Capital Punishment:
Signalling Takeover Intentions by Raising Capital

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Abstract

Using a sample of 1060 acquisitions from 1981 - 2006, this study is the first to document significant short-run target cumulative average abnormal returns (CAARs) occurring at the time the bidding firm last announced raising capital prior to the acquisition, on average 225 days prior to the acquisition announcement date. Informed trading is also found to occur in target firms over this period, with price-volume dynamics supporting the occurrence of market anticipation as opposed to insider trading. In addition, an examination of the pre-bid runup period finds that raising capital closer in proximity to the acquisition announcement date results in significantly higher target runups and takeover premiums, thereby punishing the bidder for the 'revelation' of takeover intentions. Results are robust to various factor-model measures of benchmark performance, equal- and value-weighted returns, event-period clustering, variance shifts over the event period, and other standard controls. In sum, evidence strongly supports the notion that raising capital can act as both a statistically and economically significant signal of a forthcoming takeover attempt.

I. Introduction

It is well-known that the announcement of a proposed corporate merger or acquisition has a significant impact on the share price of the target firm, not only at the announcement period and beyond, but in the weeks prior as well. Jensen and Ruback (1983) review 13 studies that examine returns around takeover announcements and report an average abnormal return of 30% to target shareholders in successful tender offers and 20% to target shareholders in successful mergers. More recently, Andrade, Mitchell, and Stafford (2001) find that target firms gained 23.8% from 20 days before the acquisition announcement until the effective date of the acquisition. Ex-ante, investing in target firms can thus be very profitable if such acquisition announcements are correctly anticipated and/or quickly acted upon. This has given rise to potentially profitable trading strategies based on insider trading and/or market anticipation during the pre-announcement trading period.

Studies of illegal insider trades revealed by U.S. regulators (Cornell and Sirri, 1992; Meulbroek, 1992; Chakraverty and McConnell, 1997, 1999; Fishe and Robe, 2004) have provided solid support for illegal insider trading being a major contributor to this target runup. Indeed, a number of papers attribute *all* of the abnormal volume and price movements shortly before the acquisition announcement to insider trading (e.g. Keown and Pinkerton, 1981; Bris, 2005), with this pre-bid trading period even commonly referred to as the *information leakage period*. Such activity is perceived to pose a threat to the operation of financial markets (Fishe and Robe, 2004; Bris, 2005), with previous SEC Chairman Arthur Levitt specifically addressing the need to fight insider trading, describing it as a prevalent and economically dangerous activity which undermines investor confidence and destabilizes investment (Levitt, 1998).

Against this backdrop, other researchers contend that rather than utilizing strictly private information, investors may instead be able to predict takeovers using publicly available information, and this anticipation of a takeover is reflected in the pre-bid target price runup. In a seminal paper, Jarrell and Poulsen (1989) examine 172 tender offers from 1981-1985 and find that increases in both stock prices and trading volumes are associated with several observable and legal factors (most notably media rumors and the establishment of a large share position in the target), consistent with little or no illegal insider trading during the runup period. Zivney, Bertin, and Torabzadeh (1996) examine 271 rumored takeover targets in the Wall Street Journal and conclude that the market factors in an increased probability of a takeover (even overreacting to such an extent that a short-selling strategy can become profitable). Both Singh (1998) and Gomes (2001) similarly find evidence of takeover anticipation surrounding the establishment of bidder toeholds[1] and accumulation by arbitrageurs.

In a sample of 1060 observations spanning years 1981-2006, this paper provides the first evidence that the public announcement of raising capital can similarly serve as a signal to discerning market participants that an acquisition attempt is forthcoming, supporting the market anticipation hypothesis over the insider trading hypothesis given the public nature of

[1] A large share position in a firm is often referred to as a toehold or foothold in the literature.

the event of raising capital, the narrow event window (-1, 0) examined, and the associated price-volume dynamics uncovered. This signal is found to not only impact target firm abnormal returns surrounding the capital issue date announcement, but also the takeover premium paid by the acquiring firm, thereby impacting both target and acquirer shareholder wealth.

An enlightening anecdote involves Barclay's share issue announced June 15, 2008. This followed more than a month of speculation that they would raise capital, in part to fund acquisitions, with Lehman Brothers a widely speculated target (Dow Jones News Service, May 20, 2008; Today(Singapore), May 22, 2008). Over a two-day period (-1,0), with day 0 representing Barclay's issue date announcement, Lehman Brothers experienced market-adjusted abnormal returns of 17.28%, which journalists attributed to investors' anticipation of a takeover by Barclay. Consistent with such reports, I find strong evidence of abnormal target returns surrounding capital issue date announcements of firms which subsequently become the associated bidding firms, despite an average time to acquisition of 225 days.

Specifically, this paper begins by first identifying a particular corporate event occurring up to *two years prior* to the acquisition announcement, namely the raising of capital[2] by the bidding firm. Centered on the *bidder's* most recent issue date of capital announcement, this empirical investigation then uses standard event-study methodology (as per Brown and Warner 1985, 1990) on a sample of 1060 mergers and acquisitions occurring between 1981-2006 to examine associated *target* returns, both under the market model and while controlling for market risk, size, book-to-market, and momentum effects. Although the acquisition has not yet been announced and as such no established connection between the bidder and target yet exists, I find a cumulative average abnormal return (CAAR) of 0.62% (t-stat: 3.38) for target firms over the daily interval (-1, 0) surrounding the issue date of capital, equivalent to an annualized return of 209%[3]. This CAAR increases to 0.90% (t-stat: 4.38) when the purpose given for raising capital explicitly refers to either acquisitional uses or increases in free cash flow.

Second, the price-volume dynamics surrounding the capital issue announcement period are examined to infer the nature of traders responsible for the abnormal returns discovered. Insiders desire both liquidity and anonymity and therefore trade when volume is high, resulting in concurrent price discovery due to the informed nature of their trades (O'Hara 1995; Madhaven 2002). The absence of coincident abnormal volume and returns in the runup period of this sample does not then support the case for information leakage effects. Similarly, the early price discovery of insider trading typically results in a muted event-date return, whereas here we witness the opposite. Finally, the narrow window examined (-1,0) appears to be a sub-optimal period for a substantial amount of insider trading to occur, affording little time for stealth trading[4] to occur and involving a substantial delay on returns. These facts seem to

[2] Raising capital in this paper always refers to the first public announcement of such as recorded in SDC.

[3] Results reported throughout refer to the equal-weighted market model, with Appendixes providing a complete description of value-weighted results. Note that the annualized return is provided for comparison purposes, and for a number of reasons discussed below this return is not practically feasible.

[4] Stealth trading refers to the breaking down of a larger trade into smaller ones to disguise the true nature of the desired trade.

suggest that abnormal returns are more likely the result of market participants relying on the analysis of public information rather than acting on strictly private information.

The third stage of analysis examines the timing of capital raised. As the acquisition announcement date draws near, it is expected that anticipatory signals will intensify in both number and in strength. Essentially, the asymmetric nature of private information weakens as the event in question approaches. Therefore I examine the implications of raising capital shortly prior to the acquisition announcement as compared to raising capital well in advance of the event, expecting that raising capital closer in proximity to the acquisition announcement date will provide a stronger takeover signal than doing so earlier. Supporting this hypothesis, in a standard multivariate regression I find that raising capital closer in proximity to the announcement date (within 20, 30, 45, or 60 trading days) for otherwise similar takeover bids results in significantly higher target runups than if capital were raised much earlier, again supporting the role of raising capital as an anticipatory signal of an impending takeover.

A higher target runup could naturally be expected to result in a higher takeover premium to be paid by the bidding firm, as it is conventional to include a period of pre-bid target runup in the premium (Schwert, 1996)[5]. Therefore in the fourth stage of analysis, I first use multivariate analysis to confirm that a higher runup is indeed associated with a higher premium in my sample. Since raising capital in close proximity to the acquisition announcement date has already been found to have a positive impact on *target returns*, this confirmation provides indirect evidence that the timing of raising capital is associated with higher *takeover premiums* as well. I next provide some direct evidence of this association by showing that for takeovers in which capital has been raised within close proximity to the bid announcement, proximity dummy variables remain significant even after including the target runup as an additional control.

In the fifth and final stage of analysis, I use Llorente, Michaely, Waar, and Sang's (2002) measure of informed trading as a robustness check that the increasing target returns discovered over the bidders' capital issue date announcement are not a result of hedging activity or public news on future payoffs[6]. To this end, I find evidence of informed trading over the issue-date event window, and for firms with high levels of information asymmetry (in which informed trading is typically most prevalent), this level of informed trading is significantly higher over the event window (-1, 0) than over an estimation window (-270, -91). A number of other robustness checks are provided as well.

Findings from each of the five stages of analysis are consistent with the notion that some market participants observe the enhanced financial capabilities of firms about to raise capital, and, perhaps combining this signal with other perceived takeover signals, ultimately believe that an acquisition has become more probable. The bidder's capital issue date announcement

[5] Moreover, defining the control (takeover) premium as: *Premium* = *Runup* + *Markup,* Schwert finds that the markup does not decrease as the runup increases (aka the *markup pricing hypothesis*).

[6] In the sense of public news interpreted similarly by all investors and thus not impacting stock demands.

may then be an initial catalyst to spur on target predictions, or may simply serve to strengthen the case made by other available information. What makes this event uniquely consequential is that, unlike rumors, it is a substantiated piece of widely available public information that can be perceived as fundamentally impacting the ability of firms to carry out acquisitions; it also occurs at the complete discretion of management. Thus, if it were determined that raising capital does indeed "tip one's hand" and bid up potential target firm share prices, a stronger argument could be made to raise or hold excess cash well in advance of such acquisitions.

Findings of abnormal target returns are typical in the literature surrounding acquisition announcement dates; however this is the first paper I know of to offer some evidence that a similar pattern can be observed around capital issue announcement dates, on average 225 days in advance of the acquisition announcement date. This also appears to be the first paper to empirically document significant differences in both target runups and premiums based on when and whether capital was raised prior to the acquisition. This paper therefore seeks to contribute to the literature in a number of ways.

First, this research offers a partial explanation of the announcement runup effect, supporting the market anticipation hypothesis as opposed to insider trading. This may be of interest not only to academics and market participants, but also to regulatory authorities, as attorneys investigating insider trading in relation to Anheuser-Busch's acquisition of Campbell Taggart based part of their search for market anticipatory factors on Jarrell and Poulsen's 1989 paper (Cornell and Sirri, 1992).

Second, the finding that both target returns over the runup period and takeover premiums offered by the bidding firm differ according to when capital was raised has implications for the optimal capital structure of the firm. Companies wishing to acquire may avoid raising capital shortly in advance of the acquisition announcement to avoid alerting the market that an acquisition may be afoot (and thus raising the target's price and perhaps negotiating strength). Instead, they may raise any required capital earlier than otherwise necessary, understanding that the combination of signals distanced through time may not be as compelling as signals bundled together, resulting in less-aggressive speculation just prior to the event date as per the model of He and Wang (1995).

Finally, the finding that target returns are reacting to acquisition strategies much earlier than the literature currently accounts for could be expected to impact future research on the profitability of mergers and acquisitions and related activities. For example, many studies measure returns related to merger-arbitrage investment strategies; these returns may change if one allows for the merger-arbitrageur's entrance to occur earlier, as far back as the bidder's issue date of capital announcement as opposed to nearer the acquisition announcement date.

The remainder of the paper is organized as follows: Section 2 examines literature related to insider trading, market anticipation, the takeover premium, and informed trading. Section 3 outlines the sample of mergers and acquisition used herein as well as the methodology

employed. Section 4 discusses the empirical results for each of the five stages of analysis, while Section 5 concludes.

2. Literature Review

2.1 Pre-announcement Trading Activity for Target Firms

Takeover announcements typically increase the value of target common stock, with large positive abnormal returns commonly reported around the public announcement of a merger or tender offer[7]. Andrade et al. (2001) show in a sample of 3,688 mergers between 1973 and 1998 that target firms gain a significant 23.8% in a window beginning 20 days before the acquisition announcement and ending on the merger closing date. A number of researchers have found that approximately half (between 42% and 64%) of such returns occur prior to the merger announcement itself (Keown and Pinkerton, 1981; Jensen and Ruback, 1983; Eger, 1983; Mikkelson and Ruback, 1985; Dennis and McConnell, 1986; and Grundfest and Black, 1987). Summarizing the findings of 21 studies, Bruner (2004) consistently finds evidence of significant target abnormal returns prior to, on, and shortly after the acquisition announcement date, despite variations in the time period, deal type, and the precise event window used.

This abnormal return of the target firm occurring prior to the actual acquisition announcement is often referred to as the leakage period or the pre-announcement target price runup (or 'target runup'), and is well-established in the literature. Two rationales are often discussed as the cause for both this runup and the associated abnormal volume: insider trading/information leakage and market anticipation.

2.2 Insider Trading/Information Leakage and Market Anticipation

The information leakage hypothesis contends that some investors learn about impending takeovers through those that have access to non-public information (Keown and Pinkerton, 1981). Commonly cited support for this hypothesis includes Meulbroek (1992), Cornell and Sirri (1992), Chakravarty and McConnell (1997), and Fishe and Robe (2004), all of whom analyze cases in which the SEC formally charged investors with insider trading. Each study finds that prices adjust to incorporate this nonpublic information.

In contrast to information leakage, the market anticipation hypothesis contends that there are a number of publicly available information sources which could potentially be utilized by investors to alter their perception of the likelihood of impending takeovers (Jensen and Ruback, 1983). Such public information mentioned in the literature includes rumors of anticipated bids, bidder toeholds (bidder accumulation of the target firm's stock), the friendly or hostile nature of the bid, buyer identities, industry analysis, the appearance of a company name on a

[7] Agrawal and Jaffe (2000) and Andrade et al. (2001) provide careful summaries of the literature here.

restricted list for investment bankers, technical analysis, large stock acquisitions, or firm-specific analysis such as financial distress, internal disputes, or statements of managers or controlling shareholders (Jarrell and Poulsen, 1989; Gomes, 2001; King, 2009). Investors impound this anticipation of a takeover into share prices such that prices of target firms may more fully reflect all available public information, specifically the adjusted probability of a takeover occurring, as per Fama's (1970) efficient markets hypothesis (Asquith, 1983).

There are a number of difficulties in distinguishing empirically between the insider trading/information leakage and market anticipation hypotheses as explanations for price and/or volume runups in the pre-announcement period of the takeover process.

The first obstacle deals with the nature of the hypotheses. Beginning with the insider trading/information leakage hypothesis, the precise definition of these components are not always clear in the literature, with Netter, Poulsen, and Hersch (1988) stating that even the SEC and the courts do not agree as to what is prohibited by law, and with a number of structural weaknesses inherent in the SEC insider trading detection algorithm itself (Minenna, 2003). To be clear, this paper defines insider trading as illegal trading by corporate insiders while they are in possession of material, non-public information about the firm, such as senior management, board members, controlling shareholders, or financial intermediaries who are fiduciaries of a firm.

Sanders and Zdanowicz (1992) consider information leakage to occur when private information is communicated (directly or indirectly; legally or otherwise) to a proper subset of market participants who use this information to trade against uninformed investors. Thus, information leakage encapsulates insider trading, albeit insider trading may represent the most pervasive element. The authors go on to note that the distinction between private and public information is blurred as the number of market participants privy to the leaked information increases, and that this distinction must be maintained if researchers are to distinguish between the insider trading/information leakage and market anticipation hypotheses (p. 111). This paper therefore uses Factiva's earliest news release of a capital issue date as the date the information becomes public, providing a reasonable and crisp distinction between public and private information.

The second difficulty arises in collecting data on information leakage, as by definition this information does not originate in the public domain. Without having a list of actual trades revealed by U.S. regulators (as in Meulbroek, 1992) or a precise time frame over which insiders had access to relevant information (as in Sanders and Zdanowicz, 1992), studies likely capture too little relevant trading activity and/or too much irrelevant trading activity in their event window. This may confound effects of information leakage and market anticipation in both the event and estimation time intervals, weakening the statistical power of the tests (Sanders and Zdanowicz, 1992). As discussed below, this is dealt with by analyzing a very narrow (-1,0) event window in which insider trading is unlikely to be substantial (given the highly public nature of the event, insiders' desires to mask their trades, and insiders' expectation of increasing returns

at this time), reducing such confounding effects from results attributed herein to market anticipation.

A final challenge derives from the fact that both the information leakage hypothesis and the market anticipation hypothesis are based on the notion of informed trading. In the first case, investors are led to believe that insiders have directly or indirectly passed on valuable insight, while in the second case investors analyze public information to potentially arrive at the same conclusion themselves. That is, while the source of information differs, in each case the desire to trade is based on investors' beliefs that they are in possession of time-sensitive ('private') information that should be acted upon in order to accrue a worthwhile return. Thus, typical econometric methods used to distinguish insider trading from regular trading (such as positive serial correlation of returns) are the same as those used to distinguish anticipatory trading from regular trading, and are therefore problematic in distinguishing the two hypotheses from one another if both are present during the same event and/or estimation period (Minenna, 2003; King, 2009). This challenge is dealt with by examining the underlying price-volume dynamics.

2.3 The Takeover Premium

The rationale underlying takeover premiums is well illustrated in Schwert (1996), in which he explains the implications of two competing views of capital markets when target returns are increasing prior to a bid for control. The efficient markets viewpoint is that such a runup reflects aggregate good news about the value of the stock, while the opposing viewpoint is that the runup reflects the diffusion of private information the bidder already possesses into the public arena[8]. This distinction is important as in calculating the premium to be paid, the bidder may ignore the runup if no new information is perceived to be revealed therein; the target may think otherwise. The empirical question then is whether takeover premiums are higher when target runups are larger.

Defining the markup as the difference between the premium paid and the target runup, (or equivalently *Premium = Runup + Markup)*, Schwert outlines a specific hypothesis in the simplest fashion by considering the following relation: $Premium_i = a + b\ Runup_i + u_i$

The *substitution hypothesis* implies that the total premium is not affected by the target runup, so the slope coefficient *b* should equal 0. In contrast, the *markup pricing hypothesis* implies that the premium increases one-for-one with the runup, and therefore the slope coefficient *b* should equal 1. A rejection of the substitution hypothesis then provides evidence that a higher target runup is associated with a higher takeover premium paid by the bidding firm.

[8] Without such private information the bidder would not be justified in paying a substantial premium for control.

2.4 Informed Trading

As informed trading in this paper simply plays the role of a robustness check, I restrict discussion to the following model examined. In developing a measure of informed trading, Llorente, Michaely, Saar, and Wang (2002) state that the actual dynamics of returns depend on the relative importance of three return-generating mechanisms: public news on future payoffs, trading for hedging reasons, and trading for speculative reasons. The first results in neither serially-correlated returns nor abnormal volume (as investors' demands have not changed), while the latter two mechanisms related to trading do. *Returns generated by hedging trades tend to reverse themselves*, as the stock price adjusts to attract other investors to take the other side of the trade, yet price changes contain no information about future payoffs. *Returns generated by speculative trading tend to continue themselves*, as price changes reflect the informed investors' expectation of the stocks' future payoffs. This expectation is fulfilled later on as private information becomes less private and more public. That is, typically information is only partially impounded into the price when speculative trading occurs, with sales followed by sales and purchases followed by purchases, which should be reflected in the data as positively-correlated returns.

