

# The Information Content of Deal Initiation in Mergers and Acquisitions

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< PRELIMINARY AND INCOMPLETE >

## ABSTRACT

From the SEC filings of the merging firms in our sample, we find out which side initiated the deal. We then examine the role of deal initiation in explaining buyer and target firm abnormal returns, bid premiums and synergistic gains between the merging firms around the public announcement of the deal. We find that target firms' abnormal returns are 7.5% higher in buyer initiated deals. Bid premiums also show similar differences: buyer initiation causes premiums to go up by 16%. Despite the fact that buyer firms pay considerably more when they initiate the deal, synergy gains in such deals are significantly positive. In seller initiated deals synergy gains are not statistically different from zero. Initiation does not affect buyer firm abnormal returns, ruling out any possibility of overpayment by the buyer firm to the target firm shareholders in buyer initiated deals. In the light of these findings, we argue that (i) the information asymmetry between the buyer and the target firm about the potential synergies could cause such an effect, and (ii) the motivations in initiating the deal could be quite different for the buyer and the target firms.

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## 1. Introduction

In this paper, we examine the relation between deal initiation and the short run return characteristics of the merging firms. Using an event study technique, we explore whether buyer initiated mergers differ from seller initiated at the time of the public announcement of the merger, in terms of abnormal returns to the target and buyer firms, bid premiums and synergy gains. For this purpose, we complement the relevant databases, which contain merger as well as acquirer and target firm characteristics, with the initiation data that we extract from documents filed with the Securities Exchange Commission (SEC).

Deal initiation has been extensively used in several areas of the market microstructure literature, thanks to the 'tick tests' which classify intraday trades as buyer or seller initiated. There are significant differences between the stock market and the takeover market, such as liquidity, organization of the markets (centralized vs. decentralized) and the size of the trades, but the players in those markets can share similar behavioral motivations in buying or selling the goods in question. Our objective is to uncover these motivations and relate them to the empirical facts in the takeover markets.

There can be several explanations as to why initiation can matter. If there is asymmetric information between the buyer and the target firm about the potential synergies between the two firms, then the uninformed party can infer from the actions of the informed party at the initiation process. For example, if the buyer firm has better information about the potential synergies between itself and the target firm, the act of initiating the merger with the target firm can signal to the other side that the synergies created by the merger are larger than the target firm is aware of. This will lead the target firm to update their beliefs upward about potential synergies. Therefore the target firm will have more bargaining power in the negotiation stage, which can result in a higher price paid to the target firm. (Myers & Majluf, 1984) argues in a very similar way to claim that the information asymmetry between the managers of the firm and the stock market causes a discount in the stock price, and when the firm buys back its stock this signals the stock market good news about the firm, as the manager's act of buying back stock could reveal undervaluation of the shares in the market.

The asymmetric information story is not complete unless we explain why it creates differences in the outcomes from the two types of initiation. If the selling firm knows more about the potential synergies with a particular firm and initiates the deal, then shouldn't this result in a higher premium paid to the target firm? In order to answer this question, we need to look at the motivations of the buyer and target firms in the acquisition process. The chances of synergies are higher in buyer initiated deals than seller initiated ones. Target firm managers usually contact dozens of potential acquirers, either themselves or through their investment banks, once they decide to put the firm up for sale. The target firm managers' primary concern is to maximize the revenue from the sale of the company, as is their investment banks'. Therefore, while choosing the potential acquirers to be contacted, they focus on the firms that could pay the highest price. The firms which would pay the highest price are not necessarily the firms that will have the highest synergies with the target firm. For example, a buyer firm in which managers' and shareholders' incentives are not aligned, may end up paying a target firm

significantly more than the highest synergy creating firm would afford to pay. This suggests that in seller initiated deals, the primary motivation of the target firm is to cash out, rather than finding the buyer that creates highest synergies. On the other hand, buyer firm's managers should have strong incentives to complete successful acquisitions in order to create value. Hence, we expect them to find the targets with which the synergies are the largest.

Our results show that there are significant differences between buyer and seller initiated mergers. Target firms are larger and buyer firms have higher Tobin's Q ratios in buyer initiated mergers. They also experience higher abnormal returns around the public announcement of the merger. The bivariate analysis suggests that the target firm returns are larger by 8% in buyer initiated deals. In the multiple regression model, in which we control for method of payment, form of acquisition, asset relatedness, competition for target firm, size and Q ratios of the merging firms, cash flow and leverage of the buyer firm, this difference is around 7.5%. The effect of initiation on target firm abnormal returns is robust to different specifications of the event window.

Target firm abnormal returns in these short event periods may not fully capture the consequential increase in the target firm valuation. As an alternative measure, we use the bid premium, defined as the transaction value of the deal divided by the market value of equity of the target firm fifty days before the public announcement of the merger. Bivariate and multivariate analysis also suggests a robust and strong effect of initiation on bid premiums. In the multiple regression analysis, bid premiums are 16% larger when deals are initiated by buyer firms.

The evidence suggests that the buyer firms pay more when they initiate the merger. But does it mean that the synergies between the merging firms are low in such deals? In order to estimate the synergy gains from mergers, we form portfolios of the merging firms stocks and calculate weighted averages of buyer and target firm abnormal returns. The weights are determined by the corresponding market values of equity of the merging firms five days before their merger announcements. We find that the sample average of the returns on these portfolios is significantly positive (+2.2%) in buyer initiated deals. For seller initiated deals, the synergy gains are not statistically different from zero.

In order to uncover any possible wealth transfers from buyer firms to the target firms in buyer initiated deals, we regress buyer firm abnormal returns on our initiation dummy variable and other control variables. The results suggest that buyer firm returns are not associated with initiation in a significant way, meaning that there are minimal wealth transfers of such kind.

The most likely scenario to justify these findings is that buyer initiated deals are relatively more synergy oriented but the potential synergy gains are generally captured by target firms' shareholders. As discussed above, the motivation of the buyer firms in initiating negotiations with target firms are more likely to be synergy oriented, but once target firms becomes aware of the size of the synergies, they demand higher bid premiums from the acquiring firms. This higher payment to the target firms does not erode value from the buyer firm itself, rather lets the target firm capture potential gains between the merging firms.

The paper is organized as follows. In section 2, we discuss the related literature in management and market microstructure, where the idea of initiation has been used before. In addition, we summarize a limited version of the M&A literature that explains cross sections of short run abnormal returns to buyer and target firms. In our econometric model, we utilize these earlier findings and use factors from this literature in our set of control variables. Section 3 describes our sample and most importantly how we extract the initiation data from SEC documents. There are also the descriptions of the calculation of the variables used in the analysis. In section 4, we report our findings on target and buyer firm abnormal returns, bid premiums and synergy gains. Section 5 concludes and discusses the limitations of our analysis.

## 2. Related Literature

### 2.1 Deal Initiation

The initiation concept has been mentioned in the management M&A literature in at least two papers. (Kitching, 1973), in the beginning of his book, states his goal is to “identify causes of success and failure – to help other top managers now responsible for acquisitions to do a better job”. His survey data covers 407 acquisitions (95 acquirer firms) made in European countries between 1965 and 1970. The survey is filled out by buyer firm managers who completed an acquisition during this period. Managers are asked several questions such as their objectives and motivations before the acquisition, how they identified their target (i.e. which accounting measures they used to select them) and whether that particular acquisition was a success from the manager’s perspective. Combining this survey with financial and accounting data, he identifies the factors that affect the success of an acquisition. One of these factors, “Availability of the target firm” has an adverse effect on the success of the merger. That is, if the acquisition is made because the target firm was available, then the deal is more likely to be classified as a failure. The explanation for this finding, in (Kitching, 1973)’s words is<sup>2</sup>: *“If you buy a company because it approaches you (‘company was available’), you are more likely to have a “lemon” on your hands than a ‘superstar’”*. This statement is in the same vein as our asymmetric information conjecture, which states that the sale of a company is a good option for firms that lack good investment opportunities. For such firms’ shareholders, it might be optimal to get a premium on their stock and cash out, since future returns do not look promising.

The second paper that uses initiation idea in the management literature is (Hunt, 1990). His methodology is quite similar to (Kitching, 1973); a survey of acquirer managers coupled with financial and accounting data. With the resulting dataset, 40 deals made in the U.K. between 1980 and 1985, he checks if initiation affects the success of the deal and finds that seller initiated deals have the same failure rates as buyer initiated deals.

Even though our paper shares the initiation concept with these papers, there are methodological and conceptual differences. The main goal in these management papers is to find out the best way to strategically position a firm in the acquisition process. The typical questions they desire to answer are “Are diversifying mergers more successful?”, “How should the buyer firm managers decide on which target to acquire?” or “What kind of firms should the

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<sup>2</sup> (Kitching, 1973) Chapter 5, page 188.

buyer firm acquire if its objective is to maximize the market share?”. On the other hand, a more positive perspective, as in this paper, questions the factors that can help explain the market reaction to the announcement of the deal. The typical questions to be answered are “What information content does initiation have that causes different market reaction to the announcement of the deal?”, “Are there wealth transfers from target shareholders to buyer shareholders when the acquisition is announced in the stock market” or “Do larger buyer firms overpay for the target firms during the negotiation process?”.

Management papers also use different datasets than economics papers. Since their questions are more normative in nature, the use of survey data is not inappropriate. However, use of such data to answer a positive question poses significant risks to the validity of the results. Therefore it is very common to use stock market data, which has no subjective value, to support the hypothesis in question. This is the way we will follow in this paper.

