Analysis of Free Stock Recommendations

Chandrashekhar R

Asst. Professor, Dept. of Business Administration, Mangalore University, Mangalagangotri, Mangalore Karnataka -574199

ABSTRACT *Advisory brokers advise investors on when to buy and sell stocks and keep them apprised of stock market trends and projections. Brokers recommend securities on the basis of their technical analysis and fundamental analysis. Investors rely almost entirely upon the advice of brokers and they do not question these recommendations. They provide stock recommendations on expected price movements of top scrip's via news papers, e-mails and mobile SMS. This study examines the performance of free stock recommendations published in the Hindu Business line and The Economic Times. I find significant difference between the predicted return and actual short term holding period return. The results of study reveal that majority of their suggestion yielded negative return over the period and all advisors were inaccurate in predicting market movement.*

1. Introduction

Trading in stock market involve high risk due to the changing market trends. Investing in the stock market is not very easy task as it requires lot of knowledge about the market environment. Changing markets environment require investors to have knowledge of the stock market to control of their investments. Investors should be aware of the market conditions so that they can remain updated on the market. Lack of knowledge force them to relay on the advice of the stock brokers advice. Stockbrokers are classified depending on the license they hold, the type of securities they sell, or the services they provide. One of the services concerned with advisor dealing, where the broker advises the investor/client on which shares to buy and sell, but leaves the final decision to the investor. Rose (1951) opine that decisions regarding activity on the stock market must be made rapidly if they are to be effective and most traders do not have the information necessary for making accurate predictions. One of the most important functions of the broker will be to provide access to emerging markets and analysis of potential investment opportunities. All of this information is less likely to be available to individual retail investors. Therefore they depend on the advisory brokers some time for accurate information. Salmanowitz (1977) opines that unsophisticated investors rely almost entirely upon the advice of brokers and they do not question these recommendations. Stock brokers estimate the future stock price and provide free advisory services to the investors. Advisory brokers provide live stock market tips and trading tips to investors and day traders dealing in share market. They provide stock recommendations on expected price movements of top scrip's for the day, via news papers, e-mails and mobile SMS. They provide tips for equity, futures and options segment and Commodity trading tips. Jackson, A. R. (2005) reveals that high reputation analysts generate higher future trading volume and accurate analysts are rewarded with higher end-of-period reputations. They claim that they have a team of specialized stock market analysts with extensive knowledge of the stock market to provide share market tips. They study the market of the day to provide profitable recommendations. They also claim that they predict the market accurately. The past performance of advisory brokers helps in knowing the accuracy of predictions. This study examines the performance of free stock recommendations published in the Hindu Business line and The Economic Times. I find significant difference between the predicted return and actual short term holding period return. The results of study reveal that majority of their suggestion yielded negative return over the period and all advisors were inaccurate in predicting market movement.

Reminder of the paper is organized as follows. Section 2 presents the review of literature. Data and sample selection are presented in section 3, methodology is described in the section 4, and empirical results are examined in section 5 and conclusions are presented in section 6.

2. Review of Literature

A few previous researchers examined the stock price reactions to the announcement of stock recommendations in USA and Europe. The results of the previous research are briefly presented below.