Trade generated returns, unlike those generated by public news on future payoffs, require volume, as demands are changing. Thus by conditioning on volume, the model identifies trade-generated returns, and this hypothesis is shared by Campbell, Grossman, and Wang (1993) in an earlier paper. Thus, a positive serial correlation of returns together with high volume becomes a measure of when informed trading is more important than trading for hedging purposes, as stated in Wang (1994) and Llorente, Michaely, Saar, and Wang (2002). Furthermore, as private information is more likely to be generated in stocks with higher information asymmetry, informed trading is expected to be higher when information asymmetry is higher.

This theory offers a number of testable hypotheses for my paper. First, abnormal target returns occurring around the bidder's issue date of capital announcement should reflect informed trading to support a theory of *either* information leakage or market anticipation[9]. Thus, I test for high volume associated with a positive serial correlation of returns around this issue date. Second, I test that this holds for stocks of higher information asymmetry as informed trading is expected to be more prevalent in such case. Finally, I compare results for highly asymmetric stocks at the issue date to that of the pre-estimation period to confirm that significantly more evidence of informed trading is occurring during the event window.

[9] The presence of informed trading does not distinguish between whether such trading occurs from insider knowledge or from private information accrued from the synthesis of publicly available information.

3. Data and Methodology

3.1 Data

My initial merger and acquisition (M&A) sample is obtained from the Securities Data Corporation (SDC) M&A Database provided by Thomson Financial. Stock price and volume data are from the Center for Research in Security Prices (CRSP) daily files, with fiscal year-end accounting data from Compustat and analyst information from the Institutional Brokers Estimate System (I/B/E/S).

I set a minimum deal value of $10 million, not only to reduce measurement errors but also because very small deals will not have substantial expectations of capital requirements, negating any potential signaling effect from raising capital. The percentage of shares owned is required to increase from below or equal to 50% to greater than 50% after the takeover to represent a definitive change in control and thereby truly represent the merger/acquisition process and benefits thereof (Luo, 2005). Additionally, the bidding firm must be public (as the target) and must have announced the raising of capital within two years prior to the takeover announcement date, the most recent of which marks Day 0 of this event study[10]. The SDC Global Issues database is used for this, with minimum total proceeds of $50 million required from a seasoned equity offering, bond issue, or syndicated bank loan[11]. IPOS are not considered here as capital-raising events due to the enhanced unpredictability of newly-public companies, including unpredictable capital demands and growth opportunities as well as a lack of historical analysis, all of which may impact the firm-specific anticipatory ability of market participants.

To be included in the sample, the target firms' shares had to have at least 50 percent of non-missing returns during the estimation window that lasts from 270 to 91 trading days prior to the capital issue date announcement of the bidder, at least 75 percent of non-missing returns from twenty days prior to five days following this issue date, and full data availability over the (-1,0) issue date announcement. Given the speculative nature of firms in distress (Masse, Hanrahan, Kushner, and Martinello, 1998; Gao and Oler, 2008), target stocks flagged as bankrupt by SDC were excluded from analysis[12]; finance and utility firms were also excluded as government regulation may interfere with the expected probability of acquisition (Song and Walkling, 2000). Robustness checks reveal similar results with the inclusion of all such firms.

The final sample size is 1060 observations[13], covering acquisition announcements from 1982[14] to 2006 and issue date announcements from 1981 to 2006 (as acquisitions are matched

[10] Only the *most recent* date of raising capital prior to the acquisition announcement is used to more realistically represent a situation in which a variety of factors relevant to the anticipation of the takeover, including industry analysis, analyst reports, rumors, etc. may be present. In so doing, I am suggesting that raising capital can be a signal of an impending takeover, but perhaps not in isolation from other factors.

[11] Similar results emerge with a minimum capital issue of $10 million.

[12] Similar results were found by instead excluding target firms with a share price less than two dollars, as per Schwert (1996).

[13] An additional 61 observations have data available over the *announcement* date event window.

to the most recent issue date of capital within the prior two years). Table 1 Panel A provides yearly descriptive statistics on the number of takeovers, attitude of the deal, acquisition type, capital type raised, and the consideration offered in the deal. Panel B of the same table details mean and quartile share prices, market capitalization, and book-to-market ratios for target and bidder firms.

In order to compare results, a benchmark sample of takeovers is also created subject to the restrictions above, with the additional requirement that no capital in excess of $10 million may have been raised within two years prior to the acquisition announcement date. This results in an additional 2503 observations for a total of 3624 observations analyzed over the announcement date window for regressions on target runup and takeover premiums.

3.2 Event Study Methodology

This short-term event study begins with a hypothesis that the corporate event of announcing the raising of capital creates or strengthens a signal which leads market participants to anticipate forthcoming takeover announcements. This raising of capital can be for any purpose as reported in SEC filings and recorded in the SDC database; this should only be expected to weaken results found. Indeed, limiting capital issue date announcements to include only those purposing funds to be used towards acquisitions, future acquisitions, leveraged buyouts, or general purposes/working capital needs improves abnormal returns by about 50% over the (-1,0) event window, as shown in Tables 3A and 3B.

The null hypothesis would typically state that this event of raising capital has no impact on the behavior of target firm returns. By instead using a test statistic which controls for variance shifts during the event period, the null hypothesis is refined in this paper such that the corporate announcement of raising capital has no impact on the *mean* of target firm returns, and is discussed further below. A rejection of this hypothesis indicates that a portion of the well-documented pre-announcement target price runup may be accounted for by publicly-revealed information and thereby provides evidence supporting the market anticipation theory of price run-ups.

The methodology employed in this paper is consistent with that used in a number of short-term event studies within the merger and acquisition literature, based on the seminal studies of Ball and Brown (1968) and Fama, Fisher, Jensen, and Roll (1969), with statistical considerations modified most notably by Brown and Warner (1980, 1985) and summarized concisely by MacKinlay (1997).

The primary event window of interest is a two-day window (-1, 0)[15] with Day 0 indicating the most recent initial public release (within two years prior to an actual acquisition

[14] As it turns out, there are no mergers and acquisitions between 1979 - 1981 which meet the criteria for inclusion.
[15] Dennis and McConnell (1986), Asquith, Bruner, and Mullins (1983; 1987), Jennings and Mazzeo (1991), Bannerjee and Owers (1992), Smith and Kim (1994), Mitchell and Stafford (2000), Mulherin (2000), and Song and Walkling (2005) are among those using such an event window.

announcement) that a bidding firm raised capital in excess of $50 million. This two day interval is designed to capture the first public announcement of this issuance announcement event, despite a potential delay in media reporting. Extending the window too long may capture the effects of those who, in the absence of such private information, may trade against it, as per the falsely informed noise traders of Cornell and Sirri (1992) or the contraire traders of Gallea and Patalon (1998)[16]. In general a short event window is preferred so as to maximize the power of the test statistic, and to reduce the possibility that potential biases dominate actual returns. To better understand patterns related to this event, a number of short intervals as well as a longer trading-day window of (-20, +5) are also examined.

Over these windows a calculation of each target firm's daily abnormal return is computed, that being the actual daily return minus the 'normal' or expected return. This expectation is defined as the return expected without conditioning on the event of raising capital taking place. For firm i and event date t the abnormal return is therefore

$$AR_{it} = R_{it} - E(R_{it}|\mathrm{X_t}) \tag{1}$$

where AR_{it}, R_{it}, and $E(R_{it}|\mathrm{X_t})$ are the abnormal, actual, and expected returns respectively for time period t. $\mathrm{X_t}$ is the conditioning information for the expected return model, for which I use the market model over an estimation window 180 days long[17], beginning 270 days and ending 91 days prior to Day 0. This estimation window occurs prior to the longest event window analyzed in this study to prevent the event from biasing the expected return performance parameter estimates (MacKinlay, 1997).

The market model (one-factor model) employed in this study regresses returns on a constant and that of either the CRSP Value or Equal Weighted Index[18], which represent the market portfolio of stocks. For robustness purposes, I compare results using both the Fama-French three-factor model (1993) and Carhart's (1997) extended four-factor model which includes momentum[19]. For any security i the market model is

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \tag{2}$$

$$E(\varepsilon_{it}) = 0 \quad var(\varepsilon_{it}) = \delta_{\varepsilon_t}^2$$

[16] Cornell and Sirri (1992, p. 1032) define falsely informed traders as those who ''fail to recognize the extent of the inside information reflected in the market price, and thus incorrectly believe that they have superior information.'' Gallea and Patalon (1998) describe contraire traders as those evaluating the opinion of the investing public, and when that opinion reaches an unreasonable extreme, investing against it.

[17] I also consider an estimation window of 120 days which leaves results virtually unchanged. Note that the estimation window must be large enough to make it reasonable to assume that the sampling error of the parameters vanishes (MacKinlay, 1997) and periods of 120 to 190 days are common (for example, Jarrell and Poulsen, 1989; Gupta and Misra, 1989; Sanders and Zdanowicz , 1992; and King, 2009).

[18] Note the criteria for a choice between value-weighted and equal-weighted indices are not well-defined (Ahern, 2008); for robustness I report both CRSP Equal Weighted and CRSP Value Weighted Indices.

[19] Four-factor model results are included in this paper, while three-factor vary only slightly and are available upon request.

where R_{it} andR_{mt} are the period t returns on security i and the market portfolio respectively, and ε_{it} is the zero-mean error term. α_i and β_i are the market model parameters.

Portfolio average abnormal returns (AARs) are obtained via simple aggregation of individual firms' abnormal returns throughout the event window as follows:

$$AAR_t = \left(\frac{1}{N}\right) \sum_{i=1}^{N} AR_{it} \quad (3)$$

where N is the number of stocks in the sample portfolio.

Aggregating these AARs over the event window results in the cumulative average abnormal return (CAAR) for each day t within the window:

$$CAAR_t = CAAR_{t-1} + AAR_t \quad (4)$$

Note that in the absence of abnormal performance, the AAR (or equivalently CAAR) on any day t should not differ significantly from 0.

Short-term tests represent the "cleanest evidence we have on efficiency" (Fama, 1991, p.162), being relatively trouble-free and instilling confidence in their results (Kothari and Warner, 2006). However, some challenges remain, with event study tests well-specified only to the extent that the underlying assumptions are correct. For example, event study tests are really joint tests of whether abnormal returns are zero and whether the assumed model of expected returns is correct; an error in the assumptions can render findings inconclusive, although short-term studies are not as susceptible to this problem as are long-term studies.

3.3 Parametric Testing

The test statistic suggested by Brown and Warner (1985, equation 5, p. 7 and detailed below), the ratio of the mean excess return to its estimated standard deviation, is commonly used throughout the literature. This statistic relies on the important assumption that individual firms' abnormal returns are normally distributed, and is subject to issues of both cross-sectional dependence (event clustering) and variance increases during the event period (when standard deviation is estimated over the estimation period).

I assume here that residuals are not correlated across securities, as the interval chosen is very short and securities come from a wide range of industry groups. Thus, event-time clustering effects[20] are not expected to be as strong as if, for example, the event were instead a new regulation impacting all firms (or a subset thereof) simultaneously. Brown and Warner state "If the degree of dependence is small, as in studies where event dates are not clustered,

[20] Event-time clustering effects render the independence assumption for the abnormal returns in the cross-section incorrect (Collins and Dent, 1984; Brown and Warner, 1985; Bernard, 1987; Petersen, 2009; Kothari and Warner, 2006), resulting in misspecification of the test statistic.

ignoring the dependence induces little bias in variance estimates. Furthermore, dependence adjustment can actually be harmful compared to procedures which assume independence" (1985, p.20), with substantial gains in power even when the independence assumption is only an approximation. However, for robustness I pool abnormal returns across all identical event dates and rerun results, without notable effect.

It is common to use the time-series estimation period data to estimate the variance of the mean excess return in the calculation of the test statistic rather than the cross-section of event period excess returns. However, this may result in misspecification of the test statistic if variance increases during the event period (Christie, 1983; Giaccotto and Sfiridis, 1996) as the variance of returns should change with the flow of information to the market (Karpoff, 1987; Ross, 1989). To be conservative, the estimated standard deviation from the cross-section of event period excess returns is chosen over that computed over the estimation period, despite a limitation of low power if there is no variance increase. This removes the possibility that significant results rely on event period variance and is expected to provide more conservative findings as variance typically increases over a period of rising returns.

The test statistic for any day t in the event period is thus given by:

$$T_t = AAR_t / S(AAR_t) \tag{5}$$

where $S(AAR_t)$ is an estimate of the standard deviation of the average abnormal return, which under the assumption of cross-sectional independence in abnormal returns is defined as follows:

$$S(AAR_t) = \sqrt{\frac{\sum_{i=1}^{L}\left[AAR_t - \frac{\sum_{i=1}^{L} AAR_t}{L}\right]^2}{L-d}} \tag{6}$$

where L represents the number of days in the event period and L-d represents the degrees of freedom. In the case of prediction errors from the one-factor market model, the degrees of freedom are L-2, whereas in the case of the four-factor model the degrees of freedom are L-5.

3.4 Matched Sample Method

The matched sample method, also referred to as the control firm approach, characteristic-based benchmark model (Daniel, Grinblatt, Titman, and Wermers, 1997) or portfolio procedure (Kothari and Warner, 2006), involves developing a list of firms which are comparable to the sample firms according to characteristics which drive cross-sectional variation in the performance measure under consideration[21] (Bhojraj and Lee, 2002). This "carefully constructed reference portfolio" is thus a list of control firms which becomes the matched-

[21] Excluding, of course, the characteristic related to the hypothesis under examination.

sample benchmark upon which to measure performance of the sample firms (Barber and Lyon, 1997).

The main advantage of this approach is for long-term event studies, as such reference portfolios can serve to eliminate the new listing, portfolio rebalancing, and skewness biases which have been found to result in misspecified test statistics in common methods testing for long-run abnormal returns (Barber and Lyon, 1997; Kothari and Warner, 1997). Daniel and Titman (1997) report that such an approach also provides better ex-ante forecasts of the cross-sectional patterns of future returns than does the factor portfolio method, with additional advantages of reduced estimation error (no regressors have to be estimated) and no requirement to choose a 'normal' estimation period. Kothari and Warner (2006) note however that while matched-sample procedures have become common, the relative empirical merits of these versus regression procedures have not yet been investigated.

In line with standard practice, I conduct a matched-sample test similar to procedures developed and refined by Daniel, Grinblatt, Titman, and Wermers (1997), Barber and Lyon (1997), and Lyon, Barber, and Tsai (1999), among others. Specifically, I match one firm per sample target firm, with the universe of matching firms consisting of the intersection of those within both the CRSP and Compustat databases. Additionally, sample firms cannot be matched against themselves, although they are retained within the universe to potentially be matched against other sample firms.

From this matching firm universe, I first select firms with the same two-digit CRSP SIC code as the target firm and a market capitalization between 70% and 130 % of the target firm[22]. Market capitalization is calculated as (CRSP share price * # of shares outstanding) at the end of December in the year prior, whereas book-to-market is calculated as (Compustat code #60/ market capitalization) at the end of the prior fiscal year, as is standard in the literature (e.g. Lyon, Barber, and Tsai, 1999). From these, the firm with the closest book-to-market ratio becomes the matched firm. If no match is found, this procedure is replicated using one-digit CRSP SIC codes, and finally without any SIC code match, although the size ratio requirement remains.

The abnormal return thus becomes

$$AAR_{it} = R_{it} - R_{mt} \tag{7}$$

where R_{mt} is the return on the matched firm for target firm i, at time t.

3.5 Takeover Premium

[22] I match on industry as firms here are likely to have similar operating risks, profitability, and growth (Purnanandam and Swaminathan, 2004), while I match on size and book-to-market as these characteristics are frequently among the best ex-ante predictors of cross-sectional patterns in common stock returns (see Fama and French, 1992, 1996; Jegadeesh and Titman, 1993; Ikenberry, Lakonishok, and Vermaelen, 1995; and Daniel and Titman, 1997).

Schwert (1996) computes the takeover premium as the sum of target abnormal returns for trading days (-42, +126) relative to the acquisition announcement date. Although variants of such measure are common in the M&A literature, this method confounds the premium estimate with the likelihood of successful completion and competition, and arbitrarily assigns an ending date for the acquisition attempt (Betton and Eckbo, 2000; Officer, 2003; Betton, Eckbo, and Thorburn, 2008). Thus, many resulting premium estimates will merely reflect the (on average) decline in target price due to a failed acquisition attempt, or a mid-way price before the premium has been offered. This bias has been found to be severe (Eckbo, 2009).

Alternatively, SDC offers two distinct data sources for computing premiums - the total consideration offered to target shareholders, and price data, in which are recorded the initial and final price per share offered by the bidder. Unfortunately these data definitions are known to be inconsistent and result in troubling outliers, with a substantial number of premium-to-target share price ratios above two or below zero and thus indicative of data errors (Officer, 2003).

Officer computes a composite premium estimate which integrates these two measures while eliminating the extremes of each data source. Specifically, the total consideration is used to calculate the premium if the ratio is between zero and two; otherwise, price data is used - first the initial price and then the final price if the boundary conditions specified are again not met. All remaining results not satisfying boundary conditions are changed to missing. This method has been adopted in Gaspar, Massa, and Matos (2005), and I too compute this combined premium measure in precisely the same manner.

3.6 Informed Trading

Llorente, Michaely, Saar, and Wang's (2002) model of informed trading is shown below, similar to that of Wang's (1994) model with the two important simplifying assumptions that shocks to the economy are independently and identically distributed over time, and investors are myopic.

The following relation is thus estimated cross-sectionally:

$$R_{it+1} = C0_i + C1_i R_{it} + C2_i V_{it}^2 R_{it} + error_{it} \quad (8)$$

where R represents returns and V_{it}^2 is a squared normalized volume measure alternately proxied for by the following measures:

(i) Daily Turnover: (daily volume/shares outstanding)^2
(ii) Transformed Volume: ln(1+daily number of shares traded)^2
(iii) Volume: (1+daily number of shares traded)^2

Stocks associated with very significant speculative trade are expected to yield statistically significant positive C2 coefficients, while those associated predominantly with hedging are expected to yield statistically negative C2 coefficients. To measure the degree of asymmetric

information for a given firm, a number of proxies in accordance with Gagnon and Karolyi (2009) are chosen:

(i) Illiquidity: abs(return)/(price*vol), as per Amihud (2002)
(ii) Relative Spread: (ask-bid)/price
(iii) Relative Spread2: (ask-bid)/midquote, where midquote=(ask-bid)/2 + bid
(iv) Size: market price * shares outstanding
(v) Number of Target Analysts: # forecasts in I/B/E/S for target firms over a period three months prior to the issue date of capital.
(vi) Number of Bidder Analysts: # forecasts in I/B/E/S for bidder firms over a period three months prior to the issue date of capital.

To compare the significance of coefficients across both the pre-estimation and event windows for those stocks which are highly asymmetric, I estimate the following relation:

$$R_{it+1} = C0_i + C1_i*R_{it} + C2_i*(V_{it})^2*R_{it} + C3_i*P_i + C4*P_i*R_{it} + C5*P_i*(V_{it})^2*R_{it} + e_{it+1} \quad (9)$$

where P is a dummy variable equal to one if within the respective event window, otherwise zero and therefore within the estimation period of (-270, -91). As such, a positively significant coefficient C5 provides evidence of more informed trading taking place during the event window as opposed to during the pre-estimation window.

