

# Financial Performance Analysis of Food Subsector Company in Indonesia Stock Exchange Using EVA Model

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**Abstract**—This study aims to determine the financial performance of food crops sub-sector in the agricultural sector listed on the Indonesia Stock Exchange based on the analysis of EVA (Economic Value Added). The research is a descriptive research with quantitative approach. The data used are secondary data, obtained from Indonesia Stock Exchange. Data analysis starts from the calculation of net operating profit after tax, weighted average capital cost, invested capital, capital cost and last calculate EVA value from 2009 until 2016. The results showed that the company had positive EVA value during the study period so that it was in good category indicating that the management of food crops sub sector in agriculture sector listed in Indonesia Stock Exchange has been able to give added value to shareholders and investors.

**Keywords**—cost of capital; EVA; weighted average cost of capital

## I. INTRODUCTION

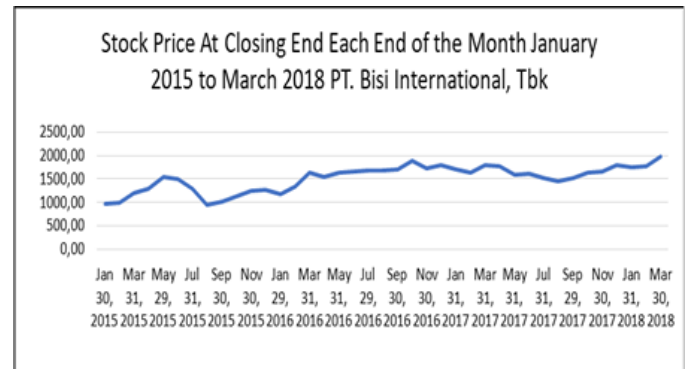
Research using the concept of EVA (Economic Value Added) has been done by researchers such as Dewi [1], Simbolon, et al [2], Novita [3], Syabella and Utiyati [4], Adiguna, et al [5], Hamid [6], Syahlina [7] and Winata, et al [8] for being able to make a useful contribution to the object under study. The first EVA concept developed by Stewart and Stern, a financial analyst of the Stern Stewart & Co. company in 1993, has been widely used to assess the company's financial performance because it is more effective than any other method, although there are some shortcomings in this method [9].

The use of EVA emphasizes value added as well as the EVA definition of Value Added. The added value in question is the use value that can be given by the company to shareholders and investors. "The value of the firm reflects the investor's collective judgment about how well a company is doing, whether its current performance, or its future prospects" [10]. The value of the firm is the investor's perception of the profit prospect of the company.

The Indonesia Stock Exchange (IDX) as a market related to the purchase and sale of securities of listed companies has 555 listed companies comprising 9 sectors, namely agriculture,

mining, basic and chemical industries, various industries, consumer goods industry, real estate - and construction of buildings, utilities and transport, finance, and trade-services and investment [11], continues to grow and compete with other countries' stock exchanges.

The agricultural subsector of food crops as part of the agricultural sector is also not spared from the competition to become better in the opinion of investors. It is undeniable that shareholders and investors will see the company's picture through the company's stock price on the floor of the stock as one of the performance measures of management. As an illustration of the condition of stock prices in the subsector of food crops can be seen on the stock price of PT. Bisi International Tbk at the time of closing each month can be seen in the following figure 1:



Source: [12] (processed)

Fig. 1. Share price of PT. Bisi International Tbk at the end of January 2015 to March 2018.

Considering the figure 1, we can see that the stock price of PT. Bisi International Tbk, experiencing a fluctuating condition, there is a period of stock prices rise and there is a time down so that to measure the performance of the company's management need other tools besides through the stock price approach. Shareholders and investors always expect their wealth to increase after investing in a company. So the performance measurement model with the concept of EVA (Economic Value Added) is an analytical tool that is

considered capable and accurately measure the performance to assess the extent to which a company can create economic value-added to capital used during a certain period.

Based on the above conditions, the researchers formulate the problem is how the performance of the company Subsector of food crops in the Agricultural Sector Indonesia Stock Exchange using the approach of Economic Value Added (EVA)?

