

The impact of public news regarding potential take-overs on the share price behaviour of target companies

1. INTRODUCTION

Insider trading actions by the Securities and Exchange Commission (SEC) against Dennis Levine, Ivan Boesky, Martin Siegel, and others have influenced the public perception of mergers and acquisitions activity. These well-publicized cases generally involve illegal insider trading based on non-public information about impending bids for take-over targets. Many regulators have interpreted public concern about illegal insider trading as political support for legislative proposals to restrict take-overs. These regulators argue that increased trading in the shares of target companies before take-over announcements indicates the pervasive nature of insider trading.

Associating share price run-ups with insider trading has intuitive appeal. The success of several regulatory authorities at identifying and prosecuting insider traders has reinforced the perception that such conduct is pervasive and that legitimate speculation is overwhelmed by illegitimate trading on non-public information. An active mergers and acquisitions market enhances opportunities for profitable legal and illegal trading in anticipation of take-over bids. If illegal conduct is sufficiently widespread, then that conduct could be an important cause of pre-bid price run-ups.

Some analysts, on the other hand, generally view increases in share prices before take-over announcements as supportive of the efficient market hypothesis, which states that share prices at any time fully reflect all public information (Fama, 1970). Researchers have documented share price reactions to many types of corporate announcements including dividend changes, earnings reports, share splits, unexpected management changes, and macroeconomic events such as inflation, oil price shocks and interest rate changes. In cases where it is possible for traders to discover information in advance of news announcements, there is generally a significant share price run-up preceding the event.

Legitimate research and analysis of corporate information gives some traders informational advantages and their superior earnings serve as compensation for their efforts (Larcker and Lys, 1987). Their trading is beneficial to the extent it aligns share prices with their theoretically correct values, promoting efficient allocation of capital. The prospect of large take-over premiums and the many kinds of clues legally available assure the existence of an active market for information on prospective take-over targets

(Comment, 1986). Therefore, much share trading that precedes important news can be attributed to a well-functioning market and not necessarily insider trading.

In line with trends in many developing countries, South Africa has in recent years witnessed a sharp rise in take-over activity. However, there have been no investigations on the relative importance of public versus private information related to the price run-ups associated with take-over announcements. The purpose of this paper is to examine the role of pre-announcement news reports as an explanation for the excess returns associated with take-over announcements of target companies listed on the Johannesburg Stock Exchange (JSE).

2. PREVIOUS RESEARCH

One consistent finding of the literature on the share price impact of corporate take-overs is that shareholders of target companies earn significant excess returns from such offers. About half of the total excess returns accrue, however, over a period approximately 20 days preceding the announcement (Jayaraman, Mandelker and Shastri, 1991). Unlike many other corporate events, a take-over offer is difficult for the market to anticipate or predict. The explanations of these price run-ups, therefore, rest on arguments based on information.

The proportion of the total premium that accrues prior to the take-over announcement is reported to be 50 percent by Mikkelson and Ruback (1985), 50 percent by Dennis and McConnell (1986), 42 percent by Keown and Pinkerton (1981), and 42 percent by the Securities and Exchange Commission (1987). Other studies that find comparable results are those of Asquith (1983), Bradley (1980), and Keown, Pinkerton, Young and Hansen (1985). Keown and Pinkerton (1981) conclude that these results imply the incidence of substantial amounts of trading based on insider information prior to the first public announcement of the proposed take-over. In a similar vein, Keown et al. (1985) compare pre-announcement price run-ups for a sample of firms for which insider trading activity was known to have occurred (firms in the Antoniu-Newman case) with a control sample and find no difference in the pre-announcement price patterns. To conclude, as they did, that the similarity of price patterns implies significant insider trading in the firms constituting the control sample, requires the assumption that insider trading in the Antoniu-Newman sample was a significant contributor to the price run-ups.

