EVALUATING THE ACCURACY OF STOCK ANALYSTS' RECOMMENDATIONS PUBLISHED IN BISNIS INDONESIA NEWSPAPER[†]

Arnold Kaudin & Yustin Hendro Pranoto

Academic Staff of the Faculty of Economics Satya Wacana Christian University & Alumnus of the Faculty of Economics Satya Wacana Christian University

ABSTRACT

Many investors have not enough knowledge, skill, and time to learn which stocks are the candidate to buy or sell. A stock analyst provides recommendation and help investors to make buy or sell decision. The purpose of this study is to investigate the stock analysts' recommendation accuracy published in Bisnis Indonesia daily newspaper. The data used in this research is analysts' recommendation published in Bisnis Indonesia along the year 2005. There are 1,196 buy recommendations, 500 sell recommendations, and 649 price recommendations; released by six security companies. The technique used to measure the accuracy of price prediction is the Chi Square and to measure the accuracy of recommendation to sell or buy is Wilcoxon Match Pair Test. The result shows that the stock price and recommendation to sell tend to be inaccurate while recommendation to buy tends to be accurate.

Keywords: recommendation accuracy, stock analyst, price recommendation, recommendation to sell, recommendation to buy

1. INTRODUCTION

The rapid development of the Indonesian financial market in recent years enables investors to choose various investment instruments. One among the alternatives which have been growing rapidly and becoming more popular for the last decade is investment in stock. The Capital Market Supervisory Agency reported that during the period 1995-2005, stock exchanges in Indonesia recorded an average annual increase of 12.76 percent in term of indices (Indonesian Capital Market Master Plan 2005-2009). In the Jakarta Stock Exchange, alone in 2005, the indices increased as high as 16.20 percent from 1,000.87 to 1,162.35. The market capitalization achieved the value of 710,433,652 million rupiah, grew for around 259 percent in five year period. The average trading volume was 73 million shares per day, around twice as high the average volume from five year period before. There were around 207 companies' shares listed and around

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130,000 investors serviced by more than 100 securities companies. The industry has been growing as the number of players in capital market increases from year to year.

As the industry grows and becomes more complex, not all of the investors, both institutional and individual, have enough expertise in analyzing the market. Most of them are only interested in accelerating the growth of their funds. They do not have enough knowledge, skill, and time to learn which stocks are the candidate to buy or sell. Therefore, as the stock market develops, the profession of financial (stock) analysts exists. Many investors find that choosing and managing investments is not their forte and turn to financial analysts‡ (Penman, 2003:12). A stock analyst gives recommendation and help investors to make buy or sell decision as those people are the ones fully equipped with knowledge and skill. Related to their professions, these people have connection to the corporate side and thus have access to the most actual and more complete information.

Analyst report contains a description of company's business, how the analysts expect the company to perform, earnings estimates, price estimates or price targets for year ahead, and recommendations as to buy, to hold, or sell (Jones, 2002:298). Further, analysts should do more than simply recommend companies expected to grow rapidly. One of the most important responsibilities of an analyst is to forecast earnings per share for particular companies because of the widely perceived linkage between expected earnings and stock returns. Most research concerning quality of analysts entails measuring the ability of analysts to determine the expected earnings (See, for instance, Andersson and Hellman [2004], Eames and Glover [2003], and Armstrong [1983]).

In fact, the recommendation and or advice made by analysts are not always accurate. For cases in U.S., according to Bodie *et al.* (2005:10), only the smallest fraction of firms were assigned sell recommendations and many firms given buy recommendations were privately called or worse by the analysts. As the analysts must establish good relation to the management of the companies he or she in charge of, there is a possibility that publishing sell recommendations would be hurt for the companies' side (the management) and after the sell recommendation those analysts would get trouble in accessing information. There is a perception that sell recommendation is the beginning of distrust. It has been common in U.S. that "neutral" rating is the euphemism for sell. Some well known cases entails recommendations to sell in U.S. are the case of Boston Chicken and Bank of America. Jegadeesh and Kim (2004) documents that the frequencies of sell recommendations in G7 countries between 1993 and 2002 are far less than that of buy recommendations. Wong (2002) provides evidence that analyst in Australia issue more recommendations to buy compared to recommendations to sell. Recommendations

‡ In this paper the terms financial analyst and stock analyst are used interchangeably due to different terminologies used by different authors.

to sell have stronger impact to prices but weaker impact to trading activity. This implies that analysts are conscious of the benefit of issuing positive recommendations and the cost of issuing negative recommendations.

