

EXTRAPOLATION BIAS: **INSIDER TRADING IMPROVEMENT SIGNAL**

HIGHLIGHTS

Consistent with previous studies, we find that knowledge of insider trading is valuable to non-insider investors.

We find that the change in insider buying (increased insider buying in recent periods) is approximately as useful as the intensity of insider buying -- how many insiders are buying, how large are the purchases. The same is true for insider selling.

An interesting finding with respect to insider trading is that knowledge of insider selling is roughly twice as valuable as knowledge of insider buying, contrary to the conventional wisdom.

More importantly, we confirm that insider trading is a useful signal to determine if investors are naively extrapolating recent negative, but temporary, information concerning a company's **future** prospects.

Backtest results document that our *Extrapolation Bias* strategy using insider trading as the improvement signal has roughly double the alpha of insider trading by itself and is even more effective compared to simple contrarian strategies of buying last period's "losers."

BEHAVIORAL BIASES AND NAIVE EXTRAPOLATION

Our *Earnings Heuristics* strategy consists of two major components: *Anchoring Bias*, which exploits **under**reaction to new, positive information, and *Extrapolation Bias* which exploits **over**reaction to past, negative information. *Anchoring Bias* has been described in

several of our previous Research Reports. This report deals with the behavioral biases that cause investors to overreact and describes one aspect of our *Extrapolation Bias* strategy which exploits overreaction.

There are a number of investment strategies that either explicitly or implicitly attempt to exploit overreaction on the part of investors. For example, simple contrarian strategies such as buying "yesterday's losers" in the hope that these stocks will be "tomorrow's winners" are generally based on the notion that investors have overreacted to recent bad information concerning a company. Other strategies such as buying low P/E, low P/B and high D/P stocks (commonly called "value strategies") may also be based on the notion that investors have overreacted to recent bad information and consequently the stock is selling for "too low" of a P/E ratio, etc.

Our concern with these types of contrarian and value strategies is that in many cases (we believe most cases) the stock **deserves** to be a "loser," or deserves to sell at a low P/E. That is, the market generally "gets it right" and has placed a low, but proper, valuation on these stocks because they have low growth prospects, or are extremely risky.

Extrapolation Bias is different from the typical contrarian or value strategy in that it is a two-step process. We first look for conditions under which investors are likely to be vulnerable to heuristic biases which cause them to naively extrapolate recent negative information about a company. We then look for "signals" that the recent negative information that is being naively extrapolated into the future is temporary in nature. When investors extrapolate negative, but temporary, information into the future, they have biased expectations regarding the firm's **future** profitability -- they underestimate the firm's future earnings, ROE, etc., -- and, as a result the stock is underpriced.

Naive extrapolation is largely the result of behavioral biases associated with two heuristics -- the **representativeness heuristic** and the **saliency heuristic**. Representativeness involves the tendency of humans to generalize about a population of future outcomes after observing a small sample -- for example, after observing only one or two outcomes, humans will frequently conclude that these two outcomes are representative of future outcomes. Saliency involves the tendency of humans to assign too high a probability to low frequency events after observing a recent, vivid example of the event. For example, immediately after a

plane crash has been reported in the news, people will greatly overestimate the probability of future plane crashes.

The first step in our *Extrapolation Bias* strategy is to identify conditions under which investors are most likely to naively extrapolate recent, negative information into the future. Thus, we first look for conditions under which investors are likely to be vulnerable to the combination of representativeness and saliency heuristic biases -- that is, they are vulnerable to extrapolating. The second step is to determine whether the negative information investors are extrapolating into the future is, most likely, temporary. To do this, we look for "improvement signals" -- that is, valid signals that the recent negative results are temporary and the company's performance in the future will improve. If investors are, in fact, vulnerable to naive extrapolation, they will ignore the improvement signal and will have biased (negative) expectations concerning the company's future and the stock will be underpriced. When the company's fortunes actually do improve in the future, the market will eventually recognize this, causing the stock price to rise and creating the alpha for our *Extrapolation Bias* strategy.

IMPROVEMENT SIGNALS

The improvement signals we utilize come from the people who understand the companies the best -- company managers and other insiders. The two improvement signals we currently utilize are:

Stock repurchases

Insider purchases of the company's stock.

