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ACHIEVEMENT OF COMPANY VALUE IN THE FOOD AND BEVERAGE SECTOR BASED ON FINANCIAL PERFORMANCE

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Abstract

The company value reflected in the share price is an important focus for investors and companies so it is necessary to analyze the factors that can influence it. Conceptually, the increase in company value can be driven by financial performance including ROE, EPS, MVA and EVA. However, in the initial survey, an empirical gap was found at PT Indofood CBP Sukses Makmur Tbk, where these four variables did not always influence stock prices, and the research gap that occurred required the author to further examine the influence of these four variables on stock prices. The difference between this research and the previous one lies in the longer research period, namely 10 years, so it is more representative. With a population of 58 companies, a purposive sample was obtained of 21 companies. Though Robust Least Square Analysis, it is on found that simultaneously and partially Roe, EPS, MVA and EVA have a significant effect on firm value, thus the four variables can be used to measure the value of F&B companies listed on the IDX

Keywords: Return on Equity (ROE), Earning Per Share (EPS), Market Value Added (MVA), and Economic Value Added (EVA) and Share Prices.

INTRODUCTION

Food and beverage industryis one of the business sectors that continues to experience rapid growth. Apart from that, the development of the food and beverage industry sector has also triggered high competition between these companies, especially those listed on the Indonesian Stock Exchange. Currently, competition in the food and beverage market is increasingly fierce, on the other hand, management is required to continue to maintain company value in order to survive. Share prices can be used as a benchmark to determine the value of the company. The higher the share price, the higher the company

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value and the more investors are interested in buying shares. With the increase in company value, it becomes a supporting factor for shareholders in deciding their investment, so management is required to be able to maintain its performance in order to maintain share prices at the desired level. Increases or decreases in demand for shares can be caused by various factors, one of which is the company's financial performance (Ariani, 2021). According to Hery, financial ratios are a ratio calculation using financial reports which function as a measuring tool in assessing financial conditions and performance (Hery, 2018). Financial performance can be measured by several financial ratios, namely (Kasmir, 2019):

a. Liquidity Ratio, is a ratio that describes a company's ability to fulfill short-term obligations.
b. Leverage Ratio, is a ratio used to measure the extent to which a company's assets are financed with debt.
c. Activity Ratio, a ratio used to measure the level of efficiency of company resource utilization.
d. Profitability Ratio, a ratio used to determine the profit or profits of a company.
e. Growth Ratio, a ratio used to describe the company's ability to maintain its economic position.
f. Value Added Ratio, a ratio that provides a measure of management's ability to create market value for its business over investment costs.

From the explanation above, the author will only limit the profitability ratio and the added value ratio as independent variables in the research.

ROE (Return on Equity) is a profitability ratio to measure how much profit is due to the owners of their own capital. The higher the ROE value, the better the company's performance and the stronger the company's position, thus stimulating the company's value better (Kasmir, 2016).

According to Hery, Return on Equity (ROE) is a ratio used to see how much equity contributes to generating net profit. The higher the ROE, the higher the profit generated from processing equity. Thus, increasing the ROE value can create good company value (Hery, 2018).

*Earnings Per Share*is a profitability ratio that shows how much ability per share can generate profits (Darmawan, 2020). If investors pay attention to EPS as the profit generated by the company, then potential investors will be interested in EPS, increasing investor attraction will increase the value of the company.

Furthermore, Kasmir emphasized that earnings per share is the ratio of earnings per share to measure management's success in achieving profits for shareholders. This means that increasing EPS shows good company performance, so that shareholder welfare can be met (Kasmir, 2018).

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Another factor that can influence share prices is the value added ratio, namely Economic Value Added (EVA) and Market Value Added (MVA), which is a measure of a company's operational performance by taking into account the interests and expectations of fund providers (creditors and shareholders).

Market Value Added (MVA) is the difference between the market value of a company's shares and the amount of investor equity capital that has been provided. So, the wealth or welfare of the company owner (shareholder) will increase if the MVA increases (Brigham & Houston, 2014). So that the main goal of the company, namely maximizing shareholder wealth, is achieved, thus the main goal of maximizing company value has been fulfilled (Brigham & Houston, 2014).

Furthermore, according to Oktary, MVA is a cumulative measure of financial performance which shows how much value was added to the capital invested by investors during the company's existence. MVA is the difference between the market value of equity and equity capital. (Octary, 2019).

