東海管理評論
民國八十九年十一月，第二卷，第一期，75-94

Does Third Hand Information Benefit Investors?
— *The Case of Stock Tipster Recommendations*

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Abstract

Numerous studies have documented positive **abnormal returns** around the announcement of stock **analysts' recommendations**, which are published in various business journals. These announcements provide second hand information to investors. This study examines the effect of **third hand information** on security performance, specifically, the recommendations reported by stock analysts to Dan Dorfman who then reports "tips" in his column in USA Today. The objectives are to determine if any new information is provided to the market, and to investigate the long term results for an investor who followed these third hand recommendations. The results indicate that the abnormal return to the investor was less than one percent. In addition, the annual return to the investor was negative. Investors did not appear to benefit from third hand stock tips.

Keywords : Third Hand Information, Abnormal Return, Analysts' Recommendations, Announcement Effect.

1. Introduction

The world of equity trading includes a wealth of "stock tips". Many of these "tips" are given by "stock tipsters" who get their information from stock analysts. Since the stock analysts' information is considered second hand information, a stock tipster's information is third hand information. An interesting question is whether the advice of these tipsters provides any real wealth effect for an individual investor who follows the "tip."

Numerous studies (Givoly *and* Lakonishok, 1979 ; Groth, Lewellen, Schlarbaum *and* Lease, 1979 ; Bjerring, Lakonishok *and* Vermaelen, 1983 ; Liu, Smith *and* Syed, 1990 ; Barber *and* Loeffler, 1993 ; Palmon, Sun *and* Tang, 1994 ; Walker *and* Hatfield, 1996 ; and Womack, 1996) have

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documented positive abnormal returns around the announcement of an analyst's recommendation (second hand information). Specifically, Barber and Loeffler (1993) analyzed the announcement effect of security analysts' recommendations which appeared in the "Dartboard" column of the Wall Street Journal. They found a positive abnormal return which is almost double that found in similar studies. Similar research has used other sources of second hand data, such as the "Heard-on-the-Street" column in The Wall Street Journal (Liu, Smith *and* Syed, 1990) and "Inside Wall Street" in the periodical Business Week (Palmon, Sun *and* Tang, 1994). The finding of abnormal returns is robust to all of these studies.

This study examines the effect of third hand information on security performance, specifically, the recommendations reported by Dan Dorfman in his column in USA Today.[1] Mr. Dorfman is a seasoned stock-market journalist who not only was a columnist for Money magazine, but also was a regular stock picker (he reported on information which he garnered from various stock analysts) on the financial news cable channel, CNBC, which is a unit of General Electric's NBC. In addition, he was a regular columnist in USA Today (in which he reported analysts' stock recommendations). Mr. Dorfman is in constant touch with Wall Street analysts, and he regularly reports their recommendations. (As such, he represents an excellent source of third hand stock tip information.)

Palmon, Sun, and Tang (1994) point out that the clients of analysts receive the recommendations before they are made available to the public in such sources as newspapers and periodicals. They further note that the clients would be unhappy if public news sources received the information first, and therefore, by notifying their clients, the analysts provide a reward of current non-public information. If analysts' clients know of the recommendations shortly before actual publication, then the question arises as to when the information is impounded in stock prices. If there is an abnormal effect as a result of the published announcements, then the information is not arriving instantaneously in the market. Palmon, Sun, and Tang (1994) point out that the presence of abnormal returns around the announcement suggests that information arrives gradually.

Barber and Loeffler (1993) investigate two possible hypotheses (the information hypothesis and the price pressure hypothesis) which might explain the abnormal return. The

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[1] This data source was selected because we hypothesized that it reached a broad spectrum of investors.

information hypothesis purports that the analyst's recommendation does provide new information to the market which investors use to reprice the security. The price pressure hypothesis holds that the naive investor temporarily follows the advice and purchases the stock. Their findings suggest that both hypotheses explain the abnormal performance.

The purpose of this study is to reexamine the announcement effect of security recommendations by investigating third hand (Dan Dorfman's report of analysts' recommendations) information to determine how it affects security prices. The objectives are to determine if any new information is provided to the market, and to investigate the long term results for an investor who followed the third hand recommendation. Would a recommended buy have provided excess returns to the investor ? Would a recommended sell have resulted in a loss if the investor had not acted on the negative recommendation ? If there is no market reaction, it would suggest that third hand information does not provide any new information. Furthermore, if the long term holding period results are non-favorable to the investor, then the stock tips are not providing a benefit to the investor who follows them.

