

NBER WORKING PAPER SERIES

FURTHER EVIDENCE ON THE VALUE
OF PROFESSIONAL INVESTMENT RESEARCH

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Working Paper No. 536

NATIONAL BUREAU OF ECONOMIC RESEARCH
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August 1980

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FURTHER EVIDENCE ON THE VALUE
OF PROFESSIONAL INVESTMENT RESEARCH

Abstract

Recommendations of the professional research staffs of retail brokerage houses represent a potentially important source of information and advice to the individual investor. Since individual investors are paying for large quantities of this research, it appears as though the product is in demand. This study provides a unique perspective as to the value of professional research to the individual investor. Specifically, in addition to examining the *potential* for individual investors to exploit brokerage house recommendations to earn superior portfolio returns, the study also focuses on the *actual* return experiences of a representative sample of investors who were in fact observed to trade on such advice. Data for the investigation consisted of a file of all common stock transactions for a random sample of individual customers of a large national brokerage house, a complete record of the securities purchase-and-sale recommendations made by that firm, and the per-share prices and cash dividends of the recommended securities. Examination of the data indicate that there *were* opportunities for investors to realize superior returns. The securities research reports, then, must have contained at least some new information and/or analytical insights of value.

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FURTHER EVIDENCE ON THE VALUE OF PROFESSIONAL
INVESTMENT RESEARCH

The securities purchase-and-sale recommendations of the professional research staffs of retail brokerage houses represent a potentially important source of information and advice to the individual investor in corporate common stocks. For many investors, such recommendations may be the paramount influence on their portfolio decisions and therefore a major determinant of the effectiveness with which they can participate in an equities market that has increasingly come to be dominated by institutional traders. Similarly, competition among brokerage houses for commission revenue business often centers on the proclaimed quality of the various firms' respective research outputs.

The question as to whether there is truly a payoff from devoting resources to producing those outputs, however, has been addressed on a number of occasions in the literature of finance--typically, from the standpoint of the consumer of the product. In that regard, the issue has been the ability of professional securities research to uncover and communicate opportunities for investors to earn above-average portfolio rates of return. The reviews to date are decidedly mixed. Certain investigators have found such research frequently to be of potential value in formulating investment strategies [2,4,11,15,19], while others have concluded that it is almost entirely without merit [1,5,6,10,16,17,24,26].

Clearly, individual investors *are* paying for large quantities of this research, either directly through subscriptions to investment advisory serv-

The second data set contains a complete record of the securities purchase and sale recommendations released to its customers by the cooperating brokerage firm's research department during the same seven-year time period. The release date, the security discussed, and the nature of the investment advice offered were identified for each of the some 6000 recommendations encompassed by that record--directly from the firm's files, rather than from the secondary sources utilized by most previous studies. Details on the composition and character of these recommendations are available in [11].

The last information element is a chronology of the per-share prices and cash dividends of the recommended securities. In addition to the master file developed for the broader study containing monthly price data and dividend amounts and distribution dates, the particular closing market prices of each recommended security were compiled: for the date of its recommendation; for the first, fifth, and tenth *preceding* trading days; and for the fifth, tenth, fifteenth, and twentieth *subsequent* trading days.¹

The indicated interval, which represents effectively a six calendar-week period surrounding every recommendation release date, was selected for attention on the basis of the results of two prior analyses of the recommendations. One [25] documented a significant increase in trading activity in the recommended securities by the investor sample over approximately the same period of time. The other [11] suggested the existence of abnormal positive rates of return on those securities during the (calendar) months they were recommended. Accordingly, there is good reason to believe that the interval on which we shall focus here--which is more finely tuned than that in [11]--is the relevant one for observing an investor reaction to, and examining both a potential and an actual return experience with, the professional investment advice being conveyed.

