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The Effect of Cash Holding, Investment Opportunity Set, and Net Profit Margin on Firm Value in the Consumer Non-Cyclicals Sector Listed on the Indonesia Stock Exchange, 2022-2024

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Abstract. The consumer non-cyclicals sector is often seen as defensive, yet the firm value of several large companies in this sector declined between 2022 and 2024. This study examines the effect of cash holding, investment opportunity set (IOS), and net profit margin (NPM) on firm value, using signaling theory and pecking order theory. The sample consists of 57 consumer non-cyclicals companies listed on the Indonesia Stock Exchange (IDX) in 2022–2024, selected by purposive sampling, which gives 171 firm-year observations. Firm value is measured by Tobin's Q, cash holding by cash and cash equivalents to total assets, and IOS by the market to book value of assets (MBVA). The data were analysed with panel data regression using the random effect model, and a robustness check added firm size, leverage, and sales growth as control variables. Cash holding has no significant effect on firm value, IOS has a positive and significant effect, and NPM has a positive and significant effect in the main model. The three variables jointly affect firm value and explain 82.12% of its variation. The effect of IOS remains significant in the robustness model, whereas the effect of NPM becomes insignificant once sales growth is controlled for. Investors in this sector respond mainly to growth opportunities, while cash balances alone do not raise firm value.

Keywords: Cash holding; Consumer non-cyclicals; Firm value; Investment opportunity set; Net profit margin

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1 Introduction

Firm value is the main goal of corporate financial management because it reflects the long-term wealth of shareholders, and it also tells the market about a company's governance and growth prospects. Slower global growth and repeated interest rate increases from 2022 onward put pressure on company valuations, especially in developing countries.

The consumer non-cyclicals sector, which covers food and beverages, tobacco, household products, and daily retail, is one of the largest sectors on the Indonesia Stock Exchange (IDX), with at least 128 listed companies in 2024. It is often described as defensive: in May 2022, when the composite index fell by 8.73%, the IDX Consumer Non-Cyclicals index (IDXNONCYC) rose by 3.59%. Over a longer period, however, its performance was weak. The index fell by 16.04% in 2021 and grew by only 0.82% in 2023 and 0.98% in 2024, and firm value in the sector tended to decline from 2020 to 2023 [1]. Table 1 shows the same pattern in five companies with a large weight in the index: their average Tobin's Q fell from 3.4155 in 2022 to 2.1096 in 2024, and two of them stayed below one throughout the period.

Table 1. Tobin's Q of five consumer non-cyclicals companies 2022-2024.

Company	2022	2023	2024
Astra Agro Lestari Tbk (AALI)	0.5983	0.6033	0.5269
Akasha Wira International Tbk (ADES)	2.7268	2.8804	2.1328
Wilmar Cahaya Indonesia Tbk (CEKA)	0.9128	0.6943	0.7024
H.M. Sampoerna Tbk (HMSP)	2.2692	2.3420	1.8382
Unilever Indonesia Tbk (UNVR)	10.5702	8.8785	5.3477
Average	3.4155	3.0797	2.1096

This decline points to internal factors at the company level. This study focuses on three of them. Cash holding is the proportion of cash and cash equivalents to total assets. Under pecking order theory, companies prefer internal funds to costly external financing [2], so sufficient cash gives them the flexibility to seize investment opportunities; on the other hand, excessive cash may suggest that resources are not being used to create value [3]. Investment opportunity set (IOS) shows how much the market values growth potential above the assets in place, and under signaling theory [4] it is a signal of future growth. Net profit margin (NPM) measures how much net profit a company earns from each rupiah of sales, and in this sector margins come under pressure from rising raw material prices, inflation, and competition [1].

Previous studies are inconsistent. Cash holding had a positive effect on firm value in [5, 6], but no significant or a negative effect in [7, 8]. IOS had a positive effect in [9], while [10] found no effect. NPM had a positive effect in [5, 11], whereas [12] found no significant effect. Most of these studies used samples from manufacturing as a whole and do not capture the defensive character of the consumer non-cyclicals sector. This study therefore tests the partial and simultaneous effects of cash holding, IOS, and NPM on the firm value of consumer non-cyclicals companies listed on the IDX in 2022–2024.

