

Private Equity Funds in the Partial Acquisitions Market: Effect on the Target Firm Governance

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Abstract

We investigate the effect of private equity funds on the governance of targets of partial acquisitions for the 1997-2000 period. We find that private equity funds dominate the partial acquisitions market and account for most of shareholder activism. The three-day cumulative abnormal return (CAR) on partial acquisitions by activist private equity funds is 18.51% showing a significant economic effect of the private equity fund activism on the target firm governance. The CAR for partial acquisitions by non-activist private equity funds is 1.86%, which is likely to reflect a partial resolution of the pricing inefficiencies in small-cap markets. Activist private equity funds are more likely to obtain a board representation. While most activist private equity funds stay with target firms at least for a year, some activist private equity funds close their position within a year via takeover. The takeover anticipation effects appear to be present in the positive market reaction to partial acquisitions by private funds. Underleveraged targets are more likely to be taken over in a year. Furthermore, the market reaction to partial acquisitions by activist private equity funds is particularly large when there is no previous outside block.

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1. Introduction

Hedge funds and private equity funds are a rage now.¹ Lately popular press delivers a daily dose of examples of where and how wealthy investors invest and their staggering returns. While the mass has turned to public investment vehicles such as mutual funds and company/state pension funds (the current share of the public market by the institutional ownership exceeding a half of all market capitalization), wealthy investors have apparently been marching to a different drummer. Wealthy investors either independently or by being a part of a capital pool (most often organized as a limited partnership) managed by a lead investor (a general partner) routinely make big bets on a select number of investments. In the academic literature, the investment behavior and performance of wealthy investors has received only limited attention.

On the other hand, there is still a serious gap in our understanding of how the capital market functions when a public firm runs into a serious problem, for example, when it falls in the hands of a wrong management or falls into financial distress. Who actually goes in and fixes the firm and gets it back on its feet without the recourse to bankruptcy or a takeover? Since public firms in serious troubles are typically heavily discounted in public market, there is an opportunity and an inducement for savvy investors to build a meaningful equity ownership and fix the firm and realize a high return consistent with the high risk they bear. Typical public funds (pension funds and mutual funds) would find this type of investment excessively risky. In this paper, we

¹ Private equity funds in turn comprise venture capital funds and buyout funds. A comprehensive review of buyout funds, venture capital funds and private equity funds in general are found in Lowenstein (1985), Kaplan and Shoar (2005) and Berg and Gottschalg (2005).

address specifically the question: What is the effect of partial acquisitions by private equity funds (unregulated private investors) on the target firm corporate governance?²

As shown in Figure 1 the sources of the equity capital for partial acquisitions are public funds (pension funds and mutual funds), corporate funds (investments from corporations) and private funds, which are funds from essentially unregulated high net worth investors. Private equity funds in turn consist of high net worth investors acting as sole investors, private equity funds and hedge funds.³ Private equity funds consist of buyout funds and venture capital funds (Berg and Gottschalg, 2005). In our study, we identify three types of partial acquirers: private funds, public funds (or institutional investors) and corporations. Using the stated reasons for partial acquisitions, we subclassify each type of partial acquirers as activist and non-activist. We define activist partial acquirers as those who express their intention of influencing target firm policies or those individuals known for activist policies in the past.

[Insert Figure 1 about here.]

We find that private equity funds dominate the partial acquisitions market with 58.0% of all deals (followed by corporations with 39.3% and institutional investors with 2.7%). Of 152 private equity funds 41 private equity funds (27.0%) take an activist position toward management. Reflecting the wealth constraint, which acts as a high entry barrier to the partial acquisitions market, most of private equity funds are organized as a limited partnership of high net worth investors managed by a lead investor (82.2%) while

² In Appendix 1, we illustrate a partial acquisition by a private equity fund using the partial acquisition of Variflex Inc. by REMY Capital Partners in 1997. Los Angeles based Variflex is a small closely held public firm in difficulty and REMY Capital Partners is a Los Angeles private equity firm. REMY acquires 28% of Variflex, secures a strong board representation, eventually turns around the firm and sells it in 2004.

³ Pension funds invest in hedge funds and private equity funds, which allow average investors to participate in high risk/high return investments.

sole individual investors represent a small proportion (17.8%) and the latter tend to be household names in business. Private equity funds represent 97.6% of all activist acquirers (41 out of 42) showing that private equity funds are the dominant force in shareholder activism in the partial acquisitions market. Suggesting that pricing inefficiencies are more severe in small-cap markets than in large cap markets, most of the targets are small-cap firms.

The three-day cumulative abnormal returns (CAR) on block purchases made by all private funds, activist private equity funds and non-activist private equity funds are 6.35%, 18.51% and 1.86%, respectively. The corresponding CARs for public funds and corporate block purchases are 5.79% and 14.69%, respectively. Our results suggest that the economic effects of activist private equity funds are economically meaningful and comparable in magnitude to strategic benefits of corporate purchases. In contrast, the CAR for partial acquisitions by non-activist private equity funds is only 1.86%, which is likely to reflect a partial resolution of the pricing inefficiencies in small-cap markets. The substantial difference in the wealth effect (the difference in the three-day CAR of 16.65%) between activist private equity funds and non-activist private equity funds suggests that economic effects of activist approach far outweigh that from resolving price inefficiencies that may exist in small-cap markets.

Activist private equity funds are more likely to obtain a board representation suggesting that activist private equity funds are hands-on investors. While most activist private equity funds stay with the firm for at least a year, at least some activist private equity funds take a quick exit out of the target via takeover. The takeover anticipation effects appear to be present in the positive market reaction to partial acquisitions by

private funds. Furthermore, the market reaction to partial acquisitions by activist private equity funds is particularly large when there is no previous outside block.

Our study overall suggests that activist private equity funds successfully internalize the benefit of monitoring. Non-activist private equity funds appear to resolve some of pricing inefficiencies in small-cap markets. The remainder of the paper is organized as follows. Section 2 presents hypotheses tested and related literature. Section 3 describes the sample and the data used. Section 4 presents the methodology and the empirical results. Section 5 concludes the paper.

2. Literature Review and Hypotheses

The financial literature has addressed the monitoring role of large outside shareholders. Shareholders owning a small fraction of outstanding shares have little incentive to monitor management, since the benefits they receive from monitoring activities are unlikely to exceed the costs that they bear. Therefore, small shareholders have incentives to free-ride in monitoring management. There are a number of articles taking the view that large outside blockholders can mitigate agency problems by behaving as monitors (e.g., Shleifer and Vishny, 1986; Barclay and Holderness, 1991; Huddart, 1993; Admati, Pfleiderer, and Zechner, 1994; Maug, 1998). There has also been considerable empirical support for this theory (e.g., Agrawal and Mandelker, 1990; Bertrand and Mullainathan, 2001; Chung, Firth and Kim, 2002; Hartzell and Starks, 2003).

However, these studies tend to be non-specific as to the identity of these blockholders. Although there are studies on the monitoring role of large institutional

shareholders such as CALPERS (California Public Employees Pension Fund System), we focus on the partial acquisitions of public firms by unregulated private investors, i.e., private funds. Furthermore, we compare the economic effect of activist private equity funds with that of inter-firm partial acquisitions where the investing (acquiring) firm takes a significant equity position of the investee (target) firm often in pursuit of strategic purposes and/or synergy.