Our research indicates that the conditions under which investors are likely to ignore these two improvement signals are different. That is, the first step in our *Extrapolation Bias* strategy (identifying conditions under which investors are likely to naively extrapolate recent negative information and ignore a valid improvement signal) depends upon the type of improvement signal. In Research Report No. 8 we document how *Extrapolation Bias* utilizing stock

repurchases as the improvement signal is actually implemented and provide considerable supporting evidence as to the effectiveness of this part of our strategy. This Research Report discusses how we use insider purchases as the improvement signal.

INSIDER TRADING DATA

One of the problems associated with insider trading data is determining whether the insider trade is a valid signal that the stock is either under or overvalued. This is particularly true for insider selling as insiders might sell for a number of reasons -- for example, they may believe the stock is overpriced, or they may want to diversify, or they may simply need cash. While insider buying is more straight forward because insiders who are buying their company's stock typically believe the stock is undervalued, there may be other reasons for the insider purchases -- in particular, one needs to determine whether insiders are simply exercising options which are close to expiration or, in more recent years, simply buying stock because the Board of Directors has initiated a policy that certain officers in the firm **must** be shareholders. There are other problems involved in interpreting insider sales and purchases, such as the number of different insiders involved, the size of the purchase relative to their current holdings, the position of the insider, etc. Because of these problems, we used a ranking of insider trading called Signal II to backtest the use of insider trading as an improvement signal for our *Extrapolation Bias* strategy.

Signal II is an insider trading rating system sold by CDA/Investnet of Ft. Lauderdale, Florida. There are five ratings (-2, -1, 0, 1, 2) that span the range of extremely bearish (insider selling) to extremely bullish (insider buying). Exactly how the ratings are determined is not known because the system is proprietary. Conversations with its creator, Carr Bettis of Arizona State University, suggest that the system uses inputs other than just the size and number of insider trades -- for example, the pattern of trades of individual insiders, the insiders position in the firm, price behavior, etc.

A monthly history of Signal II data for the period October, 1984 - June, 1995 was made available to us for backtesting. Since the data is out-of-sample beginning only with October, 1993, backtest results for simple strategies based on just the Signal II ratings must be interpreted with extreme caution. This is less of a problem when we combine the Signal II rating with stocks we identify

as being vulnerable to naive extrapolation -- this is because these stocks are identified based on behavioral characteristics that were determined without ever considering stock returns

The Signal II rating data was taken into PC+ for DOS so that it could be transferred into an Easy database for backtest analysis. This was a very involved job that took at least two weekends of computer time to effect the transfer, and many companies were lost in the transfer due to CUSIP mismatches.¹ The resulting Zack's Easy database consisted of 3,611 companies that had insider ratings at one time or another over the sample period.

SIMPLE INSIDER TRADING STRATEGY RESULTS

Backtest results for simple insider trading strategies using the Signal II data are reported in Tables 1 and 2. Carr Bettis informed us that the "best" strategy based solely on the insider trading data is one that buys stocks for which the rating has just changed to +2. On the next page Table 1A reports average 12-month holding period excess returns for a strategy that buys stocks at the end of the month in which the rating has just changed to +2. (Carr Bettis assured us that there is enough lead time to effect the transactions by the end of the month). For this simple strategy, average **annualized** excess return was 4.81%. Based on the t-statistic, this excess return is significant at the .003 level, based on a one-tailed test.² Table 1A also reports that 67% of the monthly portfolios have positive excess returns, and that the average number of stocks in each monthly portfolio is 41.

Table 1B provides backtest results for a strategy that buys stocks for which the rating has recently changed to -2. The statistical analysis is the same as for Table 1A. The average 12-month excess return was -9.96%, which is significantly negative and has an absolute value more than twice that of the average excess return reported in Table 1A. The number of monthly portfolios with negative excess returns was 77%, with an average of 35 stocks each month.

TABLE 1A

¹As one of many examples of the problems encountered with this transfer, the Signal II file supplies six digit CUSIPs, whereas the Compustat database uses eight digit cusips.

²Since the portfolios were formed each month over the period October, 1984 - June, 1994, the 12-month returns are overlapping in time. To get a correct standard deviation for statistical testing, the returns were taken into the statistical program RATS where the standard deviation was calculated with the Hansen-White procedure for overlapping observations. See p. 14-157 in the RATS 4.2 manual for details.

