Firm Value Factors: The Effect Of Intellectual Capital, Managerial Ownership, And Profitability

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Abstract: Firm value is the main component of the company in making decisions related to its financial performance. This study examines the simultaneous and partial effects of intellectual capital, managerial ownership, and profitability on firm value. The sample of this investigation is the non-cyclical consumer companies sector listed on the Indonesia Stock Exchange (IDX) in the 2018 to 2021 periods. The sampling technique used was purposive sampling, so there were 76 samples from 23 companies in the consumer non-cyclical sector. The analytical method used is panel data regression, which is analyzed using Eviews 12. The results showed that intellectual capital, managerial ownership, and profitability simultaneously and partially influence firm value. This indicates that the company needs good management guided by the factors that affect its value. Therefore, this study has implications for maximizing companies' financial performance in the consumer non-cyclical sector.

Keywords: Firm Value; Intellectual Capital; Managerial Ownership; Profitability.

INTRODUCTION

The company has a mission to prosper shareholders and increase company value by maximizing its financial performance (Dwicahyani et al., 2022). Company value helps companies to attract investors (Safari et al., 2018). In connection with the stakeholder theory by (Wijaya et al., 2021), companies need to emphasize their performance by paying attention to the needs, interests, and regulations of companies that can impact the company's operational and non-operational parties. Based on empirical research conducted by (Yuliana, 2020), the stock performance of stock companies accurately affects firm value. According to (Lumoly et al., 2018), company value is a company performance that is visualized by the value of shares and can reflect public perceptions of the company's prospects.
The Capital Market Law (UU) No. 8 of 1995 conception that the market of capital is as activities relevant to the public negotiation and trading of securities, public enterprises related to the protection they published, as well as organizations and professions related to securities. In the Capital Market Law (UUPM) Article 1 No. 5, securities are traded in the capital market, including debt securities or bonds, stocks, and commercial paper.

Several industry scopes trade securities on the Indonesia Stock Exchange (IDX), including the non-cycle consumption industry. This industrial sector is considered stable and not susceptible to changes in conditions and the economy despite the decline in value because it is included in the field of basic human needs. Stock performance can be measured through an entity's stock return value over a specific time frame.

**Table 1. Non-Cyclical Consumer Industry Sector**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Non-Cyclicals</td>
<td>Food and Staples Retailing</td>
</tr>
<tr>
<td></td>
<td>Beverages</td>
</tr>
<tr>
<td></td>
<td>Processed Foods</td>
</tr>
<tr>
<td></td>
<td>Agricultural Foods</td>
</tr>
<tr>
<td></td>
<td>Tobacco</td>
</tr>
<tr>
<td></td>
<td>Household Products</td>
</tr>
<tr>
<td></td>
<td>Personal Care Product</td>
</tr>
</tbody>
</table>

Source: idx.com (processed data), 2023

Research by (Khayati et al., 2022) states that the consumer non-cyclical sector looks to have favourable prospects in the future; this is likely due to primary needs that will be needed every day by all elements of society. This statement is supported by (Pratiwi et al., 2021), who narrate that the consumer non-cyclical index, which can be accessed on idx.com over the past ten years, has a stock return rate of 205 per cent, which is superior to the Composite Stock Price Index (CSPI) with a percentage of 148 per cent in 2019. This can be seen based on data from the IDX in 2018, where the consumer sector index often fluctuates yearly. In 2017, this sector index experienced a 23 per cent gain; in 2018, it decreased by -10 per cent. The consumer sector index still experienced a decline of -20 per cent, and the same conditions continued throughout 2020, where the consumer goods sector index weakened again to -11 per cent. (Pratiwi et al., 2021).

Although the return value of the consumer non-cyclical sector is better than the JCI, this sector will also experience fluctuations in reality. (Ardiansah and Wahyudi, 2022) Mentioned that the accumulation of companies that experienced losses from 2016 to 2019 were 13, 17, 19, and 20, respectively. Based on data from the Indonesia Stock Exchange (IDX), through the statement of Avikasari and Permady (2022), the development of net profit in the consumer non-cyclical sector has decreased significantly. The average net profit in 35 per cent of companies in this sector was 1.576,839 in 2018, declining to 1.500,102 in 2019.