Economic Value Added (EVA) is an estimate of the actual economic profit of a business for a particular year, and is very different from accounting net profit in that accounting profit is not reduced by the cost of equity, whereas in the EVA calculation these costs are excluded (Brigham & Houston, 2014). EVA can be used as a very important measuring tool in assessing performance, especially assessing the investment behavior of a company which has an impact on the high value of the company. The higher the EVA, the more investors will perceive that the company is experiencing growth and is able to provide added value. This means that if the company's financial performance increases every year, the company value will also increase (Maryani, 2016)

The factors above are several indicators that can normatively influence share prices, but in practice this concept does not always correspond to what happens in the field, as happened with the company PT Indofood Sukses Makmur Tbk as in table 1:

Table 1: List of ROE, EPS, MVA, EVA and Share Prices of PT Indofood CBP Sukses Makmur Tbk

YEAR	ROE	EPS	MVA	EVA	STOCK PRICE
2013	18.6	193	39317057	4403578	6,600
2014	18.8	227	36076576	2653459	6,750
2015	18.9	257	24336347	3593717	7,925
2016	20.8	309	50141149	596453	7,625
2017	18.3	326	43474226	2706566	7,625
2018	10.2	474	39668321	2265752	7,450
2019	11.3	559	32884913	657862	7,925
2020	13.1	735	48864686	16423307	6,850
2021	13.5	873	35947605	8661495	6,325
2022	10.2	724	32771280	9382559	6,725

Source: Indonesian Stock Exchange Financial Data that has been processed

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In 2016 Return on Equity increased from 18.9 to 20.8 while share prices decreased from 7,925 to 7,625. The same thing happened with Earning per Share which increased from 257 to 309 while share prices decreased. Economic Value Added increased from 3,593,717 to 50,141,149 while share prices decreased. In a different time period, namely 2015 *Market Value Added* decreased from 36,076,576 to 24,336,347, but the share price increased.

Apart from that, the author found several differences in research results from several previous studies which stated that ROE, EPS, MVA and EVA had no effect on stock prices ((Ernawati & Ismail, 2022), (Sulastiarini & Gustyana, 2019) And (Ernawati & Ismail, 2022)).

Several of the phenomena above encouraged the author to examine further the influence of ROE, EPS, MVA and EVA on share prices in a larger sample, namely F&B companies listed on the IDX.

Previous research used a time interval of 5 years, but in this study the research period will be taken for 10 years with the aim of the results of this research being more representative. Even though there is a gap between concepts and facts in the field and several differences in research results, in developing hypotheses the author will be guided by the theoretical basis and research results that are in line.

The share price is a reflection of the company's value. In increasing company value, there are several influencing factors, including capital structure, liquidity, company size and profitability (Harmono, 2014). So the author will outline arguments that strengthen the notion that company value is influenced by ROE, EPS, MVA and EVA simultaneously.

Thus, simultaneously the variables profitability ratio (ROE & EPS) and value added ratio (MVA & EVA) simultaneously influence stock prices.

supported by research ((Alam & Oetomo, 2017), (Pratiwi & Nurhayati, 2023) And (Siraj & Budiyanto, 2020)). Referring to this argument, the first hypothesis of this research is:

H1: It is suspected that ROE, EPS, MVA and EVA have an influence on stock prices.

*Return On Equity*is a ratio to measure net profit after tax with own capital (Kasmir, 2018) and can be formulated as follows:

$$\text{ROE} = \frac{\text{Net profit} x 100\%}{\text{Equity}}$$

This variable is a measure of the return obtained by the owner on investment in the company. The higher the return the better (Husnan & Pudjiastuti, 2015), because it can improve the welfare of shareholders. Thus the ROE variable influences share prices ((Ernawati & Ismail, 2022), (Adrisa et al., 2021), (I'niswatin et al., 2020) And (Lutfi & Sunardi, 2019)), based on this analysis, the second hypothesis is:

H2: It is suspected that ROE has an effect on stock prices.

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Darmawan explained that earnings per share is a ratio that shows the ability of each share to generate profits and can be calculated as follows:

$$\boldsymbol{EPS} = \frac{\text{Net profit after tax}}{\text{Amount in circulation}}$$

(Darmawan, 2020)

Earnings per Share is the most important factor in explaining stock price variations. This makes investors' decisions and attitudes concentrate on how much income is generated per share. Thus, the higher the EPS, the greater the interest of investors and in the end this will encourage an increase in share prices, as research results show that EPS has an effect on share prices. ((Kartiko & Rachmi, 2021) And (Rahmadewi & Abundanti, 2018). For these reasons, the third hypothesis is as follows:

H3: It is suspected that EPS has an effect on share prices.

