the firm in a takeover deal. It is, however, possible that the value created by activists' actions is already reflected in the market value of the target before the takeover deal is announced. Hence the lack of difference in the premium cannot be used to challenge the value creating ability of activism. Third, the findings also signal differences in methods of payment preferred by acquirers and targets. In acquisitions of targets that are subjected to activism, acquirers are likely to benefit from non-cash deals such that the possible constructive role of activists in the

3

merged firm can be maintained. The preferred method of payment of target shareholders, however, is cash only.

The remainder of the paper is structured as follows. Section 2 develops testable propositions drawing on the evidence available and by identifying the gaps in the literature. Section 3 explains how the database is constructed and outlines the methods used. Section 4 provides the results and their discussion. Section 5 concludes the paper.

2. The Development of Testable Propositions
2.1. Activism and firm quality

More recently a number of studies have examined the effectiveness of hedge fund activism on firm performance. Briggs (2007) finds that hedge funds with significant stockholding are able to use wolf-pack tactics against companies to achieve some of their aims and force the management to bring about changes in the company strategy. Brav et al. (2008) report that hedge fund activists employ a variety of tactics to pursue their objectives and are largely successful, even though they hold a relatively small stake. Such activists are able to generate value because of their credible commitment to confront the target firm management on behalf of all shareholders. Similarly, Clifford (2008) reports that firms targeted by hedge fund activists earned larger excess stock returns and return on assets (ROA). Klein and Zur (2009) show that firms targeted by hedge funds earned significant positive abnormal stock returns around the initial 13D filing date. They also suggest that hedge funds extract cash from the firms by increasing the target's debt capacity and paying out higher dividends. Butu (2013) argues that hedge funds play a significant role in the governance of public companies and cause polemic. She analysed the nature of hedge fund activism using the Securities and Exchange Commission (SEC) filings and assessed the various types of engagement made by activist hedge funds. She found a positive market reaction around the announcement of hedge fund interventions. She also reports evidence of larger positive market reaction to more aggressive types of activism.

Boyson and Mooradian (2011) report that hedge fund activists improve both short-term and long-term operating performance of the targeted firms. Hedge funds themselves were also gaining from their efforts as the risk-adjusted annual performance of activist hedge funds was about 7% to 11% higher than non-activist hedge funds. Wang and Zhao (2015) found that hedge funds improve corporate productivity by increasing patent quantity and quality. This evidence is supported by He, Qiu, and Tang (2014) who found evidence of activist hedge funds generating long-term benefits to shareholders of target firms by enhancing their innovative activities. Similarly, the findings of Bebchuk, Brav, and Jiang (2015) also support the view that the effects of hedge fund activism can be long-lasting as there was no evidence of declining operating performance or abnormal long-term returns even after the activist hedge fund exit.[2]

Using a sample of SEC 13D filings by portfolio investors, Greenwood and Schor (2009) studied the association between the positive market reaction and one of the outcomes of aggressive forms of activism – takeover. They attribute the large excess stock returns of target firms (i.e. takeover premium) to the ability of hedge fund activists to recognize potentially undervalued companies, identifying their potential acquirers, and forcing them to be acquired. They found that both the announcement returns and the long-term abnormal returns were high for those target firms that were ultimately acquired, but not significantly different from zero for those target firms that remained independent. They also found that when the market-wide takeover interest fell, many activists saw a decline in the value of their portfolios. This is consistent with the view that the firms in the activists' portfolios were purchased in the hope of securing a takeover deal. The findings of Greenwood and Schor (2009) were further

---

[2] Gantchev and Jotikasthira (2015) investigate the role of institutional trading in the emergence of hedge fund activism and find a positive correlation between institutional selling volume and net hedge fund purchases of stocks of target companies before the launch of an activist campaign. They also report that hedge fund activists use institutional sales to camouflage their purchases, which allows them to obtain additional trading gains, thereby covering their monitoring costs.

supported by Becht et al. (2015) who analysed nearly 1,800 interventions by activist shareholders in Europe, Asia and North America. In all three continents, they found much higher median returns to those activist engagements resulting in at least one observable outcome than those without any outcome. More specifically, when a hedge fund activist fails to change the target firm's strategy, the activism effort is significantly less profitable. Although they admit that it is difficult to understand the source of returns generated by activism, the largest abnormal returns were generated by takeover transactions averaging 17.1% during the 41-day announcement period window. Boyson, Gantchev, and Shivdasani (2017) also found that shareholder value creation from hedge fund activism occurs primarily by influencing takeover outcomes for targeted firms.

On balance, the discussion above suggests that investors' activism can improve the quality of the firm and create value through improved corporate governance and business strategies. It is also evident that the value of activists' efforts is likely to remain in the long run. If the resulting effect of activism is the improved quality of the firm, then such firms should be value enhancing to their acquirers. On the other hand, it is also possible that the acquisitions of low Q targets by high Q acquirers create value for merger participants (Lang, Stulz, and Walkling 1989; Servaes 1991). This suggests that well-managed acquirers gain superior returns when they acquire poorly-managed targets. Such an outcome is possible because well-managed acquirers have better opportunities and expertise to implement value-enhancing restructurings in poorly-managed targets. In contrast, the misvaluation hypothesis suggests that overvalued (high market-to-book ratio) firms tend to use overvalued stocks to acquire undervalued targets, leading to negative market reactions. Dong et al. (2006) examine both the Q hypothesis and the misvaluation hypothesis and find that pre-1990 empirical evidence tends to support the Q hypothesis; whereas post-1990 empirical evidence tends to support the misvaluation hypothesis. Therefore, it remains an empirical question leading to our first testable proposition that *"Acquirers gain more*

from the acquisition of targets that have been subjected to shareholders' activism than from the acquisition of other targets."[3]

As indicted by some earlier studies (e.g. Butu 2013) shareholders benefit more from aggressive forms of activism. Therefore, for the reasons discussed above, i.e. the activists are able to improve the quality of the firms and acquirers are willing to acquire them, the shareholders of the firms that are subjected to activism should be able to sell their stocks at a higher price to an acquirer. This leads to our second testable proposition that *"Compared to other targets, firms that are subjected to activism secure a higher takeover premium from their acquirers."*

2.2. Activists' confidence and the method of payment

It is also known that in a takeover deal the method of payment signals the quality of the deal. For instance, acquirers of private targets gain more in stock deals than in cash deals (Faccio, McConnell, and Stolin 2006). This is because the readiness of a single or a handful target owner(s) to continue to hold stakes in merged firms indicates that the deal is value enhancing. In the same way, if the activists are confident that their activism has improved the quality of the target and the value they created is sustainable in the long run, they are likely to be prepared to accept stocks and/or other securities in the merged firm and continue to hold stakes. Otherwise, they would accept only cash and walk away from the firm, i.e. they would prefer to 'cash and run'. Moreover, the willingness of acquirer management to accept activists' stakes (effectively their active role) in the merged firm also signals the quality of the management of the acquirer. Consequently, the market is likely to react favourably to non-cash deals compared to cash only deals where the management of the acquirer effectively 'buys out' the

---

[3] Normally, the activists dispose of their ownership of the merged firm within a very short period of the deal. Should the activists continue to hold the shares of the merged firm the acquirers are also likely to benefit from the role of the activists in improving the governance of the merged firm in the long run. This is particularly relevant in the cases of acquirers whose governance is sub-optimal.

activists. This leads to our third testable proposition that *"Acquirers of targets that have activists gain more in non-cash deals than in cash deals."*

3. Data and Methodology

3.1. The Sample

The sample is comprised of US domestic merger and acquisition (M&A) deals subsequent to activists' campaigns from 1994-2014. Data on activist campaigns were initially collected from the Thomson Reuters Shareholder Activism Intelligence database, which has recorded campaigns by prominent activist investors since 2000. Specifically, the database contains information about activist campaigns by 1038 activists all over the world from 2000-2014. We complemented this dataset with data sourced from 13D filings available in SEC's Edgar database. The Edgar database has recorded 13D filings for most public firms since 1994. Activist investors are required to file a Schedule 13D with the SEC if they acquire beneficial ownership of more than 5% of a public firm (Greenwood and Schor 2009). A total of 5,637 13D filings were recorded by 817 activists in SEC's Edgar database from 1994-2014.[4]

In order to compare the implications of activists' type on the returns from takeover deals, we classify the activists into two categories: hedge fund activists and other activists (see Appendix B for their description). Activist types were identified by searching their details (using the names of activists) on the Internet. We accessed activists' official websites to gather detailed information on these activist investors.

