

INSIDER TRADING RECEIVES a substantial amount of attention from the investors, the government and the academicians alike. This is not surprising; given insider trading is widely regarded as reflecting the superior information of the insiders about the firm. Investors follow it closely hoping to earn abnormal profits. Government scrutinizes it vigorously to detect the illegal use of inside information. Academicians use it to understand the extent of informational asymmetries between the insiders and the market.

Of particular interest to academicians is the insider trades made by the managers. For example, many studies measure the information advantage of managers by calculating the abnormal changes in stock prices following managerial insider trades.² Others try to understand the managerial motives behind important corporate events like mergers, restructurings and stock issuances by examining the abnormal changes in managerial trading patterns prior to the announcement of such plans.³ Insider trades provide a unique insight into the minds of managers whose very actions create or destroy firm value.

One particular managerial decision that can affect the firm value substantially is the decision to engage in a merger. Recent merger experience of the late 1990s seems to suggest that overvalued equity might be playing an important role in initiating mergers. This period witnessed an unprecedented boom in stock prices coupled with a similar increase in merger activity (Figure 1a). Most of the deals were financed with stock and the deal values represented the highest in history (Figure 1b). However, many of the giant stock-merger deals during this era turned out to be immensely value-destroying for the acquirer shareholders. Moeller, Schlingemann, and Stulz (2003) show that from 1998 through 2001, a small number of acquisition announcements by firms with extremely high valuations are responsible for a \$240 billion loss in acquirer firm value. This combined with the existing empirical evidence⁴ that the long run returns to acquirers which pay for acquisitions in stock tend to underperform those of cash acquirers led

² See Jaffe (1974), Finnerty (1976), Seyhun (1986, 1988), Rozeff and Zaman (1988), Lin and Howe (1990), Jeng, Metrick and Zeckhauser (1999).

³ Seyhun (1990b) finds increased purchases and no significant changes in sales prior to mergers and tender offers. Lee et al. (1992) find increased purchases and reduced sales prior to repurchase tender offers. Karpoff and Lee (1991) find increased sales prior to seasoned offerings of common stock.

⁴ See Loughran and Vijh (1997) and Rau and Vermaelen (1998).

researchers to argue that overvaluation might have been an important determinant of the merger activity in that period.

This paper aims to understand whether “overvaluation” is a plausible motive behind the recent merger activity by examining the insider trades of acquirer firm managers around 2,105 merger announcements from 1983 to 2001. My approach is simple: if mergers are driven by an opportunistic desire to use overvalued equity as an acquisition currency, then this opportunism should also be reflected in the insider trades of the acquirer managers. Acquirer managers should increase their insider sales and decrease their insider purchases prior to mergers. However if the managers are overconfident, overoptimistic or plagued with hubris, there is no reason to observe any significant changes in their insider trading behavior prior to the mergers. My results show that acquirer-firm managers abnormally increase their insider sales prior to stock mergers and bad mergers, whereas no such change is observed prior to cash mergers and good mergers. The increased willingness of managers to sell stock prior to stock mergers provides preliminary evidence for the “overvaluation” motive behind the mergers.

This paper is not meant to be a complete empirical testing of the theories of overvaluation driven mergers.⁵ Rather it documents the opportunistic trading behavior of the managers and provides preliminary evidence as to whether overvaluation could be considered as an important determinant of merger activity.

The rest of the paper is organized as follows. Section I describes the data and method. Section II examines managerial insider trading around merger announcements. Section III concludes.

⁵ Shleifer and Vishny (2003) develop a model of overvaluation driven mergers with rational managers and an irrational stock market. Rhodes-Kropf and Vishwanathan (2004) develop a model with rational managers and a rational stock market where potential market value deviations from fundamental values on both sides of the transaction can rationally lead to a correlation between stock merger activity and market valuation. Both models yield similar empirical predictions.

I. Data

A. Sample Description

I searched the Securities Data Corporation (SDC) Platinum Mergers & Acquisitions database for completed mergers between public companies from January 1983 to December 2001 where:

- The acquirer owns less than 5% of the target prior to the acquisition and buys the rest with the acquisition
- Data on method of payment, whether the deal was hostile or not and bid premium is available.
- There is price and return data for both acquirer and the target in the University of Chicago's Center for Research in Security Prices (CRSP) database
- There are no other corporate announcements like share repurchases, stock splits etc. concurrent with the merger announcement

These requirements result in an initial sample of 2,564 mergers. Next I search for the insider trades of the acquirer firms' managers in the Thomson Financial Insiders Database (IDF) prior to the announcement date. In order to ensure enough insider data coverage, I focus only on insiders which have at least two years of consecutive coverage in the IDF database. In addition, I require every insider to have at least one trade per year on average during her presence in the database. As a result, 459 observations are eliminated due to insufficient IDF coverage of the acquirer firm, leaving me with a final sample of 2,105 mergers.

Table 2 presents the summary statistics for the merger data. Acquirers are substantially bigger than targets and heavily use stock to finance their mergers as opposed to cash, 49.2% versus 24.3% of the time. While acquirers earn a negative announcement abnormal return of -1.3%, acquisitions on average create value, the average 4-day announcement abnormal return for the combined firm is 1.2%. Figures 1a and 1b show

the annual distribution of merger activity from 1983 through 2001. The stock-merger wave of the late 1990s is clearly visible; from 1995 to 2001, not only the majority of mergers are stock mergers, but these mergers also represent the highest-value deals measured as a percentage of the total market capitalization of all public firms in the CRSP database.⁶

The insider trading data comes from the IDF database, which lists the amount, type and date of each trade as well as the title of the insider from January 1983 to December 2000. To focus on information-related trades, I analyze the direct open market sale and purchase transactions of the managers involving at least 100 shares.⁷ Using the managerial position descriptions in IDF database, I categorize the managers in to three disjoint groups ranked in the order of importance: chief executive officers (CEOs), directors of the board and officers. If a person appears in more than one group, I include him only in the one which has the highest ranking. Since I am only interested in the managers' evaluation of their firms, I exclude institutional shareholders and large individual shareholders who are not managers. Finally I exclude the firms in IDF database which could not be matched to CRSP database based on the CUSIP code.

Table 3 describes the overall trading activity for 11,200 firms in the IDF database from January 1983 to December 2000. Panel A shows the average monthly trading activity by firm size. The figures are calculated as follows. First, net purchases (purchases minus sales) by the managers as a whole are calculated for each firm in each month. Then all firm-months are pooled and sorted into ten size deciles. The figures represent the average monthly trading activity for a typical firm in a given size decile. Except for the smallest firms, managers as a whole are net-sellers in all firms. The magnitude of net-selling grows monotonically with firm size; with the largest firms having \$1.8 million of net-selling. Percentage of managers who are net sellers in a given month also increases with

⁶ For each year from 1983 to 2001, the percentage of total market capitalization acquired is calculated by dividing the total market value (measured at 3 days prior to the merger announcement) of the target firms acquired in that year by the total market value at the beginning of that year of all public firms available in the CRSP database.

⁷ Nevertheless, I also present results for the value of stocks purchased through option exercises from time to time for information, since most of the stock sold on the open market comes from purchases through option exercises.

firm size; only 28% of the managers are net sellers in small firms, compared to 82% in the largest firms. The main reason for the preponderance of sales in large firms is because managers in large firms usually receive part of their compensation as stock options, exercise the options to acquire shares, and then sell the shares. For information, I also report the value of stock purchased through option exercises in Table 3. As firm size gets larger, so does the value of options granted and hence the value of purchases through option exercises. For example managers in the smallest firms buy just \$730 worth of shares through option exercises every month on average whereas managers in the largest firms buy \$841,000 worth of shares which eventually get sold on the open market.

Panel B of Table 3 shows the average monthly trading activity for different management groups.⁸ Without exception, all management groups are heavy net-sellers in own company stock on the open market. CEOs are the heaviest net-sellers in absolute and relative terms selling \$2.6 million or 15.7% of their holdings on average. This is not surprising, since they also purchase the highest amounts of company stock through option exercises. Net selling is most prevalent among officers; 77% of trading officers are net sellers in a given month on average. The question whether these trading patterns represent informed-trading will be addressed later in the paper.

⁸ The figures are calculated as follows: First net-purchases are calculated for all managers in each month. Then all manager-months are pooled and sorted into three management position groups and means and medians are calculated. The figures represent a typical manager-month in a given management position group.

II. Managerial Insider Trading and Merger Announcements

A. *Are Managers Informed Traders?*

A crucial assumption of my analysis is that the managers' trades in their own firm's stock are motivated by their beliefs about the true value of their firm. However, the managers might be trading for various other reasons like liquidity concerns, rebalancing and diversifying their portfolios after stock price run-ups, none of which has anything to do with their beliefs about the true value of the firm. For example, most of the sell trades in large firms occur because the managers receive a great part of their compensation in stock options, and they sell them in the open market for liquidity purposes. Hence it is crucial to first establish that managerial trades are indeed informed trades.

In order to see whether managerial trades are informed trades, I calculate pre-trade and post-trade short-run cumulative abnormal returns for each managerial trading date for event windows up to 15 trading days around the transaction date.⁹ If the managers purchase (sell) stock prior to announcement of favorable (unfavorable) information, then their purchases (sales) will be followed by positive (negative) abnormal returns. Table 4 presents the results for 5, 10 and 15-day event windows. Purchases clearly show evidence of informed trading: managers as a whole gain cumulative abnormal returns ranging from 0.8% in 5 days to 1.6% in 15 days following their purchases. Officers gain the most, with 2.2% return in 15 days following the purchase. On the sales side, the picture is not as clear, we see very small but significant positive returns following sales transactions. This is to be expected, as sale transactions are not as clear signals of insider information as

⁹ I calculate the average cumulative abnormal returns for each managerial position as follows: First for each insider, I calculate the net value of all open market transactions in each trading day. If sales are higher than purchases, I label the net transaction on that day as a sale, if purchases are higher than sales, I label the net transaction on that day as a purchase. Taking the trading day as the event date (day 0) I calculate the cumulative abnormal return on that firm's stock for 5, 10, and 15 trading-day windows following and preceding the event date. I calculate the abnormal return as the return in excess of the return on the CRSP value weighted index⁹. I do not use CAPM or a more complicated asset pricing model to generate the expected returns because as Brown and Warner (1985) and Fama (1991) have noted, with the relatively short event windows of 5 to 15 days, the way expected returns are estimated when calculating abnormal returns has little effect on inferences. Finally for each managerial position I calculate the average cumulative abnormal return by averaging across the cumulative abnormal returns following all sales and purchases of the managers in that managerial position. I adjust the standard errors for serial correlation using clustering at calendar time.

purchases. This is due to the fact that most of the sale transactions are motivated due to non-informational reasons like the exercising of stock options for reasons like portfolio rebalancing, diversification or meeting liquidity needs. There is however a second, less obvious sign of managerial market-timing. If the purchases (sales) are preceded by abnormally low (high) returns which are reversed during the post event period, one can argue that managers use insider information to purchase when the prices are lowest and sell when the prices are highest. The “Reversal” column of Table 4 shows the difference between the post-event and pre-event cumulative abnormal returns. Without exception, the post-sales CARs are significantly lower than pre-sales CARs suggesting that managers might be timing their insider sales to coincide with peak stock valuations. To better see this point, Figure 2a shows the average cumulative abnormal returns from 90 days before to 90 days after the sales. All management groups successfully time their sales to coincide with near-peak stock valuations, with CEOs doing an especially good job. The pre-trade run-up in stock price stops right after the sales and turns in to a decline in the middle-run (and hence not captured by the short event windows used). Similarly, Figure 2b shows that managers seem to purchase following big declines in stock prices which are reversed almost immediately in the post-purchase period. Evidence from both sales and purchases seem to support the existence of informed managerial trading.

An alternative way to see whether managers are engaging in informed trades is to look at the biggest trades both in absolute and relative sense. Unlike the small trades, big trades are less likely to simply be motivated by liquidity, portfolio rebalancing or diversification motives. Therefore they should have higher informational content. Table 5 presents the cumulative abnormal returns for pre-event and post-event windows for purchases and sales for a 5-day window¹⁰. Absolute trade size is measured by the number of shares traded whereas relative trade size is measured by the percentage of common share holdings traded. In line with our expectations, the results show that bigger purchases are followed by larger positive CARs and bigger return reversals. Similarly, bigger sales are also followed by bigger return reversals. Figures 3a, 3b, 4a and 4b show the CARs from 90 days before to 90 days after the trade for different trade size categories. Without

¹⁰ Results for 10-day and 15-day windows are qualitatively similar and hence not reported for brevity.

exception, bigger purchases are preceded with lower returns which are quickly reversed in the post-trade period, and bigger sales are preceded with higher returns which are gradually reversed in the post-trade period.

The evidence presented so far seem to suggest that managerial trades are on average informed trades and motivated by managers' inside information about the true value of the firm. Although most of the sell trades are done to liquidate the stock options received as part of compensation, the fact that they coincide with peak stock-price valuations is a clear indication that the timing of those trades is not random, and reflects managerial information about the value of the firm.

B. Managerial Opportunism or Optimism?

In order to understand whether the managers are behaving opportunistically or optimistically in their personal trades, one needs to measure the abnormal changes in the managerial trading activity around important corporate announcements and other firm-specific surprise events. In this section I first examine the abnormal trading activity prior to firm-specific “good” and “bad” events in a generalized framework. Then I specifically focus on managerial trading prior to merger announcements.

B.1 Measuring Abnormal Insider Trading

There are alternative methods to measure abnormal trading activity: For example Jenter (2004) uses pooled time-series cross-section regressions to control for non-informational motivations for trading. Seyhun (1990b), in an event-study framework of merger announcements, uses a matching-sample approach and defines the abnormal trading activity both relative to the managerial trades of the same firm *outside* the takeover period (time-series control sample) and relative to the managerial trades of size-matched non-acquirer firms *inside* the takeover period (cross-sectional control sample). I employ both these approaches with some modifications in order to ensure that my results are not the artifact of a specific method used.

B.2 Non-Informational Motives for Insider Trading

Central to any method of measuring abnormal trading is the need to control for non-informational motives for trading. There can be mechanical reasons as to why some managers sell more: for example, managers who receive larger stock or option grants in a given period will sell more on the open market (Ofeck and Yermack (2000)). To control for this portfolio rebalancing and diversification motive, I include the dollar value of stock and option holdings and stock grants (where available) in the regressions. The value of option holdings and stock grants are not available in the insiders database, but the value of stock purchased through option exercises, gifts and other non-open market

means are. Therefore I use the dollar values of stock purchased through option exercises, gifts and other non-open market means during the previous twelve months as proxies for option holdings and stock grants¹¹.

Following large increases in stock price, managers will find an increased portion of their personal wealth tied in company stock. Therefore they will be more likely to sell stock in order to diversify away from company stock. To control for this diversification motive, I include prior stock return in the regressions.

Managers holding company stock are exposed to both idiosyncratic and total firm risk. Melbourek (2000) shows that managers in more risky companies tend to sell stock more aggressively. In order to control for firm risk and the change in risk on trading behavior, I include past stock return volatility and change in volatility in the regressions.

It is a well documented empirical fact that managers in bigger firms sell more stock than those in smaller firms. My results in Table 3 also confirm this. Therefore log of total assets is included in the regressions to control for size effects.

Recent research shows that managerial trading activity is not randomly distributed among value and growth stocks. Rozeff and Zaman (1998) show that managers in growth firms tend to sell more equity than managers in value firms, i.e. they have “contrarian” views about their firms. They interpret this as evidence that the market overvalues growth stocks and undervalues value stocks. Jenter (2004) finds evidence for the contrarian nature of managerial trading even after controlling for non-information motives for trading by keeping managerial ownership levels and compensation grants constant. I include dummies for book-to-market deciles in the regressions to abstract from any book-to-market related effects.

¹¹ When examining the trades of top managers, I get the value of option holdings and stock grants directly from the Execucomp database, but this effectively limits my sample to the 1991-2000 period since Execucomp coverage starts in 1991.

Finally there might be industry and time specific reasons affecting insider trading. To control for these factors, industry and time dummies are included in the regressions.