Irfani explained that MVA or market added value is a tool for measuring financial performance in creating shareholder wealth by comparing market value with book value. (Irfani, 2020). According to Young and O'Byrne, the indicators used to measure Market Value Added (MVA), are:

1) If Market Value Added (MVA) > 0, has a positive value, the company has succeeded in increasing the value of the capital invested by the fund owners.
2) If Market Value Added (MVA) < 0, a negative value, the company has not succeeded in increasing the value of the capital invested by the fund owner. (O'Byrne et al., 2001).

The value added equation is as follows:

$$MVA = Nilai\ Pasar\ Saham - Invested\ Capital$$

(Wijayantini & Sari, 2018)

The explanation above explains the influence of MVA value on shareholder welfare, which is the target of company value. This is in line with other research which states that MVA has an effect on share prices. ((Alam & Oetomo, 2017), (Princess, 2016) And (Panahi, 2014)).

So the fourth hypothesis can be developed as follows:

H4: It is suspected that MVA has an effect on stock prices.

Economic Value Added (EVA) is an estimate of a business's actual economic profit for a particular year, and is very different from accounting net profit in that accounting profit is not reduced by the cost of equity, whereas in the EVA calculation these costs are excluded (Brigham & Houston, 2014).

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EVA can be calculated as follows:

$$EVA = NOPAT – (WACC \times TA)$$

Where if the EVA value is positive (EVA > 0) then there is additional economic value, but if the EVA value is equal to 0 (EVA = 0) it means the company breaks even because profits are used to pay obligations, meaning EVA can measure the value of the company with capital funds The greater the EVA invested, the better the company value (Brigham & Houston, 2014)

The same research states that EVA affects stock prices ((Marianti et al., 2019), (Erikawati, 2014) And (Alam & Oetomo, 2017)) shows that the Economic Value Added (EVA) variable influences stock prices. Based on the arguments above, the fifth hypothesis can be developed as follows:

H5: It is suspected that EVA has an effect on stock prices.

METHODS

This research uses quantitative descriptive research methods. The data used uses secondary data in the form of documentary data such as articles, journals, books as well as annual report data from food and beverage companies listed on the Indonesia Stock Exchange for the 2013-2022 period obtained via the website.www.idx.co.id.

Population and Sample The population in this research is the Food and Beverage Subsector Companies listed on the Indonesia Stock Exchange for the 2013-2022 period, totaling 58 issuers. The research period was taken for 10 years with the aim of making the conclusions more representative. Sampling uses purposive sampling, to comply with the specified criteria, namely:

1) The sample companies are listed on the Indonesia Stock Exchange in 2013-2022 in the group of food and beverage companies that publish annual reports and are presented on the IDX website every year in succession.
2) The sample company has financial reports ending December 31 using the rupiah as the reporting currency.
3) Sample companies have average closing share price data (as of December 31 from 2013-2022).
4) Companies that do not experience losses.
5) There are notes to the required financial reports.

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Based on these criteria, a sample of 21 companies was obtained as follows:

Table 2: List of Research Samples

No	Code	Company name
1.	CHECK	PT Wilmar Cahaya Indonesia Tbk
2.	JPFA	PT Japfa Comfeed Indonesia Tbk
3.	AALI	PT Astra Agro Lestari Tbk
4.	AMRT	PTSource Alfaria Trijaya Tbk
5.	BISI	PTBISI International Tbk
6.	DLTA	PTDelta Djakarta Tbk
7.	DSFI	PT Dharma Samudera Fishing Industries Tbk
8.	DSNG	PT Dharma Satya Nusantara Tbk
9.	GGRM	PT Gudang Garam Tbk
10.	ICBP	PT Indofood CBP Sukses Makmur Tbk
11.	LSIP	PT PP London Sumatra Indonesia Tbk
12.	MLBI	PT Multi Bintang Indonesia Tbk
13.	MYOR	PTMayora Indah Tbk
14.	SDPC	PT Millennium Pharmacon International Tbk
15.	SGRO	PT Sampoerna Agro Tbk
16.	UNVR	PT Unilever Indonesia Tbk
17.	WIIM	PT Wismilak Inti Makmur Tbk
18.	BREAD	PT Nippon Indosari Corpindo Tbk
19.	TBLA	PT Tunas Baru Lampung Tbk
20.	ULTJ	PT Ultra Jaya Milk Industry & Tra Tbk
21.	INDF	PT Indofood Sukses Makmur Tbk

Source: data from food and beverage companies in BEI (http//www.idx.com)

Data Analysis Technique

Research data analysis techniques use descriptive and verification analysis.