The inaccurate recommendation may also come from inaccurate prediction of the price movement. Off course this is a technical matter. Jones (2002:300) adapted Hovanesian article in Business Week that illustrated how sell recommendation from large investment bankers such as Credit Suisse First Boston (CFSB), UBS Warburg, Merrill Lynch, Morgan Stanley Dean Witter, etc may lead to wrong investment decision. For example, among 1,328 stocks covered by CFSB, only eleven stocks were recommended to be sold. Ironically, among those eleven, after 52 weeks, only five were really declined and one other was stagnant. Three from four stocks recommended to be sold by UBS Warburg had grown for 64.2 percent, 9.3 percent, and 17.9 percent.

Bodie *et al.* (2005:10) argue that agency problems may lead to scandals. Conflict of interest and distorted incentives played a role in these scandals as the analysts were commonly compensated not for the accuracy or insightfulness of their analysis, but for their role in garnering investment banking business for their firms. Analysts working in brokerage house receive commission based on trading volume which is affected by their recommendations (Palepu *et al.*, 2004:9). In U.S, the conflict of interest between the analysts who play in stock research business and its investment bank materialized in new regulations adopted by NASD and NYSE that sever the ties between investment bank and research department. Madureira (2004) finds that after the new regulations analysts provide less optimistic ratings for the stocks. Further, after the regulations, the big 10 brokerage houses have been twice more likely to put a stock in a pessimistic rating than the non-big 10. This indicates that before the regulation, the bigger the brokerage houses, the bigger the possibility of recommendations manipulated.

Another study concerning the conflict of interest was conducted by Agrawal and Chen (2007). They find that the level of analysts' stock recommendations is positively related to the magnitude of the conflict of interest between the investment bank and research department. The optimistic bias stemming from the conflict was pronounced during the late 1990s stock market bubble. However, they also find that investor are sophisticated enough to adjust for the bias. Another finding is when the analysts' investment bank was the lead underwriter of an IPO of the recommended stock in the past five years or a secondary IPO in the past two years (mentioned as affiliated analyst), the recommendations are more optimistic than if the analysts' investment bank had no underwriting relation to a company's recommended stock. However, the affiliated analysts' earnings forecasted found to be more pessimistic than the unaffiliated analysts' forecast (Malmendier and Shantikhumar, 2005)

Accuracy of recommendations becomes the eminent point in this study. Investors based their decisions, or at least some part of their decisions, on the analysts' advice or

recommendations. Thus, it becomes important to evaluate the performance of the stock analysts. So far, it is very difficult to find research concerning stock analysts' recommendation accuracy for the Indonesian case. There is still a lack of empirical evidence whether the Indonesian analysts' recommendations are informative. The obstacle to make such an evaluation is the data, which is very limited and only distributed to investment bankers' customers exclusively. Media such as Bisnis Indonesia daily newspaper, Tabloid Kontan, Investor magazine, e-bursa.com, and some others provide publicly available stock recommendations.

The purpose of this study is to investigate the stock analysts' recommendation accuracy published in Bisnis Indonesia, which is considered as the most consistent media publishing recommendations from stock analysts; and to arrange the analysts' ranking based on the level of prediction accuracy. Before going through a deeper exploration of security analysts' behavior and the market's perception, this preliminary study is conducted to determine the accuracy of stock analysts' recommendations for the Indonesian case.

2. THEORETICAL BACKGROUND AND PRIOR STUDIES

Rather than do their own security analysis, individual investors may choose to rely on the recommendations of the professionals (Jones, 2002:298). When a stock analyst decides that a stock will experience a change in price and inform his or her findings to investors, the investors will give response to the information. Thus the price will be affected. If the information widespread, there will be more responses from more investors and the price will be affected more. The analysts predict business prospect to find mispriced securities. They provide recommendation to buy for the under-priced securities and recommendation to sell for the overpriced securities. When an analyst decides that a stock value is under-priced, the response should be actions to buy which result in an increasing stock price. On the contrary, when an analyst decides that a stock value is overpriced; the response should be actions to sell which result in a decreasing stock price. Observations show that stock prices in the New York and Tokyo Stock Exchange are highly affected by recommendations from analysts (Bawazer, 1991).