B.3 Good versus Bad Returns

If managers are indeed opportunistic, they should abnormally increase their net-sales prior to a firm-specific “bad” event and abnormally increase their net-purchases prior to a “good” event. To see whether this is the case, I search for firm-specific bad events and good events as follows: I first identify firms with a single-day market-adjusted return of less (more) than -30% (+30%). In order to ensure this dramatic return is unprecedented, I eliminate the firms if they had a one day return less (more) than -20% (+20%) during the preceding one-year period. This procedure yields 1,689 single-day “disaster” returns with a mean of -39.1% and 2,258 single-day “good” returns with a mean of 42.3%. Next, I measure the abnormal trading activity prior to these good and bad events using the regression approach of Jenter (2004). Specifically, I first calculate for every manager in each of the 11,200 firms in the IDF database the sum of his/her net purchases in a given calendar quarter. Net purchase is defined as the dollar value of purchases minus sales of company stock on the open market. I also calculate net purchases as a percentage of prior exposure where prior exposure is defined as the value of common share holdings at the beginning of the quarter. I then regress these measures on firm-specific and manager-specific control variables, and dummy variables showing whether a given firm will experience a good return or a bad return one, two, three and four quarters from now. The coefficients of these dummy variables will show the abnormal level of trading. For example a significant negative coefficient for the “BAD Return in Quarter t+3” variable means that net-purchases are abnormally reduced (net-sales are increased) in response to a bad return event that will occur in the third quarter following the current quarter. This is equivalent to saying that net sales are increased abnormally in the third quarter preceding the merger quarter. Table 6 presents the results. Each column is a regression. Dependent variables are dollar value of individual net purchases and individual net purchases as a percentage of prior exposure in columns one and three, and firm level averages of these

variables in columns two and four. Control variables are book-to-market decile dummies, prior stock return in the last two quarters , $RET_{q(t-2),q(t)}$, and the two quarters before that, $RET_{q(t-4),q(t-2)}$, prior stock volatility in the two quarters before the last two quarters, $VOL_{q(t-4),q(t-2)}$, and the change in volatility $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$, dollar value of equity stake which is the number of common shares held at the beginning of the quarter times the beginning of the quarter stock price. Insiders database does not report the level of option holdings and it is not feasible to hand-collect this data for 1,518,164 manager-quarters. However it reports when an option is exercised to purchase stock. Therefore I use the dollar value of shares purchased through option exercises during the last twelve months as a proxy for option holdings. I also include the dollar value of "Other" share purchases and "Gift" share purchases during the last twelve months in order to take into account the value of purchases through stock grants and option grants that are incorrectly assigned into the other category. I also include 20 industry dummies as defined by Grinblatt and Moskowitz and (1999) and year-quarter dummies to control for industry and time specific effects.

The results in Table 6 show clear evidence of market timing by the managers. The coefficients for bad return dummies are negative and highly significant indicating that managers increase their sales abnormally prior to the bad return quarter. On average they increase their sales between \$33,000 and \$49,000 per quarter during the four quarters before the bad return quarter. Managers seem to anticipate the good returns as well, although not as strongly, they increase their net purchases by \$5,000 if there will be a good return in the next two quarters. Other variables have the expected signs, similar to Jenter (2004) I find that managers are contrarian investors, that is, managers in low book-to-market (growth) firms sell more than those in high-book-to-market (value) firms. Prior return and prior volatility have negative signs meaning high past returns and volatilities cause a decrease in net-purchases because managers will sell more for portfolio rebalancing and diversification reasons. Dollar value of shares purchased in the last twelve months through option exercises, gifts and other methods is negatively related with the net purchases, since the more stock managers purchase through non-open market channels, the more stock they will sell afterwards in the open market. In column three,

the regression is estimated using individual net purchases as percentage of prior exposure. Here we see that managers sell between 1.9% and 3.6% of their common share holdings per quarter during the four quarters prior to a bad return event. The results for bad mergers are robust to averaging among all the managers in a given firm as shown in columns two and four. In all four regressions, managers sell significantly more prior to bad return quarters than prior to good return quarters, as confirmed by F-tests for the equality of the coefficients of bad and good return quarter dummies. These results show that managers are able to anticipate extremely bad returns and act opportunistically to gain from this by increasing their insider sales.

In order to see whether this opportunism is also seen among the top managers, Table 7 repeats the same analysis for the managers that are present both in the insiders database and the Execucomp database. Execucomp database includes compensation and option holdings data for top five officers in S&P 500 companies. By combining the two datasets, I am able to directly control for the level of option holdings, stock grants and the value of total compensation. The new control variables are the intrinsic value of exercisable options, the intrinsic value of unexercisable options, dollar value of stock grants, dollar value of total compensation and the Black-Scholes value of option grants. Since Execucomp is an annual database, for each quarter, these variables are measured as of end of the previous calendar year. The additional benefit of using Execucomp data comes at a cost, my sample size is reduced considerably from 1,518,164 manager quarters to 13,028 and the time coverage is limited to 1991 to 2000 instead of 1983 to 2001 since Execucomp data starts only in 1991.

The evidence of managerial opportunism in Table 7 is somewhat weaker, but we still see significantly increased dollar and percentage net-sales prior to bad returns (columns two and three) and significantly increased net-purchases prior to good returns (columns one and four). Comparing the coefficients for bad and good return quarter dummies, we see that managers sell considerably more in the current quarter if there will be a bad return three quarters from now as opposed to a good return. Overall, Table 7 shows that managerial opportunism in insider trades, albeit weaker, is observed among top managers

as well, no matter how closely their trades might be scrutinized by the regulatory agencies and investors alike.

Next I examine whether managers behave opportunistically or optimistically in their personal trades prior to merger announcements.

C. Managerial Opportunism around Mergers

C.1 Good Mergers versus Bad Mergers

A good way of detecting whether managers behave opportunistically or optimistically in their trades prior to the merger is to examine the managerial trades prior to “good” and “bad” mergers. Opportunistic managers will alter their trading patterns prior to the merger if they are able to anticipate the market’s reaction to the merger announcement. Namely, they will increase their sales and decrease their purchases before the announcement of bad mergers and decrease their sales and increase their purchases before the good mergers. On the other hand, if they are optimistic, they will increase their purchases and not increase their sales before the bad mergers.

A merger is classified as a “good” merger from acquirer managers’ point of view if the acquirer’s four-day announcement cumulative abnormal return (CAR) is higher than 10% and as “bad” mergers if the acquirer’s announcement CAR is less than -10%. Similarly for a target manager a merger is “good” if target’s four-day announcement cumulative abnormal return (CAR) is higher than 10% and “bad” it is less than -10%. This definition yields 154 bad mergers and 80 good mergers from acquirer managers’ point of view and 57 bad mergers and 1,261 good mergers from target managers’ point of view. I create dummy variables which are equal to 1 if a particular firm will become an acquirer (target) in a good or bad merger from acquirer (target) manager’s point of view in one, two, three and four quarters from the current quarter.

The announcement CARs are calculated using a four day window starting at day -2 and ending at day +1 relative to the announcement date. Abnormal (or “excess”) returns are calculated by subtracting the return on the value weighted market index during the event window from the firm returns. Once the acquisitions are classified this way, I repeat the analysis in Table 7. Table 8 presents the results.

The results reveal that acquirer and target managers abnormally increase their net-sales prior to bad mergers. A typical acquirer manager increases his quarterly net-sales between \$55,000 and \$76,000 (column one) or by 3.5% to 3.9% (column three) in response to a future anticipated bad merger. A typical target manager increases his quarterly net-sales between \$69,000 and \$156,000 or by 4.5% to 6.4% of his/her holdings. However neither acquirer nor target managers exhibit any abnormal increases in net-purchases prior to good mergers. In fact in some cases we see increases in net-sales. To better understand whether managers are trading differently prior to bad and good mergers, I test whether the coefficients of bad merger dummies are equal to the corresponding good merger dummies using an F-test (p-values are reported at the bottom of the table). These tests reveal that acquirer managers in bad mergers sell significantly more in both dollar and percentage terms than acquirer managers in good mergers in the second quarter preceding the merger quarter. The dollar net-purchases of target managers also exhibit a similar pattern. It seems that both acquirer and target managers can correctly anticipate the value consequences of a future merger as early as two quarters before the merger quarter.

C.2. Discussion

My results point to the existence of opportunistic trading among the managers prior to the mergers. This stands in sharp contrast to Seyhun (1990b) who finds no evidence of managerial opportunism prior to 23 “good” mergers and 42 “bad” mergers as defined by 2-day acquirer announcement abnormal returns. Seyhun (1990b) uses a different sample period (1975-1986 vs. 1983-2001) and sample size (393 vs. 2,105 total acquisitions; 23

vs. 154 good acquisitions, 42 vs. 80 bad acquisitions) studied. In order to explore this difference, I take the intersection of my sample with Seyhun (1990b)'s sample and restrict it to 1983-1986 period and repeat the analysis in Table 8. Results are reported in the first two columns of Table 9. Consistent with Seyhun (1990b) I find no evidence of opportunistic behavior prior to bad mergers. Hence the difference in the results seems to come from the very different sample periods covered in each study.

These results are not consistent with theories of managerial overoptimism, overconfidence or hubris as a primary motivation to engage in acquisitions. Roll's (1986) hubris hypothesis predicts that managers will overestimate their abilities to generate returns, both in their current firms and potential takeover targets. Malmendier and Tate (2003) argue that overconfident CEOs are more likely to conduct mergers when they have sufficient internal resources, and they conduct more "bad" mergers on average. However, if managerial optimism or overconfidence were indeed a primary motive in mergers, then this optimism and overconfidence should also be reflected in managerial trades prior to the merger. In other words, there is no reason for managers to trade differently prior to "good" and "bad" mergers; in both cases one should observe increases in purchases and no increase in sales. This is clearly not the case for the sample studied. Not only managers in bad mergers increase their sales above normal levels prior to the announcement, they also sell more than managers in good mergers.

One important difference between my approach and Malmendier and Tate's (2003) is that my measure of "bad" mergers is different. Malmendier and Tate (2003) use diversifying acquisitions to proxy for "bad" mergers. However recent research provides no justification for singling out diversifying acquisitions as value destroying. For example, Akbulut and Matsusaka (2003) show that during Malmendier and Tate's sample period from 1980 to 1994 there are no significant differences in acquirer returns in diversifying and related acquisitions. Moreover, the market does not view diversifying acquisitions as value destroying on average; the combined announcement returns are 0.30% (insignificant) for 1980-83, 1.67% (significant at 1% level) for 1984-89 and 0.44% (insignificant) for 1990-93 periods. My method of looking at market's reaction to the

merger is a more objective way of classifying mergers as “bad”, or “value-destroying”. Moreover, Malmendier and Tate (2003) completely rule out the insider information motive for prolonged holding of stock options. In their story, a CEO holding his stock options too long is doing so because he is “overconfident”, and their analysis is based on this overconfidence measure. An alternative explanation for prolonged holdings might be that the CEO has private information that the stock prices will rise in the future due to an upcoming merger, so he will wait until the merger announcement to exercise his options. If this is the case, one will find a higher propensity to acquire among the managers who hold options until expiration. Malmendier and Tate (2003) dismiss this possibility by saying that “..This (insider information) explanation, however suggest that we would observe insider trades right around the merger. This does not seem to be the case empirically (Boehmer and Netter, 1997)”. Indeed, Boehmer and Netter (1997), following a similar method with us, find no significant changes in managerial trading patterns for 371 acquisitions between 1975 and 1987. Their sample consists of 184 good and 187 bad acquisitions as defined based on the 6-day announcement abnormal return being positive or negative. However like Seyhun’s (1990b) sample, their sample also does not include the stock-merger boom of the late 1990s where, ex-post many mergers are believed to be undertaken by opportunistic managers trying to take advantage of high stock market valuations. To explore the differences in our results I take the intersection of my sample with theirs, leaving me with a sample from 1983 to 1987. I then repeat the analysis in Table 8. The results are presented in Table 9. columns three and four. Confirming their results, I find that the evidence for managerial opportunism is much weaker in this period, with mostly insignificant increases in net-sales prior to bad mergers. This suggests that the difference between my results and Boehmer and Netter (1997)’s results are indeed due to the different time periods studied.

In order to see whether managers are deliberately postponing their option exercises to benefit from the high stock prices after the good mergers, I look at stock purchases through option exercises around good and bad mergers. Table 10 presents the results. The dependent variables are the dollar value of individual net-purchases in column one and the dollar value of individual stock purchases through stock options in column two. I

create dummy variables which are equal to one if a given firm was an acquirer or a target in a good or a bad merger in the previous and future four quarters starting from the current quarter. I also include but not report in Table 10 dummies for whether a given firm was an acquirer or a target in a “normal” merger, meaning the merger was neither a good nor a bad one. Hence the coefficients of bad and good acquirer dummies are directly interpretable as the abnormal trading in response to an upcoming or past bad or good merger. For example the coefficient of “Bad Acquirer in Quarter t-1” will show the abnormal purchases through stock options one quarter after the bad merger quarter.

Results show that there is no abnormal change in acquirer managers’ purchases through option exercises prior to good mergers. However there is a dramatic increase right after the good mergers: the coefficient of “Good Acquirer in Quarter t-1” dummy is \$630,000 and significant which means a typical manager in a good acquirer increases his/her purchases through stock option exercises by \$630,000 right after the merger. This finding seems to suggest that acquirer managers hold off exercising their options until after the favorable merger is announced. We observe the opposite situation in bad mergers: managers increase their option exercises by \$262,000 just before the bad merger and decrease their option exercises by \$212,000 right after the bad merger. These results, contrary to Malmendier and Tate (2003)’s assumption, seem to suggest that managers are actively timing their option exercises to fall before bad mergers and after good mergers.

In the light of this evidence for managerial opportunism, it seems overconfidence, overoptimism or hubris are not the primary motives behind the sample of mergers studied.

C.3 Stock Mergers versus Cash Mergers

An alternative way to see whether the managers trade opportunistically prior to mergers is to compare the trading behavior before stock and cash mergers. The asymmetric information story tells us that the method of payment chosen may signal new information about the true value of the firm to the market. For example when stock is used as a

method of payment, the market's reaction will compound both a reaction to the merger itself and the increase in the outstanding equity. If managers have more information about the true value of the firm than the market, they will want to issue new equity when they think that their stock is overvalued (Myers and Majluf, 1984). As a result, the market will react negatively to the issuance of new stock. An extensive empirical literature shows that seasoned equity issues are associated with negative announcement returns of about -3 percent on average (Smith, 1986), and the returns from merger announcements are about 3 percent lower when stock is used instead of cash (Andrade et al., 2001). These findings seem to suggest that overvalued firms prefer stock as a method of payment whereas undervalued firms prefer cash. Therefore, opportunistic managers will increase their sales and decrease their purchases prior to stock mergers and decrease their sales and increase their purchases prior to cash mergers.

Table 11 examines the abnormal managerial trading by acquirer and target managers prior to 2,105 merger announcements involving 1,189 acquirers. The method of payment is only stock in 1,035 mergers, only cash in 512 mergers and a mixture of stock, cash and other securities in the remaining 558 mergers. The dependent variables are same as before, namely the dollar value of individual net purchases in column one, individual net purchases as a percentage of prior exposure in column three and the averages of these variables across all managers in a given firm in columns two and four. In order to measure the abnormal trading in the current quarter in response to an acquisition in the next four quarters, I create dummy variables for both acquirers and targets which are equal to 1 if acquirer or target is involved in a stock, cash or a mixed acquisition in one of the next four quarters. Since I focus exclusively on stock and cash acquisitions, I do not report the coefficients for mixed acquisition dummies in Table 11 for brevity. A significant negative sign for any of these dummies will indicate increased abnormal selling prior to the merger announcement whereas a significant positive sign will indicate increased abnormal buying prior to the merger announcement. The control variables are the same as before.

Results in table 11 show that both acquirer and target managers significantly increase their net-sales prior to stock acquisitions both in dollar and percentage terms. Acquirer managers abnormally sell from \$10,500 to \$23,900 or 0.82% to 1.25% of their holdings each quarter during the four quarters prior to a stock merger announcement. Target managers sell between \$8,500 to \$22,300 or 0.65% to 2.98% of their holdings each quarter. These results are robust to averaging across all the managers in a given firm (columns two and three). Prior to cash acquisitions however, neither acquirer nor target managers exhibit such significant changes in trading activity. The coefficients for the dummy variables are mostly positive and insignificant. Finally an F-test for the equality of coefficients shows that both acquirer and target managers sell significantly more prior to stock acquisitions than prior to cash acquisitions in all four quarters prior to the merger quarter.

Next I look at the trades of top-managers covered by Execucomp. Table 12 presents the results. While we still observe signs of increased selling prior to stock acquisitions, evidence is generally weaker. We see in column one that acquirer managers increase their sales by \$167,000 and \$280,000 two and three quarters before a stock merger¹². Target managers do not significantly change their sales, but significantly increase their purchases by \$100,000 one quarter before a cash merger. There are no signs of significant changes in trading as a percentage of prior exposure.