Next, activist campaigns whose outcomes were takeovers had to be identified. As in Greenwood and Schor (2009), we define targets involving activists if they were acquired within 18 months of the activist's campaign. Information on subsequent takeovers was obtained from Thomson One Mergers and Acquisitions database. Our

---

[4] The Thomson Reuters Shareholder Activism Intelligence (TRSAI) database includes 1038 activists all over the world; however, some activists do not participate in the US market. We find that 817 activists in the TRSAI database can also be found in the Edgar database.

final sample includes 316 M&A deals subsequent to campaigns by 167 activists. Since 13D filings only record information on listed companies, all M&A targets in our sample are publicly listed firms. Table 1 (Panel A) shows that deals involving activists started to increase from 1994 (two deals) and reached their peak in 2014 (25 deals). However, there is no particular pattern to this change. Panel B shows that 192 targets involved activist hedge funds while 169 deals involved other activists.[5]

(Insert Table 1 about here)

To assess the implications of activists' targets on acquirers' gains (and the premium received by target firm shareholders) we compare the gains (and premium) from acquisitions of such targets against the gains from acquiring targets that did not have activists. To create a sample of deals that did not have activists' involvement we constructed a matching sample based on acquirers' industry, size and market-to-book value ratios (i.e. we followed the control firm approach of benchmarking). More specifically, in each industry and calendar year, we categorized acquirers into quintiles based on their market values. In each size quintile, acquirers were sorted on their market-to-book value ratios. Deals involving acquirers with market-to-book value ratios close to those of acquirers of targets involving activists were selected as the matching sample. We identified 359 matching deals that did not involve activists. The stock returns and financial (accounting) data, used in assessing short-term gain and long-term performance were obtained from CRSP and COMPUSTAT respectively.

3.2. Key features of merging partners and the deals

Table 2 provides summary statistics of key features of acquirers (Panel A) and targets (Panel B) of both the deals involving activists and the matching sample (see Appendix A for their definition). Lack of significant differences in mean/median

---

[5] The number of deals by activist groups is greater than the number of deals in total because some deals involved multiple activists.

values of the key features of merging partners (acquirers/targets) in the two categories of deals (activists' sample and the matching sample) confirms their suitability for comparison purposes. As reported by earlier studies on M&A, targets are much smaller than acquirers in size and the acquirers have higher growth opportunities (M/B ratios) than the targets. The target firms that were subjected to investors' activism have higher stock price growth in the run-up to the announcement of the deal than that of the matching firms. This is, possibly, due to the fact that the up to 18 months' gap between the deal and the initiation of the activists' campaign gave enough opportunity to the activists to improve the target firms' performance leading to an increase in stock price of the targets. Panel C (Table 2) provides a summary of the key features of the deals involving targets with activists as well the matching sample. The estimates show that relatively higher proportions of the deals involving activists are settled in cash compared to the matching sample. This is plausible because activists may prefer cash, rather than stocks or other securities in merged firms, for two reasons namely: (a) 'cash and run' because of their lack of confidence in the long-term quality of the deal, including the sustainability of the improvement in the quality of targets they have achieved through activism, and (b) to move their funds to another superior investment opportunity (i.e. the exit strategy).

(Insert Table 2 about here)

Table 3 shows the correlation between the variables used in this study. The estimates show very low correlation between most variables. The correlation between the acquirers' announcement period returns (CAR) and bid premium (difference between the price offered by the acquirer and the target's market price four weeks before the announcement of the deal divided by the latter) is 0.632 (Panel B) indicating that in deals that involve high performing targets the shareholders of both acquirers and targets gain more. Similarly, reasonably high correlations between cash deals and acquirers' announcement period returns (0.286) and volatility in targets' pre-bid returns (sigma) and bid premium are also recorded. Overall, the correlation between

the variables of our interest (except those noted above) are low and hence are not likely to cause any concern in multiple regressions.

(Insert Table 3 about here)

3.3.Measuring announcement period gains

Following recent studies on M&As (e.g. Fuller, Netter, and Stegemoller (2002) the announcement period excess returns of acquirers' shareholders are estimated using the market-adjusted model[6] as in equation (1):

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (1)$$

Where, $AR_{i,t}$ is the abnormal return of company i (acquirer or target) on day t; $R_{i,t}$ is the return of company i on day t, and $R_{m,t}$ is the market return on day t (measured by CRSP value-weighted index return). The cumulative abnormal return (CAR) is the sum of the abnormal returns over the 5-days (-2 to +2) surrounding the day of announcement of the deal as in equation (2):

$$CAR_i = \sum_{t=-2}^{t=+2} AR_{i,t} \quad (2)$$

The excess returns of the shareholders of target companies are measured in the same way as the gains to the acquirers, i.e. the CAR for the 5-day event window.

We also measure the gains to the shareholders of target firms using a bid premium, defined as the difference between the offer price and the target's stock price four weeks before the announcement divided by the latter as in equation (3).

---

[6] We also estimate excess returns using the market model and the CAR for the 3-day [-1, +1] window. In the market model the parameters (alpha and beta) are estimated over the pre-announcement [-365, -28 days] period. In the interest of brevity we report the estimates based on the market adjusted 5-day event window and discuss other results if they are qualitatively different. The unreported estimates are available on request.

$$Bid\ premium = \frac{OP - P_{(t-28)}}{P_{(t-28)}} \quad (3)$$

In equation (3) OP is the price offered by the acquirer to the target firm and P_{t-28} is the price of the target 28 days before the announcement of the deal. Unlike the 5-day event period CAR, the bid premium (equation 3) is expected to capture the relatively long-term movement in the value of the target, including the effects of any possible rumour of the takeover deal. Following Officer (2003); Golubov, Petmezas, and Travlos (2012), the bid premium is winsorized if the value is outside the range of 0 and 2.[7]

3.4.Long-term performance of acquirers

The long-term (post-announcement) performance of both sets of acquirers (the sample and the matched firms) is measured by size-adjusted buy-and-hold abnormal returns (BHAR) over 24 months as in equation (4):[8]

$$BHAR_i = \prod_{t=1}^{t=24}(1 + R_{i,t}) - \prod_{t=1}^{t=24}(1 + R_{p,t}) \quad (4)$$

where $R_{i,t}$ is the monthly return of company i in month t. $R_{p,t}$ is the monthly return for reference portfolio p in month t.

In each year, we construct 50 reference portfolios based on size and market-to-book ratios. The reference portfolios are created in two steps. First, all US listed firms are sorted into deciles based on their market value. Second, within each size decile, firms are sorted into quintiles based on their market-to-book ratios. In

---

[7] We also conduct robustness tests by using the original values of bid premiums. The results are qualitatively similar.

[8] We also estimate the BHAR over 12 months and 36 months as the robustness test. In the interest of brevity, however, we report the estimates based on 24-month buy-and-hold abnormal returns (BHAR24) and discuss other results if they are qualitatively different.

addition, firms that made acquisitions in the same year are excluded from the reference portfolios.

3.5.Univariate analysis

The announcement period gains of acquirers and targets (CAR) are analysed using the t-test (two-tailed) to assess their statistical significance. The significance of acquirers' long-term performance (BHAR) is examined by a t-test with bootstrapped standard error. The announcement period CARs received by the sample and the matched firms are compared using a two-sample t-test. The long-term gains of sample and matched acquirers are compared using a two-sample t-test by applying bootstrapped standard errors. Where appropriate, to test the significance of median gains we use the Wilcoxon signed-rank test. The Wilcoxon rank-sum test is used to compare the median gains of two sets of samples (e.g. gains from the sample and the matched deals).

3.6.Multivariate Analysis

We examine whether the deals that involve acquiring activists' targets can generate superior announcement gains (CAR_i) to acquirers after controlling for the effects of other factors that are known to affect the acquirers' gain, as in equation (5):

$$CAR_i = \alpha_0 + \alpha_1 Activist + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i \quad (5)$$

In equation (5) the key explanatory factor of interest to us is the *Activist* dummy that represents the presence of activists. It takes the value of 1 if the takeover target was subjected to activism, and 0 otherwise. *Firm$_i$* is a vector of characteristics of acquirer *i* at the end of fiscal year prior to the announcement of the deal, and *Deal$_i$* is a vector of the deal specific features pertinent to deal *i*. The firm and deal characteristics are defined in Appendix A. In estimation we also control for both the year fixed effect (f_t) and the industry fixed effect ($f_{ind.}$).

To examine the implications of activists' involvement on the long-term performance of acquirers ($BHAR_i$), we estimated equation (6) which controls for the effects of firm and deal specific characteristics as well as year and industry fixed effects.[9] Again, the key variable of interest to us is the activist dummy.

$$BHAR_i = \alpha_0 + \alpha_1 Activist + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i \quad (6)$$

Similarly, we also examine whether target firms that have activists can secure higher takeover premiums (*Premium$_i$*) by estimating equation (7). Once again, the key variable of interest to us is the activist dummy and the equation controls for the possible effects of firm and deal specific factors, year and industry effects.

$$Premium_i = \alpha_0 + \alpha_1 Activist + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i \quad (7)$$

Equations (5) to (7) are estimated using OLS. Since existing literature suggests that BHARs are non-normally distributed, we also use quantile regression to estimate equation (6).

