Analysis Stock Price Index Using Residual Income Model in Jakarta Islamic Index

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Abstract   This research is using quantitative descriptive methods and case studies approach. The ratio of financial analysis and analysis comparison financial reports are also used as the analysis part. Return on Investment (ROI) is one of the ratios of profitability which capable of measuring the company as a whole in producing the profit with all of the available assets. Other alternative to measure the performance of corporate finance is by Residual Income (RI). The uses of both analyses are expected to reinforce and furnish the result obtained so that it will be more accurate. The result of the analysis indicates the conditions of corporate finance fluctuant. The value of ROI is positive but fluctuant. The analysis of RI condition is good where the score of fluctuation is always positively grown. Companies need to be more efficient and effective in making use of company assets, as well as maintaining and enhancing the value of RI. Through this, the company can continue to objectify the level of the expected returns shareholders and its investors.

Keywords   Case Study Approach; Descriptive Method; Financial; Residual Income; Return on Investment.

INTRODUCTION

Analysis behavior srock price one of the important input for traders in the investment decision-making process. For them, the most important part is how to utilize the stock price trend changes information with the motive to earn profits in a very short time. Their motivation is profit-taking, seeking wealth in a short time and not for long-term investments. Traders, who are directly or indirectly involved in daily stock trading activities, use approaches, methods or models that they believe are accurate enough to outperform the market. Therefore, they are competing to find models, methods, and approaches that really applicable and able to predict changes in stock prices accurately [1].

Shares are securities that indicate the ownership of the company so that shareholders have the right of claim on dividends or other distributions made by the company to its shareholders, including the right of claiming on the company's assets with priority after the rights of other securities holder claim is fulfilled in case of liquidity. While stock price is the value of proof of equity participation in a limited liability company that has been listed on the stock exchange, where the shares have outstanding (outstanding securities). The price of a stock can also be defined as the price formed by the interaction between the sellers and the stock buyers motivated by their expectations of the company's profits [2, 3].

In the investment or purchase of a company's stock is certainly not easy. A person must be observant to predict whether the investment will be profitable or not. This of course, depends on the tendency of stock value movements to be purchased. If the value of shares increased, it will certainly be profitable, or vice versa. Normally a potential investor is wrong in making decisions due to the difficulty of predicting the movement of the value of these shares. One model that is believed to be used to outperform stock trading is the residual income (RI) model. Specifically, by showing it is adjusted for serial correlations in the RI model, hence, it gives more accurate price estimates results. Accurate price analysis helps to build profitable trading strategies, for example by investing in stocks with the biggest difference between the current price and the expected future price.

MATERIALS AND METHODS

Residual Income Model

Residual income is the company's net profit less the imposition of investment. The greater the profit earned by the company, the residual value of the income will be higher. Residual income is used to assess a company's performance from its equity valuation. The positive residual income indicates the excess profits generated by the company, while the negative residual income indicates the company is not able to cover its capital cost. The sense of RI according to Supriyono (2001) is "Residual Income (RI) or residual profit is profit calculated from the difference between profit before taxes are deducted by the calculated capital cost of the investment. The calculated capital cost is the opportunity cost of the invested investment". Meanwhile, according to Simamora (2002) define Residual Income as follows; Residual Income is one way of focusing on the value of rupiah rather than on the ratio (as happened on Return on Investment). Residual income is the surplus of divisional operating profit over the minimum amount of desired operating profit determined by senior management, taking

into account factors such as the cost of capital of a firm's business activities. Next According to Sudana (2011), "The cost of capital is one of the benchmarks to assess whether the decision on purchases taken by the management has been an optimal decision or not". From some of the above understanding, it can be concluded that Residual Income is net profit before tax minus the cost of capital which is then compared to the investment company to assess the performance of divisional. [5, 8].

The residual income formula is as follows:

$$RI = \text{Net income} - (\text{Operating profit x Target ROI}) \quad (1)$$

Residual Income Advantages

Some advantages on residual income, namely:

1. The use of residual income as a measure of profit centre performance results in all profit centres having the same target for comparable investments.

2. Residual income may use different capital cost rates for different risk assets.

Meanwhile, residual income has advantages such as:

1. A proportional investment division has the same profit objective

2. Different assets may be charged the percentage of different capital costs.

3. Certain types of assets may be burdened with the same percentage of costs, without placing the divisions that use the assets invested.