Bjerring et al (1983) reveal that an investor following the recommendations would have achieved significantly positive abnormal returns, even after allowing for transactions cost. Peterson (1987) finds that the reviews convey information to the market as significant abnormal returns are found over a 3-day period around release of the information. There is no statistically significant subsequent price reaction after this 3-day period, consistent with market efficiency. Liu et al (1990) indicates that the "Heard-on-the-Street" (HOTS) column of The Wall Street Journal on common stock prices column appears to have an impact on stock prices on the publication day. They also find a smaller, but statistically significant, impact on two days preceding the publication. Beneish (1991) investigates alternative explanations for the significant stock price reaction to analysts' information reported in "Heard on the Street" ("HS"). He observes that market reaction persists after eliminating firms with confounding releases and firms for which analysts' reports are issued immediately prior to publication. His result indicates that "HS" is not usually a secondary dissemination. He also finds that stock prices adjust prior to publication when recommendations are reported on a single firm. He also observes that analysts have incentives to release information to "HS" before disseminating it to their clients. His evidence suggests that "HS" gathers information, forms a consensus, and provides it to investors. Stickel (1995) opine that buy and sell recommendations of brokerage house influence stock prices. Trahan and Paul (1995) results show that the publication of this second-hand information has a positive and significant impact on stock prices at the time of publication. They also find that the abnormal returns quickly disperse and the recommendations examined here do not provide superior returns over longer holding periods. Womack (1996) opines that analysis of new buy and sell recommendations of stocks by security analysts at major U.S. brokerage firm's shows significant, systematic discrepancies between pre recommendation prices and eventual values. The initial return at the time of the recom-

mendations is large, even though few recommendations co-incide with new public news or provide previously unavailable facts. However, these initial price reactions are incomplete. For buy recommendations, the mean post event drift is modest (+2.4%) and short-lived, but for sell recommendations, the drift is larger (-9.1%) and extends for six months. Analysts appear to have market timing and stock picking abilities. Kim et al (1997) finds an initial coverage report with a buy recommendation by an analyst has a significant effect on firm value, increasing share prices of NYSE/AMEX firms by approximately 4% and NASDAQ firms by 7%. Their result also provides evidence that there is value to the information collection activities of brokerage firms and analysts and that an element of this value accrues to the benefit of their important clients. Francis and Leonard (1997) find that stock recommendations and earnings forecast revisions together explain about 5% of the variation in excess returns cumulated over days (-1,+1) relative to the report publication dates. Their results indicate that recommendations are informative. Further they report that as a group, and after controlling for earnings forecast revisions, variables capturing the level of and the revision in stock recommendations explain a significant (at the .02 level) portion of the variation in cumulative abnormal returns. They also find that investors attach significantly (at the .02 level) larger weights to the earnings forecast revisions in reports containing buy recommendations than they do to revisions in reports containing holds or sells. Michaely and Kent (1999) reveal that underwriter analysts recommend share perform more poorly than "buy" recommendations by unaffiliated brokers prior to, at the time of, and subsequent to the recommendation date. They show that the market does not recognize the full extent of this bias. The results suggest a potential conflict of interest inherent in the different functions that investment bankers perform. Barber. et. al., (2001) documents that purchasing (selling short) stocks with the most (least) favourable consensus recommendations, in conjunction with daily portfolio rebalancing and a timely response to recommendation changes, yield annual abnormal gross returns greater than four percent. Further they find that less frequent portfolio rebalancing or a delay in reacting to recommendation changes diminishes these returns; however, they remain significant for the least favourably rated stocks. Barber et al (2003), reveals that after a string of years in which security analysts' top stock picks significantly outperformed their pans, the years 2000 and 2001 were disasters. During those two years, the stocks least favoured by analysts earned an average annualized market-adjusted return of 13.44 percent whereas the stocks most highly recommended underperformed the market by 7.06 percent, are turn difference of more than 20 percentage points. Jegadeesh et al (2004) reveals that analysts from sell-side firms generally recommend "glamour"(i.e., positive momentum, high growth, high volume, and relatively expensive) stocks. Naive adherence to these recommendations can be costly, because the level of the consensus recommendation adds value only among stocks with favourable quantitative characteristics (i.e., value stocks and positive momentum stocks). In fact, among stocks with unfavourable quantitative characteristics, higher consensus recommendations are associated with worse subsequent returns. In contrast, they find that the quarterly change in consensus recommendations is a robust return predictor that appears to contain information orthogonal to a large range of other predictive variables. Malloy (2005) provide evidence that geographically proximate analysts are more accurate than other analysts. They also reveal that the stock returns immediately surrounding forecast revisions suggest that local analysts impact prices more than other analysts. Further he opines that these effects are strongest for firms located in small cities and remote areas. O Brien. et al. (2005) hypothesize that affiliated analysts have incentives to respond promptly to good news but prefer not to issue bad news about client companies. Using duration models of the time between an equity issue and the first downgrade, they find affiliated analysts are slower to downgrade from buy and hold recommendations and significantly faster to upgrade

