

## **THE VALUE OF INDIRECT INVESTMENT ADVICE: STOCK RECOMMENDATIONS IN *BARRON'S***

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### **Abstract**

This paper assesses the value of stock recommendations appearing in *Barron's*. Single-company recommendations from the Mutual Choice column, where selected mutual fund managers are asked to recommend their favorite stock, are analyzed along with the multiple-company selections appearing in periodic interviews with security analysts and portfolio managers. Return performance is assessed using both market-adjusted holding period returns and a market-model event study paradigm. A relatively large and statistically significant market reaction is found on the date of the publication of these stock selections. However, the assessment of the return performance results subsequent to the publication date are found to be methodology dependent.

### **INTRODUCTION**

The purpose of this paper is to assess issues associated with the value of the indirect investment advice provided through stock recommendations that appear in the weekly editions of *Barron's*. *Barron's* publishes single-company recommendations in their Mutual Choice column, where each week a selected mutual fund manager with an above average record is asked to recommend his or her favorite stock. In addition, *Barron's* provides multiple-company selections that appear in periodic interviews with security analysts and portfolio managers. This indirect investment advice is available to investors at a nominal cost and reflects the collective wisdom of a broad cross section of security analysts and portfolio managers.

This paper investigates whether investors react in a timely fashion to the appearance of the stock recommendations in *Barron's*, and whether there is any evidence of information leakage prior to the publication date. In addition, the paper investigates the post-publication return performance of the stock recommendations to assess whether investors may earn excess returns by forming portfolios composed of the recommended securities.

The first section of this paper briefly discusses the literature as it pertains to the value of various sources of indirect investment advice. Section two provides details of the two types of stock recommendations that are published in *Barron's* and examined in this paper. The empirical methodologies used to test hypotheses about the value of this information are presented in section three. Section four presents and discusses the empirical results and the final section of the paper provides a summary and conclusions.

### **PREVIOUS RESEARCH**

The economic value of professional investment advice and professional portfolio management is of interest to investors for obvious reasons. Existing evidence on the subject is mixed, and, surprisingly, not overly abundant. Bjerring, Lakonishok and Vermaelen (1983) find that the recommendations of a Canadian brokerage house, which include both U.S. and Canadian stocks, contain valuable information and that this information is reflected in

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market prices gradually through time. Groth, Lewellen, Schlarbaum and Lease (1979) report similar findings for the recommendations of a U.S. brokerage firm. Several other studies conclude that Value Line is capable of predicting short-term investment performance with some degree of accuracy. However, there is disagreement concerning the speed at which prices adjust to changes in rank and thus whether investors can profit from this information.<sup>1</sup> In addition, Liu, Smith and Syed (1990) and Lloyd-Davies and Canes (1978) find informational content in indirect recommendations appearing in widely disseminated publications such as the *Wall Street Journal* (*WSJ*), though prices appear to adjust too rapidly to profit from such news.

Writing for the *WSJ* on November 13, 1990, Dorfman summarized the findings of a quarterly study by the *WSJ* and Zack's Investment Research Inc. of Chicago reports, noting that while "the major stock market averages (DJIA and S&P 500) were down about fourteen percent in the quarter ended September 30, 1990, the favorite stocks of ten large brokerage houses fell even more: 14.3 percent to 28.7 percent." Over the full 51 months the study covers (June 30, 1986 to September 30, 1990), an investor who systematically purchased each of the stocks recommended by a particular brokerage house would have outperformed the market averages in only three cases and would have been significantly below the average performance in seven cases.

With respect to professional portfolio management, the consensus view suggests that mutual fund managers are generally incapable of consistently outperforming passive buy-and-hold strategies once appropriate adjustments for risk and costs are considered. Given the dollar size of most funds along with the need to diversify, the lack of superior performance is not particularly surprising.