Through the formulation of the problem then the researcher has the purpose of research is to know the performance of the company management Subsector of food crops in the Agricultural Sector Indonesia Stock Exchange using the approach of Economic Value Added (EVA).

#### A. Financial Statement Analysis

According to Prastowo and Rifka the analysis of financial statements is nothing but a process for dissecting financial statements into its elements, examining each of these elements, and examining relations among them, in order to obtain understanding and understanding of good and right to the financial statements themselves [13].

According to Harahap, the analysis of financial statements is to decipher the accounts of financial statements into smaller units of information and see the significant or meaningful relationship between one another between quantitative and non- quantitative data in order to knowing the deeper financial conditions that are essential in the process of producing the right decision [14].

#### B. Financial Performance

Financial performance is a condition that reflects the financial condition of a company based on the objectives, standards and criteria that have been established, Sawir [15]. Harmono states that financial performance is generally measured by net income (profit) or as a basis for other measures such as return on investment or earnings per share [16]. Meanwhile, according to Fahmi, financial performance is an analysis conducted to see how far a company has implemented by using the rules of financial implementation properly and correctly [17].

The purpose of an enterprise performance assessment by Sucipto [18] is as follows:

- Manage organizational operations effectively and efficiently through maximum employee motivation.
- Assist the decision-making concerned with employees such as promotions, transfers and dismissals.
- Identify training and employee development needs and to provide criteria for selection and evaluation of employee training programs.
- Provide feedback to employees on how their bosses assess their performance.
- Provide a basis for award distribution.

#### C. Economic Value Added-EVA

The term EVA was first popularized by Stren Steward Management Service, a consulting firm in the US around the 90s. EVA is one way to assess financial performance. EVA is an indicator of the addition of value from an inventory [15]. Economic Value Added (EVA) is a tool used to measure the profitability level of a company's actual year of operation as well as measuring management performance based on the size of the added value created in a given period (Brigham and Houston) [9]. According Warsono EVA is calculated by the formula [19]:

$$\text{EVA} = \text{Net Operating Profit After Tax (NOPAT)} - \text{Cost of Capital (COC)}$$

EVA is net income (operating income minus tax) less total annual capital cost. In essence, EVA is the residual income at the cost of capital equal to the actual cost of capital of the firm (instead of a minimum rate of return desired by the firm for other reasons). If EVA is positive then the company is creating wealth. If EVA is negative, then the company is wasting capital. In the long term, only companies that produce capital or wealth can survive [20].

According to Tunggal, EVA is a financial management system to manage the economic profit in a company that states that prosperity can only be created if the company is able to meet all operating costs and cost of capital [21]. EVA calculations are also expected to support the presentation of financial statements which will make it easier for users of financial statements such as investors, creditors, employees, government, customers and other interested parties [22].

According to Young and O'Byrne, EVA is an indicator of the value creation of an investment [23]. The valuation of the company based on the EVA value includes: (a) EVA value > 0, indicating that there has been added value process to the company and succeeded in creating value for fund provider. The resulting rate of return is greater than the level of capital cost or the level of expense that an investor would expect for his investment; (b) The value of EVA = 0, indicating the breakeven position of the firm because all profits are used to pay the liabilities to the provider of funds, both creditor and shareholder; (c) EVA value < 0, indicating the absence of value added processes because the available profits cannot meet the expectations of investors. The value of the firm decreases as the rate of return generated is lower than the expected return rate of the investor (investor).

## II. METHOD

#### A. Population and Sample Research

According Abdullah [22], and Sugiyono [24], in this study there are 2 companies included in the subsector of food crops, namely PT. Bisi Internasional, Tbk and PT. Citra Kebun Raya Agri, Tbk. Researchers set criteria for determining samples with Company Sample this study is a company registered in the subsector of agricultural crops during the period of research that is from 2009 to 2016. Based on these criteria, the company that became the object of research is PT. Bisi Internasional, Tbk [11].

