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THE ANALYSIS OF INVENTORY VALUE ON MARKET VALUE BY PROFIT LOSS COMPONENT AS INTERVENING VARIABLE

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Abstract

The aim of this research is to provide an empirical effect of inventory value on the market value of income, the cost of products sold and profit as intervening variables. Both firms belonging to manufacturing companies (food and beverage sub-sectors) in the period 2014-2018 on the stock exchange are the focus of this study. Indonesian Securities comprises 14 firms. The tool used is path was analysis using SPSS. The findings show that profits and expense of products sold do not have an indirect impact on the relationship between inventory value and market value as an intervening variable, while profit has an indirect effect on the relationship between inventory value and market value as an intervening variable.

Keywords: *Inventory value, income, cost of goods sold, profit, market value.*

INTRODUCTION

The tighter competition and higher rate of change mean that businesses need to change by rising their market value in the eyes of investors in the financial market. Market valuation is the most representative value for corporations because it represents the value that will be realized by the owners. By measuring the market value of the stock purchased in a corporation, investors would also gain capital. Companies will issue securities where the stock valuation is high relative to the book value or previous market value. Albanez, T., & De Lima, GASF (2014). This new market share product growth allows companies to gain a competitive advantage and affect market value. Hai, B., Gao, Q., Yin, X., and Chen, J. (2019).

To increase this achievement, the manufacturing industry must increase its market value in the eyes of investors in the capital market. According to the efficient market hypothesis (Fama, 1970). investors will react quickly to public announcements as they convey new messages that influence investor evaluations. share price information will

describe future profits and the allocation of capital and investment of the company (Carpenter, 2020).

The share price will adjust as reflected in the results of the evaluation change. Changes in stock price can affect the market value of the company and the personal wealth of stockholders, while abnormal changes have a big impact. Changes in stock prices affect the market value of the company and the ability of funding to be visible in operations. Specifically, a decrease in stock prices can affect the confidence of investors and creditors in the company. As a result, the company has greater difficulty getting operating capital through financing from the secondary market and banks.

In increasing company value based on the ability to get cash flow.

The company will increase cash flow by reason of internal funds, managers who spend a lot of funds and cash flow that correlates to investment opportunities (Lewellen, 2016). The principle in modern finance is that the present value of assets including cash flows for the future is expected to be discounted to the return when needed. (Wafi, A. S., Hassan, H., & Mabrouk, A. 2015). In company assessment, there is usually a company's performance that decides whether the company is good or bad. (Marsha, N., & Murtaqi, I. 2017). Companies need a sufficient amount of cash to pay their obligations on time, but the presence of cash excess has a negative impact on company performance (Soboleva, 2018).

For the condition of the income statement, investors prefer companies that generate profits that are more stable than those that are volatile. Investors prefer stable earnings because this information can predict future cash flows and predict returns for investors. The maximum inventory will influence increasing costs, while the minimum inventory will influence operations within the company (Karki, 2020). In order to maintain a proper inventory, there must be good management within the company. Profits are the difference between revenue received from sales and the total, which includes labor, raw material costs and so on. The cost of goods sold is divided by the average inventory against the less profitable operations which is a low turnover ratio and profit margin (Huson, 1995). Inventory impairments is an interesting thing to assess inventory management because there is a relationship with company performance both directly and indirectly, because the elimination of inventory increases the cost of the current period which results in low earnings (Feng, 2015).

Inventory value is an indicator that influences market value. Inventory as the key element of working capital is an asset that is always in a state of rotation, which is constantly changing. The problem of investing in inventory is a problem of active

spending, errors in inventory investment will disrupt the smooth operation of the company. If the inventory is too small, the operating activities are likely to experience delays, or the company operates at a low capacity, which will reduce the profits it gets. Inventory value can only affect market value if there is an intermediary / intervening variable that indirectly effect the two variables, namely the income statement. In this study, profit and loss as an intervening variable, namely income, cost of goods sold, and profit. Operating costs, which are a component of profit and loss, are not used as an intervening variable because the costs are not as significant as the cost of goods sold on revenue. This research tests empirically the effect of inventory value on market value with income, cost of goods sold and profit as intervening variables.