Though theoretically all brokerage house customers and portfolio managers who receive analysts' expert advice should achieve investment success, in reality there are several factors that make it difficult to consistently outperform the market (Reilly and Norton, 2006:510):

1. Efficient markets enable the market to review and absorb information and therefore stock prices generally approximate fair market value. With many market players, it is difficult for investors to find situation where stock may not be fairly valued.
2. Most analysts spend most of their times in a relentless search of one or more contact or one more piece of information. This preoccupation with more information can keep the analysts' mind off the final output – that is, their stock recommendations.

3. There are forces pulling on the sell-side analyst. If the investment bankers are assisting a firm in a stock or bond offering, it will be difficult for an analyst to issue a negative evaluation of the company. Besides, the analyst is in frequent contact with the top officers of the company he or she analyzes. Although there are guidelines about receiving gifts and favors, it is sometimes difficult to separate personal friendship and impersonal corporate relationships.

Analysts based their recommendations on some analytical tools. They analyze current performance of the target and its prospect. They estimate the future earnings per share of the target, determine whether the current market price is over or under valued, and finally provide recommendations to buy, to hold, to sell (also mentioned as stock ranks by Morgan and Stocken, 2001) or the variety of these basic forms of recommendations. Nevertheless, missed recommendations have been common and create skeptical among investors or other users of analysts' recommendations. Some argue that it is not always clear how the recommendation follows from the analysis, or indeed whether it is justified (Penman, 2003:12) and the motives of the analysts providing advice may not be transparent (Morgan and Stocken, 2001).

On the other hand Bradshaw (2004) proves that analysts' recommendations do work for the investors. He links valuation techniques used by analysts to recommendations by examining consistency between analysts' earnings forecast and their stock recommendations. He used four valuation models to link earnings forecast and stock recommendations. He found that analysts' recommendations are more correlated with heuristic valuations model than with present value models, and buy-and-hold investors would earn higher returns relying on present values models that incorporate analysts' earnings forecasts than on analysts' recommendations. Bradshaw also explained that personal opinions or biases dominate recommendations based on present value model. Wong (2002) explains that analysts' recommendations in Australia were observed to be associated with abnormal returns on the day they were officially released to clients. Stocks issued with sell recommendations continued to experience negative abnormal returns in the post-recommendation period while returns to buy recommendations were partly due to price pressure. Hold recommendations were informative as buy rather than sell signals. She also finds that abnormal returns were observed in the pre-recommendations period, means that analysts had poor timing ability, reactive in making recommendations, recommend privileged clients first, and left behind the traders. Similar to Wong, but in term of volume (U.S case), Puckett (2002) finds that analyst' initiations of recommendations to buy are preceded by abnormal institutional volume and abnormal net buying positions taken by those institutions for up to four days before the initiations of coverage are made public.

Welch's findings (2000) probably can provide an explanation about the abnormal return during pre-recommendations period. According to Welch, analysts' recommendations

may also be affected by prior recommendations. He finds that an analyst's recommendation revision has a positive influence on the next two analysts' revisions. The influence can be traced to short-lived information and is stronger when short run ex-post returns are accurately predicted by the revisions. The influence becomes stronger during the bullish market.

Baber *et al.* (2002) study the returns of stock recommended by analysts over the 1996-2000 periods in U.S. They find that during the period 1996-1999 the more highly recommended stocks earned greater market-adjusted returns than did those that were less highly recommended. The opposite happened in year 2000 where the least favorably recommended stocks earned an annualized market-adjusted returns of 48.66 percent while the stocks most highly recommended fell 31.20 percent. The pattern prevailed during most months of 2000, regardless of whether the market was falling or rising, and was observed for both tech and non-tech stocks. Further they propose that the result should add to the debate over the usefulness to investors of analysts' stock recommendations. Ho (2005) examines whether investment decisions based on analyst ratings without studying the full reports is sound. He finds that analysts are unable to forecast stock performance in the short term (1-2 weeks) as during the short period the excess return are indistinguishable from zero. Analysts' ratings reflect excess return best about seven months later.