Taken together, the results in Tables 11 and 12 show that even after controlling for non-informational motivations for insider trading, both acquirer and target managers significantly increase their insider sales prior to stock acquisitions, and sell more prior to stock acquisitions than prior to cash acquisitions. Similar findings are reported by studies examining managerial trading around seasoned equity issues. Karpoff and Lee (1991), Lee (1997) and Kahle (2000) all find that insider sales increase relative to insider purchases before seasoned equity offerings. Jenter (2004) finds increased managerial

¹² These are significantly higher than their sales two and three quarters before a cash merger as confirmed by an F-test for the equality of coefficients (not reported for brevity).

selling in years when there is a seasoned equity offering, after controlling for managerial ownership levels.

C.4 Robustness

In order to make sure that these results are not an artifact of the regression method I am using, I repeat the analysis for stock and cash mergers using the matching sample method used by Seyhun (1990b) with some modifications. Seyhun (1990b) defines the abnormal trading activity both relative to the managerial trades of the same firm *outside* the takeover period (time-series control sample) and relative to the managerial trades of size-matched non-acquirer firms *inside* the takeover period (cross-sectional control sample). The takeover period is defined as the 19 months from 12 months prior to 6 months after the merger announcement month. Due to the data limitations with the time-series control sample method, I only use the cross-sectional control sample method here. I define my takeover period as the twelve month period prior to merger announcement. Some acquirers make multiple acquisitions in a very short time period which might cause the takeover periods to overlap in calendar time. To prevent such cases, if there is such an overlap, I only use the largest merger by the acquirer in terms of the relative size of the target compared to the acquirer. In order to ensure enough data coverage in the insiders database during the takeover period, I require the first entry in the insiders database for a given firm to be before the beginning of the takeover period, and require the last entry to be after the merger announcement date. I also drop the mergers where the acquirers or targets cannot be matched to a control firm. These additional data constraints greatly reduce my sample size: I am able to construct a control sample for the acquirer (target) managers in 1,188 (1,104) out of 2,105 mergers.

In order to better control for non-informationally motivated trades, I make important changes to Seyhun (1990b)'s methodology. Instead of only matching on size, I match each manager in acquirer and target firms to a control manager in a size-prior stock return-industry matched non-merger firm based on the value of managerial common share holdings. Specifically, I require the dollar value of common share holdings of the

control manager to be between 70% and 130% of that of acquirer or target firm managers. I match based on size by sorting all the firms into five size groups and requiring the acquirer or target firm to be in the same size group with the control firm. I require the control firm to have a past 12 month stock return within -10% and +10% of that of the acquirer and target firms. Finally I use the 20 industry definitions used by Grinblatt and Moskowitz (1999) to match based on industry. Matching is done at thirteen months prior to the merger announcement based on the values of the matching variables at that moment in time.

Once matching is completed, I construct the expected levels of insider trading using this cross-sectional control sample. I then compare the actual and the expected levels of trading and compute the significance of the difference. The null hypothesis is that merger activity does not affect normal insider trading patterns during the takeover period. In my empirical tests, I follow Seyhun (1990b) and use the bootstrap randomization method. As Seyhun (1990b) shows, the parametric tests such as the two-sample means test or the nonparametric tests such as the median test or the sum of the ranks tests have low power since insider trading activity is non-normal, infrequent and highly skewed in magnitude. The bootstrap randomization method works as follows. First I randomly match each acquirer and target firm manager with corresponding control managers in size-prior stock return-industry matched non-merger firms based on the value of common share holdings at thirteen month prior to the merger announcement. I then record the managerial trading activity for the control managers and compute the overall sample statistics. I repeat this process 1,000 times and obtain the empirical distribution of the sample statistics under the null hypothesis. The expected value for a sample statistic is the median of the empirical distribution of that statistic under the null hypothesis. In order to test for the significance of the difference between the realized value and the expected value of a statistic, I compare the realized value with the empirical distribution under the null. The results are shown in Table 13.

Table 13 shows the absolute and relative net-purchases of acquirer and target firm managers in the twelve month period prior to the merger month. Columns one and three

report the dollar value of individual net purchases and individual net purchases as a percentage of share holdings at the beginning of the period. Columns two and three report the same variables averaged across all managers in a given firm. The first entries denote the average net purchases followed by the expected value of net purchases in row two and sample size in row three. ***, ** and * denote whether the average net purchases are significantly different from the expected value of net purchases at 1%, 5% and 10% levels. Results show a dramatic increase in sales for both acquirer and target managers prior to stock acquisitions in both dollar and percentage terms. Moreover, these trades represent significant portfolio adjustments: Column three shows that acquirer managers sell 52.9% of their holdings in the one year period prior to stock mergers compared to an expected value of 15.4% and the difference is significant at 1% level. Similarly target managers sell 35% of their shares compared to an expected value of 15% and the difference is significant at 1% level. We also observe some increase in sales prior to cash mergers as well, however for all four measures, managers in stock mergers sell significantly more than managers in cash mergers in the one year period prior to the merger. These results are qualitatively in line with those obtained using the regressions, suggesting that the results are robust to using different methods to measure abnormal insider trading activity.

D. Discussion

The evidence reported for stock and cash mergers lends itself to multiple interpretations. One possible interpretation is a pure asymmetric information story. Assume that the only inside information the managers possess is that they will conduct a merger soon and that the managers do not possess any insider information about the value of the firm. In this case, managerial trades will only be affected by the anticipation of the merger and not due to any perceived misvaluation. If the managers can correctly anticipate the mergers as value-destroying or value-creating, then prior to bad mergers there will be increased sales and reduced purchases whereas prior to good mergers there will be increased purchases and reduced sales. Similarly if the managers can anticipate the method of payment that will be used, they will sell more and purchase less prior to stock mergers.

This is because of the well-known fact that announcement returns in stock mergers are on average 3% lower than those in cash mergers.

There are a number of concerns with this interpretation. First, managers do not seem to anticipate the merger itself or its value consequences long before the merger, but they somehow act as if they correctly anticipate the method of payment as early as three to four quarters prior to the merger. There are no significant differences in sales prior to bad mergers and good mergers as early as three to four months prior to the merger: the coefficients for the bad merger dummies are not significantly different from the coefficients of the good merger dummies for this period. (see the F-tests for the equality of coefficients at the bottom of Table 8). On the other hand, managers in stock mergers sell significantly more than managers in cash acquisitions as early three and four quarters prior to the merger (see the F-tests for the equality of coefficients at the bottom of Table 11). It would be a bit forced to interpret these findings as managers correctly anticipating the method of payment that will be used as early as three to four quarters prior to merger when they cannot correctly anticipate the valuation consequences that early. Instead it might be more plausible to think that managers in stock and cash mergers are simply reacting to information they have at that time, and that information is different for future cash-acquirers and future stock-acquirers. One such information is the managers' perceptions about the value of their firms. The observed managerial trading behavior prior to stock and cash mergers is consistent with the interpretation that managers in future stock-acquirers are more likely to believe that their firm is overvalued and therefore increase their selling more than the managers in future cash-acquirers. If the managers believe that their firm is overvalued, they will be more likely to acquire for stock than for cash since they expect negative future returns on their stock. On the other hand, if they believe that their firm is undervalued, they will be more likely to acquire for cash than stock since the expected future returns on stock is higher than the expected future returns on cash. This is not to say that managers do not anticipate the value consequences at all, my results from bad mergers show that they do, at least starting from two quarters before the merger. However given the prevalence of the different trading patterns for cash and stock mergers starting as early as four quarters before the merger, I

believe that trading based on the value consequences of the merger is a secondary motive in managerial trading prior to the merger.

A second concern with the merger anticipation idea is that, if the managerial trades are only reflecting the managers' anticipation of the merger then there is no reason for the pre-merger stock returns to be different in firms whose managers are net sellers and firms whose managers are net buyers. However, Akbulut (2005b) shows that acquirers with high net-seller managers have 33.1% higher pre-merger one-year returns than acquirers with high net-buyer managers. Once again the observed pattern is more consistent with a misvaluation story where managers in firms with high stock returns in the past are selling their overvalued shares prior to the merger whereas managers in firms with low past returns believe their firm is undervalued and are increasing their purchases.

Taken together, the evidence from good versus bad and stock versus cash mergers suggest that the managers trade opportunistically in their personal portfolios around merger announcements. Moreover, the increased insider selling prior to stock mergers suggests that overvaluation should be considered as an important managerial motive behind the mergers.

E. Case studies

The evidence so far seems to support that overvaluation might be an important factor driving the merger activity. An obvious question comes to mind: If overvaluation is indeed such an important factor in initiating the mergers, shouldn't it be acknowledged by at least some of the market participants following the merger announcement? As a final step, I examine whether market participants viewed a given merger as motivated by the overvaluation of the acquirer firm. To do this, I select the top 100 mergers in terms of the size of the target. I then read the merger announcement articles in Wall Street Journal (WSJ) at or after the announcement date. I identify the cases when the article explicitly mentions that the acquisition is driven mainly by the high stock valuations of the acquirer. For 22 of the 100 acquisitions article explicitly mentions the high stock

valuations of the acquirer as the main factor. For the remaining 78 of them I do not find any mention of overvaluation in the article. Table 14 shows the mergers that are viewed as overvalued in the WSJ articles along with an excerpt from the article. In most of the articles, it is clearly stated that acquirer firm is opportunistically using its high stock valuations to buy the target firm. The next natural step is to examine whether managers indeed take advantage of overvalued equity by increasing their insider sales prior to the merger. For this purpose, I calculate the abnormal managerial trading activity using the matching sample approach. I am able to find data for 12 of the 22 overvalued firms and 54 of the 78 “not-overvalued” firms in the insiders database. Overall there are 147 managers in the overvalued sample and 655 managers in the not-overvalued sample. Table 15 presents the results.

A typical manager in an overvalued acquirer sells a staggering \$3.6 million worth of company stock in the year before the merger whereas the expected level is just 1.3 million. In relative terms, this corresponds to 144.8% of his prior common share holdings, which is almost four times higher than the expected value of 38.5 %. On the other hand we actually see a decrease in dollar net-sales for a typical manager in the “not-overvalued” group. The difference between two groups is \$2.78 million and highly significant. These results confirm our basic intuition that the managers in overvalued firms opportunistically take advantage of overvaluation by increasing their insider sales. Examining managerial insider trading seems to be a good way to identify the existence of overvaluation.

III. Conclusion

This paper examined whether overvalued equity is a plausible managerial motive for conducting mergers by examining the managerial insider trades around merger announcements. Results show that managers behave opportunistically in their personal trades around merger announcements: they abnormally increase their sales prior to stock mergers and bad mergers whereas no such change is observed prior to cash mergers and good mergers. Moreover these results are robust to controlling for many non-

informational motives for insider trading like portfolio rebalancing, diversification, reducing exposure to firm risk among others.

The willingness of managers to sell company prior to stock acquisitions is consistent with the idea that managers acquire other firms for stock when they think their stock is overvalued. This suggests that overvaluation might have played an important role in initiating many of the mergers we saw in the recent merger wave. A direct implication of this study is that it provides a natural way of measuring overvaluation. Those firms where managers are net sellers in company stock can be considered as overvalued and those firms where managers are net buyers can be considered as undervalued. This in turn will provide an alternative way of testing the predictions of the theories of overvaluation driven mergers.

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Table 1
Sample Construction

This table describes the data sources and catalogs the reasons why observations were deleted. Data sources are abbreviated as follows: CRSP is the stock database at the Center for Research in Security Prices at the University of Chicago, SDC is the SDC Platinum Mergers and Acquisitions Database.

	Observations
All public mergers in SDC between 1983-2001 where: -Both acquirer and target have CRSP data -The acquirer owns less than 5% of the target before the merger -There are no other announcements during the 4-day event window	2,564
Acquirer is not in the insiders database	-459
Final sample	2,105

Table 2
Descriptive Statistics - Merger Data

Sample includes completed merger bids and tender offers where both acquirer and target were listed on the NYSE, AMEX, or NASDAQ during 1983-2001. Acquirer and target market values are measured at day -3 relative to the acquisition announcement date (day 0). Relative size is the ratio of target market value to acquirer market value. Acquirer and target cumulative abnormal returns (CAR) are measured over the four days (-2, 1) around the announcement (day 0) of the acquisition. Combined CAR is calculated as the value weighted average of acquirer and target CARs weighted using day -3 market values of the acquirer and the target. Diversification is defined as acquirer and target not having a common 2-digit SIC code in their first 6 SIC codes.

	Mean	Median
Acquirer Market Value (million \$)	12.7	1.8
Target Market Value (million \$)	0.8	0.1
Relative Size (%)	25.0	10.6
Announcement Abnormal Returns [-2,+1] (%)		
Acquirer	-1.3	-0.9
Target	18.9	16.9
Combined	1.2	0.8
Method of Payment (%)		
Stock Only	49.2	
Mixed	26.5	
Cash Only	24.3	
Diversifying Acquisition (%)	12.3	
Tender Offers (%)	18.7	
Hostile Bids (%)	1.9	
Multiple Bidders (%)	3.8	
N	2,105	

Figure 1a
Annual Frequency of Mergers by Method of Payment

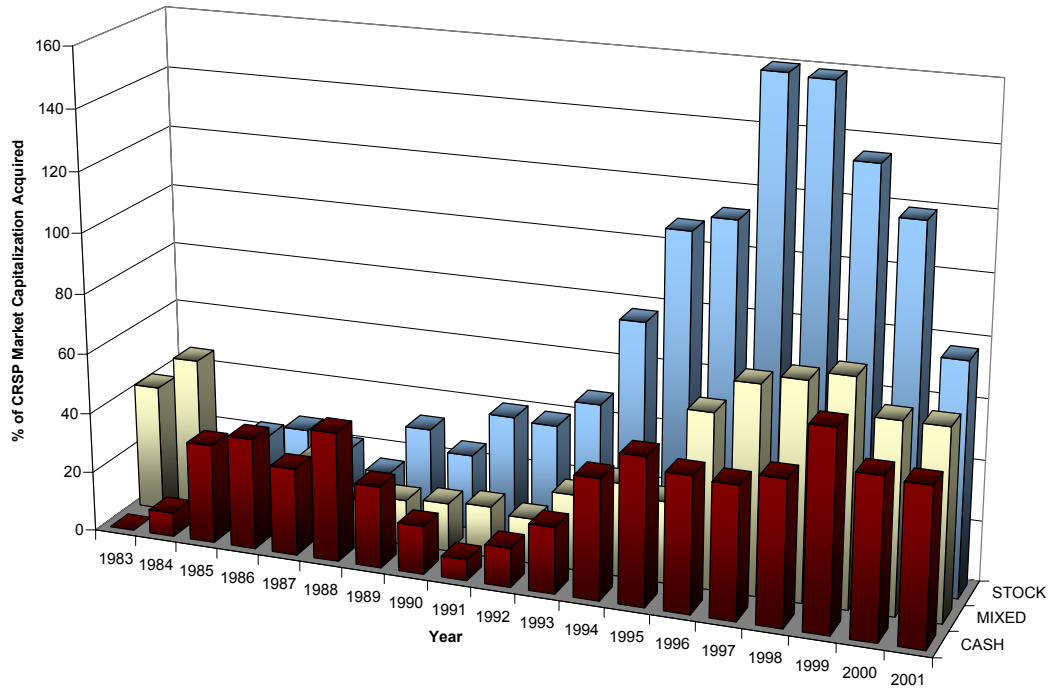


Figure 1b
Percentage of CRSP Market Capitalization Acquired

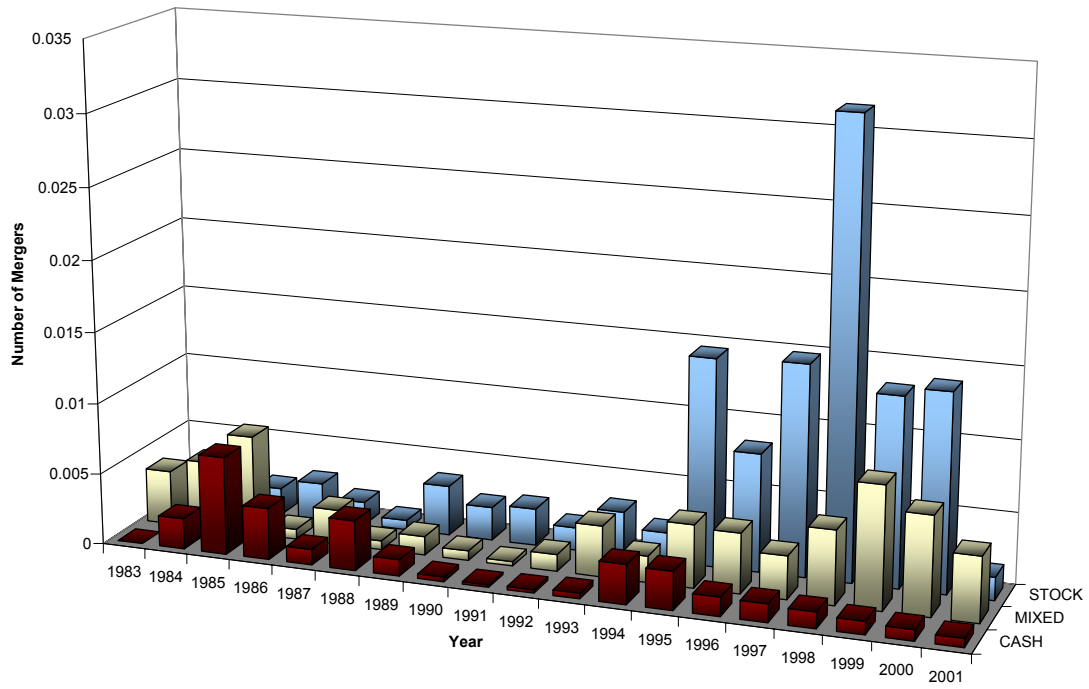


Table 3
Descriptive Statistics - Insider Trading Data

This table describes the average trading activity of different management groups for the entire 1984-2000 period. The management groups are constructed from the title descriptions in the IDF database. I exclude the trades of large institutional shareholders and insiders who are not active in the management.