The particular inputs employed in defining the $\hat{R}_{j,k}^i$ were effectively mandated by conditions of data availability. Thus, the strict form of the capital-asset-pricing model, as in (2), has been found to be less appropriate for investment performance evaluation than a "two-factor" version wherein $R_{j,k}^f$ is interpreted to be the yield on a constructed zero-beta portfolio rather than on a designated risk-free security [2,3,9]. Lacking a file of *daily* prices and dividends for a comprehensive array of securities, however, it was impossible for us to estimate zero-beta portfolio yields and rates of return on a market portfolio of equities for each of the 1738 stock trading days in the study period. Consequently, it was necessary to rely on public data sources for surrogates. In that regard, the S&P 500-stock index was chosen as a representation of the market portfolio, and its daily movements were used to compute the relevant $R_{j,k}^m$. Similarly, Treasury-Bill yields were inserted for the $R_{j,k}^f$; in the case of a specific 5-trading-day (7-calendar-day) measurement interval, for example, $R_{j,k}^f$ would be set at 7/30 the then-prevailing 30-day Treasury-Bill yield. While this definition of the risk-free rate is not the preferred one in the current literature, we have found in previous work with our data base that the results of investment performance appraisals over the years at issue are *not* sensitive to the substitution of T-Bill rates for zero-beta yields [21]. The $\hat{\beta}^i$ for the various recommended securities were obtained by regressing their monthly returns on those of a value-weighted market portfolio over the 84 months of the study period. That process is also detailed in [21].

The outcome of the foregoing analysis, as we shall see, suggests that there was in fact a clear potential for investors to achieve positive excess returns if they had acted on the advice of the brokerage firm's research staff on and around the dates of securities recommendations *and* if they were able to

The rationale was that none of the latter categories would be likely to lead to the kind of active and predictable trading responses by investors for which the measurement of potential returns from those actions would be particularly meaningful. Approximately 4500 recommendations remain on the revised list--a sample size which should still permit useful conclusions to be drawn.

Table 1 portrays the results of a comparison between the observed rates of return on the securities included on that list and the concurrent returns on comparable-risk securities, i.e., a tabulation of the $R_{j,k}^i - \hat{R}_{j,k}^i$ "residuals" described above. The figures shown are the mean values of those residuals, and only the time intervals for which they were found to be statistically significant are recorded.

The first column in the table denotes the actual computed excess-return percentages for each of the various periods. The second column translates these into a set of corresponding continuously-compounded annual rates.³ For BUY recommendations, the figures effectively represent the differential rates of return that an investor could have realized from engaging in purchase-and-resale cycles of varying durations in the recommended securities, on and around their recommendation dates. In the case of SELL recommendations, the counterpart investment cycles would have required opening short positions (while concurrently being long in the market portfolio) and subsequently covering those exposures. The positive net returns shown for sell recommendations were computed on that basis: i.e., on average, the securities in question *underperformed* the market and thereby would have yielded short-sale profits during the indicated intervals.

The data convey the message that there were in fact some opportunities for investors to obtain superior investment returns by concentrating on the

sample of recommended securities rather than dealing in the general run of similar-risk common stocks in the market, over the seven-year time period studied. Indeed, certain of the annualized differential-return figures are quite impressive. The securities research reports at issue must therefore have contained at least some new information and/or analytical insights of value.⁴

Evidence that positive excess returns show up, in connection with buy recommendations, several days in advance of the recommendations themselves, is consistent with prior findings [11,25]. In part, this anticipation is attributable to information "leakage" in the research process within the brokerage firm. Account executives frequently will learn of the tone of a research report while it is still in preparation, and begin to pass along trading suggestions to their customers before the report is formally released. Such preliminary indications to account executives of the character of imminent recommendations will, in fact, be conveyed quite deliberately on occasion. In effect, then, the recorded release date for many recommendations is only an approximation of the time much of the information therein actually began to be transmitted. The pre-release-date rise in trading activity in the recommended securities, detected in [25] for the firm's customer group, is an additional manifestation of this phenomenon.

Another factor, also cited in [11] and [25], has to do with the nature of the securities involved in the recommendations. It is not unlikely that often these would be the stocks of companies that had experienced some favorable developments in the recent past, news of which may well have been what prompted the brokerage firm's research staff to undertake its own analysis. Accordingly, we might expect to see positive excess returns on many securities prior to the recorded times of their recommendations in

The question then becomes whether those customers, all of whom were *individual* investors [12], were able to implement their trades at prices that would have allowed them to achieve above-average returns. A comparison of the execution prices documented in the investor-sample transactions file, with the closing daily trading prices employed to determine the $R_{j,k}^i$, suggests the answer is affirmative. For that purpose, the ratio of execution price to same-day closing price was computed for each observed transaction by the sample which occurred on the various benchmark dates surrounding the recommendations for which closing-price information was collected.