This phenomenon indicates that there is uncertainty about the performance conditions of companies in the consumer non-cyclical sector. Wernelfelt's resource-based theory (Ramadhan and Laksito, 2022) states that it is necessary to explore the ability of an entity to utilize its resources to create a competitive advantage. Advancing company value can be done by considering factors that help company value.

This paper focuses on three factors that impact firm value: intellectual capital,
managerial ownership, and profitability. Intellectual capital (IC) by (Yuliana and Khoiriyah, 2018) is a human ecosystem in an entity that can provide competitive aspects in the form of intellectuality, utilization of data and information, and experience used for the company's welfare. Their research (Sianty, 2018) found that intellectual capital positively correlates with and significantly influences firm value. However, there are differences of opinion, and the findings by (Putri and Atika, 2022) show that IC negatively impacts firm value.

Management ownership is the accumulation or number of internal shareholders who include management and actively have involvement in making company decisions. The greater the ownership of a company's shares based on the internal side, the more managers will work optimally in increasing credibility, then the company's value will also increase (Putranto and Kurniawan, 2018). This is also linked to managerial ownership and firm value, which has been investigated and analyzed by (YC Kruce, 2022); he stated that managerial ownership has a positive and significant partial effect on firm value. The positive relationship between the two does not guarantee the consistency of the findings made by previous researchers. Research (Apriantini et al., 2022) proved no partial connection between managerial ownership and firm value.

Then, profitability relates to the company's capability to result in margins or profits, assesses the profit level from operational efficiency in utilizing assets, and is one of the factors that can influence company value (Hirdinis, 2019). The presence of a more significant on profitability and firm value has been analyzed by (Fadillah et al., 2021), and their analysis shows a positive correlation among these variables. This research was also supported by (Saputri and Giovanni, 2021), who investigated the effect of profitability on firm value. However, there is a contradiction in the findings made by (Yuniastri et al., 2021), who states that fluctuations in profitability do not affect company value. Quoting from the paper finished by (Muharramah and Hakim, 2021) also found no impact on profitability on company value.

There needs to be more consistency of these factors to firm value related to previous theories and phenomena. They are signalling theories by (Andhar and Hadiprajitno, 2023) that companies must provide signals to minimize information asymmetry in the capital market. In this case, positive signals are used as information for potential investors through disclosure in company reports (Ginting and Sagala, 2020). Therefore, companies need to pay attention to the components that can affect the company's value to give a positive signal.

No research specifically explains these three factors together as far as researchers can, which include intellectual capital, managerial ownership, and profitability factors on firm value in the consumer non-cyclical sector in the 2018-2021 period. In addition, researchers focus on companies in this sector because this industry plays an essential role in daily human needs, so research needs to be updated for each period. This is a concern for researchers to increase the company value of the companies listed in the sector after experiencing a decline in value in the previous few years. Thus, the researcher is interested in conducting a more detailed analysis of the title "Firm Value Factors: The Effect of Intellectual Capital, Managerial Ownership, and Profitability" in the Non-Cyclical Consumer Companies Sector listed on the IDX in the 2018-2021 periods.
THEORETICAL REVIEW

**Signaling Theory.** Signalling theory by (Wicaksono et al., 2022) is a situation where companies need to provide signals to those who use information to minimize information asymmetry. According to (Putri and Wiksauana, 2021), positive signals run by the industry signal investors to make investments because of a guaranteed return on their investment. The same thing was stated by (Ginting and Sagala, 2020) that companies try to show positive signals or information to potential investors through financial reports. Information imbalance indicates that one side has a higher level of understanding than the other side, so it can cause losses to certain parties. Minimizing the occurrence of information asymmetry events in the company can maximize the value of the company (Dewi and Abundanti, 2019). The relevance of this case is in companies that will provide positive signals in the form of reports that will be publicized in the financial statements. This signal is supposed to get a positive response from the capital owners to invest their wealth in companies that can advance company value.