Descriptive Analysis

This analysis aims to provide an overview of data in terms of the average (mean), standard deviation, maximum, minimum, variance, sum, range, kurtosis and skewness (distribution differences). (Kasmir, 2018)

Verification Analysis

Verification analysis aims to test theories and try to produce scientific methods, namely the status of hypotheses in the form of conclusions, whether a hypothesis is accepted or rejected (Sugiyono, 2017) with the following analysis sequence:

1. Estimation of Panel Data Regression Model

Panel data regression model estimation consists of 3 types, namely as follows (Agus Tri Basuki; Nano Prawoto, 2017):

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Common Effects Model (CEM)

The CEM model assumes that the behavior of company data is the same (constant) over various time periods and uses the Ordinary Least Square (OLS) approach or least squares technique to estimate the panel data model.

Fixed Effect Model (FEM)

The FEM model or also called Least Squares Dummy Variable (LSDV) in estimating panel data uses dummy variable and constant slope techniques to capture intercept differences between companies.

Random Effect Model (BRAKE)

The REM model or also called the Error Component Model (ECM) or Generalized Least Square (GLS) technique estimates panel data by using error terms in the intercept for each company.

2. Selection of Panel Data Regression Model

There are several stages for selecting a good model, namely as follows (Agus Tri Basuki; Nano Prawoto, 2017):

Test Chow

The testing stage is to determine the most appropriate fixed effect or common effect model to use in estimating panel data. So the hypothesis is:

H0 accepted: Common Effect Model

H1 accepted: Fixed Effect Model

Chow-Test decision criteria:

a. If the Cross-section value F > 0.05 CEM.
b. If the Cross-section F value < 0.05 FEM.

Hausman test

The next stage is statistical testing to choose whether the fixed effect or random effect model is most appropriate to use. So the hypothesis is:

H0 accepted: Random Effect Model

H1 accepted: Fixed Effect Model

Hausman Test decision criteria:

a. If the random cross-section probability value is > 0.05 REM.
b. If the random cross-section probability value is <0.05 FEM.

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Lagrange Multiplier Test

The final stage of statistical testing is to find out whether the random effect model is better than the common effect method. So the hypothesis is:

H0 accepted: Common Effect Model

H1 accepted: Random Effect Model

Lagrange Multiplier Test decision criteria:

a. If the random cross-section probability value is > 0.05 CEM.
b. If the random cross-section probability value is <0.05 REM.

3. Classic Assumption Test

In the classical assumption test, panel data regression is adjusted to the estimates of the selected regression model. With the approach used as follows:

Table 3: Prerequisite Test

Prerequisite Test	OLS (CEM and FEM)	GLS (BRAKE)
Normality	No	Yes
Heteroscedasticity	Yes	No
Multicollinearity	Yes	Yes
Autocorrelation	No	No

Source: (Agus Tri Basuki; Nano Prawoto, 2017)

Normality test

The normality test is used to assess the normality of the variables studied, whether the data is normally distributed or not.

a. If the probability is > 0.05 then the distribution of the regression model can be said to be normal.
b. If the probability is <0.05 then the distribution of the regression model can be said to be non-normal.

Multicollinearity Test

To find out the correlation between independent variables.

a. If the probability value > 0.8 then the data has multicollinearity.
b. If the probability value is <0.8 then there is no multicollinearity in the data.

Heteroscedasticity Test

This test is used to determine whether the error variance remains constant (homoscedasticity) or changes (heteroscedasticity).

a. If the significance value is > 0.05 then heteroscedasticity does not occur.
b. If the significance value is <0.05 then heteroscedasticity occurs.

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4. Hypothesis Testing Design

In hypothesis testing, 3 stages can be used, namely simultaneous significance test, coefficient of determination test and partial significance test. With the following hypothesis:

H0: The independent variable has no effect on the dependent.

Ha: The independent variable has an effect on the dependent variable.

Simultaneous Significance Test (F)

The F test is a test used to measure how much influence the independent variables (X) have together on the related variable (Y).(Wiratna Sujarweni, 2015) hypothesis:

H0: ROE, EPS, MVA and EVA have no effect on share prices.

H1: ROE, EPS, MVA and EVA influence stock prices.

Based on the hypothesis that has been formulated, the partial testing is as follows:

a. If the sig value <0.05 then H1accepted
b. If the sig value is > 0.05 then H0accepted

Partial Significance Test (t)

The t statistical test is a regression coefficient test that is used to determine whether the independent variable (X) individually influences the dependent variable (Y).

Hypothesis:

H0: ROE, EPS, MVA and EVA each have no partial effect on share prices.