*Graduate School of Business, University of Durban-Westville, Private Bag X54001, Durban 4000, Republic of South Africa.
Email: mba@mancosa.co.za

Research also indicates that public information is a significant contributor to price run-ups associated with take-over announcements. Jensen and Ruback (1983) point out that the observed price behaviour could well be an unbiased market response to publicly available information that increases the probability of a take-over. The Securities and Exchange Commission (1987) examined take-over-related news releases during the period preceding take-over announcements and reported that this (publicly available) information explains a large portion of the price run-ups. Comment (1986) examined the abnormal returns to target companies in take-overs, after adjusting for the price effects of all other kinds of corporate announcements. He concluded that over 85 percent of the total premium can be explained by public information and has little to do with insider trading. If public information is a significant contributor to price run-ups, the price patterns documented by Keown et al. (1985) could well be a result of such public information and have little to do with insider trading. Since insider trading activities of this type are generally deemed illegal, this matter is of particular interest to investors as well as to public policy officials.

Gupta and Misra (1988) investigated whether insider information or publicly available information drives share prices preceding take-over announcements. This was done by examining the daily pre-announcement price and share volume behaviour of acquired companies before and after the Dennis Levine insider trading case of May 1986. Given the high visibility of the SEC in the stock market over the 7-month period (May through December 1986), it is reasonable to assume that the effects of trading based on insider information during this period should have been significantly lower than in the period prior to May 1986. This assumption is borne out by reports in the financial press regarding the "fear" that gripped NYSE traders in the post-Levine insider trading case. Gupta and Misra (1988) reported that the price run-ups during the pre-announcement period were statistically no different for take-over situations in the pre- and post-May 1986 periods. Given the view that trading based on insider information declined after May 1986, these results suggest that insider trading is not a significant contributor, on average, to pre-announcement price run-ups.

Bhana (1987) investigated the role of insider trading related to take-over target companies listed on the JSE during the 1976-1985 period. It was shown that shareholders of acquired companies earned fairly substantial abnormal returns around the time of the take-over announcement. Insiders appear to take market positions on prospective take-overs approximately 40 trading days before the public announcement. Leakage of insider information occurs at a significant level in the 15 trading days preceding the public announcement of the proposed take-over. The results suggest that registered insiders are not

responsible for the abnormal trading in the target companies during the three weeks prior to the public announcement of the take-overs and that substantial insider trading is carried out through third parties in order to escape detection.

Jarrell and Poulsen (1989) investigated a sample of 172 successful take-overs on the New York and American stock exchanges between 1981 and 1985. They investigated how several factors affect market activity, including the presence of media speculation, the size of foothold acquisitions disclosed by the bidder, and whether the initial bid is friendly or contested. Their results indicate that the presence of rumours in the news media concerning an impending take-over bid is the strongest variable in explaining unanticipated premiums and pre-bid price run-up for target companies. They also report evidence that unanticipated premiums are lower and pre-bid run-up is higher in those cases in which the bidder held a relatively large position in the target at the time of the bid. The significant effects of media speculation and foothold acquisitions on unanticipated premiums and pre-bid price run-up are consistent with a legitimate market for information. They further imply that significant pre-bid market activity is consistent with little or no illegal insider trading. Jarrell and Poulsen (1989) conclude that aggregate run-up statistics must be used cautiously as measures of illegal insider trading activity.

De Long, Shleifer, Summers and Waldmann (1990) suggest that pre-announcement price run-ups may be due to the presence of noise traders. Noise traders, such as technical traders, trade on the basis of what they believe is special information. De Long et al. (1990) identify investors as "positive feedback" investors when they buy securities when prices rise and sell when prices fall, or, in other words, when they "chase the trend" of prices. Thus, a possibility exists that initial target company share price run-ups are due to purchases by insiders, while subsequent pre-announcement price run-ups are due, at least in part, to trend-chasing by otherwise uninformed market participants. Thus, while it is clear that price run-ups are a consequence of trading based on information, the relative importance of public versus private information in this process is yet to be resolved.

This paper examines the role of pre-announcement news reports pertaining to take-overs as an explanation for the observed price run-ups. Three related issues are examined. First, in the absence of public information about a potential take-over, is the magnitude of pre-announcement price run-ups significantly greater than zero? An affirmative result may suggest that non-public information is a contributor to the price run-ups. Second, are pre-announcement price increases significantly larger in the cases where take-over related information is publicly available? An affirmative result would suggest

that public information is a significant contributor to the pre-announcement price run-ups. Finally, in the cases where take-over information is publicly available, do significant price run-ups occur subsequent to the publication of the information or do the price run-ups precede information? If the price run-ups are significant after the news, then it may be concluded that public news drives the pre-announcement prices. If, on the other hand, there is significant run-up prior to the first publication of the information, then the insider trading hypothesis cannot be rejected.