As noted earlier, one of the issues that we examine is the choice of the method of payment. We examine this issue using two alternative definitions of dependent variable, viz. by estimating the probability of cash payment (equation 8), and the percentage of cash payment (equation 9).

---

[9] It is also possible that the operating performance of the acquirer is affected by the type of the targets acquired in the long run. To test if the acquirers of activist targets perform differently from the acquirers of non-activist targets, we regress ROA and ROE (separately) against a set of explanatory variables including activist dummy, acquirer firm characteristics and deal characteristics. The results, available on request, suggest no significant impact of activist targets on operating performance of the acquirers.

Probability of Cash Payment

$$= \alpha_0 + \alpha_1 Activist + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i \quad (8)$$

Percentage of Cash Payment

$$= \alpha_0 + \alpha_1 Activist + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i \quad (9)$$

In equation (8) the dependent variable is a *Cash* dummy that equals one if the deal is 100% paid in cash, and 0 otherwise. In equation (9) the dependent variable is defined as the percentage of consideration paid in cash (transaction value paid in cash over total transaction value). Equation (8) is estimated using the Probit model. Since the percentage of cash payment is scaled 0 to 1 inclusive, equation (9) is estimated using the fractional Probit model. In both equations *Activist* is the key variable of interest. The model also accounts for firm and deal characteristics as well as year and industry effects.

To control for outliers, all continuous variables in above regressions are winsorized at the 2% and 98% levels, except for bid premium that is discussed above. To check for robustness of results with respect to the effects of outliers we also use original values, winsorize the data at the 1% and 99% levels and at 5% and 95% levels. The results remain qualitatively similar.

4. Results and Discussion
4.1.Activism and announcement period gains to acquirers

As discussed earlier, targets that are subjected to investors' activism are likely to have superior financial and business strategies. Hence acquisitions of such firms should enhance the value of their acquirers more than the acquisitions of other targets. Consequently, on the announcement of deals, involving activists' targets should generate relatively higher gains to acquirers. On the other hand, given the superior/reformed quality (at least perceived) of the target firms, they are likely to be attractive to many potential bidders. To minimize competition and pre-empt competition in acquiring such targets, potential bidders are likely to offer higher

premiums to such targets, possibly close or equal to the synergy gains. Consequently, the acquirers may not gain on the announcement of targets that are subjected to activism.[10] Therefore, whether acquisitions of activists' targets generate higher returns to acquirers remains an empirical question. To address this issue, in this section, we compare the announcement period gains of acquirers that acquire activists' targets against those of matching firms. Table 4 (Panel A) provides a comparison of the 5-day market-adjusted CARs (announcement period gains) of the activists' sample and the matching sample. The estimates show that the acquirers of activists' targets gain a positive and significant return (0.78%) on the announcement of the deal while the acquirers of other targets (matching sample) suffer a significant loss (-0.69%). The difference between their gains (1.6%) is also statistically significant, confirming that the acquisition of activists' targets is superior to the acquisition of other targets. This is possible because the activists have already improved the governance and business strategies of the targets before making the firm available for acquisition.[11] This result also supports the finding of Boyson et al. (2016), who found that third-party bids for activist targets experienced higher returns. In summary, the results support our first testable proposition that *"Acquirers gain more from the acquisition of targets that have been subjected to shareholders' activism than from the acquisition of other targets"* and suggest that acquiring firms' shareholders are better off by acquiring targets that have been subjected to activism.

(Insert Table 4 about here)

Next, to ensure that the superior gains to acquirers of activists' targets is due to activism, rather than other factors, we estimate equation (5) to control for the implications of other factors that are known to affect acquirers' gains. The results

---

[10] When judged *ex post*, it is possible for acquirers to end up paying more than the synergy value and suffer a loss on the announcement of the deal. However, *ex ante*, no rational manager should pay a premium higher than the synergy value of the deal, hence the expected lower limit of the gain is zero.

[11] The estimates based on a 3-day event period window and market model are qualitatively similar.

reported in Table 5 reveal a positive and significant role effect of the 'activist' dummy on acquirers' announcement period gains in all four specifications. Thus, combined with the evidence from univariate analysis discussed earlier, it can be deduced that acquiring a target that had an activist can generate higher returns to the acquirer in comparison to acquiring a target that has no activist.

Other factors that affect the announcement period gains (CAR) of acquirers are the size of the acquirer (i.e. Ln(MV)) and the relative size of the deal. Both have an inverse relation with the acquirers' returns, thereby suggesting that larger acquirers and relatively larger deals lead to a decline in acquirers' announcement period returns.

Thus, the results suggest that target firms' activists can create value to acquiring firms' shareholders too. More specifically, after controlling for the firm and deal specific factors, activists' involvement can improve acquirers' market value by about 2% within a 5-day announcement period window (Table 5, specification 4). This return translates into $334 million (2% × $16,696 million average acquirer size) gain to an average acquirer. In summary, the evidence from multivariate analysis also supports our first testable proposition and confirms that potential acquirers can benefit by identifying targets that have been subjected to investors' activism.

(**Insert Table 5 about here)**

4.2.Activism and Long-term performance of acquirers

Evidence discussed above suggests that the acquiring activist's target generates significantly higher gains to the bidder on the announcement of the deal. The observed superior announcement period gains could be a function of a quality acquisition that brings synergy to the acquirer. Alternatively, it is also possible that the market overreacts (optimistically) to such deals. This question could be resolved by assessing the long-term performance of the acquirers. If the market is efficient and the acquisition of activists' targets is truly more value enhancing, which is already

17

reflected in the deal price, than the acquisitions of other targets, then there should be no significant difference in the long-term performance of deals involving activists' targets and other targets. On the other hand, if the superior announcement period gains are due to the market's over-optimism, then there should be a reversal in long-term returns (i.e. correction of earlier over-optimism) leading to inferior performance of the acquirers of activists' targets. We test for these possibilities by comparing the long-term performance (measured by buy-and-hold abnormal returns i.e. BHARs) of the acquirers that acquired activists' targets against the performance of the matching deals. Panel B of Table 4 reports estimates of post-merger 24-month abnormal returns (BHARs) of the two groups. The estimates show that the acquirers of activists' targets earn higher returns than the acquirers of other targets (matching sample); however, the difference in their mean return is not statistically significant. The difference in median return, however, is weakly significant. This suggests that the long-term performance of acquirers of activists' targets is at least as good as that of the acquirers of other targets. This evidence suggests that the observed superior announcement period gains of acquirers of activists' targets were not due to the market's overreaction. The value of acquirers that was enhanced during the early stage of the deal (announcement period) is sustained in the long run too (i.e. there is no reversal).

To control for the possible implications of other factors on the long-term performance of the acquirers, we estimated equation (6) in which BHARs of acquirers are regressed against a set of explanatory variables. The results are reported in Table 6. Specifications 1 to 4 shows OLS regressions. The coefficient of the activist dummy is insignificant in the four specifications. The evidence of an insignificant difference in the long-term performance of the two groups of acquirers in both univariate and multivariate analysis suggests that the acquirers of activists' targets perform at least as well as the acquirers of other targets.

Since BHARs are not normally distributed, the OLS estimators could be biased. We also use quantile regressions to address this issue of non-normality. Specifications

5 to 8 show the results of quantile regressions. The coefficients of the activist dummy are significantly positive in three of the four specifications, suggesting that the median acquirer in activist-involved deals outperforms the median acquirer in the matching sample. In particular, once the firm and deal characteristics are controlled for, the activists' involvement improves the long-term performance of an (median) acquirer by 8.07% (Table 6, specification 8).

It reconfirms that the observed superior announcement period gain of acquirers of activists' targets was not due to the market's overreaction. This is possible because the activists were helping the targets to improve their strategic decisions and governance for a sustained period of time prior to the deal which has strengthened the quality of the firm. Overall, the evidence discussed above supports our first testable proposition that *"Acquirers gain more from the acquisition of targets that have been subjected to shareholders' activism than from the acquisition of other targets."* Therefore, the evidence suggests that the managers of acquiring firms can add more value to the wealth of their shareholders by acquiring targets that have been subjected to shareholders' activism.

(Insert Table 6 about here)

4.3. Activism and the announcement period gains of targets

Extant literature unanimously suggests that targets' shareholders achieve significant positive returns on the announcement of a takeover bid. The results in Table 7 (panel A) show that targets both with and without activists gain around 20% abnormal returns (CAR) on the announcement of the deal. However, the key question here is whether the shareholders of targets that have activists gain more than the shareholders of other targets. A comparative analysis of gains for the shareholders of activists' targets and other targets does not reveal any significant difference (Table 7, Panel A). This is possible because the market may have already incorporated the

value of activism at the time of the news of activism (13D filing) rather than wait until the firm is taken over.