PANEL A: Insider Trading by Firm Size

Size Deciles	Percentage of Net Buyers	Percentage of Net Sellers	Average / Median Size of Monthly Net Purchases (\$)	Average / Median Size of Monthly Purchases through Option Exercises (\$)	Average Size of Net Purchase (% of common stock holdings)	Average Size of Purchases through Option Exercises (% of common stock holdings)
1	72%	28%	12 4	0.7 0	2.70%	0.10%
2	64%	36%	-1 4	4 0	0.14%	0.28%
3	58%	42%	-23 4	5 0	-1.53%	0.27%
4	51%	49%	-47 3	10 0	-2.29%	0.44%
5	47%	53%	-88 -6	17 0	-3.28%	0.55%
6	41%	59%	-163 -24	35 0	-4.31%	0.80%
7	35%	65%	-292 -54	61 0	-5.85%	1.00%
8	30%	70%	-474 -97	109 0	-6.47%	1.25%
9	26%	74%	-678 -151	229 0	-7.25%	2.06%
10	18%	82%	-1,826 -260	841 0	-6.68%	2.30%

PANEL B: Insider Trading by Managerial Position

Management Group	Percentage of Net Buyers	Percentage of Net Sellers	Average / Median Size of Net Purchase (\$)	Average / Median Size of Purchases through Option Exercises (\$)	Average Size of Net Purchase (% of common stock holdings)	Average Size of Purchases through Option Exercises (% of common stock holdings)
CEO	36%	64%	-2,629 -71	1,421 0	-15.73%	7.83%
Directors	48%	52%	-765 -10	170 0	-4.31%	0.79%
Officers	23%	77%	-504 -93	301 0	-13.74%	6.00%

Table 4
Abnormal Returns on Insider Transactions by Managerial Position

This table describes the cumulative abnormal returns for 5, 10 and 15 day event windows around the insider transaction date (day 0). The abnormal returns are calculated by subtracting the return on the CRSP value weighted index from firm returns during the event window. For each transaction day for each insider, the net value of trades by the insider is calculated and the transaction day is labeled as a buy day or a sell day. Taking the transaction day as the event day (day 0), the abnormal returns are calculated for both buy days and sell days. Average abnormal returns are calculated for each management group by averaging the abnormal returns following the buy and sell days of insiders in that group. Standard errors are corrected for serial correlation by using calendar date clustering. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively.

Management Group	PURCHASES				SALES			
	N	Cumulative Abnormal Returns (%)			N	Cumulative Abnormal Returns (%)		
		Pre-Event (1)	Post-Event (2)	Reversal (2) - (1)		Pre-Event (1)	Post-Event (2)	Reversal (2) - (1)
		[-5,-1]	[1,5]		[-5,-1]	[1,5]		
CEOs	3,568	-2.5 ***	0.2	2.7 ***	6,151	2.2 ***	-0.1	-2.2 ***
Directors	67,028	-1.2 ***	0.7 ***	1.9 ***	115,446	1.9 ***	0.2 ***	-1.8 ***
Officers	28,604	-2.0 ***	1.1 ***	3.0 ***	140,088	2.1 ***	0.1 **	-2.0 ***
All Management Insiders	99,200	-1.5 ***	0.8 ***	2.2 ***	261,685	2.0 ***	0.1 ***	-1.9 ***
		[-10,-1]	[1,10]		[-10,-1]	[1,10]		
CEOs	3,565	-3.9 ***	0.1	4.0 ***	6,138	3.6 ***	-0.1	-3.7 ***
Directors	66,818	-2.2 ***	1.1 ***	3.2 ***	115,153	3.1 ***	0.3 ***	-2.9 ***
Officers	28,538	-3.1 ***	1.7 ***	4.8 ***	139,830	3.3 ***	0.1 **	-3.2 ***
All Management Insiders	98,921	-2.5 ***	1.2 ***	3.7 ***	261,121	3.2 ***	0.2 ***	-3.0 ***
		[-15,-1]	[1,15]		[-15,-1]	[1,15]		
CEOs	3,563	-5.6 ***	0.0	5.6 ***	6,132	5.2 ***	-0.1	-5.3 ***
Directors	66,637	-2.9 ***	1.5 ***	4.3 ***	114,811	4.2 ***	0.2 ***	-3.9 ***
Officers	28,469	-4.1 ***	2.2 ***	6.3 ***	139,579	4.4 ***	0.1 *	-4.3 ***
All Management Insiders	98,669	-3.3 ***	1.6 ***	5.0 ***	260,522	4.3 ***	0.2 **	-4.2 ***

Figure 2a
Cumulative Abnormal Returns Around Insider Sales

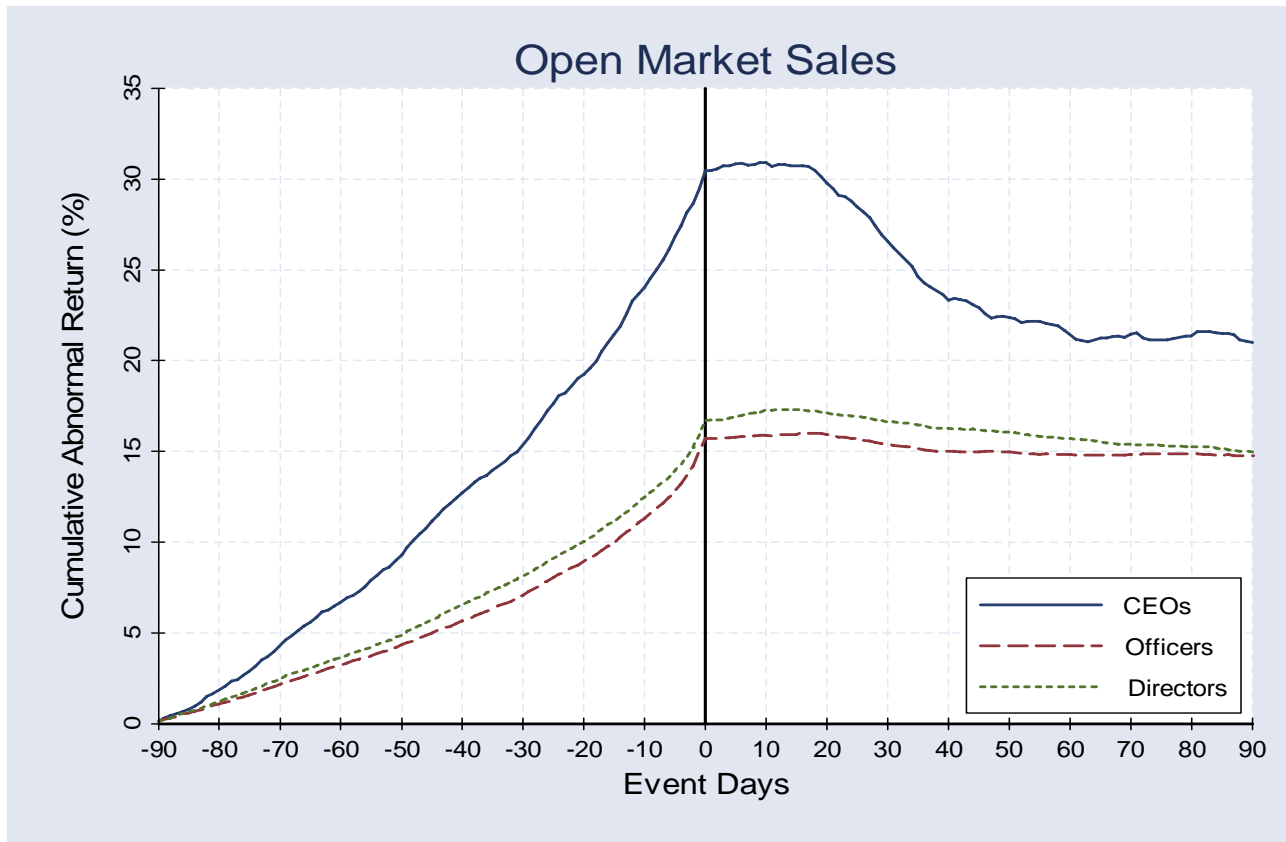


Figure 2b
Cumulative Abnormal Returns Around Insider Purchases

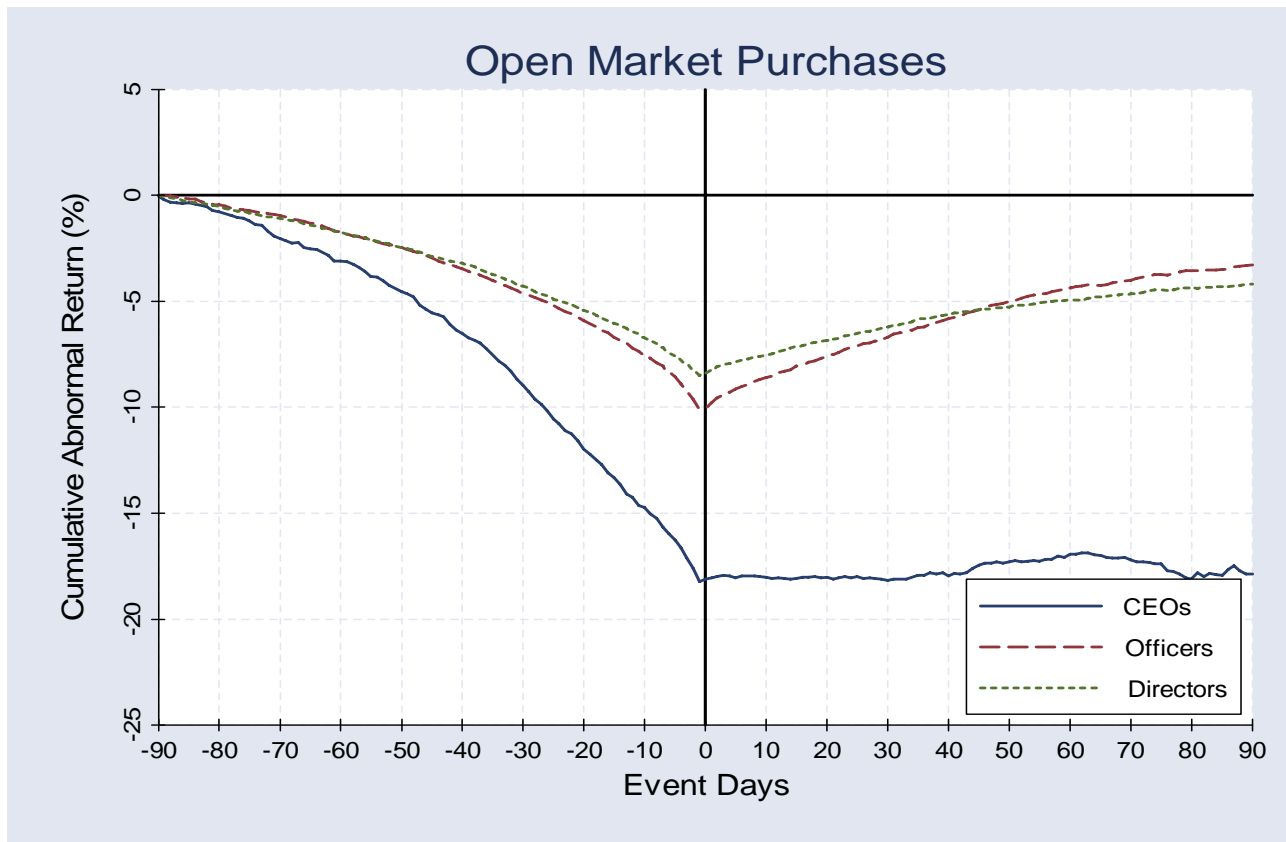


Table 5
Abnormal Returns on Insider Transactions by Trade Size

This table describes the cumulative abnormal returns for a 5 day event window around the insider transaction date (day 0) for different trade sizes. The abnormal returns are calculated by subtracting the return on the CRSP value weighted index from firm returns during the event window. For each transaction day for each insider, the net value of trades by the insider is calculated and the transaction day is labeled as a buy day or a sell day. Taking the transaction day as the event day (day 0), the abnormal returns are calculated for both buy days and sell days. Average abnormal returns are calculated for each trade size group by averaging the abnormal returns following the buy and sell days of insiders in that group. Standard errors are corrected for serial correlation by using calendar date clustering. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively.

Trade Size	PURCHASES				SALES			
	N	Cumulative Abnormal Returns (%)			N	Cumulative Abnormal Returns (%)		
		Pre-Event (1)	Post-Event (2)	Reversal (2) - (1)		Pre-Event (1)	Post-Event (2)	Reversal (2) - (1)
		[-5,-1]	[1,5]		[-5,-1]	[1,5]		
<u>Absolute Measure: Number of shares</u>								
Small Trades (<10,000 shares)	90,182	-1.4***	0.7***	2.1 ***	191,931	1.8***	-0.0	-1.8 ***
Big Trades (>=10,000 shares)	9,018	-1.7***	1.5***	3.2 ***	69,754	2.6***	0.4***	-2.2 ***
<u>Relative Measure: Percentage of holdings</u>								
Small Trades (0-10%)	55,478	-1.2***	0.7***	1.9 ***	127,376	1.7***	0.0	-1.7 ***
Medium trades (10-30%)	19,560	-1.6***	0.8***	2.4 ***	56,511	2.0***	0.2***	-1.8 ***
Big Trades (>30%)	24,162	-1.9***	0.9***	2.8 ***	77,798	2.6***	0.2***	-2.4 ***