Choi (1991) identifies three explanations for the positive market reaction to partial acquisitions; a monitoring effect, a takeover anticipation effect and an undervaluation signaling effect. However, partial acquirers often state that they contemplate takeovers along with many other monitoring activities such as obtaining a directorship on the target board and meeting with the target management. Therefore, we must separate out the takeover anticipation effect from the monitoring effect. We divide private equity funds into the activist private equity funds and non-activist private funds. By analyzing partial acquisitions by activist private funds, we attempt to measure the market valuation of the effect on the target firm governance by private equity funds while by analyzing partial acquisitions by non-activist private funds, we attempt to measure the undervaluation of target firms.

Barclay and Holderness (1991) find that abnormal returns associated with negotiated block trades are positive (5.6%) and stock price increases are larger when management does not resist the blockholder's effort to influence corporate policy. Outside block investors who are strategic partners of the target firm are likely to provide synergy benefits which purely financially motivated block investors would not be able to provide. We expect that the wealth effect of strategic blocks is larger than that of

financial blocks. Chan et al. (1997) show a positive market response to announcements of strategic alliances even when the alliance does not involve equity participation.

The liquidity problem, that arises when the shareholdings of blockholders are high, can cause blockholders to hold shares for longer periods, collect information and monitor management actions (Maug, 1998). In addition to lack of liquidity, the greater is the proportion of block ownership, the larger is the likelihood that the benefit of monitoring will exceed the cost. Therefore, we expect a positive relationship between block size and market reaction.

Brickley, Lease and Smith (1988) make another distinction based on whether acquiring blockholders are pressure sensitive or insensitive. Pressure sensitive blockholders are defined as those who might have current or potential business relations with the firm (commercial banks, insurance companies, etc.). These blockholders might not be as effective in monitoring the firm as the pressure insensitive ones since they would be less likely to object to questionable practices for fear of losing the company's business. If this theory is indeed valid, we would expect a stronger market reaction to a partial acquisition announcement if the acquiring blocks are pressure insensitive. Payne, Millar and Glezen (1996) provide support for this theory by examining banks as institutional investors. They find that officers of banks that have business relations with the firm rarely vote against the management if they happen to hold directorships with the company. However, faced with increasing public scrutiny, pressure sensitive firms may object to questionable practices as a way to maintaining their reputation throughout the market. The reputational concern argument would predict a positive relationship between

pressure sensitivity and market reaction, contrary to the conflict of interest argument presented previously.

Park et al. (2008) investigate the monitoring effect of large outside blockholders by examining the market reaction to partial acquisitions. The three-day cumulative abnormal returns (CAR) around activist block purchases are significant both economically and statistically (17.55%), suggesting that the monitoring benefits are economically meaningful. In contrast, the CAR around financial block purchases is only marginally significant (1.42%), both economically and statistically. The CAR around strategic block purchases is 15.46%, which reflects synergy benefits and possibly monitoring benefits to some extent.

We document a positive wealth effect of block size, pressure insensitivity of the block and board representation and a negative wealth effect of the managerial ownership of the target firm. We also find that the market reaction to activist blocks is particularly large when there is no previous outside block. Even well-managed firms can fall on to hard times due to a governance failure, a short-term liquidity trap, technological change, competition, or an unexpected need for a large equity infusion. We postulate that private equity funds in their quest for high return investments provide both professionals and capital to restructure firms. Therefore, we expect a major presence of private equity funds in the partial acquisitions market. We also expect that a large percentage of private equity funds will pursue an activist approach to governance problems of target firms. Also consistent with the positive effect of private acquirers on the target firm governance, we predict a positive market reaction to partial acquisitions by activist private funds. If activist private equity funds are hands-on investors, activist private equity funds are more

likely to obtain a board representation and actively monitor management. If activist private equity funds are a form of patient capital with long investment horizon, we expect that targets of activist private equity funds are not likely taken over in a year. If takeover is the dominant exit strategy for private funds, then takeover anticipation effect will dominate the market reaction to partial acquisitions by private funds. However, if takeover is not the dominant mode of exit, then the takeover anticipation effect will be only a modest part of the market reaction.

There is a considerable interest in the existence of pricing inefficiencies in public markets in the literature and in particular, in small-cap markets (Rozeff and Zaman, 1998; Dong et al., 2005; Rhodes-Kropf et al., 2005). A number of studies have documented some form of market over- and under-reactions and various ensuing resolutions. Mispriced assets present an opportunity and inducement for a private fund to assume the price discovery role and make a substantial equity investment in undervalued firms thus participating in the partial acquisitions market. Consistent with the pricing inefficiencies hypothesis, we expect a positive market reaction to partial acquisitions by non-activist private funds. We also expect that targets are largely small-cap firms.

The quality of monitoring is likely to depend on deal characteristics such as the block size and the purpose of the partial acquisition. In addition, there may be an interaction between governance characteristics of the target firm and the emergence of a new monitor. We develop a series of hypotheses which examine the interactions between private fund characteristics and target governance characteristics.

The greater is the proportion of the target ownership a private fund acquires, the larger is the likelihood that the benefit of monitoring will exceed the cost. In addition, the

larger its shareholdings are, the more difficult it is to sell shares whenever it wishes. This liquidity problem can cause the private fund to hold shares for longer periods, collect information and monitor management actions (Maug, 1998). Therefore, we expect a positive relationship between the market reaction and the acquired block size.

Furthermore, if the partial acquirer is able to obtain board representation of the target firm, then it is more likely to be an effective monitor. Therefore, we expect a positive relationship between the market reaction and the board representation of the partial acquirer.

If a large percentage of directors are also managers of the company or are otherwise affiliated with the firm (insider directors), these agency problems could be more serious in nature. Earlier studies show that the presence of unaffiliated directors (outsider directors) on the board enhances firm performance. For example, Weisbach (1988) shows that firms with low levels of inside directorship perform better than those with high levels of inside directorship. Since the acquiring private fund would have limited governance improvement opportunities in firms with strong outside directors, the market reaction to partial acquisitions by private equity funds would be negatively related to the proportion of outside directors on the board. However, Bhagat and Black (2001) suggest that there is an optimal number of outside directors and more outside directors are not necessarily better for shareholders. According to the interior optimal board independence hypothesis (Bhagat and Black, 2001), we would expect the market reaction to partial acquisitions by private equity funds to be unrelated to the proportion of outside directors on the board.

Another important governance mechanism is managerial ownership. Managers have incentives to act in the best interest of shareholders if they own a significant percentage of the firm's outstanding shares (Jensen and Meckling, 1976). Based on this theory, private equity funds could be particularly effective in improving the target firm governance where the managerial ownership of the target firm is excessively low. On the other extreme, managerial ownership can be large enough to give it an effective control of the firm. Then, management is entrenched and there may be a minority shareholder expropriation (Dyck and Zingales, 2001). Therefore, private equity funds could also be particularly effective in improving the target firm governance where managerial ownership is excessively high.

One of the external monitoring mechanisms we consider is financial leverage. According to Jensen (1986), agency problems such as overinvestment can be mitigated by disbursing the free cash flow to investors. Financial leverage is a viable candidate for curbing overinvestment since the manager would have to pay out interest expense on a regular basis. Furthermore, banks are viewed as effective monitors of corporations due to their ability to access firm information (Fama, 1985). Therefore, private equity funds can have a greater scope of improving the target firm governance where the target firm has an excessively low leverage. We expect to see a greater positive market reaction for targets with low leverage ratios than those with high leverage ratios.