Estimates based on an alternative measure of bid premium received by the target firm shareholders (deal price relative to the market price of the target 4 weeks prior to the announcement of the deal), are presented in Panel B. The estimates confirm that there is no significant difference in the bid premium received by the shareholders of activists' targets (46.55%) and other targets (43.44%).

(**Insert Table 7 about here)**

We also assessed the implications of activism on gains to target firm shareholders in a multivariate framework that controls for the effects of other firms and deal specific characteristics. Target firms' 5-day announcement period returns are regressed against a set of explanatory variables and the results are reported in Table 8. The coefficient of the activist dummy remains insignificant, indicating that the target firms' returns do not depend on investors' activism. This result is consistent with the evidence from our univariate analysis. The lack of significant difference in the returns secured by the shareholders of activist targets and other targets does not imply that investor activism fails to add value to target firms. It is possible that the value created by investor activism was already reflected in a target's market value before the announcement of the deal. We therefore analyse the gains of activist targets around the activist campaigns. The CARs over three days [-1, 1], five days [-2, 2], eleven days [-5, 5], and twenty-one days [0, 20] around the activists' campaign are 7.44%, 7.95%, 9.03%, and 13.83% respectively.[12] These statistically significant returns suggest that the market value of activists' targets increases after the news of activism. Consequently, on the announcement of the deal, target firm shareholders receive only an average takeover premium. Overall, the evidence from the above discussion

---

[12] The unreported estimates are available on request.

rejects our second proposition that *"Compared to other targets, firms that are subjected to activism secure a higher takeover premium from their acquirers."*

(Insert Table 8 about here)

4.4.Methods of payment and acquirers' gains

Extant literature on M&A suggests that the acquirer's performance is dependent on methods of payment. As noted earlier, the signal conveyed by the willingness of activists to maintain a stake in the merged firm should be much more favourable compared to that of 'cash and run'. Therefore, we expect non-cash deals with activists' involvement to generate higher announcement period gains to acquirers than the cash deals. To examine this issue, equation (5) is estimated by splitting the sample deals into two categories, namely (a) cash only deals, and (b) non-cash deals (i.e. all deals excluding cash only deals). Announcement period gains of acquirers (5-days) are regressed against a set of explanatory variables. The results are reported in Table 9. In cash only deals (specifications 1-4), the coefficients of the activist dummy are statistically insignificant. In non-cash deals, however, the coefficient of the activist dummy is positive and significant in all specifications (5-8) in Table 9. Specifically, activist involvement improves acquirers' 5-day gains by 2.59% in non-cash deals (Table 9, specification 8). These estimates suggest that non-cash (primarily stocks) payment helps generate higher returns to acquirers. The evidence that acquirers gain more in non-cash deals (stocks) is consistent with the experience of the acquirers of private (unlisted) targets, in which the acceptance of stocks by the shareholders of the target signals a certification of the quality of the deal to the market. The signal is meaningful because the activists, who are likely to have access to expertise for rigorous due diligence and substantial post-merger holdings, are willing to accept securities (e.g. stocks) of the acquirer. This evidence provides further support to our third testable proposition that *"Acquirers of targets that have activists gain more in non-cash deals than in cash deals."* Strategically, from the perspective of acquirers' shareholders, it

looks more meaningful to bid for targets that have activists who are willing to maintain their stake in the merged firm.

(Insert Table 9 about here)

4.5.Target firms' preferred method of payment

The results reported in Table 8 reveal a significant positive relation between the announcement period returns (CAR) secured by targets' shareholders and the variable representing cash payment. In other words, target shareholders who sell their stocks for cash earn significantly higher returns. This positive evidence prompted us to test if there is any significant difference in the preferences of activist and non-activist target firms' shareholders. To this end we split the sample into two groups – cash only deals and non-cash deals, and run two separate estimations. The choice of payment methods (cash only vs. non-cash) were regressed against a vector of explanatory variables using Probit (equation 8) and fractional Probit (equation 9) models. The results reported in Table 10 indicated by the positive and significant coefficients of the 'activist' dummy, suggest that activists' targets prefer cash only deals compared to non-cash deals. Such a preference of activists looks plausible because they would like to cash in their efforts and move on to some other investments that may have higher return potential. The choice of cash only can also be considered a rational decision for other investors because they receive higher premiums in cash only deals than in other deals (Table 9).

(Insert Table 10 about here)

4.6.Types of activist and gains from acquisitions

As discussed earlier (section 2), numerous studies show that hedge funds are more effective than other activists. On balance, the literature on shareholder activism shows differences in the effectiveness of activism led by hedge funds and other investors. In addition, it could be argued that, compared to a single activist, multiple activists working together could influence the governance and strategy of the firm

more effectively. Consequently, the improvement in the quality of a firm that has multiple activists should be better than that of a firm with a single activist. Furthermore, it is possible that the experience of activists adds more value to the outcome of activism. If so, the quality of firms that have serial (experienced) activists would be expected to be superior to the quality of firms that have casual activists.

Shawky, Dai and Cumming (2012) report that sector diversification improves the performance of hedge funds. Therefore, it is reasonable to expect that the quality of a firm that has sector-diversified activists is better than the quality of a firm with non-diversified activists. Similarly, Cumming, Dai and Johan (2015) examine whether hedge funds registered in Delaware are different from those registered in other locations. They find that Delaware registered hedge funds tend to have higher management and incentive fees, higher watermark provision, longer redemption notice periods and longer lock-up periods. Although they did not find any significant difference in the performance of Delaware registered hedge funds and other hedge funds it is possible for the differences in their attributes to affect the outcome of their activism on M&A performance. Therefore, we also compare the outcomes of activism of Delaware registered and other activists.

Overall, we compare the roles of different types of activists (hedge fund vs. others, multiple vs. single, serial vs. casual, sector-diversified vs sector-focused, and Delaware registered vs non-Delaware registered) to examine whether the benefits of activism to firms involved in takeover deals (both targets and acquirers) are dependent on the type of activists. However, the results reported in Table 11 suggest that the types of activists do not influence the outcome of M&A.[13] Specifically, the results suggest similarity in the effectiveness of the roles of hedge funds and other activists. Neither the acquirers nor the target firm shareholders benefit more from the deals that involve multiple activists compared to a single activist. Similarly, the experience of activists does not

---

[13] Since the difference in acquirer and target gains between different types of activists are insignificant, in the interest of brevity we only report a concise table including regressions of CARS of acquirers and targets. Results of acquirers' BHARs and bid premiums are available on request.

seem to make any material difference in the gains to acquirers or targets. In addition, the effects of shareholder activism on M&A performance do not differ across sector-diversified and sector-focused activists. Furthermore, activists' registration place (whether activists are registered in Delaware) has no significant effect on acquirer or target performance.

(Insert Table 11 about here)

Overall, the benefits of activism to firms involved in takeover deals (both targets and acquirers) remain independent of the type of activist. All activists contribute equally to improving the quality of firms and realising their full potential, leading to higher market value.

5. Conclusions

Several studies report that activists can create significant value to a firm through their engagements. Greenwood and Schor (2009) attribute such excess returns (additional value) to the ability of the activists to force the firm to be acquired. Becht et al. (2015) also show that takeovers are the most popular outcome of activist engagements. Our paper examines whether firms that acquire targets which have been subjected to investors' activism can outperform the acquirers of targets that do not have any activist. We analysed a sample of US domestic M&As subsequent to activist campaigns over the period 1994-2014. A comprehensive database on activist campaigns over the same period is compiled by collecting information from Thomson Reuters' Shareholder Activism Intelligence database as well as from the SEC's EDGAR database. Several findings emerge.

First, on the announcement of takeover deals, the acquirers of targets that have activists' involvement outperform the acquirers of targets that do not have any activist. After controlling for the firm and deal specific characteristics, activists' involvement

contributes to acquirer outperformance by about 2% on the announcement of the takeover deal. This return translates into $334 million gain to the average acquirer. In other words, deals with activist involvement can create additional value to acquiring firms. Additionally, acquirers in activist-involved deals maintain their superior performance during the post-merger period. Second, the gains to target firm shareholders remain independent of activism. Unlike the suggestions of some previous studies, this evidence implies that there is no need to sell the target to a bidder to realize the gains of activism. It is possible that the market price of firms that are subjected to activism already reflects the enhanced quality of the firm. This evidence, combined with the evidence from a comparative analysis of an alternative measure of bid premium, suggests that acquirers do not overpay to the targets that have activists. On the contrary, they benefit more by acquiring such targets compared to targets that do not have activists. Third, the superior gains enjoyed by the acquirers of activists' targets is largely driven by non-cash deals where the activists continue to hold their stakes in merged firms. Finally, the impact of activism on M&A gains remains independent of the type of activists.