METHODOLOGY AND DATA

This is a secondary study with a data source focused on the findings of the documentation carried out using the data quality analysis tool. By using the research object of all companies belonging to manufacturing companies (food and beverage sub-sector) for the 2014-2018 period on the Indonesia Stock Exchange (IDX), namely 14 companies. That explanatory research as a scientific disciplineto test research hypothesis that explains the use of variables that are interconnected with one another (Sekaran, 2016). The sample selection technique used was purposive judgment sampling. The analysis method used in this research is descriptive analysis method and inferential analysis which aims to get data results from the minimum, maximum, average and standard deviation values. The inferential method used in testing the hypothesis is regression and path analysis using SPSS data. To test the indirect effect, a single test was performed.

The grand theory used in this study is Financial Management and Accounting, and supported by other interrelated theories. The foundation of this theory is obtained from literature, books, and scientific works downloaded through internet media or academic Libraries. The variables used in this study are inventory value, income, cost of goods sold, net income and market value. We can see the operational definition of the variables in this study in table 3.1. below this:

Table 3.1
Operational Definition of Variables

No.	Variable	Information
1	<i>Independent variable</i>	
	Inventory value	one of the most expensive assets of many companies, represents as much as 50% of the total invested capital.
2	<i>Dependent variable</i>	
	Market value	a value that reflects the condition of the company as seen from the condition of the company's equity in the market which is reflected in the share price and the number of shares issued by the company.
3	<i>Intervening variable</i>	
	Revenue	all cash and non-cash receipts that result from sales.
	HPP	the cost of merchandise sold during the accounting period.
	Profit or loss	the final result obtained by the company can be in the form of net profit or net loss.

RESULTS AND DISCUSSION

Based on the results of the one S K-S test after being logged in natural, the Inventory Value has a significance value of 0.161, Revenue has a significant value of 0.059, HPP 0.125, Profit 0.162, and a market value of 0.156 seen from the asymp column. sig. (2-tailed) where the significant value is above 0.05 that the data on inventory value, income, COGS, profit, and market value are normally distributed.

The regression model used in this study is as follows:

$$P = 0,923NP + 0,3847$$

$$HPP = 0,9NP + 0,4359$$

$$L = 0,837NP + 0,5477$$

$$MP = 0,534P - 0,115HPP + 0,847L - 0,355NP + 0,2757$$

Figure 4.1

Path Diagram

The path diagram in Figure 4.1 above is the coefficient of direct influence of each variable describes through regression analysis as follows:

1. Inventory Value Effect (NP) on Revenue (P)

Based on the results, the t value of 14.799 is greater than the t table value of 2.024 where the variable inventory value has a significant value of 0.000 smaller than the alpha value of 0.05, so that H0 is rejected and Ha is accepted. There is a significant influence between the value of inventory and income. The amount of R Square value got is 0.852 which shows that the contribution of the influence of NP to HPP is 85.2% while the remaining 14.8% is the contribution of the variables not tested in this study. Meanwhile, the value of ε_1 can be found with the formula $\varepsilon_1 = \sqrt{(1-0.852)} = 0.3847$. Thus, the path diagram for the NP to P structure model as follows:

NP path diagram to P

Figure 4.2

The effect of inventory value on revenue is significant, companies that are ineffective on accounts receivable can result in the company failing to follow up on outstanding accounts which indicate a larger report and inventory value will decrease and lower net revenue (Lin, 2018)

2. Inventory Value Effect (NP) on Cost of Goods Sold (HPP)

Based on the results obtained, the t value is 12.733, which is greater than the t table value of 2.024, where the variable inventory value has a significant value of 0.000. The significant value of 0,000 is greater than the alpha value of 0.05 so that H0 is rejected and Ha is accepted. This means that there is a significant influence between the value of the inventory and the cost of goods sold with the amount of R square obtained is 0.810. This shows that the contribution of NP testing to HPP is 81% and the remaining 19% is the contribution of variables not included in the study. The value of ε_2 can occur using a formula $\varepsilon_2 = \sqrt{(1 - 0,810)} = 0,4359$. Thus, the path diagram for the NP structure model to P and HPP is obtained as follows:

NP path diagram to P and HPP

Figure 4.3

3. Inventory Value Effect (NP) on Profit (L)

Based on the results, the t value of 9.425 is greater than the t table value of 2.024, where the value of the inventory obtained is a significant value of 0.000 smaller than the alpha value, then H_0 is rejected and H_a is accepted, meaning that there is a significant influence between the inventory value and profit. The amount of R square value obtained is equal to 0.700, this shows that the contribution of the influence of the value of the inventory to the old is 70% while the remaining 30% is a contribution that is not included in the study. Meanwhile, the value of ϵ_3 can be found with the formula $\epsilon_3 = \sqrt{1-0,700} = 0.5477$. Thus, the path diagram for the NP structure model to P, HPP and L is obtained as follows:

NP path diagram to P, HPP and L.

