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The Investment Value of the Wall Street Journal's Smart Money Stock Screen

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ABSTRACT

We document positive (negative) abnormal returns and volume associated with long (short) recommendations published in *The Wall Street Journal's* Smart Money Stock Screen. Even though the recommendations are free, long positions have a cumulative abnormal return of 1.17% and the short recommendations have a cumulative abnormal return of -5.85% return. Our results are consistent with previous research, regarding the initial price reaction to a daily news event. Unlike most previous research, our results indicate a more permanent price change.

JEL Classification: G11, G12, G14

Keywords: Wall Street Journal; Stock recommendations; Event studies; Abnormal returns; Trading volume

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I. INTRODUCTION

A recent addition to *The Wall Street Journal (The WSJ)* is a weekly feature Smart Money Stock Screen (SMSS). SMSS recommends a small number of positions, averaging 8.2 positions per week. We find firms recommended, demonstrate significant appropriate returns (given long or short recommendation), and significant volume increases. These results are consistent with previous research findings studying other recurring *WSJ* recommendations, analysts' recommendations, expanded definitions of market efficiency (Grossman and Stiglitz (1980)) and more recently, televised recommendations (Engelberg, Sasseville and Williams (2006)).

Most studies find price changes associated with *WSJ* have variable reverting tendencies in the test period[1]. The information sources are *WSJ* articles "Heard on the Street" or "Dartboard." More recently, the CNBC popular show "Mad Money," Engelberg, Sasseville and Williams (2006), find price reactions and reversals within 12 trading days of the show's stock recommendations. The exception is Beneish (1991), who finds price changes associated with *WSJ*'s "Heard on the Street" not fully reversed. Our results indicate that SMSS information around the publication process is associated with price changes and does not reverse. An interesting aspect of the SMSS is that the screens constantly change, effectively adopting a new style. Given the changing styles of SMSS, we evaluate the value of the recommendation rather than a particular screening procedure. A somewhat circular argument is that investment advisory services, such as Value Line, must provide value or else they would cease to exist - therefore information provided by such services must have value and the market response to their information is the evidence of that value. The information of SMSS is essentially free with little possibility of threatening the existence of *The WSJ* (though it may have personal implications for the journalists). Our results indicate that the recommendations are associated with significant price and volume changes. Unlike other studies, we do not find prices reversing during the test period.

Section II is a brief literature review. Section III describes the data and methodology. Section IV analyzes the results. Section V concludes the paper.

II. LITERATURE REVIEW

Lloyd-Davies and Canes (1978) and Beneish (1991) find information in *The WSJ* "Heard on the Street" (HOTS) find significant market reactions around publication. Liu, Smith, and Syed (1990) find the HOTS column associated with higher volumes and significant price changes. Barber and Loeffler (1993) and Liang (1999) study the recommendation effect from the "Dartboard" column in *The WSJ*. In this column, analysts recommend one stock each and compare these picks to a random portfolio generated by throwing darts. The analysts' recommendations do show positive and significant returns around their announcement. Again, most studies show price adjustments after the information effect.

One of the most studied information effects in finance is Value Line information. Likely inspired by Fischer Black in 1973, some of the most prominent finance journals have published multiple papers on the Value Line effect[2]. Given the potential implications to market efficiency, this is not surprising. In short, Value Line does appear to provide priced information to the market, but the debate of the tradability of

these recommendations and the overall Value Line implications to market efficiency continues.

Numerous studies provide evidence that markets respond to information provided by investment advisory services[3]. Millon and Thakor (1985) and Stickel (1986) offer frameworks where investment advisors can exist even when based on public information. Womak (1996) analyzes brokerage recommendations as reported in *First Call*, and finds information returns are significant and prices reflect an immediate recommendation announcement effect and that is sustained subsequent months. These results support the Grossman and Stiglitz (1980) expanded definition of market efficiency.[4]

III. DATA AND METHODOLOGY

The WSJ publishes a weekly column, SMSS, providing investors a selective list of stock positions. These positions meet SMSS criteria based on changing, weekly topical selections.[5] Topic examples are "bargain growth stocks", "future stars", "safe stocks", "insider buying", "casual dining," and "unheard of stocks."[6] The position recommendations repeatedly disclaim the recommendations as research starting points and the responsibility of due diligence falls to the investor.