The market microstructure literature also hosts significant number of papers that use the idea of trade initiation. Intraday trade data doesn’t specify which trades are triggered by a buy (or sell) order but fortunately there are tick tests (such as (Lee & Ready, 1991)) to classify trades as buyer or seller initiated. It is quite useful to learn whether a trade is a buy or sell order, as this leads to interesting topics, such as measuring market reaction to an information event, price effects of block trades or asymmetric information effects on asset prices<sup>3</sup>. (Holthausen, Leftwich, & Mayers, 1987) examines the effect of block transactions<sup>4</sup> on the prices of common stocks traded on the NYSE. Their evidence suggests that there are temporary negative price effects for seller initiated transactions, and permanent positive price effects for buyer initiated trades. The authors explain the temporary effect through short selling constraints of the block broker and the permanent effect through information set changes in different types of trades. Another paper that uses such a trade classification procedure is (Easley, Hvidkjaer, & O’Hara, 2002). Their calculation of PIN (probability of informed trading), which is the probability that the opening trade in the market is information based, depends on the number of buyer and seller initiated deals. A higher buyer initiated trade arrival rate signals positive news about the stock, while a higher seller initiated trade arrival rate signals negative news. Their main conclusion is that information risk is priced; there is a positive relationship between PIN and asset returns.

These studies in the market microstructure literature explain the differences between buyer and seller initiated trades on an institutional and informational basis. Our approach in analyzing the M&A market utilizes primarily the informational aspect. For example, asymmetric information conjecture emphasizes the differences in information on the valuation of the target firm. When the target firm shareholders know that there are no positive NPV projects available in the future, selling the firm and getting a premium can be a good alternative to continuing as an independent firm. This information asymmetry between the target and the buyer firms may

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3 For a partial list of earlier studies, see (Lee & Ready, 1991).

4 (Kraus & Stoll, 1972) defines block trade as “a transaction involving a larger number of shares than can readily be handled in the normal course of the auction market”

lead to a discount in the price of the target firm and result in a less than normal premium paid for the shares.

Beyond the fact that initiation information in the market micro structure literature has no use per se, there are a couple of major differences between the initiation concepts in the market microstructure and the M&A literature. These differences reflect the nature of the markets the players operate in. Stock markets consist of numerous traders and are liquid, while the takeover market consists of several firms and are not liquid. In the stock market, shares of firms are traded in a centralized market in small amounts, while significantly larger blocks of shares are exchanged at once in the decentralized takeover market. Therefore it is possible to get lots of trade initiation data for each firm in the stock market, while there is only one initiation observation for each firm in the takeover market. Assuming no short sale constraints, the same trader can initiate a buy and sell order in the stock market, while it is not possible to do so in the takeover market.

## **2.2 Factors That Explain Cross Sections of Bidder and Target Firm Returns on the Announcement Day**

Short term market reactions to the announcement of mergers have been extensively examined in the M&A literature, basically to assess the resulting wealth creation or transfer from mergers. Several firm and deal characteristics are shown to influence cross sections of abnormal returns, such as relative size of the target, method of payment and form of acquisition. We discuss these factors below.

### **a. Method of Payment**

(Travlos, 1987) shows that buyer firm cumulative abnormal returns (CAR) are negative if the buyer firm uses its stock as payment to the target firm, and are not significantly different from zero if it uses cash<sup>5</sup>. The main explanation for this evidence comes from asymmetric information hypothesis. As (Myers & Majluf, 1984) argues, the information asymmetry between managers and investors causes a discount in the stock price of the firm. Good quality firms should therefore be reluctant to issue stock, as they know that their shares are undervalued in the market. Hence, there will be a negative reaction when a buyer firm announces a stock purchase of the target firm.

### **b. Form of Acquisition**

As (Jensen & Ruback, 1983) shows, buyer firm CAR's are positive in tender offers and negative in mergers. For target firms, both tender and merger deals result in positive CAR's, but they are larger in tender offers than in mergers<sup>6</sup>. A theory about the form of acquisition type is provided

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<sup>5</sup> This result holds for acquisitions in which target firms are public. (Chang, 1998) analyzes the cases in which private target firms are acquired and finds that buyer firm CAR's are higher in stock deals. Since our dataset includes only public targets, we don't elaborate on this paper.

<sup>6</sup> (Jensen & Ruback, 1983) does not control for the method of payment in CAR regressions. Tender offers tend to be in cash, and cash offers have neutral to positive reactions in the market. This possible bias is discussed in (Huang & Walkling, 1987) and (Moeller, Schlingemann, & Stulz, 2004).

by (Berkovitch & Khanna, 1990), who shows in a theoretical model that high synergy bidders initiate tender offers as they are confident that they will win the auction process resulting from the tender offer, while low synergy bidders choose to merge with the target firm as this negotiating process will increase their chances of acquiring the target.

c. Asset Relatedness

Diversification motives can have an impact on buyer firm CAR's, as shown by (Morck, Shleifer, & Vishny, 1990). Buyer firm CAR's are positive when the merging firm assets are related (focusing mergers) and negative when they are not (diversifying mergers, a.k.a. conglomerates). Human capital risk, discussed in detail by (Amihud & Lev, 1981) for the M&A case, can provide incentives to buyer firm managers to acquire unrelated businesses as such actions will reduce their employment risk. In a perfect capital market, this managerial motive to acquire unrelated businesses does not apply to the shareholders of the firm<sup>7</sup>. Therefore the announcement of a diversifying merger is perceived as a violation of managerial and shareholder alignment of interests.

Another managerial motive for conglomerate mergers is explained by (Shleifer & Vishny, 1989). When poor performance threatens the employment of a manager, he has incentive to enter into new businesses at which he might be better at. Therefore managers may be willing to overpay for such targets at the expense of shareholders.

d. Hostility

Using different measures of hostility, (Schwert, 2000) shows that buyer firm CAR's are lower when the buyer firm makes a hostile takeover bid to the target firm. For target firms, CAR's are higher when the deal is classified as hostile. One possible explanation is that target managers resist hostile takeovers to improve the terms of the offer, so greater bargaining power implies a larger premium to target shareholders.

e. Competition

(Bradley, Desai, & Kim, 1988) shows that buyer firm CAR's are higher when there is only one bidder for the target firm, and target firm CAR's are higher when there are multiple bidders for the target firm. Competition for the target firm raises the premium paid to the target firm shareholders. There is a simple wealth transfer from buyer firm shareholders to target firm shareholders due to the fact that competitive bidding results in higher prices paid to the target firm.

f. Relative Size

(Asquith, Bruner, & Mullins, 1983) is the first paper to show that the size of the target firm relative to the buyer has explanatory power for buyer and target firm CAR's. However, there is no agreement in the literature on the sign of this effect. (Asquith, Bruner, & Mullins, 1983) and (Servaes, 1991) find a positive relationship between buyer firm CAR's and relative size, while

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<sup>7</sup> See (Levy & Sarnat, 1970).

(Travlos, 1987) find the opposite. On the other hand, target firm CAR's have a positive relationship with relative size in (Davidson & Cheng, 1997) and negative in (Lang, Stulz, & Walkling, 1989). This disparity in the sign of the relative size is explained by (Fuller, Netter, & Stegemoller, 2002). For buyer firm CAR's, the relation is positive when the target is private and negative when the target is public. They continue to argue that public acquisitions tend to be made using stock, and as explained in (Moeller, Schlingemann, & Stulz, 2004), downward sloping demand curves for stock result in a decline in prices. Therefore, as the size of the target firm increases, the stock payment and thus the stock issuance is getting larger, which causes a drop in the buyer firm's stock prices.

g. Cash Holdings & Cash Flow

(Harford, 1999) shows that when cash rich buyer firms acquire a target, their CAR's are lower at the announcement day. Using cash flow measures, rather than the absolute level of cash holdings, (Lang, Stulz, & Walkling, 1989) finds a negative relationship between cash flow and buyer firm CAR's. This effect is stronger when the buyer firm has Tobin's Q less than one, which the authors interpret as the quality of the firm in terms of investment opportunities. Managerial incentives can explain the unsatisfactory performance of cash rich firms. Managers can pile cash to avoid human capital risk, make poor conglomerate acquisitions or increase their authority in the firm<sup>8</sup>.

h. Buyer Firm Size

(Moeller, Schlingemann, & Stulz, 2004) finds that larger buyer firms make worse acquisitions than smaller firms, in terms of CAR measured around the announcement day of the merger. They claim that managerial incentives are more aligned with shareholders' in smaller firms, as managerial stock ownership tends to be higher. Similarly, (Roll, 1986)'s hubris hypothesis is more likely to hold in larger firms. To support their hypothesis, they show that larger firms tend to overpay for targets, and tend to complete deals more successfully.

i. Buyer Firm Leverage

Buyer firm leverage also explains cross sections of abnormal returns, as shown by (Maloney, McCormick, & Mitchell, 1993). Buyer firm CAR's are larger when buyer firm leverage is higher. Leverage can mitigate the problems between managers and shareholders,<sup>9</sup> therefore the quality of the acquisitions by levered firms will be higher.

j. Tobin's Q

There are two papers that examine the effect of Tobin's Q on buyer and target firm abnormal returns. Using successful tender offers, (Lang, Stulz, & Walkling, 1991) shows that buyer firm CAR's increase when a high Q buyer acquires a low Q target. For all other matches, the effect on CAR is weak. (Servaes, 1991) expands this dataset to include both successful merger and

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<sup>8</sup> See (Jensen, 1986).

<sup>9</sup> (Lang, Stulz, & Walkling, 1991) gives a summary of papers that explain how leverage mitigates such incentive problems.



tender offer deals and verifies that the CAR's are higher for high Q buyers than low Q buyers. For target firms, CAR's are higher when the target firm has lower Q ratios. (Lang, Stulz, & Walkling, 1991) interprets Tobin's Q as the quality of the management of the firm. If the same resources are managed by higher quality managers, which lead to better use of target assets, then the gains will be larger from the acquisition.