H2, H3, H4, H5: ROE, EPS, MVA and EVA each partially influence share prices.

Test criteria:

a. If the sig value <0.05 then H0 is accepted
b. If the sig value is > 0.05 then H0 is accepted

Coefficient of Determination Test (R^2)

According to Sugiyono, to find out how accurately the ability of the independent variable can explain the dependent variable, you can use the coefficient of determination (R^2). The R value ranges between 0-1, the closer to 1 the R value is, the greater the independent variable (X) is able to explain the dependent variable (Y). (Sugiyono, 2017)

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RESULTS AND DISCUSSION

Descriptive Statistical Analysis

The following is a statistical description of the data which includes the average value (mean), standard deviation, maximum value, minimum value, variance, sum, range, kurtosis and skewness.

Table 4: Descriptive Statistics Output

	STOCK PRICE	ROE	EPS	MVA	EVA
Mean	8201.738	23.23444	362.9290	5.95E+11	-3.01E+09
Median	1677,500	13.81500	102,0000	7.35E+10	-18620749
Maximum	83800.00	168.8000	17621.00	6.76E+12	2.05E+08
Minimum	51,00000	-5.100000	-3.160000	62100818	-3.08E+11
Std. Dev.	15790.51	33.26905	1664.056	1.18E+12	2.25E+10
Skewness	3.026386	2.866856	9.737004	2.613312	-12.18087
Kurtosis	12.28222	10.34709	98.29700	9.745818	162.9394
Jarque-Bera	1074.462	759.9823	82781.60	637.2070	229023.4
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	1722365.	4879.233	76215.08	1.25E+14	-6.31E+11
Sum Sq. Dev.	5.21E+10	231327.5	5.79E+08	2.92E+26	1.06E+23
Observations	210	210	210	210	210

Source: Data processed using Eviews 12, 2023

Table 4 shows the minimum value is 51.00, the maximum value is 83,800.00. The average value (mean) is smaller than the standard deviation (82,101.738 < 15,790.51), so it can be said that the data has varying or heterogeneous values.

Retun on Equity has a minimum value of -5.100000 and the maximum value is168.8000. The average ROE value is smaller than the standard deviation (23.23444<33.26905), so it is said that the average ROE value varies or is heterogeneous.

The minimum EPS value is-3.1600and the maximum value is 17,621.00. The average EPS value is smaller than the standard deviation (362.9290 < 16,644,056) then the EPS value varies greatly or is heterogeneous

Minimum value *Market Value Added* (MVA) of 621,000,818 and the maximum value is 6.76E+12. The average value (mean) is greater than the standard deviation (6.76E+11>1.18E+12), so it is said that the data has a constant or homogeneous value.

Economics Value Added (EVA) minimum value of-3.08E+11 and the maximum value is 2.05E+08. The average value (mean) is smaller than the standard deviation (-3.08E+11 < 2.25E+10), which means the data has high variability or is heterogeneous.

Based on table 4, the probability value for all variables is 0 or not normally distributed, so the data needs to be corrected. The author uses one method, namely by logarithmic zing all variables.

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Logarithmic Transformation

Natural logarithm, namely a logarithm with a base of e = 2.71828 (the value of e is close to 2.71828). Transformation using natural logarithms is usually used in situations where there is a non-linear relationship between the explanatory (independent) variable and the dependent variable or is not normally distributed to or approaches a normal distribution, and the following results are obtained:

Descriptive Statistics after Data in Logarithms

Table 5: Descriptive Statistics Output

Date: 08/26/23 Time: 19:21					
Sample: 2013 2022					
	STOCK PRICE	**ROE**	**EPS**	**MVA**	**EVA**
Mean	3.343308	1.076220	1.935352	10.80260	7.307178
Median	3.224662	1.140343	2.008600	10.86615	7.456844
Maximum	4.923244	2.227372	4.246031	12.82996	11.48816
Minimum	1.707570	-1.045757	0.077004	7.793097	4.150324
Std. Dev.	0.728544	0.583897	0.714470	1.143434	1.487468
Skewness	0.101338	-1.407275	-0.234292	-0.382396	0.043427
Kurtosis	2.641028	6.996751	3.338931	2.708765	2.560953
Jarque-Bera	1.486962	209.0875	2.926398	5.860080	1.752676
Probability	0.475456	0.000000	0.231494	0.053395	0.416305
Sum	702.0948	226.0062	406.4239	2268.546	1534.507
Sum Sq. Dev.	110.9324	71.25545	106.6878	273.2551	462.4252
Observations	210	210	210	210	210

Source: Data processed using Eviews 12, 2023

Table 5 shows the transformation data and shows that all variables have an average value that is greater than the standard deviation, so that all data is constant or homogeneous.