from hold recommendations, in both within-analyst and within-issuer tests. Their findings indicate that banking ties increase analysts' reluctance to reveal negative news, and that reform efforts must carefully consider the incentives of affiliated and unaffiliated analysts to initiate coverage and convey the results of the research. Green (2006) opines that early access to stock recommendations provides brokerage firm clients with incremental investment value. He also finds that short-term profit opportunities persist for two hours following the pre-market release of new recommendations. His results are robust within sub-periods and a calendar-based strategy produces positive abnormal daily returns. Further he reveals that recommending firms' market makers shift their quotes accordingly, providing indirect evidence that clients make use of the informational advantage that arises from analysts' opinion changes. Antunovich and Asani (2006) examine 120 Nasdaq and over-the-counter "buy" recommendations for the period April 1999 to June 2001. The stock picks show substantial short- and long-run price and liquidity gains, although no new information is revealed about them. We find that stocks with lower initial liquidity have proportionately greater liquidity gains on the pick day. Further, stocks with lower initial liquidity and higher pick day liquidity have higher pick-day excess returns. These results support the idea that stocks have multiple liquidity equilibria and that the stock picks, by coordinating uninformed trading activity, push initially illiquid stocks to higher liquidity equilibrium. Brown. et al. (2009) shows that the market's reaction is strongly influenced by the analyst's reputation, the divergence of opinion among analysts and the number of analysts following the stock. Simon and Asher (2011) examine how analysts conflicting incentives to be either accurate or optimistic affect their choice to generate stock recommendations with rigorous valuation models or growth-based heuristics. Consistent with prior research they find that the average analyst recommendation is negatively associated with rigorous valuation models and positively associated with growth- based heuristics. They document that these associations are weakest for the most accurate analysts and strongest for the least accurate analysts. They also find evidence consistent with consistency between recommendations and valuation models underlying the positive future returns from trading on the most accurate analysts recommendations. Roshan (2011) reveals that in short-term (one year period) majority of the suggestions given by various brokers are inaccurate, in very short term (within one month) the majority of the suggestions given by various brokers are accurate. Chandrashekhar (2012) analyses Brokers Call the free stock recommendations appeared in The Hindu Business Line. He finds significant difference between predicted return and the actual return of the company recommended.

3. Data and sample selection:

The study analyzes 2076 buy recommendations from January 2010 to December 2011. The sample size varies for different periods due to non availability of data. The study restricts the sample to free stock recommendation appeared in The Hindu Business Line and The Economics Times. The closing and opening prices of the stocks are collected from the official website of NSE. On the day of announcement opening and closing prices is taken into account. Closing price of t+1 day, one week, one month and one year are taken into account for analysis.

4. Methodology of the study:

Target return, T+1 day return, one week return, one month return and short term returns are calculated to evaluate the free stock recommendations. Further average return, standard deviation, z-test, positive return and negative return are used in the analysis. The target return and the return for a given period is given by the following equation

Target return or Predicted Return:

$$\frac{Target\ price - Market\ price}{Market\ price}$$

Market Price: Is the current price at which a share can be bought or sold on the day of prediction.
Target price: Is the projected price level as stated by an investment analyst or advisor.

Return for a given Period:

$$\frac{Pt - Market\ price}{Market\ price}$$

Pt : is the price of share for a given period, i.e. opening price, closing price, T+1 day price, one week price, one month price and one year price.

Market Price: Is the current price at which a share can be bought or sold on the day of prediction.