## THIS STUDY

Beginning in December of 1987, *Barron's* initiated a weekly column entitled, "Mutual Choice" in which they ask a selected fund manager, "What's your favorite stock?" Fund managers who are asked to participate have solid track records, often managing funds in excess of a billion dollars. Since each manager is asked to select only one stock, these recommendations may prove valuable even though above average performance is not associated with mutual funds in general. Providing "good" investment advice is in the best interest of the fund managers both because the recommended stock is likely to be contained in the fund being managed and because it may attract additional investors to the fund.

In addition to the Mutual Choice Column, *Barron's* interviews selected analysts and money managers on the average of about once every two weeks for the purpose of ascertaining their current view of the market and what, if any, stocks they are presently recommending and/or buying. Here the "expert" generally provides multiple recommendations (average is about seven), sometimes within a particular industry and sometimes spanning the market as a whole. The immediate price reactions and subsequent investment performance of stocks recommended in these interviews are of interest in their own right as well as for comparison purposes with the Mutual Choice group.

## DATA

The data obtained from the Mutual Choice column span the period from December 14, 1987 through the end of 1988. During this time, there are 50 Mutual Choice columns appearing in *Barron's* in which a total of 53 stocks are recommended (one manager indicated that he could not single out a specific stock among a group of four, so all four are listed). Thirty-five of the companies are from the NYSE, five are ASE stocks, and thirteen are NASDAQ stocks.

The recommendations of security analysts and money managers (subsequently referred to as the "Multiple Selection" sample to distinguish it from the "Mutual Choice" sample discussed above) cover all of 1988. In total, 229 stocks are recommended (*Barron's* refers to these as "Picks" and highlights them by "boxing" them.) These recommendations are obtained from twenty-seven different interviews, and include 151 NYSE stocks, 19 ASE stocks, 58 NASDAQ stocks, and one from a regional exchange.

The final samples for which we report results, are restricted to firms with complete stock return data on the Center for Research in Security Prices (CRSP) tapes over a 410 day period beginning 210 days prior to the publication date in *Barron's*. The only exceptions are the ten recommended firms (one in the Mutual Choice

Sample and nine in the Multiple Selection sample) that were acquired during the 200 day period subsequent to being recommended. For these firms, stock return data are required through the date of their delisting. Imposing these requirements results in a final Mutual Choice sample of 48 firms, and a final Multiple Selection sample of 210 firms.

## METHODOLOGY

To assess the value of the stock selections contained in both the Mutual Choice and Multiple Selection samples, both event study and holding period return analyses are conducted. The event study methodology is used to determine whether there is any information leakage prior to publication of the stock selection, as well as to assess the market's immediate reaction around the publication date.

Both event study and holding period return analyses are conducted to assess the post-publication return performance of the samples. Each approach has its unique advantages. The holding period return analysis provides a truer indication of the actual returns that could be earned from a given portfolio strategy, but is somewhat restricted in adjusting for risk when computing excess returns. Event study analysis enables an explicit adjustment for differences in risk across securities and also simplifies statistical tests. Both of these methodologies are described below.<sup>2</sup>

### Event Study Methodology

The standard market model paradigm is used to assess the market's reaction to the recommendations just prior to and at the time of publication and to examine return performance subsequent to this date. The abnormal return for security  $j$  on event day  $t$ ,  $AR_{jt}$ , is defined as:

Equation 1

$$AR_{jt} = R_{jt} - (\alpha_j + \beta_j R_{mt})$$

where  $\alpha$  and  $\beta$  are the ordinary least squares regression estimates of the market model parameters for firm  $j$  over the 200 trading days beginning 210 days prior to the *Barron's* publication date (defined as day 0).<sup>3</sup>

The average daily abnormal return for day  $t$ ,  $\overline{AR}_t$ , for a sample of  $N$  securities is calculated as<sup>4</sup>:

Equation 2

$$\overline{AR}_t = \sum_{j=1}^N AR_{jt} / N$$

and the average cumulative daily abnormal return from the period  $T1$  to  $T2$ ,  $\overline{CAR}_{T1,T2}$  is:

Equation 3

$$\overline{CAR}_{T1,T2} = \sum_{t=T1}^{T2} \overline{AR}_t$$

To determine whether investors react to *Barron's* stock recommendations, the average daily abnormal returns,  $\overline{AR}_t$ , are computed for each day in a twenty-one day window beginning ten days before and ending ten days after the publication date. Further, to evaluate information leakage prior to the publication date, the average cumulative daily abnormal return,  $\overline{CAR}_{T1,T2}$ , is computed for the days -10 to -1. The post-publication return performance is evaluated by computing the  $\overline{CAR}_{T1,T2}$ 's for time intervals of 25, 50, 100, 150 and 200 days following publication in *Barron's*.