Figure 3a

Cumulative Abnormal Returns Around Insider Sales by Absolute Size

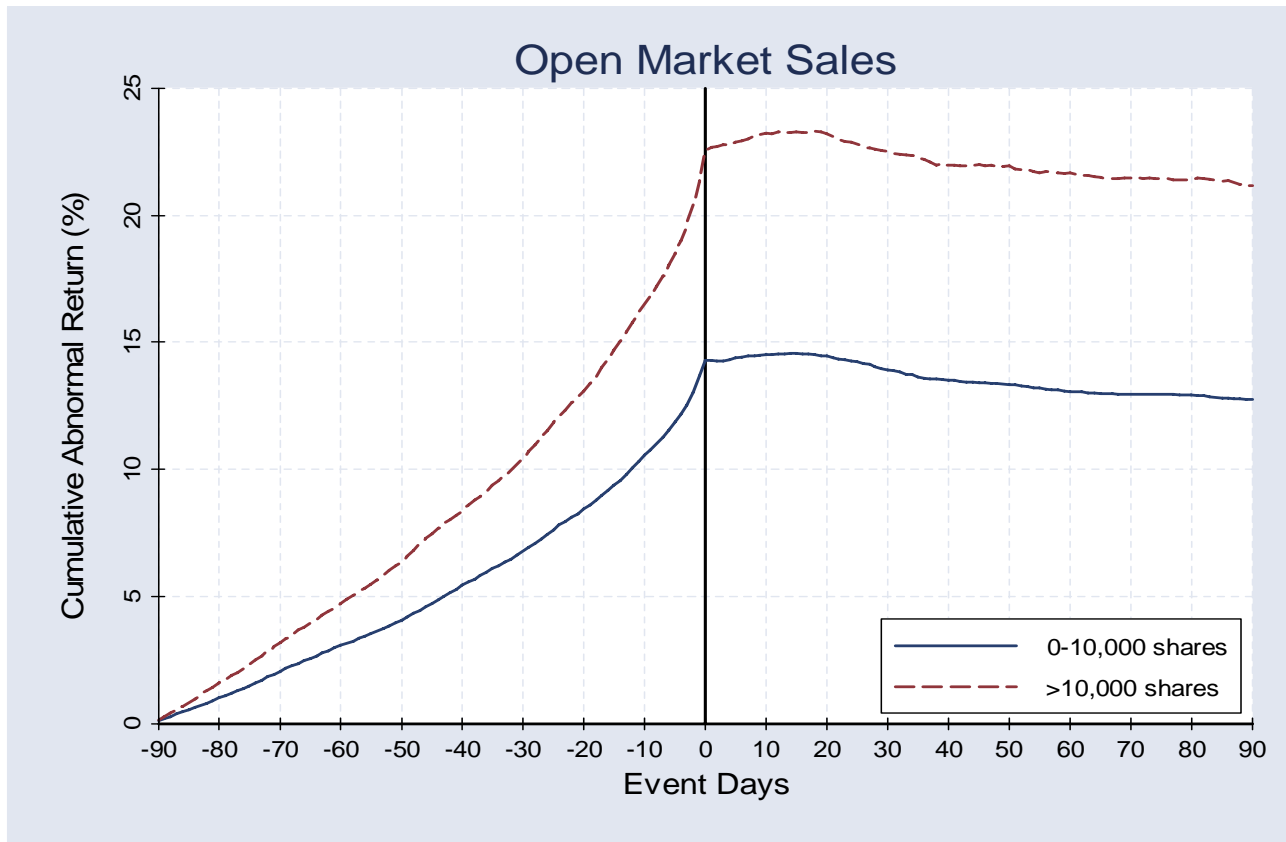


Figure 3b

Cumulative Abnormal Returns Around Insider Purchases by Absolute Size

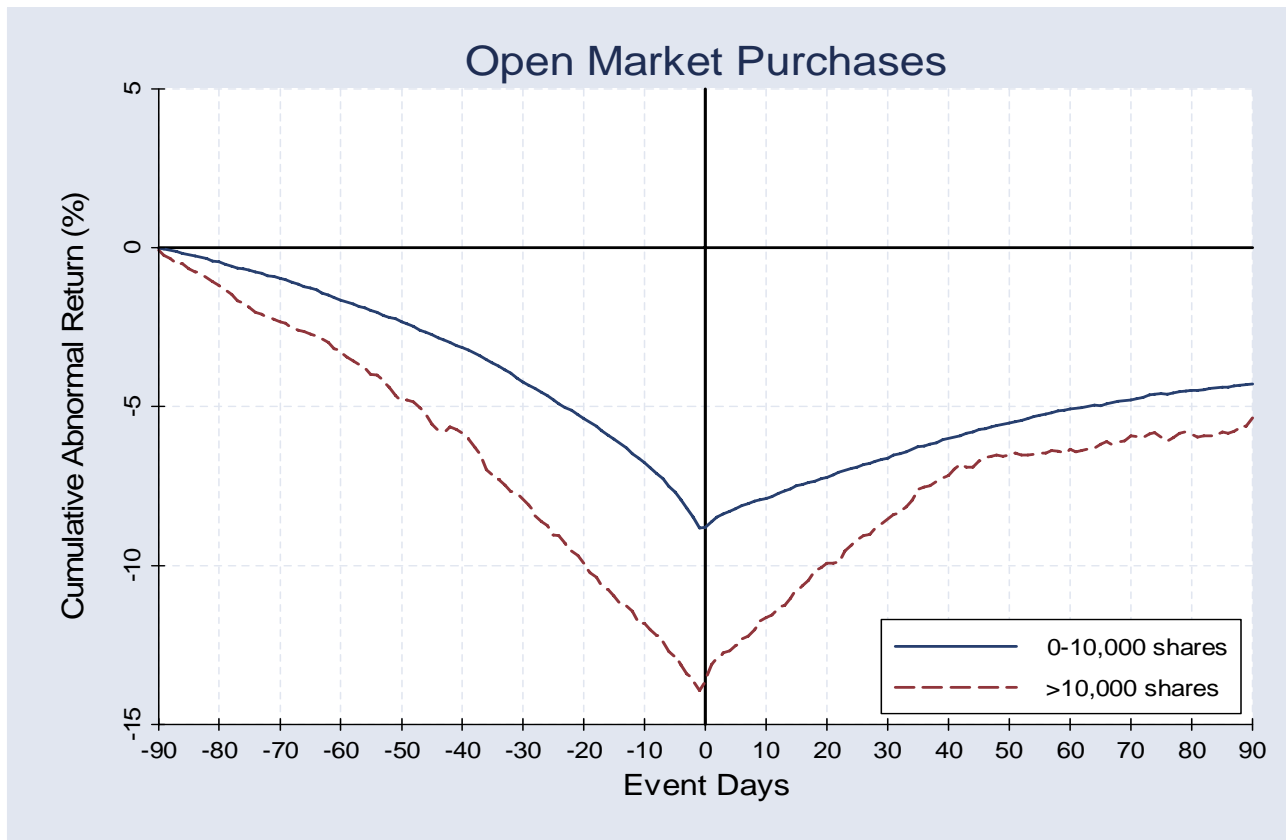


Figure 4a

Cumulative Abnormal Returns Around Insider Sales by Relative Size

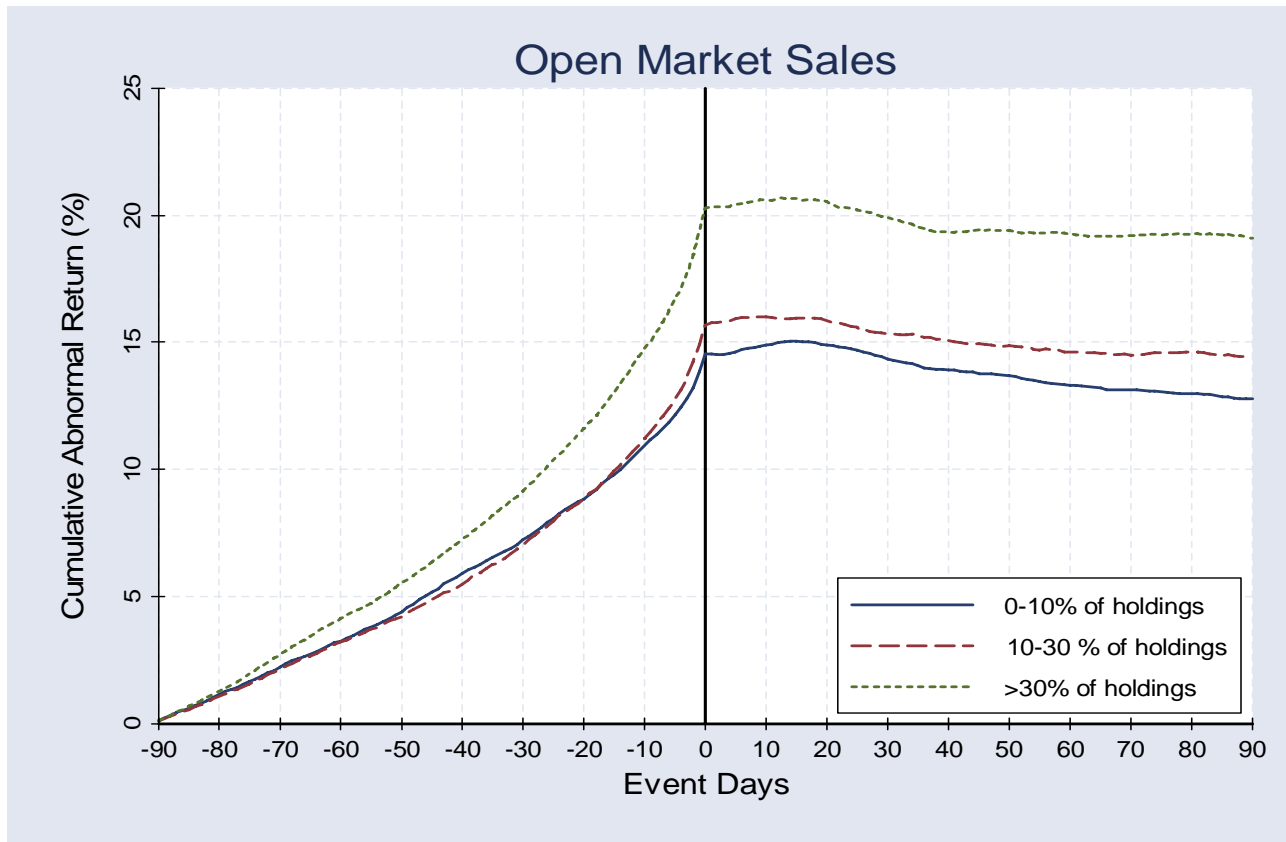


Figure 4b

Cumulative Abnormal Returns Around Insider Purchases by Relative Size

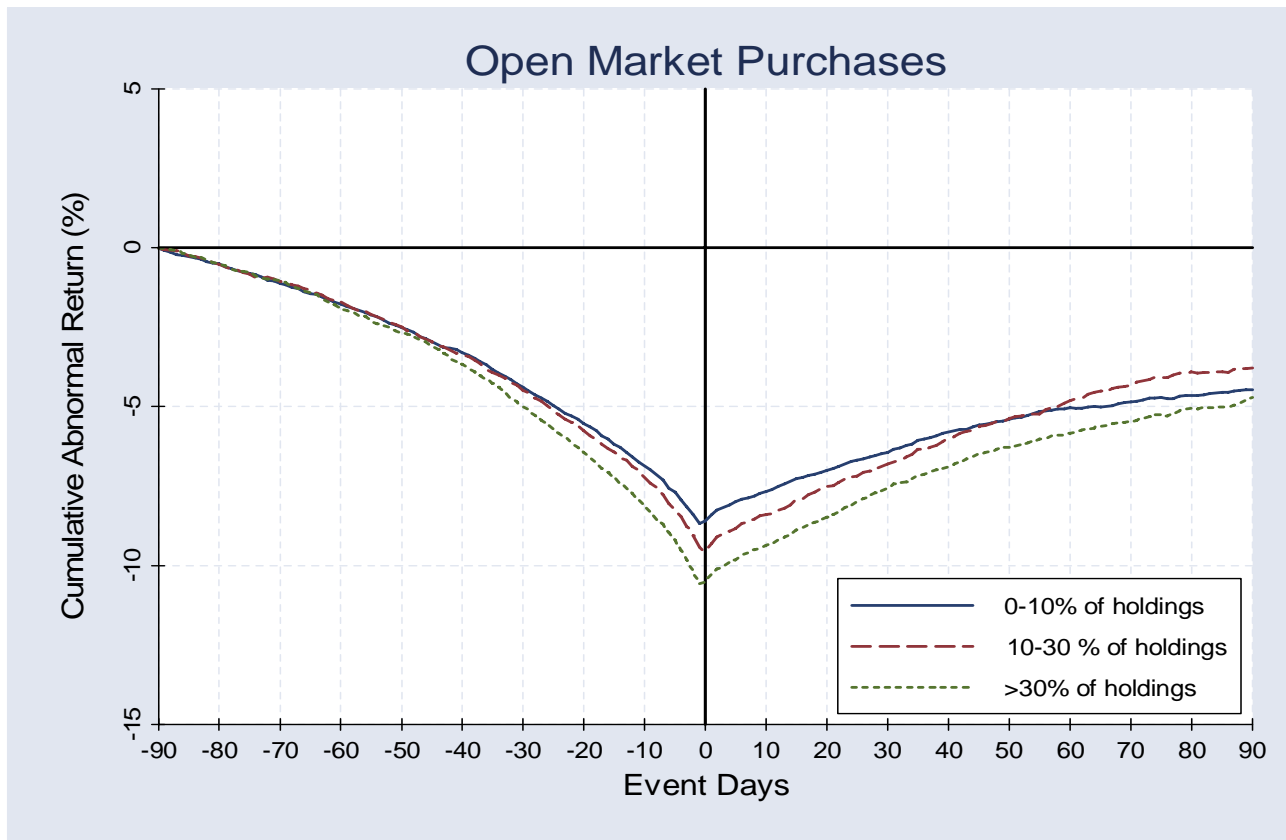


Table 6
Abnormal Trading Activity Prior to "Good" and "Bad" Returns - All Managers

The purpose of this table is to see whether managers trade abnormally prior to extremely good and bad firm-specific events. A good event is proxied by a firm obtaining a market adjusted return of 30% or more in a single trading day. A bad event is proxied by a firm obtaining a market adjusted return of -30% or less in a single trading day. In models (1) and (2) the dependent variables are the quarterly dollar value of individual net stock purchases and the quarterly individual net stock purchases as a percentage of prior common stock holdings respectively. Net purchase is defined as the dollar value of purchases minus sales. The dependent variables in models (2) and (4) are constructed by averaging the dependent variables in models (1) and (3) across all managers in a given firm. Independent variables include book-to-market decile dummies, dummy variables showing whether there is an incidence of a "good" or a "bad" return in the following four quarters. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-4),q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarters. $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager (columns one and three) or firm level (columns two and four) second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1)	(2)	(3)	(4)
	Dollar Value of Individual Net Purchases of Company Stock	Dollar Value of Net Purchases of Company Stock Averaged by Firm-Quarters	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firm-Quarters
Independent Variables:				
Intercept	73 (8.71)***	50 (5.06)***	3.8 (6.73)***	3.1 (4.31)***
B/M-Decile				
1 (Growth)	-96 (38.88)***	-71 (22.31)***	-4.6 (25.08)***	-4.0 (16.43)***
2	-65 (41.96)***	-54 (23.71)***	-4.0 (27.91)***	-3.8 (17.49)***
3	-40 (34.64)***	-36 (19.83)***	-2.5 (20.72)***	-2.7 (15.23)***
4	-24 (25.34)***	-23 (15.53)***	-1.6 (15.01)***	-1.9 (12.07)***
5	-18 (21.51)***	-15 (11.26)***	-1.5 (13.83)***	-1.6 (10.39)***
6	-10 (13.33)***	-8 (6.63)***	-1.0 (9.72)***	-1.1 (7.76)***
7	-8 (12.05)***	-4 (3.88)***	-0.7 (7.46)***	-0.7 (5.18)***
8	-5 (7.88)***	-1 (1.22)	-0.6 (6.09)***	-0.5 (3.41)***
9	-3 (5.96)***	0 (0.38)	-0.4 (4.78)***	-0.3 (2.23)**
10 (Value)				
Dummy Variable = 1 if:				
BAD Return in Quarter t+1	-49 (9.49)***	-40 (5.91)***	-3.6 (7.46)***	-2.6 (4.67)***
BAD Return in Quarter t+2	-49 (9.55)***	-41 (6.36)***	-3.8 (7.75)***	-2.8 (5.05)***
BAD Return in Quarter t+3	-33 (6.83)***	-25 (4.49)***	-2.1 (4.70)***	-1.7 (3.07)***
BAD Return in Quarter t+4	-41 (8.24)***	-31 (5.00)***	-1.9 (4.47)***	-1.7 (3.37)***
GOOD Return in Quarter t+1	5 (2.32)**	4 (1.56)	0.2 (0.91)	0.2 (0.56)
GOOD Return in Quarter t+2	5 (2.31)**	1 (0.43)	0.1 (0.44)	0.0 (0.05)
GOOD Return in Quarter t+3	2 (0.78)	-5 (1.41)	-0.2 (0.83)	-0.4 (1.05)
GOOD Return in Quarter t+4	-5 (1.97)**	-6 (1.59)	-0.6 (2.20)**	-0.5 (1.32)
Dollar Value of equity stake	0.0000 (2.05)**	-0.0001 (2.56)**	-	-
Dollar Value of shares purchased through option exercises during the last 12 months	-0.0047 (2.79)***	-0.0148 (4.32)***	-0.0001 (2.39)**	-0.0008 (4.13)***
Dollar Value of "Other" share purchases during the last 12 months	-0.0001 (1.41)	-0.0002 (1.12)	0.0000 (5.88)***	0.0000 (1.34)
Dollar Value of "Gift" share purchases during the last 12 months	-0.0008 (0.89)	-0.0007 (0.33)	0.0000 (1.19)	0.0000 (0.29)
$RET_{q(t-2),q(t)}$	-64 (50.58)***	-46 (24.68)***	-5.1 (45.04)***	-3.7 (22.95)***
$RET_{q(t-4),q(t-2)}$	-40 (34.34)***	-26 (16.18)***	-2.9 (30.97)***	-2.0 (15.30)***
$VOL_{q(t-4),q(t-2)}$	-2 (2.66)***	4 (4.53)***	0.2 (2.67)***	0.4 (4.49)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	12 (11.40)***	5 (4.60)***	0.4 (4.53)***	0.2 (1.54)
Log of Total Assets	-8 (27.29)***	-7 (15.94)***	-0.5 (23.17)***	-0.5 (15.36)***
Industry Dummies	Yes	Yes	Yes	Yes
Year-Quarter Dummies	Yes	Yes	Yes	Yes
R ²	0.064	0.146	0.031	0.075
Number of Observations	1,518,164	233,996	1,421,173	231,502
Test of Differences in Coefficients:	p-value	p-value	p-value	p-value
BAD Return in Quarter t+1 = GOOD Return in Quarter t+1	<0.0001	<0.0001	<0.0001	<0.0001
BAD Return in Quarter t+2 = GOOD Return in Quarter t+2	<0.0001	<0.0001	<0.0001	<0.0001
BAD Return in Quarter t+3 = GOOD Return in Quarter t+3	<0.0001	0.0501	0.0004	0.0040
BAD Return in Quarter t+4 = GOOD Return in Quarter t+4	<0.0001	0.0631	0.0128	0.0012