### **3. Data & Methodology**

#### **3.1 The Sample**

The merger, accounting and return data comes from SDC, COMPUSTAT and CRSP databases, respectively. The first step is to identify the M&A deals that are used in this analysis. The following restrictions are imposed in the SDC database:

- 'Deal value' is greater than \$5 million,
- Only US acquirers and targets,
- Only public acquirers and targets,
- The form of transaction is either 'merger', 'acquisition' or 'acquisition of majority interest',
- The deal status is 'completed',
- No merger event by the same acquirer 30 days around the announcement of each merger,
- No financial or utility firms – for either acquirer or target firms,
- Announcement of the deal falls in between 1/1/1997 and 12/31/2000.

The deal value restriction is to exclude very small firms from our analysis. Only US acquirers and targets are included in the sample, to find the initiation data from SEC filings easily. Private targets are excluded from the sample, as price data is not available for such firms. The form of acquisition is restricted to the above criteria, to make it clear that the merger substantially changes the ownership of the merging firms. The sample includes only completed deals<sup>10</sup>. To isolate the effects of merger announcements on stock prices, we exclude deals in which the acquiring firm has another entry in the SDC database within 30 days around the announcement of the merger. Financial and utility firms are also excluded from our sample, as accounting structures of such firms are different than the others. Finally, the sample consists of deals that are announced to the public between 1997 and 2000. The SEC made it mandatory to submit the filings online starting in mid 1996, so the EDGAR archives used to find the initiation information starts then.

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<sup>10</sup> See the conclusion section for a brief discussion on how this might affect our results.

In the second step, the filtered SDC data is matched with CRSP/COMPUSTAT merged database. This results in 383 data points. As a final step, we use the SEC EDGAR database to search for the company filings for either the buyer firm or the target firm, to get the initiation data for each deal. If exists, the initiation data is in the "Background of the Merger"<sup>11</sup> section of the following documents;<sup>12</sup>

- DEFM14A, definitive proxy statements relating to mergers and acquisitions
- PREM14A, preliminary proxy statements relating to mergers and acquisitions
- 14D9, tender offer solicitation/recommendation statements filed under Rule 14-d9
- TO-T, third party tender offer statements
- S-4, registration of securities issued in business combination transactions

The background section summarizes past contacts and negotiations between the buyer and the target firm, such as who the initiator of the merger is, how the managers of the firms first met, how the negotiations proceeded, what decisions the board of directors took, which investment banks were hired, etc<sup>13</sup>.

In some cases, it is not very clear from the documents who the initiator is. There are instances in which a third party (usually another bidder) is involved in the negotiations, which makes initiation ambiguous. For example, a target receives an unsolicited offer from Firm A, and then hires an investment bank who contacts potential buyers for the target, and the target firm ends up merging with Firm B. In this case, the initiation is not clear; Firm A's initial contact leads the target firm to initiate the deal with Firm B, so it cannot be classified as a seller initiated deal. Similarly, it can't be classified as a buyer initiated deal as Firm A doesn't merge with the target. Therefore we drop these transactions from the data set and only focus on the cases in which the buyer firm clearly initiates contact with the target and ends up buying it, or the target firm initiates contact with the buyer firm and ends up being bought by it. The former is classified as a buyer initiated deal and the latter as a seller initiated deal. We provide an example of each kind in Appendix-A2.

The final step yields 188 deals with initiation data. There are various reasons for this drop in the number of data points: some firms file different documents with the SEC that don't contain the background section, some don't file at all, some don't specify clearly who initiated the deal, and some have inconclusive initiation information as mentioned above.

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<sup>11</sup> If the background section is missing, the "Material Contacts and Board Deliberations" section has this information.

<sup>12</sup> Source: [www.sec.gov](http://www.sec.gov)

<sup>13</sup> The timing of events in a typical merger is shown in Appendix-A1.

### 3.2 Variables used in the analysis

#### a. Return Variables

In order to measure the impact of a merger on the value of the merging firms, we calculate abnormal returns to the acquirer and the target stock at the announcement date<sup>14</sup> using the market model<sup>15</sup>. For that purpose, we first estimate market model parameters  $(\hat{\alpha}, \hat{\beta})$  by running an OLS regression in the estimation period.

$$R_{i,t} = \alpha_i + \beta_i R_{m,t}$$

Where  $R_{i,t}$  is the returns to firm  $i$  at day  $t$  and  $R_{m,t}$  the returns to the value weighted CRSP market portfolio at day  $t$ . Following (Schwert, 2000), we set the estimation period as  $(-316,-64)$  business days relative to the announcement day of the merger. Then abnormal returns can be calculated in the event period as;

$$CAR_i^k = \sum_{t=-k}^k AR_{i,t}$$

$$AR_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t})$$

Where  $2k+1$  is the event window size,  $AR_{i,t}$  the abnormal returns to firm  $i$  on day  $t$  and  $CAR_i^k$  the cumulative abnormal returns to firm  $i$  in the event window.

There is no guidance in the literature as to which window size to use. Some authors keep the pre-event window long enough to capture the possibility of an information leakage before the announcement and some keep the post-event window long enough to capture the fact that in some special cases successful closing of the deal resolves over time. For example in tender offers, target shareholders have typically 20 days to tender their shares. As the event window size gets larger, however, the amount of noise in measuring the initial impact of the merger on the stock prices gets larger. To see if our results are robust to different window sizes, we use three different specifications; CAR over  $(-5,+5)$ ,  $(-2,+2)$  and  $(-1,+1)$ . We refer to them by the length of their window size, i.e. 11, 5 and 3, respectively.

To estimate the synergies created from the merger, we take the weighted average of buyer and target firm CAR's, the weights being determined by the market value of equity of the buyer and target firms 5 days before the announcement of the merger.

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<sup>14</sup> The announcement date in the SDC database is defined as; "the first public disclosure of the intent to merge or acquire".

<sup>15</sup> Market return adjusted models yield very similar results, so they are not reported.

To test whether the initiation has any relation with overpayment, we calculate the bid premium to the target firm using (Moeller, Schlingemann, & Stulz, 2004)'s definition; transaction value<sup>16</sup> divided by the market value of equity of the target firm 50 days before the announcement of the merger, minus one.

It is a possibility that there is more publicity involved in seller initiated deals, as target firms or their investment banks usually contact many parties to look for potential acquirers. This might decrease the surprise component of the market reaction to the announcement of the merger. Therefore, we calculate the runup<sup>17</sup> in the merging firms' stock prices over the (-63,-6) period to capture information leakages before the merger announcement.

#### b. Deal Characteristics

The second type of variables control for deal characteristics. Previous studies show how the deal characteristics such as the method of payment (cash, stock, mixed), form of acquisition (tender offer, merger), asset relatedness, hostility, existence of competition for the target, current offer being unsolicited and the size of the target relative to the acquirer can effect CAR around the announcement day. The following table shows how these variables are calculated.

**Table 1**

Variable	Definition	Proxy
<b>Method of Payment</b>	The way acquirer firm pays the target in exchange of its shares; cash, stock or mixed	Percent of cash as payment from buyer firm to the target firm
<b>Form of Acquisition</b>	The structure of acquisition; Merger vs. tender offer	Dummy 1 if tender offer
<b>Asset Relatedness</b>	Similarity of buyer and target firm's main business of operation	Dummy 1 if the first 2 digits of the buyer and the target firm's SIC codes match
<b>Hostility</b>	Unsolicited offer that is resisted by the target management	Dummy 1 if the deal is reported as hostile in SDC
<b>Competition</b>	The number of entities	Dummy 1 if the number of

<sup>16</sup> The SDC database defines transaction value as follows. "Transaction value is the total value of consideration paid by the acquirer, excluding fees and expenses. The dollar value includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction. Liabilities assumed are included in the value if they are publicly disclosed. Preferred stock is only included if it is being acquired as part of a 100% acquisition. If a portion of the consideration paid by the acquirer is common stock, the stock is valued using the closing price on the last full trading day prior to the announcement of the terms of the stock swap. If the exchange ratio of shares offered changes, the stock is valued based on its closing price on the last full trading date prior to the date of the exchange ratio change. For public target 100% acquisitions, the number of shares at date of announcement (CACT) is used."

<sup>17</sup> Definition of runup follows from (Schwert, 2000): Cumulative abnormal returns (using the market model) over (-63,-6).

	(including the acquirer) bidding for a target. Also, the number of challenging deals for one target	bidders, as reported in SDC, is greater than or equal to 2.
<b>Unsolicited</b>	Acquiring company makes an offer for target company without prior negotiations.	Dummy 1 if the deal is reported as unsolicited in SDC
<b>Relative Size</b>	Relative size of the target firm relative to the buyer.	Natural logarithm of the ratio of transaction value to the market value of the buyer at the financial year end prior to the merger

c. Financial Characteristics

The third type of variables control for the merging firms' financial characteristics. Table 2 gives the definition and the calculation of these variables<sup>18</sup>.

**Table 2**

Variable	Definition	Proxy(COMPUSTAT DATA ITEM)
<b>Cash Flow<sup>19</sup></b>	Operating income before depreciation minus interest expense, taxes, preferred dividends and common dividends, normalized by the book value of assets	$[13-15-(16-\Delta 35)-19-21]/6$
<b>Size</b>	Market value of equity; number of outstanding shares times price per share	$LN[25*199]$
<b>Leverage</b>	Market leverage; book value of debt divided by the market value of assets	$[(181+10-35)/(MV \text{ of assets})]^{20}$
<b>Tobin's Q</b>	Market value of assets divided by the book value of assets	$[(MV \text{ of assets})/6]$

<sup>18</sup> Financial variables are calculated using the end of financial year statements prior to the merger.

<sup>19</sup> Cash flow variable is calculated using (Lehn & Poulsen, 1989)'s definition.