The typical timelines the *WSJ* follows in creating the SMSS as follows: a selection of stock screen topics presented to the *WSJ* on Monday. By the end of Monday, screening begins on the chosen topic. Writing is complete by Wednesday and *WSJ* publishes the print version on Thursday. The online publication posts Thursday 12 AM.[7]

The SMSS themselves possibly provide investors with valuable financial information, reducing the number of potential positions. For example, the ten stocks listed in the article SM "Unheard-of Stocks" dated on December 22, 2005, successfully passed the following screens:[8]

> ….analyst coverage by fewer than four analysts, but more than two, debt/capital ratios below 0.5, trailing 12-month sales of at least $100 million and average daily trading volume of 100,000 shares or more. Current-year earnings forecasts for each company must have increased within the past four weeks, and reported earnings must have topped estimates, on average, over each of the past four quarters. Finally, price/earnings-to-growth, or PEG, ratios must be below 1.5.[9]

As noted in the literature review, several researchers find a variety of published stock recommendations, investment newsletters, and surveys, often at negligible costs, associated with significant market changes. Our similar purpose is to analyze the usefulness of the SMSS selections.

We construct our sample using SMSS**'**s for the 2005 calendar year and the initial sample is 395 long and 24 short positions distributed across 51 event dates. Typically, each event date averages 8.2 recommendations.[10] Our source for stock return and volume data is the Center for Research in Security Prices (CRSP) research data file. As we use standard event study methodology, we require each observation a minimum of 50 days of returns and no more than two missing returns over the event period[11]. The

event period is 250 days and the estimation period is 46 days prior to the event period. The final sample for contains 361 long positions and 15 short positions.

We investigate the daily and cumulative abnormal returns for several event windows, where the publication date in *The WSJ* is "Day 0."[12] Longer event windows provide insight into investor reaction to SMSS. If the SMSS is valuable we expect abnormally high volume, positive abnormal returns for long recommendations and abnormally high volume, negative returns for short recommendations.

We estimate the mean cumulative abnormal returns using the equality-weighted market model. The sample contains a mix of NYSE and NASDAQ stocks. While our sample construction provides some control for thinly traded securities, and infrequently traded securities, we must acknowledge the control is not complete and varying return variances are potential sources of model misspecification. We report the Patell z statistic and the standardized cross-section z statistics, but because this potential model misspecification we also report the cross-section t-statistic and the rank z-statistic (Cowan and Sergeant (1996)).

We test the null hypotheses that the abnormal stock return is greater (less) than zero for the long (short) positions. Additionally, we report the generalized sign z-statistic to test the null hypothesis that the proportion of positive (negative) abnormal returns is greater than negative (positive) abnormal returns.

We follow the same event study methodology with trading volume for both log-transformed data and non-transformed data. The results are similar so we report the results based on the log-transformed data (Campbell & Wasley (1996), Cowan (2005)). We use the rank test to test the null hypotheses that the relative volume is equal to zero and the generalized sign z-statistic to test the percentage of positive relative trading volume is equal to the percentage of negative relative trading volume.

IV. EMPIRICAL RESULTS

The long positions highlight the daily abnormal returns over the window spanning thirty days prior and post article publication. We present our results in Table 1 and graphically in Figure 1. Our interest in individual daily returns stems from any associations with the publication process and the midnight release of the article online. We find thirteen days with significantly abnormal returns.[13] We hesitate to attach a root cause to the outlying individual days. However, two of these days are important relative to the publication production. Day -5 (0.22% return) is associated with the beginning of the publication process. Day -1 (0.17% return) is associated with the publication date.[14]

In Table 1, we report cumulative abnormal returns for windows of varying size. The windows of particular interest are those including the days prior to article publication that coincides with the SMSS's production lead-time. For the window (-5, +30), we report significant positive cumulative abnormal returns of 1.17% and the generalized sign z-statistic confirms that the number of positive abnormal returns is significantly greater than negative abnormal returns. Two probable explanations for this price behavior are: 1) information leakage in the SMSS's production process; and/or 2) investors running the same or similar screens find the same firms. Finally, we note that while the statistical significance mixed, in all cases we find the expected, positive, sign.