2 Literatur review and hypotheses

Signaling theory states that managers know more about the company's condition and prospects than investors do, so the company sends signals through its financial policies [4]. For a signal to be credible, it must be costly for low-quality companies to imitate. In this study, cash policy, investment opportunities, and profit margins are treated as such signals. Pecking order theory states that, because of information asymmetry, companies finance themselves first with retained earnings and cash, then with debt, and only as a last resort by issuing shares, since new equity is costly and can be read negatively by investors [2, 13].

Adequate cash allows a company to fund investment quickly without relying on expensive external funding, and investors may read this as a sign of financial strength. Muadz and Sastradipraja [5] found that internal cash speeds up the company's response to investment opportunities, and Purnasari et al. [6] found that cash reserves help consumer goods manufacturers keep production running when raw material supply is disrupted.

H1: Cash holding has a positive effect on firm value

A company with good investment opportunities signals strong growth prospects and the ability to create value. Hulaila and Prajawati [9] found that high growth opportunities show that management has promising projects that can increase future cash flows, which makes investors more optimistic.

H2: Investment opportunity set has a positive effect on firm value.

A consistently high net profit margin signals that the company controls its costs well under operating and competitive pressure. Anton et al. [11] found that companies able to keep their margins despite volatile commodity prices are valued more highly by the market.

H3: Net profit margin has a positive effect on firm value.

When these signals appear together, they give investors a more convincing picture than a single signal does [5]. The fourth hypothesis is therefore as follows (see Fig. 1):

H4: Cash holding, investment opportunity set, and net profit margin simultaneously affect firm value.

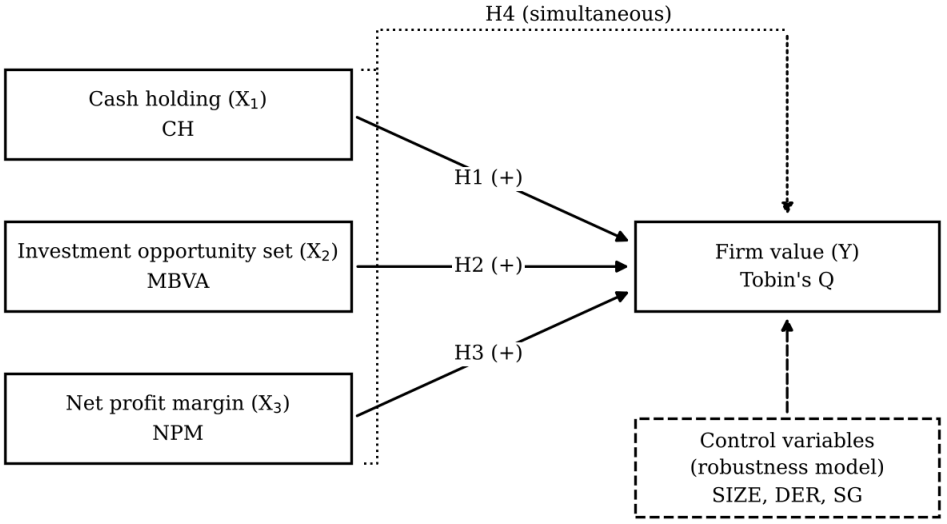


Fig. 1. Conceptual framework

3 Research method

This quantitative study uses audited annual reports of consumer non-cyclicals companies listed on the IDX in 2022–2024, obtained from www.idx.co.id and company websites. Of the 128 listed companies, purposive sampling excluded 31 that were not listed throughout the period, 5 without complete audited statements, 3 reporting in foreign currency, and 32 that recorded a net loss, since negative earnings make NPM hard to interpret. The final sample is 57 companies and 171 observations. Firm value (Y) is measured by Tobin's Q [14]:

$$Tobin's\ Q\ =\ \frac{MVE + DEBT}{TA} \quad (1)$$

Where MVE is the closing share price on 31 December multiplied by the number of outstanding shares, DEBT is total liabilities, and TA is total assets. Cash holding (X_1) is cash and cash equivalents divided by total assets. IOS (X_2) is measured by the market to book value of assets, MBVA = (TA – TE + MVE) / TA, where TE is total equity; this asset-based proxy was chosen to match the Tobin's Q measure [5]. NPM (X_3) is net income after tax divided by net sales. The control variables are firm size (SIZE, natural logarithm of total assets), leverage (debt to equity ratio, DER), and sales growth (SG).

The data were analysed with panel data regression in EViews 13. The Chow, Hausman, and Lagrange Multiplier (LM) tests were used to choose between the common effect (CEM), fixed effect (FEM), and random effect (REM) models. The classical assumption tests were the Jarque–Bera normality test, the variance inflation factor (VIF), the Glejser test, and the Durbin–Watson test. Hypotheses were tested with t- and F-tests at the 5% level. A robustness check compared the main model with a model that includes the control variables [15]:

$$FV_{it} = \alpha + \beta_1 CH_{it} + \beta_2 IOS_{it} + \beta_3 NPM_{it} + \varepsilon_{it} \quad (2)$$

$$FV_{it} = \alpha + \beta_1 CH_{it} + \beta_2 IOS_{it} + \beta_3 NPM_{it} + \beta_4 SIZE_{it} + \beta_5 DER_{it} + \beta_6 SG_{it} + \varepsilon_{it} \quad (3)$$

Where FV is firm value, CH is cash holding, i is the company, and t is the year. The results are robust if signs and significance stay stable across both models.

4 Result and discussion

4.1 Descriptive statistics and model tests

Table 2 shows that the mean Tobin's Q is 2.1788, so the market generally values the sample companies above their assets, although the standard deviation (2.4485) is larger than the mean. On average, companies hold cash equal to 12.15% of total assets, with values ranging from 0.18% to 57.27%. The mean MBVA is 1.7543, and the mean NPM of 0.0965 means that each Rp100 of net sales produced about Rp9.65 of net profit. The negative minimum DER indicates a company with negative equity.

Table 2. Descriptive stastics (N=171)

Variable	Min.	Max.	Mean	Std. dev.
Tobin's Q (Y)	0.5133	15.0933	2.1788	2.4485
Cash holding (X_1)	0.0018	0.5727	0.1215	0.1169
MBVA (X_2)	0.0620	14.3810	1.7543	2.4573
NPM (X_3)	0.0017	0.3375	0.0965	0.0802
DER	–1.7686	6.4659	0.9073	1.1442
SIZE	24.9749	32.9379	29.1831	1.6910
SG	–0.4259	1.1603	0.0950	0.1764

The Chow test (Prob. 0.0000) favours FEM over CEM, the Hausman test (Prob. 0.0945) favours REM over FEM, and the LM test (Prob. 0.0000) favours REM over CEM, so REM is used for both models. The Jarque–Bera probability of 0.1317 shows that the residuals are normally distributed. The centered VIF values are 1.4416 (CH), 1.0501 (IOS), and 1.5014 (NPM), all below 10. The Glejser test gives probabilities of 0.1412, 0.1248, and 0.4024, all above 0.05, and the Durbin–Watson value of 1.7976 lies between dU = 1.7856 and 4 – dU = 2.2144.

4.2 Regression results

In the main model (Table 3), cash holding has a positive but insignificant effect (0.1227; Prob. 0.5540), IOS has a positive and significant effect (0.1824; Prob. 0.0000), and NPM has a positive and significant effect (0.7575; Prob. 0.0311). The F-statistic of 261.1936 (Prob. 0.0000) shows that the three variables jointly affect firm value, and the adjusted R2 of 0.8212 means they explain 82.12% of its variation. H1 is rejected, and H2, H3, and H4 are accepted.