Table 7
Abnormal Trading Activity Prior to "Good" and "Bad" Returns - Top Managers - 1991 - 2000

The purpose of this table is to see whether top managers trade abnormally prior to extremely good and bad firm-specific events. A good event is proxied by a firm obtaining a market adjusted return of 30% or more in a single trading day. A bad event is proxied by a firm obtaining a market adjusted return of -30% or less in a single trading day. In models (1) and (2) the dependent variables are the quarterly dollar value of individual net stock purchases and the quarterly individual net stock purchases as a percentage of prior common stock holdings respectively. Net purchase is defined as the dollar value of purchases minus sales. The dependent variables in models (2) and (4) are constructed by averaging the dependent variables in models (1) and (3) across all top-managers in a given firm. Independent variables include book-to-market decile dummies, dummy variables showing whether there is an incidence of a "good" or a "bad" return in the following four quarters. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarters. $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager (columns one and three) or firm level (columns two and four) second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1)	(2)	(3)	(4)
	Dollar Value of Individual Net Purchases of Company Stock	Dollar Value of Net Purchases of Company Stock Averaged by Firm-Quarters	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firm-Quarters
Independent Variables:				
Intercept	518 (4.93)***	171 (4.85)***	50.0 (1.89)*	7.5 (2.51)**
B/M-Decile				
1 (Growth)	-303 (6.99)***	-141 (9.03)***	-39.9 (4.03)***	-7.7 (5.49)***
2	-203 (5.72)***	-93 (7.77)***	-48.7 (5.28)***	-6.1 (5.20)***
3	-184 (6.07)***	-79 (6.86)***	-38.7 (4.38)***	-5.2 (4.59)***
4	-77 (3.07)***	-41 (4.37)***	-16.9 (2.61)***	-2.9 (2.86)***
5	-122 (4.29)***	-50 (4.83)***	-26.9 (4.04)***	-3.8 (3.53)***
6	-110 (4.08)***	-45 (4.52)***	-30.4 (4.10)***	-3.7 (3.50)***
7	-94 (3.54)***	-37 (4.12)***	-18.3 (3.45)***	-3.2 (3.16)***
8	-61 (2.79)***	-30 (3.16)***	-26.3 (3.38)***	-2.7 (2.44)**
9	-60 (2.78)***	-26 (3.11)***	-14.0 (2.35)**	-2.5 (2.55)**
10 (Value)				
Dummy Variable = 1 if :				
BAD Return in Quarter t+1	-101 (0.70)	-65 (1.38)	-24.2 (0.79)	-5.5 (1.53)
BAD Return in Quarter t+2	-91 (0.71)	-66 (1.74)*	-97.0 (1.71)*	-4.5 (1.18)
BAD Return in Quarter t+3	-239 (1.32)	-76 (1.72)*	-58.2 (1.30)	-6.5 (1.56)
BAD Return in Quarter t+4	49 (0.43)	-64 (1.26)	20.2 (0.68)	-1.1 (0.32)
GOOD Return in Quarter t+1	53 (1.61)	0 (0.02)	-1.7 (0.09)	-0.9 (0.44)
GOOD Return in Quarter t+2	97 (2.71)***	20 (1.08)	-0.4 (0.02)	1.8 (0.94)
GOOD Return in Quarter t+3	123 (2.77)***	23 (0.95)	14.6 (0.76)	3.0 (1.68)*
GOOD Return in Quarter t+4	68 (1.38)	-18 (0.54)	-29.8 (0.79)	0.4 (0.18)
Dollar Value of equity stake	-0.001 (2.67)***	0.000 (5.20)***	-	-
Intrinsic value of exercisable options	-0.002 (0.57)	-0.001 (0.76)	-0.001 (0.79)	0.000 (0.17)
Intrinsic value of unexercisable options	-0.011 (2.25)**	-0.002 (2.47)**	0.001 (1.43)	0.000 (0.82)
Dollar Value of stock grants	-0.012 (0.37)	0.001 (0.11)	0.013 (3.12)***	0.001 (2.17)**
Dollar Value of Total compensation	-0.081 (2.46)**	-0.007 (1.19)	0.007 (1.84)*	-0.001 (0.69)
Black-Scholes value of option grants	-0.003 (0.25)	0.001 (0.29)	-0.002 (0.87)	0.000 (0.81)
$RET_{q(t-2),q(t)}$	-271 (9.07)***	-110 (11.54)***	-42.8 (5.45)***	-9.0 (10.12)***
$RET_{q(t-4),q(t-2)}$	-195 (5.02)***	-81 (7.75)***	-23.8 (2.53)**	-4.9 (5.84)***
$VOL_{q(t-4),q(t-2)}$	-346 (5.02)***	-127 (4.89)***	-52.0 (3.47)***	-9.0 (4.20)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	226 (3.05)***	60 (2.78)***	21.2 (1.40)	3.0 (1.60)
Log of Total Assets	-36 (4.37)***	-9 (3.44)***	-3.7 (2.15)**	-0.4 (1.98)**
Industry Dummies	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Year-Quarter Dummies	Yes Yes	Yes Yes	Yes Yes	Yes Yes
R ²	0.148	27.4%	0.041	0.161
Number of Observations	13028	10301	11994	10287
Test of Differences in Coefficients:	p-value	p-value	p-value	p-value
BAD Return in Quarter t+1 = GOOD Return in Quarter t+1	0.300	0.2107	0.5265	0.2376
BAD Return in Quarter t+2 = GOOD Return in Quarter t+2	0.1569	0.0443	0.1134	0.1387
BAD Return in Quarter t+3 = GOOD Return in Quarter t+3	0.0535	0.0563	0.1499	0.0441
BAD Return in Quarter t+4 = GOOD Return in Quarter t+4	0.8884	0.4762	0.3355	0.7284

Table 8
Abnormal Trading Activity Prior to "Good" and "Bad" Mergers - All Managers

The purpose of this table is to see whether acquirer and target firm managers trade abnormally prior to good and bad mergers. A good merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is higher than 10%. A bad merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is less than -10%. This procedure yields 154 bad mergers and 80 good mergers for acquirer managers, and 57 bad mergers and 1,261 good mergers for the target managers. In models (1) and (2) the dependent variables are the quarterly dollar value of individual net stock purchases and the quarterly individual net stock purchases as a percentage of prior common stock holdings respectively. Net purchase is defined as the dollar value of purchases minus sales. The dependent variables in models (2) and (4) are constructed by averaging the dependent variables in models (1) and (3) across all the managers in a given firm. Independent variables include book-to-market decile dummies, dummy variables showing whether the firm is a good acquirer, bad acquirer, good target or a bad target in the four quarters following the merger. p-values for F-tests for the equality of the coefficients of these dummy variables are presented at the bottom of the table. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-2),q(t)}$ denotes the annualized stock return volatility during the two quarters before the last two quarter. $VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager (columns one and three) or firm level (columns two and four) second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1) Dollar Value of Individual Net Purchases of Company Stock	(2) Dollar Value of Net Purchases of Company Stock Averaged by Firm-Quarters	(3) Individual Net Purchases of Company Stock as Percentage of Prior Exposure	(4) Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firm-Quarters
Independent Variables:				
Intercept	70 (8.44)***	47 (4.81)***	4 (6.55)***	3 (4.08)***
B/M-Decile				
1 (Growth)	-96 (39.23)***	-70 (22.48)***	-4.6 (25.37)***	-4.0 (16.63)***
2	-65 (42.13)***	-54 (23.76)***	-4.0 (28.04)***	-3.8 (17.52)***
3	-40 (34.55)***	-35 (19.69)***	-2.5 (20.74)***	-2.7 (15.12)***
4	-23 (24.92)***	-22 (15.22)***	-1.6 (14.88)***	-1.9 (11.88)***
5	-18 (21.02)***	-14 (10.90)***	-1.5 (13.68)***	-1.5 (10.19)***
6	-9 (12.70)***	-7 (6.18)***	-0.9 (9.52)***	-1.1 (7.52)***
7	-8 (11.42)***	-4 (3.44)***	-0.7 (7.26)***	-0.7 (4.96)***
8	-5 (7.51)***	-1 (0.83)	-0.6 (5.96)***	-0.4 (3.23)***
9	-3 (5.71)***	0 (0.06)	-0.4 (4.68)***	-0.3 (2.08)**
10 (Value)				
Dummy Variable = 1 if :				
BAD Acquirer in Quarter t+1	-63 (4.66)***	-82 (3.10)***	-1.6 (1.61)	-4.3 (2.24)**
BAD Acquirer in Quarter t+2	-69 (5.16)***	-97 (3.67)***	-3.7 (3.26)***	-6.2 (2.97)***
BAD Acquirer in Quarter t+3	-76 (5.48)***	-85 (3.55)***	-3.9 (3.50)***	-4.5 (2.42)**
BAD Acquirer in Quarter t+4	-55 (4.47)***	-65 (2.65)***	-3.5 (3.21)***	-4.9 (2.25)**
GOOD Acquirer in Quarter t+1	-28 (1.72)*	-29 (0.86)	-1.9 (1.35)	-2.6 (0.91)
GOOD Acquirer in Quarter t+2	1 (0.05)	2 (0.07)	-0.5 (0.37)	0.4 (0.17)
GOOD Acquirer in Quarter t+3	-45 (2.59)***	-52 (1.47)	-2.7 (1.97)**	-2.7 (1.05)
GOOD Acquirer in Quarter t+4	-55 (3.17)***	-63 (1.66)*	-2.9 (2.00)**	-2.7 (0.93)
BAD Target in Quarter t+1	-4 (0.23)	7 (0.48)	0.8 (0.47)	2.3 (1.22)
BAD Target in Quarter t+2	-156 (4.20)***	-118 (2.13)**	-4.5 (1.87)*	-6.5 (1.56)
BAD Target in Quarter t+3	-19 (1.26)	-16 (0.81)	-1.4 (0.78)	-0.1 (0.04)
BAD Target in Quarter t+4	-69 (2.85)***	-69 (1.67)*	-6.4 (2.53)**	-10.5 (1.98)**
GOOD Target in Quarter t+1	-4 (1.21)	-9 (1.56)	-0.1 (0.41)	-0.4 (0.83)
GOOD Target in Quarter t+2	-2 (0.77)	-7 (1.24)	-0.9 (2.70)***	-0.8 (1.55)
GOOD Target in Quarter t+3	-3 (0.96)	-8 (1.58)	-0.7 (2.19)**	-0.5 (1.10)
GOOD Target in Quarter t+4	-4 (1.33)	-3 (0.66)	-1.6 (4.59)***	-1.2 (2.37)**
Dollar Value of equity stake	0.0001 (2.04)**	-0.0001 (2.55)**	-	-
Dollar Value of shares purchased through option exercises during the last 12 months	-0.0047 (2.79)***	-0.0146 (4.27)***	-0.0001 (2.39)**	-0.00076 (4.09)***
Dollar Value of "Other" share purchases during the last 12 months	-0.0001 (1.32)	-0.0002 (1.06)	0.00001 (6.37)***	0.00001 (1.35)
Dollar Value of "Gift" share purchases during the last 12 months	-0.0008 (0.89)	-0.0007 (0.34)	0.00003 (1.19)	0.00003 (0.28)
$RET_{q(t-2),q(t)}$	-64 (50.67)***	-45 (24.70)***	-5.1 (45.07)***	-3.6 (22.96)***
$RET_{q(t-4),q(t-2)}$	-40 (34.42)***	-26 (16.21)***	-2.9 (30.99)***	-2.0 (15.30)***
$VOL_{q(t-4),q(t-2)}$	-2 (2.51)**	4 (4.88)***	0.2 (2.66)***	0.4 (4.68)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	11 (11.32)***	5 (4.45)***	0.4 (4.49)***	0.2 (1.42)
Log of Total Assets	-7 (26.69)***	-7 (15.57)***	-0.4 (22.57)***	-0.5 (14.95)***
Industry Dummies	Yes	Yes	Yes	Yes
Year-Quarter Dummies	Yes	Yes	Yes	Yes
R ²	0.064	0.146	0.031	0.075
Number of Observations	1,518,164	233,996	1,421,173	231,502
F-Test for Differences in Coefficients:	p-value	p-value	p-value	p-value
BAD Acquirer in Quarter t+1 = GOOD Acquirer in Quarter t+1	0.091	0.178	0.884	0.625
BAD Acquirer in Quarter t+2 = GOOD Acquirer in Quarter t+2	0.000	0.006	0.061	0.036
BAD Acquirer in Quarter t+3 = GOOD Acquirer in Quarter t+3	0.170	0.439	0.504	0.580
BAD Acquirer in Quarter t+4 = GOOD Acquirer in Quarter t+4	0.999	0.971	0.748	0.560
BAD Target in Quarter t+1 = GOOD Target in Quarter t+1	0.990	0.298	0.592	0.166
BAD Target in Quarter t+2 = GOOD Target in Quarter t+2	0.000	0.047	0.138	0.172
BAD Target in Quarter t+3 = GOOD Target in Quarter t+3	0.299	0.698	0.709	0.788
BAD Target in Quarter t+4 = GOOD Target in Quarter t+4	0.008	0.110	0.061	0.082

Table 9
Abnormal Trading Activity Prior to "Good" and "Bad" Mergers - All Managers - Comparison with the Literature