Figure 1

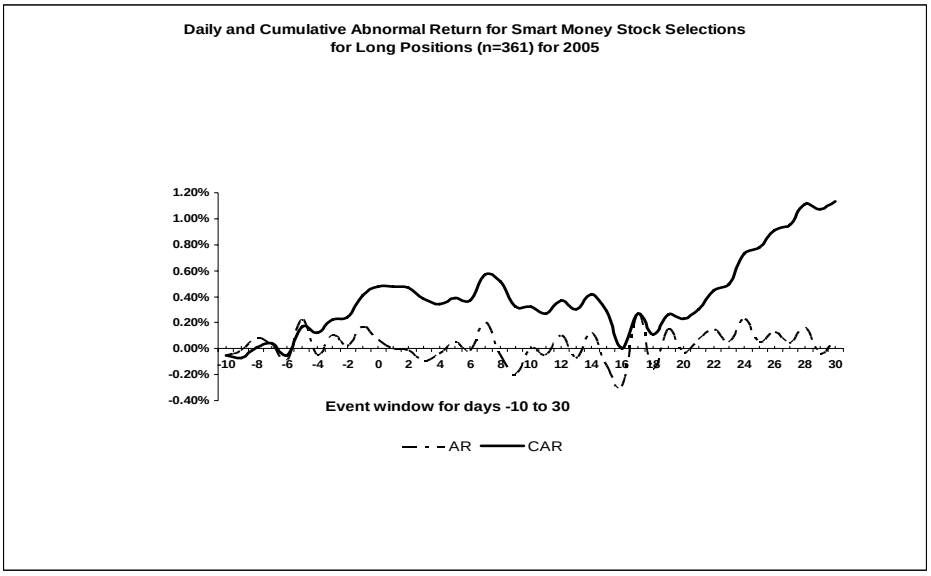


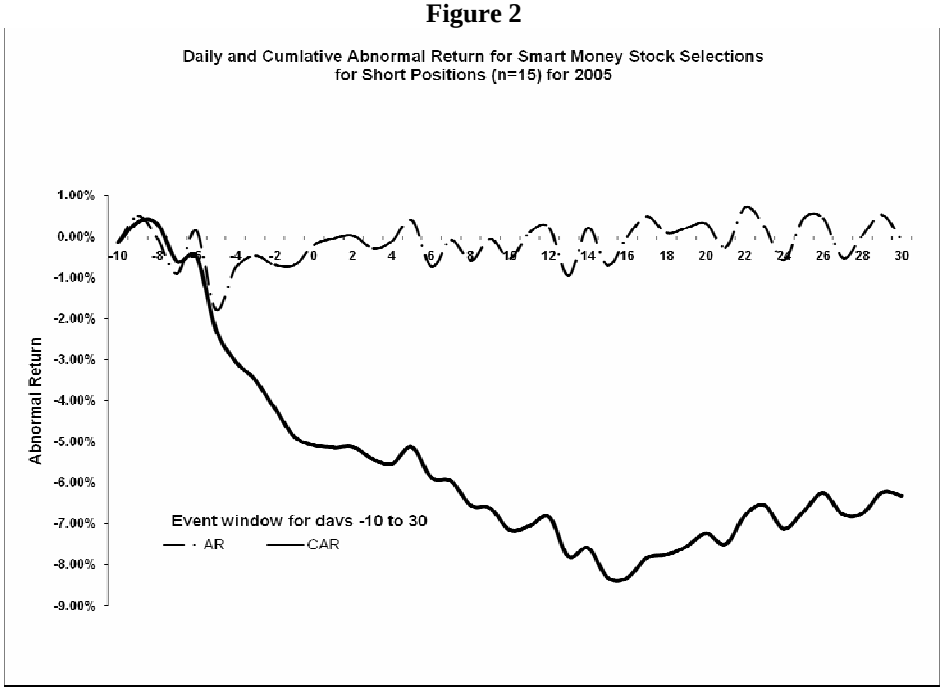
Table 1
Long position cumulative abnormal returns

event window	cumulative abnormal return	Patell z	t-statistic	z-statistic	% positive	generalized sign z-statistic
(-1,1)	0.25%	1.388*	1.243	1.426*	51%	1.110
(-5,5)	0.45%	1.418*	1.121	1.385*	54%	2.374***
(0,30)	0.71%	1.203	0.985	1.209	55%	2.479***
(-1,30)	0.88%	1.393*	1.166	1.361*	54%	2.269**
(-5,30)	1.17%	1.899**	1.466*	1.860**	55%	2.795***
(-10,30)	1.12%	1.690**	1.272	1.636*	53%	2.058**
(-30,30)	0.53%	0.932	0.502	0.937	55%	2.585***