4. Empirical Results

*4.1 Target Returns in the Runup Period (-20, -1) to the **Issue Date** Announcement*

Daily equal-weighted abnormal target returns over the window (-20, 5), where Day 0 represents the announcement date on which the bidding firm raised capital (the 'issue date announcement'), are presented in Table 2[23]. Average abnormal returns (AARs) are taken across all firms on the given day, while cumulative average abnormal returns (CAARs) are simply the cumulative sum of these AARs over the entire window (-20, 5), and each is expressed as a return percentage. Panel A considers all observations, whereas Panel B restricts observations by eliminating those occurring within 20 days prior to the eventual acquisition announcement date. This is done as a robustness check that results are not solely attributable to the acquisition announcement runup effect which has repeatedly been shown to exist in the literature.

On average, Day 0 is 225.17 days in advance of the acquisition announcement date for Panel A and 243.37 days in advance of the acquisition announcement date for Panel B. The

[23] Equal-weighted returns are used throughout for illustrative purposes, with value-weighted returns reported in similar fashion and revealing similar results in Appendices 2 and 3.

column "% of Runup" presents the issue date announcement CAAR as a percentage of the eventual acquisition announcement date CAAR over the runup window (-20, -1) for which Day 0 instead represents the *acquisition* announcement date. For example, the issue date CAAR over (-20, 0) accounts for 12.05% of the pre-bid target return runup, as shown in Panel A using the market model.

Examining Panels A and B further, we find evidence of positive average abnormal returns on days (-1) and (0), with these dates typically containing the highest abnormal returns throughout the entire (-20, 5) event window. There is also some indication of a positive cumulative average abnormal return trend throughout the window. The overall significance of this issue date effect is even more pronounced when examining a number of short-term intervals in Table 3. In particular, the event window of greatest interest, (-1, 0), is almost always significant at the 1% level, dropping to 5% only under the four-factor model and when eliminating observations within 20 days of the acquisition announcement date. Non-parametric tests, such as the Wilcoxon signed-rank test and the Kruskal-Wallis rank test provide additional, although not uniform, support[24].

The economic significance of the above returns can perhaps most easily be assessed by calculating the annualized return. However, it must be stressed that this annualized return is not achievable, even if the target firm were known with certainty, as the issue date announcement effect is not recurrent through time. That said, a two day (-1, 0) annualized return of 209.5%, a 21 day (-20, 0) annualized return of 19.7% and a 26 day (-20, +5) annualized return of 29.96% are computed. However, the chief advantage of establishing such an early long position in the target would likely be to capture the well-known significant target runup effects occurring prior to the *acquisition* announcement. In this sample, such target runups can be seen in Table 2 Panel C, with an unadjusted 26 day (-20, +5) return of 32.3%, representing an annualized return of around 5,000%, again unachievable in practice.

For robustness, matched sample testing was carried out as explained in the methodology section. Over the (-1, 0) period, the matched sample itself has a non-significant CAAR of -0.17%, and the difference in CAARs between sample observations and this matched sample is a significantly positive 0.79% (t-stat: 3.72). Further robustness measures over this issue date announcement period are shown in Table 3. In particular, abnormal returns are not dependent on matching industry effects, as CAARs are still significant when the target has the same four-digit SIC code as the bidder firm (Table 3, Panel A: t-stat=2.85 for *Siccd ≠).* The same test using two-digit SIC codes is even more conclusive, yielding a t-stat of 3.52 (unreported).

As expected, results are stronger when the bidder indicates that capital issue proceeds will be used towards acquisitions, future acquisitions, leveraged buyouts, general purposes or

[24] One reason for non-uniform support here may be that the Wilcoxon signed-rank test assumes 50% probability between positive and negative returns; however, given the skewness of stock returns, we know that this is not generally true. Incorporating the procedure of the generalized sign test, which allows the probability between positive and negative returns to equal that of, for example, the pre-estimation period, may improve the power of this test.

working capital (Table 3, Panel A: t-stat=4.38 for *AcqUse).* This removes instances in which capital is clearly raised for such purposes as refinancing, construction, education, and so forth. There are indications of time dependency, with a complete lack of evidence prior to the 1990s. This may be due to the absence of such an anticipatory strategy at this time, or simply a result of fewer observations over this time period (only 5% of total observations account for 35% of the total time period from 1981 to 1989).

There is thus strong evidence that target firms experience positive abnormal returns surrounding the period in which the eventual bidder raises capital, long before the beginning of the typical pre-bid runup period reported in the literature. Public announcements of raising capital provide to market analysts a shortlist of likely bidders, yet it remains unclear precisely how target firms are chosen at this time. Still, it is very evident that there are strong incentives for market participants to attempt to uncover this information.

4.2 Information Leakage or Market Anticipation?

An important question is whether the target runups surrounding the issue date announcement are the result of insiders acting on private information, or rather a consequence of market analysis. To this end, Table 4 compares abnormal volumes constructed using the log of daily turnover (as per King, 2009) with returns reprinted from Table 2 Panel A. The side-by-side pairing of volume and returns over the issue date announcement period presents a number of interesting results.

First, we don't see abnormal volume coinciding with abnormal returns until just prior to the event date. This is relevant because one stylized fact of insider trading is that abnormal returns should occur on days with abnormal volume, with both discretionary liquidity traders (Admati and Pfleiderer, 1988) and 'falsely informed' noise traders (Cornell and Sirri, 1992) induced to trade by the increased order flow when insiders are active. The additional liquidity provided by these non-informed traders inhibits a rise in the bid-ask spread, permitting insiders lower execution costs and thereby further encouraging insider activity. In a study of actual insider trading cases pursued by the SEC, Meulbroek (1992) finds that insider trading, while itself relatively small on a daily basis, is indeed associated with abnormal volume.

Second, we notice a definite trend of increasing volume throughout the window, particularly in the ten days or so prior to the event, with coincident abnormal volume and return occurring just prior to and beyond the event date. This is consistent with He and Wang's (1995) model of how sophisticated investors, in possession of proprietary information yet also a residual portion of uncertainty, will trade: closer to the date of the event, the number of signals increase and uncertainty declines, leading to more aggressive speculation. This leads to price discovery close to the event date, with an increase in volume as well; results thus again support the market anticipation hypothesis[25].

[25] Insiders, given their enhanced level of certainty, do not need to rely on anticipatory signals.

Third, in continuation of the above model, residual risk remains right until the actual event, leading to an expectation of abnormal returns on Day 0, which we do indeed find. This is in contrast to a story based on information leakage, in which earlier price discovery leads to intermittent abnormal returns and therefore a limited event date return (e.g. King, 2009). The significantly positive event date abnormal return thus provides additional support for the market anticipation hypothesis as opposed to the information leakage hypothesis.

Fourth, if insider trading is to be believed as the primary driver of the abnormal returns discovered, we must believe that these insiders are trading within the brief (-1, 0) interval. Yet it is at this time that target firm returns are typically increasing and therefore an undesirable purchase point of entry for those "in the know". Additionally, insiders typically prefer to hide their trades and thus avoid aggressive speculation, interspacing their trades in the weeks prior to the event date (O'Hara 1995; Madhaven 2002). However, the brief (-1, 0) interval is too narrow to allow insiders much opportunity for 'stealth trading' (breaking up trades into sequences of smaller trades), a common tactic of insiders with the purpose to either conceal their trades and/or to optimally using market liquidity to trade when their price impact is small (Barclay and Warner, 1993; Lebedeva, Maug, and Schneider, 2009).

Finally, it seems reasonable to expect that at least a portion of those in possession of insider information regarding upcoming acquisition plans will also have at least a rough indication of the timing of such. Yet the average time from Day 0 to acquisition announcement in my sample is 225 days. If one knows that the acquisition announcement is not soon forthcoming, to invest at this time appears suboptimal due to the time value of money.

In contrast to the notion of insider trading, the market anticipation hypothesis contends that a subgroup of market participants observes and interprets the raising of capital as a signal which increases the probability of an acquisition occurring. Without additional knowledge of the timing of such, early entry is desirable to avoid missing the well-known significantly positive acquisition announcement and runup effects. As the event date approaches, anticipatory signals increase and uncertainty declines, with the resulting price discovery witnessed herein.

In sum, analyzing the pattern of both volume and returns provides a much stronger case that market participants are using publicly available knowledge, albeit proprietary in nature, rather than strictly private information which is known with virtual certainty.

*4.3 Target Returns in the Runup Period (-20, -1) to the **Acquisition** Announcement*

Panel C of Table 2 presents target abnormal returns over the runup period to the *acquisition* announcement date rather than the issue date announcement, separated by the proximity of raising capital to this acquisition announcement. Specifically, the first three sections of Panel C distinguish between takeovers in which bidders announced the raising of capital within 30 days prior to the acquisition announcement, between 30 days and 730 days prior, and the complete sample of all takeovers in which bidders raised capital. The fourth section introduces a benchmark sample of an additional 2503 observations in which no capital in excess of $10

million has been raised by the bidding firm within two years prior to the acquisition announcement.

First, despite identical timing with respect to the acquisition announcement date, I find that the target CAAR over the runup period (-20, -1) is a significant 53.22% higher (12.521/8.172) for takeovers in which capital was raised shortly prior to the acquisition announcement (Panel C Section 1) than when capital was raised much earlier (Panel C Section 2). This presents the first evidence that bidding firms raising capital in proximity to the acquisition announcement experience a higher target runup than those raising capital much earlier. Similarly, we see that the target CAAR over the runup period is a significant 40.45% higher (12.521/8.915) for takeovers in which capital was raised shortly prior to the acquisition announcement (Panel C Section 1) than when capital was not raised at all (Panel C Section 4).

Formalizing this, I combine the original sample with takeovers in which capital has not been raised, and regress the target runup on a capital-proximity dummy variable as well as a number of controls. Tables 5A and 5B show regression results with the target announcement date runup CAAR (-20, -1) as the dependent variable and a number of controls in place, including target and bidder size and book-to-market values as well as binary variables for the type of acquisition (tender offers or mergers), the existence of target defensive measures as reported by SDC, the form of financing (cash, stock, or mixed), the diversifying nature of the acquisition (conglomerate versus related industry acquisitions), the attitude (friendly, hostile, or undisclosed) apparent in the acquisition, the existence of a 5% or larger bidder toehold, and whether or not capital was raised by the bidding firm. Variable definitions are provided in Appendix 3.

The dummy variable representing the timing of the capital raised (within 20, 30, 45, or 60 days) ranges in significance from 10% to 1%, with a coefficient matched only by tender offers. This validates the premise that the significantly higher target runup experienced by bidding firms raising capital in proximity to the acquisition announcement is due to the difference in the timing of capital raised rather than due to extraneous factors. Restated differently, *when* bidders raise capital appears to impact target runup, and doing so shortly before the acquisition announcement appears to increase target returns more than if capital is raised earlier or not at all.

I interpret results as evidence that the bidders' raising of capital in proximity to the acquisition announcement is a strong corroborating signal of an impending acquisition, whereas if capital is raised earlier or not at all, the market does not receive this same bundle of signals during the runup period. While the raising of capital by eventual bidders at any time sparks an abnormal return, doing so well in advance of the acquisition announcement (or not at all) likely creates more uncertainty over when and if the acquisition announcement will take place, with a result of a lower target runup (-20, -1) prior to the acquisition announcement.

In homage to market efficiency, results change dramatically once the information environment adapts to incorporate the acquisition announcement itself. Incorporating Day 0

into the runup yields target CAARs which are not dependent on when capital was raised, as can be seen in Table 5C which uses a target runup of (-20, 0) as the dependent variable rather than (-20, -1) and in Table 5D which uses a target runup of (-1, 0) instead. This is to be expected, as the value of a signal vanishes once the event signaled becomes known. However, this does not diminish the findings herein, as the runup period (-20, -1) is of particular importance for both target shareholder wealth and for setting the premium paid by the bidder for target shares. Evidence for this comes from Schwert (1996), who shows the lack of substitution between this runup period and the post announcement period beginning on Day 0, as detailed in the following section.

In unreported results, I also control for the form of capital raised (debt vs. equity), with results remaining unchanged. Results are also robust to the definition of the runup period changing to (-20, -2) to remove the possibility that some announcement date observations are erroneously reported by SDC as occurring on Day 0 when in fact they occurred a day prior.

4.4 Determinants of the Takeover Premium

If the bidder and target firms believe target return movement over the runup period merely reflects a growing public understanding of the private information the bidder already possesses, there may be reluctance on the part of the bidder to incorporate much of this runup into the premium to be paid. This describes the *substitution hypothesis*, that an increase in runup should not impact the takeover premium. If, however, the bidder and/or target are uncertain whether target return movement over the runup period reflects valuable information of other traders, either or both parties may revise their valuation of the target stock. This should ultimately lead to higher takeover premiums, which Schwert (1996) labels the *markup pricing hypothesis* when such increase in the premium is one-to-one with the increase in the runup. Schwert (1996) finds little substitution between the runup and the markup, with the runup tending to increase the final deal price, thereby representing an added cost to the bidder.

I use the model

$$PREMIUM_i = \beta_0 + \beta_1 RUNUP_i + \sum_{k=2}^{14} \beta_k \, INDEP_{ki} + \varepsilon_i, \qquad (10)$$

where INDEP refers to typical continuous and dummy control variables as listed in Table 6A and defined in Appendix 3. As do Schwert (1996) and betton, Eckbo, and Thorburn (2008), I similarly reject the substitution hypothesis that $\beta_1 = 0$ in my sample as indicated by the 1% significance of *Runup* in Table 6A. That is, the target runup appears to positively and significantly impact the takeover premium. In additional analysis, testing that $\beta_1 = 1$ is also rejected at the 5% level, but in favor of $\beta_1 > 1$. That is, an increase in the runup is positively associated with a *larger-than-unity increase* in the takeover premium, further underlying its importance. Given that the timing of raising capital has previously been shown to be associated with higher target runups in Table 5A, results of Table 6A provide indirect evidence that takeover premiums are affected as well.

From Table 6A we see that takeovers in which capital has been raised by the bidder result in a larger takeover premium on average, with significance ranging from 5% to 1% on *capitalsampledummy*. This result is driven by those takeovers in which capital was raised close in proximity to the acquisition announcement date, as discussed below.

Table 6B extends the above model by including the proximity of raising capital as an additional independent dummy variable in order to assess the direct effect of the timing of raising capital on takeover premiums. Here we see 1% significance for *within20dummy* in models 1-3, and 5% for *within30dummy* in models 5-7, evidence that raising capital in close proximity to the acquisition announcement is associated with a significantly higher takeover premium in a combined sample of takeovers (those both raising and not raising capital prior). Limiting analysis to the sample in which capital has been raised within two years prior (*capitalsampledummy*=1), models 4 and 8 reveal 5% and 10% significance respectively on these variables, affording marginal evidence that premiums are higher even when restricted to either portion of the combined sample (those in which capital was either raised or wasn't raised). Overall, acquiring firms are punished by the capital markets by paying a premium approximately 20% - 30% higher[26] than if capital were raised earlier than within 30 days prior to the bid announcement.

In sum, it appears that raising capital shortly before the acquisition announcement is directly associated with a higher takeover premium, beyond the aforementioned indirect effect via an association with a target runup increase. This could be the case if raising capital in such proximity affects negotiations with target firms in ways unrelated to existing share price effects. For example, if target firm management perceives the bidders' raising of capital as an escalating takeover commitment done solely for the purpose of acquisition, they may feel encouraged to negotiate more strongly. Alternatively, raising capital may generate interest on the part of other potential bidders, requiring swift action and a corresponding decrease in the acquirer's negotiating power. It seems clear that more research is called for to examine precisely *why* premiums are directly affected by the proximity of raising capital, but evidence of increasing target runups leading to higher premiums paid is again consistent with the theory that raising capital provides a signal of an impending takeover, and that this signal strengthens as the acquisition date approaches.

For robustness the total consideration offered by the bidding firm as provided by SDC is used as an alternative premium measure for Tables 6A and 6B. In this case, results are similar except slightly stronger, with *capitalsampledummy* in Table 6A models 1-3 having coefficients almost twice as high and significant at the 1% level, again showing that premiums are higher when capital is raised. Appendix 4 provides the correlation matrix for all independent variables used for regressions in Tables 5A through 6B.

4.5 Informed Trading

[26] Including direct and indirect effects.

Table 7 Panels A and B test for informed trading in target firms over the period in which capital was raised. This is in contrast to trading occurring for the purpose of hedging, and is performed in the manner of Llorente, Michaely, Saar, and Wang (2002) and Gagnon, Karolyi, and Lee (2006). I check for informed trading simply as a form of robustness that the significance of the capital issue date announcement period stems from the actions of sophisticated traders.

Specifically, the relation:

$$R_{it+1} = C0_i + C1_i R_{it} + C2_i V_{it}^2 R_{it} + error_{it} \quad (11)$$

is analyzed cross-sectionally to examine the dynamic volume-return relationship, expressed in the coefficient C2. A positive significance indicates the presence of informed trading, as per the definition of the above authors, meaning that market participants appear to be trading on the basis of private information for the time period indicated in the table. This would appear to be a pre-requisite for either of the market anticipation or the information leakage hypotheses to be taking place, but does not distinguish between the two.

Given the potential sensitivity of results to the nature of volume used, three different volume constructions are generated as a measure of robustness (as described in the methodology section): Daily Turnover, Transformed Volume, and Volume. For days (-1), (0), and most importantly the interval of interest (-1, 0), C2 appears to be highly and positively significant for most volume measures in both Panels A and B of Table 7. In unreported results, C2 is not consistently significantly positive for all volume measures in other intervals, suggesting that those acting on private information are centering their efforts very closely around the date of issue. In sum, the test supports the position that informed trading (as opposed to trading for purposes of hedging) is taking place over a very short interval (-1, 0) centered on the event date.

I further consider this issue by examining only those stocks possessing a high degree of asymmetric information, the rationale being that informed trading has been found to take place to a higher extent in such cases (e.g., Llorente, Michaely, Saar, and Wang, 2002). As described in the methodology section, I consider six proxies for asymmetric information which are consistent with the literature. Providing equal weight to each proxy, I construct a combined proxy by summing normalized rankings for those proxies in which higher values indicate higher levels of asymmetric information, and subtracting normalized rankings for those proxies in which higher values indicate lower levels of asymmetric information. Only those stocks located within the top tertile of this combined measure of asymmetric information are analyzed here in Table 8. Once again, the event interval of interest, (-1, 0), displays positively significant coefficients on the volume return relationship, signifying that informed trading appears to be taking place at this time.

As an additional test for informed trading, I wish to compare the level of informed trading taking place during the event period to that of a pre-estimation period (-270, -91). Once again I restrict the sample to include only those stocks within the top tertile of a combined measure of

asymmetric information, where informed trading is most likely to occur. Table 9 compares regression coefficients for such stocks across these two periods, that of the event window (time period listed in the table) versus a pre-estimation window (-270, -91). In order to do this, a dummy variable for the window used (a value of '1' signifies the event window) and two interaction terms are added to the original regression, resulting in[27]:

$$R_{it+1} = C0_i + C1_i R_{it} + C2_i V_{it}^2 R_{it} + C3_i P_i + C4_i P_i R_{it} + C5_i P_i V_{it}^2 R_{it} + error_{it} \qquad (12)$$

The emphasis here then is on coefficient C5, with positive significance indicating a higher degree of informed trading taking place within the event window as opposed to that of the pre-estimation window. This is indeed found to be the case, with 5% significance found for C5 regardless of the proxy used for volume or the absence of firms announcing the raising of capital within 20 days of the acquisition announcement (see Tables 9A and 9B).