Figure 4.4

4. Income Effect (P), Cost of Goods Sold (COGS), and Profit (L), Inventory Value (NP) on Market Value (MV).

Based on the results, the F number of research is $106.147 > F$ table of 2.64 and a significance value of $0.000 < 0.05$, so it can be concluded that there is an influence of the NP, P, HPP and L variables on the MV variable.

The t test is used to see variable inventory value effect, income, COGS, and profit partially on market value.

Table 4.10

Hypothesis test results

No.	Variable	Coefficient	Sig.Value
1	Marker Value	1.214	0.547
2	Revenue	0.589	0.103
3	Cost of goods sold	-0.111	0.556
4	Profit	0.852	0.000
5	Inventory Value	-0.307	0.007

a. Income Effect (P) on Market Value (MV)

From table 4.10 it can be got t count of 1.674 while t table 2.024. The t count < t table and seen in the significant column where the income variable has a significant value of 0.103. Significant value $0.103 > 0.05$, then H_0 is accepted and H_a is rejected, meaning that there is no significant effect between income on market value.

b. Effect of Cost of Goods Sold (COGS) on Market Value (MV)

Table 4.10 reflected t count -0.595 while t table 2.024. So, that t count < t table. A negative t value shows that COGS has a relationship in the opposite direction to market value (MV). This means that the higher the cost of goods sold, the lower the market value.

This is because the high cost of goods sold will cause a high selling price. The high selling price causes low demand from consumers for a week, the company's profit and production will decline. Profits that continue to decline because of high cost of goods sold will cause the company's market value to decline in the eyes of investor.

The significant column where the HPP variable has a significance value

of 0.556. The significance value is $0.556 > 0.05$, then H_0 is accepted or H_a is rejected. This means that there is no significant effect between COGS on market value.

c. Effect of Profit (L) on Market Value (MV)

From table 4:10 it can be obtained t count 5,430 while t table 2,024. So, it can be seen that $t_{\text{arithmetic}} > t_{\text{table}}$ and is seen in the significant column / sig, where the earnings variable has a significance value of 0.000. The significance value is $0.000 < 0.05$, then H_0 is rejected or H_a is accepted. This means that there is a significant influence on earnings on market value.

d. Effect of Inventory Value (NP) on Market Value (MV)

From table 4:10 that t count -2.872 and a significance value of 0.007 at a significance level of 0.05. It can be concluded that $0.007 < 0.05$, it can be concluded that the inventory value has a negative and significant effect on market value. A negative t value means the results are contradictory. This means that the higher the inventory stored in the company, the lower the market value because of low inventory turnover.

Effect Analysis

a. Direct Effect

1. Analysis of the effect of NP on P: from the above analysis, the significance value of X is $0.000 < 0.05$, so the significant effect of NP on P.
2. Analysis of the effect of NP on HPP: from the above analysis, the significance value of NP is $0.000 < 0.05$, so it directly effect the significant effect of NP on HPP.

3. Analysis of the effect of NP on L: from the above analysis, the significance value of NP is $0.000 < 0.05$, so the significant effect of NP on L.
4. Analysis of the effect of P on MV: from the above analysis the significance value of P is $0.584 > 0.05$, there is no direct influence of P on MV.
5. Analysis of the effect of HPP on MV: from the above analysis, the significance value of COGS is $0.505 > 0.05$, there is no direct effect of COGS on MV.
6. Analysis of the effect of L on MV: from the above analysis the significance value of L is $0.000 < 0.05$, there is a direct significant effect of L on MV.
7. Analysis of the effect of NP on MV: from the above analysis the significance value of NP is $0.007 < 0.05$, there is a significant effect of NP on MV directly..

b. Indirect Effect

1. Analysis of the effect of NP through P on MV: Figure 4.1 that the direct effect of NP on MV is 0.355. Meanwhile, the indirect effect of NP through P on MV is the multiplication of the value of the beta NP against P with the beta value of P on MV, namely: $0.923 \times 0.534 = 0.493$. Based on the results of the above calculation, the value of the direct effect of NP on MV is 0.355, so the value of the indirect effect is greater than the value of the direct effect, this result shows that income affects the value of inventory on market value as an intervening variable or the value of inventory through income has a significant effect against market value.
2. Analysis of the effect of NP through HPP on MV: in Figure 4.1 that the direct effect of NP on MV is 0.355. Meanwhile, the indirect effect of NP through HPP on MV is the multiplication of the NP beta value against HPP with the HPP beta value on MV. Namely: $0.9 \times 0.115 = 0.103$. Based on the results of the above calculations, the value of the direct effect of NP on MV is 0.355, so the value of the

indirect effect is smaller than the value of the direct effect. These results show that indirectly there is no effect of inventory value on market value through the cost of goods sold.