The means of those ratios are recorded in Table 2. The figure of 1.001 listed for trading day $t = 5$ in the BUY column, for example, indicates that the purchase transactions engaged in by the sampled customer group in securities that had been recommended for acquisition by the brokerage firm five trading days earlier took place, on average, at prices that were just one-tenth of one percent higher than the closing prices of those securities.⁶ A value of this ratio substantially greater than one for BUYS, or substantially below one for SELLS, would be evidence of what could be described as poor "access"--i.e., of an inability of individuals in practice to trade in recommended stocks on terms that would have allowed the potential differential-return opportunities therein to be realized.

It is apparent from the tabulation that there is little cause for concern on this score. The mean price ratios were in fact very close to 1.000 across the board. Only for the BUY side of one of the trading-day reference dates examined did the figure differ from 1.000 in a statistically significant unfavorable direction, and even there the discrepancy was merely 0.003 on the high side. Computations for day $t = 20$ were not made in the

present instance because the analysis in [25] revealed that by then the sample's trading volume in the securities recommended had returned to its normal level. Hence, it did not seem appropriate to regard transactions at that stage to be recommendation-induced and price ratio comparisons to be relevant, as they were for the other dates in Table 2. In any event, our conclusion from the data is that the firm's customers did get the information in time and experienced the sort of trading execution that would have been required to give them effective access to the superior investment returns identified in Table 1.

Realized Rates of Return

An indication that they took good advantage of the opportunities thereby presented can be found in a final piece of evidence: the returns realized by the investor sample on that portion of the investment round trips observed during the seven-year study period which appear to have been prompted by the firm's stock recommendations. The latter were interpreted to encompass all securities purchase-to-resale, or short-sale-to-cover, cycles that were *initiated* in the identified trading-day "response" interval $t = -10$ to $t = +15$ surrounding a recommendation of the security involved. While it obviously is an overstatement to define every such event as having been triggered by the recommendation, the associated over-all returns should still provide an unbiased measure of the experience of those individuals whose trades *were* so motivated. Thus, there is no reason to suspect that trading-price execution terms would differ on any given day for customer orders that happened to be placed in response to recent stock research reports, in contrast to those in the same securities that were generated by other influences.

Table 3

POST-TRANSACTIONS-COST
RISK-ADJUSTED REALIZED EXCESS RETURNS
ON INVESTMENT ROUND TRIPS: 1964-70
DATA FOR THE INDIVIDUAL INVESTOR SAMPLE

(Continuously Compounded Annual Rates)

	All Round Trips (N = 75,123)	Recommended- Security Round Trips (N = 5,432)
<hr/>		
A. Distribution--Decile Boundary Points:		
Decile #1	-43%	-35%
Decile #2	-21%	-16%
Decile #3	-11%	-10%
Decile #4	- 6%	- 3%
Decile #5	0%	2%
Decile #6	5%	6%
Decile #7	11%	14%
Decile #8	21%	24%
Decile #9	39%	37%
B. Parameters of the Distribution:		
Mean	0.1%	2.0%
σ	63%	48%
<hr/>		

FOOTNOTES

¹These data had to be hand-collected, since a daily price tape was unavailable to the researchers for the years in question.

²More accurately, $D_{j,k}^i$ represents the dividend payment associated with any *ex-dividend* date occurring in the interval.

³Where the translation takes into account the distinction between trading-day and calendar-day intervals.

⁴See [11] for a discussion of the character of such possibilities. It is worth noting that neither in that analysis, nor in the present one, is there any evidence of transitory distortions in the prices of the recommended securities. Thus, the positive return residuals in the vicinity of the recommendation dates were not subsequently reversed by price corrections.

⁵For that matter, they may have attracted the prior attention of the brokerage firm itself. Instances of repeat recommendations of particular stocks were not at all uncommon [25].

⁶Again, only "buy", "weak buy", "sell", and "weak sell" recommendations were included in the analysis.

⁷Which costs include commission charges, SEC fees, and--where applicable--New York securities transfer taxes and "odd lot" price differentials.

⁸As discussed in [20], the rates of return on the individual round trips at issue were time-weighted in obtaining these mean values.

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