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The Wall Street Journal Investment Dartboard

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Market Responses to Recommendations of Returning Winners versus New Contenders.

Introduction

The Investment Dartboard is a monthly feature of the Wall Street Journal (WSJ). Each month, four professional stock pickers each select a stock they expect to perform best over the next six months. Four stocks are also chosen at random by throwing darts at the stock listings from the WSJ. At the end of the six-month contest period, the performances of the pros are compared with the darts. The contest uses a rolling six-month time frame for analysis.

Several researchers have conducted abnormal returns on the announcement of an analyst's recommendation. Many of these researchers concluded that it is in the best interest of investors to follow the advice of analysts. Bjerring, Lakonishok, and Vermaelen (1983) concluded that investors following the advice of a leading Canadian brokerage house would have earned positive abnormal returns after allowing for transaction costs. Studies on abnormal returns conducted by Liu, Smith, & Syed (1990) and Davies & Canes (1978) result in the same conclusion.

Barber and Loeffler (hereafter BL) (1983) addressed factors that drive abnormal performances associated with analysts' recommendations. They presented key characteristics of the Pros' Picks, the Dartboard Stocks, the S&P 500, and NYSE Firms for the WSJ Investment Dartboard. They found that the Pros' Picks are approximately the same size as the Dartboard Stocks and the median size of the NYSE firms. The Pros' Picks, however, have substantially lower dividend yields, substantially higher historic and projected EPS growth, and slightly higher PE ratios and betas. It is further stated that the differences were caused by selection biases professional analysts have when selecting stocks¹. However, BL stated that differences in dividend yields, historic and projected EPS growth, PE ratios, and betas offer no reason in predicting abnormal performance of the Pros' Picks relative to the Dartboard Stocks or market averages. BL tested for price and volume pressure around the announcement date of the new professional picks. They find an average abnormal return of 3.53% on the announcement day, as well as higher than expected trading volume. They attribute their findings to naive buying pressure as well as information content in the analysts' recommendations.

We extend the BL results by splitting the sample of stock chosen by the professionals. Each month, the two analysts from the previous (i.e., six months prior) contest with the highest return are invited back (we label them "winners"), and are accompanied by two new contestants ("contenders"). Since BL attribute the excess returns observed to investors buying on the basis of professionals' recommendations,

¹ Professional analysts have a tendency to pick high growth firms with low dividend yields. Capital appreciation was used to measure performance in BL's study making low yielding stocks a necessary criteria in picking stocks.

we test whether investors place greater price and volume pressure on the stocks chosen by the proven "winners" when compared to the unproven "contenders."

Data and Methodology

We collected the announcement date and recommendations of the winners and contenders for all WSJ issues of 1990 and 1991. Stocks not listed on the Compustat PC-Plus CD-ROM were deleted from the sample. The final sample consisted of thirty-seven winners' picks, and 53 contenders' picks. Daily closing prices and volumes were collected for each stock for a period from 120 days before the announcement to 20 days after.

We used standard event study methodology, as surveyed and evaluated by Brown and Warner (1985), to test for price pressure around the announcement. For each stock, we estimated the market model using days $t=-120$ to $t=-20$ relative to the announcement:

$$R_{i,t} = a + b_i R_{m,t} + e_{i,t}$$

where:

$R_{i,t}$ = return on stock i , on day t

$R_{m,t}$ = return on NYSE composite index on day t

Next, the parameters from the estimation period were used to calculate "abnormal returns" for days $t=-20$ to $t=+20$:

$$AR_{i,t} = R_{i,t} - ER_{i,t}$$

where:

$AR_{i,t}$ = abnormal return for stock i , on day t

$R_{i,t}$ = actual return for stock i , on day t

$ER_{i,t}$ = expected return for stock i , on day t , given the parameters of the

market model and the actual return on the NYSE index on that day.