12-Month Excess Returns from Buying Stocks Recently Rated +2 At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Positive	Avg. # of Stocks per Month
4.81%	2.62	0.003	67%	41
TABLE 1B 12-Month Excess Returns from Buying Stocks Recently Rated -2 At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Negative	Avg. # of Stocks per Month
-9.96%	-3.50	0.000	77%	35

On the next page Tables 2A and 2B reports the average **monthly** excess returns for the months subsequent to portfolio formation for these two simple strategies based on strong insider buying and strong insider selling. These are the same portfolios that underlie Tables 1A and 1B, but the returns are not overlapping. For example, column 1 of Table 2A reports the average excess return one month after portfolio formation for portfolios formed each month over the period October, 1984 - June, 1994. The average excess return is a significantly positive 0.92%, with 65% of the months positive. Continuing with the example, row 7 reports an average return of -.36% seven months after portfolio formation, with only

44% of the months positive. Overall, Table 2A suggests that the excess returns from the buy strategy are large and significant for the first two months after portfolio formation, and then become small and less significant in the subsequent months (month 11 is significant at 0.67%, but is surrounded by negative average returns for months 10 and 12). Table 2B is similar to Table 2A, except that it reports average excess returns for a strategy of buying the stocks each month whose rating changed to -2. This table provides an interesting contrast to Table 2A. The average returns are large and negative for the first six months, and are negative for eleven of the twelve months reported.

TABLE 2A				
Monthly Excess Returns from Buying Stocks Recently Rated +2				
Month After Portfolio Formation	Avg. Monthly Excess Return	T-Statistic	Significance Level	% Months Positive
1	0.92%	4.00	0.00	65%
2	0.59%	2.40	0.01	62%
3	0.30%	1.07	0.14	58%
4	0.35%	1.37	0.09	56%
5	-0.11%	0.41	0.66	48%
6	0.37%	1.59	0.06	57%
7	-0.36%	1.57	0.94	44%
8	0.41%	1.56	0.06	61%
9	0.28%	0.95	0.17	52%
10	-0.06%	0.25	0.60	46%
11	0.67%	3.10	0.00	63%
12	-0.18%	0.68	0.75	49%

TABLE 2B				
Monthly Excess Returns from Buying Stocks Recently Rated -2				
Month After Portfolio Formation	Avg. Monthly Excess Return	T-Statistic	Significance Level	% Months Positive
1	-1.33%	3.53	0.00	61%
2	-1.67%	4.17	0.00	68%
3	-0.58	1.40	0.08	53%
4	-1.40%	3.43	0.00	70%

5	-0.71%	2.09	0.02	64%
6	-0.70%	2.13	0.02	60%
7	-0.47%	1.52	0.07	57%
8	-0.38%	1.08	0.14	49%
9	-0.48%	1.52	0.07	50%
10	0.19%	0.48	0.68	49%
11	-0.28%	0.72	0.24	49%
12	-0.32%	0.96	0.17	53%

It has also been suggested that **changes** in insider trading are as important and perhaps more important than the **intensity** of insider trading. To test this conjecture, we formed portfolios of stocks for which the Signal rating had been changed from either 0 to +1 or from +1 to +2 in the current month -- we refer to these stocks as having been rated "positive" in the most recent month. Similarly, we formed portfolios which had been rated "negative" in the most recent month -- those for which the rating changed from 0 to -1 or from -1 to -2. These results are reported below in Tables 3A and 3B.

TABLE 3A				
12-Month Excess Returns from Buying Stocks Recently Rated "Positive" At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Positive	Avg. # of Stocks per Month
4.87%	2.54	0.006	67%	56
TABLE 3B				
12-Month Excess Returns from Buying Stocks Recently Rated "Negative" At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Negative	Avg. # of Stocks per Month
-9.26%	-4.37	0.000	81%	59

Note that these results are very similar to those reported in Tables 1A and 1B. Thus, it appears that changes in insider trading patterns may be as important as the intensity. However, given the construction of these tests, this should not be too surprising as there is considerable overlap in the two strategies. For example, the portfolios represented in both Table 1A and Table 3A contain the "new" +2 rated stocks -- the difference between the two approaches is that Table 3A contains the "new" +1 stocks, whereas Table 1A does not.