2. Selection of Panel Data Regression Model Estimates

Test Chow

Based on the Chow Test results, the following output is obtained:

Table 6: Chow-Test Output

Redundant Fixed Effects Tests			
Equation: Fixed			
Cross-section fixed effects test			
Effects Test	**Statistics**	**df**	**Prob.**
Cross-section F	109.767359	(20,185)	0.0000
Chi-square cross-section	536.475620	20	0.0000

Source: Data processed using Eviews 12, 2023

Table 6 shows that the cross-section probability value F is smaller than 0.05, namely 0.0000, then H0 is rejected and H1 is accepted or the Fixed Effect Model (FEM) is the

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selected regression model. The next test is the Hausma Test, which is a statistical test to determine whether the fixed effect or random effect model is most appropriate to use.

Hausman test

Based on the results of the Hausman test, they are as follows:

Table 7: Hausman-Test Output

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	130.745122	4	0.0000
Cross-section random effects test comparisons:			
Variables	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
ROE	37.200152	157.882324	1057.298220	0.0002
EPS	-0.050401	-0.192936	0.003669	0.0186
MVA	-0.000000	-0.000000	0.000000	0.2279
EVA	0.000000	0.000000	0.000000	0.0000

Source: Data processed using Eviews 12, 2023

Table 7 shows that the cross-section probability value is smaller than 5% (P < 0.05), namely 0.0000, so H0 is rejected and H1 is accepted, meaning that the selected model is the Fixed Effect Model (FEM). To ensure again that FEM is the best model, the Lagrange multiplier test is carried out as follows:

Lagrange Multiplier Test

Based on the results of the Lagrange multiplier test, the output is as follows:

Table 8: LM-Test output

Lagrange Multiplier Tests for Random Effects			
Null hypothesis: No effects			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided			
	Test Hypothesis		
	Cross-section	**Time**	**Both**
Breusch-Pagan	609.7951	2.372996	612.1681
	(0.0000)	(0.1234)	(0.0000)
Honda	24.69403	-1.540453	16.37205
	(0.0000)	(0.9383)	(0.0000)
King-Wu	24.69403	-1.540453	12.47742
	(0.0000)	(0.9383)	(0.0000)
Standardized Honda	28.00364	-1.399450	14.26821
	(0.0000)	(0.9192)	(0.0000)
Standardized King-Wu	28.00364	-1.399450	9.992532
	(0.0000)	(0.9192)	(0.0000)
Gourieroux, et al.	--	--	609.7951
			(0.0000)

Source: Data processed using Eviews 12, 2023

Table 8 above produces a Breusch Pagan cross-section probability greater than 5% (P < 0.05), namely 0.0000, so H0 is rejected and H1 is accepted, meaning that the model

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selected in the LM-Test is the Random Effect Model (REM). Based on the Chow-Test, LM-Test and Hausman-Test, it was concluded that the selected model was the Fixed Effect Model (FEM), because this model was selected twice.

3. Classic Assumption Test

The following are classic assumption tests for the Fixed Effect Model (FEM): multicollinearity test and heteroscedasticity test.

Multicollinearity Test

Table 9: Multicollinearity Test Output

	ROE	EPS	MVA	EVA
ROE	1,000000	0.274540	-0.131458	-0.259826
EPS	0.274540	1,000000	-0.159921	-0.221832
MVA	-0.131458	-0.159921	1,000000	0.542763
EVA	-0.259826	-0.221832	0.542763	1,000000

Source: Data processed using Eviews 12, 2023.

Table 9 shows that the value of the relationship between one independent variable and another independent variable is smaller than 0.8 or there is no relationship between one independent variable and another independent variable, so it can be concluded that the data in this study does not have a multicollinearity problem.

Heteroscedasticity Test

Table 10: Heteroscedasticity Test Output

Dependent Variable: ABS(RESID)				
Method: Least Squares Panel				
Date: 08/28/23 Time: 15:09				
Sample: 2013 2022				
Periods included: 10				
Cross-sections included: 21				
Total panel (balanced) observations: 210				
Variables	**Coefficient**	**Std. Error**	**t-Statistics**	**Prob.**
STOCK PRICE	0.100363	0.027214	3.687851	0.0003
C	0.565661	0.169263	3.341903	0.0010
ROE	-0.043366	0.031762	-1.365348	0.1736
EPS	-0.040618	0.025559	-1.589206	0.1136
MVA	-0.050173	0.016464	-3.047453	0.0026
EVA	-0.001712	0.013654	-0.125356	0.9004
MSE Root	0.224787	R-squared		0.099421
Mean dependent var	0.221414	Adjusted R-squared		0.077348
SD dependent var	0.237436	SE of regression		0.228069
Akaike info criterion	-0.090182	Sum squared resid		10.61115
Schwarz criterion	0.005449	Log likelihood		15.46913
Hannan-Quinn Criter.	-0.051522	F-statistic		4.504180
Durbin-Watson stat	0.877456	Prob(F-statistic)		0.000647

Source: Data processed using Eviews 12, 2023.