3. RESEARCH METHODOLOGY

All JSE listed companies which were targets of take-over bids during the period January 1985 to December 1996 were identified. In order to be included in the study, a company had to be listed on the JSE and daily returns had to be available for the entire study period in the JSE database. These criteria led to the identification of 136 take-over targets during 1985-1996 that are utilized in this study. For each company, the Reuters News Services was used to identify take-over related news items that appeared in the *Business Day*. The archive product, Reuters Business Briefing allows access to a database of all news items released through Reuters for period dating back five years from the current date. This publication was used to identify news regarding a potential take-over in the three months preceding the public announcement.

The presence or absence of public information was used to identify take-over samples from two populations, i.e. those targets for which there was take-over related public information before the actual announcement are named the "NEWS" sample and those for which the announcement was a surprise are called the "NO-NEWS" sample. A take-over target was included in the "NEWS" sample if there were any news reports in Reuters Business Briefing about:

- (a) Named investor acquires/increases stake;
- (b) Named company rumoured to be a target or named company rumoured to be considering an offer;
- (c) Rumour denial/No explanation for share activity;
- (d) Named company seeking approval for take-over;
- (e) Named company looking for a buyer;
- (f) Company rebuffs a suitor;
- (g) Other news items suggesting the named company as a take-over target.

The classification resulted in 39 companies in the NEWS sample and 97 in the NO-NEWS sample. The number of take-over related news reports is small until about 30 trading days before the announcement. In the 30 trading day period preceding the announcement, however, 73 different news reports were documented, suggesting an active market for information about take-overs.

The magnitude of pre-announcement price run-ups was examined using event time methodology described by Brown and Warner (1985). The day that a take-over announcement appeared in the *Business Day* was specified as day 0 in event time. The two-day period $t = (-1,0)$ was treated as the announcement period since announcements are typically carried by the wire services the day before the announcement in the *Business Day*. For each company, daily abnormal returns for the period $t = -29$ to $t = +10$ in event time were computed as:

$$AR_{it} = R_{it} - (\alpha_i + B_i R_{mt}) \quad (1)$$

where AR_{it} is the abnormal return for company i on day t , relative to the take-over announcement date. R_{it} is the return for company i on day t , and the term in parenthesis is the normal return. R_{mt} is the return on the market portfolio represented by the JSE Overall Index on day t and α_i and B_i are the market model coefficients for company i . The market model coefficients were estimated using daily returns for the period starting 149 days preceding the first news date (NEWS sample) or the announcement date (NO-NEWS sample) and ending 30 days prior to the first news date or announcement date, respectively. An estimation period that did not overlap with any news reports was chosen to avoid potential biases in the α and B estimates. Portfolio average abnormal returns for days $t = (-29,+10)$ relative to the announcement date were then obtained as:

$$AAR_t = \frac{\sum_{i=1}^N AR_{it}}{N} \quad (2)$$

where N is the number of shares in the sample portfolio. The Cumulative Average Abnormal Returns for each day were computed as:

$$CAAR_t = CAAR_{t-1} + AAR_t \text{ for } t = (-29,+10) \quad (3)$$

In the absence of abnormal performance, the AAR on any day t should not be significantly different from zero. The test statistic suggested by Brown and Warner (1985) is the ratio of the average abnormal return to its estimated standard deviation, where the standard deviation is estimated from the time series of portfolio average abnormal returns during the estimation period. Assuming that daily returns are normally distributed and independent through time, AAR_t has a student $-t$ distribution.

The following hypotheses were tested:

- H_1 : Insider trading activity is a significant contributor to the share price run-up preceding the announcement of the take-over of a target company.

H₂ : The share price run-ups preceding take-over announcements occur mainly in the presence of publicly available news of impending take-overs. Insider trading is not a significant contributor, on average, to pre-announcement price run-ups.