In general, the results reported in Tables 1, 2 and 3 are consistent with previous studies on insider trading.³ Knowledge of insider trading is valuable -- stocks which insiders have recently bought tend to produce positive excess returns after the insider trading data becomes publicly available, and vice versa for insider selling. Both the intensity of insider trading and the change in direction of insider trading seem to be important. Perhaps the most interesting result is the finding that insider selling is a stronger signal than insider buying, contrary to earlier studies and what might be termed the "conventional wisdom."⁴ Consistent with this, the excess return associated with insider selling lasts longer (perhaps as long as nine months) whereas the excess return associated with insider buying is relatively short-lived, perhaps lasting only two-four months.

We can suggest two reasons as to why insider selling turns out to be a stronger signal than insider buying -- the first reason is institutional; the second reason is behavioral. First, income taxes may influence insiders' trading decision. Since the sale of stock is likely to trigger a tax liability and the purchase of stock does not, insiders may require stronger evidence that their company's stock is overpriced in order to be willing to sell compared to the information that might cause them to buy. Second, the heuristic bias of confirming/disconfirming information may be at play -- that is, humans tend to give more weight to information that confirms their prior beliefs and less weight to information that disconfirms their priors. Insiders may be (probably are) predisposed to believe that their company's stock is undervalued. Thus, insiders may require stronger negative information regarding the company's prospects before selling, compared to the "strength" of positive information that might cause them to buy their company's stock. Both of these factors (taxes and confirming/disconfirming information) are consistent with insiders requiring stronger information in order to sell their company's stock than to buy the stock, and it seems plausible that stronger information associated with insider selling would generate a stronger and longer lasting stock price effect than would be the case for insider buying.

SIMPLE OVERREACTION STRATEGY RESULTS

As noted earlier, our *Extrapolation Bias* strategy is a two-step process. We first identify stocks which we believe are vulnerable to naive extrapolation and then we look for

³See, for example: J.F. Jaffe (1974), "Special Information and Insider Trading," *Journal of Business* (July), 410-428; J.M. Karpoff, and D. Lee (1991), "Insider Trading Before New Issue Announcements," *Financial Management* (Spring), 18-26; D. Lee, W.H. Mikkelson, and M.M. Partch (1992), "Managers' Trading Around Stock Repurchases," *Journal of Finance*; and S.H. Penman (1985), "A Comparison of the Information Content of Insider Trading Management Earnings Forecasts," *Journal of Financial and Quantitative Analysis* (March), 1-17.

⁴However, in one of the most recent studies on insider trading, Pettit and Venkatesh also report a similar result. See R. Pettit and P.C. Venkatesh (1995), "Insider Trading and Long-Run Return Performance," *Financial Management* (Summer), 88-103.

"improvement signals" to determine if the recent, negative information is temporary. The two improvement signals we currently utilize are stock repurchases and insider buying. Previous testing has convinced us that the conditions under which investors are likely to naively extrapolate negative, but temporary information, are dependent upon the type of improvement signal that is being used.

With respect to the insider buying improvement signal, we have found that investors are likely to naively extrapolate and ignore the insider buying signal if the stock price has significantly underperformed the market for a long period of time. The intuition for this is that if the stock has underperformed in terms of price for a long period of time, investors are very disappointed in the company and have lost confidence in the firm's management -- in these cases, if insiders begin to buy the stock, the market ignores this signal because investors no longer have confidence in the managers.

To test this conjecture, we first start with stocks that meet *RJF's* minimum market value criterion,⁵ and then identify stocks with poor relative price performance. More specifically, a stock must rank in the **bottom decile** on two-year price performance as of two months ago (i.e., P_{t-2}/P_{t-26} must rank in the bottom decile) and must also rank among the top 52.5% of stocks based on recent two month price performance (i.e., P_t/P_{t-2} must rank in the top 52.5%.) The intuition for using a two-year period of extreme stock price underperformance followed by a two-month "leveling off" period is the following: It takes at least two years of underperformance before negative behavioral biases will develop that are strong enough to cause investors to ignore an improvement signal such as insider buying. We impose the two-month "leveling off" criteria to try to capture the effect that as insiders begin to buy, their buying activity, as well as the buying activity of others who are aware of the insider buying (but before the insider trading information becomes public information) will support the stock price and cause the previous long period of underperformance to level out. We refer to stocks which meet these criteria as "Negative Expectations" stocks. At the other extreme, stocks which have generated top decile price performance over the past two-years are referred to as "Positive Expectations" stocks.