<sup>20</sup> Market value of assets is defined as  $[181+10-35+(25*199)]$ . If 10 is not available, we use 56 instead. The definitions of market leverage and Tobin's Q follow from (Fama & French, 2002).

## Summary of the Data

Table 3 summarizes the deal and the financial characteristics of the buyer and the target firm. The data is grouped in three ways; all data (including the firms for which the initiation information cannot be found), buyer initiated deals and seller initiated deals. Of the 383 data points, 115 are classified as buyer initiated and 73 of them as seller initiated<sup>21</sup>. Our sample comes from a very active period for the takeover market, and there is a question of whether it is representative of average market conditions in terms of initiation.

There are several important points to mention about the summary statistics. First of all, there is a weak relationship between the form of acquisition and initiation<sup>22</sup>. It is not true that tender offers are necessarily buyer initiated; tender offers can also be utilized after buyer and the target firms negotiate. Tender offers usually expedite the acquisition process<sup>23</sup>, and this might be desired by either firm.

[Table 3 here]

There is a relation between hostility, unsolicited and initiation variables. A deal is classified as hostile in the SDC database if the deal is unsolicited and target management resists the offer. Therefore the hostile variable is a subset of the unsolicited variable. The correlation coefficient between the two is 0.55. The unsolicited and initiation variables are also related<sup>24</sup>. Whenever the deal is classified as seller initiated, the unsolicited variable will be 0 as the target firm contacts the buyer firm first. However, when the deal is buyer initiated, the unsolicited variable can be either 0 or 1, as unsolicited measures the event around the announcement day. For example, suppose Firm A initiates contacts with the target first; this is a buyer initiated deal. If the target firm agrees to be taken over, the unsolicited variable will be 0. However, if Firm A unexpectedly makes an offer to the target firm and announces this to the public, then the unsolicited variable will be 1. Another important point with the unsolicited and hostile variables is that the occurrence of these events are low, compared to other time periods. For example, around 10% of the sample in (Schwert, 2000) is classified as hostile, while this ratio is only 1% in our sample. Again, time period might play a role in this disparity since his sample from 1975 to 1996 contains the 1980's, an active period for hostile takeovers.

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<sup>21</sup> In appendix-A3, we report takeover and initiation activity by years. The ratio of buyer initiated to seller initiated deals gradually increase over time from 0.95 to 2.7, and then drops to 1.05 in 2000, probably due to the market crash in May of that year.

<sup>22</sup> 61% of the tender offers are buyer initiated which is the exact same ratio of the number of buyer initiated deals to the total number of deals with initiation data.

<sup>23</sup> Tender offers usually close after 20 days of the initial notification of the target firm shareholders.

<sup>24</sup> The correlation coefficient between initiation and unsolicited is 0.11.

Competition is one of the important suspects in explaining target firm returns. Buyer initiated deals have lower competition (0.9%) compared to seller initiated deals (4%). This is quite natural, as target firms usually contact many potential buyers once they decide to be sold. The 'competition' variable tells us whether there are more than 2 potential bidders for the target firm at the time of the announcement, so it is possible to have multiple public bidders in a buyer initiated deal. However, if it is so, we know that the buyer will end up acquiring the target firm. This difference in public (at the time of the announcement) and private competition (before the announcement) is the motivation behind (Boone & Mulherin, 2007), whose main point is that the takeover market can look non-competitive if public competition measures are used while in fact it is competitive. Firms can fiercely compete for the same target, without making this public, so it does not mean that the market is not competitive because there are no public bidders.

Relative size of the target is significantly larger in buyer initiated deals. As can be seen from the table, this difference can primarily be explained by the target firm size, which is larger in buyer initiated deals. When a firm decides to acquire another company, it usually filters the universe of potential targets by size, P/E ratio, leverage, etc. Therefore small firms are naturally excluded from buyer initiated deals, which can explain this disparity. Alternative measures of size, such as market value of assets or book value of assets yield very similar results, therefore any hypothesis involving target firm's stock valuation in the market to explain the size difference is weak.

There are three important observations with respect to Tobin's Q. First, the average of Tobin's Q for both the buyer and the target firm are higher than the ones reported in the literature. As mentioned before, between 1997 and early 2000 markets were experiencing abnormally high returns due to the tech boom. Valuations in that period were quite high and this is reflected in our measures. Second, the Tobin's Q measure is significantly larger for buyer firms than for the target firms. Neoclassical view proponents, such as (Jovanovic & Rousseau, 2002) argues that merger is a channel for capital to flow from inefficient firms to efficient ones. Interpreting Tobin's Q as the quality of the management and available projects, it is natural to observe high Q firms acquire low Q targets. (Shleifer & Vishny, 2003) and (Rhodes-Kropf & Viswanathan, 2003), on the other hand argue that overvalued buyer firms acquire relatively cheaper targets as this makes target firms a bargain for buyer firms. The overvaluation measure used in that literature is market to book ratio, which is highly correlated with Tobin's Q. Finally, the Q ratios of buyers in buyer initiated deals are larger than those in seller initiated deals. Using the exchange rate idea from the overvaluation hypothesis, it might be the case that when the target firm decides to put itself for sale, it does not want to be taken over by an overvalued buyer. Therefore it contacts potential buyers that are not overvalued.

## 4. Results

### 4.1 Initiation and Target Firm Abnormal Returns

If deal initiation reveals valuable private information about the potential synergies between the merging firms, then we should observe larger premiums paid to the target firm shareholders in buyer initiated deals. We use two measures to test this hypothesis; target firm CAR's and bid premiums. As defined in the previous section, the bid premium is defined as the transaction value divided by the market value of equity of the target firm 50 days before the announcement of the merger, minus 1. Since the bid premium data contains outliers, we follow (Officer, 2003) and exclude entries larger than two. Table 4 summarizes the data.

There are several important observations about Table 4. First of all, buyer and seller initiated deals differ in terms of target firm CAR's except for the 11 day window size. The bi-variate relationship between initiation and target firm CAR's is positive; target firm returns are significantly higher if the deal is buyer initiated. In particular, target firm returns are 8% higher when the deal is initiated by the buyer. Second, in the whole sample, the standard deviation in the CAR's increase as the window size increases. This might be a factor to explain decreasing t-statistics as the event window size gets larger. Finally, the variation in target firm abnormal returns is higher in seller initiated deals than in buyer initiated deals, keeping the window size constant. There is a 20% difference in the bid premiums of buyer initiated and seller initiated deals and this difference is significant at the 5% level.

[Table 4 here]

The data shows that initiation has a statistically insignificant effect on the runup in the stock prices of both firms. Buyer firm stocks experience higher runups prior to the merger announcement in seller initiated deals, but the variation in runups is so large that this difference becomes insignificant. Target firm runups are also not significantly different from each other, with respect to initiation.

Overall, the simple two way relationship between initiation and target firm returns is positive. The question now is whether this difference in returns still persists in a multiple regression analysis. To see whether initiation explains target firm returns and the bid premiums in cross-sections, we run several regressions controlling for the effects that are shown to influence these returns.

Table 5 summarizes the multiple regression results. We report regressions only for the 3 day window size as the effect of initiation on the target firm abnormal returns is robust to 5 day and 11 day window size choices. There are five different regressions shown in Table 5, and these regressions differ by different specifications of the initiation dummy variables. As Table 3 shows, our whole sample consists of 383 observations, of which 115 are classified as buyer initiated and 73 as seller initiated. The remaining 195 observations can't be identified as buyer or seller initiated. These unclassified observations could actually be either buyer initiated, seller initiated, neither or both, but due to the lack of information on their SEC documents they can not be properly classified. For these reasons, we create three different initiation dummy



variables; 'initiation\_b' takes a value of 1 if the deal is buyer initiated and 0 otherwise, 'initiation\_s' takes a value of 1 if the deal is seller initiated and 0 otherwise, and 'initiation' takes a value of 1 if the deal is buyer initiated and 0 if seller initiated.

[Table 5 here]

In these regressions we include all deal variables, except hostile and relative size. As mentioned in section 4.2.b, hostile is a subset of unsolicited. Due to the low frequency of these variables and high correlation between the two, we only include unsolicited variable in our regressions<sup>25</sup>. Second, we exclude the relative size measure as both target and buyer firm sizes are used in the analysis. With respect to the financial variables, we follow the literature and include cash flow, size, leverage and Tobin's Q measures for the buyer firm, and size and Tobin's Q measures for the target firm. There is no theory or finding that cash flow or leverage of the target firm would influence the target firm abnormal returns, so we exclude them from our analysis. The final set of variables in these regressions is the runups of buyer and target firms. To address the information leakage concerns, we control for the merging firms' runups.

Regression results indicate that initiation has a significant effect on the target firm CAR's, and this effect persists in different specifications of the econometric model. From regression (1), where only 'initiation\_b' dummy variable is used, we can see that target firm CAR's are 7.5% higher if the deal is initiated by the buyer. This effect of initiation is significant at the 1% level. To see how seller initiation affects abnormal returns, we use 'initiation\_s' in regression (2). Target firm CAR's at the announcement day is 8% lower if the targets themselves initiate the deal. This coefficient is significant at the 5% level. As a next step, we include both 'initiation\_b' and 'initiation\_s' dummy variables in regression (3). Almost half of our sample can not be classified as buyer or seller initiated, which implies that 'initiation\_b' and 'initiation\_s' are negatively correlated<sup>26</sup>. This might raise concerns about a mild collinearity problem which can result in higher standard errors of the least squares estimators. In addition, the unidentified group is very likely to contain buyer and seller initiated deals, which means that in case of an identification bias with respect to one group, we end up having biased estimates of the coefficients. Even though including both dummy variables into the regression might be problematic due to these reasons, we report them in regression (3). 'initiation\_b' has a significant 5.7% coefficient while 'initiation\_s' has an insignificant -5.9% coefficient. Regression (4) doesn't include any initiation variables, mainly to show how the econometric model looks in the absence of any initiation effects.