4. EMPIRICAL RESULTS

Event study results for the NEWS and the NO-NEWS samples are reported in Table 1. For each sample, the AAR and the percent of companies having positive ARs are reported for each day from day -29 to +10, relative to the announcement date. A comparison of the AARs for the two samples indicates the dramatic effect of publicly available news reports on the pre-announcement price pattern of take-over targets. The

number of days with positive AARs is similar for both samples (26 days for NEWS and 19 days for NO-NEWS). The NEWS sample, however, exhibits statistically significant AARs (10% or better) during 13 days in the pre-announcement period $t = (-29, -2)$ while the NO-NEWS sample had no statistically significant AAR days in the pre-announcement period. For 8 of the 10 days preceding the announcement ($t < -1$), the NEWS sample had more than 60% of the ARs greater than zero. Lastly, while the CAAR for the NEWS sample is positive from day $t = -29$, it is consistently positive only after day $t = -8$ for the NO-NEWS sample. The CAAR for the samples is plotted in Figure 1. The results suggest that publicly available news of impending take-overs has a substantial impact on pre-announcement price run-ups in target company shares.

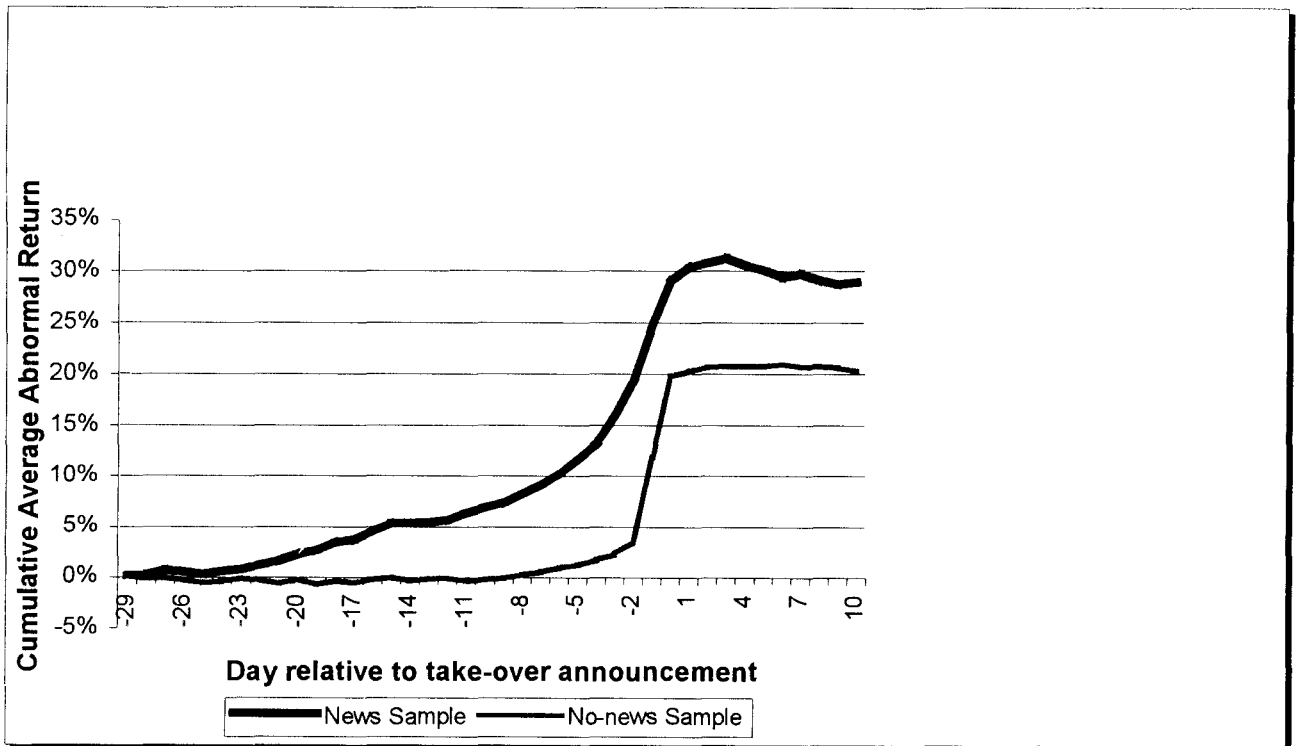


Figure 1: CAAR in event time of take-over target companies during 1985 - 1996

Table 1: Share price behaviour of take-over target companies around announcement date during 1985-1996

