The Effect of Profitability, Financial Leverage, Firm Size, Dividend Policy, and Stock Value on Income Smoothing in Food and Beverages Companies Listed on Indonesia Stock Exchange in 2020-2022

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Abstract

Income smoothing is the intentional normalizing of profits to a specified level or trend. Smoothing is an attempt by the company's management to lessen anomalous variations in profitability, to the extent permitted by solid accounting and management standards. This study aims to explore the effects of many factors, including stock value, dividend policy, firm size, profitability, and financial leverage, on income smoothing approaches. The population of the study consisted of the 84 food and beverage companies that were listed on IDX between 2020 and 2022. The sampling process provides 20 companies for a three-year observation period using a purposive sample method. Logistic regression analysis is used in the data analysis process using the SPSS 26 program. The study's findings indicate that income smoothing is influenced by all variables at the same time. Variable dividend policies significantly have effect on income smoothing, partially. However, there is no effect between the factors of stock value, company size, profitability, or leverage.

Introduction

Current economic and business developments cause competitive competition for each company. The emergence of this competition will be a challenge for management to continue to develop in the company in order to maintain the survival of its business by always showing its best performance and performance (Oktoriza, 2018). Therefore, management strives to

optimize profits and present good and quality financial reports to get a positive assessment and convince potential investors to invest.

Financial reports are used by organizations to show their financial situation (Rudianto, 2019). Financial reports are required to be published by the company because this report is a medium of accountability by management for controlling the resources of owners and investors, in which there is important information about profit. Earnings information has many benefits and is an element of financial statements (Bobby dkk., 2022). Management is so aware of the importance of this information that it can encourage dysfunctional behavior or income smoothing, by manipulating profits (Setyani & Wibowo, 2019).

The emergence of the phenomenon of earnings smoothing practices is believed to be related to certain factors that are thought to provide support for management to do so. This study will use five variables as factors that have the potential to affect income smoothing, namely profitability, financial leverage, firm size, dividend policy, and stock value.

The various elements that influence income smoothing continue to create different results based on the previous research described above. Thus, researcher have an interest in replicating the findings of Novius (2023) which indicate that company size, profitability, and leverage have a significant effect on income smoothing in technology sector companies listed on the IDX in 2019-2021. This study has three differences. First, this study includes two new elements, dividend policy and stock value. Furthermore, the object of research is different, previously on technology companies, while this study focuses on the food and beverages sector. The third difference lies in the period of research. The previous study used 2019-2021 as its research period, while this study used 2020-2022. It is hoped that this study can help external and internal parties make decisions about the variables studied, and can be used as a reference for future researchers.

Literature Review

Positive Accounting Theory

Scott (2003) states that positive accounting theory has the ability to predict how company managers will choose accounting policies and how they will respond to new accounting policies proposed. Positive theory assumes that managers, shareholders, and regulators act rationally and seek to optimize profits, which are closely related to their compensation and welfare. The choice of accounting policies by various groups is influenced by a comparison between the costs and benefits of various alternative accounting methods. Thus, the main objective of this perspective is to maximize the benefits they can obtain (Belkaoui & Riahi, 2012).

Agency Theory

According to Jensen & Meckling (1976), agency theory is a theoretical concept that discusses the relationship between the principal and the agent, which is assumed that each party

is driven by their own self-interest. The principal party is the party that provides capital to the agent to be managed, such as shareholders or creditors, while the agent is the management party that manages the capital of the owner. The agent is hired and paid by the principal with the expectation that the agent will work in the principal's interest.

Signaling Theory

According to the signaling theory developed by Spence (1973), the sender (information owner) provides investors (information recipients) with cues or signals containing information about favorable business conditions. If the company is in good condition, management will intentionally signal to external parties or the market using accounts in the financial statements (Soly & Novia, 2017).

Income Smoothing

Income smoothing can be interpreted as intentional behavior to equalize or normalize earnings levels in order to achieve a certain trend or desired level (Belkaoui & Riahi, 2012). Income smoothing is one of the various strategies used by managers to manipulate transaction data. This manipulation can be done by manipulating the timing of revenue receipts or income reports, so that reported income appears stable (Widiasmara dkk., 2022). Income smoothing is calculated through:

$$\text{Indeks Eckel} = \frac{\text{CV } \Delta \text{I}}{\text{CV } \Delta \text{S}}$$

Profitability

Profitability is a ratio that describes the ability of an entity to earn profits in relation to sales, total assets, and own capital (Sartono, 2005). Profitability is one of the factors in evaluating the performance of an entity. Apart from functioning as a means of measuring the entity's ability to achieve profit, profitability also provides information about the company's effectiveness in managing its resources (Fitriani, 2018). Profitability is calculated using:

$$\text{NPM} = \frac{\text{Net profit after tax}}{\text{Total sales}} \times 100\%$$