B. Types and Data Sources

1) Data type:

- Qualitative data [25], obtained from PT. Bisi Internasional Tbk, through the website <https://bisi.co.id/> [26] and the Indonesia Stock Exchange through the site <http://www.idx.co.id/> [27] in the form of information not in the form of numbers. This qualitative data is like a general overview of the company and the theories relating to this research.
- Quantitative data, in this study comes from the financial statements of PT. Bisi Internasional Tbk 2009-2016 period obtained from Indonesia Stock Exchange through website <http://www.idx.co.id/> [27]. Also obtained from PT. Bisi Internasional Tbk, through the site <https://bisi.co.id/> [26] and other sources is through the site <https://finance.yahoo.com/> [12].

2) Data sources: Sources of data in this study are secondary data obtained from the company's financial statements, books, journals and articles related to this research.

C. Method of Collecting Data

Data collection methods used in this study include:

- Literature Review like books in libraries, articles and related to this research [25].
- Documents from PT. Bisi Internasional Tbk which has been published on the official website of Indonesia Stock Exchange is [www.idx.co.id](http://www.idx.co.id) from 2009-2016 [24].

D. Data Analysis Method

In this research, the data analysis method used is descriptive statistic. The analytical tool used is Economic Value Added (EVA). The steps in calculating EVA are as follows:

- Calculating Economic Value Added (EVA). With the formula used [28]:

$$EVA = NOPAT - (WACC \times \text{Invested Capital})$$

- Calculate of Net Operating Profit After Tax (NOPAT) [9]:

$$NOPAT = EBIT (1 - T)$$

Information:

NOPAT = Net Operating Profit After Tax

EBIT = Earnings Before Interest and Tax

T = Tax Rate

- Cost of Capital (COC) [29]:

$$\text{Cost of Capital} = WACC \times \text{Invested Capital}$$

- WACC (Weighted Average Capital Cost) [29]:

$$WACC = W_d K_d + W_e K_e$$

$$W_d = \text{Total od Debt} / \text{Total of Debt} + \text{Total of Equity}$$

$$W_e = \text{Total of Equity} / \text{Total of Debt} + \text{Total of Equity}$$

Information:

WACC = Weighted Average Cost of Capital

W<sub>d</sub> = Amount of Debt to Capital Structure

W<sub>e</sub> = Amount of Equity to Capital Structure

K<sub>d</sub> = cost of debt

K<sub>e</sub> = cost of equity

- Cost of Debt/ K<sub>d</sub> [29]:

$$K_d = K_{dbt} (1 - T)$$

$$K_{dbt} = \text{Interest Expense} / \text{Long Term Debt}$$

Information:

K<sub>d</sub> = cost of debt after tax

K<sub>dbt</sub> = the interest rate of the debt before tax

T = tax rate T

- Cost of Equity (COC) [30], the cost of equity can be found using ROE (Return On Equity):

$$K_e = ROE = \text{Earnings After Tax} / \text{Total of Equity}$$

- Invested Capital [23]:

$$\text{Invested capital} = \text{long-term debt} + \text{shareholder equity}$$

III. RESULTS AND DISCUSSION

A. NOPAT Analysis (Net Operating Profit After Tax)

The first step in the calculation of EVA is by calculating the amount of NOPAT (Net Operating Profit After Tax). NOPAT represents a net profit from the company's after-tax operation (Brigham and Houston) [9]. Results of calculation NOPAT PT. Bisi Internasional, Tbk as shown in the table 1.

Based on table 1 we can conclude that the value of NOPAT PT. Bisi Internasional Tbk from 2009 to 2013 tends to decrease. The highest decrease occurred from 2010 to 2011 with a decrease of 16.872% and the lowest decrease occurred from 2012 to 2013 with a value of 0.343%. Furthermore, from 2013 to 2016 the value of NOPAT has increased. The highest increase occurred in 2014 to 2015 with a value of 57.473% and the lowest NOPAT increase occurred from 2015 to 2016 with a value of 27.306%.