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Table 10 concludes that the Prob(F-statistic) value is smaller than 0.05 (0.000647 < 0.05), meaning that the data has a heteroscedasticity problem. The author suspects that the OLS model is not appropriate for this research data and decided to use a robust regression method (Robust Least Square) in order to strengthen the observation data so that it is not susceptible to outlier data.

4. Robust Regression Analysis*Least Square*

Robust regression is a regression method introduced by Andrews in 1972, if there is an abnormal distribution of residual data or there are several outliers that affect the model. (Wijayanti, 2015). On the official eviews website, it is stated that robust regression is a regression method designed to strengthen observational data so that it is not susceptible to outlier data. The benchmark that can be used to estimate the best robust regression model is to choose the estimate with the smallest Standard Error (SE) value and/or the largest Adjusted R^2 value.(Cahyandari & Hisani, 2012). In this research, researchers used the smallest Standard Error value indicator to determine the estimation results of the robust regression model, namely as follows:

Table 11: Comparison of Standard Error Values for Each Robust Regression Estimate

Robust Method	Variable	Mark	*Standard Error of Regression*
M-estimate	C	0.613688	0.752531
	ROE	0.145613	
	EPS	0.894473	
	MVA	0.082439	
	EVA	-0.027175	
	C	0.045774	
S-estimation	ROE	0.112840	0.686581
	EPS	0.791113	
	MVA	0.097661	
	EVA	0.062572	
MM-estimate	C	0.620090	0.752426
	ROE	0.146478	
	EPS	0.894062	
	MVA	0.082050	
	EVA	-0.027414	

Source: Data processed using Eviews 12, 2023.

Table 11 shows that the smallest standard error value is found in Estimate S, namely 0.686581. So the robust regression equation with S-estimation (Scale) in this research is as follows:

$$Y = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4$$

$$Y = a + \beta 1\text{ROE} + \beta 2\text{EPS} + \beta 3\text{MVA} + \beta 4\text{EVA}$$

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Stock price = 0.0457738937348 + 0.112839930371 ROE + 0.791113353428 EPS + 0.0976608306198 MVA + 0.0625723270246 EVA

5. Hypothesis Testing

Simultaneous Test (F Test)

The following are the results of the simultaneous significance test of the research data:

Table 12: F Test Output

Robust Statistics			
R-squared	0.509367	Adjusted R-squared	0.499794
Scale	0.332288	Deviance	0.110416
Rn-squared statistics	476.7297	Prob(Rn-squared stat.)	0.000000
Non-robust Statistics			
Mean dependent var	3.343308	SD dependent var	0.728544
SE of regression	0.686581	Sum squared resid	96.63567

Source: Data processed using Eviews 12, 2023

In robust regression, the simultaneous significant test can be seen from the Rn-squared statistic value (Dimas, 2020). Based on table 12, the significance value of F shown in the Rn-squared statistic is 476.7297 with a probability of 0.000000, where this value is smaller than the significance level, namely 0.05, so it can be concluded that H0 is rejected and H1 is accepted, which means the independent variable Return On Equity (ROE), Earning Per Share (EPS), Market Value Added (MVA) and Economic Value Added (EVA) simultaneously influence the dependent variable (Share Price).

Partial Test (t Test)

The following are the results of the partial significance test of the research data:

Table 13: t test output

Variables	Coefficient	Std. Error	z-Statistics	Prob.
C	0.045774	0.279556	0.163738	0.8699
ROE	0.112840	0.047822	2.359584	0.0183
EPS	0.791113	0.038747	20.41756	0.0000
MVA	0.097661	0.027354	3.570257	0.0004
EVA	0.062572	0.021690	2.884832	0.0039

Source: Data processed using Eviews 12, 2023

Table 13 shows that all variables have a prob value < 0.05 so it can be concluded that H0 is rejected and H1 is accepted or Return On Equity (ROE), Earning Per Share (EPS), Market Value Added (MVA), Economic Value Added (EVA) respectively. Partial effect on stock prices.