Financial Leverage

Leverage, or what can also be referred to as the solvency ratio, is an indicator of an entity's ability to meet its long-term obligations (Hanafi & Halim, 2016). The use of financial leverage will illustrate how much proportion of debt is used in financing the company's investment. Leverage is calculated through:

$$\text{DER} = \frac{\text{Total debt}}{\text{Total equity}} \times 100\%$$

Company Size

Firm size is a parameter that assesses the size of the company. Company size can be classified into several types, such as total assets, log size, stock market value, and so on (Suwito & Herawaty, 2005). Company size is calculated through:

$$\text{Size} = \text{Ln (Total aset)}$$

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Stock Policy

Dividend policy is a decision that regulates the entity's profit will be allocated to shareholders as dividends or kept as retained earnings which are useful for future investment (Sartono, 2005). Dividend policy is calculated through:

$$DPR = \frac{Dividend\ per\ share}{Earning\ per\ share} \times 100\%$$

Share Value

Every investor who makes stock investment transactions will have the same goal, namely to get capital gains or cash dividends obtained from the issuer because the company makes a profit (Samsul, 2006). Shares are financial instruments that are proof of ownership or participation in a company (Pradnyandari & Astika, 2019). Stock value will be calculated through:

$$PBV = \frac{Market\ price\ per\ share}{Book\ value\ per\ share}$$

Research Hypothesis

The hypothesis in this study is as follows:
H_1 = Profitability, financial leverage, firm size, dividend policy, stock value simultaneously affect income smoothing practices.
H_2 = Profitability affects income smoothing practices.
H_3 = Financial leverage affects income smoothing practices.
H_4 = Company size affects income smoothing practices.
H_5 = Dividend policy affects income smoothing practices.
H_6 = Share value affects income smoothing practices.

Research Method

Quantitative research is applied in this study with the Ex Post Facto study type, which is also known as comparative causal research, is a type of research that will be applied to ascertain the causal relationship between independent and dependent variables (Yusuf, 2019). The IDX is where the data is obtained, where, as of December 31, 2022, there are 84 companies in the food and beverage sub-sector which are the population in this study. Sample selection using purposive sampling by following criteria such as: (1) listed in the food and beverages sector in the IDX between 2020-2022, (2) who have conducted an IPO before that time, (3) publish consecutive financial reports, (4) do not experience losses during the study period, (5) who provide complete data based on variables. These sample criteria made it possible to obtain 3 years of observational data from 20 companies, resulting in a total of 60 data. Logistic regression will be used in this study because the dependent variable is a dummy. As a result, the following is the model for logistic regression:

$$is = \beta0 + \beta1prof + \beta2fnl + \beta3ukp + \beta4dvd + \beta5ns + \varepsilon$$

Result/Findings

Descriptive Statistics

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PROFITABILITAS	60	,00	,30	,0892	,07193
FIN. LEVERAGE	60	,11	2,46	,8383	,61082
UKU. PERUSAHAAN	60	27,37	32,83	29,7728	1,47355
KEB. DIVIDEN	60	,11	5,26	,6152	,85130
NILAI SAHAM	60	,34	6,39	2,1672	1,50026
PERATAAN LABA	60	,00	1,00	,5500	,50169
Valid N (listwise)	60				

Source: Data processed by SPSS v.26

Overall Model Fit

Table 2. Result of Block Number = 0

Iteration History[a,b,c]

		-2 Log likelihood	Coefficients Constant
Step 0	1	82,577	,200
	2	82,577	,201

Source: Data processed by SPSS v.26

Table 3. Result of Block Number = 1

Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Constant	PROFITABILITAS	FIN. LEVERAGE	UKU. PERUSAHAAN	KEB. DIVIDEN	NILAI SAHAM
Step 1	1	72,214	-5,127	-1,185	-,819	,230	-,680	-,143
	2	70,212	-5,215	-,391	-,893	,242	-1,334	-,123
	3	69,036	-5,155	,476	-,937	,250	-2,294	-,078
	4	68,937	-5,328	,510	-,973	,261	-2,667	-,066
	5	68,937	-5,350	,495	-,976	,262	-2,688	-,065
	6	68,937	-5,350	,495	-,976	,262	-2,688	-,065

Source: Data processed by SPSS v.26

The findings of the regression analysis are shown in table 2, which indicates that the initial -2LogL with a constant value yields 82.577. The final -2LogL drops to 68.937 after the five independent variables are included in table 3. From the above results, the initial -2LogL value is higher than the final -2LogL value. The independent variables added in the model indicate a good regression model, or H_0 is accepted. The addition of variables indicates that the proposed model fits the data.

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Goodness of Fit Test

Table 4. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8,178	8	,416

Source: Data processed by SPSS v.26

From the table above, Hosmer and Lemeshow produced a Chi-Square value of 8.178 and a significance of 0.416, in accordance with the regression analysis results. Based on the test results, H0 is accepted due to the probability higher than 0.05, which is 0.416. The processing indicates that the model and data are not significantly different, which indicates the feasibility and ability of the regression model to predict the observed values in this study.