The recommendations in this research were listed in Dan Dorfman's column in USA Today. The test period is January, 1988, to December, 1991, and analysts' recommendations are classified into two mutually exclusive categories : **1.** buy and **2.** sell. For each category, standard event study methodology is used to **1.** estimate the abnormal returns around the recommendation announcement date, and **2.** evaluate the performance of each recommendation over the subsequent twelve-month period. When a professional analyst makes a buy or a sell recommendation, his standard time horizon for performance is six months to a year ; therefore, this time frame has been adopted in this study.

The choice of an appropriate evaluation technique, however, is important. Event study methodologies often bias the results toward a finding of no excess return because recommended securities often exhibit abnormal performance during the estimation period. Therefore, this study tests the hypothesis of no abnormal performance during the estimation period. It is possible that the security performed well during both the estimation and forecast periods.

Despite the fact that previous studies have found that second hand information does provide information to the market, the results of this study suggest that third

hand information does not. There is a statistically significant response on the event day for both buy and sell recommendations ; however, the return to investors is less than one percent. The return is positive for the buy category and negative for the sell category. For both groups of investors, the annual return was negative (-12.5 percent for buys and -22.3 percent for sells) and statistically significant.

The organization of this paper is as follows. Section **2** reviews the relevant literature. The data are described in Section **3** and the methodology in Section **4**. Section **5** presents the results, and conclusions are drawn in Section **6**.

2. Relevant Literature

Fama (1970) notes that a market is said to be efficient if security prices reflect all available information, and information is freely and quickly disseminated in an unbiased manner. Financial theory purports that it takes three conditions to make a market efficient : **1.** a large number of profit-maximizing investors ; **2.** insignificant transaction costs ; and **3.** free and equal access for investors to all relevant information. While most observers believe that the U.S. stock markets are semi-strong form efficient (i.e. security prices adjust rapidly to reflect publicly-available information), financial research indicates that security prices do not reflect private information[2] ; therefore, fundamental and technical analysis may be a worthwhile endeavor. Investors who are more adept at analyzing and interpreting publicly-available information and who can uncover non-public information should earn positive risk-adjusted returns. Grossman and Stiglitz (1980) point out, however, that investors will search for new information only if the cost and effort produces higher investment returns.[3]

Research has found that announcements by agencies that provide investment advice (Moody's, S&P, Value Line) provide information to the market (see Griffen *and* Sanvicente, 1982 ; and Holthausen *and* Leftwich, 1986). In the early 1980s, several

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[2] Empirical studies indicate that corporate insiders and stock specialists generally do profit by having access to non-public information (see most investment texts (i.e., Reilly, 1985) for a review of this literature).

[3] Ippolito(1993) reviews studies that test mutual fund performance and finds support for the Grossman and Stiglitz hypothesis : mutual funds appear to earn positive risk-adjusted returns, but the returns are offset by higher operating expenses and trading costs. As a result, active and passive investors earn the same rate of return net of expenses.

researchers tested the accuracy of Value Line Investment Survey timeliness rankings (Value Line analysts forecast stock price performance over a twelve-month period and rank stocks from 1(outperform) to 5(underperform)). The results of these studies were mixed. Holloway (1981) concluded that investors who bought and held Value Line rank 1 stocks did outperform the market. Holloway (1981) also tested an active trading strategy that involved rebalancing the portfolio weekly to reflect ranking changes, but the results were significant only when transaction costs were ignored. In a later study Holloway (1983) found that an active trading strategy did result in significant abnormal returns even when transaction costs were included. While Holloway (1983) used Friday's closing prices to calculate returns (Value Line recommendations were published on Friday), he indicated that timing was critical. When returns were calculated using prices for the following Monday, the returns for the rank 1 portfolio were significantly lower. Copeland and Mayers (1982), on the other hand, found no evidence that investors who followed an active trading strategy earned positive abnormal returns by investing in stocks with a particular Value Line ranking. While a portfolio of rank 5 stocks did earn statistically significant abnormal returns of approximately -3 percent (based on a 26-week holding period), Copeland and Mayers (1982) argued that the cost of implementing a short sale trading rule would offset the gain.