In partial acquisitions which take place via private placement as opposed to block transfer or open market purchases, the target firm experiences cash infusion by receiving cash from the partial acquirer in exchange for new equity. Therefore, partial acquisitions by private equity funds which take place via a private placement can lead to a resolution

of financial distress where the target firms are highly leveraged. Therefore, private equity funds could be particularly effective in improving the target firm governance where the target faces a severe financial distress. If the financial distress resolution effect dominates the substitution effect, we would expect the market reaction to be positively related to financial leverage.

Another important external monitoring mechanism is the presence of institutional investors. In United States, institutional ownership grew from 6.1% in 1950 to more than 50% in 2002 (Gillan and Starks, 2003). Institutional investors can mitigate agency problems by behaving as monitors. There has also been considerable empirical support for this theory (e.g., Chung, Firth and Kim, 2002; Hartzell and Starks, 2003). Therefore, private equity funds could be particularly effective in improving the target firm governance where the target has unusually low institutional holdings. Therefore, we expect to see a greater positive market reaction for targets with low institutional holdings than those with high institutional holdings. However, Duggal and Millar (1999) do not find that institutional investors play an active role in the takeover market. If institutional shareholders are passive, then we would expect the market reaction to partial acquisitions by private equity funds to be unrelated to institutional holdings.

Dual class common stock where one class of common stock has more voting rights than the other(s) is often associated with managerial entrenchment (Jarrell and Poulsen, 1988). If management is entrenched using dual class common stock, the partial acquirer is less likely to influence the management. As a result, it is less likely to be an effective monitor than otherwise. Therefore, we expect a negative relationship between the existence of dual class common stock and the market reaction to partial acquisitions

by private funds. On the other hand, private equity funds would have a greater scope of improving the target firm governance where the target has management entrenched with dual class commons stock.

Finally, the marginal effect of partial acquisitions by private equity funds depends on whether other outside blocks already exist. If the marginal effect of partial acquisitions by private equity funds is larger when there is no existing outside block (case of diminishing marginal benefit), then we expect the market reaction to be negatively correlated with the existence of previous outside blocks.

3. Data

Screening for original partial acquisitions from the SDC database from 1997 to 2000, we have an initial sample of 723 events.⁴ The following sample selection criteria are used: (1) targets are not financial services firms; (2) the stock price data of the target firms is available in the CRSP daily returns files over a one year period prior to the filing; (3) there is a summary of 13D or 13G filings of the partial acquisition in the Factiva database; (4) accounting data are available in the Compustat database; (5) proxies are available in the LexisNexis or the EDGAR database; (6) institutional ownership information is available in the quarter prior to the announcement date either in the Factiva database or in the Compact Disclosure database; (7) the partial acquisition reported in the SDC database is confirmed by searching the Factiva database; (8) the announcement of the partial acquisition is not preceded by other partial acquisition announcements during the 2-month period prior to the disclosure; (9) the announcement of the partial acquisition

⁴ To be considered as original partial acquisitions, we require that the initial common stock holding of the target by the acquirer is less than 2% and that the stock ownership after the acquisition is 5% or more, but does not exceed 50% of the target firm's outstanding shares;

does not take place in the middle of a tender offer process; (10) no announcement of other material events such as surprise earnings, earnings restatements and major investment or divestiture decisions occurs within a week before and after the announcement of partial acquisitions.

The first criterion is to ensure that all the accounting data are comparable across the targets. Criteria (2) through (6) are to ensure the completeness of the data required to test various hypotheses. In connection with the selection criterion (3), we use summaries of 13D or 13G filings reported by Dow Jones Select Filings Newswires to examine the nature and the purpose of the partial acquisition.⁵ Under the William's Act as amended in 1970, a buyer must file with the Securities Exchange Commission (SEC) a disclosure known as 13D or 13G within ten calendar days after the five percent threshold is exceeded where the identity of the investor(s), the number of shares acquired in the transaction, the total number of accumulated shares (and the fractional ownership) and the stated purpose of ownership (e.g., arbitrage, investment, influence, or control among others) are disclosed.

Criterion (6) is to ensure that the events reported by the SDC are indeed accurate. Because the SDC database is a secondary source of information, we use all articles surrounding the partial acquisition reported in the Factiva database to confirm whether a genuine partial acquisition occurs and whether the announcement data is accurate. If the announcement date inferred from the Factiva database is unambiguously more reliable than the date reported in the SDC database, we use the Factiva date for the event study.

Following Choi (1991) we include partial acquisitions where investors acquire less than 50% but more than 5% of the target firm's stock. We assume that partial bids

⁵ Institutional investors file 13G while all others file 13D.

larger than or equal to 50% and less than 90% lead to majority control blocks. We exclude all de facto control blocks, which comprise majority control blocks, so that the minority shareholder expropriation and private benefits of control are mitigated (Dyck and Zingales, 2001).

We investigate the role of private equity funds in the partial acquisitions market for the 1997-2000 period. Panel A of Table 1 shows the actual sample selection process. Of 723 original partial acquisitions, the sample is reduced to 616 events once the targets whose business is financial services are excluded. The requirements (2) through (10) reduce the sample size to 262. We distinguish three types of partial acquirers: private funds, public funds (institutional investors) and corporations.

[Table 1 about here]

As shown in Panel A of Table 1 we find that private equity funds dominate the partial acquisitions market with 58.0% of all deals followed by corporations with 39.3% and institutional investors with 2.7%. This is true of each year during the study period except in 1999 when the dot.com market frenzy reached its peak. The number of partial acquisitions peaks in 1997 and then levels off in subsequent years. The proportion of partial acquisitions by private equity funds ranges from 36.4% in 1999 to 67.8% in 1997. We also note that the proportion of corporate partial acquirers rises from 31.4% in 1997 to 61.4% in 1998 and stays high coincident with the accelerating technology stock bubble.⁶

We further divide each type of partial acquirers either as activist or non-activist. Bethel et al. (1998) define activist block purchases as those made with the announced intention of influencing firm policies or those made by individuals known for activist

⁶ The distribution of the target firms by industry is shown in the Appendix 3.

policies in the past.⁷ For a block to be considered activist, it would have to expressly state that it will attempt to influence the management of the firm in order to enhance the firm value in its 13D filing. However, individuals such as Carl Icahn who are known for activist policies in the past are considered as activists even if there is no explicit mention of influencing the management either in 13D or press releases. As shown in Panel C of Table 1, of 152 private equity funds 41 private equity funds (27.0%) take an activist position toward management. Private equity funds represent 97.6% of all activist acquirers (41 out of 42) showing that private equity funds are the dominant force in shareholder activism in the partial acquisitions market.

Reflecting the wealth constraint in entering the partial acquisitions market, most of private equity funds are a pool of investors managed by a lead investor (82.2%) while sole individual investors represent a small proportion (17.8%). While there are well-known large private equity firms in the sample, most of private are organized as limited partnerships are relatively unknown. Sole investor partial acquirers tend to be household names in business such as Bill Gates, Paul Allen, Warren Buffet and Saudi Prince al-Waleed.

4. Empirical Tests

We measure the marginal effect of partial acquisitions by private equity funds by the cumulative abnormal returns and compare it with that of other partial acquirers. We investigate the effect of partial acquisitions by private equity funds on the target governance such as board representation and takeover. We also test interactions of

⁷ Relevant articles in the Factiva database are used for the purpose.

private equity funds with a wide range of internal and external governance mechanisms in place using OLS and probit analyses.