The statistical significance of the computed  $\overline{AR}_t$ 's and  $\overline{CAR}_{T1,T2}$ 's can be assessed by computing the following test statistics:

Equation 4

$$T_t = \left[ \sum_{j=1}^N AR_{jt} / S_j \right] / N^{1/2}$$

and

Equation 5

$$T_{T_1, T_2} = \left[ \sum_{j=1}^N \sum_{t=1}^T AR_{jt} / S_j \right] / \{(T_2 - T_1 + 1)^{1/2} (N^{1/2})\}$$

where  $S_j$  is the residual standard deviation for security  $j$  estimated from the market model regression. Assuming that the  $AR_{jt}$  are independent and identically distributed with finite variance, both test statistics ( $T_t$  and  $T_{T_1, T_2}$ ) will be distributed as Student- $t$ s in the absence of abnormal performance.

## Holding Period Return Methodology

To further examine the post-publication performance of the recommendations, an excess holding period returns analysis is also conducted. Examination of holding period returns is useful for two reasons. First, practitioners and the financial press generally assess investment performance by comparing the holding period returns on the portfolio of interest with the returns from a market index computed for the same time period (eg. as in the study by the *WSJ* and *Zacks* referred to above). Secondly, the holding period returns analysis provides a truer indication of the actual returns that could be earned from a given portfolio strategy because the continuous rebalancing of the portfolio (eg. equally weighting of the portfolio after each day that occurs in the event study) is avoided.

Holding period returns (*HPR*'s) are calculated for a 200 day holding period starting one day subsequent to the publication date (two days after if Monday is a holiday). Specifically, the *HPR* for security  $j$  is calculated as:

Equation 6

$$HPR_{j,1-200} = \prod_{t=1}^{200} [1 + R_{jt}] - 1$$

where  $R_{jt}$  is the return on security  $j$  on day  $t$ .<sup>5</sup> For comparison purposes, the corresponding 200 day holding period return on the CRSP equally weighted index (NASDAQ equally weighted index for NASDAQ stocks) is computed using the same procedure. Excess holding period returns are then defined as the difference between the *HPR* for the respective security (portfolio) and the *HPR* for the market index.

## RESULTS

### Information Leakage And Immediate Investor Reaction

The  $AR_t$  for days -10 through +10, the  $CAR_{T_1, T_2}$  for selected intervals, and the corresponding  $t$ -statistics are presented in Table 1. The large and statistically significant average abnormal returns on day 0 for both samples indicate that *Barron's* investment recommendations contain relevant information and that investors react to it in a timely fashion. The similarity in the magnitudes of the day 0 abnormal returns, 1.82 percent for the Mutual Choice sample and 1.79 percent for the Multiple Selection sample, implies that investors do not differentiate between multiple and single recommendations as has been found elsewhere.<sup>6</sup>

Immediate investor reaction to the recommendations is slightly larger than that found in related studies. For example, studies of "buy" recommendations from the *WSJ*'s "Heard on the Street" column produce day 0 abnormal returns of .92 percent and 1.54 percent, respectively, while the recommendations from a Canadian brokerage house are characterized by a 1.49 percent abnormal return on day 0.<sup>7</sup> In contrast to the "Heard on the Street"

studies, no evidence of a buildup in the *CAR* over days -10 through -1 is detected, suggesting that information leakages are trivial in the case of the recommendations appearing in *Barron's*.