For each group of stock pickers (i.e., winners and contenders) we calculate the average abnormal return for days $t=-20$ to $t=+20$:

$$\overline{AR}_t = \sum_{i=1}^N AR_{i,t}$$

To evaluate the total effect over time of the announcement, we also calculate the cumulative abnormal return from days $t=-20$ to $t=+20$:

$$CAR_t = \sum_{j=-20}^t \overline{AR}_j$$

The test for volume effects is conducted using the technique of Allen and Thompson (1991). For days $t=-40$ to $t=-21$, the mean volume ratio is computed for each stock:

$$MVR_i = \sum_{t=-40}^{-21} [V_{i,t} / V_{m,t}] / 20$$

where:

$V_{i,t}$ = volume for stock i , on day t

$V_{m,t}$ = NYSE composite volume on day t

We then calculate the relative volume ratio for each stock for days $t=-20$ to $t=+20$:

$$RVR_{i,t} = [V_{i,t} / V_{m,t}] / MVR_i$$

Finally, we calculate the average relative volume ratio for each day for $t=-20$ to $t=+20$:

$$\overline{RVR}_t = \sum_{i=1}^N RVR_{i,t}$$

Empirical Results

Table 1 presents the average abnormal returns around the announcement day for both groups. For the winners, we find an announcement day abnormal return of 3.28% ($p < .001$) for the winners, and 2.60% ($p < .001$) for the contenders. *Table 2* presents the relative volume ratios around the announcement day for both groups. For the winners, the announcement day RVR is 2.50 ($p = .05$) for the winners, and 1.98 ($p = .19$) for the contenders. These results indicate that investors place greater price and volume pressure on the stock chosen by returning winners than on those stocks chosen by the new contender.

To test whether the winners' performance in the last contest has an effect on the announcement day abnormal return in the new contest, we perform the following regression:

$$AR_{j,o} = \xi_0 + \xi_1 TR_j$$

where:

$AR_{j,0}$ = the announcement day abnormal return for the pick of winner j

TR_j = the return for the pick of winner j in the last contest.

The estimated equation is:

$$AR_{j,0} = .021676 + .0311^* TR_j \quad R^2 = 0.0481$$

where:

* indicates the parameter is significant at the .10 level.

This result strengthens the price and volume pressure findings. Investors place more price pressure on the winners' stocks, with the amount of pressure increasing the better that contestant did in the previous contest.

Graph 1 shows the cumulative abnormal return for each group around the announcement day. For the returning winners, the CAR is about 7% the day after publication. For the contenders, the CAR is only 4% by the day after publication. However, for both groups, the CAR falls back to near zero by 20 trading days after the publication date. This indicates that the price pressure observed is due to naive buying by investors reading the column, and not due to information contained in the analysts recommendations.

Graph 2 shows the relative volume ratio for each group around the announcement day. Again, we see that investors buy more of the stock recommended by the returning winner than by the new contender in the two-day window following publication. After this time period, neither group exhibits any abnormal trading volume.

Summary and Conclusion

The purpose of this paper is to test whether investors place greater price and volume pressure on the stocks chosen by the proven winners when compared to the unproven "contenders". The abnormal returns indicate that investors did place greater price pressure on the stocks chosen by the "winners" compared to the "contenders". The observed run up in the CAR of "winners" picks before the announcement date may be caused by the analysts making recommendations to their own clients before announcement. The wealth increase for both the "winners" and "contenders" is not permanent. Rather it decreases to near the pre-event level by the twentieth day after the announcement. This finding indicates that the price pressure is due to naive buying rather than new information being revealed. The tests on relative volume ratio show that investors placed greater emphasis on the "winners" recommendations versus the recommendations of the "contenders." Finally, we show that the amount of price pressure observed increases with the success of the winner in the previous contest.