In a recent study, Peterson and Peterson (1995) analyzed the market reaction to stocks that were recommended by Value Line Investment Survey in its "Stock Highlights" column and found a statistically significant positive response before and after the date on which the column is published. Their study avoids the issue of "timeliness rank" as all of the securities in the "Stock Highlight" column have identical timeliness ranks. Contrary to the Holloway study (1983), Peterson and Peterson points out that, despite the fact that Value Line wishes subscribers to receive the publication on a Friday, it often arrives a day before or after Friday.

Financial researchers (Givoly *and* Lakonishok, 1979 ; Groth, Lewellen, Schlarbaum *and* Lease, 1979 ; Bjerring, Lakonishok *and* Vermaelen, 1983 ; Liu, Smith *and* Syed,1990 ; Barber *and* Loeffler, 1993 ; Walker *and* Hatfield, 1996 ; and Womack, 1996) have used an event study methodology to test the information content of analysts' recommendations. Liu, Smith, and Syed (1990) analyzed the reaction of stock prices to security recommendations listed in the "Heard on the Street" column in the Wall Street Journal. Based on the finding that investors earned positive cumulative abnormal returns (CARs) of approximately 3.4 percent over a 21-trading day period centered

around the announcement date, Liu, Smith, and Syed (1990) concluded that analyst recommendations do convey new information to the market (the information hypothesis). Barber and Loeffler (1993) examined recommendations listed in the monthly "Dartboard" column of the Wall Street Journal. While the professional analyst's stock picks earn CARs of approximately 4 percent on the publication date, the CARs are partially reversed over the next 25 days. As a result, Barber and Loeffler (1993) concluded that investment recommendations have both an information and a price pressure effect. The price pressure hypothesis suggests that the abnormal returns associated with investment recommendations are caused primarily by the actions of naive investors. If this hypothesis is correct, then one would expect analysts' recommendations to have no effect on security prices in the long term.

Womack (1996) examined the buy and sell recommendations of the fourteen most notable brokerage firms in the U. S. In contrast to Barber and Loeffler (1993), he concluded that the market reaction to announcements is permanent and does not revert to the mean, thus suggesting that these recommendations of analysts still influence the stock price for several months post announcement. To effectively distinguish between the price pressure and information hypotheses, we argue that portfolio performance should be evaluated over at least a six- to twelve-month holding period. Most analysts' recommendations are based on a similar time frame.

3. Data

This research examines recommendations of professional analysts as announced by Dan Dorfman in his column in USA Today. Only firms listed on either the New York Stock Exchange or the American Stock Exchange are included in the study. Security return data (both individual and market) were obtained from the CRSP (Center for Research in Security Prices) tapes. The sample period is January, 1988, to December, 1991. The initial sample contained 807 investment recommendations, but 70 recommendations were excluded due to insufficient price data during the estimation periods. As a result, the final sample contains 737 recommendations.

《Table 1》 shows the number of analysts' recommendations by year.

《Tab. 1》 Dorfman Investment Recommendations in USA Today (1988—1991)

	Positive Recommend	Negative Recommend		Market
	Buy	Sell	Total	Return*
1988	152	16	168	12.40%
1989	178	15	193	27.25
1990	75	66	141	- 6.56
1991	130	105	235	26.31
Total	**535**	**202**	**737**	
% of Total	**73%**	**27%**	**100%**	

* : The one-year rate of return on the S&P 500 stock portfolio from the Center for Research in Security Prices.

Five hundred and thirty-five recommendations (73 percent) are positive (buy), and 202 recommendations (27 percent) are negative (sell). Womack (1996) found that the "ratio of new buy to sell recommendations (1989-1991) issued by the fourteen major U.S. brokerage firms is approximately 7:1" (p.164). His results indicated that sell recommendations have more predictive power than the buy ones. The data in both our study and Womack's provide support for the belief that analysts have a predilection for making positive recommendations to avoid offending current or potential clients. Many large brokerage firms also have extensive investment banking operations, in addition to providing brokerage and research services. Given the industry's unwillingness to issue negative recommendations, one might expect negative recommendations to be more accurate than positive recommendations. This study tests this hypothesis and also examines the sensitivity of the results to different holding periods.