Another study by Jegadeesh *et al.* (2004) provides evidence that stocks which receive higher recommendations tends to have positive momentum and higher trading volume. On average, stocks favorably recommended by the analysts outperform stocks unfavorably recommended by the analysts but the predictive ability of the level of analyst recommendation is not significant. This poor performance is caused by the analysts' failure to quickly downgrade stock rejected by some investment signals (valuation multiples, accounting accruals, capital expenditure). They conclude that analyst recommendations may be partly driven by incentives that are not entirely related to the investment performance of the analysts' recommendations.

A study by Ribeiro *et al.* (2004) provides evidence from Portuguese investment banks that trading strategies based on analysts' recommendations have a negative performance regardless of the investment horizon. However, they find a positive significant return on the day the recommendations are published. They conclude that the positive impact is partially consistent with market efficiency and supports that analysts have forecasting skills.

Stock analysts are highly trained individuals who possess expertise in financial analysis and background of the industry. Theoretically, all brokerage house customers and portfolio managers who receive analysts' expert advice should achieve investment success (Reilly and Norton, 2006:510). As analysts have knowledge, skill, and information, we believe that the price and buy or sell recommendation given is based

on a deep calculation and analysis. Thus, our hypotheses are that analysts' price recommendation and their recommendation to buy or sell are accurate.

3. SAMPLES AND RESEARCH METHOD

The population of this research is all analysts' recommendations published in the Bisnis Indonesia newspaper along the year 2005. The samples include price recommendations and clear recommendation to sell or buy the stocks. More specific recommendations such as exit, take profit, hold, etc are excluded to avoid bias in interpretation. There are 649 price recommendations, 500 sell recommendations, and 1,196 buy recommendations; released by six security companies: Bhakti Sekuritas, BNI Sekuritas, Mandiri Sekuritas, Ciptadana Sekuritas, Trimegah Sekuritas, and Sarijaya Sekuritas.

The price recommendation is considered to be accurate when the price at the second day after the recommendation matches with the two-days before recommendation price. We use the two days before and after recommendation date price by consideration that the two-day period is a neutral time horizon because:

1. The recommendation must be for a short-term horizon since it is published in a daily newspaper.
2. In many occasions, analysts provided more than one recommendation for one stock in a month.

Nevertheless, the recommendations may also affect the price at the recommendation date, one day after the recommendation date, five days after the recommendation date, etc. The technique used to measure the accuracy of price prediction is the Chi Square Test. We assume that price recommendations are considered to be accurate when the proportion of correct price recommendations (in aggregate) achieves the 50 percent level.

To determine the effect of the sell or buy recommendations, we compare the two days before recommendation date price to the two days after the recommendation date price. The recommendation to sell is considered to be accurate when the price at the second day after the recommendation date is lower than two-days before recommendation price. The buy recommendation is considered to be accurate when the price at the second day after the recommendation is higher than the two-days before recommendation price. To measure the accuracy of recommendation to sell or buy is Wilcoxon Match Pair Test[ʃ].

The ranking of security companies which provide the highest level of accuracy for their price recommendation, recommendation to sell and recommendation to buy is

[ʃ] After the Kolmogorov-Smirnov Test, we find that the distribution of the data is not normal. Thus we use the non parametric technique of Wilcoxon Match Pair Test to measure the difference between the two days before the recommendation price and the second day after the recommendation price.

determined by comparing the number of accurate recommendations. The security companies included in the ranking process must produce not less than 52 recommendations during the year 2005. The number 52 is established by consideration that there must be at least one recommendation (in average) released for every week. Security companies which released too few recommendations cannot be compared to those which actively published their recommendations.

4. RESULTS

Table 1 show that Bhakti Sekuritas was the most productive security company publishing stock recommendations in Bisnis Indonesia in 2005. It released 671 recommendations, which comprised of 221 price recommendations, 313 recommendations to buy, and 137 recommendations to sell. BNI Sekuritas following in the second place with 574 stock recommendations, which comprised of 345 recommendations to buy and 229 recommendations to sell. Almost all of recommendations published by Mandiri Sekuritas were price recommendations while Trimegah seems to prefer releasing recommendations to buy or to sell. Ciptadana Sekuritas was the least active among the six as it only released 70 recommendations for the whole year.

Table 1
The Number of Recommendations Released By the Analysts