In summary, our findings suggest that acquirers can benefit more by taking over targets that have been subjected to investors' activism compared to the acquisitions of targets that have no activists. By implication, from the perspective of target firms' shareholders, it is worthwhile improving the quality of the firm before it is sold. Similarly, acquirers are better off by acquiring targets that have already gone through the improvement process. The benefit to acquirers is even higher when the activists are willing to retain their stakes in the merged firm by accepting a non-cash settlement.

References

Bebchuk, Lucian A., Alon Brav, and Wei Jiang. 2015. "The Long-Term Effects of Hedge Fund Activism." *Columbia Law Review* 115 (5):1085-155.

Becht, Marco, Julian Franks, Jeremy Grant, and Hannes Wagner. 2015. "The Returns

to Hedge Fund Activism: An International Study." *European Corporate Governance Institute (ECGI)-Finance Working Paper* (No. 402/2014).

Boyson, Nicole M., Nickolay Gantchev, and Anil Shivdasani. 2017. "Activism mergers." *Journal of Financial Economics* 126 (1):54-73.

Boyson, NicoleM, and RobertM Mooradian. 2011. "Corporate governance and hedge fund activism." *Review of Derivatives Research* 14 (2):169-204.

Brav, Alon, W. E. I. Jiang, Frank Partnoy, and Randall Thomas. 2008. "Hedge Fund Activism, Corporate Governance, and Firm Performance." *The Journal of Finance* 63 (4):1729-75.

Brav, Alon, Wei Jiang, and Hyunseob Kim. 2015. "The Real Effects of Hedge Fund Activism: Productivity, Asset Allocation, and Labor Outcomes." *Review of Financial Studies* 28 (10):2723-69.

Brav, Alon, Wei Jiang, Song Ma, and Xuan Tian. 2014. "Shareholder Power and Corporate Innovation: Evidence from Hedge Fund Activism." *working paper*.

Briggs, Thomas W. 2007. "Corporate governance and the new hedge fund activism: An empirical analysis." *Journal of Corporation Law* 32 (4).

Butu, Mihaela. 2013. *Shareholder Activism by Hedge Funds: Motivations and Market's Perceptions of Hedge Fund Interventions*. Vol. 5: Diplomica Verlag.

Clifford, Christopher P. 2008. "Value creation or destruction? Hedge funds as shareholder activists." *Journal of Corporate Finance* 14 (4):323-36.

Cumming, Douglas, Na Dai, and Sofia Johan. 2015. "Are hedge funds registered in Delaware different?" *Journal of Corporate Finance* 35:232-46.

Dong, Ming, David Hirshleifer, Scott Richardson, and Siew Hong Teoh. 2006. "Does Investor Misvaluation Drive the Takeover Market?" *The Journal of Finance* 61 (2):725-62.

Faccio, Mara, John J. McConnell, and David Stolin. 2006. "Returns to Acquirers of Listed and Unlisted Targets." *Journal of Financial and Quantitative Analysis* 41 (01):197-220.

Fuller, Kathleen, Jeffry Netter, and Mike Stegemoller. 2002. "What Do Returns to Acquiring Firms Tell Us? Evidence from Firms That Make Many Acquisitions." *The Journal of Finance* 57 (4):1763-93.

Gantchev, Nickolay, and Chotibhak Jotikasthira. 2015. "Institutional Trading and Hedge Fund Activism." *Working Paper, The University of North Carolina at Chapel Hill*.

Golubov, Andrey, Dimitris Petmezas, and Nickolaos G. Travlos. 2012. "When It Pays to Pay Your Investment Banker: New Evidence on the Role of Financial Advisors in M&As." *The Journal of Finance* 67 (1):271-311.

Greenwood, Robin, and Michael Schor. 2009. "Investor activism and takeovers." *Journal of Financial Economics* 92 (3):362-75.

He, Zhongzhi Lawrence, Jiaping Qiu, and Tingfeng Tang. 2014. "Hedge fund activism and corporate innovation." *Brock University, McMaster University and Shanghai University of Finance and Economics Working Paper*.

Klein, April, and Emanuel Zur. 2009. "Entrepreneurial Shareholder Activism: Hedge Funds and Other Private Investors." *The Journal of Finance* 64 (1):187-229.

Lang, Larry H. P., RenéM Stulz, and Ralph A. Walkling. 1989. "Managerial performance, Tobin's Q, and the gains from successful tender offers." *Journal of Financial Economics* 24 (1):137-54.

Norli, Øyvind, Charlotte Ostergaard, and Ibolya Schindele. 2015. "Liquidity and Shareholder Activism." *Review of Financial Studies* 28 (2):486-520.

Officer, Micah S. 2003. "Termination fees in mergers and acquisitions." *Journal of Financial Economics* 69 (3):431-67.

Servaes, Henri. 1991. "Tobin's Q and the Gains from Takeovers." *The Journal of Finance* 46 (1):409-19.

Shawky, Hany A., Na Dai, and Douglas Cumming. 2012. "Diversification in the hedge fund industry." *Journal of Corporate Finance* 18 (1):166-78.

Wang, Ying, and Jing Zhao. 2015. "Hedge Funds and Corporate Innovation." *Financial Management* 44 (2):353-85.

Table 1. Distribution of deals by year and activist type

This table presents deals with activist involvement from 1994-2014. Panel A reports the distribution of deals by sample year and Panel B reports distribution of deals by activist type.

Panel A: Annual Distribution of Deals with Activist Involvement					
Year	No. of Deals	Percent (%)	Year	No. of Deals	Percent (%)
1994	2	0.63	2005	10	3.16
1995	2	0.63	2006	23	7.28
1996	10	3.16	2007	16	5.06
1997	20	6.33	2008	21	6.65
1998	24	7.59	2009	20	6.33
1999	20	6.33	2010	15	4.75
2000	15	4.75	2011	15	4.75
2001	16	5.06	2012	11	3.48
2002	9	2.85	2013	13	4.11
2003	13	4.11	2014	25	7.91
2004	16	5.06	**Total**	**316**	**100.00**

Panel B: Distribution of Deals by Activist Type	
Activist Types	**No. of Deals**
Hedge Funds	192
Industrial Owners	68
Investment Managers	51
Individual Investors	18
Investment Companies	13
Financial Institutions	12
Private Equity Companies	4
Pensions Funds	3

Note: The sum of deals by activist group is greater than the number of deals in total because some deals involve multiple activists.

Table 2. Summary statistics for the sample of M&A deals

This table presents summary statistics for the full sample of M&A deals, portioned by the deals with activist involvement and matching deals. Panel A, B and C show summary statistics for acquirer firm characteristics, target firm characteristics, and deal characteristics, respectively. All variables are defined in Appendix A. Continuous variables are winsorized at the 2% and 98% levels. P-Values are shown in parentheses. T-test and the Wilcoxon rank-sum test are used to test the difference in mean and median, respectively. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Full Sample			Activists Sample			Matching Sample			Difference (Activists – Matching)			
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Acquirer Firm Characteristics													
MV ($ mil.)	16696.18	1843.67	675	14799.48	2139.30	316	18365.70	1706.35	359	-3566.22	(0.220)	432.95	(0.459)
M/B	4.12	2.41	675	3.91	2.39	316	4.32	2.41	359	-0.41	(0.322)	-0.02	(0.486)
Leverage	0.39	0.38	673	0.40	0.37	316	0.38	0.38	357	0.03	(0.213)	-0.02	(0.277)
Cash Flows/Equity	0.04	0.05	646	0.05	0.06	299	0.04	0.05	347	0.01	(0.416)	0.01*	(0.098)
RUNUP	0.15	0.10	675	0.18	0.13	316	0.13	0.08	359	0.05	(0.102)	0.05	(0.109)
Sigma	0.03	0.02	675	0.03	0.02	316	0.03	0.02	359	0.00	(0.495)	0.00	(0.471)
Panel B: Target Firm Characteristics													
MV ($ mil.)	1540.37	201.74	554	1404.12	213.75	273	1672.75	189.07	281	-268.64	(0.393)	24.68	(0.931)
M/B	2.48	1.78	502	2.50	1.75	249	2.47	1.78	253	0.03	(0.878)	-0.04	(0.811)
Leverage	0.37	0.36	559	0.38	0.35	276	0.36	0.36	283	0.02	(0.497)	0.00	(0.553)
Cash Flows/Equity	-0.03	0.04	480	-0.04	0.04	238	-0.03	0.05	242	-0.01	(0.826)	0.00	(0.654)
RUNUP	0.06	0.03	556	0.11	0.08	275	0.02	0.01	281	0.08**	(0.046)	0.07**	(0.019)
Sigma	0.04	0.03	567	0.04	0.03	281	0.04	0.03	286	0.00	(0.851)	0.00	(0.574)