5. Conclusion

This study examines target firm cumulative average abnormal returns in a sample of takeover announcements from 1981 - 2006, first simply centered on the bidding firm's most recent issue date of capital announcement prior to the eventual takeover announcement, and next after distinguishing between those firms which raise capital just prior to the acquisition announcement from those raising capital much earlier or not at all.

First, despite the lack of an obvious association between bidders and targets 225 days in advance of the acquisition announcement, standard event-study methodology reveals economically and statistically significant abnormal returns over the (-1, 0) period centered on the issue date announcement of the bidding firm. This finding is robust to excluding observations in which the event of raising capital occurs within the twenty-day runup period of the acquisition, and to excluding takeovers involving firms of related industries (whether by two- or four-digit SIC codes). Likewise, significance remains when the four-factor model is used in place of the market model to calculate abnormal returns, when test statistics are calculated after controlling for shifts in variance, and when value-weighted rather than equal-weighted returns are used. Using the procedure of Llorente, Michaely, Saar and Wang (2002) and Gagnon and Karolyi (2009) further reveals informed trading over the issue date announcement period, and at significantly higher levels than during the pre-estimation period, indications that trading on private information is indeed occurring over the event window.

Second, this research offers a partial explanation of the announcement runup effect, supporting the market anticipation hypothesis as opposed to insider trading given the public nature of the event of raising capital, the associated price-volume dynamics uncovered herein, and the narrow two-day event window examined. This provides further proof that not all target

[27] The same result is obtained by use of the Suest command ("seemingly unrelated estimation") in Stata

runup effects should be attributed to insider trading, impacting investor confidence in the markets and allowing regulatory authorities to further refine algorithms which attempt to separate cases of insider trading from market anticipatory events.

Third, results indicate that the bidder's decision of when to raise capital prior to an acquisition can impact the runup experienced by the target firm. Specifically, when bidders raise capital shortly prior to the acquisition announcement date, this is associated with significantly higher target returns over the runup period (-20, -1) compared to bidders which raise capital earlier or not at all, and these findings are robust to the inclusion of standard controls.

Finally, by verifying that Schwert's (1996) markup-pricing hypothesis holds for this sample, it is shown that the timing of raising capital impacts not only the target runup, of concern to target shareholders, but *indirectly* even the takeover premium paid by the bidding firm. A further significant and *direct* association between this timing of capital and the takeover premium is revealed when capital is raised within 20 or 30 days of the acquisition announcement. It therefore appears that raising capital can provide a signal of an impending acquisition to the market, and this signal is stronger as the acquisition announcement date approaches, all else equal. By raising necessary capital earlier, it would appear that bidders do not compound signals of an impending takeover, resulting in a lower target runup and thereby a lower premium to be paid in accordance with the markup-pricing hypothesis.

It should be noted that significant results are obtained despite a number of conservative measures taken in this paper: First, by looking for positive abnormal returns around the capital issue-date, this paper relies on the stylized fact that investors' anticipation of an impending acquisition will result on average in a positive target runup. Still, some acquisitions may be anticipated yet interpreted as bad news for the target, resulting in negative returns and thereby working against finding evidence of overall market anticipation. Second, by structuring the design to look for positive abnormal returns, an argument could be made to use one-sided tests rather than the two-sided t-tests employed herein, (e.g. King, 2009) with a resulting increase in significance. Third, results here are diminished by not restricting issue date announcements to exclude those indicating uses unrelated to acquisitions and free cash flow[28]. Finally, modifying the test statistic to account for variance shifts during the event window is likely decreasing the power of the tests.

The corporate event of raising capital by the bidding firm is a fact rather than a rumor, fundamentally impacts the ability of a firm to make an acquisition, is well-publicized, and offers a signal that plans of some sort are afoot. It appears reasonable that raising capital may either create or strengthen existing rumors of a takeover, or otherwise become a central component in firm-specific analysis used to anticipate acquisitions. Additionally, occurring at the complete discretion of management, this event lends itself well to firm policy decisions, and yet to the best of my knowledge has never been proffered as an anticipatory event for corporate control.

[28] However, the timing and accuracy of such use of proceeds filings are no longer of primary concern.

Findings herein present some of the earliest evidence yet as to the anticipation of takeovers, implying that previous merger studies may have underestimated the true value of a merger (as per Asquith, 1983). This paper therefore hopes to contribute towards research in many related areas of corporate finance, including merger predictability and profitability, firm capital structure, merger-arbitrage strategies, and the detection methodology of insider trading.

It must be stressed that while this paper infers that market participants appear to successfully predict target firms to some degree, the precise method of doing so is not examined here. It may be that industry or firm analysis provides a good indication of the precise target (e.g. Gao and Oler, 2008), or that many target firms' prices are bid-up due to increased probability that at least one of them will become a target themselves (Song and Walkling, 2000), or some other explanation. It is clear then that further research is called for to investigate methods by which market participants identify target firms around the issue date of capital for the bidding firm, and to explore implications thereof.

References

Admati, Anat R., and Paul Pfleiderer, 1988, A Theory of Intraday Patterns: Volume and Price Variability, *The Review of Financial Studies* 1, 3-40.

Agrawal, Anup, and Jeffrey F. Jaffe, 2003, Do Takeover Targets Underperform? Evidence from Operating and Stock Returns, *The Journal of Financial and Quantitative Analysis* 38, 721-746.

Amihud, Yakov, and Baruch Lev, 1981, Risk Reduction as a Managerial Motive for Conglomerate Mergers, *The Bell Journal of Economics* 12, 605-617.

Andrade, Gregor, Mark Mitchell, and Erik Stafford, 2001, New Evidence and Perspectives on Mergers, *The Journal of Economic Perspectives* 15, 103-120.

Asquith, Paul, Robert F. Bruner, and David W. Mullins Jr., 1983, The Gains to Bidding Firms from Merger, *Journal of Financial Economics* 11, 121-139.

Asquith, Paul, 1983, Merger Bids, Uncertainty, and Stockholder Returns, *Journal of Financial Economics* 11, 81-83.

Baker, Malcolm, and Serkan Savasoglu, 2002, Limited arbitrage in mergers and acquisitions, *Journal of Financial Economics* 64, 91-115.

Baker, Malcolm, and Jeffrey Wurgler, 2002, Market Timing and Capital Structure, *The Journal of Finance* 57, 1-32.

Ball, Ray, and Philip Brown, 1968, An Empirical Evaluation of Accounting Income Numbers, *Journal of Accounting Research* 6, 159-178.

Barber, Brad M., and John D. Lyon, 1997, Firm Size, Book-to-Market Ratio, and Security Returns: A Holdout Sample of Financial Firms, *The Journal of Finance* 52, 875-883.

Barclay, Michael J., and Jerold B. Warner, 1993, Stealth trading and volatility: Which trades move prices? *Journal of Financial Economics* 34, 281-305.

Betton, Sandra, B. E. Eckbo, and Karin S. Thorburn, 2008, Markup Pricing Revisited, *SSRN eLibrary* .

---. 2009, Merger negotiations and the toehold puzzle, *Journal of Financial Economics* 91, 158-178.

Betton, Sandra, and B. E. Eckbo, 2000, Toeholds, Bid Jumps, and Expected Payoffs in Takeovers, *The Review of Financial Studies* 13, 841-882.

Bhojraj, Sanjeev, and Charles M. C. Lee, 2002, Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms, *Journal of Accounting Research* 40, 407-439.

Bris, Arturo, 2005, Do Insider Trading Laws Work? *European Financial Management* 11, 267-312.

Brown, Stephen J., and Jerold B. Warner, 1980, Measuring security price performance, *Journal of Financial Economics* 8, 205-258.

---. 1985, Using daily stock returns : The case of event studies, *Journal of Financial Economics* 14, 3-31.

Bruner, Robert, 2004, Where M&A Pays and Where It Strays: A Survey of the Research, *Journal of Applied Corporate Finance* 16, 63-76.

Campbell, John Y., Sanford J. Grossman, and Jiang Wang, 1993, Trading Volume and Serial Correlation in Stock Returns, *The Quarterly Journal of Economics* 108, 905-939.

Chakrabarty, Bidisha, and Andriy V. Shkilko, 2008, Information Leakages in Financial Markets: Evidence from Shorting Around Insider Sales, *SSRN eLibrary* .

Chakravarty, Sugato, Huseyin Gulen, and Stewart Mayhew, 2004, Informed Trading in Stock and Option Markets, *The Journal of Finance* 59, 1235-1257.

Christie, A., 1983, On information arrival and hypothesis testing in event studies, .

Cornell, Bradford, and Erik R. Sirri, 1992, The Reaction of Investors and Stock Prices to Insider Trading, *The Journal of Finance* 47, 1031-1059.

Daniel, Kent, Mark Grinblatt, Sheridan Titman, and Russ Wermers, 1997, Measuring Mutual Fund Performance with Characteristic-Based Benchmarks, *The Journal of Finance* 52, 1035-1058.

Daniel, Kent, and Sheridan Titman, 1997, Evidence on the Characteristics of Cross Sectional Variation in Stock Returns, *The Journal of Finance* 52, 1-33.

Dennis, Debra K., and John J. McConnell, 1986, Corporate mergers and security returns, *Journal of Financial Economics* 16, 143-187.

Eckbo, B. E., 2009, Bidding strategies and takeover premiums: A review, *Journal of Corporate Finance* 15, 149-178.

---. 1983, Horizontal mergers, collusion, and stockholder wealth, *Journal of Financial Economics* 11, 241-273.

Eger, Carol E., 1983, An Empirical Test of the Redistribution Effect in Pure Exchange Mergers, *The Journal of Financial and Quantitative Analysis* 18, 547-572.

Fama, Eugene F., Lawrence Fisher, Michael C. Jensen, and Richard Roll, 1969, The Adjustment of Stock Prices to New Information, *International Economic Review* 10, 1-21.

Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56.

---. 1992, The Cross-Section of Expected Stock Returns, *The Journal of Finance* 47, 427-465.

---. 1996, Multifactor Explanations of Asset Pricing Anomalies, *The Journal of Finance* 51, 55-84.

Fama, Eugene F., 1970, Efficient Capital Markets: A Review of Theory and Empirical Work, *The Journal of Finance* 25, 383-417.

---. 1991, Efficient Capital Markets: II, *The Journal of Finance* 46, 1575-1617.

---. 1998, Market efficiency, long-term returns, and behavioral finance, *Journal of Financial Economics* 49, 283-306.

Fishe, Raymond P. H., and Michel A. Robe, 2004, The impact of illegal insider trading in dealer and specialist markets: evidence from a natural experiment, *Journal of Financial Economics* 71, 461-488.

Gagnon, Louis, and G. A. Karolyi, 2009, Information, Trading Volume, and International Stock Return Comovements: Evidence from Cross-Listed Stocks, *Journal of Financial & Quantitative Analysis* 44, 953-986.

Gao, Yuan, and Derek Oler, 2008, Rumors and Pre-Announcement Trading: Why Sell Target Stocks Before Acquisition Announcements? *SSRN eLibrary* .

Gomes, Armando R., 2001, Takeovers, Freezeouts, and Risk Arbitrage, *SSRN eLibrary* .

Grundfest, Joseph A., and Bernard S. Black, September, 1987, Stock Market Profits from Takeover Activity Between 1981 and 1986: $167 Billion is a Lot of Money, .

He, Hua, and Jiang Wang, 1995, Differential informational and dynamic behavior of stock trading volume, *Review of Financial Studies* 8.

Jarrell, Gregg A., James A. Brickley, and Jeffry M. Netter, 1988, The Market for Corporate Control: The Empirical Evidence Since 1980, *The Journal of Economic Perspectives* 2, 49-68.

Jarrell, Gregg A., and Annette B. Poulsen, 1989, The Returns to Acquiring Firms in Tender Offers: Evidence from Three Decades, *Financial Management* 18, 12-19.

Jensen, Michael C., and Richard S. Ruback, 1983, The market for corporate control : The scientific evidence, *Journal of Financial Economics* 11, 5-50.

Jensen, Michael C., 1986, Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, *The American Economic Review* 76, 323-329.

Keown, Arthur J., and John M. Pinkerton, 1981, Merger Announcements and Insider Trading Activity: An Empirical Investigation, *The Journal of Finance* 36, 855-869.

King, Michael R., 2009, Prebid Run-Ups Ahead of Canadian Takeovers: How Big Is the Problem? *Financial Management* 38, 699-726.

Kothari, S. P., and Jerold B. Warner, 2004, The Econometrics of Event Studies, *SSRN eLibrary* .

Lebedeva, Olga, Ernst G. Maug, and Christoph Schneider, 2009, Stealth Trading by Corporate Insiders, *SSRN eLibrary* .

Lehn, Kenneth, and Annette Poulsen, 1991, Contractual Resolution of Bondholder-Stockholder Conflicts in Leveraged Buyouts, *Journal of Law and Economics* 34, 645-673.

Li, Kai, and Xinlei Zhao, 2008, Asymmetric Information and Dividend Policy, *Financial Management* 37, 673-694.

Llorente, Guillermo, Roni Michaely, Gideon Saar, and Jiang Wang, 2002, Dynamic Volume-Return Relation of Individual Stocks, *The Review of Financial Studies* 15, 1005-1047.

Luo, Yuanzhi, 2005, Do Insiders Learn from Outsiders? Evidence from Mergers and Acquisitions, *The Journal of Finance* 60, 1951-1982.

Lyon, John D., Brad M. Barber, and Chih-Ling Tsai, 1999, Improved Methods for Tests of Long-Run Abnormal Stock Returns, *The Journal of Finance* 54, 165-201.

MacKinlay, A. C., 1997, Event Studies in Economics and Finance, *Journal of Economic Literature* 35, 13-39.

Meulbroek, Lisa K., 1992, An Empirical Analysis of Illegal Insider Trading, *The Journal of Finance* 47, 1661-1699.

Mikkelson, Wayne H., and Richard S. Ruback, 1985, Takeovers and managerial compensation a discussion, *Journal of Accounting and Economics* 7, 233-238.

Minenna, Marcello, 2003, Insider trading, abnormal return and preferential information: Supervising through a probabilistic model, *Journal of Banking and Finance* 27, 59-86.

Mitchell, Mark, Todd Pulvino, and Erik Stafford, 2004, Price Pressure around Mergers, *The Journal of Finance* 59, 31-63.

Moeller, Sara B., Frederik P. Schlingemann, and René M. Stulz, 2004, Firm size and the gains from acquisitions, *Journal of Financial Economics* 73, 201-228.

Netter, Jeffry M., Annette Poulson, and Philip L. Hersch, 1988, Insider Trading: The Law, The Theory, The Evidence, *Contemporary Economic Policy* 6, 1-13.

O'Hara, Maureen, 1995, *Market Microstructure Theory* (Blackwell, Cambridge, MA).

Officer, Micah S., 2003, Termination fees in mergers and acquisitions, *Journal of Financial Economics* 69, 431-467.

Roll, Richard, 1986, The Hubris Hypothesis of Corporate Takeovers, *The Journal of Business* 59, 197-216.

Sanders, Ralph W.,Jr., and John S. Zdanowicz, 1992, Target Firm Abnormal Returns and Trading Volume Around the Initiation of Change in Control Transactions, *The Journal of Financial and Quantitative Analysis* 27, 109-129.

Schwert, G. W., 1996, Markup pricing in mergers and acquisitions, *Journal of Financial Economics* 41, 153-192.

Song, Moon H., and Ralph A. Walkling, 2000, Abnormal returns to rivals of acquisition targets: A test of the 'acquisition probability hypothesis', *Journal of Financial Economics* 55, 143-171.

Wang, Jiang, 1994, A Model of Competitive Stock Trading Volume, *The Journal of Political Economy* 102, 127-168.

Zivney, Terry L., William J. Bertin, and Khalil M. Torabzadeh, 1996, Overreaction to takeover speculation, *The Quarterly Review of Economics and Finance* 36, 89-115.

Table 1 - Descriptive Statistics of Initial M&A Sample

Merger and issue data come from the Securities Data Corporation (SDC) database. A minimum of 75% target firm return data availability from the Center for Research in Security Prices (CRSP) is required over the estimation period (-270, -91) as well as 100% target firm return data availability over the issue date of capital (-1,0). Finance and utility firms are excluded. Both bidders and targets must be public and non-bankrupt, with the bidder raising capital of at least $50 million within two years prior to the acquisition. *Obs* refers to the number of observations, while *Consideration* refers to the terms of financing proposed in the takeover deal and *ComOnly* refers to only common shares proposed as a term of financing. Market capitalization is calculated as (CRSP share price * # of shares outstanding at the end of December in the year prior), while book-to-market is calculated as (Compustat code #60 / market capitalization) at the end of the prior fiscal year. Undisclosed attitudes include those listed as 'neutral', 'unsolicitated', and 'not applicable'. 18 acquisition types are undisclosed.