Two sample z-test is used to compare and evaluate the target return and the buy and hold return for a given period. The test statistics for significance of difference between targets return and buy and hold return for a given period is given by;

z-test:

$$z = \frac{\bar{x}_1 - \bar{x}_2}{\sigma}$$

$$\sigma_{x_1 - x_2} = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$

✓ σ1 and σ2= sample standard deviations
✓ 1 = sample mean of first sample i. e., target return
✓ 2 = sample mean of second sample e i. e., buy and hold return for a given period.
✓ n1 and n2 = sample size

One sample sign test is used to compare the actual positive and negative returns of the recommended shares. The sign test statistic is given by;

$$z = \frac{\bar{p}_\square - p_\square}{\sigma_p}$$

$$\sigma_p \quad \sigma_p = \sqrt{\frac{pq}{n}} \sqrt{\frac{pq}{n}}$$

$\bar{p}$ = Proportion of success/Positive return in the sample

p = Hypothesised proportion of positive return

q = Hypothesised proportion of negative return

n = number of return in the sample.

σ_p = Standard error of the proportion

5. Evaluation of free stock Recommendations
The test results of free stock recommendations are presented in the following two tables.

Table No 1.
Difference between the Predicted Return and Actual Returns

	Predicted Return	T+1 day Closing Return	One Week Return	One Month Return	Short-term return
AVERAGE	0.2684	0.0759	0.0657	0.02977	-0.35817
N	2076	2053	2053	2053	2058
STD.DEV	0.30519	1.1786	1.1596	1.16082	1.2882
Z TEST		7.1645	7.6575	9.009020	21.4703

*The critical value for 5 percent levels of significance is 1.96 respectively.

The average predicted return of the advisors is 26.84 percent and the standard deviation of the predicted return is 0.3051. The average actual return for t + 1 day (Announcement day +1), one week, one month is positive and it is negative for one year period. The average actual return on the day of t + 1 is 7.59 percent. One week holding period return is 6.57 percent and for one month it is 2.97 percent. The standard deviations of the actual returns for different holding period are more than 1. The higher standard deviations of the actual returns indicate that the actual returns are far from the average return as against the standard deviation of predicted return. The test results reveal significant difference between predicted returns and actual returns. This result reveals that the advisors fail to predict the actual market movement in advance.

Table No 2.
Difference between Positive and Negative Actual Returns

	Target Return	T+1 day Closing Return	One Week Return	One Month Return	Short Term Return
Proportion of +	0.9648	0.49829	0.46517	0.41889	0.14237
Proportion of -	0.0352	0.50170	0.53482	0.58110	0.85762
Z		-0.15449	-3.1560	-7.34936	-32.4478

*The critical value for 5 percent levels of significance is 1.96 respectively.

The proportion of positive predicted return is 0.9648 and the proportion of negative predicted return is 0.0352. The proportions of positive actual returns for T+2 day, one week, one month and short – term are less than 0.50. The sign test reveals that there is no significant difference between the proportion of positive and negative actual returns on the day of t + 1 day. There exists significant difference between the proportion of positive and negative actual returns for one week, one month and one year periods. This result indicated that the advisors fail to predict the decreasing trend in the market.

6. Conclusion
The disclaimer of advisors states that views expressed are based on technical analysis and do not reflect the fundamental value of the scrip. Further it states that no responsibility is assumed for any adverse consequence resulting out of acting on the recommendations. The results also reveal significant difference between the predicted and actual returns. Further, I find significant negative returns as against the predicted high positive returns. The results of study reveal that majority of their suggestion yielded negative return over the period and all advisors were inaccurate in predicting future price. This result raise a question, how have a team of specialized stock market analysts with extensive knowledge of the stock market fail to predict the actual market movement. Further this result and the disclaimer of the advisors raise the doubt of collusion between the companies recommended and the advisors. Further it is better not to use these recommendations to trade in the stock market.

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