	Full Sample			Activists Sample			Matching Sample			Difference (Activists – Matching)			
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel C: Deal Characteristics													
TV ($ mil.)	1013.52	183.73	615	1055.19	233.34	286	977.31	162.79	329	77.88	(0.636)	70.55**	(0.028)
Relative Size	0.35	0.16	615	0.38	0.17	286	0.34	0.15	329	0.04	(0.319)	0.03	(0.215)
All-Cash (%)	39.89	-	569	44.61	-	269	35.67	-	300	8.94**	(0.030)	-	-
All-Stock (%)	29.17	-	569	24.91	-	269	33.00	-	300	-8.09**	(0.033)	-	-
Mixed (%)	30.93	-	569	30.48	-	269	31.33	-	300	-0.85	(0.827)	-	-
Incl. Stock (%)	60.11	-	569	55.39	-	269	64.33	-	300	-8.94**	(0.030)	-	-
Hostile (%)	5.04	-	675	6.96	-	316	3.34	-	359	3.62**	(0.036)	-	-
Competing Bid (%)	7.85	-	675	11.39	-	316	4.74	-	359	6.66***	(0.002)	-	-
Tender Offer (%)	16.00	-	675	19.94	-	316	12.53	-	359	7.40***	(0.010)	-	-
Diversification (%)	34.07	-	675	34.18	-	316	33.98	-	359	0.19	(0.958)	-	-
Completed Deal (%)	81.33	-	675	81.96	-	316	80.78	-	359	1.18	(0.694)	-	-

Table 3. Correlation matrix

This table presents pairwise correlations of the variables. Panel A shows correlations of acquirer gains, activist involvement, acquirer firm characteristics, and deal characteristics. Panel B shows correlations of target gains, activist involvement, target firm characteristics, and deal characteristics. All variables are defined in Appendix A. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other continuous variables are winsorized at the 2% and 98% levels.

	CAR [-2,2]	BHAR24	Activist	MV	M/B	Leverage	CF/E	RUNUP	Sigma	TV	Relative Size	Cash	Hostile	Competing Bid	Tender Offer	Diversification
Panel A: Correlations of Acquirer Gains, Activist Involvement, Acquirer Firm Characteristics and Deal Characteristics																
CAR [-2,2]	1.000															
BHAR24	-0.044	1.000														
Activist	0.106	0.024	1.000													
MV	0.022	0.032	-0.029	1.000												
M/B	0.080	-0.055	-0.041	0.192	1.000											
Leverage	0.047	0.075	-0.029	0.014	-0.005	1.000										
CF/E	0.030	0.164	0.028	0.031	-0.106	0.097	1.000									
RUNUP	0.055	-0.135	0.059	-0.015	0.422	-0.069	-0.140	1.000								
Sigma	-0.032	-0.095	-0.027	-0.242	0.209	-0.118	-0.456	0.299	1.000							
TV	-0.140	0.001	-0.029	0.291	0.134	0.096	0.089	0.044	-0.119	1.000						
Relative Size	-0.213	-0.091	0.047	-0.222	-0.068	0.032	-0.004	-0.008	0.228	0.231	1.000					
Cash	0.103	0.183	0.085	0.228	0.010	-0.170	0.155	-0.082	-0.277	-0.120	-0.336	1.000				
Hostile	-0.054	0.005	0.096	-0.016	0.007	0.110	0.121	0.045	-0.016	0.190	0.110	-0.028	1.000			
Competing Bid	-0.021	0.106	0.135	-0.005	-0.031	0.037	0.128	0.027	-0.058	0.067	0.174	0.068	0.243	1.000		
Tender Offer	0.116	0.047	0.069	0.007	0.053	-0.101	0.028	-0.022	-0.035	-0.014	-0.070	0.258	0.070	0.125	1.000	
Diversification	0.054	-0.035	0.054	0.111	0.076	0.004	0.107	0.004	-0.116	-0.062	-0.172	0.225	-0.037	-0.013	0.101	1.000

	Panel B: Correlations of Target Gains, Activist Involvement, Target Firm Characteristics and Deal Characteristics															
	CAR [-2,2]	Bid Premium	Activist	MV	M/B	Leverage	CF/E	RUNUP	Sigma	TV	Relative Size	Cash	Hostile	Competing Bid	Tender Offer	Diversification
CAR [-2,2]	1.000															
Bid Premium	0.632	1.000														
Activist	-0.051	-0.017	1.000													
MV	-0.176	-0.129	-0.008	1.000												
M/B	-0.073	-0.043	0.032	0.196	1.000											
Leverage	-0.143	-0.037	-0.014	0.145	-0.052	1.000										
CF/E	-0.142	-0.226	-0.032	0.092	0.057	0.105	1.000									
RUNUP	-0.083	-0.084	0.055	0.022	0.283	0.067	0.078	1.000								
Sigma	0.245	0.318	-0.047	-0.210	0.065	-0.137	-0.497	0.129	1.000							
TV	-0.135	-0.049	-0.009	0.813	0.232	0.184	0.120	0.052	-0.217	1.000						
Relative Size	-0.238	-0.063	0.066	0.149	-0.052	0.263	0.127	-0.023	-0.112	0.249	1.000					
Cash	0.286	0.082	0.031	-0.156	-0.022	-0.314	-0.006	0.074	0.023	-0.152	-0.383	1.000				
Hostile	-0.041	0.014	0.082	0.174	0.046	0.061	0.057	0.033	-0.100	0.246	0.150	-0.039	1.000			
Competing Bid	-0.057	0.174	0.110	0.131	-0.022	0.021	0.065	0.032	-0.074	0.171	0.202	0.046	0.289	1.000		
Tender Offer	0.158	0.164	0.049	0.039	0.041	-0.158	-0.023	0.050	0.041	-0.016	-0.094	0.285	0.087	0.181	1.000	
Diversification	0.132	0.084	0.022	-0.116	0.109	-0.114	0.014	0.048	0.035	-0.086	-0.224	0.231	0.000	-0.037	0.095	1.000

Table 4. Gains to acquirers from M&A deals

This table presents acquirers' short- and long-term gains. Panel A shows acquirers' announcement abnormal returns. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around the announcements. Panel B shows acquirers' post-announcement long-term returns. BHAR24 is the 24-month buy-and-hold abnormal returns after the announcement. Variables are winsorized at the 2% and 98% levels. P-Values are shown in parentheses. T-test is used to test the significance of the mean CARs, and the difference in the mean CARs. Bootstrapped standard error is used in the t-test to test the significance of the mean BHARs, and the difference in the means of BHARs. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in medians, respectively. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Full Sample			Activists Sample			Matching Sample			Difference (Activists – Matching)			
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Acquirers' Announcement Abnormal Returns													
CAR [-2, 2] (%)	0.00	-0.15	675	0.78*	0.16	316	-0.69*	-0.35**	359	1.46**	(0.012)	0.51**	(0.034)
	(0.996)	(0.402)		(0.081)	(0.262)		(0.067)	(0.025)					
Panel B: Acquirers' Post-Announcement Buy-and-Hold Returns													
BHAR24 (%)	-6.51**	-7.48***	471	-5.29	-1.40	213	-7.51*	-10.17***	258	2.21	(0.685)	8.77*	(0.074)
	(0.028)	(0.002)		(0.212)	(0.192)		(0.055)	(0.004)					

Table 5. Multivariate analysis of acquirers' announcement gains

Acquirers' announcement abnormal returns (CAR [-2, 2]) are regressed (OLS) against a set of explanatory variables (Activist dummy, acquirer firm characteristics and deal characteristics). All variables are defined in Appendix A. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable. All continuous variables are winsorized at the 2% and 98% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	(1)	(2)	(3)	(4)
Activist	0.0137**	0.0160**	0.0172***	0.0206***
	(0.022)	(0.010)	(0.009)	(0.002)
Ln(MV)		-0.0029		-0.0068***
		(0.110)		(0.001)
M/B		0.0009		0.0011
		(0.276)		(0.267)
Leverage		0.0110		0.0169
		(0.423)		(0.267)
CF/E		-0.0215		0.0279
		(0.592)		(0.487)
RUNUP		0.0013		0.0045
		(0.913)		(0.715)
Sigma		-0.2725		0.2003
		(0.483)		(0.627)
Relative Size			-0.0240***	-0.0411***
			(0.003)	(0.000)
Cash			0.0034	0.0055
			(0.634)	(0.470)
Hostile			-0.0108	-0.0154
			(0.460)	(0.335)
Tender Offer			0.0092	0.0105
			(0.257)	(0.207)
Competing Bid			-0.0017	0.0014
			(0.887)	(0.910)
Diversification			-0.0010	0.0013
			(0.886)	(0.859)
Constant	-0.0066	0.0146	-0.0323	-0.0373
	(0.807)	(0.706)	(0.179)	(0.437)
N	675	644	569	542
R²	0.072	0.087	0.115	0.167
Adj. R²	0.025	0.030	0.051	0.093