4. Methodology

4.1. Event Study Methodology

This study employs the following market model to calculate the excess return, or prediction error (PE_{jt}), for each firm j at event day t.

$$PE_{jt} = R_{jt} - (\alpha + \beta_j R_{mti}) \quad \cdots\cdots (1)$$

R_{jt} is the rate of return on security j for day t, and R_{mt} is the return on the

CRSP equal-weighted index on day t.[4] The coefficients α_j and β_j are ordinary least squares estimates of the intercept and slope, respectively, from a prior-event market model regression for days -500 to -251. Prediction errors are estimated over the interval $t = -5$ days prior to the Dorfman announcement of the investment recommendation to $t = +250$ days after the announcement.[5] Day zero (t=0) is defined as the last trading day before a recommendation is reported in the Dorfman column of USA Today.[6]

The cumulative prediction error (CPE) from day T_1 to day T_2 for each recommendation j is：

$$CPE_j = \sum_{T_1}^{T_2} PE_{jt} \qquad \cdots\cdots (2)$$

Cumulative prediction errors are estimated over various intervals. For a sample of N securities, the mean cumulative prediction error ($MCPE$) is defined as：

$$MCPE = \frac{\sum_{j=1}^{N} PE_j}{N} \qquad \cdots\cdots (3)$$

The expected value of the CPE is zero in the absence of abnormal performance.

The test statistic is based on an aggregation of mean standardized cumulative prediction errors ($MCPE$) (see Appendix). The test statistic for a sample

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[4] Brown and Warner (1980) found that the use of an Equal-Weighted Index is actually more likely to detect abnormal performance than use of a Value-Weighted Index. For an explanation as to why this is so, see Peterson (1989). In addition, current research (Liu, Smith *and* Syed, 1990；and Barber *and* Loeffler, 1993) uses the equally-weighted index. Using the same index in this study will allow for more relevant comparisons of the findings.

[5] Our prior-event estimation period occurs before the holding period (250 trading days, which is approximately a calendar year) that we are testing. We also examine a holding period of 125 days, which is approximately 6 months. Six months and a year are normal investment horizons for professional analysts.

[6] It should be noted that investment recommendations are usually disclosed to the brokerage firm's institutional and retail clients prior to publication in USA Today. The time span is relatively short (1 to 3 days).

of N securities is :

$$Z = \sum_{j=1}^{N} MSCPE_j \Big/ \sqrt{N} \quad \cdots\cdots (4)$$

Each $MSCPE_{jt}$ is assumed to be distributed unit normal in the absence of abnormal performance. Under this assumption, Z is also unit normal.

Event study methodologies evaluate investment performance by subtracting a security's expected rate of return from its actual rate of return (see equation 4.1). When a security's expected rate of return is estimated using parameters calculated from a pre- or post-event estimation period, the methodology tests only whether a security's performance during the event period differs from its performance during the estimation period. As a result, the abnormal returns (if any) measure relative performance rather than absolute performance. If no abnormal returns are observed during the event period, the researcher can conclude only that the security's performance did not change relative to the estimation period. The researcher cannot rule out, however, the possibility that the security was a good investment during both periods.[7] The null hypothesis of no abnormal performance during the estimation period (i.e. α_p αp = 0) is tested for each category p.

4.2. Sharpe, Treynor, and Jenson Measures

The Sharpe, Treynor, and Jensen measures have generally not been used to analyze the performance of professional stock analysts despite the fact that they are commonly used to evaluate the performance of portfolio managers. While the Sharpe and Treynor measures have some similarity, each considers a different type of risk.

Sharpe's measure examines average excess return per unit of total risk :

$$Sharp = \frac{\overline{(R_p - R_f)}}{\alpha_p} \quad \cdots\cdots (5)$$

[7] If α_j in Equation (1) is positive and statistically significant, then the test would be biased against finding a positive abnormal return. However, a stock with a positive α_j during the estimation period and no abnormal return during the event period would still be regarded as a good investment.

where $\overline{(R_p - R_f)}$ = the average monthly excess return on a portfolio of stocks with a recommendation by Dan Dorfman (where R_f equals the one-month return on a 3-month T-Bill), and α_p = the standard deviation of portfolio p.