The purpose of this table is to see whether acquirer and target firm managers trade abnormally prior to good and bad mergers and to compare our results with the literature. Sample is limited to 1983-1986 to overlap with Seyhun (1990b)'s sample in columns (1) and (2). Sample is limited to 1983-1987 to overlap with Boehmer and Netter (1997)'s sample in columns (3) and (4). A good merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is higher than 10%. A bad merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is less than -10%. In models (1) and (3) the dependent variables are the quarterly dollar value of individual net stock purchases. In models (2) and (4) the dependent variables are the quarterly individual net stock purchases as a percentage of prior common stock holdings. Net purchase is defined as the dollar value of purchases minus sales. Independent variables include book-to-market decile dummies, dummy variables showing whether the firm is a good acquirer, bad acquirer, good target or a bad target in the four quarters following the merger. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-4),q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarters. $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager level second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1)	(2)	(3)	(4)
	Seyhun's Sample 1983-1986	Seyhun's Sample 1983-1986	Boehmer and Netter's sample 1983-1987	Boehmer and Netter's sample 1983-1987
	Dollar Value of Individual Net Purchases of Company Stock	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Dollar Value of Individual Net Purchases of Company Stock	Individual Net Purchases of Company Stock as Percentage of Prior Exposure
Independent Variables:				
Intercept	34 (3.85)***	3.2 (4.93)***	26 (3.11)***	2.4 (3.99)***
B/M-Decile				
1 (Growth)	-84 (14.07)***	-2.9 (10.11)***	-79 (14.74)***	-2.5 (10.40)***
2	-50 (13.76)***	-2.1 (8.41)***	-49 (16.57)***	-1.8 (8.48)***
3	-33 (10.82)***	-1.5 (6.45)***	-31 (13.39)***	-1.3 (6.22)***
4	-24 (8.96)***	-1.6 (7.04)***	-22 (11.57)***	-1.1 (5.23)***
5	-19 (7.94)***	-1.1 (4.93)***	-18 (9.87)***	-0.7 (3.55)***
6	-10 (4.52)***	-0.8 (3.51)***	-12 (7.00)***	-0.6 (2.72)***
7	-6 (2.88)***	-0.6 (2.86)***	-7 (4.76)***	-0.5 (2.29)**
8	-3 (1.67)*	-0.5 (2.47)**	-3 (2.60)***	-0.3 (1.57)
9	1 (0.70)	-0.9 (4.08)***	-1 (0.51)	-0.5 (2.82)***
10 (Value)				
Dummy Variable = 1 if :				
BAD Acquirer in Quarter t+1	19 (1.79)*	1.6 (1.53)	-17 (0.89)	0.0 (0.04)
BAD Acquirer in Quarter t+2	-72 (1.18)	-1.3 (0.37)	-79 (1.73)*	-3.6 (1.37)
BAD Acquirer in Quarter t+3	-50 (1.22)	-0.4 (0.31)	-84 (1.74)*	-0.7 (0.57)
BAD Acquirer in Quarter t+4	-56 (1.60)	-4.6 (1.48)	-55 (1.59)	-4.6 (1.46)
GOOD Acquirer in Quarter t+1	1 (0.17)	0.1 (0.08)	5 (0.24)	0.7 (0.28)
GOOD Acquirer in Quarter t+2	-2 (0.06)	-0.3 (0.09)	8 (0.44)	0.4 (0.16)
GOOD Acquirer in Quarter t+3	-21 (0.90)	-3.3 (1.16)	-20 (0.86)	-3.7 (1.30)
GOOD Acquirer in Quarter t+4	-1 (0.04)	0.4 (0.18)	-2 (0.09)	0.2 (0.08)
BAD Target in Quarter t+1	35 (5.54)***	3.8 (7.87)***	26 (5.64)***	3.3 (9.00)***
BAD Target in Quarter t+2	54 (13.22)***	3.0 (14.23)***	46 (14.53)***	3.1 (17.22)***
BAD Target in Quarter t+3	-345 (1.33)	1.2 (1.58)	-353 (1.34)	1.2 (1.59)
BAD Target in Quarter t+4	-12 (0.32)	0.5 (0.36)	-18 (0.53)	0.5 (0.34)
GOOD Target in Quarter t+1	4 (0.30)	-1.4 (1.34)	-11 (1.01)	-1.2 (1.66)*
GOOD Target in Quarter t+2	8 (0.93)	-0.8 (0.66)	11 (2.17)**	-0.1 (0.10)
GOOD Target in Quarter t+3	1 (0.10)	0.3 (0.26)	-4 (0.45)	0.3 (0.46)
GOOD Target in Quarter t+4	-12 (1.07)	-3.2 (2.39)**	-8 (0.89)	-2.0 (2.24)**
Dollar Value of equity stake	-0.0004 (3.35)***		0.0001 (0.87)	
Dollar Value of shares purchased through option exercises during the last 12 months	0.133 (0.99)	0.02120 (1.55)	0.1084 (1.08)	-0.0409 (0.73)
Dollar Value of "Other" share purchases during the last 12 months	0.000 (0.21)	0.00001 (5.75)***	-0.0003 (3.05)***	0.0001 (6.81)***
Dollar Value of "Gift" share purchases during the last 12 months	-0.014 (3.88)***	0.00012 (2.25)**	-0.0145 (4.07)***	0.0001 (1.93)*
$RET_{q(t-2),q(t)}$	-37 (11.17)***	-1.1 (6.21)***	-34 (14.61)***	-1.2 (9.25)***
$RET_{q(t-4),q(t-2)}$	-24 (6.54)***	-0.2 (1.29)	-18 (7.17)***	-0.1 (1.18)
$VOL_{q(t-4),q(t-2)}$	3 (1.06)	-0.2 (0.89)	4 (2.37)**	-0.2 (1.41)
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	-1 (0.35)	0.0 (0.18)	-1 (0.75)	-0.1 (0.76)
Log of Total Assets	-4 (9.01)***	-0.5 (17.10)***	-4 (9.78)***	-0.5 (19.15)***
Industry Dummies	Yes	Yes	Yes	Yes
Year-Quarter Dummies	Yes	Yes	Yes	Yes
R ²	0.033	0.013	0.026	0.016
Number of Observations	122,413	118,054	194,202	186,868

Table 10
Abnormal Option Exercises Prior to "Good" and "Bad" Mergers - All Managers

The purpose of this table is to see whether insiders abnormally change their purchases through stock option exercises prior to good and bad mergers. A good merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is higher than 10%. A bad merger for an acquirer (target) manager is one in which the acquirer's (target's) 4-day announcement cumulative abnormal return is less than -10%. In model (1) the dependent variable is the quarterly dollar value of individual net stock purchases. In model (2) the dependent variable is the dollar value of individual purchases of company stock through option exercises. Independent variables include book-to-market decile dummies, dummy variables showing whether the firm is a good acquirer, bad acquirer, good target or a bad target in the four quarters following the merger and in the four quarters preceding the merger. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-4),q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarter. $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager level second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1) Dollar Value of Individual Net Purchases of Company Stock	(2) Dollar Value of Individual Purchases of Company Stock Through Option Exercises
Independent Variables:		
Intercept	70 (8.45)***	-240 (6.38)***
B/M-Decile		
1 (Growth)	-96 (39.36)***	141 (6.28)***
2	-65 (42.18)***	57 (6.04)***
3	-39 (34.47)***	32 (5.36)***
4	-23 (24.85)***	24 (2.51)**
5	-18 (20.99)***	17 (4.37)***
6	-9 (12.55)***	3 (1.42)
7	-8 (11.41)***	8 (4.12)***
8	-5 (7.40)***	7 (3.35)***
9	-3 (5.50)***	6 (3.55)***
10 (Value)		
Dummy Variable = 1 if :		
BAD Acquirer in Quarter t-1	3 (0.24)	-212 (2.67)***
BAD Acquirer in Quarter t-2	-32 (2.55)**	159 (1.35)
BAD Acquirer in Quarter t-3	-60 (4.05)***	174 (1.34)
BAD Acquirer in Quarter t-4	-40 (3.04)***	-61 (1.01)
BAD Acquirer in Quarter t+1	-62 (4.65)***	262 (2.12)**
BAD Acquirer in Quarter t+2	-69 (5.16)***	638 (2.91)***
BAD Acquirer in Quarter t+3	-76 (5.51)***	137 (1.88)*
BAD Acquirer in Quarter t+4	-56 (4.48)***	277 (2.12)**
GOOD Acquirer in Quarter t-1	-11 (0.62)	630 (1.85)*
GOOD Acquirer in Quarter t-2	-45 (2.27)**	-170 (0.77)
GOOD Acquirer in Quarter t-3	-59 (3.15)***	717 (1.92)*
GOOD Acquirer in Quarter t-4	-15 (0.91)	997 (1.63)
GOOD Acquirer in Quarter t+1	-27 (1.69)*	460 (1.26)
GOOD Acquirer in Quarter t+2	0 (0.02)	300 (1.14)
GOOD Acquirer in Quarter t+3	-45 (2.60)***	247 (1.12)
GOOD Acquirer in Quarter t+4	-55 (3.12)***	303 (1.91)*
Dollar Value of equity stake	0 (2.05)**	0 (0.84)
Dollar Value of shares purchased through option exercises during the last 12 months	0 (2.78)***	0 (3.71)***
Dollar Value of "Other" share purchases during the last 12 months	0 (1.33)	0 (1.02)
Dollar Value of "Gift" share purchases during the last 12 months	0 (0.89)	0 (0.83)
$RET_{q(t-2),q(t)}$	-64 (50.48)***	93 (17.95)***
$RET_{q(t-4),q(t-2)}$	-40 (34.52)***	64 (6.67)***
$VOL_{q(t-4),q(t-2)}$	-2 (2.48)**	39 (6.14)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	12 (11.34)***	-45 (6.87)***
Log of Total Assets	-7 (27.03)***	25 (6.29)***
Industry Dummies	Yes	Yes
Year-Quarter Dummies	Yes	Yes
R ²	0.06	0.08
Number of Observations	1,518,164	1,518,164

Table 11
Abnormal Trading Activity Prior to Stock and Cash Merger Announcements - All Managers

The purpose of this table is to see whether acquirer and target firm managers trade abnormally prior to stock and cash mergers. To achieve this goal, dummy variables are created showing whether the firm will be an acquirer or a target in a stock, cash or a mixed acquisition during the next four quarters. The dummies for mixed acquisitions are included in all models but are not reported below for brevity. In models (1) and (3) the dependent variables are the quarterly dollar value of individual net stock purchases and the quarterly individual net stock purchases as a percentage of prior common stock holdings respectively. Net purchase is defined as the dollar value of purchases minus sales. The dependent variables in models (2) and (4) are constructed by averaging the dependent variables in models (1) and (3) across all managers in a given firm. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-4),q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarter. $VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager (columns one and three) or firm level (columns two and four) second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1)	(2)	(3)	(4)
	Dollar Value of Individual Net Purchases of Company Stock	Dollar Value of Net Purchases of Company Stock Averaged by Firm-Quarters	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firm-Quarters
Independent Variables:				
Intercept	70 (8.38)***	47 (4.77)***	4.0 (6.48)***	3.0 (4.05)***
B/M-Decile				
1 (Growth)	-96 (39.16)***	-70 (22.42)***	-4.6 (25.26)***	-4.0 (16.57)***
2	-65 (42.06)***	-54 (23.71)***	-4.0 (27.95)***	-3.7 (17.49)***
3	-39 (34.32)***	-35 (19.56)***	-2.5 (20.56)***	-2.6 (15.04)***
4	-23 (24.83)***	-22 (15.17)***	-1.6 (14.79)***	-1.9 (11.85)***
5	-18 (20.87)***	-14 (10.81)***	-1.4 (13.55)***	-1.5 (10.14)***
6	-9 (12.38)***	-7 (5.98)***	-0.9 (9.30)***	-1.0 (7.41)***
7	-8 (11.20)***	-3 (3.28)***	-0.7 (7.12)***	-0.7 (4.89)***
8	-5 (7.52)***	-1 (0.76)	-0.6 (5.93)***	-0.4 (3.20)***
9	-3 (5.87)***	0 (0.12)	-0.4 (4.73)***	-0.3 (2.11)**
10 (Value)				
Dummy Variable = 1 if :				
Acquirer of STOCK acquisition in Quarter t+1	-11 (2.93)***	-15 (1.83)*	0.0 (0.00)	-0.5 (0.82)
Acquirer of STOCK acquisition in Quarter t+2	-24 (6.58)***	-32 (3.75)***	-1.3 (4.13)***	-2.0 (2.84)***
Acquirer of STOCK acquisition in Quarter t+3	-24 (6.56)***	-34 (4.18)***	-1.2 (3.70)***	-2.2 (3.06)***
Acquirer of STOCK acquisition in Quarter t+4	-13 (4.04)***	-25 (2.88)***	-0.8 (3.02)***	-1.9 (2.54)**
...				
Acquirer of CASH acquisition in Quarter t+1	3 (0.74)	-3 (0.32)	0.0 (0.05)	-0.6 (0.81)
Acquirer of CASH acquisition in Quarter t+2	-11 (2.32)**	-19 (1.90)*	-0.5 (1.30)	-1.1 (1.29)
Acquirer of CASH acquisition in Quarter t+3	3 (0.76)	0 (0.04)	0.6 (1.51)	0.1 (0.15)
Acquirer of CASH acquisition in Quarter t+4	2 (0.53)	-1 (0.12)	-0.2 (0.51)	-0.5 (0.61)
...				
Target of STOCK acquisition in Quarter t+1	-19 (4.63)***	-23 (2.95)***	-1.4 (3.64)***	-1.4 (2.18)**
Target of STOCK acquisition in Quarter t+2	-22 (5.36)***	-28 (3.33)***	-1.9 (4.89)***	-2.1 (3.36)***
Target of STOCK acquisition in Quarter t+3	-9 (2.36)**	-15 (2.49)**	-0.7 (1.91)*	-0.9 (1.74)*
Target of STOCK acquisition in Quarter t+4	-12 (3.48)***	-12 (2.06)**	-3.0 (7.05)***	-2.4 (3.55)***
...				
Target of CASH acquisition in Quarter t+1	9 (2.48)**	8 (1.71)*	0.4 (0.76)	0.2 (0.30)
Target of CASH acquisition in Quarter t+2	2 (0.52)	-4 (0.52)	0.0 (0.02)	-0.2 (0.21)
Target of CASH acquisition in Quarter t+3	-7 (1.26)	1 (0.08)	-1.4 (2.08)**	-0.9 (1.02)
Target of CASH acquisition in Quarter t+4	-0.2 (0.03)	1 (0.11)	0.2 (0.28)	0.0 (0.00)
Dollar Value of equity stake	0.00001 (2.04)**	-0.0001 (2.52)**	-	-
Dollar Value of shares purchased through option exercises during the last 12 months	-0.005 (2.79)***	-0.0147 (4.28)***	-0.00010 (2.39)**	-0.0008 (4.10)***
Dollar Value of "Other" share purchases during the last 12 months	0.000 (1.37)	-0.0002 (1.10)	0.00001 (6.10)***	0.00001 (1.34)
Dollar Value of "Gift" share purchases during the last 12 months	-0.001 (0.89)	-0.0007 (0.33)	0.00003 (1.20)	0.00001 (0.29)
$RET_{q(t-2),q(t)}$	-64 (50.65)***	-45 (24.68)***	-5 (45.07)***	-4 (22.95)***
$RET_{q(t-4),q(t-2)}$	-40 (34.41)***	-26 (16.17)***	-3 (31.02)***	-2 (15.30)***
$VOL_{q(t-4),q(t-2)}$	-2 (2.39)**	4 (4.95)***	0.22 (2.76)***	0.4 (4.71)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	12 (11.29)***	5 (4.41)***	0.38 (4.45)***	0.2 (1.40)
Log of Total Assets	-7 (26.57)***	-7 (15.49)***	-0.44 (22.50)***	-1 (14.90)***
Industry Dummies	Yes	Yes	Yes	Yes
Year-Quarter Dummies	Yes	Yes	Yes	Yes
R ²	0.063	0.145	0.031	0.075
N	1,518,164	233,996	1,421,173	231,502
F-Test for Differences in Coefficients:	p-value	p-value	p-value	p-value
Acquirer-STOCK-q(t+1) = Acquirer-CASH-q(t+1)	0.0118	0.2572	0.9713	0.8901
Acquirer-STOCK-q(t+1) = Acquirer-CASH-q(t+1)	0.0230	0.2780	0.1531	0.4422
Acquirer-STOCK-q(t+1) = Acquirer-CASH-q(t+1)	0.0000	0.0025	0.0005	0.0269
Acquirer-STOCK-q(t+1) = Acquirer-CASH-q(t+1)	0.0043	0.0516	0.2217	0.2422
Target-STOCK-q(t+1) = Target-CASH-q(t+1)	<0.0001	0.0006	0.0044	0.0832
Target-STOCK-q(t+1) = Target-CASH-q(t+1)	0.0001	0.0365	0.0033	0.0405
Target-STOCK-q(t+1) = Target-CASH-q(t+1)	0.7786	0.0773	0.3284	0.9901
Target-STOCK-q(t+1) = Target-CASH-q(t+1)	0.0512	0.1189	<0.0001	0.0144

Table 12
Abnormal Trading Activity Prior to Merger Announcements - Top Managers -1991-2000

The purpose of this table is to see whether acquirer and target firm top-managers trade abnormally prior to stock and cash mergers. To achieve this goal, dummy variables are created showing whether the firm will be an acquirer or a target in a stock, cash or a mixed acquisition during the next four quarters. The dummies for mixed acquisitions are included in all models but are not reported below for brevity. In models (1) and (3) the dependent variables are the quarterly dollar value of individual net stock purchases and the quarterly individual net stock purchases as a percentage of prior common stock holdings respectively. Net purchase is defined as the dollar value of purchases minus sales. The dependent variables in models (2) and (4) are constructed by averaging the dependent variables in models (1) and (3) across all managers in a given firm. Dollar value of equity stake is the number of common shares held at the beginning of the quarter times the beginning-of-the-quarter stock price. $RET_{q(t-2),q(t)}$ denotes stock return during the last two quarters. $RET_{q(t-4),q(t-2)}$ denotes the stock return during the two quarters before the last two quarters. $VOL_{q(t-4),q(t-2)}$ denotes the annualized stock return volatility during the two quarters before the last two quarter. $VOL_{q(t-2),q(t)}$ - $VOL_{q(t-4),q(t-2)}$ is the change in volatility between the last two quarters and the previous two quarters. Each regression includes industry and year-quarter dummies. Industries are defined using the 20 industry definition of Grinblatt and Moskowitz (1999). Coefficient estimates are reported first and robust t-statistics with clustering at the manager (columns one and three) or firm level (columns two and four) second in each column. Significance levels at 1%, 5% and 10% are denoted by ***, ** and * respectively. All dollar amounts are in thousands of 2004 dollars.