t	NEWS sample (N=39)			NO-NEWS sample (n=97)		
	AAR	CAAR	%AR>0	AAR	CAAR	%AR>0
-29	0,00197	0,00197	48	0,00124	0,00124	49
-28	0,00235	0,00432	47	-0,00263	-0,00139	51
-27	0,00273	0,00705	51	0,00071	-0,00068	54
-26	-0,00186	0,00519	53	-0,00237	-0,00305	50
-25	-0,00218	0,00301	57	-0,00272	-0,00577	51
-24	0,00332	0,00633	55	0,00179	-0,00398	59
-23	0,00187	0,00820	58	0,00278	-0,00120	56
-22	0,00394	0,01214	56	-0,00184	-0,00304	60
-21	0,00429	0,01643	57	-0,00315	-0,00619	59
-20	0,00656**	0,02299	59	0,00376	-0,00243	53
-19	0,00387	0,02686	58	-0,00443	-0,00686	60
-18	0,00758**	0,03444	60	0,00289	-0,00397	64
-17	0,00285	0,03729	55	-0,00152	-0,00549	53
-16	0,00816**	0,04545	54	0,00324	-0,00225	59
-15	0,00741**	0,05286	59	0,00175	-0,00050	60
-14	0,00088	0,05374	60	-0,00286	-0,00336	63
-13	0,00095	0,05469	57	0,00171	-0,00165	60
-12	0,00216	0,05685	56	0,00056	-0,00109	59
-11	0,00652**	0,06337	60	-0,00281	-0,00390	58
-10	0,00581**	0,06918	57	0,00194	-0,00196	57
-9	0,00452	0,07370	55	0,00097	-0,00099	60
-8	0,00895***	0,08265	65	0,00389	0,00290	63
-7	0,00913***	0,09178	62	0,00275	0,00565	54
-6	0,01102***	0,10280	68	0,00393	0,00958	70
-5	0,01459***	0,11739	64	0,00248	0,01206	56
-4	0,01501***	0,13240	69	0,00484	0,01690	59
-3	0,02815***	0,16055	68	0,00693	0,02383	73
-2	0,03352***	0,19407	74	0,01186	0,03569	70
-1	0,05314***	0,24721	85	0,08347***	0,11916	79
0	0,04389***	0,29110	79	0,07851***	0,19767	83
+1	0,01352***	0,30462	53	0,00508	0,20275	56
+2	0,00359	0,30821	52	0,00413	0,20688	54
+3	0,00413	0,31234	50	0,00227	0,20915	51
+4	-0,00686**	0,30548	48	-0,00176	0,20739	50
+5	-0,00465	0,30083	45	0,00351	0,21090	47
+6	-0,00612**	0,29471	49	-0,00168	0,20922	51
+7	0,00248	0,29719	54	-0,00261	0,20661	54
+8	-0,00591*	0,29128	60	0,00098	0,20759	48
+9	-0,00347	0,28781	45	-0,00128	0,20631	46
+10	0,00232	0,29013	41	-0,00354	0,20277	49

* significant at the 10% level

** significant at the 5% level

*** significant at the 1% level

An "information leakage" (IL) statistics was constructed to test for differences in the pre-announcement price patterns in the two samples. The computed values of the IL statistics are shown in Table 2. Intuitively, this statistic measures the area under the CAR path for any share. A higher value of the statistic indicates greater "information leakage" or equivalently greater pre-announcement price run-ups. The mean IL was 5,12 for NEWS and 1,74 for NO-NEWS samples. For the NEWS sample, the price run-up is significantly different from zero at the

1% significance level. For the NO-NEWS sample, the run-up is not statistically different from zero at the 10% level. A test of difference of the means of information leakage for the two samples yields a t-value of 1,97. The null hypothesis of no difference in information leakage between the samples can be rejected at the 5% level. Companies in the NEWS sample displayed significantly greater pre-announcement price run-up than companies in the NO-NEWS sample.

Table 2: Information Leakage (IL) statistic of take-over target companies during 1985-1996

	N	Mean IL	Standard Deviation	t-Statistic	Significance
NEWS	39	5,12	8,63	5,79	0,0053
NO-NEWS	97	1,74	6,05	1,92	0,1125

Additional tests were employed to compare price run-ups in the two samples. The mean daily abnormal return during the pre-announcement period $t = (-29,-2)$ was computed for each company. The portfolio average of the mean daily abnormal return was 0,7187% for the NEWS sample and 0,1322% for the NO-NEWS sample. A difference of means test was employed. With a t-value of 20,35, the null hypothesis of no difference in the mean daily abnormal return was again rejected at the 1% level.