Besides initiation dummy variables, method of payment, form of acquisition, competition, buyer and target firm sizes and target firms' Tobin's Q measures have explanatory power for target firm CAR's. The target firm abnormal returns are higher when the payment is in cash, which is consistent with the existing findings in the literature. Cash is not tax free for the target firm shareholders, therefore a premium should be paid to make them indifferent between cash

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<sup>25</sup> Including hostility, or replacing it with unsolicited variable in the regressions does not change our results.

<sup>26</sup> The correlation coefficient between the two is -0.32.

and stock<sup>27</sup>. Consistent with (Jensen & Ruback, 1983), returns to the target firms are larger in tender offers. Competition for target firms has a surprising negative effect, which is contrary to earlier findings in the literature, such as (Bradley, Desai, & Kim, 1988). This disparity might be due to the chosen time period. Having a larger buyer firm in a merger increases a target firm's abnormal returns, and this is consistent with (Moeller, Schlingemann, & Stulz, 2004)'s findings that larger firms overpay in the takeover market. The absolute size of the target firm has a negative effect on target firm abnormal returns. Since in the regression we control for the buyer firm size, this means that as the target gets larger, keeping the size of the buyer firm constant at any level, returns to the target firm decreases.

Even though it significantly reduces the sample size, we use 'initiation' dummy variable in regression (5) as a final step. As mentioned above, this dummy variable excludes the unidentified cases, and takes a value of 1 if the deal is buyer initiated and a value of 0 if it is seller initiated. With the reduced sample, 'initiation' still has a significant coefficient of 11.8% with a t statistic of 2.95. However, significance levels of other coefficients vanish with this smaller sample, implying the need for a larger dataset to help reduce the standard errors of least squares estimators.

The market reaction to the merger news at the announcement day, target firm CAR's, have a different nature than the bid premium. The deal is usually announced to the public when the merger agreement is signed, therefore the terms such as price can change after the announcement. Also, the bid premium includes part of the runup in the target firm's stock price which may capture appreciation in the target firm's stock due to the merger talks. In other words, abnormal returns measure the change in the information set of the investors around the announcement day whereas the bid premium is a broader measure of how better off the target shareholders are overall, due to the merger.

[Table 6 here]

Table 6 contains the regression results in which the bid premium measure is the dependent variable and the same set of control variables from target abnormal returns regression are independent variables. The only excluded variable from the set of controls is the runup in the target firm's stock, because bid premium contains a portion of the runup<sup>28</sup>. Also, we replace the target firm size variable with the relative size measure, as it uniformly gives a better model fit<sup>29</sup>. As regressions (1) and (2) show, bid premiums to the target firms are 16.4% larger in buyer initiated deals and 15.6% lower in seller initiated deals. These estimates are significant at 1% and 5%, respectively. When both 'initiation\_b' and 'initiation\_s' dummy variables are used in the regression, the picture is very similar; buyer initiation causes premiums to go up by 13.5% and seller initiation causes to go down by 11.2%.

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<sup>27</sup> See (Travlos, 1987).

<sup>28</sup> (Schwert, 2000) defines bid premium as runup + markup, where markup is the cumulative abnormal returns starting at event day +6 and ending at the delisting date.

<sup>29</sup> Using target firms' size instead of relative size does not change the magnitude or significance of initiation dummy variables.

Along with initiation, relative size, runup in the buyer firm stock and buyer firm size have significant effects on the bid premium. As buyer firms get larger, bid premiums to the target firms increase, and as the target firm gets larger relative to the buyer firm, bid premiums go up. As discussed in (Moeller, Schlingemann, & Stulz, 2004), size effect is a different factor from relative size. Finally, the runup in the buyer firms' stock has a marginal significance level in our regressions. Bid premiums to the target firms increase 16 basis points for every 100 basis point increase in the buyer firm stock during the runup period. This could suggest that buyer firms with better investment opportunity, which can cause runup in their stock prices, tend to pay generously when they acquire a target.

#### **4.2 Initiation, Synergistic Gains and Buyer Firm Abnormal Returns**

In the previous section, we show that buyer initiated deals result in higher payments to the target firms, as measured by abnormal returns around the announcement of the merger and the bid premium. But does it mean that there is a wealth transfer from the buyer firm shareholders to the target firm shareholders in buyer initiated deals? In order to answer this question, we first look at the synergy gains from the merger, measured as the weighted average of buyer and target firm abnormal returns around the announcement day. These weights are calculated using the market value of equity of the merging firms 5 days before the announcement. The returns to this hypothetical portfolio tell us the change in the combined firm's value at the announcement, which is used as a measure of synergy gains from the merger.

The question is whether initiation has any relationship with synergy gains. In Table 7 we report synergy gains by initiation type. For each event window size, average synergy gains are significantly greater than zero in buyer initiated deals. In such mergers, the portfolio of the merging firms earn around 2%. For seller initiated deals, results differ with respect to the event window size. Carc1 and carc2 are around 1% and not statistically different from zero, while carc5 is a significant 2.3%. The total sample of firms always shows statistically significant positive synergy gains regardless of the event window size, but the mean synergy gains are lower than in the buyer initiated sample.

[Table 7 here]

The second step is to examine the buyer firm abnormal returns around the announcement of the merger. We have shown that in buyer initiated deals, target firm shareholders get higher premiums for their shares and the synergies between the merging firms is significantly positive. In order to examine a possible wealth transfer from buyer firm shareholders to the target firm shareholders, we need to examine buyer firm abnormal returns around the announcement day of the merger. If we find a negative effect of buyer initiation on the buyer firm CAR's then this means that buyer firms overpay, hence there is a wealth transfer. Otherwise, if the effect of initiation on buyer firm CAR's is insignificant, then there is no wealth transfer between the two firm shareholders. It simply means that in buyer initiated deals, target firm shareholders are paid generously as the quality of the match between the two firms, measured by synergies, is

high. In other words, buyer firm can afford to pay higher premiums to the target firms as they know that merging the two firms will result in high synergies.

[Table 8 here]

Our regression results in Table 8 confirm that there is little evidence to support wealth transfer hypothesis. Regardless of the specification of the econometric model, there is no evidence that initiation has any significant effect on the buyer firm CAR's. If a deal is initiated by the buyer firm, CAR's to the buyer firm is 0.2% larger but this effect is statistically insignificant. A similar story hold for the seller initiated deals; returns are smaller by 0.6% if the deal is seller initiated, but this coefficient is again insignificant.

## 5. Conclusion

We have shown that buyer initiated deals result in a higher payment by the buyer firm to the target firm. Cross section analysis suggests that the target firm CAR's around the public announcement date are 7% higher when buyer initiates the deal. The results are very similar when target abnormal returns are replaced with the bid premium as the dependent variable. Bid premiums are larger by 16% in buyer initiated deals. However, higher premiums paid to the target firm by the buyer firm reflect higher synergies in such mergers. Synergy gains are significantly positive (+2.2%) in buyer initiated deals, whereas in seller initiated mergers they are not. Initiation does not help to explain buyer firm CAR's, which means that buyer firms do not overpay as they are acquiring the target firms when they initiate the deal. In summary, these results imply that even though buyer firms pay more to the target firms in buyer initiated deals, there is not a wealth transfer between the two firms. The synergies in buyer initiated deals are large and much of these potential gains are captured by the target firm as higher premiums.

There are several points to mention about our results. First of all, our sample comes from a very active takeover market and it is a question whether this period is a representative of the general merger market in general. Many factors that were otherwise unimportant can be relevant for this time period.

Second, our sample includes only successful mergers which can create a bias if initiation predicts successful closing of the deal. In other words, if buyer initiated deals tend to close more often, observing higher abnormal returns to the target firm can also reflect arbitrage opportunities, not necessarily overpayment from the buyer firm to the target firm. We tried to alleviate this problem by using bid premium measure instead of target firm abnormal returns, but this point still remains.

Another area of importance is the relation between initiation and the likelihood of the merging firms to be potential acquirers or targets. Authors such as (Morck, Shleifer, & Vishny, 1989), (Hasbrouck, 1985) and (Palepu, 1986) examine the takeover targets' characteristics and identify the factors that predict such firms. If initiation is a proxy for the likelihood of acquisition then the results in this paper should be re-evaluated. Therefore it remains to find whether potential buyer firms, as predicted by such models, tend to initiate deals more often than the others.

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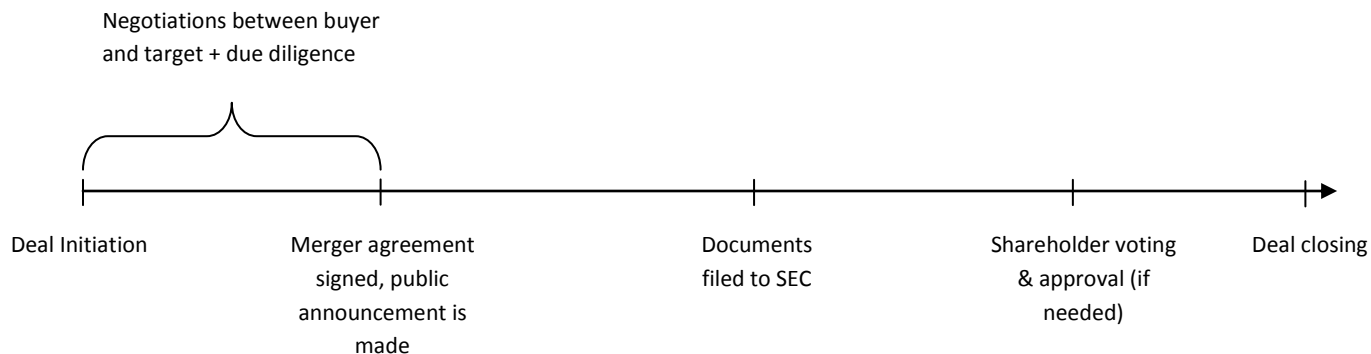
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## APPENDIX

### A1. Timing of Events in a Typical Merger



### A2. An example of a Buyer initiated deal

"International Paper Company" acquiring "Union Camp Corporation". Initiation information is in bold and italics. From S-4 filed to SEC on 3/30/1999:

#### BACKGROUND OF THE MERGER

As part of its strategic planning, International Paper continually reviews trends and strategic opportunities in the forest products industry. With continuing consolidation in the worldwide pulp and paper industry, as indicated by several recent business combinations such as Jefferson Smurfit/Stone Container, Stora/Enzo and UPM/Kymmene, International Paper believed that it needed to increase its scale in printing papers and industrial packaging to supplement its expansion in consumer packaging accomplished with the acquisition of Federal Paper Board Company in 1996. International Paper believed that increased scale was important to reduce costs through lower overhead and manufacturing expenses and to develop broader product offerings. Although International Paper has a number of low-cost facilities in printing papers and industrial packaging, it viewed the addition of other low-cost, large-scale facilities as an important objective. In connection with this review of business plans, Credit Suisse First Boston Corporation began to provide financial advisory services to International Paper in April 1998 and formalized its relationship with International Paper on October 20, 1998.