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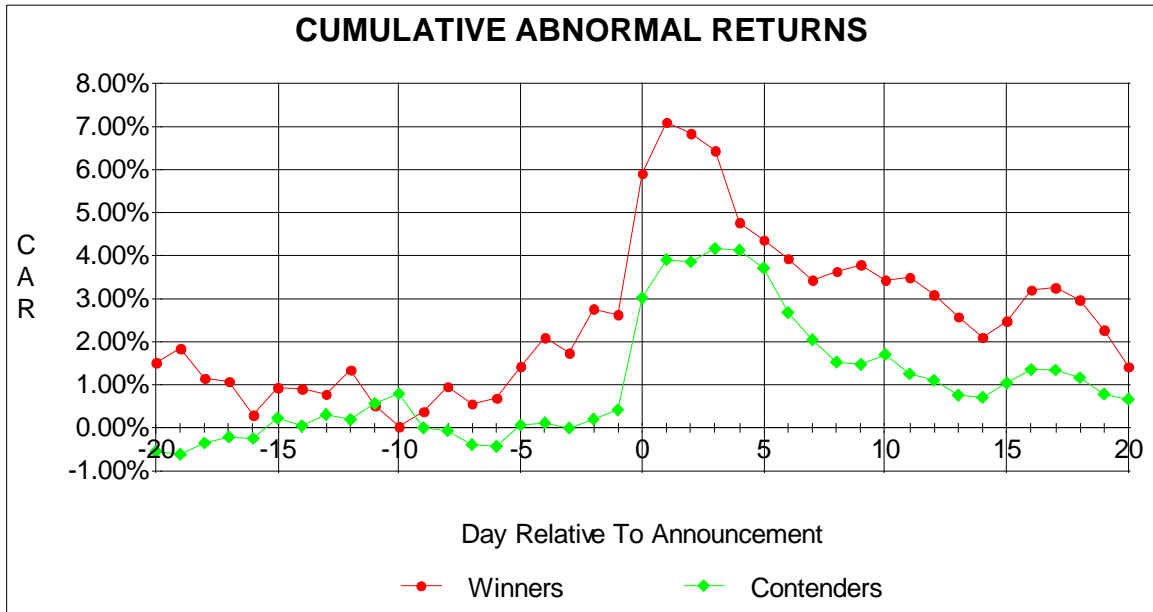
Table 1: Abnormal Returns

	Winners		Contenders	
Day	AR	P	AR	P
-20	1.51%	0.005	-0.55%	0.225
-19	0.33%	0.513	-0.06%	0.889
-18	-0.69%	0.175	0.26%	0.561
-17	-0.07%	0.887	0.14%	0.757
-16	-0.78%	0.129	-0.03%	0.939
-15	0.63%	0.216	0.47%	0.297
-14	-0.02%	0.965	-0.18%	0.689
-13	-0.13%	0.800	0.26%	0.562
-12	0.56%	0.271	-0.11%	0.803
-11	-0.83%	0.110	0.37%	0.411
-10	-0.48%	0.341	0.23%	0.607
-9	0.34%	0.499	-0.80%	0.081
-8	0.58%	0.259	-0.07%	0.883
-7	-0.40%	0.433	-0.32%	0.475
-6	0.14%	0.786	-0.04%	0.925
-5	0.73%	0.155	0.50%	0.271
-4	0.67%	0.190	0.05%	0.918
-3	-0.36%	0.484	-0.12%	0.798
-2	1.02%	0.049	0.21%	0.647
-1	-0.13%	0.792	0.22%	0.628
0	3.28%	0.000	2.60%	0.000
1	1.19%	0.023	0.89%	0.052
2	-0.26%	0.614	-0.05%	0.908
3	-0.41%	0.425	0.31%	0.493
4	-1.67%	0.002	-0.04%	0.932
5	-0.41%	0.424	-0.42%	0.357
6	-0.43%	0.397	-1.03%	0.025
7	-0.50%	0.326	-0.63%	0.165
8	0.20%	0.689	-0.52%	0.250
9	0.15%	0.763	-0.05%	0.904
10	-0.35%	0.484	0.23%	0.609
11	0.06%	0.901	-0.45%	0.321
12	-0.40%	0.428	-0.15%	0.736
13	-0.51%	0.314	-0.34%	0.445
14	-0.48%	0.348	-0.05%	0.912
15	0.38%	0.455	0.33%	0.465
16	0.72%	0.161	0.31%	0.488
17	0.06%	0.912	-0.01%	0.989
18	-0.29%	0.570	-0.18%	0.687
19	-0.70%	0.176	-0.38%	0.398
20	-0.85%	0.098	-0.12%	0.792