Treynor's measure, although similar to Sharpe's, examines average excess return per unit of systematic risk：

$$Treynor = \frac{\overline{(R_p - R_f)}}{\beta_p} \quad \cdots\cdots (6)$$

where β_p = the beta coefficient for portfolio p.

The Sharpe and Treynor measures for the market portfolio are calculated in a similar fashion using the *CRSP* equal-weighted index.

Jensen's measure examines excess return as a function of systematic risk：

$$R_{pt} - R_{ft} = \alpha_p + \beta_t(R_{mt} - R_{ft}) \quad \cdots\cdots (7)$$

where R_{mt} = the monthly return on the *CRSP* equal-weighted index. The coefficients α_p and β_p are estimated using *OLS* regression. If α_p is statistically different from zero, then the null hypothesis of no abnormal performance is rejected.

This research calculates Sharpe, Treynor, and Jensen measures for two trading strategies. First, the strategy assumes that an investor buys a recommended stock at the beginning of the month that contains the publication date (t=0) and holds the stock for 13 months (i.e., the holding period is t=0 to t=+12). Second, the strategy assumes that an investor buys a recommended stock at the beginning of the month following the publication date and holds the stock for 12 months (i.e., the holding period is t=+1 to t=+12). As a result, each performance measure is calculated using pre-recommendation prices (prices on which the analysts' recommendations are based) and post-recommendation prices (prices at which investors are likely to trade). Buy and sell recommendations are examined separately. The Sharpe, Treynor, and Jensen measures for the buy and sell categories are calculated using monthly returns from January 1988 to December 1991 (48 months).

5. Results

5.1. Event Study Methodology

This study employs the following market model to calculate the excess return, or prediction error (PE_{jt}), for each firm j at event day t.

5.2. Event Study Results

5.2.1. Announcement Day Effects

One objective of this study is to examine the returns surrounding the announcement date to determine if any new information is provided to the market. The results are presented in 《Table 2》. On day 0, buy and sell recommendations have *MCPEs* of 0.0034 (Z=3.77) and -0.0032 (Z=-3.05), respectively. Although these results are statistically significant, any excess gain or loss to the investor was minimal (0.3 percent and -0.3 percent). Day +1 to day +5 have statistically significant results for the sell recommendations; however, the percentages of gains or losses are still less than 1 percent.

《Tab. 2》 Dorfman Investment Recommendations : Event Study Results (1988—1991)

Interval (Trading Days)	Buy		Sell	
	MCPE	Z	MCPE	Z
[-250 , -125]	-0.0442	-4.45[c]	-0.0833	-7.12[c]
[-250 , -5]	-0.0512	-3.57[c]	-0.1920	-11.80[c]
[-5 , -1]	0.0025	1.88	-0.0060	-1.76
[-1 , -1]	-0.0007	0.02	-0.0043	-4.02[c]
[0 , 0]	0.0034	3.77[c]	-0.0032	-3.05[c]
[1 , 1]	0.0010	0.37	0.0020	2.41[b]
[1 , 5]	-0.0026	-1.29	-0.0059	-2.14[b]
[1 , 125]	-0.0695	-7.24[c]	-0.0926	-7.60[c]
[1 , 250]	-0.1253	-9.65[c]	-0.2230	-13.72[c]
[-5 , 125]	-0.0637	-6.38[c]	-0.1017	-8.03[c]
[-5 , 250]	-0.1195	-9.03[c]	-0.2321	-13.99[c]

[a], [b], [c] indicate significance at the 10%, 5%, and 1% level, respectively.

Note : the sample sizes for each category are as follows—buy (535 recommendations) and sell (202).

These results are in contrast to findings in previous research. Liu,

Smith, and Syed(1990) reported the average abnormal return (on announcement day, t=0) of 0.0154 (t=16.37) for buy recommendations and -0.0199 (t=-15.46) for sell recommendations. The investor either gained or lost over 1.5 percent. They concluded that publication of recommendations in the Wall Street Journal's "Heard-on-the-Street" column (which was the source of their recommendations) impacts security prices. As their forecast period only included 10 days before and after publication date, they did not consider long-term impact.