Daily stock returns over -30 to 30 trading days are used to estimate the abnormal returns associated with the announcement of formation of monitoring blocks. The returns from -150 to -31 days (120 observations) are used to estimate the market model specified below and abnormal returns are estimated over [-1,0], [-1,1], [-2,2], [-5,5], and [-30,30] event windows. However, we report univariate analysis and regression results based on the three day CAR over [-1,1] only. The market model is modified following Scholes and Williams (1977) to include lags and leads to correct for the possible problems with thin trading on the target firms which tend to be small in size.

$$R_{jt} = \alpha_j + \sum_{k=-2}^{+2} \beta_{jk} R_{m,t+k} + e_{jk},$$

where

R_{jt} = the daily holding period return of stock j,

$R_{m,t+k}$ = the daily holding period return of the value weighted index of all stocks

for the lagged, contemporaneous and lead periods,

β_{jk} = the beta coefficient.

Returns up to 30 days preceding the announcement are used to capture the market anticipatory effect and returns up to 30 days post-announcement are used to examine any lagged response. The daily stock residuals are cumulated over the event window and the cumulative abnormal returns are averaged cross-sectionally to arrive at the mean cumulative abnormal returns (CAR).

The cross-sectional return variance at the time of block purchases is likely to be significantly different from the pre-event window return variance. We take care of this problem by carrying out the cross-sectional test (Brown and Warner, 1985), the standardized cross-sectional test (Boemer, Musumeci, and Poulsen, 1991), and the generalized sign test (Cowan, 1992). Cowan (1992) reports that the generalized sign test is well specified and is also more powerful than the cross-sectional test. In Table 2, we report the level of significance using the generalized sign test.

Table 2 shows the announcement effect of the partial acquisitions by private funds. The three-day announcement CAR for private equity funds is 7.51%, which is highly significant (p-value<1%). Furthermore, the three-day announcement CAR for activist private equity funds is 18.51%, which is highly economically significant (p-value<1%). This result is consistent with the positive impact of activist private equity funds on the target firm governance. Two-day [-1,0], five-day [-2,2], 11-day [-5,5] and 61-day [-30,30] event windows show positive and significant cumulative average abnormal returns as well.

[Table 2 about here]

Cumulative abnormal returns for partial acquisitions by acquirer types are shown in Table 2. The three-day cumulative abnormal returns (CAR) on block purchases made by all private funds, activist private equity funds and non-activist private equity funds are 6.35%, 18.51% and 1.86%, respectively. The corresponding CARs for partial acquisitions by public funds and corporate funds are 5.79% and 14.69%, respectively. Our results suggest that the economic effects of activist private equity funds are economically meaningful and comparable in magnitude to strategic benefits of corporate purchases. In

contrast, the CAR for partial acquisitions by non-activist private equity funds is 1.42%, which is likely to reflect a partial resolution of the pricing inefficiencies in small-cap markets. The substantial difference in the wealth effect (the difference in the three-day CAR of 16.65%) between activist private equity funds and non-activist private equity funds suggests that economic effects of activist approach far outweigh that from resolving price inefficiencies that may exist in the small-cap markets.

If we assume that undervaluation effects are comparable between activist private equity funds and non-activists private funds, then the difference of 16.65% in the 3-day CAR should reflect primarily monitoring effects. Since a takeover is a potential vehicle of governance change an activist may institute, a part of 16.65% may reflect takeover anticipation effects, which we view to be one of the entire spectrum of monitoring actions. It is interesting to note that a takeover does not materialize within a year in 73.17% of activist private funds, therefore non-takeover related monitoring benefits must be clearly significant in the case of activist private funds. This result is also consistent with the long investment horizon of activist private funds.

If we assume that undervaluation effects are comparable between partial acquisitions by corporations (or strategic buyers) and those by public funds, then the difference of 14.04% in the 3-day CAR should reflect primarily the synergy effects of strategic block purchases. It is also interesting to note that the magnitude of the synergy effect (14.04%) is comparable to that of the overall governance effect (16.13%).

Palepu (1986) and Song and Walkling (2000) among others report that market has the ability to distinguish future targets from non-targets. We investigate whether market is able to distinguish between those targets of partial acquisitions which will become

takeover targets and those which will not using the full sample of partial acquisitions by private equity funds (N=152). Panel A of Table 3 shows that the 3-day CARs for the targets of partial acquirers taken over within a year (N=41) and those not taken over within a year (N=111) are 15.3% and 5.5%, respectively. The difference of 9.8% is significant (p-value<5%). This result is consistent with the explanation that market anticipates a takeover in partial acquisitions made by private funds.

[Table 3 about here]

Panel B of Table 3 shows that the mean 3-day CARs for the targets of activist partial acquirers taken over in a year (N=11) and those not taken over in a year (N=30) are 18.4% and 18.6%, respectively. The difference of -0.2% is not significant (p-value>10%). Given that the market has the ability to distinguish future targets from non-targets (Palepu, 1986 and Song and Walkling, 2000), an insignificant difference between the takeovers and the non-takeovers is consistent with the long term investment horizon of activist private fund partial acquirers.

The relative frequencies of the board representation are 56.1% and 7.2% for activist private equity funds and non-activist private funds, respectively. This result suggests that activist private equity funds are hands-on investors and relatively successful in moving into the target firm's board while non-activist private equity funds participate in the board infrequently. The relative frequencies of ex-post takeover activities are 26.83% and 1.80% for firms with activist private equity funds and non-activist private funds. This result suggests that the greater wealth effect of activist private equity funds may reflect different takeover expectations in part.⁸

⁸ Because there is anecdotal evidence that activist blocks often facilitate third party takeovers, we keep both takeovers by the blocks themselves and third party takeovers when we count ex-post takeovers for different

[Table 4 about here]

Appendix 2 shows the definitions of the variables used in both the univariate and the regression analysis. Private fund is a dummy variable taking the value of one if the acquirer is neither a public fund nor a corporation. Activism is a dummy variable taking the value of one when the acquirer expressly states its intention to influence the management of the firm to improve the firm value or the acquirer is known for shareholder activism in the past and zero otherwise. Block size is measured as the proportion of the common stock of the target acquired. Board representation is a dummy variable taking the value of one if the acquirer has a seat on the target's board of directors.

Board independence is measured as the ratio of outside directors to the total number of directors. Following prior studies of boards, we define inside directors as those directors who are employees of the firm, gray directors as those directors who are family members of controlling shareholders or officers, or those who have business dealings with the firm other than directorship and outside directors as those who are neither inside nor gray directors. We exclude gray directors from outside directors.⁹

Managerial ownership is measured as the fraction of common stock held by the firm's officers and directors.¹⁰ Debt ratio is measured as the ratio of the book value of the total assets minus the book value of equity to the book value of total assets.¹¹ Proportion of institutional ownership is measured as the proportion of common stock of the target

types of block purchases. When third party takeovers are removed from the count, the result is essentially the same.

⁹ However, the inclusion of gray directors in outside directors does not change our results.

¹⁰ We further disaggregate the ownership of outside directors and the ownership of managers. Using managerial ownership which excludes the ownership of outside directors, we obtain qualitatively the same results.

¹¹ Debt ratio is also calculated as the ratio of the book value of debt to the sum of the market value of equity and the book value of debt. The results reported in the paper remain essentially the same.

firm held by institutions. Dual class common stock is a dummy variable taking the value of one if the target firm has dual class common stock.¹² No previous outside block is a dummy variable taking the value of one if there is no outside block prior to the partial acquirer.