The criterion of a two-year period of underperformance ("Negative Expectations" stocks) is very similar to a simple contrarian strategy of buying the previous period's "losers," as in the academic studies by DeBondt and Thaler.⁶ Consequently, we first examine the returns for simple contrarian strategies of buying past "losers" (Negative Expectations stocks) and, for comparison purposes, buying past "winners" (Positive Expectations stocks). These results are reported in Tables 4A and 4B below.

<p>TABLE 4A</p> <p>12-Month</p> <p>Excess</p>
--

⁵The minimum market value criterion is currently \$150 million. This minimum market value hurdle decreases as one goes back in time.

⁶See W. DeBondt and R. Thaler (1985), "Does the Stock Market Overreact?" *Journal of Finance* (July), 793-805; also W. DeBondt and R. Thaler (1987), "Further Evidence on Investor Overreaction and Stock Market Seasonality," *Journal of Finance* (July), 557-581.

Returns from Buying "Negative Expectations" Stocks At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Positive	Avg. # of Stocks per Month
-0.66%	-0.28	0.611	44%	83
TABLE 4B 12-Month Excess Returns from Buying "Positive Expectations" Stocks At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Negative	Avg. # of Stocks per Month
-3.06%	-2.20	0.001	66%	87

Note in Table 4A that the average 12-month excess return was an insignificant -0.66% for Negative Expectations stocks (i.e., bottom decile on P_{t-2}/P_{t-26} ranking and top 52.5% on P_t/P_{t-2} ranking) while Table 4B reports an average 12-month excess return of -3.06% for Positive Expectations stocks (i.e., top decile on P_{t-2}/P_{t-26} ranking and bottom 52.5% on P_t/P_{t-2} ranking). Thus, we find no evidence supporting a "bounce back" effect where last period's "losers" become next period's "winners," although we do find some evidence that last period's "winners" become next period's "losers."⁷

⁷There are a number of reasons why our results might differ from those of DeBondt and Thaler. First, the time periods are not identical. Second the samples are not identical. Third, DeBondt and Thaler generally used longer periods to determine previous "losers/winners" and always used longer periods to measure subsequent returns to "losers" and "winners."

EXTRAPOLATION BIAS: INSIDER TRADING RESULTS

Table 5 report average returns for strategies that combine the relative price rankings with the insider rankings. More specifically, our *Extrapolation Bias* strategy using insider buying as the improvement signal selects those stocks which have "Negative Expectations" and also are recently rated positive for insider buying by Signal. These results are reported in Table 5A. For completeness, we report in Table 5B results for portfolios which hold stocks that have "Positive Expectations" and also are recently rated negative by Signal.

TABLE 5A				
12-Month Excess Returns from Buying "Negative Expectations" Stocks Recently Rated Positive At the end of Each Month (12/31/84 - 6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Positive	Avg. # of Stocks per Month
8.33%	1.95	0.026	57%	2
TABLE 5B				
12-Month Excess Returns from Buying "Positive Expectations" Stocks Recently Rated Negative At the end of Each Month (12/31/84 -				

6/30/94)				
Average Excess Return	T-Statistic	Significance Level	% of Months Excess Return was Negative	Avg. # of Stocks per Month
-16.17%	-4.18	0.000	75%	2

For the *Extrapolation Bias* strategy (Table 5A) the average excess return is 8.33%, while for the combination of "Positive Expectations" and negative insider rating (Table 5B) the average annual excess return is -16.17%.

Several important points should be noted: First, and most importantly, by combining our rules for identifying stocks that are potentially vulnerable to naive extrapolation with insider trading as an improvement signal, we observe much stronger return patterns than when either factor is considered separately. For example, compare the 8.33% return for our *Extrapolation Bias* strategy (Table 5A) to the 4.87% return for the simple "positive" insider buying signal (Table 3A) and insignificant return of -0.66% for the simple "Negative Expectations," or "loser" strategy reported in Table 4A.