TABLE I. NOPAT CALCULATION RESULTS

Year	NOPAT Value	Ups (Down) %
2009	185.192.000.000	-
2010	171.650.000.000	-7,312%
2011	142.690.000.000	-16,872%
2012	125.779.000.000	-11,852%
2013	125.348.000.000	-0,343%
2014	162.984.000.000	30,025%
2015	256.655.000.000	57,473%
2016	326.737.000.000	27,306%

**B. WACC (Weighted Average Cost of Capital) Analysis**

WACC calculation results PT. Bisi International Tbk as shown in table 2.

TABLE II. RESULTS OF WACC CALCULATION

Year	Value of WACC		Ups (Down) %
	Number	%	
2009	0,01693	1,693%	-
2010	0,00380	0,380%	-77,530%
2011	0,00113	0,113%	-70,288%
2012	0,00054	0,054%	-51,857%
2013	0,00049	0,049%	-9,756%
2014	0,00064	0,064%	30,760%
2015	0,00106	0,106%	65,141%
2016	0,00117	0,117%	10,198%

Based on table 2, we can conclude that the value of WACC PT. Bisi International Tbk from 2009 to 2013 tends to decrease. The highest decrease occurred from 2009 to 2010 with a decline of 77.530% and the lowest decrease occurred from 2012 to 2013 with a value of 9.756%. Furthermore, from 2013 to 2016 WACC value has increased. The highest increase occurred in 2014 to 2015 with a value of 65.141% and the lowest WACC increase occurred from 2015 to 2016 with a value of 10.198%.

The increasing trend of WACC values will help to create a positive EVA value so as to provide economically viable value to the company, while a high WACC value will encourage negative EVA occurrence.

**C. Analysis of Total Invested Capital (Invested Capital)**

The calculation results Invested Capital (PT). Bisi International Tbk as shown in table 3.

Based on table 3, we can see that the value of Invested Capital PT. Bisi International Tbk from 2009 until 2016 tends to increase. The highest increase occurred in 2015 to 2016 with a value of 13.547% and the lowest Invested Capital increase occurred from 2012 to 2013 with a value of 7.148%.

TABLE III. INVESTED CAPITAL VALUE

Year	Value of Invested Capital	Ups (Down) %
2009	1.045.588.000.000	-
2010	1.192.135.000.000	14,016%
2011	1.318.419.000.000	10,593%
2012	1.426.137.000.000	8,170%
2013	1.528.071.000.000	7,148%
2014	1.659.924.000.000	8,629%
2015	1.862.356.000.000	12,195%
2016	2.114.653.000.000	13,547%

The invested capital is the total amount of the company's finances regardless of its short-term liabilities, noninterest bearing liability, such as maturing wage debts and maturing taxes [21]. A large Invested Capital value will help make Cost of Capital a bigger value that affects the smaller or negative EVA values. Conversely, if the value of small Invested Capital

will help make the value of EVA to be positive, so as to provide economic value-added for the company.

**D. Analysis of Cost of Capital (COC)**

Calculation results of Cost of Capital PT. Bisi International Tbk as shown in table 4.

TABLE IV. COST OF CAPITAL (COC) VALUE

Year	Value of COC	Ups (Down) %
2009	17.701.357.156	-
2010	4.535.052.758	-74,380%
2011	1.490.210.927	-67,140%
2012	776.044.954	-47,924%
2013	750.389.062	-3,306%
2014	1.065.876.081	42,043%
2015	1.974.861.815	85,281%
2016	2.471.087.367	25,127%

Based on table 4, we can conclude that the value of Cost of Capital PT. Bisi International Tbk from 2009 to 2013 tends to decrease. The highest decrease occurred from 2009 to 2010 with a decrease of 74.380% and the lowest decrease occurred from 2012 to 2013 with a value of 3.306%. Furthermore, from 2013 to 2016 the value of Cost of Capital increased. The highest increase occurred in 2014 to 2015 with a value of 85.281% and the lowest COC increase occurred from 2015 to 2016 with a value of 25.127%

The lower tendency of Cost of Capital value will help to create a positive EVA value so as to provide economic value added for the company, while high Capital Charges value will encourage negative EVA occurrence.