These results suggest that price run-ups preceding take-over announcements occur in the presence of publicly available information. It is possible, however, that the price run-ups precede the public news; in which event the role of insider trading as a contributor to price run-ups cannot be rejected. This issue is addressed by analyzing the abnormal returns in the pre-news period.

To clarify what comes first, news or price run-ups, the first take-over related news item was isolated for each company. This day was designated as day zero in event time, and average abnormal returns were computed for the period $t = (-10,+5)$ relative to this date. The methodology used is identical to that relating to the previous analysis. The AAR, CAAR, T-stat and the percentage of shares exhibiting positive abnormal return are reported in Table 3.

The AAR is positive for each day from day-10 to -1, and is statistically significant for 7 of the 10 days. The proportion of companies displaying positive ARs is in excess of 50% for most of the days, and the CAAR at day -1 is 8,3%. There is a significant price reaction to news on the news date and the following day; the cumulative run-up for these two days is 7,6%. The results suggest that some portion of the price run-up in the NEWS sample occurred prior to the first identified news report.

To investigate whether proximity of the news to the take-over announcement had any influence on the pre-news run-up, the number of days between the first news date and the take-over announcement date (Intra Event Period or IEP) was identified for each company. The IEP ranged from 1 day to 58 days, with an average of 31 days. A sub-sample of 28 companies that had the first news date at least 10 days prior to the announcement date was isolated. An event study similar to the one for the entire NEWS sample reported in Table 3 was conducted for this sub-sample of 28

companies (detailed results are not reported). For this sub-sample of 28 companies, the pre-news 10-day cumulative run-up was 4,95% and the two-day news run-up was 5,36%. Both these numbers are lower than comparable figures for the full sample. These results are suggestive of a relationship between the intra event period (IEP) and the magnitude of the pre-news price run-ups for the companies in the NEWS sample.

For each share in the NEWS sample, the 10-day pre-news cumulative return (CER) was regressed against the time between the first news date and the take-over announcement date (IEP). The negative relationship obtained in Equation (4) indicates that the pre-news cumulative return is greater, the closer the news is to the announcement date. NEWS has a stronger effect on share prices, the closer the news publication is to the take-over announcement date. The regression results are given below, with t-statistics in parenthesis.

$$\text{CER} = 0,1547 - 0,0025 * \text{IEP} \quad (4)$$

(5,12) (-2,83)

5. DISCUSSION

A comparison of the results in Tables 1 and 3 permits the following conclusions. Share price run-ups prior to take-over announcements are small (3,6%) in the NO-NEWS sample, whereas they are substantial (19,4%) in the NEWS sample. However, a portion of the price run-up in the NEWS sample occurs prior to the first news report. Clearly, if there is insider trading in the NO-NEWS sample it has an insignificant impact on prices. If insider trading has a market impact it is restricted to shares with public information. The results of this investigation provides strong evidence to reject the hypothesis (H_1) that insider trading is a significant contributor to the share price run-up preceding the take-over announcement. However, the results clearly support the hypothesis (H_2) that the share price run-ups occur mainly in the presence of publicly available news of impending take-overs.

The results reported in Table 3 indicate that share prices do respond (by 7,6%) to public news in a significant manner. But there is a substantial run-up in prices (by 8,3%) prior to the actual news publication, and the possibility that this price run-up is a result of insider trading cannot be rejected. Some alternative possibilities and qualifications may, however, be noted.

The definitional limitation of "news" employed in the study provides a partial explanation for the run-up. The price run-up may be in response to other legal forms of news-like publications in other sources,

analysts' reports, newsletters, and street talk. Sometimes the public news may be based on facts and rumours known to market participants prior to their actual publication.