International Paper's management considered numerous strategic alternatives including a sale of one or more of its large divisions to generate funds for investment in the remaining segments, as well as joint venture combinations with other companies with printing papers or industrial packaging operations. In each case, management concluded that International Paper could better achieve its long-term interests by acquiring businesses in these areas and applying its manufacturing and cost-reduction expertise through a combination with its own businesses.



*Beginning in June 1998, Mr. John T. Dillon, International Paper's Chairman and Chief Executive Officer, discussed on several occasions with International Paper's board of directors the competitive trends in the forest products industry and the importance of focusing on areas where International Paper could develop a more competitive position. During these discussions, Mr. Dillon identified and compared domestic and international competitors, finally focusing on an intensive review of five or six domestic competitors as candidates for merger or acquisition. Each of these companies offered different opportunities to one or more of International Paper's core printing papers and industrial packaging businesses. Each was also a major integrated paper and forest products company with a significant presence either in printing papers, industrial packaging or both. To pursue these objectives, Mr. Dillon secured the board of directors' approval to investigate the possibility of a merger with another forest products company.*

*Ultimately, Mr. Dillon concluded that a combination transaction with Union Camp was the most compelling and strategic choice, as he viewed Union Camp as providing the best fit and requiring the least restructuring in a combination with International Paper. Mr. Dillon believed that each of Union Camp's businesses fit well with comparable International Paper businesses and that International Paper could integrate Union Camp with relatively little disruption. Moreover, International Paper judged Union Camp's facilities to be among the lowest cost mills in the industry.*

*On October 13, 1998, International Paper's board of directors reviewed the advisability of a merger with Union Camp. After this review, it authorized Mr. Dillon to pursue a transaction by contacting Union Camp.*

*On October 21, 1998, Mr. Dillon called Mr. W. Craig McClelland, Union Camp's Chairman and Chief Executive Officer, to express International Paper's interest in combining with Union Camp and to advise Mr. McClelland that he was sending a letter to him proposing a transaction. Mr. McClelland indicated that Union Camp would duly consider the letter, but told Mr. Dillon that Union Camp was pursuing its own strategic plan as an independent company and was not looking for a merger partner. On October 22, 1998, Union Camp received International Paper's letter dated October 20, 1998 to Mr. McClelland, in which International Paper proposed a merger of Union Camp and International Paper, whereby Union Camp shareholders would receive International Paper common shares with a value of \$58 for each Union Camp common share.*

*On October 26 and 27, 1998, Union Camp's board of directors met with management and its legal and financial advisors to consider the merger proposal set forth in International Paper's October 20 letter. After completing its review, the board of directors unanimously determined that the International Paper proposal was not in Union Camp's best interests. The board of directors authorized Mr. McClelland to inform International Paper that Union Camp had rejected the proposal and had no interest in any further discussions unless International Paper was prepared to improve its proposal substantially. Mr. McClelland telephoned Mr. Dillon on October 27, 1998 to advise him of the board of directors' decision.*

*On November 3, 1998, Mr. Dillon telephoned Mr. McClelland to request a face-to-face meeting. In the course of their discussion, Mr. Dillon advised Mr. McClelland that International Paper would be willing to negotiate a merger agreement with Union Camp, whereby Union Camp's shareholders would receive International Paper common shares with a value of \$62 for each Union*

Camp common share. Mr. McClelland advised Mr. Dillon that he would not recommend a combination at \$62 per share to Union Camp's board of directors and would not be willing to meet to discuss such a transaction.

### **An example of a Seller initiated deal**

"Eastern Enterprises" acquiring "Colonial Gas Company". Initiation information is in bold and italics. From S-4 filed to SEC on 12/16/1998:

#### **BACKGROUND OF THE MERGER**

During the past several years, the Colonial Board had periodically evaluated Colonial's long-term position and strategic alternatives in view of the trend toward deregulation and consolidation in the gas distribution industry. The Colonial Board had consistently supported a strategy to remain independent and continue to build shareholder value. During the same period, Eastern had been continually considering and pursuing strategic initiatives that would help enable it to take advantage of the increasing deregulation and consolidation in the gas distribution industry. As part of this strategy, Eastern from time to time indicated to Colonial its interest in discussing a business combination transaction and, in 1998, Eastern acquired Essex Gas.

Following the announcement in December 1997 of the proposed acquisition of Essex Gas by Eastern and of Bay State Gas Company by NIPSCO Industries, Inc., the Colonial Board decided to reassess Colonial's strategic options and to consider a possible business combination transaction. In January 1998, as part of retaining the option of remaining independent, the Colonial Board approved the creation of a holding company structure and the submission of the holding company restructuring to Colonial's stockholders for approval.

***The Colonial Board retained Salomon Smith Barney in March 1998 to assist it in exploring its strategic options. Throughout the Spring of 1998, Colonial considered several strategic options, including (i) continuing its independent course, (ii) merging with a larger regional gas distribution company or electric company, (iii) merging with an out-of-region energy company and (iv) combining with a similarly sized New England gas distribution company. The Colonial Board met on April 15, 1998 to hear a report from Salomon Smith Barney on these strategic options. In evaluating any potential business combination alternative, Colonial set an objective of achieving the greatest benefits for stockholders, customers and employees.***

In May 1998, Colonial's stockholders approved the formation of a holding company, subject to the approval of the Massachusetts Department of Telecommunications and Energy (the "DTE").

***In its assessment of strategic options, Colonial, with the assistance of Salomon Smith Barney, identified six companies, including Eastern, that fit one or more of its strategic combination objectives. Preliminary discussions with these six companies took place in June and July 1998. From these discussions, Colonial identified three companies, including Eastern, with which it might have an interest in pursuing a business combination transaction, depending on whether the terms of such a transaction would meet the objectives of achieving benefits for stockholders, customers and employees.***

***Following a meeting of the Colonial Board on July 15, 1998, Colonial invited the three companies to engage in a diligence investigation after signing confidentiality agreements with Colonial. One of the companies subsequently indicated that it was not interested in pursuing the transaction at this time because of strategic considerations, while Eastern and the other company indicated a strong interest in submitting a proposal.***

On August 11, 1998, Colonial requested that the two remaining companies each submit a definitive proposal by August 28, 1998 for a merger with Colonial. That date was chosen because Colonial's management anticipated that the DTE orders on the gas distribution company merger transactions referred to above would be issued by then and would provide necessary guidance as to the regulatory treatment that could be expected for a merger transaction. The potential bidders were requested to address in their proposal the expected benefits of the proposed transaction to Colonial's stockholders, customers and employees and were provided a form of merger agreement, on which Colonial requested the bidders to provide comments. When it became apparent that the DTE orders would not be issued by the date for submission of proposals, Colonial suspended the solicitation process pending issuance of the orders.

In early September 1998, the other interested company asked Colonial to delay the proposal process for an extended period of time. Colonial's management met with the other company's management to discuss the request but gave no commitment. On September 9, 1998, the Colonial Board met to review the status of the merger proposal process and instructed management to continue to monitor developments. On September 17, 1998, the DTE issued its order approving Eastern's acquisition of Essex Gas.

On September 23, 1998, the Eastern Board met and authorized Eastern's management to proceed with an offer to acquire Colonial based upon the terms and conditions as presented at the meeting. Representatives of Merrill Lynch, Pierce, Fenner & Smith Incorporated, Eastern's financial advisor, were present at the meeting and gave a preliminary presentation to the Eastern Board regarding the proposed offer price and the terms and conditions of the proposed acquisition.

### **A3. Initiation activity by years**

This table reports the number of mergers classified as buyer or seller initiated with respect to years.