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Coefficient of Determination Test (R^2)

Table 14: Determination Coefficient Test Output

Robust Statistics			
R-squared	0.509367	Adjusted R-squared	0.499794
Scale	0.332288	Deviance	0.110416
Rn-squared statistics	476.7297	Prob(Rn-squared stat.)	0.000000

Source: Data processed using Eviews 12, 2023

Table 14 produces an R-square value of 0.509367 which shows that Return On Equity (ROE), Earning Per Share (EPS), Market Value Added (MVA) and Economic Value Added (EVA) are able to predict and explain stock prices by 50.9367%, while the remaining 49.0633% is influenced by other factors not included in the model.

DISCUSSION

Description of Research Data

From the results of data description processing using eview 12 stock price variables, return on Equity (ROE), Earning per Share (EPS), Market Value Added (MVA) and Economic Value Added (EVA), have a constant or homogeneous data distribution so that it can be said that all this variable is more representative.

The Influence of Return On Equity (ROE), Earning Per Share (EPS), Market Value Added (MVA) and Economic Value Added (EVA on Stock Prices

Simultaneously ROE, EPS, MVA, and EVA have an influence on stock prices because their probability values are <0.05. The results of other research show the same thing, namely ROE, EPS, MVA, and EVA together have an influence on stock prices ((Alam & Oetomo, 2017), (Pratiwi & Nurhayati, 2023), (Erikawati, 2014) And (Siraj & Budiyanto, 2020)).

Thus, simultaneously all of these variables can be used to predict stock prices on the IDX, and the concept has been proven which states that profitability and added value can be acceptable predictors of stock prices.

The Influence of the Return on Equity (ROE) Ratio on Share Prices

The results of the analysis show that Return on Equity (ROE) partially has a significant and positive influence on share prices. This is in line with research conducted by ((Alam & Oetomo, 2017) (Adrisa et al., 2021) And (I'niswatin et al., 2020)).

Return on equity (ROE) influences share prices because companies that have a high rate of return indicate that the company's financial condition is healthy. So there is potential profit that investors can enjoy if they buy or own shares in the company.

The Effect of Earning Per Share (EPS) on Share Prices

From the results of data analysis, it was found that the probability value was smaller than 0.05 so that the Earning per Share (EPS) variable had an influence on share prices. The

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results of research conducted by Pande Widya, Rahmadewi Nyoman, Abundanti stated that EPS partially affects share prices ((Rahmadewi & Abundanti, 2018), (Kartiko & Rachmi, 2021), And (Ratih et al., 2016))

High EPS increases the company's attractiveness, making the company increasingly attractive to investors, because the level of net profit on outstanding shares increases. This will also have an impact on the company's share price in the capital market, which will increase the EPS value which will ultimately affect the company's share price.

The Influence of Market Value Added (MVA) on Stock Prices

In this research, the Market Value Added (MVA) variable has a positive and significant influence on stock prices.

The results of this research support the research of Putri and Panahi, positive MVA shows that there is added value for the company, and will usually be responded to by an increase in the share price of the company which has added value to the company for investors. The greater the MVA, the greater the added value for investors, so the share price will also increase. On the other hand, if the MVA is negative, it means that the company is experiencing a decline in performance which will usually be responded to by a decline in share prices ((Princess, 2016), (Alam & Oetomo, 2017) And (Panahi, 2014)).

The Effect of Economic Value Added (EVA) on Stock Prices

The results of the analysis conclude that the Economic Value Added (EVA) variable has a positive and significant influence on stock prices, because the probability value is <0.05.The research results are in line with research conducted by Alam, AB, & Oetomo, HW which shows that the EVA variable influences stock prices ((Alam & Oetomo, 2017), (Marianti et al., 2019) And (Erikawati, 2014)).

This can be interpreted as meaning that this variable can be used as an indicator of changes in share prices because the higher the EVA, the higher the company's share price, in other words, the more prosperous the share price holders will be. EVA that has a positive sign indicates that the company in question is managed efficiently and effectively.

CONCLUSION

Based on the results and discussion of the research, the stock price variables, Return on Equity, Earning per Share, Market Value Added and Economic Value Added have a constant or homogeneous data distribution which shows that data variability is more stable during the research period so that the data is more representative. Simultaneously ROE, EPS, MVA and EVA influence the share prices of food and beverage subsector companies. Partially, each variable ROE, EPS, MVA and EVA influence stock prices. All independent variables in this study are able to represent changes in share prices of 50.9367% and the remainder are influenced by other factors that should be tested in further research so that they can produce a more representative model for the food and beverage industry.

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