4. Consistent measurement in each division encourages division managers to make investments that can generate as much RI as possible [10].

Residual Income Weakness

In addition to having advantages, residual income also has shortcomings,suggests some residual income weaknesses, namely:

1. Residual income encourages the profit center manager to decide on his or her orientation of short-term goals since the profits and components used to calculate earnings are limited to an accounting period not exceeding one calendar year.

2. Residual income as a measure of profit center performance is strongly influenced by depreciation methods of fixed assets.

Residual income is an absolute number that cannot be used to compare the capabilities of various profit centers in generating profits [10].

Residual on Investment (ROI)

Return on Investment (ROI) is a measure of the company's overall ability to generate profits with the total assets available within the company [4]. Factors that affect Return On Investment (ROI) can also be seen by combining two factors, namely:

1. Turnover from operating assets, (Turnover rate of assets used for operations, ie the speed of operating assets in a given period of time.)

2. Profit Margin, ie operating profit stated in percentage and total net sales, this profit margin measures the level of profit that can be achieved by the company associated with the sale [7].

Analysis of Return on Investment (ROI) in the financial analysis has a very important meaning as one of the techniques of financial analysis that is comprehensive (comprehensive). ROI analysis is a technique commonly used by corporate leaders to measure the effectiveness of the overall operations of the company. ROI itself is one form of profitability ratios intended to measure the ability of the company with the overall funds invested in the assets used for its operations to generate profits. Thus this ratio connects the profits derived from the operating company (net operating income) with the amount of investment or assets used to generate operating profit (net operating assets) [6].

The ROI formula is as follow

$$\text{Return On Investment (ROI)} = \frac{\text{Net income}}{\text{Total assets}} \times 100\% \quad (2)$$

METHODOLOGY

In conducting the research, a researcher should pay attention to the research methods that being used. The research method is an objective activity in an attempt to discover and develop and test science with the aim of collecting relevant data to solve a problem. This research uses descriptive research method with quantitative research type and case study approach. Researchers describe the financial performance of companies that have been recorded through ROI and RI. The data is taken from the Indonesia Stock Exchange in January 2013-December 2016, shares incorporated in the Jakarta Islamic Index.

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Table 1: The name lists of 17 shareholders of the Indonesia Stock Exchange.

No	Share Holders
1	AALI (PT Astra Agro Lestari Tbk)
2	ADRO (PT Adaro Energy Tbk)
3	AKRA (AKR Corpindo Tbk)
4	ASII (PT Astra International Tbk)
5	ASRI (Alam Sutera Realty Tbk)
6	BSDE (Bumi Serpong Damai Tvk)
7	ICBP (Indofood CBP Sukses Makmur Tbk)
8	INDF (Indofood Sukses Makmur Tbk)
9	INTP (PT Indocement Tunggal Prakarsa Tbk)
10	KLBF (PT Kalbe Farma Tbk)
11	LPKR(Lippo Karawaci Tbk)
12	LSIP(PP London Sumatra Indonesia Tbk)
13	PGAS (Perusahaan Gas Negara (Persero) Tbk)
14	SMGR (Semen Indonesia (Persero) Tbk)
15	TLKM (Telekomunikasi Indonesia (Persero) Tbk)
16	UNTR (United Tractors Tbk)
17	UNVR (Unilever Indonesia Tbk)

Steps to model stock by developing Residual Income Model is analysis an optimal stock price that begins by calculating net income and earnings after interest and tax of a stock so as to find the residual income of the shares.

RESULTS AND DISCUSSION

Return on investment (ROI) is a measurement tool used to assess the company's financial performance by sourced from the company's net income and total asset which will be known percentage of ROI every year. Table 2 shows the calculation of return on investment of each company.

The next step is to analyze the residual income of a company. This analysis is used in financial performance to determine the rate of return of shares of the investor who will be known as the financial performance. The company is said to be good if the value is equal or greater than zero, it is less good if below that zero where it only getting a small rate of return. Based on the results of financial performance analysis by using the RI companies, the Jakarta Islamic Index experienced a fluctuating situation in its RI. The result of Residual Income calculations shown in Table 2.