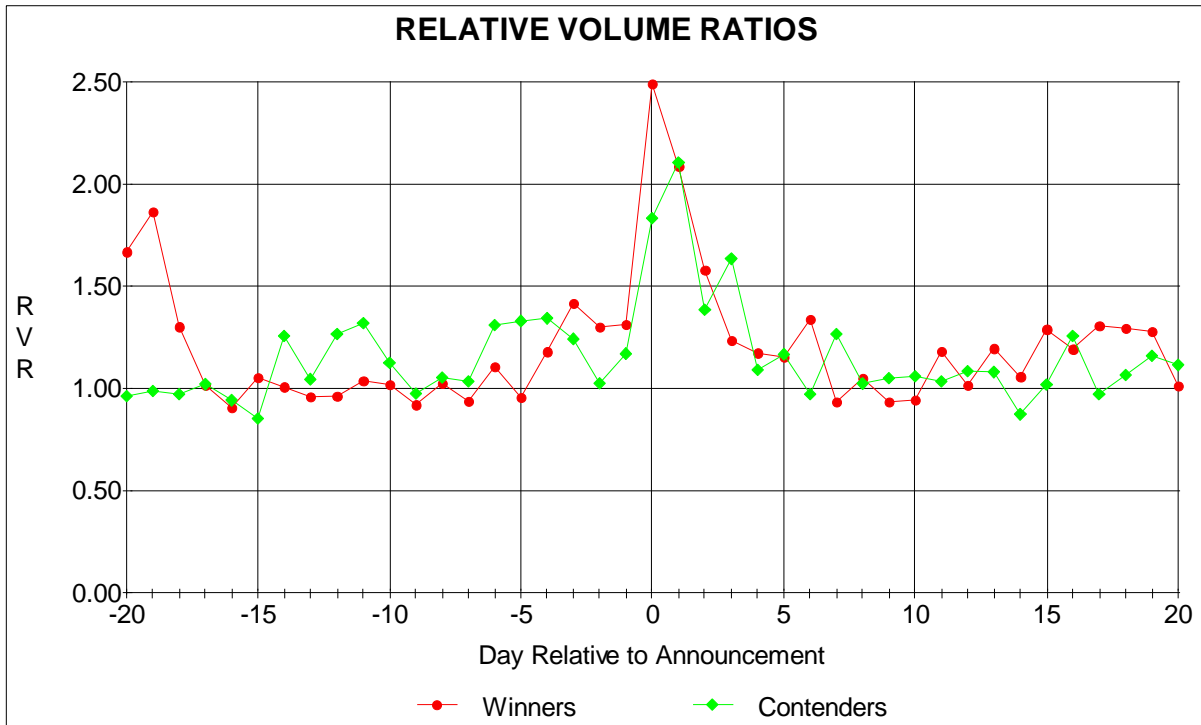
Table 2: Relative Volume Ratio

	Winners		Contenders	
Day	RVR	P	RVR	P
-20	1.67	0.000	0.96	0.786
-19	1.87	0.000	0.99	0.932
-18	1.30	0.085	0.97	0.843
-17	1.02	0.930	1.02	0.881
-16	0.91	0.585	0.94	0.679
-15	1.05	0.752	0.85	0.296
-14	1.01	0.962	1.26	0.068
-13	0.96	0.818	1.05	0.744
-12	0.96	0.833	1.27	0.060
-11	1.04	0.822	1.32	0.025
-10	1.02	0.909	1.13	0.364
-9	0.92	0.646	0.98	0.857
-8	1.02	0.887	1.05	0.702
-7	0.94	0.718	1.04	0.798
-6	1.11	0.533	1.31	0.029
-5	0.96	0.798	1.33	0.020
-4	1.18	0.298	1.34	0.016
-3	1.42	0.020	1.24	0.085
-2	1.30	0.086	1.03	0.847
-1	1.31	0.075	1.17	0.221
0	2.49	0.000	1.83	0.000
1	2.09	0.000	2.11	0.000
2	1.58	0.002	1.39	0.007
3	1.24	0.176	1.64	0.000
4	1.17	0.315	1.09	0.513
5	1.15	0.375	1.17	0.230
6	1.34	0.055	0.97	0.836
7	0.93	0.699	1.27	0.059
8	1.05	0.771	1.02	0.863
9	0.93	0.700	1.05	0.716
10	0.94	0.747	1.06	0.660
11	1.18	0.292	1.03	0.802
12	1.01	0.932	1.09	0.538
13	1.20	0.258	1.08	0.561
14	1.06	0.736	0.87	0.365
15	1.29	0.098	1.02	0.898
16	1.19	0.266	1.26	0.069
17	1.31	0.079	0.97	0.837
18	1.29	0.095	1.07	0.639
19	1.28	0.112	1.16	0.255
20	1.01	0.936	1.11	0.410

Graph 1: Cumulative Abnormal Returns



Graph 2: Relative Volume Ratios



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