***, **, and * indicate significance at the 1%, 5%, and 10% level

The short positions highlight the daily abnormal returns over the window spanning thirty days prior and post article publication. We present our results in Table 2 and graphically in Figure 2. Again, we examine individual daily returns for associations with the publication date and process. In our event window (Day -30, Day +30), we find eleven days with statistically significant abnormal returns.[15] As with the long positions we find a statically significant abnormal return (-1.79%), associated with the beginning of the SMSS production process.

Figure 2



In Table 2, we detail the cumulative abnormal returns for the short positions. For the windows that include day -5, all yield statistically significant negative cumulative abnormal returns. For the window (-5, +30), the cumulative abnormal return is -5.85%. Accordingly, negative abnormal returns are significantly greater than positive abnormal returns. As with the long positions, the statistical evidence is mixed, we find the expected negative returns.

Table 2
Short position cumulative abnormal return

event window	cumulative abnormal return	Patell z	t-statistic	z-statistic	% positive	generalized sign z-statistic
(-1,1)	-0.97%	-1.181	-0.762	-1.042	40%	-0.620
(-5,5)	-4.68%	-2.231**	-1.647**	-1.816**	53%	0.414
(0,30)	-1.43%	-0.656	-0.653	-0.852	40%	-0.620
(-1,30)	-2.13%	-0.852	-0.873	-1.109	33%	-1.137
(-5,30)	-5.85%	-1.428*	-2.285**	-1.990**	27%	-1.653**
(-10,30)	-6.33%	-1.594*	-2.354***	-2.072**	33%	-1.137
(-30,30)	-7.18%	-1.533*	-2.158**	-2.020**	40%	-0.620

***, **, and * statistical significance at the 1%, 5%, and 10% level of significance.

We find day -5 has significant positive relative volume of 2.21% for long positions. This coincides with the positive return on day -5. Furthermore, we find 1.72% relative volume on day 0 and -5.93% relative volume for day +7. Day +26 is the only other day following publication that has significant negative relative volume (-5.16%).

In Table 3, we list the mean cumulative relative volume. The window directly surrounding the publication date (-1, +1) shows positive relative trading volume. However, when considering the other windows, the relative trading volume is negative. This suggests there is only brief reaction directly on and around the trading date. The significant generalized sign z-statistics indicate that the tendency for the proportion of negative trading volume to dominate the proportion of positive trading volume.

Table 3
Cumulative abnormal relative volume for long positions

event window	cumulative abnormal relative volume	rank test	% positive	generalized sign z-statistic
(-1,1)	0.07%	2.725***	45%	1.940*
(-5,5)	-17.55%	0.431	46%	2.371**
(0,30)	-55.87%	-1.137	43%	1.401
(-1,30)	-55.74%	-0.859	43%	1.293
(-5,30)	-61.31%	-0.865	44%	1.724*
(-10,30)	-64.60%	-0.451	43%	2.155*
(-30,30)	-114.45%	-2.393**	45%	2.155*

***, **, and * statistical significance at the 1%, 5%, and 10% level of significance.

Table 4
Cumulative abnormal relative volume for short positions

event window	cumulative abnormal relative volume	rank test	% positive	generalized sign z-statistic
(-1,1)	21.59%	2.049**	47%	1.054
(-5,5)	10.59%	2.123**	40%	0.508
(0,30)	-66.77%	2.310**	60%	2.145**
(-1,30)	-53.73%	2.350**	47%	1.054
(-5,30)	-38.90%	2.758***	47%	1.054
(-10,30)	-66.12%	2.089**	47%	1.054
(-30,30)	-233.52%	0.459	40%	0.508

***, **, and * statistical significance at the 1%, 5%, and 10% level of significance.

All but one event window, for the mean cumulative relative volume for the short positions in Table 4, are statistically significant and negative. For the shortest windows (-1, +1) and (-5, +5) encompassing the publication date, the cumulative relative trading volume is positive. This is consistent with initial expectations.