Our findings also contradict the results in Barber and Loeffler(1993). Their study examined the recommendations in the monthly "Dartboard" column in the Wall Street Journal. On publication date, they noted that buy recommendations made by professional analysts resulted in a mean abnormal return of 0.0353 (t=12.19). They considered a period lasting 25 days post-announcement and found that the initial price response is partially reversed. As they did not have any sell recommendations, no direct comparison to our findings for sell recommendations can be made.

5.2.2. Long-Term Analysis

The second objective in this study is to investigate an investor's long term results if he followed the third hand recommendation. The results are shown in 《Table 2》 Based on a pre-event estimation period, investors suffered a cumulative abnormal negative return for both buy and sell recommendations, suggesting inferior performance. The buys and sells had abnormal annual returns of -12.5 percent (Z=-9.65) and -22.3 percent (Z=-13.72), respectively. Had an investor bought or sold the recommended stocks, he would have lost approximately 12 percent and 22 percent, respectively. Because the results in 《Table 1》 do not include brokerage commissions, the actual losses experienced by most investors would have been even higher.[8]

[8] Bodie, Kane, and Marcus (1993) indicate that the commissions charged by full-service brokerage firms often represent about 2 percent of the transaction value. Based on a hypothetical purchase of 200 shares at $26 per share, for example, Bodie, Kane, and Marcus (1993) indicate that full-service brokers charge about $135. Discount brokers charge approximately $61 for a similar transaction. These transaction costs would have increased the losses for both groups.

To analyze analysts' performance using an event study methodology, one should recall that event studies measure relative performance, that is, the technique tests only whether stock performance during the event period differs from that observed during the estimation period. Investors should consider the cumulative prediction errors earned during the event period, and the abnormal performance (if any) observed during the estimation period itself. As a result, the finding that securities tend to exhibit normal or negative abnormal returns following positive recommendations may not be surprising. In an efficient market one would expect security prices to adjust rapidly to reflect the information contained in analyst recommendations. As a result, if a security performs well during the estimation period, then an event study methodology is biased toward finding no abnormal return during the event period.

5.2.3. Sharpe, Treynor, and Jensen Measures Results

The Sharpe, Treynor, and Jensen measures results are reported in 《Table 3》

《Tab. 3》 Analysts' Investment Recommendations : Sharpe, Treynor, and Jensen Measurers (1988—1991)

	Sharpe's Measure		Treynor's Measure		Jensen's Measure			
	Analyst Portf.	Market Portf.	Analyst Portf.	Market Portf.	α_p	t	β_p	t
Thirteen-month period : begin at announcement month [t=0 ; t=+12]								
Buy	0.17	0.31	0.90	1.39	-0.51	-1.50	1.04	0.48
Sell	0.06	0.27	0.45	0.24	-0.76	-1.11	0.97	0.52
Twelve-month period : following announcement month [t=+1 ; t=+12]								
Buy	0.17	0.29	0.90	1.29	-0.52	-1.75[c]	1.09	1.41
Sell	0.12	0.25	0.76	1.15	-0.39	-0.57	1.00	0.00

[a], [b], [c] indicate statistical significance at the 10%, 5%, and 1% level, respectively. Tests on α_p are against zero; tests on β_p are against one.

Note : the sample sizes for each category are as follows—buy (535 recommendations) and sell (202).

The results in the upper panel of the table are based on pre-recommendation prices (i.e., the holding period is 13 months : t=0 to t=+12). The results in the lower panel are based on post-recommendation prices (i.e.,

the holding period is 12 months : t=+1 to t=+12). For both buy and sell recommendations for both time periods, the Sharpe and Treynor measures are less than the market portfolio measures. Jensen's alpha measures are negative, and the results for the buy category for the 12 month period following the announcement are statistically significant at the 10 percent level (α_p =-0.52 percent per month and t = 1.75). None of the results in 《Table 3》 reflect transaction costs. These findings support those of the event study methodology, that, in this case, investors did not benefit from the recommendations.

In general, the beta coefficients for each category are very close to one. None are statistically significant, therefore the null hypotheses that $\beta=1$ cannot be rejected. The stocks recommended in this sample exhibited almost the same risk as the market.