Based on the calculation of Residual Income (RI) companies included in the Jakarta Islamic Index experienced a good situation. This is because the amount of net profit, operating profit and ROI companies are not burdened. The INDF company has the highest Residual Income value while LSIP, PGAS, UNVR company has the lowest residual income value. However, all companies are in good condition, each having a positive Residual Income despite the fluctuating situation during 2013-2016. Figure 1 shows the graph of residual income shares.

Table 2: ROI level of stock companies.

ROI Levels	Years			
	2013	2014	2015	2016
AALI	0.127185	0.140977	0.032339	-
ADRO	0.034648	0.028687	0.02534	0.052285
AKRA	0.044313	0.054773	0.067986	0.063851
ASII	0.09611	0.094164	0.063614	0.069894

ASRI	0.061656	0.112723	0.086998	0.054317
BSDE	0.128956	0.141596	0.065276	0.060261
ICBP	0.105664	0.102847	0.110058	0.125642
INDF	0.04452	0.060754	0.040395	0.064094
INTP	0.188371	0.183244	0.157645	0.128354
KLBF	0.017408	0.170643	0.150236	0.154399
LPKR	0.039233	0.067451	0.022454	0.02969
LSIP	0.098025	0.105996	0.077943	0.059237
PGAS	0.194025	0.12497	0.06201	0.045153
SMGR	0.173879	0.162345	0.118613	0.10254
TLKM	0.158703	0.155413	0.144115	0.150689
UNTR	0.083657	0.080124	0.045247	0.079768
UNVR	0.042136	0.042525	0.037279	0.035579

Table 3: Residual income analysis.

No	Business Code	2013	2014	2015	2016
1	AALI	701983	1059765	479829	-
2	ADRO	729891.8	2405939	1932862	770441.3
3	AKRA	7193000	9218000	11824000	8641000
4	ASII	13014000	16678000	20557000	18130000
5	ASRI	776288	1647746	1448842	1016880
6	BSDE	2373627	3403903	2048629	2025427
7	ICBP	15806503	17411114	18645435	22669130
8	INDF	28550461	41888637	30123653	40216543
9	INTP	3381645	3624381	3110184	3057391
10	KLBF	1836776	676338	766930.4	885949.5
11	LPKR	966471.3	1760864	931511.3	1092890
12	LSIP	665132.6	760738	602731.7	494524.9
13	PGAS	562740.1	550377.1	343036	268535.7
14	SMGR	3451283	3690601	3262692	3524413
15	TLKM	15982770	17502004	19276084	21166731
16	UNTR	4002625	3864914	2262945	4333838

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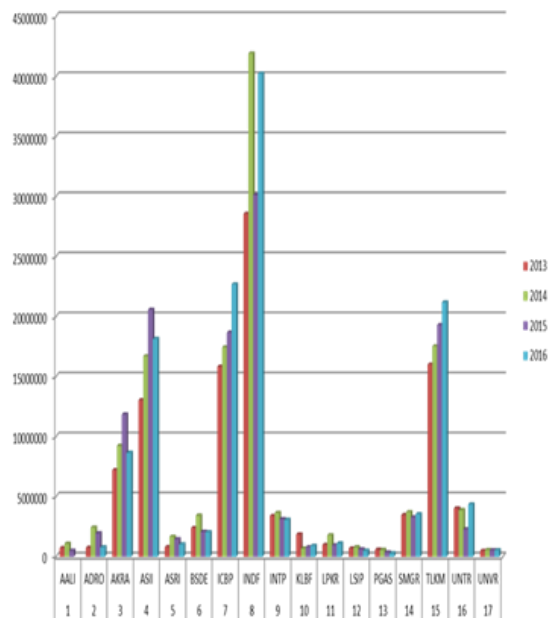| 17 | UNVR | 468817.3 | 534127.2 | 516878.2 | 523009.6 |

Fig. 1: Residual income graph.

CONCLUSION

Based on the results of the analysis and discussion in the previous sections, it can be concluded that assessment of the financial performance of companies listed on the Jakarta Islamic index with Residual Income shows a good trend, it can be seen from the results of the RI calculation is positive although the calculation of the results of Indonesia fluctuates the company's financial performance is still effective.

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