Panel A: Sample Merger and Acquisition Characteristics

Year of	# of		Attitude		Acquisition Type		Capital Raised		Consideration		
Acq Ann	Obs	Friendly	Hostile	Undisclosed	Tender	Merger	Debt	Equity	Cashonly	ComOnly	Other
1982	4	1	2	0	2	1	0	4	0	0	4
1983	3	1	0	0	1	0	1	2	1	1	1
1984	0	2	0	0	1	1	0	0	0	0	0
1985	13	5	0	0	2	3	7	6	8	3	2
1986	18	16	1	0	10	7	6	12	11	3	4
1987	5	9	1	0	3	7	5	0	2	1	2
1988	4	5	1	0	3	3	3	1	3	1	0
1989	9	6	1	0	4	2	8	1	4	3	2
1990	12	9	0	0	2	7	9	3	6	5	1
1991	20	17	0	0	4	13	6	14	3	8	9
1992	23	17	0	0	4	13	18	5	9	5	9
1993	37	28	0	0	6	21	28	9	16	11	10
1994	37	37	3	0	13	25	28	9	13	15	9
1995	69	46	7	0	19	34	53	16	18	27	24
1996	94	80	2	0	16	64	68	26	23	37	34
1997	144	109	1	0	31	78	114	30	29	55	60
1998	139	136	1	0	30	106	119	20	35	49	55
1999	106	132	3	0	35	100	91	15	26	36	44
2000	66	91	2	0	24	68	47	19	16	23	27
2001	51	54	1	2	10	45	39	12	16	9	26
2002	33	31	1	0	14	18	26	7	18	4	11
2003	46	37	1	2	9	31	39	7	12	13	21
2004	55	41	1	1	6	35	49	6	23	2	30
2005	41	46	1	8	9	44	28	13	16	1	24
2006	31	53	0	8	3	55	26	5	11	3	17
Total:	1060	1009	30	21	261	781	818	242	319	315	426

Panel B: Target and Bidder Firm Characteristics

	Target				Bidder			
	Mean	1st Qrt	Median	3rd Qrt	Mean	1st Qrt	Median	3rd Qrt
Market Value ($mil)	1320	82	214	762	12000	609	2240	7750
Book-to-Market	0.51	0.27	0.45	0.72	0.47	0.24	0.40	0.62
Share Price at Issue Date	20.60	7.88	15.88	27.88	40.43	23.50	34.75	49.13

Table 2 : Target Average and Cumulative Average Abnormal Returns, Equal-weighted 1981-2006

Target average and cumulative average abnormal returns (AAR and CAAR) were estimated using both a market model (with the CRSP equal-weighted index) and the Carhart /Fama French four-factor model with size, book-to-market, momentum, and the CRSP equal-weighted return as factors. Parameter estimates are obtained 270 days to 91 days before the issue date of capital raised by the bidder. *% of Runup* measures the cumulative average abnormal return as a percentage of the acquisition announcement date abnormal target return from day -20 to -1 (Panel C). *Timediff* measures the number of days between the bidder's issue announcement date of capital and the announcement date of the takeover. Slightly more observations have data availability over the takeover announcement period as compared to the issue date of capital period. *AcqUse==1* refers to the use of capital proceeds indicated at the time of issue for either acquisitions, future acquisitions, leveraged buyouts, or general purposes/working capital. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730 ; 1060 takeovers (whole sample)
Day 0 represents the acquirer's issue date of capital

	one-factor market model					*four-factor market model*				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*
-20	0.005	0.05	0.005	0.05	0.06	-0.030	-0.25	-0.030	-0.25	-0.34
-19	-0.177	-1.58	-0.171	-1.11	-1.98	-0.177	-1.57	-0.206	-1.31	-2.39
-18	-0.008	-0.07	-0.179	-0.98	-2.08	-0.046	-0.40	-0.253	-1.34	-2.93
-17	-0.083	-0.67	-0.263	-1.24	-3.04	-0.109	-0.87	-0.362	-1.66	-4.19
-16	0.104	0.76	-0.158	-0.67	-1.84	0.119	0.86	-0.243	-1.00	-2.82
-15	-0.091	-0.77	-0.250	-0.96	-2.90	-0.137	-1.14	-0.380	-1.42	-4.40
-14	0.092	0.80	-0.158	-0.57	-1.83	0.070	0.60	-0.310	-1.08	-3.59
-13	0.001	0.01	-0.157	-0.53	-1.82	-0.001	-0.01	-0.311	-1.01	-3.60
-12	0.278	**2.07**	0.121	0.37	1.40	0.260	**1.92**	-0.051	-0.15	-0.59
-11	-0.032	-0.28	0.089	0.25	1.03	-0.040	-0.34	-0.091	-0.26	-1.05
-10	-0.046	-0.36	0.043	0.12	0.50	-0.064	-0.50	-0.155	-0.42	-1.80
-9	0.153	1.15	0.196	0.52	2.27	0.151	1.12	-0.005	-0.01	-0.05
-8	-0.031	-0.25	0.165	0.43	1.91	-0.039	-0.32	-0.044	-0.11	-0.51
-7	0.116	0.92	0.281	0.71	3.26	0.125	0.97	0.081	0.20	0.94
-6	0.093	0.84	0.375	0.92	4.34	0.103	0.90	0.184	0.44	2.14
-5	0.061	0.51	0.436	1.02	5.05	0.004	0.03	0.188	0.42	2.18
-4	-0.029	-0.26	0.407	0.92	4.72	-0.047	-0.42	0.141	0.31	1.64
-3	0.142	1.09	0.549	1.19	6.36	0.165	1.27	0.307	0.65	3.56
-2	-0.131	-1.11	0.418	0.90	4.84	-0.147	-1.25	0.160	0.34	1.86
-1	0.231	**1.88**	0.649	1.34	7.53	0.195	1.56	0.355	0.72	4.12
0	0.390	**2.73**	1.039	**2.08**	12.05	0.328	**2.30**	0.684	1.36	7.92
1	0.108	0.81	1.147	**2.23**	13.29	0.080	0.59	0.764	1.48	8.85
2	0.265	**1.88**	1.412	**2.68**	16.36	0.282	**1.98**	1.046	**1.96**	12.13
3	0.328	**2.29**	1.740	**3.14**	20.17	0.330	**2.29**	1.376	**2.45**	15.95
4	0.186	1.43	1.926	**3.38**	22.32	0.167	1.28	1.544	**2.66**	17.89
5	-0.042	-0.32	1.884	**3.22**	21.83	0.008	0.06	1.551	**2.61**	17.98

Panel B: 20 < Timediff < 730 ; 977 takeovers
Day 0 represents the acquirer's issue date of capital

	one-factor market model					*four-factor market model*				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*
-20	0.023	0.18	0.023	0.18	0.27	-0.009	-0.07	-0.009	-0.07	-0.10
-19	-0.167	-1.42	-0.144	-0.89	-1.67	-0.161	-1.36	-0.170	-1.02	-1.96
-18	0.021	0.18	-0.123	-0.63	-1.42	-0.026	-0.21	-0.196	-0.98	-2.27
-17	-0.092	-0.70	-0.215	-0.96	-2.49	-0.125	-0.94	-0.321	-1.39	-3.72
-16	0.065	0.45	-0.150	-0.60	-1.74	0.076	0.52	-0.245	-0.95	-2.84
-15	-0.062	-0.50	-0.212	-0.78	-2.46	-0.104	-0.83	-0.349	-1.24	-4.05
-14	0.025	0.21	-0.187	-0.64	-2.17	0.005	0.04	-0.345	-1.14	-3.99
-13	0.021	0.16	-0.166	-0.53	-1.93	0.022	0.16	-0.323	-0.99	-3.74
-12	0.259	**1.83**	0.092	0.27	1.07	0.235	1.66	-0.088	-0.25	-1.02
-11	-0.019	-0.16	0.073	0.20	0.85	-0.032	-0.26	-0.119	-0.32	-1.38
-10	-0.099	-0.74	-0.026	-0.07	-0.30	-0.110	-0.82	-0.229	-0.59	-2.65
-9	0.088	0.63	0.062	0.16	0.72	0.094	0.66	-0.135	-0.33	-1.57
-8	-0.056	-0.45	0.006	0.01	0.07	-0.074	-0.59	-0.209	-0.51	-2.42
-7	0.114	0.87	0.119	0.29	1.38	0.118	0.88	-0.091	-0.21	-1.06
-6	0.096	0.82	0.215	0.51	2.49	0.115	0.96	0.024	0.05	0.28
-5	0.023	0.20	0.238	0.53	2.76	-0.043	-0.36	-0.019	-0.04	-0.22
-4	-0.083	-0.74	0.154	0.33	1.79	-0.096	-0.83	-0.115	-0.24	-1.33
-3	0.110	0.80	0.265	0.55	3.07	0.134	0.97	0.019	0.04	0.23
-2	-0.191	-1.64	0.074	0.15	0.85	-0.206	**-1.77**	-0.187	-0.38	-2.16
-1	0.228	**1.76**	0.302	0.61	3.50	0.180	1.36	-0.007	-0.01	-0.08
0	0.283	**1.91**	0.586	1.14	6.79	0.221	1.49	0.214	0.41	2.48
1	-0.048	-0.41	0.538	1.03	6.23	-0.081	-0.67	0.133	0.25	1.54
2	0.137	1.05	0.675	1.27	7.82	0.150	1.12	0.282	0.52	3.27
3	0.139	1.03	0.814	1.47	9.43	0.145	1.08	0.427	0.76	4.95
4	0.076	0.58	0.890	1.57	10.32	0.057	0.42	0.484	0.84	5.60
5	-0.168	-1.30	0.723	1.25	8.37	-0.118	-0.90	0.366	0.62	4.24

Panel C: **Day 0 represents the takeover announcement date**

	Original Sample Takeovers Bidder Raised Capital															Benchmark Sample No Capital Raised					
	one-factor market model Timedif<=30; 118 takeovers					*one-factor market model* Timedif>30; 1003 takeovers					*one-factor market model* Timedif<730; 1121 takeovers						*one-factor market model* 2503 takeovers				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup	*Trade Day*	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup
-20	-0.062	-0.21	-0.062	-0.21	-0.7	0.210	1.62	0.210	1.62	2.4	0.181	1.514	0.1811	1.51	2.1	**-20**	0.271	**3.19**	0.271	**3.19**	3.1
-19	0.533	0.97	0.471	0.77	5.5	0.084	0.57	0.294	1.57	3.4	0.131	0.914	0.3124	**1.75**	3.6	**-19**	0.144	**1.97**	0.416	**3.83**	4.8
-18	-0.092	-0.35	0.379	0.61	4.4	-0.109	-0.90	0.184	0.89	2.1	-0.108	-0.956	0.2047	1.04	2.4	**-18**	0.185	**2.72**	0.601	**4.74**	7.0
-17	-0.082	-0.26	0.297	0.42	3.4	0.228	**1.93**	0.412	**1.80**	4.8	0.195	**1.764**	0.3999	**1.84**	4.6	**-17**	0.253	**3.37**	0.854	**5.83**	9.9
-16	0.019	0.05	0.316	0.38	3.7	0.140	1.13	0.552	**2.14**	6.4	0.127	1.077	0.5271	**2.13**	6.1	**-16**	0.257	**3.36**	1.111	**6.74**	12.9
-15	1.165	**3.18**	1.481	1.64	17.2	0.158	1.32	0.710	**2.50**	8.2	0.264	**2.308**	0.7911	**2.92**	9.2	**-15**	0.297	**3.78**	1.408	**7.77**	16.3
-14	-0.127	-0.34	1.354	1.32	15.7	0.291	**2.27**	1.001	**3.29**	11.6	0.247	**2.036**	1.0381	**3.54**	12.0	**-14**	0.254	**3.19**	1.662	**8.47**	19.3
-13	0.915	**2.35**	2.269	**2.13**	26.3	0.253	**1.97**	1.254	**3.85**	14.5	0.323	**2.637**	1.3612	**4.36**	15.8	**-13**	0.275	**3.70**	1.937	**9.34**	22.5
-12	0.559	1.55	2.829	**2.60**	32.8	0.377	**2.78**	1.631	**4.63**	18.9	0.396	**3.116**	1.7572	**5.24**	20.4	**-12**	0.261	**3.26**	2.199	**10.15**	25.5
-11	0.248	0.91	3.076	**2.77**	35.6	0.147	1.06	1.778	**4.75**	20.6	0.157	1.237	1.9145	**5.40**	22.2	**-11**	0.313	**4.11**	2.512	**11.06**	29.1
-10	0.635	**2.03**	3.712	**3.27**	43.0	0.369	**2.80**	2.147	**5.37**	24.9	0.397	**3.246**	2.3116	**6.12**	26.8	**-10**	0.207	**2.93**	2.719	**11.43**	31.5
-9	0.672	**1.74**	4.384	**3.66**	50.8	0.279	**1.87**	2.425	**5.77**	28.1	0.320	**2.292**	2.6315	**6.63**	30.5	**-9**	0.376	**4.87**	3.095	**12.55**	35.9
-8	0.673	1.61	5.057	**3.85**	58.6	0.361	**2.80**	2.786	**6.42**	32.3	0.394	**3.187**	3.0255	**7.33**	35.1	**-8**	0.195	**2.54**	3.290	**12.80**	38.1
-7	0.854	**1.80**	5.911	**4.10**	68.5	0.333	**2.78**	3.119	**7.06**	36.1	0.388	**3.285**	3.4131	**8.05**	39.6	**-7**	0.433	**6.12**	3.723	**14.08**	43.1
-6	0.432	1.38	6.343	**4.29**	73.5	0.657	**4.29**	3.777	**8.10**	43.8	0.634	**4.499**	4.0469	**9.08**	46.9	**-6**	0.491	**6.41**	4.215	**15.24**	48.8
-5	0.641	**2.00**	6.984	**4.64**	80.9	0.336	**2.37**	4.113	**8.47**	47.7	0.368	**2.808**	4.4149	**9.54**	51.2	**-5**	0.594	**7.41**	4.808	**16.81**	55.7
-4	0.451	1.17	7.435	**4.91**	86.2	0.628	**4.16**	4.741	**9.76**	54.9	0.610	**4.322**	5.0246	**10.85**	58.2	**-4**	0.585	**7.24**	5.393	**18.08**	62.5
-3	1.438	**2.56**	8.873	**5.36**	102.8	0.596	**4.40**	5.337	**10.63**	61.8	0.684	**5.067**	5.7091	**11.83**	66.2	**-3**	0.849	**9.04**	6.242	**19.78**	72.3
-2	1.152	**2.28**	10.025	**5.88**	116.2	0.978	**6.10**	6.314	**12.06**	73.2	0.996	**6.519**	6.705	**13.34**	77.7	**-2**	0.857	**9.59**	7.099	**21.66**	82.3
-1	2.496	**4.53**	12.521	**7.15**	145.1	1.857	**8.72**	8.172	**14.80**	94.7	1.924	**9.658**	8.6294	**16.33**	100.0	**-1**	1.816	**15.58**	8.915	**25.27**	103.3
0	15.302	**8.29**	27.822	**11.46**	322.4	16.357	**21.06**	24.528	**26.22**	284.2	16.246	**22.52**	24.875	**28.42**	288.3	**0**	14.638	**36.37**	23.55	**45.73**	272.9
1	5.532	**5.04**	33.355	**14.43**	386.5	4.738	**9.81**	29.266	**30.52**	339.1	4.822	**10.78**	29.697	**33.28**	344.1	**1**	3.861	**16.15**	27.41	**52.68**	317.7
2	0.276	1.19	33.631	**14.50**	389.7	0.130	1.26	29.396	**30.58**	340.6	0.145	1.523	29.842	**33.36**	345.8	**2**	0.069	0.95	27.48	**52.41**	318.5
3	-0.107	-0.54	33.524	**14.30**	388.5	-0.139	-1.55	29.256	**30.18**	339.0	-0.136	-1.634	29.706	**32.92**	344.2	**3**	0.002	0.05	27.49	**51.97**	318.5
4	-0.203	-1.11	33.321	**14.19**	386.1	-0.049	-0.58	29.208	**29.82**	338.5	-0.065	-0.832	29.641	**32.53**	343.5	**4**	-0.051	-1.10	27.44	**51.62**	317.9
5	0.165	0.89	33.486	**14.15**	388.0	-0.131	-1.65	29.077	**29.62**	337.0	-0.100	-1.356	29.541	**32.33**	342.3	**5**	-0.030	-0.67	27.41	**51.17**	317.6

Table 3 : Target Cumultive Average Abnormal Return Intervals, Equal-weighted 1981-2006

Target cumulative average abnormal return intervals were estimated using both a market model (with the CRSP equal- weighted index) and the Carhart /Fama French four-factor model with size, book-to-market, momentum, and the CRSP equal-weighted return as factors. Parameter estimates are obtained 270 days to 91 days before the issue date of capital raised by the bidder. Timediff measures the number of days between the issue date of capital and the announcement date, with day 0 representing the announcement date of capital issuance. *AcqUse* refers to the subsample in which the use of proceeds from capital raised was indicated at the time of issue for either acquisitions, future acquisitions, leveraged buyouts, or general purposes/working capital. *SICCD* ≠ refers to the subsample in which the bidder four-digit standard industrial classification code does not match the target's. The rank test performed is the Kruskal-Wallis , while the Wilcoxon test is the signed- rank test. *, **, and *** indicate two-tailed test significance at the 10%, 5%, and 1% levels respectively, with significance based on White-adjusted standard errors.

Panel A: 0 < Timediff < 730 ; 1060 takeovers

one-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.62%	**3.38*** **	0.122	**0.005**
(-1,1)	0.73%	**3.32*** **	**0.012**	**0.020**
(-2,2)	0.86%	**3.10*** **	**0.030**	**0.067**
(-4,4)	1.49%	**3.94*** **	**0.002**	**0.013**
SICCD ≠ (-1,0)	0.57%	**2.85*** **	0.440	**0.010**
Acq Use (-1,0)	0.90%	**4.38*** **	**0.062**	**0.000**
1981-89 (-1,0)	-0.41%	-0.70	0.893	0.160
1990-99 (-1,0)	0.66%	**3.20*** **	**0.014**	**0.002**
2000-06 (-1,0)	0.98%	**2.30****	0.491	0.302

four-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.52%	**2.87*** **	**0.016**	**0.040**
(-1,1)	0.60%	**2.67*** **	**0.081**	**0.067**
(-2,2)	0.74%	**2.55*** **	**0.093**	0.154
(-4,4)	1.36%	**3.50*** **	**0.016**	**0.030**
SICCD ≠ (-1,0)	0.47%	**2.40****	**0.075**	**0.075**
Acq Use (-1,0)	0.83%	**3.93*** **	**0.001**	**0.002**
1981-89 (-1,0)	-0.18%	-0.33	0.374	0.294
1990-99 (-1,0)	0.58%	**2.74*** **	**0.009**	**0.013**
2000-06 (-1,0)	0.81%	**1.97****	0.325	0.532

Panel B: 20 < Timediff < 730 ; 977 takeovers

one-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.51%	**2.66*** **	0.312	**0.042**
(-1,1)	0.46%	**2.16****	**0.094**	0.126
(-2,2)	0.41%	1.54	0.204	0.377
(-4,4)	0.65%	**1.79***	**0.066**	0.373
SICCD ≠ (-1,0)	0.45%	**2.18****	0.833	**0.059**
Acq Use (-1,0)	0.82%	**3.80*** **	0.164	**0.003**
1981-89 (-1,0)	-0.33%	-0.53	0.946	0.211
1990-99 (-1,0)	0.50%	**2.31****	**0.046**	**0.023**
2000-06 (-1,0)	0.93%	**2.09****	0.304	0.393

four-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.40%	**2.11****	**0.091**	0.208
(-1,1)	0.32%	1.43	0.292	0.319
(-2,2)	0.26%	0.94	0.367	0.713
(-4,4)	0.50%	1.33	0.202	0.618
SICCD ≠ (-1,0)	0.36%	**1.74***	0.300	0.258
Acq Use (-1,0)	0.73%	**3.33*** **	**0.005**	**0.015**
1981-89 (-1,0)	-0.16%	-0.29	0.256	0.282
1990-99 (-1,0)	0.42%	**1.89****	**0.034**	0.108
2000-06 (-1,0)	0.72%	**1.70***	0.635	0.675

Table 4 : Target Cumulative Average Abnormal Volumes, 1981-2006

This table examines target firm volumes for an interval (-20, 5) surrounding the issue date announcement of capital by the bidding firm. Cumulative abnormal volumes and the corresponding t-statistics use parameter estimates from 270 days to 91 days before the issue date of capital announcement. Turnover is calculated as trading volume divided by the number of shares outstanding. Returns are from Table 2A Panel A, re-illustrated for comparison purposes. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730