Q ratio is measured as the ratio of the book value of total assets minus the book value of equity plus the market value of equity to the book value of total assets. Market-to-book ratio is the market value of equity divided by the book value of equity. Sales is measured in millions of dollars. Total assets is measured in millions of dollars. Takeover intention is a dummy variable taking the value of one if the partial acquirer expressly states its takeover intention. Private placement is a dummy variable taking the value of one if the method of acquisition is private placement.

[Table 5 about here]

Table 5 shows the descriptive statistics of the variables used in both the univariate and the regression analysis. Panel A shows the proportions of dummy variables. Non-activist private equity funds outnumber activist private equity funds by about three to one. In 20.4% of all cases private equity funds obtain a seat or more on the board of the target firm.¹³ Only 7.9% of the target firms have dual class common stock. In about one in every four transactions, private fund is the first outside block of the target firm. Only 5.3% of private equity funds expresses the intention to takeover the target firm. In 14.5% of all cases, the partial acquisition involves a private placement, that is, the target firm issues to the partial acquirer a new common stock or other forms of securities which can be converted to the common stock of the target firm.

¹² For dual firms, voting rights have been used for the ownership variables. We obtain qualitatively identical results when we use cash flow rights for the ownership variables.

¹³ It is worthwhile to note that the block purchase always precedes acquirer representation on the target board.

Panel B of Table 5 shows the descriptive statistics of continuous variables. The mean and the median block sizes are 13.1% and 9.4%, respectively. Next, we report the governance characteristics of target firms. The fraction of outside directors (BI), which measures board independence, has a median value of 0.50 indicating that there are as many target firms with insider-dominated boards as those with outsider-dominated boards. Mean and median managerial ownerships are 25.3% and 21.2%, respectively, indicating that target firms have significant managerial ownership. We proxy lender monitoring by the debt ratio; the mean and median debt ratios are 47.9% and 45.5%, respectively. The institutional ownership of the median target firm is 29.8%.

The median q ratio is 1.559. The moderate median q ratio suggests that the targets range from low growth to high growth industries. Not surprisingly, the median market-to-book ratio of equity of target firms is also moderate (1.823). Half of the firms have sales between \$0.1 and \$82 million and total assets between \$0.7 and \$102 million, indicating the presence of a large number of small firms. Consistent with the belief that there are pricing inefficiencies in the small-cap market, most of the targets are small-cap firms.

Extending the univariate analyses of the difference in the proportions of board representation and a target being taken over within a year, we carry out corresponding multi-variate probit regressions. Using the board representation dummy as the dependent variable, we estimate the following probit regression model:

$$\text{Board representation} = f(\text{Acquirer Characteristics, Target Governance Characteristic and Other Variables}),$$

where acquirer characteristics comprise activist dummy and block size. The target governance characteristics comprise the fraction of outside directors on the board, managerial ownership, debt ratio, institutional ownership, a dual class common stock dummy and a new outside block dummy. Other variables are the q ratio, the log of sales, a dummy for takeover intention, and a private placement dummy.

The second last column of Table 6 shows the regression coefficients. The coefficient estimate of the activist private fund dummy is positive and highly significant. This is consistent with the explanation that activist private equity funds are hands-on investors and are relatively successful in securing the board seats of target firms. The coefficient estimate of block size is positive and highly significant showing that a larger block size helps with securing a board seat. The coefficient estimate of the takeover intention dummy is positive and highly significant suggesting that the private fund that states explicitly that it intends to take over the target eventually is more likely to secure a board seat. The coefficient estimate of the private placement dummy is positive and highly significant. An explanation is that private placement and board representation typically occur concurrently in an atmosphere of friendliness between the private fund and the target management.

[Table 6 about here]

We consider the question whether a private fund buys a board seat with large acquired blocks. We examine the relationship between board representations and block size. We find that block size is positively correlated with board representation for all private equity funds sample, but more so for the activist private equity funds subsample.¹⁴

¹⁴ We do not make a separate table for the activist subsample. The results will be available upon request.

We infer that private equity funds and in particular activist private equity funds tend to acquire larger blocks to secure a board seat.

Using the takeover within a year dummy as the dependent variable, we estimate the following probit regression model:

$$\text{Takeover within a year} = f(\text{Acquirer Characteristics, Target Governance Characteristic and Other Variables}),$$

where acquirer characteristics comprise activist dummy, block size and a board representation dummy. The target governance characteristics comprise the fraction of outside directors on the board, managerial ownership, debt ratio, institutional ownership and a dual class common stock dummy. Other variables are the q ratio, the log of sales and a dummy for takeover intention.

The last column of Table 6 shows the regression coefficients. The coefficient estimate of the activist private fund dummy is positive and highly significant. This is consistent with the explanation that at least some activist private equity funds take a quick exit by either buying the rest of the target themselves or arranging a third party takeover within a year of partial acquisition. The coefficient estimate of board independence is positive and highly significant. An interpretation is that an independent board is more likely to accommodate a takeover by a private fund. The coefficient estimate of debt ratio is negative and highly significant suggesting that targets which use too little debt and too much equity are more likely to be taken over quickly by a private fund following a partial acquisition.

We carry out a regression analysis of the wealth effect on the acquirer attributes as well as target governance characteristics. We use the following regression model:

$$\text{CAR} = \alpha_0 + \beta \text{ Acquirer Characteristics} + \gamma \text{ Target Governance Characteristics} + \delta \text{ Controls} + \varepsilon,$$

where acquirer characteristics are the activist dummy, block size and the board representation dummy. The target governance characteristics comprise the fraction of outside directors on the board, managerial ownership, debt ratio, institutional ownership, a dual class common stock dummy and a new outside block dummy. Control variables are the q ratio, the log of sales, a dummy for takeover intention, and a private placement dummy. Finally, β , γ and δ are vectors of coefficients which correspond to Acquirer Characteristics, Target Governance Characteristics and Controls.

In order to isolate the monitoring effect, we control for the takeover anticipation effect and the undervaluation signaling effect¹⁵. We control for the takeover bid anticipation effect by identifying those partial acquisitions which are explicitly takeover motivated. We use the takeover intention variable which identifies partial acquirers that expressly state their intention to takeover the target.¹⁶ Since the q ratio has been associated with overvaluation (Shleifer and Vishny, 1988; Stulz and Walkling, 1989;

¹⁵ The takeover anticipation effect is controlled for more as a point of interest, rather than a separate effect from that of monitoring. We contend that a takeover is one of many monitoring actions an activist may engage in.

¹⁶ We find some acquirers take over the targets themselves or arrange a takeover of the targets without making an explicit statement of their takeover intention. In this sense, board representation, which is closely related to actual takeover outcomes, is a better proxy for takeover anticipation effects.

McConnell and Servaes, 1990; Stulz and Walking, 1991), we control for undervaluation effects using the q ratio as well as the market to book ratio of equity (MBR).

Table 7 shows the results of the regression analysis. The coefficient of the activist dummy is positive and significant. This is consistent with the explanation that market believes that activist private equity funds are more likely to carry out the necessary corporate restructuring than non-activist. We find that the coefficient of board representation is significant while the coefficient of the acquired block size is not significant.

[Table 7 about here]

The coefficients of all target governance variables, namely, board independence, managerial ownership, debt ratio, institutional ownership, dual class common stock, no existing outside block are not statistically significant. All control variables, namely, the q ratio, firm size, the dummy variable for takeover intention, and the dummy variable for private placement are not significant, either.