Second, and once again, the stronger return effects are associated with potential sale candidates. Note in Table 5B the -16.17% return associated with "Positive Expectations" recently rated negative because of insider selling.⁸

Third, while the combination strategies (Tables 5A and 5B) produce superior average returns to either strategy independently (Tables 3A, 3B, 4A, and 4D), the average number of stocks per month drops to only 2. However, CDA/Investnet claims to currently follow more than 7,700 companies and deliver more than 1200 non-neutral scores per week. Thus the number of companies that would make this screen on a current basis is likely to be closer to an average of 4 per month rather than 2 per month.⁹

Finally, on the last page Tables 6(A) and 6(B) report monthly excess returns for our *Extrapolation Bias* strategy ("Negative Expectations" combined with insider buying) and its mirror image ("Positive Expectations" combined with insider selling). These tables are identical in construction to Tables 2(A) and 2(B). The standard deviations (t-statistics) in Table 6 are larger (smaller) than in Table 2, due to the much smaller average number of stocks per month. Thus some of the average returns in Table 6 are not significantly different from zero, even though they are larger in absolute value than in Table 2. What is interesting about Table 6 is that the significant average returns occur at longer lags than in Table 2. For example, the first significant average return in Table 6A occurs three months after portfolio formation, and the second significant average return occurs at six months. In Table 2A the first two significant average returns were at one and two months after portfolio formation. The story in Table 6B is similar, with the first two significant returns occurring three and eight months after portfolio formation. This finding was not a surprise, as we expect *Extrapolation Bias* to be a "slow" strategy -- we do not believe that strong, negative

⁸While this fact cannot be exploited in the long-only *Extrapolation Bias* strategy, it could in either a long-short strategy, or in the enhanced index strategy we are currently developing which will focus on identifying and avoiding "losers" rather than simply betting on "winners."

⁹Recall that the sample size in our backtest was approximately 3,600, or roughly half the number of stocks CDA currently provides insider ratings on.

behavioral biases which have accumulated over a long period of time will quickly dissipate after investors observe the first improvement signal.

CONCLUSIONS

Overall the results in Tables 1 - 6 are interesting, though they must be interpreted with caution. Most of the insider rating data is from a system that was optimized over the period October, 1984 - September, 1993. Even so, it is interesting that the insider sell signal results in excess returns that are about twice the absolute value of the returns from buy signals. Also, the sell signal returns seem to persist over a longer period.

Most importantly, the results in Tables 5A and 6A are supportive of our *Extrapolation Bias* strategy using insider buying as the improvement signal -- especially so because the identification of the conditions under which investors are vulnerable to naive extrapolation were identified without ever considering stock returns. **And, to reiterate the most important point, the set of stocks identified as vulnerable to extrapolation bias ("Negative Expectations" stocks) which had "positive" insider buying generated an alpha that was roughly double the alpha of all stocks which had "positive" insider buying.** This results confirms, once again, the value of identifying the behavioral biases that actually cause alphas rather than simply looking for proxies that are correlated with alphas.

TABLE 6A				
Monthly Excess Returns from Buying Negative Expectations Stocks Recently Rated Positive				
Month After Portfolio Formation	Avg. Monthly Excess Return	T-Statistic	Significance Level	% Months Positive
1	0.64%	0.79	0.21	53%
2	0.84%	1.07	0.14	54%
3	2.38%	2.56	0.01	58%
4	1.15%	1.48	0.07	54%
5	-0.71%	0.84	0.80	51%
6	1.70%	2.15	0.02	59%
7	0.54%	0.60	0.73	50%
8	-0.47%	0.51	0.69	55%
9	-0.23%	0.26	0.60	46%
10	-0.96%	1.02	0.84	45%
11	2.15%	2.41	0.01	63%
12	-0.98%	0.92	0.82	45%

TABLE 6B				
Monthly Excess Returns from				

Buying Positive Expectation Stocks Recently Rated Negative				
Month After Portfolio Formation	Avg. Monthly Excess Return	T- Statistic	Significance Level	% Months Positive
1	-1.29%	1.22	0.11	57%
2	-1.23%	0.86	0.20	60%
3	-2.46%	1.84	0.04	64%
4	0.09%	0.06	0.52	54%
5	-0.60%	0.46	0.32	57%
6	-1.13%	0.87	0.19	60%
7	-0.93%	0.74	0.23	53%
8	-1.89%	1.76	0.04	60%
9	-1.27%	1.05	0.15	56%
10	-1.48%	1.31	0.10	54%
11	-1.96%	1.96	0.03	64%
12	-0.94%	0.83	0.21	49%