3. Analysis of the effect of X through L on MV: in Figure 4.1 that the direct effect of NP on MV is 0.355. Meanwhile, the indirect effect of NP through L on MV is the multiplication of the value of the beta of NP to L and the value of beta L to MV. Namely: $0.837 \times 0.847 = 0.709$. Based on the results of the above calculations, the value of the direct effect of NP on MV is 0.355 so the value of the indirect effect is greater than the value of the direct effect, this result shows that profit affects the value of inventory on market value as an intervening variable or the value of inventory through profit has a significant effect against market value.

c. Total Effect

The total effect is obtained from the direct effect plus the indirect effect.

$$1. X \longrightarrow Y_1 \longrightarrow Z = (0,355 + 0,493) = 0,848$$

It shows that the total effect of the inventory value variable on the market value through revenue is 84.8%.

$$2. X \longrightarrow Y_3 \longrightarrow Z = (0,355 + 0,709) = 1,064$$

It shows that the total effect of the inventory value variable on market value through profit is equal to 106,4%.

Table 4.11

Sobel test

Hypothesis	a	b	Sea	Seb	t
NP-->P-->MV	0.923	0.534	0.049	0.351	1.516
NP-->HPP-->MV	0.9	0.115	0.064	0.186	0.6176
NP-->L-->MV	0.837	0.847	0.076	0.157	5.844

The Sobel test determine whether the relationship through a mediating variable is significant as a mediator.

a. Inventory value (NP) through income (P) to market value (MV)

The result of the analysis with the single test is 1.51642962 and the significance of the Two-tailed probability is 0.12941076. because z - value < 1.98 or p - value $> \alpha = 0.05$, the indirect effect is not significant. This is not in line with previous findings using path analysis, so the mediation hypothesis is not supportive.

b. Inventory value (NP) through COGS (COGS) against market value (MV)

The test result is 0.61768285 and the significance of the Two-tailed probability is 0.53678442. because z - value < 1.98 or p - value $> \alpha = 0.05$, the indirect effect is not significant.

c. Inventory value (NP) through profit (L) to market value (MV)

The result using the Sobel test is 4.84484004 and the significance of the Two-tailed probability is 0.00000127. because z - value > 1.98 or p - value $< \alpha = 0.05$, the indirect effect is significant. This is in line with previous findings using path analysis, so the mediation hypothesis is supportive.

Based on the analysis and hypothesis testing that has been done, we can draw conclusion as follow:

- a. The relation between inventory value and market value is not mediated by revenue. The inventory value has an important impact on revenue. Revenue, however, does not affect market value because there are costs in revenue that must be calculated before the company generates profit so that revenue does not have a direct impact or mediate the relationship between inventory value and market value. High market value on changes in company inventory with better growth prospects, high sales predictability and tight financial retention (Chen, 2018). Applying the principle of the lowest price to inventory causes problems in confirming the current market value of the inventory. Consideration should be given to price fluctuations relating to events occurring after the reporting date and the confirmation conditions that existed at the end of the reporting period, as well as the purpose of inventories (kulikova, 2015).

- b. Cost of Goods Sold does not mediate the relationship between inventory value and market value. Inventory value has a significant effect on cost of goods sold. High inventory value is because of low inventory turnover due to high cost of goods sold. However, the cost of goods sold has no effect on market value because the cost of goods sold in the income statement is a major component of operating costs. Cost of goods sold is the variable cost associated with unit sales (Swaryer, 2014). Inventory increases with increasing demand for cost (COGS) and margin (GM). The cost of goods sold decreases by margin but as inventory increases. The company will take advantage of the demand-stimulating effect of higher inventory levels by increasing margins charged to buyers (Jain, 2014).
- c. Profit mediates the relationship between inventory value and market value. Inventory value has a significant effect on profit. Investors prefer stable profit because it can predict future cash flows and predict returns for investors. With predictive and stable information, investors will respond positively to this, which is then realized as investment in the company. This investment affects the increase in the company's share price. The increase of stock prices shows that market value has increased.

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