Year	All	Buyer Initiated	Seller Initiated	Ratio of Buyer Initiated to Seller Initiated
1997	89	20	21	0.95
1998	103	30	17	1.76
1999	106	46	17	2.70
2000	85	19	18	1.05

**TABLE 3.** This table summarizes the deal and financial variables used in the analysis with respect to initiation. percentcash is the percentage of cash as payment from buyer firm to the target firm. Tenderoffer is 1 if the takeover is completed by a tender offer and 0 otherwise. Assetrelatedness is 1 if the first 2 digits of the SIC codes of the merging firms match and 0 otherwise. hostile and unsolicited dummy variables take a value of 1 if the deal is classified as hostile and unsolicited, respectively. competition is 1 if there are more than 1 buyer firms competing for the same target firm. lnrelativesize is the natural logarithm of the ratio of transaction value to the market value of the buyer at the financial year end prior to the merger. Cashflow is the operating income before depreciation minus interest expense, taxes, preferred dividends and common dividends, normalized by the book value of assets. Cashflow\_b stands for the buyer firm and cashflow\_t for the target firm. lnmvequity is the natural logarithm of the market value of the equity (number of outstanding shares times price per share) at the financial year end prior to the merger. lnmvequity\_b stands for the buyer firm and lnmvequity\_t for the target firm. mlev\_b is the market leverage (book value of debt divided by the market value of assets) of the buyer firm at the financial year end prior to the merger. tobinq is Tobin's Q (market value of assets divided by the book value of assets) at the financial year end prior to the merger. tobinq\_b stands for the buyer firm and tobinq\_t for the target firm. The difference test is based on t test for equality in means of the two samples. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

Variable	All (N=383)				Buyer Initiated (N=115)				Seller Initiated (N=73)				Difference	
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	in means	t stat
percentcash	0.338	0.424	0	1	0.373	0.439	0	1	0.443	0.457	0	1	-0.070	-1.053
tenderoffer	0.277	0.448	0	1	0.339	0.475	0	1	0.329	0.473	0	1	0.010	0.146
assetrelatedness	0.642	0.480	0	1	0.626	0.486	0	1	0.699	0.462	0	1	-0.073	-1.017
hostile	0.013	0.114	0	1	0.035	0.184	0	1	0.000	0.000	0	0	0.035	1.613
competition	0.047	0.212	0	1	0.009	0.093	0	1	0.041	0.200	0	1	-0.032	-1.501
unsolicited	0.026	0.160	0	1	0.043	0.205	0	1	0.000	0.000	0	0	0.043	1.8119*
lnrelativesize	-2.018	1.860	-8.400	2.317	-1.987	1.789	-7.641	2.000	-2.705	2.066	-8.408	0.387	0.718	2.5253**
cashflow_b	0.088	0.156	-1.605	0.556	0.117	0.072	-0.091	0.332	0.096	0.165	-1.202	0.223	0.022	1.225
lnmvequity_b	7.655	2.185	1.910	13.168	7.916	2.049	2.624	12.954	7.813	1.969	4.331	13.070	0.103	0.342
mlev_b	0.245	0.176	0.002	0.744	0.222	0.163	0.018	0.703	0.254	0.156	0.021	0.714	-0.032	-1.339
tobinq_b	3.256	4.549	0.445	58.041	3.194	2.240	0.907	11.201	2.556	1.837	0.740	12.662	0.638	2.0377**
lnmvequity_t	5.147	1.715	1.379	11.089	5.401	1.716	1.949	11.089	4.703	1.497	1.927	8.318	0.698	2.853***
tobinq_t	2.328	2.499	0.462	28.395	2.165	1.451	0.462	7.846	2.031	1.291	0.728	6.546	0.134	0.642

**TABLE 4.** This table summarizes the return variables with respect to two different types of initiation. Car1\_t is the abnormal returns to the target firm centered 3 days around the announcement of the merger. The normal returns are calculated using the market model with an estimation window of (-316,-64). Similarly, car2\_t and car5\_t stand for cumulative abnormal returns to the target firm 5 and 11 days around the announcement, respectively. bidpremium is defined as the transaction value divided by the market value of equity of the target firm 50 days before the announcement of the merger, minus 1. We truncate this variable at 2, to exclude the outliers. runup is the abnormal returns to the firm over (-63,-6), where normal returns are calculated using the market model. runup\_b stands for the buyer firm, and runup\_t for the target firm. The difference test is based on a t test for equality in means of the two samples. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

Variable	All					Buyer Initiated					Seller Initiated					Difference	
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	in means	t stat
car1_t	383	0.2325	0.2523	-0.4627	1.2974	115	0.2842	0.2327	-0.2457	0.9865	73	0.2022	0.2749	-0.4627	1.2974	0.0820	2.1931**
car2_t	383	0.2449	0.2629	-0.7714	1.4736	115	0.2964	0.2300	-0.2023	0.9813	73	0.2135	0.3087	-0.7714	1.2803	0.0829	2.1044**
car5_t	383	0.2763	0.2844	-0.5654	1.8180	115	0.3167	0.2426	-0.1792	1.0175	73	0.2603	0.2937	-0.2478	1.2732	0.0565	1.4313
bidpremium	340	0.7113	0.5423	-0.9115	1.9487	103	0.8105	0.4677	-0.9115	1.9487	64	0.6013	0.6207	-0.6196	1.8909	0.2092	2.4732**
runup_b	383	0.0346	0.2760	-0.8390	1.5726	115	0.0157	0.2650	-0.8390	0.9370	73	0.0562	0.2490	-0.6267	1.0007	-0.0405	-1.0465
runup_t	383	0.0959	0.3777	-1.6469	2.3144	115	0.1270	0.3416	-1.1267	1.1049	73	0.1007	0.4474	-1.3119	2.3144	0.0263	0.4548

**TABLE 5.** This table reports multivariate regressions explaining cross sections of target firm abnormal returns around announcement dates of mergers. Car1\_t stands for cumulative abnormal returns to the target firm 3 days around the announcement of the merger. To calculate abnormal returns, we use the market model, parameters of which are estimated over (-316,-64). percentcash is the percentage of cash as payment from the buyer firm to the target firm. Tenderoffer is 1 if the takeover is completed by a tender offer and 0 otherwise. Assetrelatedness is 1 if the first 2 digits of the SIC codes of the merging firms match and 0 otherwise. The unsolicited dummy variable takes a value of 1 if the deal is classified as unsolicited. competition is 1 if there are more than 1 bidder firms competing for the same target firm. Cashflow\_b is the operating income of the buyer firm before depreciation minus interest expense, taxes, preferred dividends and common dividends, normalized by the book value of assets. lnmequity is the natural logarithm of the market value of the equity (number of outstanding shares times price per share) at the financial year end prior to the merger. lnmequity\_b stands for the buyer firm and lnmequity\_t for the target firm. mlev\_b is the market leverage (book value of debt divided by the market value of assets) of the buyer firm at the financial year end prior to the merger. tobinq is Tobin's Q (market value of assets divided by the book value of assets) at the financial year end prior to the merger. tobinq\_b stands for the buyer firm and tobinq\_t for the target firm. runup is the abnormal returns to the firm over (-63,-6), where normal returns are calculated using the market model. runup\_b stands for the buyer firm, and runup\_t for the target firm. initiation is 1 if the deal is classified as buyer initiated, and 0 if seller initiated. initiation\_b is 1 if the deal is buyer initiated and 0 otherwise. initiation\_s is 1 if the deal is seller initiated and 0 otherwise. Robust t statistics are in parentheses, below the reported coefficients. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

DEPENDENT VARIABLE	1	2	3	4	5
	car1_t	car1_t	car1_t	car1_t	car1_t
percentcash	0.0812 (1.65)	0.0873* (1.81)	0.0857* (1.79)	0.0811 (1.63)	0.145** (2.04)
tenderoffer	0.0820** (1.98)	0.0880** (2.13)	0.0828** (2.01)	0.0891** (2.12)	0.069 (1.18)
assetrelatedness	0.0189 (0.69)	0.023 (0.85)	0.0228 (0.85)	0.0172 (0.62)	0.0505 (1.35)
unsolicited	0.0731 (1.10)	0.0812 (1.33)	0.0678 (1.04)	0.0954 (1.56)	0.0188 (0.33)
competition	-0.0892** (-2.14)	-0.116*** (-2.88)	-0.0942** (-2.23)	-0.117*** (-2.95)	-0.0844 (-0.91)
cashflow_b	-0.156 (-1.36)	-0.131 (-1.18)	-0.15 (-1.32)	-0.133 (-1.19)	-0.0327 (-0.40)
lnmequity_b	0.0179** (2.04)	0.0199** (2.26)	0.0198** (2.23)	0.0171* (1.94)	0.0179 (1.41)
mlev_b	-0.00401 (-0.049)	-0.0233 (-0.29)	-0.005 (-0.061)	-0.0302 (-0.37)	-0.0159 (-0.11)
tobinq_b	0.00268 (1.64)	0.00204 (1.22)	0.00229 (1.37)	0.00253 (1.53)	0.00103 (0.07)
lnmequity_t	-0.0280** (-2.53)	-0.0283** (-2.52)	-0.0299*** (-2.66)	-0.0247** (-2.23)	-0.0119 (-0.74)
tobinq_t	-0.00753 (-1.54)	-0.00884* (-1.85)	-0.00772 (-1.61)	-0.00906* (-1.83)	-0.0188 (-1.05)
runup_b	0.0325 (0.65)	0.0388 (0.78)	0.0376 (0.76)	0.0315 (0.62)	0.183*** (2.86)
runup_t	-0.0132 (-0.32)	-0.0101 (-0.25)	-0.0143 (-0.35)	-0.00654 (-0.16)	-0.051 (-0.78)
initiation_b	0.0746*** (2.77)		0.0576** (2.00)		
initiation_s		-0.0806** (-2.33)	-0.059 (-1.60)		
initiation					0.118*** (2.95)
Constant	0.183*** (2.80)	0.209*** (3.22)	0.192*** (2.91)	0.202*** (3.09)	0.0353 (0.40)
Observations	368	368	368	368	183
R-squared	0.14	0.14	0.15	0.12	0.21