	Volume: *ln(Daily Turnover)*				**Returns:** *one-factor market model*			
Trade Day	***AAV(%)***	***t-stat***	***CAAV(%)***	***t-stat***	***AAR(%)***	***t-stat***	***CAAR(%)***	***t-stat***
-20	0.016	0.76	0.016	0.76	0.005	0.05	0.005	0.05
-19	0.019	0.88	0.035	1.18	-0.177	-1.58	-0.171	-1.11
-18	-0.002	-0.10	0.033	1.67	-0.008	-0.07	-0.179	-0.98
-17	-0.002	-0.10	0.031	1.37	-0.083	-0.67	-0.263	-1.24
-16	0.016	0.49	0.046	**2.01**	0.104	0.76	-0.158	-0.67
-15	0.035	1.14	0.081	**2.38**	-0.091	-0.77	-0.250	-0.96
-14	-0.001	-0.03	0.080	**2.21**	0.092	0.80	-0.158	-0.57
-13	0.042	1.67	0.122	**2.58**	0.001	0.01	-0.157	-0.53
-12	0.057	1.60	0.180	**2.85**	0.278	**2.07**	0.121	0.37
-11	0.080	**2.06**	0.259	**3.00**	-0.032	-0.28	0.089	0.25
-10	0.065	**2.10**	0.324	**3.43**	-0.046	-0.36	0.043	0.12
-9	0.043	**1.97**	0.368	**3.86**	0.153	1.15	0.196	0.52
-8	0.034	1.45	0.402	**4.23**	-0.031	-0.25	0.165	0.43
-7	0.051	1.57	0.452	**4.68**	0.116	0.92	0.281	0.71
-6	0.056	**2.23**	0.509	**5.11**	0.093	0.84	0.375	0.92
-5	0.032	1.36	0.540	**5.44**	0.061	0.51	0.436	1.02
-4	0.066	**2.27**	0.606	**5.82**	-0.029	-0.26	0.407	0.92
-3	0.056	**2.23**	0.663	**6.25**	0.142	1.09	0.549	1.19
-2	0.025	1.26	0.688	**6.46**	-0.131	-1.11	0.418	0.90
-1	0.035	**1.69**	0.723	**6.80**	0.231	**1.88**	0.649	1.34
0	0.082	**2.14**	0.805	**6.95**	0.390	**2.73**	1.039	**2.08**
1	0.110	**3.01**	0.915	**6.73**	0.108	0.81	1.147	**2.23**
2	0.074	**2.31**	0.989	**7.08**	0.265	**1.88**	1.412	**2.68**
3	0.131	**3.14**	1.120	**6.79**	0.328	**2.29**	1.740	**3.14**
4	0.135	**3.78**	1.256	**6.71**	0.186	1.43	1.926	**3.38**
5	0.091	**3.06**	1.346	**7.03**	-0.042	-0.32	1.884	**3.22**

Table 5A: Regressing Target Runup on Proximity of Issue Date Announcement Over Acquisition Runup Period (-20, -1)

The 'Runup' dependent variable represents target cumulative average abnormal returns (CAARs) for the 20-day run-up period (-20,-1) prior to the acquisition announcement date for years 1981-2006. Market-model equal-weighted returns were used in the calculation of CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and capital is raised prior to the stated number of days before the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	Capital Raised within 20 Days of Acq Ann				Capital Raised within 30 Days of Acq Ann			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Runup	Runup	Runup	Runup	Runup	Runup	Runup	Runup
tenderdummy		0.0398***	0.0393***	0.0379***		0.0396***	0.0390***	0.0375***
		(4.004)	(4.007)	(3.880)		(3.986)	(3.987)	(3.848)
defensedummy		0.00521	0.00625	0.00618		0.00471	0.00577	0.00565
		(0.518)	(0.626)	(0.618)		(0.469)	(0.578)	(0.565)
cashonlydummy		-0.00684	-0.00401	-0.00339		-0.00666	-0.00375	-0.00305
		(-0.670)	(-0.454)	(-0.384)		(-0.653)	(-0.425)	(-0.346)
mixedfinancingdummy		-0.00510				-0.00524		
		(-0.529)				(-0.544)		
twodigitrelateddummy		-0.00388	-0.00386	-0.00346		-0.00390	-0.00387	-0.00344
		(-0.497)	(-0.494)	(-0.443)		(-0.499)	(-0.496)	(-0.440)
friendlydummy		0.0175	0.0244	0.0252		0.0167	0.0237	0.0245
		(0.961)	(1.509)	(1.557)		(0.919)	(1.466)	(1.513)
attitudeundisclosedddummy		-0.0322				-0.0326		
		(-0.881)				(-0.892)		
toeholddummy		-0.0197	-0.0203	-0.0195		-0.0199	-0.0205*	-0.0197
		(-1.589)	(-1.638)	(-1.582)		(-1.603)	(-1.653)	(-1.596)
lnTargetSize		-0.0122***	-0.0120***	-0.0118***		-0.0123***	-0.0121***	-0.0119***
		(-4.320)	(-4.290)	(-4.207)		(-4.350)	(-4.320)	(-4.237)
lnTargetBTM		0.0704***	0.0691***	0.0698***		0.0695***	0.0681**	0.0688***
		(2.641)	(2.612)	(2.642)		(2.607)	(2.575)	(2.604)
lnAcquirerSize		0.00788***	0.00771***	0.00819***		0.00777***	0.00760***	0.00811***
		(3.279)	(3.224)	(3.359)		(3.242)	(3.186)	(3.329)
lnAcquirerBTM		0.0153**	0.0147**	0.0130*		0.0156**	0.0150**	0.0132*
		(2.081)	(2.015)	(1.745)		(2.118)	(2.050)	(1.769)
within20dummy	0.0400**	0.0446*	0.0449**	0.0493**				
	(1.978)	(1.946)	(1.971)	(2.147)				
capitalsampledummy				-0.00980				-0.0106
				(-1.180)				(-1.274)
within30dummy					0.0369**	0.0394**	0.0396**	0.0443**
					(2.164)	(2.071)	(2.087)	(2.308)
Constant	0.0866***	0.0663	0.0587	0.0487	0.0863***	0.0715	0.0638	0.0536
	(31.10)	(0.958)	(0.861)	(0.705)	(30.89)	(1.032)	(0.935)	(0.777)
Observations	3,624	2,064	2,064	2,064	3,624	2,064	2,064	2,064
Adjusted R-squared	0.001	0.028	0.029	0.029	0.001	0.028	0.029	0.029

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 5B: Regressing Target Runup on Proximity of Issue Date Announcement Over Acquisition Runup Period (-20, -1)

The 'Runup' dependent variable represents target cumulative average abnormal returns (CAARs) for the 20-day run-up period (-20,-1) prior to the acquisition announcement date for years 1981-2006. Market-model equal-weighted returns were used in the calculation of CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and capital is raised prior to the stated number of days before the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	Capital Raised within 45 Days of Acq Ann				Capital Raised within 60 Days of Acq Ann			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Runup	Runup	Runup	Runup	Runup	Runup	Runup	Runup
tenderdummy		0.0394***	0.0390***	0.0371***		0.0398***	0.0394***	0.0375***
		(3.973)	(3.989)	(3.819)		(4.016)	(4.032)	(3.853)
defensedummy		0.00479	0.00584	0.00570		0.00460	0.00562	0.00546
		(0.478)	(0.586)	(0.572)		(0.459)	(0.563)	(0.547)
cashonlydummy		-0.00628	-0.00360	-0.00273		-0.00673	-0.00412	-0.00329
		(-0.615)	(-0.409)	(-0.310)		(-0.660)	(-0.469)	(-0.374)
mixedfinancingdummy		-0.00484				-0.00472		
		(-0.502)				(-0.489)		
twodigitrelateddummy		-0.00389	-0.00387	-0.00334		-0.00380	-0.00378	-0.00319
		(-0.498)	(-0.495)	(-0.428)		(-0.486)	(-0.484)	(-0.409)
friendlydummy		0.0158	0.0232	0.0241		0.0160	0.0232	0.0240
		(0.870)	(1.436)	(1.488)		(0.878)	(1.434)	(1.487)
attitudeundisclosedummy		-0.0347				-0.0339		
		(-0.947)				(-0.926)		
toeholddummy		-0.0200	-0.0206*	-0.0197		-0.0201	-0.0206*	-0.0196
		(-1.610)	(-1.657)	(-1.588)		(-1.612)	(-1.658)	(-1.587)
lnTargetSize		-0.0124***	-0.0122***	-0.0120***		-0.0124***	-0.0122***	-0.0119***
		(-4.392)	(-4.356)	(-4.263)		(-4.385)	(-4.351)	(-4.257)
lnTargetBTM		0.0692***	0.0679**	0.0687***		0.0694***	0.0682**	0.0690***
		(2.597)	(2.570)	(2.603)		(2.601)	(2.575)	(2.610)
lnAcquirerSize		0.00754***	0.00737***	0.00794***		0.00746***	0.00730***	0.00787***
		(3.144)	(3.086)	(3.266)		(3.117)	(3.059)	(3.246)
lnAcquirerBTM		0.0158**	0.0151**	0.0131*		0.0161**	0.0155**	0.0134*
		(2.137)	(2.074)	(1.746)		(2.174)	(2.114)	(1.785)
within45dummy	0.0375***	0.0401***	0.0401***	0.0461***				
	(2.737)	(2.670)	(2.681)	(3.010)				
capitalsampledummy				-0.0129				-0.0137
				(-1.525)				(-1.601)
within60dummy					0.0276**	0.0339***	0.0340***	0.0405***
					(2.324)	(2.585)	(2.605)	(2.997)
Constant	0.0858***	0.0780	0.0697	0.0584	0.0858***	0.0785	0.0705	0.0591
	(30.45)	(1.127)	(1.023)	(0.846)	(30.22)	(1.133)	(1.033)	(0.857)
Observations	3,624	2,064	2,064	2,064	3,624	2,064	2,064	2,064
Adjusted R-squared	0.002	0.029	0.030	0.030	0.001	0.029	0.029	0.030

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 5C: Regressing Target Runup on Proximity of Issue Date Announcement Over Acquisition Runup Period (-20, 0)

The 'Runup' dependent variable represents target cumulative average abnormal returns (CAARs) for the 20-day run-up period (-20, 0) prior to the acquisition announcement date for years 1981-2006. Market-model equal-weighted returns were used in the calculation of CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and capital is raised prior to the stated number of days before the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	Capital Raised within 20 Days of Acq Ann				Capital Raised within 30 Days of Acq Ann			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Runup	Runup	Runup	Runup	Runup	Runup	Runup	Runup
tenderdummy		0.0947***	0.0987***	0.0983***		0.0944***	0.0984***	0.0979***
		(6.123)	(6.449)	(6.441)		(6.116)	(6.445)	(6.431)
defensedummy		0.0131	0.0132	0.0132		0.0130	0.0131	0.0131
		(0.850)	(0.862)	(0.861)		(0.847)	(0.859)	(0.856)
cashonlydummy		0.0305*	0.0244*	0.0245*		0.0306*	0.0245*	0.0247*
		(1.954)	(1.747)	(1.758)		(1.960)	(1.755)	(1.773)
mixedfinancingdummy		0.0101				0.0101		
		(0.704)				(0.704)		
twodigitrelateddummy		0.0125	0.0124	0.0125		0.0126	0.0125	0.0127
		(1.092)	(1.084)	(1.091)		(1.099)	(1.091)	(1.103)
friendlydummy		0.0223	0.0397	0.0399		0.0217	0.0391	0.0393
		(0.856)	(1.636)	(1.640)		(0.832)	(1.610)	(1.617)
attitudeundisclosedddummy		-0.0882				-0.0881		
		(-1.449)				(-1.448)		
toeholddummy		-0.0642***	-0.0634***	-0.0632***		-0.0644***	-0.0636***	-0.0633***
		(-3.781)	(-3.727)	(-3.705)		(-3.792)	(-3.738)	(-3.712)
lnTargetSize		-0.0211***	-0.0205***	-0.0205***		-0.0212***	-0.0206***	-0.0206***
		(-4.852)	(-4.729)	(-4.696)		(-4.875)	(-4.753)	(-4.715)
lnTargetBTM		0.168***	0.171***	0.171***		0.167***	0.170***	0.171***
		(3.876)	(3.974)	(3.982)		(3.859)	(3.957)	(3.966)
lnAcquirerSize		0.0183***	0.0181***	0.0182***		0.0182***	0.0180***	0.0181***
		(5.117)	(5.061)	(5.024)		(5.079)	(5.024)	(5.003)
lnAcquirerBTM		0.0137	0.0145	0.0141		0.0141	0.0149	0.0143
		(1.197)	(1.284)	(1.228)		(1.231)	(1.318)	(1.245)
within20dummy	0.0309	0.0199	0.0201	0.0212				
	(1.074)	(0.599)	(0.606)	(0.631)				
capitalsampledummy				-0.00244				-0.00374
				(-0.198)				(-0.302)
within30dummy					0.0420*	0.0271	0.0272	0.0289
					(1.711)	(1.000)	(1.006)	(1.048)
Constant	0.237***	0.0429	0.0195	0.0170	0.236***	0.0482	0.0248	0.0212
	(55.85)	(0.426)	(0.194)	(0.167)	(55.48)	(0.478)	(0.247)	(0.209)
Observations	3,624	2,064	2,064	2,064	3,624	2,064	2,064	2,064
Adjusted R-squared	0.000	0.073	0.073	0.073	0.001	0.073	0.073	0.073

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 5D: Regressing Target Runup on Proximity of Issue Date Announcement Over Acquisition Runup Period (-1, 0)

The 'Runup' dependent variable represents target cumulative average abnormal returns (CAARs) for the two-day run-up period (-1, 0) prior to the acquisition announcement date for years 1981-2006. Market-model equal-weighted returns were used in the calculation of CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and capital is raised prior to the stated number of days before the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	Capital Raised within 20 Days of Acq Ann				Capital Raised within 30 Days of Acq Ann			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Runup	Runup	Runup	Runup	Runup	Runup	Runup	Runup
tenderdummy		0.0572***	0.0620***	0.0631***		0.0572***	0.0620***	0.0630***
		(4.498)	(4.932)	(5.034)		(4.496)	(4.932)	(5.033)
defensedummy		0.0145	0.0137	0.0137		0.0149	0.0141	0.0142
		(1.154)	(1.094)	(1.099)		(1.189)	(1.128)	(1.135)
cashonlydummy		0.0335***	0.0244**	0.0239**		0.0335***	0.0242**	0.0237**
		(2.598)	(2.087)	(2.048)		(2.592)	(2.073)	(2.036)
mixedfinancingdummy		0.0154				0.0155		
		(1.353)				(1.364)		
twodigitrelateddummy		0.0133	0.0131	0.0128		0.0134	0.0132	0.0129
		(1.411)	(1.397)	(1.363)		(1.422)	(1.408)	(1.376)
friendlydummy		0.0132	0.0261	0.0254		0.0133	0.0261	0.0255
		(0.588)	(1.270)	(1.236)		(0.593)	(1.271)	(1.242)
attitudeundisclosedddummy		-0.0675				-0.0670		
		(-1.358)				(-1.348)		
toeholddummy		-0.0423***	-0.0409***	-0.0415***		-0.0423***	-0.0409***	-0.0415***
		(-3.043)	(-2.956)	(-2.985)		(-3.049)	(-2.960)	(-2.985)
lnTargetSize		-0.0113***	-0.0108***	-0.0109***		-0.0113***	-0.0108***	-0.0109***
		(-3.149)	(-3.029)	(-3.061)		(-3.152)	(-3.032)	(-3.060)
lnTargetBTM		0.102***	0.106***	0.105***		0.102***	0.106***	0.106***
		(2.831)	(2.974)	(2.963)		(2.835)	(2.979)	(2.972)
lnAcquirerSize		0.0129***	0.0128***	0.0124***		0.0129***	0.0128***	0.0124***
		(4.266)	(4.244)	(4.094)		(4.250)	(4.229)	(4.093)
lnAcquirerBTM		0.00344	0.00490	0.00623		0.00357	0.00505	0.00625
		(0.359)	(0.517)	(0.650)		(0.373)	(0.532)	(0.652)
within20dummy	-0.00982	-0.0251	-0.0251	-0.0287				
	(-0.484)	(-1.071)	(-1.074)	(-1.197)				
capitalsampledummy				0.00798				0.00740
				(0.815)				(0.750)
within30dummy					0.00640	-0.0115	-0.0115	-0.0148
					(0.357)	(-0.581)	(-0.580)	(-0.724)
Constant	0.168***	-0.0257	-0.0445	-0.0363	0.167***	-0.0253	-0.0440	-0.0369
	(49.65)	(-0.304)	(-0.531)	(-0.431)	(49.29)	(-0.299)	(-0.524)	(-0.438)
Observations	3,624	2,064	2,064	2,064	3,624	2,064	2,064	2,064
Adjusted R-squared	-0.000	0.047	0.047	0.046	-0.000	0.047	0.046	0.046

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 6A: Regressing Premium on the Target Runup
Over Acquisition Runup Period (-20, -1)

The 'Premium' dependent variable represents the total consideration offered by the bidding firm to the target firm. Market-model equal-weighted returns were used in the calculation of target runup CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and no capital has been raised within two years prior to the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	(1)	(2)	(3)
VARIABLES	Premium	Premium	Premium
Runup	1.697***	1.411***	1.398***
	(20.31)	(13.80)	(13.57)
tenderdummy		0.0850*	0.143***
		(1.670)	(2.877)
defensedummy		0.125**	0.0962*
		(2.353)	(1.797)
cashonlydummy		-0.0170	-0.176***
		(-0.290)	(-3.801)
mixedfinancingdummy		0.277***	
		(4.686)	
twodigitrelateddummy		0.0800*	0.0816*
		(1.875)	(1.903)
friendlydummy		-0.188**	-0.185**
		(-2.343)	(-2.194)
attitudeundisclosedddummy		-0.0695	
		(-0.268)	
toeholddummy		-0.431***	-0.402***
		(-5.470)	(-5.053)
lnTargetSize		-0.0412**	-0.0386**
		(-2.402)	(-2.266)
lnTargetBTM		0.302**	0.384***
		(2.268)	(2.906)
lnAcquirerSize		0.0350***	0.0399***
		(2.768)	(3.121)
lnAcquirerBTM		0.0107	0.0340
		(0.249)	(0.783)
capitalsampledummy	0.112***	0.136***	0.0918**
	(3.263)	(2.879)	(1.974)
Constant	-1.029***	-1.162***	-1.268***
	(-47.39)	(-2.977)	(-3.248)
Observations	3,373	1,940	1,940
Adjusted R-squared	0.097	0.112	0.101

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 6B: Regressing Premium on the Target Runup
Over Acquisition Runup Period (-20, -1)

The 'Premium' dependent variable represents the total consideration offered by the bidding firm to the target firm. Market-model equal-weighted returns were used in the calculation of target runup CAARs. Independent variables are binary, excepting (log) size and BTM values, with the intercept term in a full regression implicitly representing cases where the type of acquisition is merger, no defensive measures are present, the form of payment is stock, the target firm has a different two-digit SIC code from the bidding firm, the attitude is hostile, no 5% or more bidder toehold is present, and no capital has been raised within two years prior to the acquisition announcement date. T-stats are shown below coefficients, testing for significant deviations from these types of offers. Variable definitions are given in Appendix 3.