On a cumulative basis, we find positive relative trading volume for (-1, +1) for long positions and (-5, +5) for short positions. These results are consistent with Liu, Smith, and Syed (1990), who find significantly greater trading volume in their three-day window (-2, 0).

Are findings are different from prior studies as are price changes appear permanent and do not reverse. Are results are consistent with Womack (1996) and Beneish (1991) and support the Grossman and Stiglitz expanded definition of market efficiency.

To summarize the findings, the results for returns and trading volume are consistent prior to publications. On days -5 and -1 (for long positions) and day -5 (for short positions), we find significant abnormal positive and negative returns respectively. Likewise, we find significant positive relative trading volume on days -5 and 0 (for long positions) and day -5 (for short positions). Given the author's communication with *the WSJ* and his lead-time, this suggests that the market is reacting to the leakage of the information prior to its publication.

V. CONCLUSIONS

We document positive (negative) abnormal returns and volume associated with long (short) recommendations published in WSJ's SMSS. In all event windows, we find expected signs associated with the recommendations. Interestingly, cumulative returns for the short positions are large (up to -7.18%) relative to the long positions (up to 1.17%).

We find evidence that either information leaks during the publication production process or investors are anticipating price movements by using similar screens. Unlike most previous research, our results indicate a persistent price change during the test period. We conclude, while based on free information, any processing and interpretation of that information by a highly disseminated news source is associated with price movements, particularly when the recommendation is a short position.

ENDNOTES

1. Lloyd-Davies and Canes (1978), Liu, Smith and Syed (1990), Barber and Loeffler (1993), Liang, (1999).
2. While not an exhaustive list: *The Journal of Finance Economics*, Affleck-Graves and Mendenhall (1992), Copeland and Mayers (1982), Stickel (1985); *The Journal of Finance*, Holloway (1981), Gregory (1983) Graham (1999); *Journal of Financial and Quantitative Analysis*, Peterson (1987 and 1995) Choi (2000); *The Journal of Business*, Huberman and Kandel (1987 and 1990) Hausman (1969) Shelton (1967) Broughton and Chance (1993). There is debate concerning the tradability of the immediate recommendation effect.
3. Grier and Katz (1976), Griffin and Sanvicente (1982), Holthausen and Leftwich (1986), Ingram, Brooks, and Copeland (1983).

4. Given the costs of gathering and analyzing financial data, market prices cannot reflect all available information, or else there would be no incentive to incur those costs.
5. Since inception, the column's reporter is Jack Hogue.
6. A complete list of types of stocks is available upon request.
7. Email communiqué with Mr. Hough, Wednesday, July 12, 2006.
8. The ten companies are Bright Horizons Family Solutions, Comtech Telecommunications, Genesco, Lightbridge, Oshkosh Trucking, Pediax Medical Group, Res-Care, Stage Stores, Stein Mart, and Toro.
9. Hough, WSJ. pp. D2, 22 December 2005.
10. The first complete calendar year the SMSS articles appear in the WSJ is 2005.
11. We use Eventus® software.
12. If the publication date falls on a non-trading day, we use the next available trading day.
13. The days (returns) statistically significant are -28 (-0.13%), -24 (-0.13%), -23 (-0.29%), -20 (0.23%), -6 (-0.09%), -5 (0.22%), -1(0.17%), +7 (0.20%), +16 (-0.29%), +17 (0.27%), +19 (0.15%), +22 (0.15%), and +24 (0.23%).
14. We are using closing prices, so the return of Day -1 is typically the Wednesday closing price to the Thursday closing price. Recall that the online publication is the midnight between Wednesday and Thursday. Because we do not observe a Day 0 significant return, the stock price likely prices the information in the pre-market and intraday Day 0.
15. The days (returns) statistically significant are -30 (0.49%), -28 (0.75%), -27 (-0.65%), -15 (-0.54%), -9 (0.50%), -5 (-1.79%), -4 (-0.78%), +6 (-0.74%), +22 (0.71%), +24 (-0.58%), +27 (-0.52%).

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