### Return Performance Following Publication

At the bottom of Table 1, *CAR*'s beginning on day 1 and extending for various lengths of time are provided. For the Mutual Choice sample, the *CAR*'s are negative over all periods examined. They reach a low of -5.73 percent over the 150 trading day period subsequent to day 0. However, with the exception of the 25 and 50 day holding periods, the *CAR* is not statistically significant at the 5 percent level. The *CAR* for the Multiple Selection sample is negative over all periods examined of less than 150 days, but it takes on a value of 1.43 percent over the 200 day HP. Thus the negative performance which occurs over the 150 day period immediately subsequent to the publication date is largely offset by positive performance in the 150 to 200 day interval. During this period, the *CAR* increases 4.08 percent for the Mutual Choice Sample (from -5.73 percent to -1.65 percent) and by 2.54 percent for the Multiple Selection Sample (from -1.11 percent to 1.43 percent). While this result is interesting, there is no obvious explanation as to why the recommended stocks should perform in this manner.

The *HPR* results for each security in the Mutual Choice sample are provided in Panel A of Table 2, and summary statistics appear in Panel B. Excess *HPR*'s are simply the difference between the security's *HPR* and market's *HPR*. The individual security *HPR*'s range from a high of 89.5 percent to a low of -16.3 percent, with a mean of 24.0 percent and a standard deviation of 24.3 percent. In each instance the corresponding *HPR* on the market is positive, with a range of 6.3 percent to 40.8 percent. Twenty-eight out of 48 excess *HPR*'s are positive, and they range in magnitude from a low of -34.6 percent to a high of 78.3 percent. A comparison of the mean excess *HPR* of 4.1 percent with the standard error of the mean of 3.5 percent suggests that the mean excess *HPR* is not statistically different from zero.

The *HPR* results for the Multiple Selection sample are provided on an analyst-by-analyst basis in Panel A of Table 3. Mean excess *HPR*'s for the analysts range from a high of 38.8 percent to a low of minus 17.6 percent, and the picks of 16 out of the 27 analysts are characterized by positive mean excess *HPR*'s. Interestingly, the analyst that recommended the most stocks (16) also had the highest mean excess *HPR*.

Summary statistics pertaining to the Multiple Selection sample as a whole are presented in Panel B of Table 3. Both the mean *HPR* of 26.2 percent and the mean excess *HPR* of 7.3 percent are somewhat greater than the corresponding figures for the Mutual Choice Sample. In addition, the mean excess *HPR* is more than 3 standard errors from zero. On an individual security basis, 169 out of 209 have positive *HPR*'s, and 112 have positive excess *HPR*'s.

### Comparison Of *HPR* And *CAR* Results

The *HPR* results indicate that investors may experience better than average performance when investing in the stocks recommended in *Barron's*, while the *CAR*'s from the event study approach suggest that such is not the case. These differing conclusions may be attributable to (1) differences in how the two methods adjust for risk, or (2) the daily rebalancing (equally weighting) of the portfolio inherent in the *CAR* approach, or some combination of the two. To gain insight as to whether the risk adjustment procedure is at least partly responsible, the average beta of each sample is computed. In each case, it is 1.24, indicating that the recommended securities, on average, are riskier than the average security in the market. Since the period analyzed is characterized by positive market returns and the average beta exceeds one,  $\beta R_{mt}$  will generally be greater than  $R_{mt}$ . This result implies that the excess *HPR*'s over a given period will be greater than the *CAR*'s for the same period, since market returns are generally positive during the period analyzed.

## CONCLUSION

The economic value associated with both single-security and multiple-security investment recommendations appearing in *Barron's* is assessed. Both the immediate market response to the recommendations and subsequent return performance are examined. In contrast to some closely related studies, we find little evidence of price adjustments prior to the publication date. The immediate market reaction is pronounced for each sample,

indicating that a significant number of investors act on the recommendations. Return performance subsequent to the *Barron's* publication date varies somewhat according to whether the focus is on *HPR's* or *CAR's*. Specifically, the *HPR's* suggest that investors may earn excess returns by forming portfolios based on the recommended securities, while the *CAR* results are neutral. However, as was also noted, higher *HPR's* may simply reflect the higher average risk associated with the recommended stocks.