	Capital Raised within 20 Days of Acq Ann				Capital Raised within 30 Days of Acq Ann			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Premium	Premium	Premium	Premium	Premium	Premium	Runup	Runup
Runup	1.688***	1.390***	1.382***	1.389***	1.686***	1.390***	1.382***	1.389***
	(20.17)	(13.52)	(13.36)	(13.46)	(20.18)	(13.55)	(13.38)	(13.48)
tenderdummy		0.0727	0.130***	0.141***		0.0719	0.129***	0.140***
		(1.424)	(2.630)	(2.827)		(1.409)	(2.614)	(2.810)
defensedummy		0.125**	0.100*	0.101*		0.122**	0.0975*	0.0981*
		(2.345)	(1.866)	(1.873)		(2.295)	(1.819)	(1.832)
cashonlydummy		-0.0271	-0.172***	-0.177***		-0.0261	-0.171***	-0.176***
		(-0.464)	(-3.723)	(-3.814)		(-0.446)	(-3.695)	(-3.786)
mixedfinancingdummy		0.248***				0.247***		
		(4.255)				(4.242)		
twodigitrelateddummy		0.0859**	0.0861**	0.0837*		0.0856**	0.0858**	0.0835*
		(2.013)	(2.012)	(1.950)		(2.006)	(2.006)	(1.945)
friendlydummy		-0.183**	-0.180**	-0.186**		-0.187**	-0.183**	-0.189**
		(-2.276)	(-2.124)	(-2.210)		(-2.322)	(-2.161)	(-2.238)
attitudeundisclosedddummy		-0.0848				-0.0873		
		(-0.321)				(-0.330)		
toeholddummy		-0.418***	-0.395***	-0.402***		-0.419***	-0.397***	-0.402***
		(-5.323)	(-4.983)	(-5.045)		(-5.321)	(-4.983)	(-5.043)
lnTargetSize		-0.0391**	-0.0375**	-0.0392**		-0.0395**	-0.0379**	-0.0394**
		(-2.280)	(-2.205)	(-2.298)		(-2.297)	(-2.222)	(-2.308)
lnTargetBTMCRSP		0.320**	0.389***	0.383***		0.316**	0.385***	0.379***
		(2.413)	(2.958)	(2.898)		(2.373)	(2.915)	(2.865)
lnAcquirerSize		0.0410***	0.0433***	0.0396***		0.0405***	0.0429***	0.0393***
		(3.216)	(3.386)	(3.089)		(3.186)	(3.354)	(3.072)
lnAcquirerBTMCRSP		-0.00558	0.0222	0.0359		-0.00449	0.0232	0.0363
		(-0.135)	(0.536)	(0.828)		(-0.109)	(0.559)	(0.837)
within20dummy	0.232***	0.237***	0.227***	0.192**				
	(2.892)	(2.696)	(2.635)	(2.164)				
capitalsampledummy				0.0783*				0.0767
				(1.648)				(1.600)
within30dummy					0.222***	0.191**	0.187**	0.152*
					(3.162)	(2.498)	(2.451)	(1.926)
Constant	-1.000***	-1.270***	-1.329***	-1.248***	-1.002***	-1.247***	-1.306***	-1.232***
	(-50.94)	(-3.250)	(-3.409)	(-3.191)	(-50.88)	(-3.178)	(-3.337)	(-3.143)
Observations	3,373	1,940	1,940	1,940	3,373	1,940	1,940	1,940
Adjusted R-squared	0.096	0.110	0.101	0.102	0.096	0.110	0.101	0.102

Robust t-statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table 7: Informed Trading

The tables below present the significance of coefficients from the following regression:

$$R_{it+1} = C0_i + C1_i * R_{it} + C2i * (V_{it})^2 * R_{it} + error_{it+1}$$

Where a positively significant C2 indicates the presence of informed trading over the indicated period. *Daily Turnover* is calculated as (daily volume/shares outstanding)^2; *Transformed Volume* is calculated as: ln(1+daily number of shares traded)^2; and *Volume* is calculated as: (1+daily number of shares traded)^2. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730

Day -1	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C1}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.003	2.750	-0.095	-1.590	0.002	**2.040**
Transformed Volume	0.003	2.720	-0.412	-3.280	0.002	**3.290**
Volume	0.003	2.770	-0.090	-1.480	0.000	**3.020**

Day 0	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.001	1.240	-0.125	-3.240	0.002	**2.670**
Transformed Volume	0.001	0.930	-0.426	-5.430	0.002	**3.770**
Volume	0.001	1.250	-0.130	-3.320	0.000	**2.420**

Days (-1,0)	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.002	2.810	-0.088	-2.480	0.002	**2.020**
Transformed Volume	0.002	2.640	-0.423	-6.190	0.002	**5.250**
Volume	0.002	2.830	-0.096	-2.760	0.000	**2.460**

Panel B: 20 < Timediff < 730

Day -1	Coefficients and respective t-tests					
Volume Measure	**C1**	**t_{C1}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.002	1.890	-0.176	-2.410	0.003	**3.060**
Transformed Volume	0.002	1.650	-0.450	-3.520	0.003	**3.420**
Volume	0.002	1.650	-0.114	-1.750	0.000	**2.830**

Day 0	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.000	-0.080	-0.143	-3.230	0.001	0.630
Transformed Volume	0.000	-0.360	-0.423	-4.630	0.002	**2.810**
Volume	0.000	-0.050	-0.144	-3.460	0.000	**3.490**

Days (-1,0)	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.001	1.260	-0.141	-3.580	0.002	**2.510**
Transformed Volume	0.001	1.040	-0.439	-6.060	0.002	**4.800**
Volume	0.001	1.230	-0.117	-3.180	0.000	**2.600**

Table 8A: Informed Trading for Highly Asymmetric Information Acquisitions

The tables below present the significance of coefficients from the following regression:

$$R_{it+1} = C0_i + C1_i * R_{it} + C2i * (V_{it})^2 * R_{it} + error_{it+1}$$

Where a positively significant C2 indicates the presence of informed trading over the indicated period. Only acquisitions ranking in the top tertile of highly asymmetric information are examined, as described below: First, rankings are created for illiquidity, relative spread, and relative spread2 (for which higher values indicate higher levels of information asymmetry), and these rankings are then normalized to between 0 & 1. From the sum of these rankings is subtracted the normalized ranking for the size of the target firm (for which higher values indicate lower levels of information asymmetry). This overall ranking is normalized to values between 0 and 1 and combined with a lack of analyst coverage within three months prior to the acquirer's issue date to represent the overall level of asymmetric information associated with the merger. Acquisitions with values above 0.66 on this ranking are represented below. A positively significant C2 indicates the presence of informed trading over the indicated period for such acquisitions. *Daily Turnover* is calculated as (daily volume/shares outstanding)^2; *Transformed Volume* as: ln(1+daily number of shares traded)^2; *Volume* as: (1+daily number of shares traded)^2; *Illiquidity* as abs(return)/(price*vol), as per Amihud (2002); *Relative Spread* as: (ask-bid)/price; *Relative Spread2* as: (ask-bid)/midquote, where midquote=(ask-bid)/2 + bid ; *# of acquirer analysts* =the number of analysts for the acquiring firm whose forecast period includes the date in which capital is raised by the acquirer; *# of target analysts* = the number of analysts for the target firm whose forecast period includes the date in which capital is raised by the acquirer ; and *Size* =abs(prc)*shares outstanding. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730

Day -1	Coefficients and respective t-tests					
Volume Measure	**C1**	**t_{C1}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.003	0.940	-0.271	-2.040	0.008	**3.900**
Transformed Volume	0.001	0.400	-0.931	-3.320	0.008	**3.350**
Volume	0.001	0.460	-0.231	-1.650	0.000	**1.840**

Day 0	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.005	1.980	-0.315	-5.850	0.006	**1.800**
Transformed Volume	0.005	2.050	-0.781	-3.800	0.006	**2.500**
Volume	0.004	1.810	-0.324	-6.230	0.000	**3.890**

Days (-1,0)	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.004	1.920	-0.292	-4.480	0.007	**7.620**
Transformed Volume	0.003	1.490	-0.826	-6.030	0.007	**4.730**
Volume	0.003	1.440	-0.283	-4.190	0.000	**2.590**

Table 8B: Informed Trading for Highly Asymmetric Information Acquisitions

The tables below present the significance of coefficients from the following regression:

$$R_{it+1} = C0_i + C1_i * R_{it} + C2i * (V_{it})^2 * R_{it} + error_{it+1}$$

Where a positively significant C2 indicates the presence of informed trading over the indicated period. Only acquisitions ranking in the top tertile of highly asymmetric information are examined, as described below: First, rankings are created for illiquidity, relative spread, and relative spread2 (for which higher values indicate higher levels of information asymmetry), and these rankings are then normalized to between 0 & 1. From the sum of these rankings is subtracted the normalized ranking for the size of the target firm (for which higher values indicate lower levels of information asymmetry). This overall ranking is normalized to values between 0 and 1 and combined with a lack of analyst coverage within three months prior to the acquirer's issue date to represent the overall level of asymmetric information associated with the merger. Acquisitions with values above 0.66 on this ranking are represented below. A positively significant C2 indicates the presence of informed trading over the indicated period for such acquisitions. *Daily Turnover* is calculated as (daily volume/shares outstanding)^2; *Transformed Volume* as: ln(1+daily number of shares traded)^2; *Volume* as: (1+daily number of shares traded)^2; *Illiquidity* as abs(return)/(price*vol), as per Amihud (2002); *Relative Spread* as: (ask-bid)/price; *Relative Spread2* as: (ask-bid)/midquote, where midquote=(ask-bid)/2 + bid ; *# of acquirer analysts* =the number of analysts for the acquiring firm whose forecast period includes the date in which capital is raised by the acquirer; *# of target analysts* = the number of analysts for the target firm whose forecast period includes the date in which capital is raised by the acquirer ; and *Size* =abs(prc)*shares outstanding. Bold highlighting indicates significance at 10% levels or better.

Panel B: 20 < Timediff < 730

Day -1	Coefficients and respective t-tests					
Volume Measure	**C1**	**t_{C1}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.002	0.680	-0.318	-2.320	0.007	**4.170**
Transformed Volume	0.000	0.100	-0.960	-3.270	0.007	**3.200**
Volume	0.000	0.130	-0.273	-1.840	0.000	**1.990**

Day 0	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.005	2.090	-0.307	-5.670	0.005	1.540
Transformed Volume	0.006	2.240	-0.681	-3.220	0.005	**1.870**
Volume	0.005	1.960	-0.315	-6.010	0.000	**2.820**

Days (-1,0)	Coefficients and respective t-tests					
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**
Daily Turnover	0.003	1.600	-0.312	-4.740	0.006	**8.040**
Transformed Volume	0.002	1.220	-0.791	-5.530	0.006	**4.070**
Volume	0.002	1.150	-0.298	-4.330	0.000	**2.540**

Table 9A: Informed Trading over Event and Pre-estimation Windows for Highly Asymmetric Information Acquisitions

The tables below present the significance of coefficients from the following regression:

$$R_{it+1} = C0_i + C1i*R_{it} + C2_i*(V_{it})^2*R_{it} + C3_i*P_i + C4*P_i*R_{it} + C5*P_i*(V_{it})^2*R_{it} + e_{it+1}$$

where P=1 if within the event window listed, else 0 and therefore within the estimation period of (-270, -91). A positively significant C5 indicates informed trading is significantly higher over the event window as compared to the estimation window. Only acquisitions ranking in the top tertile of highly asymmetric information are examined, as described below: First, rankings are created for illiquidity, relative spread, and relative spread2 (for which higher values indicate higher levels of information asymmetry), and these rankings are then normalized to between 0 & 1. From the sum of these rankings is subtracted the normalized ranking for the size of the target firm (for which higher values indicate lower levels of information asymmetry). This overall ranking is normalized to values between 0 and 1 and combined with a lack of analyst coverage within three months prior to the acquirer's issue date to represent the overall level of asymmetric information associated with the merger. Acquisitions with values above 0.66 on this ranking are represented below. A positively significant C2 indicates the presence of informed trading over the indicated period for such acquisitions. *Daily Turnover* is calculated as (daily volume/shares outstanding)^2; *Transformed Volume* as: ln(1+daily number of shares traded)^2; *Volume* as: (1+daily number of shares traded)^2; *Illiquidity* as abs(return)/(price*vol), as per Amihud (2002); *Relative Spread* as: (ask-bid)/price; *Relative Spread2* as: (ask-bid)/midquote, where midquote=(ask-bid)/2 + bid ; *# of acquirer analysts* =the number of analysts for the acquiring firm whose forecast period includes the date in which capital is raised by the acquirer*; # of target analysts* = the number of analysts for the target firm whose forecast period includes the date in which capital is raised by the acquirer ; and *Size* =abs(prc)*shares outstanding. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730

Day -1	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-1.010	-0.224	-24.460	7.495	1.640	0.004	1.880	-0.057	-0.820	0.004	**7.170**
Transformed Volume	0.000	-1.380	-0.476	-23.720	0.003	11.560	0.003	1.530	-0.351	-2.370	0.004	**2.620**
Volume	0.000	-0.970	-0.221	-24.350	0.000	1.520	0.003	1.420	-0.051	-0.710	0.000	**2.520**

Day 0	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-0.790	-0.210	-22.720	4.497	1.750	0.004	1.850	-0.071	-1.040	0.004	**7.190**
Transformed Volume	0.000	-1.280	-0.453	-20.930	0.003	10.470	0.002	1.220	-0.424	-2.540	0.004	**2.760**
Volume	0.000	-0.740	-0.207	-22.420	0.000	1.570	0.003	1.330	-0.067	-0.960	0.000	**2.540**

Days (-1,0)	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-1.000	-0.215	-24.540	6.133	1.740	0.004	2.020	-0.076	-1.160	0.004	**7.410**
Transformed Volume	0.000	-1.390	-0.454	-22.650	0.003	11.140	0.003	1.640	-0.373	-2.700	0.004	**2.820**
Volume	0.000	-0.950	-0.212	-24.450	0.000	1.490	0.003	1.540	-0.070	-1.030	0.000	**2.590**

Table 9B: Informed Trading Over Event and Pre-estimation Windows for Highly Asymmetric Information Acquisitions

The tables below present the significance of coefficients from the following regression:

$$R_{it+1} = C0_i + C1i*R_{it} + C2_i*(V_{it})^2*R_{it} + C3_i*P_i + C4*P_i*R_{it} + C5*P_i*(V_{it})^2*R_{it} + e_{it+1}$$

where P=1 if within the event window listed, else 0 and therefore within the estimation period of (-270, -91). A positively significant C5 indicates informed trading is significantly higher over the event window as compared to the estimation window. Only acquisitions ranking in the top tertile of highly asymmetric information are examined, as described below: First, rankings are created for illiquidity, relative spread, and relative spread2 (for which higher values indicate higher levels of information asymmetry), and these rankings are then normalized to between 0 & 1. From the sum of these rankings is subtracted the normalized ranking for the size of the target firm (for which higher values indicate lower levels of information asymmetry). This overall ranking is normalized to values between 0 and 1 and combined with a lack of analyst coverage within three months prior to the acquirer's issue date to represent the overall level of asymmetric information associated with the merger. Acquisitions with values above 0.66 on this ranking are represented below. A positively significant C2 indicates the presence of informed trading over the indicated period for such acquisitions. *Daily Turnover* is calculated as (daily volume/shares outstanding)^2; *Transformed Volume* as: ln(1+daily number of shares traded)^2; *Volume* as: (1+daily number of shares traded)^2; *Illiquidity* as abs(return)/(price*vol), as per Amihud (2002); *Relative Spread* as: (ask-bid)/price; *Relative Spread2* as: (ask-bid)/midquote, where midquote=(ask-bid)/2 + bid ; *# of acquirer analysts* =the number of analysts for the acquiring firm whose forecast period includes the date in which capital is raised by the acquirer*; # of target analysts* = the number of analysts for the target firm whose forecast period includes the date in which capital is raised by the acquirer ; and *Size* =abs(prc)*shares outstanding. Bold highlighting indicates significance at 10% levels or better.

Panel B: 20 < Timediff < 730

Day -1	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-1.020	-0.228	-23.770	7.349	1.610	0.003	1.590	-0.074	-1.050	0.003	**7.500**
Transformed Volume	0.000	-1.400	-0.485	-23.280	0.003	11.250	0.003	1.300	-0.307	-1.980	0.003	**2.080**
Volume	0.000	-0.990	-0.225	-23.660	0.000	1.540	0.003	1.150	-0.063	-0.860	0.000	**2.470**

Day 0	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-0.730	-0.214	-21.870	5.222	1.690	0.003	1.660	-0.091	-1.310	0.004	**7.570**
Transformed Volume	0.000	-1.220	-0.460	-20.390	0.003	10.170	0.002	1.100	-0.377	-2.140	0.004	**2.180**
Volume	0.000	-0.680	-0.210	-21.660	0.000	1.580	0.003	1.160	-0.082	-1.140	0.000	**2.480**

Days (-1,0)	Coefficients and respective t-tests											
Volume Measure	**C0**	**t_{C0}**	**C1**	**t_{C1}**	**C2**	**t_{C2}**	**C3**	**t_{C3}**	**C4**	**t_{C4}**	**C5**	**t_{C5}**
Daily Turnover	0.000	-0.920	-0.218	-23.850	6.016	1.710	0.003	1.690	-0.094	-1.420	0.003	**7.830**
Transformed Volume	0.000	-1.310	-0.460	-22.170	0.003	10.870	0.003	1.370	-0.332	-2.300	0.003	**2.250**
Volume	0.000	-0.870	-0.215	-23.780	0.000	1.500	0.002	1.240	-0.083	-1.190	0.000	**2.540**

Appendix 1 : Target Average and Cumulative Average Abnormal Returns, Value-weighted 1981-2006

Target average and cumulative average abnormal returns (AAR and CAAR) were estimated using both a market model (with the CRSP value-weighted index) and the Carhart /Fama French four-factor model with size, book-to-market, momentum, and the CRSP value-weighted return as factors. Parameter estimates are obtained 270 days to 91 days before the issue date of capital raised by the bidder. *% of Runup* measures the cumulative average abnormal return as a percentage of the acquisition announcement date abnormal target return from day -20 to -1 (Panel C). *Timediff* measures the number of days between the bidder's issue announcement date of capital and the announcement date of the takeover. Slightly more observations have data availability over the takeover announcement period as compared to the issue date of capital period. *AcqUse==1* refers to the use of capital proceeds indicated at the time of issue for either acquisitions, future acquisitions, leveraged buyouts, or general purposes/working capital. Bold highlighting indicates significance at 10% levels or better.