As a robustness check, we add the number of the existing outside blocks in addition to the “no existing outside block” dummy. Since the variable is not significant, we do not report the regression result separately in a table. Similarly, we add the percentage ownership of the existing outside blocks in addition to the “no existing outside block” dummy. Neither variable is significant. In order to mitigate the impact of potential outliers in q ratio, we use the inverse of q ratio. The results are not affected by the alternative measure.

We test formally whether there is any difference in the interaction between the governance variables and the private fund depending on whether the private fund is

activist by introducing interactions between the activist private fund dummy and the governance variables. The results are shown in Table 8.

We find that managerial ownership has a more negative effect on shareholder wealth when the private fund is an activist. This may reflect the fact that even an activist private fund is unlikely to influence management if managers are very entrenched. Similarly, we find that a target firm with no previous outside block enjoys a greater wealth effect when the private fund is an activist. This is consistent with the monitoring hypothesis that the wealth impact of an activist private fund would be correspondingly greater in a target firm where the existing monitoring is particularly weak.

[Table 8 about here.]

5. Summary and Conclusions

While holding the virtue of portfolio diversification as one of its primary tenets, the standard finance theory allows for the existence of lumpy high risk/high return investments made by high net worth investors. The finance literature has long held that large outside blockholders serve as monitors of management. We examine activist private equity funds in the partial acquisitions market and in particular their effect on the target firm governance. There are considerable evidences of price inefficiencies in public markets in general and in small-cap markets in particular. We investigate the price discovery role of private equity funds using partial acquisitions by non-activist private funds.

We define a private fund as all non-public and non-corporate investment capital. It can be either funds from a pool of investors such as private equity funds, hedge funds,

venture capital and other alternative funds or funds from sole individual investors (e.g., Warren Buffet, Bill Gates, Paul Allen, Carl Icahn). We investigate the role of private equity funds in the partial acquisitions market for the 1997-2000 period. We distinguish three types of partial acquirers: private funds, public funds (institutional investors) and corporations.

We find that private equity funds dominate the partial acquisitions market with 58.0% of all deals (followed by corporations with 39.3% and institutional investors with 2.7%). Of 152 private equity funds 41 private equity funds (27.0%) take an activist position toward management. Reflecting a high entry barrier to the partial acquisitions market, most of private equity funds are funds from a pool of investors managed by a lead investor (82.2%) while sole individual investors represent a small proportion (17.8%) and the latter tend to be household names in business. Private equity funds represent 97.6% of all activist acquirers (41 out of 42) showing that private equity funds are the dominant force in shareholder activism in the partial acquisitions market. Reflecting the belief that there are pricing inefficiencies in the small-cap market, most of the targets are small-cap firms.

The three-day cumulative abnormal returns (CAR) on partial acquisitions made by all private funds, activist private equity funds and non-activist private equity funds are 6.35%, 18.51% and 1.86%, respectively. The corresponding CARs for partial acquisitions by public funds and corporations are 5.79% and 14.69%, respectively. Our results suggest that the economic effects of partial acquisitions by activist private equity funds are economically meaningful and comparable in magnitude to strategic benefits of corporate purchases. In contrast, the CAR for partial acquisitions by non-activist private equity

funds is 1.42%, which is likely to reflect a partial resolution of the pricing inefficiencies in small-cap markets. The substantial difference in the wealth effect (the difference in the three-day CAR of 16.65%) between activist private equity funds and non-activist private equity funds suggests that economic effects of activist approach far outweigh that from resolving price inefficiencies that may exist in the small-cap markets.

Activist private equity funds are more likely to obtain a board representation suggesting that activist private fund funds are hands-on investors. Furthermore, most activist private equity funds stay with the firm for at least a year. However, targets of activist private equity funds are more likely to be taken over in a year suggesting that at least some activist private equity funds take a quick exit by carrying out or facilitating a takeover of the target firm. The takeover anticipation effects in the positive market reaction to partial acquisitions by private equity funds appear to be present. Furthermore, the market reaction to partial acquisitions by private equity funds is particularly large when there is no previous outside block.

Our study overall suggests that activist private equity funds successfully internalize the benefit of monitoring and it often provides discipline and capital to firms in distress. We also find some evidence that non-activist private equity funds appear to resolve some of pricing inefficiencies in the small-cap markets.

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Figure 1
Sources of equity capital for partial acquisitions

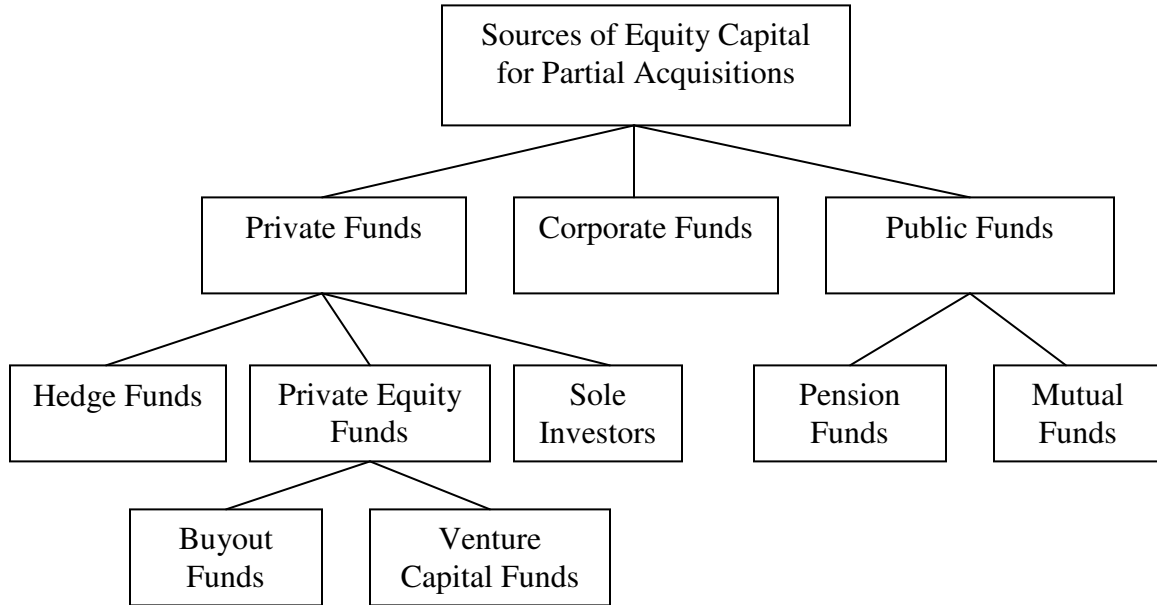


Table 1
Sample description
Panel A. Sample selection

	Number	Percent
All original partial acquisitions reported in the SDC database for the 1997-2000 period	723	100.0%
Screened after selection criteria 1	616	85.2%
Screened after selection criteria 2 through 10	262	36.2%

The sample selection criteria are: (1) targets are not financial services firms; (2) the stock price data of the target firms is available in the CRSP daily returns files over a one year period prior to the filing; (3) there is a summary of 13D or 13G filings of the partial acquisition in the Factiva database; (4) accounting data are available in the Compustat database; (5) proxies are available in the LexisNexis or EDGAR database; (6) institutional ownership information is available in the quarter prior to the announcement date; (7) the partial acquisition reported in the SDC database is confirmed by searching the Factiva database; (8) the announcement of the partial acquisition is not preceded by other partial acquisition announcements during the 2-month period prior to the disclosure; (9) the announcement of the partial acquisition does not take place in the middle of a tender offer process; (10) no announcement of other material events such as surprise earnings, earnings restatements and major investment or divestiture decisions occurs within a week before and after the announcement of partial acquisitions.