**TABLE 1**  
Average Daily Abnormal Returns, t-Statistics,  
And Cumulative Abnormal Returns relative To The  
Publication Day In *Barron's* (Day 0)

Event Day	Mutual Choice Sample				Expert's Sample			
	AR(%)	t-stat	CAR(%)	t-stat	AR(%)	t-stat	CAR(%)	t-stat
-10	-0.06	-0.29			0.07	-0.03		
-9	-0.13	-0.28			-0.11	-0.20		
-8	0.24	1.11			0.24*	2.02		
-7	0.44	0.83			-0.13	-1.09		
-6	0.00	-0.06			-0.08	-0.61		
-5	0.25	0.51			-0.19	-0.45		
-4	-0.03	0.16			0.09	0.42		
-3	-0.00	-0.09			0.22	1.48		
-2	0.14	0.79			-0.01	-0.11		
-1	-0.15	-0.44			-0.06	-0.21		
0	1.82*	5.63			1.79*	11.22		
1	-0.13	-0.68			0.09	0.73		
2	-0.41	-1.57			0.25	1.51		
3	-0.10	-0.09			-0.04	-0.73		
4	-0.03	0.22			-0.21	-1.17		
5	-0.06	-0.74			0.12	0.96		
6	0.28	0.17			0.16	1.18		
7	-0.28	-0.88			0.23	1.09		
8	-0.35	-1.30			-0.02	-0.08		
9	0.37	1.46			-0.41*	-2.28		
10	-0.22	-0.58			-0.08	0.63		
1-25			-3.03*	-1.94			-0.24	0.31
1-50			-5.34*	-2.44			-0.68	0.48
1-100			-4.69	-1.78			-0.36	0.98
1-150			-5.73	-1.57			-1.11	1.02
1-200			-1.65	-0.78			1.43	2.56

\*Significant at 1-percent level

**TABLE 2**

**Panel A**  
**Mutual Choice Sample - *HPR*'s And Excess *HPR* Returns Over The 200**  
**Day Period Commencing The Day Following Publication In *Barron's*—**  
**Market *HPR* Is The CRSP Equally-Weighted Index For AMEX And NYSE**  
**Stocks And NASDAQ Equally-Weighted Index For NASDAQ Stocks**

<i>HPR</i> Security	<i>HPR</i> Market	<i>HPR</i> Excess	<i>HPR</i> Security	<i>HPR</i> Market	<i>HPR</i> Excess
89.5	11.2	78.3	23.7	16.7	7.1
79.9	13.2	66.7	22.9	25.5	-2.7
68.3	31.3	37.0	22.3	40.8	-18.5
57.8	23.9	33.9	20.1	29.9	-9.8
54.5	33.6	20.9	18.8	14.6	4.3
52.1	14.6	37.5	18.6	11.0	7.7
51.5	30.9	20.7	17.1	14.1	3.1
44.5	20.3	24.2	15.2	12.9	2.3
44.1	29.2	14.9	13.3	10.5	2.8
43.0	29.5	13.5	11.2	13.2	-2.0
41.9	22.9	19.0	5.6	15.8	-10.2
41.0	16.2	24.8	5.4	15.7	-10.3
36.5	23.3	13.2	-1.7	25.4	-27.0
35.4	24.3	11.1	-2.5	6.3	-8.8
33.7	17.0	16.7	-2.7	8.0	-10.7
32.8	13.6	19.2	-3.1	13.2	-16.3
32.1	16.8	15.3	-4.1	22.1	-26.1
31.2	8.6	22.6	-4.3	21.5	-25.8
29.6	26.3	3.3	-4.7	29.9	-34.6
28.4	13.8	14.6	-5.2	17.8	-23.0
26.8	24.3	2.5	-6.5	13.2	-19.7
26.7	32.0	-5.3	-9.4	24.4	-33.8
25.4	13.6	11.8	-13.0	19.7	-32.7
24.1	26.3	-2.1	-16.3	14.5	-30.8