Table 3 : Share price behaviour of take-over target companies around first news date during 1985-1996¹

t	Companies ²	AAR	CAAR	%AR>0
-10	39	0,00389	0,00389	59
-9	39	0,00598*	0,00987	66
-8	39	0,00783**	0,00177	69
-7	39	0,00495	0,02265	55
-6	39	0,00897***	0,03162	67
-5	39	0,00462	0,03624	66
-4	39	0,00981***	0,04605	54
-3	39	0,00766**	0,05371	62
-2	39	0,01284***	0,06655	67
-1	39	0,01657***	0,08312	72
0	39	0,04125***	0,12437	70
+1	35	0,03451***	0,15888	73
+2	35	0,00614*	0,16502	67
+3	33	-0,00427	0,16075	59
+4	30	0,00368	0,16443	57
+5	27	-0,00219	0,16224	55

¹ NEWS sample = 39 companies

² If a company had a take-over announcement on the day following the news report, that company was deleted from the sample for the day. Therefore, the number of companies declines from day 0 in Table 3.

* significant at the 10% level

** significant at the 5% level

*** significant at the 1% level

The positive relationship between the event date proximity and the magnitude of the price run-up indicates that there may be information leakage or that the market participants are able to better predict the take-over event closer to the announcement date. Rational trading response such as "positive feedback" investors who "chase the trend" (tape watching) or exploiting potential accumulations are likely to lead to increased prices prior to the news or actual announcement. Finally, if the price run-up prior to the news date in the NEWS sample is largely due to insider trading, then by the same token insider trading should be ruled out in the NO-NEWS sample in view of the absence of significant price run-ups.

Jarrell and Poulsen (1989) have noted that there are many sources of information on which trading in anticipation of a take-over may be based. In addition to mandated disclosures, street talk can affect pre-bid market activity in potential take-over shares. While some street talk might originate illegally from inside information, observers suggest numerous sources of legitimate information. For example, Stern and Jereski (1986, p33) makes the following observation:

"It is not difficult for all sorts of people to deduce that take-over action is about to occur in a stock.

Computers are a big help here. Accumulation is instant news, so is unusual volume. Connected by a national network of direct phone lines, smart traders talk to one another and to brokers constantly. When investment bankers are hired, they frequently publish an internal memo that places their client corporation on a restricted list, to prevent conflicts of interest in trading and research recommendations. A company's name appearing on a restricted list often is all the information needed by shrewd investors to predict a prospective take-over".

Larcker and Lys (1987) have shown that in order for security prices to be informationally efficient, incentives must exist for traders to engage in costly information acquisition. They provide evidence that certain market participants are able to generate legally acquired private information regarding the success or failure of company acquisitions and mergers. Furthermore, these investors are able to earn superior returns by trading on the basis of private information related to companies that are likely to be targets for take-overs. The researchers suggest that security prices are sufficiently noisy to create incentives for costly information acquisition. The acquisition of private information is important for the development of an

efficient market for corporate take-overs. It would seem that those skilled traders who engage in costly information search are rewarded for their effort.

6. CONCLUSIONS

The literature on corporate take-overs presents evidence that target company share prices tend to follow an upward trend starting about 20 days prior to the public announcement of the take-over. It has been suggested that this is evidence of significant amounts of trading based on insider information in the pre-announcement period. This paper examines the impact of take-over related news which appear in the financial press in the period immediately preceding the announcement on the pre-announcement behaviour of share prices. It is shown that the price run-ups for companies "in the news" as potential targets are significantly greater than for companies not in the news as potential targets. For companies not in the news, practically all the abnormal returns accrue upon announcement. Information leakage measured by pre-announcement share price run-ups is minimal for these no-news targets.

Share prices respond to news publication but there is a substantial pre-news price run-up as well. This pre-news price response is stronger if the news publication date is closer to the announcement date. Furthermore, since price run-ups are largely limited to shares for which there is public information, it may be concluded that insider trading does not have a significant price impact for the no-news companies. The possibility of insider trading causing some price run-ups for companies in the news cannot, however, be ruled out.

The evidence seems to indicate that the market identifies potential take-over target companies prior to the first public announcement of an attempt to acquire the company. The evidence also suggests that insider trading is not, on average, a significant contributor to pre-announcement price run-ups. Therefore, much trading preceding take-over announcements can be attributed to a well-functioning market and not necessarily insider trading. The results suggest that increases in share prices before take-over announcements are associated with several observable (and legal) factors. To argue that pre-bid share price run-ups necessarily reflect insider trading is a misinterpretation of the data. In short, the aggregate pre-announcement share price run-up statistics must be used cautiously as measures of illegal insider trading activity.

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