Panel B. Distribution of the partial acquisitions by acquirer type and year

Year	Private funds		Public funds		Corporations		All acquirers	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
1997	82	67.8%	1	0.8%	38	31.4%	121	100.0%
1998	33	58.9%	2	3.6%	21	37.5%	56	100.0%
1999	16	36.4%	1	2.3%	27	61.4%	44	100.0%
2000	21	51.2%	3	7.3%	17	41.5%	41	100.0%
1997-2000	152	58.0%	7	2.7%	103	39.3%	262	100.0%

Panel C. Distribution of activists and non-activists within each partial acquirer type

	Private funds		Public funds		Corporations		Row total	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
Activist	41	27.0%	1	14.3%	0	0.0%	42	
		97.6%		2.3%		0.0%		100.0%
Non-activist	111	73.0%	6	85.7%	103	100.0%	220	
		50.5%		2.4%		46.8%		100.0%
Column total	152	100.0%	7	100.0%	103	100.0%	262	100.0%

Table 2
Cumulative abnormal returns for three types of acquirers

Event time period	Private funds (N=152)	Public funds (N=7)	Corporate acquirers (N=103)	Activist private funds (N=42)	Non-activist private funds (N=111)	Activist private equity funds - Non-activist private funds
[-1, 0]	4.76 ^{***}	5.04 ^{***}	12.74 ^{***}	14.33 ^{***}	1.23 [*]	13.10 ^{***}
[-1, 1]	6.35 ^{***}	5.79 ^{***}	14.69 ^{***}	18.51 ^{***}	1.86 ^{***}	16.65 ^{***}
[-2, 2]	7.51 ^{***}	5.17 ^{**}	14.55 ^{***}	19.61 ^{***}	3.04 ^{***}	16.67 ^{***}
[-5, 5]	8.46 ^{***}	0.00	12.93 ^{***}	21.82 ^{***}	3.53 ^{**}	18.30 ^{***}
[-30, 30]	11.72 ^{***}	-0.12	6.44 ^{**}	32.04 ^{***}	4.22	27.80 ^{***}

CARs (mean cumulative abnormal returns) are reported in percentages. The level of significance is one-tailed. The level of significance is based on the generalized signed test.

^{***} indicates 1% level of significance.

^{**} indicates 5% level of significance.

^{*} indicates 10% level of significance.

Table 3

Univariate analysis of the difference in the wealth effect between targets which are taken over within a year and those which are not

Panel A. All private funds

	Takeovers (N=41)	Non-takeovers (N=111)	Difference
2-day CAR	0.108	0.042	0.066
3-day CAR	0.153	0.055	0.098**
5-day CAR	0.169	0.066	0.102**

Panel B. Activist private funds

	Takeovers (N=11)	Non-takeovers (N=30)	Difference
2-day CAR	0.130	0.148	-0.018
3-day CAR	0.184	0.186	-0.002
5-day CAR	0.198	0.196	0.002

Independent sample t tests are used for comparison. Unequal variances are assumed. The level of significance is two-tailed.

** indicates 5% level of significance.

Table 4

Univariate analysis of the difference in the proportion of board representation and a target being taken over within a year

	Activist private fund (N=41)	Non-activist private fund (N=111)	Difference
Board representation	0.561	0.072	0.489***
Takeover in a year	0.269	0.018	0.250***

Independent sample t tests are used for comparison. Unequal variances are assumed. The level of significance is two-tailed.

*** indicates 1% level of significance.

Table 5
Descriptive statistics of variables for the sample of private funds

Panel A. Descriptive statistics of dummy variables					
		Proportion			
Acquirer characteristics					
	Activism	0.270			
	Board representation	0.204			
Target governance characteristics					
	Dual class common stock	0.079			
	No previous outside block	0.250			
Control variables					
	Takeover intention	0.053			
	Private placement	0.145			
Panel B. Descriptive statistics of continuous variables					
		Mean	Median	Minimum	Maximum
Acquirer characteristics					
	Block size	0.131	0.094	0.034	0.500
	Percentage ownership of the existing blocks	0.190	0.151	0.000	0.855
Target governance characteristics					
	Board independence	0.495	0.500	0.000	0.941
	Managerial ownership	0.253	0.212	0.000	0.884
	Debt ratio	0.479	0.455	0.000	0.995
	Number of the existing blocks	1.849	2.000	0.000	8.000
	Institutional ownership	0.298	0.259	0.000	0.923
Control variables					
	Q ratio	2.448	1.559	0.423	27.911
	Market to book ratio of equity	4.947	1.823	0.193	115.93
	Sales (\$ million)	668	82	0.1	27973
	Total assets (\$ million)	835	102	0.7	27278

Table 6
Probit analysis of board representation and takeover within a year as a function of acquirer and target firm characteristics

		Board representation	Takeover within a year
	Constant	-2.949(10.04) ^{***}	-2.478(6.16) ^{***}
Acquirer characteristics	Activism	1.382(14.15) ^{***}	1.667(8.90) ^{***}
	Block size	0.039(8.02) ^{***}	-0.013(0.54)
	Board representation		0.169(1.11)
Target governance characteristics	Board independence	0.104(0.02)	2.048(3.63) ^{***}
	Managerial ownership	0.007(0.55)	-0.001(0.00)
	Debt ratio	0.009(0.00)	-1.387(2.79) ^{***}
	Institutional ownership	0.074(0.01)	-0.028(-0.54)
	Dual class common stock	-6.002(0.00)	0.027(0.64)
	No previous outside block	0.211(0.20)	
Control variables	Q ratio	0.065(1.90)	-0.245(1.44)
	Log of sales	0.043(0.49)	0.082(0.41)
	Takeover intention	1.369(3.27) ^{***}	0.624(0.85)
	Private placement	1.598(13.73) ^{***}	
N		152	152
Log likelihood		-37.84	-30.73

The dependent variables are the board representation dummy variable for the first regression and a dummy variable for whether the target is taken over in a year for the second regression, respectively. Year dummies and industry dummies are not shown in the table. The chi-squares are shown in parenthesis.

^{***} indicates 1% level of significance.

Table 7
Regression analysis of the wealth effect of partial acquisitions by private equity funds as a function of private equity funds and target firm characteristics

		Three-day CAR
Acquirer characteristics	Constant	-0.004(-0.08)
	Activism	0.124(4.18) ^{***}
	Block size	0.001(0.27)
	Board representation	0.062(1.73) [*]
Target governance characteristics		
	Board independence	-0.009(-0.17)
	Managerial ownership	-0.001(-1.34)
	Debt ratio	-0.069(1.57)
	Institutional ownership	-0.020(-0.38)
	Dual class common stock	-0.022(-0.54)
	No previous outside block	0.054(2.01)
Control variables		
	Q ratio	0.002(0.52)
	Log of sales	-0.001(-0.24)
	Takeover intention	-0.002(-0.03)
	Private placement	0.029(0.85)
N		152
Adjusted R ²		0.19

The dependent variable is the three-day cumulative abnormal return. Year dummies and industry dummies are not shown in the table. Coefficients are White heteroskedasticity consistent estimates. The t-statistics are shown in parenthesis and the level of significance is two-tailed.