6. Conclusions

This study has taken research into analysts' recommendations one step further than prior studies which focused on the benefits of second hand information to investors by testing the benefits of third hand information. The world of equity trading includes continual stock tips for investors where the "tip" is based on a professional analyst's recommendation. The source of the third hand information in this study is a "veteran stock-market journalist" (Dan Dorfman) who has close relationships with Wall Street analysts. The results indicate that, even though the announcement effect was statistically significant, the return to the investor was less than one percent. Prior studies utilizing second hand information (Barber and Loeffler ,1993 ; Walker and Hatfield ,1996) have found a return to investors of four percent. The results of the Sharpe, Treynor, and Jensen measures support those of the event study methodology, that is, in this study, investors did not benefit from the analysts' recommendations reported by Mr. Dorfman. Jensen's alphas are negative, and the Sharpe and Treynor measures indicate inferior portfolio performance.

As Palmon, Sun, and Tang (1994) point out, there are two groups of investors. One group, institutional and retail clients, gets to trade before the "tips" appear in

USA Today. The second group, individual investors, buys or sells after reading the "tips" in the newspaper. The results suggest that both groups experience subpar returns by following the "tips." Actual returns would be even lower because the results do not include any measure of transaction costs. The lack of a significant market reaction, coupled with the Sharpe, Treynor, and Jensen findings, suggests that third hand information does not provide any new information.

Appendix

Standard event study methodology is used to estimate the excess returns (see Dodd *and* Warner, 1980). For intervals longer than one day, however, Karafiath and Spencer(1988) show that the Dodd-Warner test statistic is biased, and that the bias increases with the length of the interval examined. As a result, we use the test statistics suggested by Karafiath and Spencer (1988) and Mikkelson and Partch (1988). These test statistics are smaller than would be obtained if the serial correlation in the prediction errors were ignored.

The formula for the test statistic is :

$$MSCP_j = \left(\frac{1}{\sqrt{T_2 + T_1 + 1}}\right)\left(\frac{\sum_{t=T_1}^{T_2} PE_{jt}}{\sqrt{Var(\sum_{t=T_1}^{T_2} PE_{it})}}\right) \quad \cdots\cdots\cdots\cdots\cdots\cdots \text{(a.1)}$$

where T_1 is the first day of the interval, T_2 is the last day of the interval, and the denominator is the square root of the variance of the cumulative prediction errors of firm j. The variance is defined to be :

$$Var(\sum_{t=T_1}^{T_2} PE_{it}) = V_j^2\left(T + \frac{T^2}{ED} + \frac{\sum_{t=T_1}^{T_2} R_{mt}^2 - T(\bar{R}_m)^2}{\sum_{t=-500}^{-250}(R_{mt} - \bar{R}_m)^2}\right) \quad \cdots\cdots\cdots\cdots\cdots \text{(a.2)}$$

V_j is the residual variance of firm j's market regression, T is the number of days

in the interval $(T_2 - T_1 + 1)$, ED is the number of days in the estimation period for the market model, R_{mt} is the market return on day t, and $\overline{R}_m$ is the mean market return during the estimation period. Because the weights used in calculating the $MSCPE$-statistic are a modified inverse of the standard deviation of the cumulative prediction errors, the Z-statistic can differ in sign from the average prediction error (since returns of securities with lower variance are given greater weight).

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第三手訊息有益於投資者嗎？
—以股票解盤者之推薦為實例探討

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摘要

許多實證研究結果顯示當股票被分析師推薦且被發表於各商業日報或期刊時，該股票在宣告日或其前後日期間有顯著的正異常報酬。這些宣佈提供了第二手資訊給予投資者。本研究檢視 Dan Dorfman 在整理股票分析師對其報告或推薦之股票後，將其所認同之股票公佈在其 USA Today 的專欄上之投資績效。亦即，本研究探討**第三手訊息**對股票投資績效之影響。本文目標在於確認第三手訊息是否提供市場新的資訊，並且檢視投資者跟隨第三手訊息所做之長期投資結果。本文實證結果顯示，投資者所賺取之異常報酬低於一個百分比，且其年投資報酬率是負值。因此，本文結論投資者並未能從第三手訊息所推薦之股票中獲利。

關鍵詞：第三手訊息、宣告效果、專家推薦、異常報酬。

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