Nagelkerke R Square

Table 5. Nagelkerke R Square

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	68,937ª	,203	,272

Source: Data processed by SPSS v.26

The table above displays a Nagelkerke R Square value of 0.272. The result indicates that only 27.2% of the dependent variable, earnings smoothing, can be explained by the independent factors, as used in this study. However, the variability of elements not included in this research model accounts for the remaining 72.8% of the data.

Logistic Regression Model

Table 6. Results of Logistic Regression Model Analysis

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª PROFITABILITAS	,495	5,110	,009	1	,923	1,641
FIN. LEVERAGE	-,976	,586	2,775	1	,096	,377
UKU. PERUSAHAAN	,262	,211	1,544	1	,214	1,300
KEB. DIVIDEN	-2,688	1,285	4,377	1	,036	,068
NILAI SAHAM	-,065	,203	,104	1	,747	,937
Constant	-5,350	6,141	,759	1	,384	,005

Source: Data processed by SPSS v.26

The logistic regression equation is formulated as follows:

$$\text{is} = -5{,}350 + 0{,}495\text{prof} - 0{,}976\text{fnl} + 0{,}262\text{ukp} - 2{,}688\text{dvd} - 0{,}065\text{ns} + \varepsilon$$

1. The constant value of the regression results is -5,350, which indicates that income smoothing (IS) will be worth -5,350 if the independent variable remains constant.

2. Profitability (PROF) is 0.495, which indicates that assuming other factors remain constant, a one unit increase in the profitability variable will result in an increase in the value of income smoothing (IS) of 0.495.
3. Leverage (FNL) has a value of -0.976, which means that each increase in the leverage variable by one unit, assuming other variables are constant, will reduce the value of income smoothing (IS) by 0.976.
4. Company size (UKP) has a value of 0.262, indicating that each increase in the company size variable by one unit, assuming the value of other variables is constant, will increase the value of income smoothing (IS) by 0.262.
5. Dividend policy (DVD) is worth -2.688, which means that each increase in the dividend policy variable by one unit, assuming the value of other variables is constant, will reduce the value of income smoothing (IS) by 2.688.
6. Stock value (NS) is -0.065, indicating that each increase in the stock value variable by one unit, assuming the value of other variables is constant, will reduce the value of income smoothing (IS) by 0.065.

F-Test

Table 7. F-Test

		Chi-square	df	Sig.
Step 1	Step	13,640	5	,018
	Block	13,640	5	,018
	Model	13,640	5	,018

Source: Data processed by SPSS v.26

With n=60 and 5 independent variables, the degree of freedom (df1) = 5 and (df2) = 60-5-1 = 54, with a significance level of $\alpha = 0.05$. Then the ftabel is obtained worth 2.38607. The simultaneous test results show a probability of 0.018, the f_{count} value is greater than the f_{tabel} (13.640 > 2.38607). H_1 can be accepted because the probability is less than 0.05 (0.018 <0.05). That way, income smoothing is influenced by the five independent variables.

Discussion

From table 6, the hypothesis test results can be concluded as follows:
1. Profitability has a Wald value of 0.009 and greater significance, 0.923 > 0.05. Therefore, H_0 is accepted and H_2, which reads that profitability has an impact on income smoothing, is **rejected**.
2. Financial leverage shows a Wald value of 2.775 and a greater significance, 0.096 > 0.05. That way, H_0 is accepted and H_3 which reads financial leverage has an impact on income smoothing, is **rejected**.
3. Company size shows a Wald value of 1.544 and a higher significance, 0.214 > 0.05. That way, H_0 is accepted and H_4 which reads company size has an impact on income smoothing, is **rejected**.

4. Dividend policy shows a Wald value of 4.377 and a lower significance, $0.036 < 0.05$. Therefore, H_0 is rejected and H_5, which states that dividend policy has an impact on income smoothing, is **accepted**.

5. Share value shows a Wald value of 0.104 and a higher significance, $0.747 > 0.05$. It is concluded that H_0 is accepted and H_6, which states that stock value has an impact on income smoothing, is **rejected**.

Conclusion

The purpose of this study is to examine the impact of independent variables on income smoothing practices in food and beverages entities, taking samples from 2020 to 2022. From the information processing, the conclusions of this study can be summarized as:

1. Profitability, financial leverage, firm size, dividend policy, and stock value significantly affect income smoothing practices.
2. Profitability does not have a significant effect.
3. Financial leverage does not have a significant effect.
4. Company size does not have a significant effect.
5. Dividend policy has a significant effect.
6. Share value does not have a significant effect.

Limitations in this study include, among others, only testing on one company sector, the use of a short research time period, only 5 variables used. Thus, it is recommended for future researchers to develop studies in other sectors, use a longer time period, add other variables, and use measuring instruments other than the eckel index.

Declaration of conflicting interest

The authors declare that there is no conflict of interest in this work.

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