Table 3. Panel regression results of the main and robustness models (REM).

Variable	Main model			Robustness model		
	Coef.	*t*-stat.	Prob.	Coef.	*t*-stat.	Prob.
Constant	0.0283	0.4449	0.6570	2.6202	1.7646	0.0795
CH	0.1227	0.5930	0.5540	–0.1238	–0.6373	0.5248
IOS (MBVA)	0.1824	27.4389	0.0000	0.1719	28.5146	0.0000
NPM	0.7575	2.1741	0.0311	0.2934	0.8514	0.3958
DER	–	–	–	–0.0109	–0.3776	0.7062
SIZE	–	–	–	–0.0863	–1.6971	0.0916
SG	–	–	–	0.3013	4.8299	0.0000
R^2	0.8243					
Adjusted R^2	0.8212					
F-statistic	261.1936		(0.0000)			
Durbin–Watson	1.7976					

The robustness model gives a mixed picture. IOS stays positive and significant (0.1719; Prob. 0.0000). Cash holding stays insignificant (Prob. 0.5248), although its sign turns negative (–0.1238). NPM falls to 0.2934 and is no longer significant (Prob. 0.3958), while sales growth is positive and significant (0.3013; Prob. 0.0000). The finding for IOS is therefore robust, but the effect of NPM depends on the model specification and should be read with caution.

4.3 Discussion

Cash holding has no significant effect in either model, which does not support the view from pecking order theory that internal cash gives companies valuable flexibility [13]. The result differs from [5, 6] and agrees with [7, 8]. Cash has two opposing roles: sufficient cash provides flexibility, but excessive cash can be seen as a failure to use resources to create value [3], and the two effects may cancel each other out. Pecking order theory also implies that there is no single optimal level of cash, because it depends on each company's cash flow and operating needs [2], which is consistent with the very wide range of cash holding in the sample.

IOS has a positive and significant effect in both models, which supports signaling theory [4]: companies with good investment opportunities signal growth and the ability to create value, and the market values them more highly. This is in line with Hulaila and Prajawati [9] and Muadz and Sastradipraja [5], but differs from Baihaqi and Murtanto [10], who argued that opportunities that are not realised do not raise market value. In a sector with relatively stable demand, growth opportunities seem easier for the market to believe. It should be noted, however, that MBVA and Tobin's Q share the same market value component, which probably contributes to the very strong relationship (t = 27.4389).

NPM has a positive and significant effect in the main model, consistent with signaling theory: a high and stable margin shows investors that the company manages its costs well, which matters in a period of rising raw material prices and inflation [1]. This agrees with Anton et al. [11]. Once sales growth is added, however, NPM loses its significance. Both variables reflect operating performance, so sales growth may absorb part of the explanatory

power of NPM. The robustness result is closer to Maulany [12], who found no significant effect.

The joint effect is in line with Muadz and Sastradipraja [5], but most of the explanatory power of the model comes from IOS.

5 Conclusion

For 57 consumer non-cyclicals companies listed on the IDX in 2022–2024, cash holding has no significant effect on firm value, IOS has a positive and significant effect, and NPM has a positive and significant effect in the main model that disappears after control variables are added. The three variables jointly explain 82.12% of the variation in firm value. The findings support signaling theory for IOS and partly for NPM, but do not support the role of cash holding predicted by pecking order theory in this sector and period. Managers should communicate and carry out their investment plans clearly, manage cash according to operating and investment needs rather than simply accumulating it, and maintain margins together with sales growth. Investors should combine growth opportunities, profitability, and sales growth rather than rely on a single ratio. The sample excludes loss-making companies and covers only three years. Future studies could extend the period, include other sectors or loss-making companies, use other proxies for firm value (such as price to book value) and IOS, since MBVA and Tobin's Q are both market-to-asset ratios, and add variables such as free cash flow, institutional ownership, dividend policy, interest rates, or inflation.

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