Panel A: 0 < Timediff < 730 ; 1060 takeovers (whole sample)
Day 0 represents the acquirer's issue date of capital

	one-factor market model					*four-factor market model*				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*
-20	0.068	0.58	0.068	0.58	0.8	-0.031	-0.26	-0.031	-0.26	-0.4
-19	-0.120	-1.07	-0.051	-0.33	-0.6	-0.174	-1.55	-0.205	-1.30	-2.4
-18	0.048	0.42	-0.003	-0.02	0.0	-0.012	-0.11	-0.217	-1.16	-2.5
-17	-0.051	-0.40	-0.054	-0.26	-0.6	-0.103	-0.82	-0.320	-1.48	-3.7
-16	0.121	0.87	0.067	0.28	0.8	0.140	1.01	-0.180	-0.74	-2.1
-15	-0.065	-0.54	0.002	0.01	0.0	-0.133	-1.10	-0.313	-1.16	-3.6
-14	0.066	0.56	0.067	0.24	0.8	0.058	0.50	-0.255	-0.88	-3.0
-13	0.025	0.19	0.092	0.30	1.1	-0.006	-0.04	-0.261	-0.84	-3.0
-12	0.250	**1.83**	0.342	1.01	4.0	0.246	**1.81**	-0.015	-0.04	-0.2
-11	0.000	0.00	0.342	0.95	4.0	-0.041	-0.35	-0.055	-0.15	-0.6
-10	-0.008	-0.06	0.335	0.90	3.9	-0.057	-0.44	-0.112	-0.30	-1.3
-9	0.155	1.14	0.490	1.28	5.7	0.182	1.35	0.070	0.18	0.8
-8	-0.033	-0.27	0.457	1.17	5.3	-0.048	-0.39	0.022	0.06	0.3
-7	0.067	0.53	0.524	1.30	6.1	0.119	0.92	0.141	0.35	1.6
-6	0.071	0.63	0.595	1.44	6.9	0.106	0.93	0.247	0.59	2.9
-5	0.018	0.15	0.613	1.42	7.1	-0.006	-0.05	0.241	0.54	2.8
-4	-0.043	-0.38	0.570	1.27	6.6	-0.059	-0.52	0.182	0.40	2.1
-3	0.102	0.77	0.673	1.44	7.8	0.156	1.19	0.338	0.71	3.9
-2	-0.131	-1.11	0.542	1.16	6.3	-0.163	-1.39	0.175	0.37	2.0
-1	0.338	**2.70**	0.880	**1.81**	10.2	0.196	**1.56**	0.371	0.75	4.3
0	0.363	**2.54**	1.242	**2.50**	14.4	0.314	**2.21**	0.685	1.37	8.0
1	0.078	0.59	1.321	**2.59**	15.4	0.078	0.57	0.763	1.48	8.9
2	0.273	**1.92**	1.594	**3.02**	18.5	0.274	**1.91**	1.037	**1.95**	12.1
3	0.323	**2.23**	1.917	**3.44**	22.3	0.312	**2.16**	1.349	**2.40**	15.7
4	0.155	1.20	2.072	**3.64**	24.1	0.163	1.25	1.512	**2.61**	17.6
5	-0.087	-0.66	1.985	**3.41**	23.1	-0.020	-0.15	1.492	**2.52**	17.3

Panel B: 20 < Timediff < 730 ; 977 takeovers
Day 0 represents the acquirer's issue date of capital

	one-factor market model					*four-factor market model*				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	*% of Runup*
-20	0.094	0.74	0.094	0.74	1.1	-0.007	-0.06	-0.007	-0.06	-0.1
-19	-0.120	-1.02	-0.026	-0.16	-0.3	-0.158	-1.34	-0.166	-1.00	-1.9
-18	0.067	0.55	0.041	0.21	0.5	0.007	0.05	-0.159	-0.80	-1.8
-17	-0.057	-0.43	-0.016	-0.07	-0.2	-0.118	-0.89	-0.277	-1.21	-3.2
-16	0.086	0.59	0.070	0.28	0.8	0.095	0.65	-0.182	-0.71	-2.1
-15	-0.038	-0.30	0.032	0.12	0.4	-0.099	-0.78	-0.281	-0.99	-3.3
-14	0.001	0.01	0.033	0.11	0.4	-0.005	-0.04	-0.286	-0.94	-3.3
-13	0.047	0.34	0.080	0.25	0.9	0.015	0.11	-0.271	-0.83	-3.2
-12	0.228	1.59	0.308	0.86	3.6	0.215	1.52	-0.056	-0.16	-0.6
-11	0.016	0.13	0.323	0.85	3.8	-0.038	-0.31	-0.094	-0.25	-1.1
-10	-0.060	-0.44	0.264	0.67	3.1	-0.096	-0.70	-0.189	-0.48	-2.2
-9	0.105	0.74	0.369	0.91	4.3	0.125	0.88	-0.065	-0.16	-0.8
-8	-0.039	-0.31	0.330	0.81	3.8	-0.076	-0.61	-0.141	-0.34	-1.6
-7	0.060	0.46	0.390	0.92	4.5	0.109	0.81	-0.032	-0.08	-0.4
-6	0.068	0.58	0.458	1.06	5.3	0.116	0.97	0.084	0.19	1.0
-5	-0.025	-0.21	0.433	0.96	5.0	-0.058	-0.49	0.026	0.06	0.3
-4	-0.097	-0.83	0.336	0.72	3.9	-0.113	-0.97	-0.087	-0.18	-1.0
-3	0.075	0.53	0.412	0.85	4.8	0.125	0.89	0.038	0.08	0.4
-2	-0.189	-1.62	0.223	0.46	2.6	-0.223	**-1.92**	-0.185	-0.37	-2.2
-1	0.323	**2.46**	0.545	1.09	6.3	0.182	1.38	-0.003	-0.01	0.0
0	0.257	**1.74**	0.803	1.57	9.3	0.207	1.40	0.204	0.40	2.4
1	-0.075	-0.64	0.728	1.41	8.5	-0.079	-0.65	0.124	0.24	1.4
2	0.146	1.10	0.874	1.65	10.2	0.147	1.10	0.272	0.50	3.2
3	0.136	1.00	1.009	**1.82**	11.7	0.127	0.94	0.399	0.71	4.6
4	0.063	0.48	1.072	**1.89**	12.5	0.057	0.43	0.456	0.79	5.3
5	-0.219	**-1.68**	0.853	1.47	9.9	-0.147	-1.12	0.309	0.52	3.6

Panel C: **Day 0 represents the takeover announcement date**

Original Sample Takeovers
Bidder Raised Capital

	one-factor market model Timedif<=30; 118 takeovers					*one-factor market model* Timedif>30; 1003 takeovers					*one-factor market model* Timedif<730; 1121 takeovers				
Trade Day	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup	*AAR(%)*	*t-stat*	*CAAR(%)*	*t-stat*	% of Runup
-20	-0.056	-0.18	-0.056	-0.18	-0.6	0.214	1.65	0.214	1.65	2.5	0.186	1.54	0.186	1.54	2.2
-19	0.483	0.89	0.427	0.67	5.0	0.028	0.19	0.242	1.28	2.8	0.076	0.53	0.262	1.44	3.0
-18	-0.096	-0.36	0.331	0.50	3.9	-0.112	-0.92	0.131	0.62	1.5	-0.110	-0.98	0.152	0.76	1.8
-17	-0.057	-0.17	0.274	0.36	3.2	0.226	**1.88**	0.356	1.52	4.1	0.196	**1.74**	0.348	1.55	4.0
-16	0.085	0.21	0.359	0.41	4.2	0.145	1.17	0.501	**1.91**	5.8	0.138	1.17	0.486	**1.93**	5.7
-15	1.143	**2.97**	1.502	1.55	17.5	0.182	1.52	0.683	**2.38**	7.9	0.283	**2.47**	0.769	**2.79**	8.9
-14	-0.344	-0.91	1.158	1.07	13.5	0.271	**2.09**	0.954	**3.09**	11.1	0.206	**1.68**	0.975	**3.27**	11.3
-13	0.900	**2.35**	2.058	**1.86**	23.9	0.273	**2.11**	1.226	**3.73**	14.3	0.339	**2.77**	1.314	**4.15**	15.3
-12	0.527	1.42	2.585	**2.27**	30.0	0.367	**2.70**	1.593	**4.45**	18.5	0.384	**3.00**	1.698	**4.97**	19.7
-11	0.202	0.73	2.786	**2.37**	32.4	0.213	1.55	1.807	**4.74**	21.0	0.212	**1.68**	1.910	**5.27**	22.2
-10	0.370	1.10	3.157	**2.60**	36.7	0.377	**2.85**	2.184	**5.38**	25.4	0.376	**3.05**	2.286	**5.94**	26.6
-9	0.524	1.37	3.681	**2.96**	42.8	0.266	**1.77**	2.450	**5.72**	28.5	0.293	**2.09**	2.580	**6.37**	30.0
-8	0.675	1.64	4.355	**3.17**	50.6	0.382	**2.97**	2.832	**6.43**	32.9	0.413	**3.36**	2.992	**7.13**	34.8
-7	0.873	**1.83**	5.228	**3.54**	60.8	0.350	**2.91**	3.182	**7.11**	37.0	0.405	**3.41**	3.397	**7.91**	39.5
-6	0.453	1.47	5.682	**3.80**	66.1	0.664	**4.33**	3.846	**8.12**	44.7	0.642	**4.55**	4.039	**8.93**	47.0
-5	0.632	**1.90**	6.313	**4.20**	73.4	0.296	**2.07**	4.142	**8.41**	48.2	0.331	**2.50**	4.370	**9.33**	50.8
-4	0.511	1.28	6.825	**4.54**	79.3	0.597	**3.93**	4.739	**9.69**	55.1	0.588	**4.14**	4.958	**10.65**	57.6
-3	1.515	**2.77**	8.339	**5.23**	97.0	0.575	**4.22**	5.314	**10.48**	61.8	0.674	**4.99**	5.632	**11.63**	65.5
-2	1.250	**2.45**	9.590	**5.93**	111.5	0.976	**6.07**	6.289	**11.85**	73.1	1.004	**6.55**	6.637	**13.13**	77.2
-1	2.523	**4.51**	12.113	**7.32**	140.8	1.899	**8.85**	8.188	**14.51**	95.2	1.965	**9.79**	8.601	**16.07**	100.0
0	15.161	**8.29**	27.274	**11.74**	317.1	16.346	**21.05**	24.535	**26.16**	285.2	16.222	**22.50**	24.823	**28.40**	288.6
1	5.495	**5.02**	32.769	**14.89**	381.0	4.709	**9.74**	29.244	**30.28**	340.0	4.792	**10.71**	29.615	**33.09**	344.3
2	0.175	0.80	32.944	**14.98**	383.0	0.141	1.39	29.385	**30.34**	341.6	0.145	1.55	29.760	**33.17**	346.0
3	-0.116	-0.60	32.828	**14.87**	381.7	-0.104	-1.17	29.281	**29.97**	340.4	-0.105	-1.28	29.655	**32.77**	344.8
4	-0.073	-0.41	32.756	**14.78**	380.8	-0.021	-0.25	29.260	**29.64**	340.2	-0.026	-0.34	29.628	**32.42**	344.5
5	0.042	0.24	32.798	**14.75**	381.3	-0.140	**-1.78**	29.120	**29.40**	338.6	-0.121	-1.66	29.507	**32.18**	343.1

Appendix 2 : Target Cumultive Average Abnormal Return Intervals, Value-weighted 1981-2006

Target cumulative average abnormal return intervals were estimated using both a market model (with the CRSP value- weighted index) and the Carhart /Fama French four-factor model with size, book-to-market, momentum, and the CRSP value-weighted return as factors. Parameter estimates are obtained 270 days to 91 days before the issue date of capital raised by the bidder. Timediff measures the number of days between the issue date of capital and the announcement date, with day 0 representing the announcement date of capital issuance. *AcqUse* refers to the subsample in which the use of proceeds from capital raised was indicated at the time of issue for either acquisitions, future acquisitions, leveraged buyouts, or general purposes/working capital. *SICCD* ≠ refers to the subsample in which the bidder four-digit standard industrial classification code does not match the target's. The rank test performed is the Kruskal-Wallis , while the Wilcoxon test is the signed- rank test. *, **, and *** indicate two-tailed test significance at the 10%, 5%, and 1% levels respectively, with significance based on White-adjusted standard errors.

Panel A: 0 < Timediff < 730 ; 1060 takeovers

one-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.70%	**3.78*** **	**0.001**	**0.002**
(-1,1)	0.78%	**3.53*** **	**0.003**	**0.010**
(-2,2)	0.92%	**3.30*** **	**0.000**	**0.056**
(-4,4)	1.46%	**3.83*** **	**0.045**	**0.030**
SICCD ≠ (-1,0)	0.65%	**3.25*** **	**0.013**	**0.004**
Acq Use (-1,0)	0.99%	**4.76*** **	**0.000**	**0.000**
1981-89 (-1,0)	-0.12%	-0.21	0.524	0.303
1990-99 (-1,0)	0.73%	**3.45*** **	**0.004**	**0.001**
2000-06 (-1,0)	1.08%	**2.53****	0.162	0.235

four-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.51%	**2.79*** **	0.147	**0.052**
(-1,1)	0.59%	**2.58****	**0.041**	**0.097**
(-2,2)	0.70%	**2.40****	0.208	0.246
(-4,4)	1.27%	**3.27*** **	**0.033**	**0.078**
SICCD ≠ (-1,0)	0.47%	**2.37****	0.486	**0.078**
Acq Use (-1,0)	0.81%	**3.86*** **	**0.025**	**0.004**
1981-89 (-1,0)	-0.19%	-0.34	0.985	0.277
1990-99 (-1,0)	0.60%	**2.84*** **	**0.013**	**0.009**
2000-06 (-1,0)	0.72%	**1.75***	0.455	0.770

Panel B: 20 < Timediff < 730 ; 977 takeovers

one-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.58%	**2.99*** **	**0.004**	**0.022**
(-1,1)	0.51%	**2.35****	**0.021**	**0.082**
(-2,2)	0.46%	**1.74***	**0.003**	0.348
(-4,4)	0.64%	**1.74***	0.409	0.508
SICCD ≠ (-1,0)	0.52%	**2.49****	**0.036**	**0.037**
Acq Use (-1,0)	0.89%	**4.12*** **	**0.000**	**0.002**
1981-89 (-1,0)	-0.11%	-0.19	0.770	0.254
1990-99 (-1,0)	0.55%	**2.48****	**0.008**	**0.014**
2000-06 (-1,0)	1.04%	**2.36****	0.219	0.285

four-factor mkt model			*Rank Test*	*Wilcox Test*
CAAR	**AAR**	**T-stat**	**p-value**	**p-value**
(-1,0)	0.39%	**2.04****	0.371	0.254
(-1,1)	0.31%	1.37	0.179	0.387
(-2,2)	0.23%	0.83	0.521	0.899
(-4,4)	0.43%	1.14	0.331	0.944
SICCD ≠ (-1,0)	0.35%	**1.71***	0.812	0.271
Acq Use (-1,0)	0.72%	**3.28*** **	**0.081**	**0.022**
1981-89 (-1,0)	-0.16%	-0.28	0.832	0.258
1990-99 (-1,0)	0.44%	**2.01****	**0.045**	**0.078**
2000-06 (-1,0)	0.64%	1.49	0.325	0.956

Appendix 3: Variable Definitions

Variable	Definitions
A. Target Characteristics	
lnTargetBTM	Natural logarithm of target book value (Compustat #60) divided by market capitalization (CRSP shares outstanding * abs(price)) at fiscal year-end prior to the acquisition ann.
lnTargetSize	Natural logarithm of the target market capitalization according to CRSP in $ million the last day of December the year prior; same results using 60 days prior to acq ann
B. Bidder Characteristics	
lnAcquirerBTM	Natural logarithm of bidder book value (Compustat #60) divided by market capitalization (CRSP shares outstanding * abs(price)) at fiscal year-end prior to the acquisition ann.
lnAcquirerSize	Natural logarithm of the bidder market capitalization according to CRSP in $ million the last day of December the year prior; same results using 60 days prior to acq ann
C. Takeover Characteristics	
attitudeundisclosedddummy	The attitude of of target management is not given in SDC
capitalsampledummy	Refers to the original sample in which bidding firms have raised capital within two years prior to the acquisition announcement, as opposed to a benchmark sample in which no capital has been raised in excess of $10 million within two years prior to the acq ann
cashonlydummy	The payment method for the takeover is cash only
defensedummy	The presence of one or more target defenses (poison pill, etc.) has been noted in SDC
friendlydummy	The attitude of target management is listed as friendly in SDC
mixedfinancingdummy	The payment method for the takeover is neither cash only nor stock only
Premium	The total value of all consideration offered by the bidding firm to the target firm as computed by Officer (2003): total consideration from SDC is used if the premium-to-target share price ratio is between zero and two; otherwise first initial price data and then final price data are used if the same condition is met, else changed to missing data
Runup	Unless otherwise specified, this refers to target cumulative average abnormal return (CAAR) for the 20-day run-up period (-20,-1) prior to the acquisition announcement
tenderdummy	The form of the takeover is a tender offer as opposed to a merger
toeholddummy	The bidding firm owns a 5% - 49.9% stake in the target firm when announcing the bid
twodigitrelateddummy	The first two digits of the Standard Industrial Classification (SIC) code is the same for both the target and bidder firm
within'x'dummy	Capital has been raised by the bidding firm within 'x' days of the acquisition ann.

Appendix 4: Correlation Matrix of Independent Variables

	Premium	Runup	tender~y	defens~y	casho~y	mixedf~y	twodig~y	friend~y	attitu~y	toehol~y	lntarg~e	lnTarg~P	lnAcqu~e	lnAcqu~P	w~20d~y	w~30d~y	w~45d~y	w~60d~y	capita~y
Premium	1																		
Runup	0.2725	1																	
tenderdummy	0.0581	0.0992	1																
defensedummy	0.043	0.0197	0.0868	1															
cashonlydummy	-0.0369	0.0658	0.4533	0.0329	1														
mixedfinancin~y	0.1043	-0.0227	-0.0195	-0.1018	-0.4829	1													
twodigitrelate~y	0.0315	-0.0357	-0.1144	-0.0132	-0.1111	-0.004	1												
friendlydummy	-0.0226	0.0308	-0.2516	-0.0923	-0.0946	-0.0248	0.0459	1											
attitudeundis~y	0.0006	-0.0206	0.0323	-0.03	0.0251	0.0107	-0.0121	-0.409	1										
toeholddummy	-0.1163	-0.013	0.068	-0.0504	0.1056	0.0304	-0.0526	-0.1122	0.0525	1									
lntargetsize	-0.0703	-0.1177	-0.0803	0.0532	-0.1789	0.0882	0.0487	-0.0898	-0.0345	-0.013	1								
lnTargetBTMC~P	0.0458	0.0798	0.1057	-0.0382	0.1096	0.0231	-0.0551	-0.041	0.0114	0.0261	-0.229	1							
lnAcquirerSize	0.0394	-0.008	-0.0761	0.0269	0.0003	-0.05	0.0203	0.0607	-0.009	-0.0125	0.4643	-0.1948	1						
lnAcquirerBTM~P	-0.0143	0.0402	0.1552	-0.0244	0.1492	0.0736	-0.1981	-0.0101	-0.0121	0.067	-0.0202	0.122	-0.3412	1					
within20dummy	0.0564	0.0196	-0.0056	-0.032	0.0234	-0.035	-0.0076	0.0152	-0.0178	0.0021	0.0403	-0.0069	0.1054	-0.0711	1				
within30dummy	0.0504	0.0239	-0.0097	-0.0115	0.0094	-0.0316	0.0015	0.0305	-0.022	0.0074	0.0675	-0.0063	0.1399	-0.0924	0.8098	1			
within45dummy	0.0503	0.0344	-0.0055	-0.0113	0.0053	-0.0459	0.0155	0.0354	-0.0035	0.0055	0.0912	-0.0125	0.177	-0.0999	0.6702	0.8277	1		
within60dummy	0.0465	0.0264	-0.0196	0.0043	0.0107	-0.0577	0.0101	0.0399	-0.0102	0.0042	0.1114	-0.042	0.2101	-0.1285	0.5814	0.7179	0.8674	1	
capitalsample~y	0.0301	-0.0525	-0.1445	-0.0092	-0.0229	-0.1993	0.1051	0.052	-0.0361	0.0279	0.162	-0.0834	0.3205	-0.2652	0.2144	0.2648	0.3199	0.3688	1