	(1)	(2)	(3)	(4)
	Dollar Value of Individual Net Purchases of Company Stock	Dollar Value of Net Purchases of Company Stock Averaged by Firm-Quarters	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firm-Quarters
Independent Variables:				
Intercept	480 (4.58)***	163 (4.61)***	45.9 (1.74)*	7.4 (2.45)**
B/M-Decile				
1 (Growth)	-289 (6.70)***	-140 (9.03)***	-40.0 (4.04)***	-7.7 (5.57)***
2	-191 (5.59)***	-92 (7.71)***	-49.0 (5.20)***	-6.2 (5.29)***
3	-167 (5.43)***	-76 (6.69)***	-38.0 (4.27)***	-5.2 (4.55)***
4	-69 (2.73)***	-40 (4.18)***	-17.1 (2.58)**	-3.0 (2.88)***
5	-110 (3.86)***	-48 (4.56)***	-26.7 (3.94)***	-3.8 (3.49)***
6	-96 (3.47)***	-42 (4.20)***	-30.2 (3.96)***	-3.7 (3.45)***
7	-81 (3.21)***	-35 (3.83)***	-17.8 (3.19)***	-3.2 (3.12)***
8	-53 (2.43)**	-29 (3.07)***	-26.7 (3.39)***	-2.7 (2.47)**
9	-60 (2.83)***	-26 (3.09)***	-14.6 (2.40)**	-2.6 (2.60)***
10 (Value)				
Dummy Variable = 1 if :				
Acquirer of STOCK acquisition in Quarter t+1	-36 (0.41)	-15 (0.82)	-8.2 (0.35)	0.3 (0.22)
Acquirer of STOCK acquisition in Quarter t+2	-167 (1.66)*	-31 (1.64)	-5.2 (0.27)	0.2 (0.13)
Acquirer of STOCK acquisition in Quarter t+3	-280 (2.52)**	-21 (1.14)	-22.3 (0.91)	-1.0 (0.61)
Acquirer of STOCK acquisition in Quarter t+4	-8 (0.10)	-15 (0.75)	2.3 (0.15)	-2.2 (1.24)
...				
Acquirer of CASH acquisition in Quarter t+1	-368 (2.01)**	-73 (1.84)*	-27.3 (0.85)	-1.3 (0.48)
Acquirer of CASH acquisition in Quarter t+2	-308 (1.49)	-10 (0.29)	-13.4 (0.40)	0.4 (0.15)
Acquirer of CASH acquisition in Quarter t+3	117 (0.99)	19 (0.72)	17.1 (1.12)	-2.3 (0.77)
Acquirer of CASH acquisition in Quarter t+4	43 (0.29)	37 (1.12)	-27.9 (0.72)	-1.6 (0.52)
...				
Target of STOCK acquisition in Quarter t+1	-98 (1.15)	-38 (1.29)	-11.8 (0.55)	-1.0 (0.47)
Target of STOCK acquisition in Quarter t+2	-169 (1.58)	-70 (1.99)**	-19.5 (0.75)	-5.2 (2.18)**
Target of STOCK acquisition in Quarter t+3	-148 (1.35)	-51 (1.43)	-27.9 (0.91)	-2.2 (0.87)
Target of STOCK acquisition in Quarter t+4	-91 (0.86)	-55 (1.39)	-62.4 (1.50)	-5.7 (1.77)*
...				
Target of CASH acquisition in Quarter t+1	100 (2.40)**	33 (1.23)	-8.0 (0.23)	0.2 (0.06)
Target of CASH acquisition in Quarter t+2	76 (0.90)	19 (0.74)	-45.2 (0.66)	0.4 (0.17)
Target of CASH acquisition in Quarter t+3	-187 (0.82)	-51 (0.60)	-117.0 (1.26)	-8.1 (0.94)
Target of CASH acquisition in Quarter t+4	52 (0.27)	-3 (0.04)	48.7 (3.31)***	1.4 (0.22)
Dollar Value of equity stake	-0.0007 (2.67)***	-0.0001 (5.16)***	-	-
Intrinsic value of exercisable options	-0.0019 (0.55)	-0.0005 (0.72)	-0.0004 (0.76)	0.0000 (0.12)
Intrinsic value of unexercisable options	-0.0102 (2.21)**	-0.0020 (2.42)**	0.0012 (1.47)	0.0000 (0.81)
Dollar Value of stock grants	-0.0153 (0.46)	0.0007 (0.09)	0.0125 (3.06)***	0.0012 (2.07)**
Dollar Value of Total compensation	-0.1000 (2.58)**	-0.0076 (1.30)	0.0100 (1.77)*	-0.0006 (0.70)
Black-Scholes value of option grants	0.0000 (0.31)	0.0004 (0.24)	-0.0015 (0.92)	-0.0001 (0.80)
$RET_{q(t-2),q(t)}$	-271 (9.23)***	-110 (11.65)***	-43.5 (5.61)***	-9.0 (10.26)***
$RET_{q(t-4),q(t-2)}$	-194 (5.02)***	-82 (7.81)***	-24.0 (2.53)**	-4.9 (5.90)***
$VOL_{q(t-4),q(t-2)}$	-338 (4.94)***	-125 (4.81)***	-50.5 (3.39)***	-8.9 (4.18)***
$VOL_{q(t-2),q(t)} - VOL_{q(t-4),q(t-2)}$	224 (3.05)***	60 (2.78)***	20.2 (1.34)	3.1 (1.63)
Log of Total Assets	-32 (3.82)***	-8 (3.04)***	-3.3 (1.91)*	-0.4 (1.77)*
Industry Dummies	Yes	Yes	Yes	Yes
Year-Quarter Dummies	Yes	Yes	Yes	Yes
R ²	0.152	0.275	0.042	0.162
N	13,028	10,301	11,994	10,287

Table 13
Management Trading Activity for Acquirer and Target Firms around 1,188 Merger Announcements

This table describes the trading patterns of the acquirer firms' managers around merger announcements. All trading figures are in thousands of 2004 dollars. The first entry is the average value of shares traded, followed by the expected value, computed as the median (in 1,000 replications) of the empirical distribution of the average number of shares traded for a random sample of matching control firms. Each acquirer manager is matched to control manager in a size-prior return-industry matched non-merger firm based on prior shareholdings.

	Dollar Value of Individual Net Purchases of Company Stock	Dollar Value of Net Purchases of Company Stock Averaged by Firms	Individual Net Purchases of Company Stock as Percentage of Prior Exposure	Net Purchases of Company Stock as Percentage of Prior Exposure Averaged by Firms
Acquirers				
STOCK	-522 *** -357 N = 7027	-763 *** -403 N = 590	-52.9 *** -15.4 N = 7027	-79.1 *** -17.9 N = 590
MIXED	-332 *** -268 N = 3182	-451 *** -388 N = 300	-35.8 *** -18.6 N = 3182	-42.5 *** -22.1 N = 300
CASH	-342 ** -281 N = 3045	-375 -385 N = 298	-47.9 *** -17.9 N = 3045	-69.4 *** -19.7 N = 298
STOCK-CASH	-181 ** -76	-388 *** -19	-5.0 *** 2.5	-9.7 *** 1.7
Targets				
STOCK	-200 ** -175 N = 4087	-286 *** -221 N = 541	-35.0 *** -15.1 N = 4087	-45.4 *** -16.9 N = 541
MIXED	-173 *** -262 N = 1666	-152 *** -228 N = 248	-20.5 -18.6 N = 1666	-22.7 *** -16.1 N = 248
CASH	-106 -130 N = 1148	-121 *** -171 N = 225	-23.1 *** -13.7 N = 1148	-22.5 *** -17.9 N = 225
STOCK-CASH	-94 ** -45	-165 *** -49	-11.9 *** -1.3	-22.9 *** 1.0

Table 14
Acquirers that are identified as "Overvalued" from the merger announcement articles in Wall Street Journal

Acquirer Name	Target Name	Ann. Date	Acquirer 4-day Ann. CAR	Target 4-day Ann. CAR	Combined 4-day Ann. CAR	Method of Payment	WSJ Article
VIACOM INC	PARAMOUNT COMMUNICATIONS INC	9/8/1993	-0.3%	0.3%	0.1%	MIXED	Mr. Redstone has been an active buyer of Viacom stock in recent months, contributing to a recent price run-up and making it a more valuable currency with which to buy Paramount. Even though Viacom has less than half the revenue of Paramount, it has a slightly larger stock-market value.
VIACOM INC	BLOCKBUSTER ENTERTAINMENT CORP	9/9/1993	-0.5%	4.3%	2.4%	STOCK	
SOUTHWESTERN BELL CORP	PACIFIC TELESIS GROUP	4/1/1996	-7.2%	19.6%	0.0%	STOCK	
GILLETTE SAFETY RAZOR CO	DURACELL INTERNATIONAL INC	9/12/1996	4.8%	25.5%	8.1%	MIXED	Gillette is using its rich stock price, which trades at 33 times trailing 12-month earnings, to pay for Duracell, which currently trades at about 24 times trailing 12 month earnings. The deal, which includes the assumption of debt, is expected to be immediately accretive to earnings for Gillette.
N C N B CORP	BARNETT BANKS INC	8/29/1997	-9.7%	22.8%	-3.4%	STOCK	
COMMERCIAL CREDIT CO (Travelers Co.)	SALOMON INC	9/23/1997	-1.5%	16.3%	0.9%	STOCK	Some on Wall Street praised Mr. Weill for making yet another opportunistic deal -- his trademark. "This is certainly not a case where Sandy Weill is guilty of paying high prices," said Roy Smith, a New York University professor and a Goldman, Sachs & Co. limited partner. Added Stephen Treadway, a former Smith Barney executive and now chairman of Pimco Advisors LP's retail mutual funds: "This may be a good value in this marketplace because his currency is Travelers stock -- not cash." Travelers stock has soared more than tenfold since 1986, more than four times that of the broader-market averages.
QWEST COMMUNICATIONS INTL IL C I INTERNATIONAL INC		3/9/1998	0.5%	11.4%	3.9%	STOCK	While Qwest lacks big revenues and earnings, it has a staggering market capitalization of more than \$7 billion. Like WorldCom, which agreed to swallow bigger carrier MCI for \$37 billion, Qwest is able to use its highflying stock as currency to acquire the bigger carrier.
U S A WASTE SERVICES INC	WASTE MANAGEMENT INC	3/11/1998	13.9%	20.6%	17.7%	STOCK	Its strong stock price has allowed Mr. Drury to make a steady stream of big acquisitions to sustain growth.
COMMERCIAL CREDIT CO	CITICORP	4/6/1998	14.0%	15.1%	14.5%	STOCK	
N C N B CORP	BANKAMERICA CORP	4/13/1998	5.8%	4.4%	5.2%	STOCK	Armed with a particularly rich currency after a recent run-up in the price of Berkshire shares, Mr. Buffett set aside his longstanding reluctance to using stock for purchases: General Re stockholders will receive roughly an 18% Berkshire stake.
SOUTHWESTERN BELL CORP	AMERITECH CORP	5/11/1998	-8.6%	4.5%	-3.7%	STOCK	
BERKSHIRE HATHAWAY INC DE	GENERAL RE CORP	6/19/1998	-0.6%	15.3%	1.8%	STOCK	But Lucent's shares have recovered in the past three months -- in fact, they have nearly doubled -- enabling a purchase by restoring the value of the currency the company is using to make it. Lucent's stock also gives it the power to make acquisitions without diluting its earnings. The shares now trade at a rich multiple of about 50 times annual earnings
LUCENT TECHNOLOGIES INC	ASCEND COMMUNICATIONS INC	1/11/1999	-6.3%	9.0%	-5.0%	STOCK	The hyperkinetic Mr. Jermoluk, known throughout Silicon Valley as TJ, definitely isn't groveling now. In the largest Internet merger to date, he has agreed to exchange \$7.5 billion in At Home's sky-high shares to acquire Excite Inc., one of the World Wide Web's busiest sites. The deal and its price tag -- more than double Excite's recent market valuation -- are another sign of the frantic scramble for customer traffic and market share in the booming interactive arena. They also illustrate how the highflying stock of Internet companies has become a currency that outweighs conventional concerns such as sales and profits.
AT HOME CORPORATION	EXCITE INC	1/19/1999	2.0%	31.5%	9.5%	STOCK	The deal is by far Yahoo's largest, and its first major effort to use its highflying stock as acquisition currency. Jeff Mallett, its president, said the move is part of an effort by Yahoo to increase its brand awareness on the Web.
YAHOO INC	GEOCITIES	1/27/1999	22.2%	61.6%	24.8%	STOCK	Within only three months, Yahoo has used more than \$10 billion of its highflying stock to purchase two major Web companies, GeoCities Inc. and broadcast.com Inc. And yesterday, just after the Santa Clara, Calif., Internet "portal" confirmed that it had agreed to spend \$5.7 billion for broadcast.com, the Dallas-based Internet broadcaster, Yahoo executives implied that more merger mania lies ahead.
YAHOO INC	BROADCAST COM INC	3/22/1999	-7.2%	27.3%	-4.4%	STOCK	Financially, the decision by General Dynamics exploits a differential in the respective stock price-to-earnings multiples, allowing the acquirer to use its higher priced shares to snare what could be considered a fairly inexpensive stock.
ELECTRIC BOAT CO	GULFSTREAM AEROSPACE CORP NEW	5/17/1999	-8.0%	16.1%	-0.8%	STOCK	Some analysts believe the drop in the stock prices of AOL and Time Warner spells one thing: Investors are scrutinizing the merger and finally catching on to the hot air in Internet valuations. "The reason why the stocks of Internet companies like Yahoo! and AOL are dropping lately is because the sharp investors are starting to realize that companies like Yahoo can't justify being traded at 400 times earnings, or stock-price targets of \$500 a share, when Yahoo's actual annualized earnings are at just about 75 cents a share," says Robert A. Olstein, manager of the Olstein Financial Alert mutual fund.
ALLIED CHEMICAL & DYE CORP	HONEYWELL INC	6/7/1999	3.0%	16.5%	6.6%	MIXED	
VIACOM INC	C B S CORP	9/7/1999	10.2%	4.1%	5.0%	STOCK	
AMERICA ONLINE INC	TIME WARNER INC	1/10/2000	-17.6%	23.8%	-4.4%	STOCK	The more cynical view, says Broadview Chief Executive Paul Deninger, is that technology companies with highflying stock prices are doing these deals "because they have the currency and don't know how long it will last."
VERISIGN INC	NETWORK SOLUTIONS INC	3/7/2000	-19.1%	28.0%	-5.1%	STOCK	The merging of the two companies also brings together a couple of stock-market highfliers. During the past six months, I2's stock has soared 889%, while Aspect Development has shot up 688%, reflecting Wall Street's enthusiasm for companies that facilitate business-to-business e-commerce.
I2 TECHNOLOGIES INC	ASPECT DEVELOPMENT INC	3/13/2000	-9.8%	14.6%	-6.7%	STOCK	The deal is designed to resolve difficulties that have arisen for Seagate because of its 33% stake in software maker Veritas, of Mountain View, Calif., the value of which has soared in recent months and which is now valued at well more than all of Seagate's disk-drive operations. Seagate executives described the transactions as a creative way of "unlocking" the value of those Veritas shares in a way that spared an excessive tax burden on both Seagate and its shareholders.
VERITAS SOFTWARE CORP	SEAGATE TECHNOLOGY	3/29/2000	-6.7%	-2.0%	-5.8%	MIXED	

Table 15
Management Trading Activity for 147 "Overvalued" and 655 "Not-Overvalued" Acquirer Firm Managers as identified from Wall Street Journal Articles

This table describes the trading patterns of the acquirer firms' managers around merger announcements. All trading figures are in thousands of 2004 dollars. The first entry is the average value of shares traded, followed by the expected value, computed as the median (in 1,000 replications) of the empirical distribution of the average number of shares traded for a random sample of matching control firms. Each acquirer manager is matched to control manager in a size-prior return-industry matched non-merger firm based on prior shareholdings.

	Dollar Value of Individual Net Purchases of Company Stock	Individual Net Purchases of Company Stock as Percentage of Prior Exposure
I. Overvalued Acquirer	-3,608 *** -1,310 N = 147	-144.8 *** -38.5 N = 147
II. Not Overvalued Acquirer	-821 ** -964 N = 655	-65.4 *** -27.7 N = 655
Difference I-II	-2,787 * -346	-79.4 *** -10.9