Table 6. Multivariate analysis of acquirers' long-term performance

Acquirers' post-announcement buy-and-hold abnormal returns (BHAR24) are regressed against a set of explanatory variables (activist dummy, acquirer firm characteristics and deal characteristics). Specifications 1 to 4 show OLS regressions. Specifications 5 to 8 show quantile regressions. All variables are defined in Appendix A. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable. All continuous variables are winsorized at the 2% and 98% levels. P-Values are shown in parentheses. In OLS regressions, p-values are adjusted for heteroskedasticity and acquirer clustering. In quantile regressions, p-values are calculated based on robust errors. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	OLS				Quantile Regression			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Activist	-0.0034	0.0342	-0.0265	0.0055	0.0742*	0.1091***	0.0378	0.0807*
	(0.952)	(0.557)	(0.650)	(0.926)	(0.082)	(0.010)	(0.436)	(0.095)
Ln(MV)		0.0163		0.0083		0.0301***		0.0085
		(0.376)		(0.653)		(0.008)		(0.553)
M/B		0.0025		0.0028		-0.0149***		-0.0089
		(0.736)		(0.751)		(0.002)		(0.264)
Leverage		0.2807**		0.2400		0.5009***		0.3582***
		(0.041)		(0.100)		(0.000)		(0.001)
CF/E		0.2832		0.4928		0.1144		0.3879**
		(0.468)		(0.229)		(0.713)		(0.031)
RUNUP		-0.3223***		-0.2814**		-0.1539*		-0.1614*
		(0.002)		(0.013)		(0.077)		(0.052)
Sigma		1.4221		3.9531		-2.9283		-2.4886
		(0.695)		(0.341)		(0.319)		(0.325)
Relative Size			-0.1112	-0.1290			-0.1117**	-0.1781**
			(0.189)	(0.224)			(0.029)	(0.014)
Cash			0.1643***	0.1435*			0.1614***	0.0386
			(0.007)	(0.055)			(0.001)	(0.514)
Hostile			0.2275*	0.1867*			0.2387**	0.2039
			(0.070)	(0.086)			(0.019)	(0.429)
Tender Offer			0.0233	0.0103			0.0326	0.0552
			(0.745)	(0.888)			(0.542)	(0.306)
Competing Bid			0.1708	0.1770			0.0079	-0.0376
			(0.262)	(0.255)			(0.931)	(0.649)
Diversification			-0.1109*	-0.1139*			-0.0191	-0.0648
			(0.065)	(0.057)			(0.681)	(0.214)
Constant	-0.5324**	-0.7349**	0.1409	-0.1575	-0.2725*	-0.3494	-0.2086	0.1473
	(0.049)	(0.020)	(0.598)	(0.628)	(0.084)	(0.133)	(0.410)	(0.609)
N	471	449	421	402	471	449	421	402

R^2	0.151	0.195	0.188	0.230	-	-	-	-
Adj. R^2	0.093	0.125	0.114	0.142	-	-	-	-
Pseudo R^2	-	-	-	-	0.100	0.144	0.126	0.163

Table 7. Gains to targets from M&A deals

This table presents the distribution of targets' gains. Panel A shows targets' announcement abnormal returns. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around the announcements. CARs are winsorized at the 2% and 98% levels. Panel B shows Bid Premiums measured by difference between the offer price and the target stock price 4 weeks before the announcement divided by the latter. Bid Premiums are winsorized if values are beyond the range of [0, 2]. P-Values are shown in parentheses. T-test is used to test the significance of the mean, and the difference in mean. Wilcoxon signed-rank test and Wilcoxon rank-sum test are used to test the significance of median and the difference in median, respectively. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Full Sample			Activists Sample			Matching Sample			Difference (Activists – Matching)			
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Targets' Announcement Abnormal Returns													
CAR [-2, 2] (%)	21.18***	16.27***	556	20.26***	16.32***	275	22.08***	16.14***	281	-1.82	(0.355)	0.18	(0.870)
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)					
Panel B: Bid Premium													
Bid Premium (%)	44.95	34.69	524	46.55	33.12	254	43.44	36.11	270	3.11	(0.395)	-2.99	(0.577)

Table 8. Multivariate analysis of targets' gains

Targets' gains and Bid Premium are regressed against a set of explanatory variables (activist dummy, target firm characteristics and deal characteristics). All variables are defined in Appendix A. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable. Bid Premiums are winsorized if values are beyond the range of [0, 2]. Other continuous variables are winsorized at the 2% and 98% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Targets' CAR [-2, 2]				Bid Premium			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Activist	-0.0197	-0.0170	-0.0311	-0.0188	0.0343	0.0235	0.0105	0.0012
	(0.311)	(0.397)	(0.146)	(0.397)	(0.346)	(0.496)	(0.778)	(0.973)
Ln(MV)		-0.0260***		-0.0192**		-0.0243**		-0.0354***
		(0.000)		(0.012)		(0.039)		(0.004)
M/B		0.0005		-0.0025		-0.0114		-0.0082
		(0.903)		(0.594)		(0.176)		(0.329)
Leverage		-0.0759*		0.0070		0.1187		0.1573*
		(0.073)		(0.881)		(0.140)		(0.075)
CF/E		0.0117		0.0382		-0.0463		-0.0299
		(0.831)		(0.518)		(0.718)		(0.817)
RUNUP		-0.0579**		-0.0708***		-0.0999**		-0.1159**
		(0.014)		(0.005)		(0.037)		(0.013)
Sigma		1.9243**		2.9374***		4.6629***		4.6263***
		(0.036)		(0.003)		(0.006)		(0.005)
Relative Size			-0.0696***	-0.0514**			-0.0120	-0.0207
			(0.000)	(0.024)			(0.786)	(0.588)
Cash			0.0832***	0.0796***			0.0360	0.0092
			(0.001)	(0.005)			(0.393)	(0.841)
Hostile			-0.0063	0.0199			-0.0883	-0.0291
			(0.870)	(0.619)			(0.172)	(0.654)
Tender Offer			0.0371	0.0408			0.0368	0.0905*
			(0.213)	(0.187)			(0.456)	(0.056)
Competing Bid			-0.0493	-0.0218			0.3175***	0.3009***
			(0.187)	(0.550)			(0.000)	(0.000)
Diversification			0.0124	0.0233			0.0732*	0.0540
			(0.664)	(0.441)			(0.080)	(0.208)
Constant	0.0658	0.0193	0.0662	-0.1843	0.0886	-0.4073	0.1079	-0.3613
	(0.414)	(0.880)	(0.352)	(0.202)	(0.628)	(0.162)	(0.541)	(0.219)
N	556	477	469	420	524	404	505	396
R²	0.089	0.190	0.186	0.260	0.129	0.247	0.182	0.313
Adj. R²	0.033	0.120	0.114	0.173	0.072	0.169	0.115	0.227

Table 9. Methods of payment and acquirers' announcement gains

Acquirers' announcement period abnormal returns (CAR [-2, 2]) by the methods of payment are regressed (OLS) against a set of explanatory variables (activist dummy, acquirer firm characteristics and deal characteristics). All variables are defined in Appendix A. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable. All continuous variables are winsorized at the 2% and 98% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Cash Only Deals				Non-cash Deals			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Activist	0.0094	0.0062	0.0081	0.0043	0.0177*	0.0243**	0.0196*	0.0259**
	(0.261)	(0.470)	(0.345)	(0.632)	(0.073)	(0.017)	(0.051)	(0.012)
Ln(MV)		-0.0052**		-0.0038		-0.0035		-0.0074**
		(0.047)		(0.196)		(0.233)		(0.015)
M/B		-0.0014		-0.0015		0.0030**		0.0025*
		(0.164)		(0.159)		(0.047)		(0.083)
Leverage		0.0323		0.0337		0.0052		0.0165
		(0.117)		(0.105)		(0.816)		(0.431)
CF/E		-0.0663		-0.0922		0.0106		0.0474
		(0.378)		(0.228)		(0.830)		(0.338)
RUNUP		0.0345*		0.0327*		-0.0124		-0.0063
		(0.054)		(0.064)		(0.451)		(0.681)
Sigma		-0.8379		-0.9386		0.2394		0.5878
		(0.224)		(0.208)		(0.674)		(0.285)
Relative Size			0.0220	0.0332			-0.0308***	-0.0488***
			(0.351)	(0.241)			(0.001)	(0.000)
Hostile			-0.0098	-0.0256			-0.0044	-0.0091
			(0.661)	(0.251)			(0.828)	(0.699)
Tender Offer			0.0016	0.0031			0.0068	0.0087
			(0.860)	(0.737)			(0.677)	(0.611)
Competing Bid			0.0062	0.0020			-0.0139	-0.0066
			(0.645)	(0.888)			(0.503)	(0.786)
Diversification			-0.0043	-0.0013			0.0051	0.0084
			(0.644)	(0.892)			(0.666)	(0.477)
Constant	-0.0044	0.1033**	0.0029	0.0432	-0.0225	-0.0455	0.0130	-0.0262
	(0.905)	(0.016)	(0.938)	(0.138)	(0.472)	(0.388)	(0.704)	(0.639)
N	227	219	227	219	342	323	342	323
R²	0.147	0.216	0.158	0.233	0.103	0.142	0.150	0.225
Adj. R²	0.012	0.056	-0.001	0.050	0.010	0.027	0.046	0.106