**E. Economic Value Added Analysis (EVA)**

After the calculation of NOPAT, WACC, Invested Capital (IC) and Cost of Capital (COC) then it can be calculated the value of EVA company. Economic Value Added (EVA) is the residual profit after deducted by all capital costs used to generate the profit [28] or in other words EVA is NOPAT deducted with Cost of Capital. EVA Calculation results can be seen as follows table 5.

TABLE V. VALUE OF ECONOMIC VALUE ADDED (EVA)

Year	EVA Value	Ups (Down) %
2009	167.490.642.844	-
2010	167.114.947.242	-0,224%
2011	141.199.789.073	-15,507%
2012	125.002.955.046	-11,471%
2013	124.597.610.938	-0,324%
2014	161.918.123.919	29,953%
2015	254.680.138.185	57,289%
2016	324.265.912.633	27,323%

Based on table 5, it is known that from 2009 to 2016, the value of Economic Value Added (EVA) PT. Bisi International Tbk is positive, although there is a decrease in the number of EVA from 2009 to 2013. Positive EVA values give meaning that the management of PT. Bisi International Tbk is able to create added value for its shareholders. A positive EVA value

indicates that management is able to maximize the value of Net Operating Income After Tax (NOPAT) so that it has a value greater than the value of Cost of Capital.

Positive EVA values but have a tendency to decline from 2009 to 2013 and then increase positively from 2013 to 2016, influenced by the NOPAT and Cost of Capital values in the year. When considered the trends of NOPAT, Cost of Capital and EVA from 2009 to 2016, can be seen in the following figure 2.

Based on figure 2, it can be seen that the Cost of Capital value is smaller than the NOPAT value, so that the management of the company PT. Bisi International Tbk is able to maximize economic added value for its shareholders. The low of cost of capital value is due to the low value of WACC thus contributing to creating low capital costs even if the value of capital invested (Capital Invested) is high.

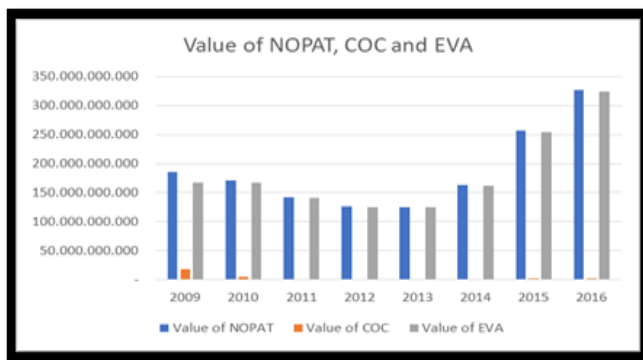


Fig. 2. Value of NOPAT, Cost of Capital and EVA.

For the management of PT. Bisi International Tbk is expected to be able to incorporate EVA values into the company's financial statements, so investors can provide positive responses by seeing the true value of the company. To be able to create company added value (EVA) the management of the company can do in a way that the company must be able to increase operating profit without additional capital. Because if NOPAT increases while the cost of fixed capital, the EVA of the company will be positive and increase.

The implication of a positive EVA value will certainly provide a good picture for shareholders and investors because the company management has provided economic value added. The value added process in this company succeeded in creating value for shareholders and investors as providers of funds. The rate of return generated through the company's efforts is greater than the level of capital costs or the level of costs expected by investors over the investments made.

The limitation of this research is that the research results obtained can only be used on the object under study in the sense that it cannot be generalized to other companies, so the researcher suggests that the next researcher be able to conduct a study with the use of models that can be used for several companies.

#### IV. CONCLUSIONS

Based on the results of research and discussion conducted at PT. Bisi International Tbk, a food crops agricultural sub-sector company in the agricultural sector of the Indonesia Stock Exchange, it can be concluded that the company's performance in terms of the use of EVA is good because there is a company's added value as evidenced by the positive value of Economic Value Added (EVA). The company has been able to maximize the value of Net Operating Income After Tax (NOPAT) so that its value is higher than the Capital Charges.

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