**Panel B**  
**Summary Statistics On 200 Day *HPR*'s For The Mutual**  
**Choice Sample (All Values In Percents)**

Mutual Choice Co.	Mean	Standard Error Of Mean	Minimum Value	Maximum Value	Standard Deviation
<i>HPR</i> - Securities	24.0	3.50	-16.3	89.5	24.3
<i>HPR</i> - Market	19.9	1.13	6.3	40.8	7.9
<i>HPR</i> - Excess	4.1	3.47	-34.6	78.3	24.1

TABLE 3

**Panel A**  
**Summary Statistics On 200 Day HPR's By Individual Analyst**  
**For The Multiple Selection Sample (HPR's In Percent)**

Analyst	Number Of Stocks	Mean HPR	Mean Excess HPR	Excess HPR's Minimum	Excess HPR's Maximum
1	16	54.5	38.8	-26.6	93.5
2	9	48.5	33.6	-30.2	150.7
3	6	44.7	21.9	-78.7	137.1
4	12	27.8	16.3	-25.9	47.4
5	9	32.9	16.2	-17.7	60.6
6	3	45.9	13.9	-17.1	32.4
7	14	37.3	13.2	-29.5	119.8
8	6	36.5	13.2	-5.8	20.7
9	8	28.2	11.2	-29.1	29.2
10	10	23.8	8.6	-15.2	31.8
11	9	29.6	8.2	-22.0	81.2
12	12	32.9	6.6	-47.7	74.3
13	7	30.8	6.1	-44.6	83.7
14	8	18.2	5.8	-50.1	116.0
15	7	36.8	4.0	-15.9	53.1
16	9	8.6	2.4	-32.2	70.7
17	3	11.0	-1.4	-18.4	23.1
18	4	29.9	-1.5	-12.5	14.4
19	4	21.4	-2.5	-28.6	28.2
20	5	8.6	-4.0	-16.6	17.9
21	5	11.2	-4.0	-28.2	34.4
22	6	26.2	-4.7	-54.6	28.6
23	3	16.3	-9.9	-14.5	-0.1
24	9	11.0	-15.4	-118.0	30.1
25	8	-5.0	-13.7	-49.0	30.1
26	10	0.7	-14.1	-37.2	10.6
27	7	-4.2	-17.6	-27.4	1.7

**Panel B**  
**Summary Statistics On 200 Day HPR's For The Multiple**  
**Selection Sample (All Values In Percents)**

Multiple Selection	Mean	Standard Error Of Mean	Minimum Value	Maximum Value	Standard Deviation
HPR - Securities	26.2	2.43	-90.3	167.2	35.1
HPR - Market	18.9	0.49	6.3	32.8	7.1
HPR - Excess	7.3	2.40	-118.0	150.7	34.6



## ENDNOTES

1. See Copeland and Mayers (1982), Holloway (1981), Peterson (1987) and Stickel (1985) for examples of this literature.
2. See Roll [8] for a discussion of the potential for differential results that may arise from these two methodologies.
3. The only peculiarity in the estimation procedure is that the five days symmetric to "Black Monday" (October 19, 1987) are eliminated due to the large impact that these days tend to exert on estimates of correlation coefficients, standard deviations and betas.
4. For acquired firms, the values of the  $AR_{jt}$  are set to zero following their delisting.
5. The 200 day *HPR*'s for acquired firms are computed by substituting the return on the CRSP equally weighted index (NASDAQ equally weighted index for NASDAQ stocks) once the stock is delisted. This procedure facilitates the aggregation of results across securities without distorting the magnitude of the average excess return.
6. See Lloyd-Davies and Canes [6], and Liu, Smith, and Syed [5].
7. See Groth, Lewellen, Schlarbaum, and Lease [3], Bjerring, Lakonishok, and Vermaelen [1], Lloyd-Davies and Canes [6], and Liu, Smith, and Syed [5].

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