Table 10. Multivariate analysis of payment methods

Payment methods are regressed against a set of explanatory variables (activist dummy, acquirer firm characteristics and deal characteristics). In specifications 1 to 4 (Probit model), the dependent variable is the cash payment dummy that takes a value of one if the deal is settled by 100% cash. In specifications 5 to 8 (fractional Probit model), the dependent variable is the percentage of consideration paid in cash. All variables are defined in Appendix A. In all models, industry fixed effects and year fixed effects are controlled for. For brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable. All continuous variables are winsorized at the 2% and 98% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Probit: Cash				Fractional Probit: % Cash			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Activist	0.1950*	0.2784**	0.2129*	0.3134**	0.2112**	0.2612**	0.1705	0.2095*
	(0.089)	(0.025)	(0.094)	(0.021)	(0.039)	(0.013)	(0.110)	(0.057)
Ln(MV)		0.0472		-0.0821*		0.0010		-0.0664*
		(0.261)		(0.070)		(0.978)		(0.069)
M/B		0.0193		0.0079		0.0100		-0.0023
		(0.179)		(0.587)		(0.388)		(0.830)
Leverage		-0.8178***		-0.5985**		-0.5024**		-0.3267
		(0.004)		(0.047)		(0.028)		(0.168)
CF/E		1.3444*		2.6230***		1.3241**		1.7765***
		(0.054)		(0.002)		(0.028)		(0.008)
RUNUP		-0.3760*		-0.2569		-0.1995		-0.0964
		(0.087)		(0.242)		(0.253)		(0.568)
Sigma		-36.8705***		-34.4194***		-31.4002***		-26.6298***
		(0.000)		(0.000)		(0.000)		(0.000)
Relative Size			-1.5079***	-1.8668***			-0.7153***	-0.7225***
			(0.000)	(0.000)			(0.000)	(0.000)
Hostile			-0.1282	-0.2517			-0.0342	-0.1034
			(0.606)	(0.374)			(0.860)	(0.631)
Tender Offer			0.8339***	0.7804***			0.8592***	0.7910***
			(0.000)	(0.000)			(0.000)	(0.000)
CompetingBid			0.3473	0.3940			0.5141***	0.4943**
			(0.152)	(0.165)			(0.005)	(0.012)
Diversification			0.5560***	0.5413***			0.4461***	0.4390***
			(0.000)	(0.000)			(0.000)	(0.000)
Constant	-4.1270***	-2.1769***	-4.0225***	-1.1940	-4.4718***	-2.8949***	-4.5342***	-2.5635***
	(0.000)	(0.009)	(0.000)	(0.154)	(0.000)	(0.000)	(0.000)	(0.000)
N	569	542	569	542	569	542	569	542
Pseudo R²	0.135	0.243	0.301	0.380	0.129	0.219	0.235	0.295

Table 11. Types of activist and gains from acquisitions

Announcement period abnormal returns of acquirers (CAR [-2, 2] in specifications 1 to 5) and returns of targets (CAR [-2, 2] in specifications 6 to 10) are regressed (OLS) against a set of explanatory variables. The hedge fund dummy equals 1 if an activist is a hedge fund and 0 otherwise. The multiple activists dummy equals 1 if a target has multiple activists and 0 otherwise. The serial activist dummy equals 1 if an activist has performed five or more activist campaigns over three years before the current deal and 0 otherwise. The sector-diversified activist dummy equals 1 if an activist invests in multiple sectors identified by the first two digits of the primary SIC codes and 0 otherwise. The Delaware dummy equals 1 if an activist is registered in Delaware and 0 otherwise. Firm characteristics include Ln(MV), M/B, Leverage, CF/E, RUNUP, and Sigma and deal characteristics include Relative Size of the Deal, Hostile, Tender Offer, Competing Bid, and Diversification. All firm and deal specific variables are defined in Appendix A. In all equations, industry fixed effects and year fixed effects are controlled for but for brevity, their coefficients are not reported in the table. The number of observations used in different specifications may vary because of the missing value of one or more variable(s). All continuous variables are winsorized at the 2% and 98% levels. P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Statistical significance at the 1%, 5% and 10% levels is denoted as ***, ** and * respectively.

	Acquirer CAR [-2, 2]					Target CAR [-2, 2]				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Hedge Fund	0.0010					-0.0270				
	(0.921)					(0.400)				
Multiple Activists		-0.0037					-0.0340			
		(0.796)					(0.405)			
Serial Activist			0.0114					0.0142		
			(0.274)					(0.652)		
Sector-diversified Activist				0.0113					-0.0663	
				(0.317)					(0.172)	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Delaware					0.0078					0.0184
					(0.518)					(0.550)
Acquirer Firm Characteristics	√	√	√	√	√					
Target Firm Characteristics						√	√	√	√	√
Deal Characteristics	√	√	√	√	√	√	√	√	√	√
Constant	0.0093	0.0102	0.0035	0.0023	0.0039	-0.1339	-0.1755	-0.1766	-0.1246	-0.1967
	(0.898)	(0.888)	(0.962)	(0.974)	(0.957)	(0.529)	(0.372)	(0.369)	(0.548)	(0.330)
N	255	255	255	255	255	209	209	209	209	209
R-sq	0.267	0.267	0.271	0.271	0.269	0.348	0.348	0.346	0.359	0.347
adj. R-sq	0.114	0.114	0.119	0.118	0.116	0.173	0.173	0.171	0.187	0.171

Appendix A: Definition of variables

Variable	Definition
Panel A: Gains to Acquirers and Targets	
CAR [-2, 2]	Market-adjusted cumulative abnormal returns around the announcement over 5-days [-2, 2] surrounding the day of deal announcement.
BHAR24	Post-merger buy-and-hold abnormal returns in 24 months.
Bid Premium	Difference between the offer price and the target stock price 4 weeks before the announcement divided by the latter.
Panel B: Key Explanatory Variable	
Activist	Dummy variable equals one if takeover target is an activist target firm.
Panel C: Firm Characteristics	
MV	Market value of the firm 4 weeks before the announcement (CRSP items PRC×SHROUT).
Ln(MV)	Natural logarithm of MV.
M/B	Market value of equity 4 weeks before the announcement (CRSP items PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).
Leverage	Total debt over total capital at the fiscal year end before the announcement (Compustat items (DLTT+DLC)/(DLTT+DLC+SEQ)).
CF/E	Cash flows at the fiscal year end before the announcement (Compustat items IB+DP-DVP-DVC) divided by market value of equity 4 weeks before the announcement (CRSP items PRC×SHROUT).
RUNUP	Market-adjusted CARs before the announcement of the deal, [-365, -28] days window.
Sigma	The standard deviation of a firm's market-adjusted daily abnormal return prior to the announcement [-365, -28].
Panel D: Deal Characteristics	
TV	Transaction value of the M&A deal (from Thomson One Banker).
Relative Size	Transaction value (from Thomson One Banker) divided by the acquirer's MV (defined above).
Cash	Dummy variable equals one if the deal is 100% paid in cash, and 0 otherwise.
Stock	Dummy variable equals one if the deal is 100% paid in stock, and 0 otherwise.
Mix	Dummy variable equals one if deal is paid in cash and stock, and 0 otherwise.
Non-cash	Dummy variable equals one if deal is not 100% cash (includes stocks and other securities), and 0 otherwise.
% Cash	The percentage of consideration paid in cash (from Thomson One Banker).
Hostile	Dummy variable equals one if the deal attitude is hostile or unsolicited in Thomson One Banker.
Competing Bid	Dummy variable equals one if there is more than one bidder reported in Thomson One Banker.
Tender Offer	Dummy variable equals one if the deal is identified as a tender offer in Thomson One Banker.
Diversification	Dummy variable equals one if the bidder and the target have different first two-digits of the primary SIC code.

Appendix B: Description of activist type

Following Norli, Ostergaard, and Schindele (2015), we classify activist investors' type as follows:

Activist Type	Definition
Hedge Funds	Hedge fund manager or sponsor, a private investment fund or partnership
Industrial Owner	Firms that own an equity stake in the target firm; all corporations excluding those in the financial sector
Investment Managers	Managers who manage asset portfolios of private clients; includes both financial advisors and consultants
Individual Investors	Single individual, who is usually a shareholder of the target company
Investment Companies	Mutual funds, both closed-end and open-end
Financial Institutions	Mostly different types of bank, such as commercial banks, savings banks etc.; includes broker-dealers
Private Equity Companies	Includes both private equity funds and private equity investors
Pension funds	Funds such as CalPERS that are retirement systems