**TABLE 6.** This table reports the multivariate regressions to explain bid premiums. Bidpremium is defined as the transaction value divided by the market value of equity of the target firm 50 days before the announcement of the merger, minus 1. We truncate this variable at 2, to exclude the outliers. percentcash is the percentage of cash as payment from buyer firm to the target firm. Tenderoffer is 1 if the takeover is completed by a tender offer and 0 otherwise. Assetrelatedness is 1 if the first 2 digits of the SIC codes of the merging firms match and 0 otherwise. unsolicited dummy variable takes a value of 1 if the deal is classified as unsolicited. competition is 1 if there are more than 1 bidder firm competing for the same target firm. Inrelativesize is the natural logarithm of the ratio of transaction value to the market value of the buyer at the financial year end prior to the merger. Cashflow\_b is the operating income of the buyer firm before depreciation minus interest expense, taxes, preferred dividends and common dividends, normalized by the book value of assets. Inmvequity is the natural logarithm of the market value of the equity (number of outstanding shares times price per share) at the financial year end prior to the merger. Inmvequity\_b stands for the buyer firm. mlev\_b is the market leverage (book value of debt divided by the market value of assets) of the buyer firm at the financial year end prior to the merger. tobinq is Tobin's Q (market value of assets divided by the book value of assets) at the financial year end prior to the merger. tobinq\_b stands for the buyer firm and tobinq\_t for the target firm. runup is the abnormal returns to the firm over (-63,-6), where normal returns are calculated using the market model. runup\_b stands for the buyer firm. initiation is 1 if the deal is classified as buyer initiated, and 0 if seller initiated. initiation\_b is 1 if the deal is buyer initiated and 0 otherwise. initiation\_s is 1 if the deal is seller initiated and 0 otherwise. Robust t statistics are in parentheses, below the reported coefficients. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

DEPENDENT VARIABLE	1	2	3	4	5
	bidpremium	bidpremium	bidpremium	bidpremium	bidpremium
percentcash	0.0995 (1.27)	0.113 (1.37)	0.106 (1.34)	0.105 (1.28)	0.202 (1.60)
tenderoffer	-0.0183 (-0.23)	-0.0163 (-0.20)	-0.0263 (-0.33)	-0.000868 (-0.010)	-0.0333 (-0.29)
assetrelatedness	-0.0000539 (-0.0011)	0.00675 (0.13)	0.00879 (0.17)	-0.00735 (-0.14)	-0.0401 (-0.62)
unsolicited	0.0778 (0.48)	0.114 (0.79)	0.0788 (0.50)	0.124 (0.84)	-0.119 (-1.19)
competition	-0.0237 (-0.18)	-0.0739 (-0.60)	-0.0292 (-0.23)	-0.0802 (-0.62)	-0.289** (-2.05)
Inrelativesize	0.0468** (2.47)	0.0482** (2.48)	0.0421** (2.20)	0.0572*** (2.98)	0.0555** (2.04)
cashflow_b	-0.00729 (-0.053)	0.0155 (0.13)	-0.00863 (-0.067)	0.0255 (0.19)	0.272** (2.18)
Inmvequity_b	0.0297** (2.08)	0.0329** (2.30)	0.0285** (2.01)	0.0361** (2.48)	0.0403* (1.89)
mlev_b	0.114 (0.67)	0.0557 (0.33)	0.0968 (0.57)	0.0679 (0.39)	0.495* (1.73)
tobinq_b	0.0112 (1.62)	0.00944 (1.40)	0.01 (1.50)	0.011 (1.54)	0.0418* (1.80)
tobinq_t	-0.0118 (-0.83)	-0.015 (-1.06)	-0.0123 (-0.90)	-0.0152 (-1.01)	-0.00405 (-0.12)
runup_b	0.166* (1.77)	0.163 (1.63)	0.162* (1.66)	0.171* (1.77)	0.292 (1.64)
initiation_b	0.164*** (3.54)		0.135*** (2.73)		
initiation_s		-0.156** (-2.45)	-0.112* (-1.66)		
initiation					0.210*** (2.94)
Constant	1.199*** (10.30)	1.271*** (11.10)	1.231*** (10.80)	1.235*** (10.50)	0.858*** (4.89)
Observations	224	224	224	224	107
R-squared	0.12	0.11	0.14	0.09	0.32

**TABLE 7.** This table summarizes percentage synergy gains to merger announcements with respect to initiation. Carc is the cumulative abnormal returns to the portfolio of buyer and target firm shares, where portfolio weights are the market value of equity of respective firms measured 5 days before the announcement of the merger. carc1, carc2 and carc5 measure abnormal returns 3, 5 and 11 days around the announcement, respectively. t statistics are in paranthesis under the reported sample mean values. They test whether the mean carc's are different than zero. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

Variable	All (N=371)				Buyer Initated (N=111)				Seller Initiated (N=72)			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
carc1	0.0135 (3.056***)	0.0852	-0.3428	0.4705	0.0203 (2.5022**)	0.0855	-0.2200	0.2502	0.0085 (0.9760)	0.0742	-0.3027	0.2160
carc2	0.0139 (2.7952***)	0.0960	-0.3370	0.5155	0.0228 (2.5289**)	0.0952	-0.2880	0.3304	0.0107 (1.0619)	0.0858	-0.3370	0.2527
carc5	0.0175 (2.7887***)	0.1206	-0.4173	0.7310	0.0236 (2.3169**)	0.1073	-0.3138	0.3063	0.0232 (1.9678*)	0.0999	-0.2341	0.2806



**TABLE 8.** This table reports the multivariate regressions to explain buyer firm abnormal returns at the announcement of the merger. Car1\_b stands for cumulative abnormal returns to the buyer firm 3 days around the announcement of the merger. To calculate abnormal returns, we use the market model, parameters of which are estimated over (-316,-64). percentcash is the percentage of cash as payment from buyer firm to the target firm. Tenderoffer is 1 if the takeover is completed by a tender offer and 0 otherwise. Assetrelatedness is 1 if the first 2 digits of the SIC codes of the merging firms match and 0 otherwise. unsolicited dummy variable takes a value of 1 if the deal is classified as unsolicited. competition is 1 if there are more than 1 bidder firms competing for the same target firm. Inrelativesize is the natural logarithm of the ratio of transaction value to the market value of the buyer at the financial year end prior to the merger. Cashflow\_b is the operating income of the buyer firm before depreciation minus interest expense, taxes, preferred dividends and common dividends, normalized by the book value of assets. Inmvequity is the natural logarithm of the market value of the equity (number of outstanding shares times price per share) at the financial year end prior to the merger. Inmvequity\_b stands for the buyer firm. mlev\_b is the market leverage (book value of debt divided by the market value of assets) of the buyer firm at the financial year end prior to the merger. tobinq is Tobin's Q (market value of assets divided by the book value of assets) at the financial year end prior to the merger. tobinq\_b stands for the buyer firm and tobinq\_t for the target firm. runup is the abnormal returns to the firm over (-63,-6), where normal returns are calculated using the market model. runup\_b stands for the buyer firm and runup\_t for the target firm. initiation is 1 if the deal is classified as buyer initiated, and 0 if seller initiated. initiation\_b is 1 if the deal is buyer initiated and 0 otherwise. initiation\_s is 1 if the deal is seller initiated and 0 otherwise. Robust t statistics are in parentheses, below the reported coefficients. Significance levels are denoted by an asterisk, \* for 10%, \*\* for 5% and \*\*\* for 1%.

DEPENDENT VARIABLE	1	2	3	4	5
	car1_b	car1_b	car1_b	car1_b	car1_b
percentcash	0.0303*** (2.67)	0.0307*** (2.69)	0.0307*** (2.69)	0.0303*** (2.67)	0.0111 (0.73)
tenderoffer	-0.00526 (-0.47)	-0.00507 (-0.46)	-0.00516 (-0.46)	-0.005 (-0.45)	0.02 (1.61)
assetrelatedness	-0.00152 (-0.17)	-0.00107 (-0.12)	-0.00107 (-0.12)	-0.0016 (-0.18)	0.00415 (0.34)
unsolicited	-0.0123 (-0.48)	-0.0126 (-0.49)	-0.0128 (-0.49)	-0.0115 (-0.45)	-0.0139 (-0.69)
competition	-0.00463 (-0.13)	-0.00553 (-0.16)	-0.00518 (-0.14)	-0.00566 (-0.16)	0.00188 (0.10)
Inrelativesize	-0.0141*** (-4.32)	-0.0143*** (-4.38)	-0.0143*** (-4.35)	-0.0139*** (-4.37)	-0.0118** (-2.44)
cashflow_b	-0.00418 (-0.14)	-0.00311 (-0.11)	-0.00342 (-0.12)	-0.00333 (-0.11)	-0.00638 (-0.22)
Inmvequity_b	-0.00766*** (-2.67)	-0.00766*** (-2.71)	-0.00768*** (-2.68)	-0.00757*** (-2.70)	-0.0119** (-2.43)
mlev_b	0.0771** (2.54)	0.0769** (2.56)	0.0772** (2.53)	0.0761** (2.54)	0.0627 (1.51)
tobinq_b	-0.00203* (-1.66)	-0.00207* (-1.70)	-0.00206* (-1.69)	-0.00204* (-1.68)	0.00324 (0.88)
tobinq_t	-0.00182 (-0.87)	-0.00186 (-0.89)	-0.00184 (-0.88)	-0.00187 (-0.89)	-0.00289 (-0.40)
runup_b	-0.000288 (-0.012)	0.000248 (0.01)	0.000227 (0.01)	-0.000313 (-0.013)	-0.0217 (-0.68)
runup_t	0.00671 (0.52)	0.00674 (0.52)	0.00669 (0.52)	0.00689 (0.54)	0.0211 (1.26)
initiation_b	0.00275 (0.28)		0.000953 (0.09)		
initiation_s		-0.00663 (-0.72)	-0.00628 (-0.65)		
initiation					-0.000113 (-0.0090)
Constant	-0.00418 (-0.17)	-0.00282 (-0.11)	-0.00309 (-0.12)	-0.00348 (-0.14)	0.0189 (0.52)
Observations	368	368	368	368	183
R-squared	0.17	0.17	0.17	0.16	0.14