^{***} indicates 1% level of significance.

^{*} indicates 10% level of significance.

Table 8
Regression analysis of the wealth effect on the interaction between acquirer and target firm governance characteristics

Variables	Coefficients
Constant	-0.016(-0.33)
Acquirer characteristics	
Activism	0.222(2.47)**
Block size	0.001(1.11)
Board representation	0.012(0.35)
Target governance characteristics	
Board independence	0.002(0.03)
Activism x Board independence	-0.000(-0.64)
Managerial ownership	-0.004(0.10)
Activism x Managerial ownership	-0.005(-3.19)***
Debt ratio	0.030(0.65)
Activism x Debt ratio	-0.060(-0.69)
Institutional ownership	-0.048(-0.88)
Activism x Institutional ownership	0.041(0.36)
Dual class common stock	-0.052(-1.31)
Activism x Dual class common stock	-0.030(-0.24)
No previous outside block	-0.011(-0.39)
Activism x No previous outside block	0.362(5.23)***
Control variables	
Q ratio	0.002(0.77)
Log of sales	0.004(0.65)
Takeover intention	-0.037(-0.70)
Private placement	0.038(1.21)
N	152
Adjusted R ²	0.24

The dependent variable is the cumulative abnormal return. Year dummies and industry dummies are not shown in the table. Coefficients are White heteroskedasticity consistent estimates. The t-statistics are shown in parenthesis and the level of significance is two-tailed.

** indicates 5% level of significance.

*** indicates 1% level of significance.

Appendix 1

A brief chronology of the partial acquisition of Variflex Inc. by REMY Capital Partners

On November 19 1997, Dow Jones reports that REMY Capital Partners IV LP acquired 28 percent of Variflex Inc's common stock from Variflex co-founder Raymond H. Losi and other Losi family members for \$9.2 million, or \$5.50 a share. It indicates that REMY is a Los Angeles based private investment partnership and that the Losi family continues to hold about 32% of the outstanding shares. Mark Siegel, the chairman of REMY Capital Partners replaces Raymond Losi as the chairman of the Variflex board. However, Raymond Losi remains as a director. Raymond Losi' son, Jay Losi, who was not a selling shareholder and owns 22 percent of the company's stock, is named chief executive officer and keeps his titles of president and chief operating officer.

On that day Variflex stock gains \$1.44 on Wednesday to 5.94, up 32 percent. In 1996 Variflex lost \$1.8 million as a result of declining market for in-line stakes, which accounted for about 69 percent of the company's sales. On November 26 1997, REMY Capital Partners IV LP files with the SEC the 13D(Original) indicating that it acquired 28 percent of the common stock of Variflex Inc. REMY discloses that it may hold discussions with the Variflex management and it will vote its shares to elect two directors for the board of directors which has a maximum of six directors.

On September 9 1998, Steven Muller, president and co-chief executive of Applause Enterprises, a toy distributor, is named president replacing Jay Losi, who remains chief executive. On October 20 1998, Variflex, which has 5.7 million shares outstanding, announces a self-tender offer to repurchase up to 750,000 shares at \$6.50 a share. In 2003 it reports return to profitability. It reports a net income of \$856,000, or \$0.19 per diluted share on revenues of \$57,884,000. On August 24, 2004 Variflex enters into a definitive merger agreement, under which Bravo Sports, a private held competitor based in Los Angeles, will acquire Variflex in an all-cash transaction valued at approximately \$38 million, or \$7.60 a share. REMY and the Losi family still hold 2/3 of the company stock and Jay Losi is still the chief executive officer at the time of merger.

Appendix 2

Variable definitions

Variable name	Definition	Sources
Private fund	a dummy variable taking the value of one if the acquirer is neither a public fund nor a corporation	13d and 13g filings
Public fund	a dummy variable taking the value of one if the acquirer is a public fund	13d and 13g filings
Corporate (or strategic) acquirer	a dummy variable taking the value of one if the acquirer is a corporation	13d and 13g filings
Activism	a dummy variable taking the value of one if the private fund is an activist	13d and 13g filings; Factiva database
Block size	the proportion of the common stock of the target acquired	SDC database; Factiva database
Board representation	a dummy variable taking the value of one if the acquirer has a board representation	13d and 13g filings; Factiva database
Board independence	a proxy for board independence measured as the ratio of outside directors to the total number of directors	Proxy statements
Managerial ownership	the managerial ownership variable measured as fraction of the common stock of the firm held by the firm's officers and directors	Proxy statements
Debt ratio	debt ratio measured as the ratio of the book value of the total assets minus the book value of equity to the book value of total assets	Compustat
Proportion of institutional ownership	an institutional ownership variable measured as the proportion of the common stock of the target firm held by institutions	Compact Disclosure database; Factiva database
Dual class common stock	a dummy variable taking the value of one if the target firm has dual class common stock	Proxy statements
No previous outside block	a dummy variable taking the value of one if there is no outside block prior to the partial acquirer	Proxy statements
Q ratio	the q ratio measured as the ratio of the book value of the total assets minus the book value of the equity plus the market value of the equity to the book value of the total assets	Compustat database; CRSP database
Market-to-book ratio	the market to book ratio of equity.	Compustat database; CRSP database
Log of sales	log of the total net sales of the target firm in millions of dollars	Compustat database
Total assets	the total assets in millions of dollars	Compustat database
Takeover intention	a dummy variable taking the value of one if the partial acquirer expressly states its takeover intention	13d and 13g filings
Private placement	a dummy variable taking the value of one if the method of acquisition is private placement	13d and 13g filings

Appendix 3
Distribution of the target firms by industry

Industry	SIC Codes	Private fund	Public funds	Corporations	Total blocks	Percent of sample
Crops	1	0	0	0	0	0.0
Natural resource extraction	10, 12, 13, 14	5	0	2	7	2.7
Real Estate Development	15	2	0	0	2	0.8
Food products	20	1	0	3	4	1.5
Tobacco	21	0	0	0	0	0.0
Apparel and textile mill products	22, 23	3	0	1	4	1.5
Prefab buildings	24	0	0	0	0	0.0
Furniture and fixtures	25	0	0	0	0	0.0
Paper and allied products	26	2	0	0	2	0.8
Printing and publishing	27	0	0	3	3	1.1
Chemicals and allied products	28	26	1	8	35	13.3
Petroleum and coal products	29	0	0	0	0	0.0
Rubber and plastics	30	2	0	1	3	1.1
Leather and footwear	31	1	0	0	1	0.4
Stone, clay and glass products	32	1	0	0	1	0.4
Primary products and metals	33,34	6	0	3	9	3.4
Industrial machinery	35	4	1	5	10	3.8
Electronic/electric equipment	36	6	0	13	19	7.2
Transportation equipment	37	4	0	2	6	2.3
Instruments and related products	38	4	0	6	10	3.8
Miscellaneous manufacturing	39	1	0	1	2	0.8
Railroad transportation	40	0	0	0	0	0.0
Trucking and warehousing	42	2	0	0	2	0.8
Air transportation	45	1	0	0	1	0.4
Miscellaneous transport	47	1	0	0	1	0.4
Communications	48	10	1	10	21	8.0
Utilities and waste management	49	4	0	0	4	1.5
Wholesale	50, 51	6	0	0	6	2.3
Retail	52-59	18	1	3	22	8.3
Non-financial services	71-87	41	3	42	86	32.6
Other		1	0	0	1	1.1
Total		152	7	103	262	100.0