**Stakeholder Theory.** The stakeholder theory (Dewi, 2019) indicates that corporate objectives are sought to balance the interests of all corporate elements, namely shareholders and agents. This statement is supported by (Fitriasari and Sari, 2019); stakeholder theory implies that the company is not an entity that only carries out activities based on its interests but must involve and benefit stakeholders. The position of shareholders has the authority to influence management to utilize all the capabilities possessed by the company. Therefore, stakeholders' support has a crucial influence on the company's sustainability (Ramadhan and Laksito, 2022). Judging from the stakeholder theory, this theory has strong relevance to the research base. Companies must develop and improve operations by utilizing their resources, management and performance elements. If the company can realize an increase in profits, it will explain good financial performance and benefit investors. Stakeholder theory is also the basis for company reporting because information connects stakeholders with company management.

**Resource-based Theory.** (Ramadhan and Laksito, 2022), Defines resource-based theory as a theory that investigates the capability of an entity to exploit its potential to build competitive advantage. This advantage is created when the company can develop the necessary resources. (Dwi, 2019) expressed his view through RBT theory; he explained that a company's resources have the potential to create unique characteristics. When a company can use its resources well, it will have a character in the form of a competitive advantage as a strategic effort against its competitors (Dwi, 2019). Barney (Halim and Wijaya, 2020) explain that companies explore the potential of strategic resources to increase competitive advantage by looking at four characteristics: First, resources can support companies in meeting customer needs better than competitors; Second, resources are limited, so they are not easily imitated. Third, this ability can benefit the company due to its utilization of its resources. Fourth, these resources have good resilience (Dwi, 2019).

In line with the theoretical view, research has relevance related to companies that need to increase resources. This increase is required to make a competitive advantage to maintain the continuity of company activities. Superior capabilities can encourage companies to realize their goals.

There is a strong relevance of intellectual capital, managerial ownership, and profitability simultaneously to firm value. Companies need to improve operations optimally to realize increased profits, thus indicating effective financial performance and
providing positive benefits for investors (Dewi, 2019). (Khoerunnisa et al., 2018) They stated that when a company utilizes its resources optimally, it can increase its competitive advantage, which can accurately impact the firm's valuation. So, with intellectual capital, the company can realize its goals. The existence of managerial ownership can run the company's business optimally because it will make a company conduct a study before making decisions. This is because it can be seen from two different points of view, as an internal and external party of the company (Fitriasari and Sari, 2019). This is done based on business and stakeholder interests (Ramadhan and Luksito, 2022). Large profitability illustrates that a company can maximize high returns for investors. (Putranto and Kurniawan, 2018) State that the greater the profit of an entity, the firm's valuation will also increase because it can attract an investor to invest.

**H1:** Intellectual capital, managerial ownership, and profitability simultaneously influence firm value.

**Intellectual Capital.** Intellectual capital is crucial to company value because it relates to its ability to carry out business processes (Dunna et al., 2020). Utilization of intellectual capital provides an opportunity for companies to achieve a competitive advantage over competitors so that they can improve their performance (Sianty, 2018). Resource-based theory by Barney (Khoerunnisa et al., 2018) defines that when a company utilizes its resources optimally, it can increase its competitive advantage, which can accurately impact firm value. The theory linkage indicates that the connections between IC and the firm's value had a positive relationship. An analytical study by (Suzan and Devi, 2021; Fitriasari and Sari, 2019) provide evidence that intellectual capital and firm value are positive and significantly interrelated.

**H2:** Intellectual capital partially has a significant positive effect on firm value.

**Managerial Ownership.** (Fana and Prena, 2021) Emphasize that managerial ownership optimally shapes company performance, providing an excellent impetus for managers to make careful decisions. The relation of managerial ownership is supported by the findings of (Dewi and Abundanti, 2019) observation that there is a significant positive connection between both variables. Then, research conducted by (YC Kruce, 2022) found a significant positive relationship between managerial ownership and firm value.

**H3:** Managerial ownership partially has a significant positive effect on firm value.

**Profitability.** (Ardianto and Suzan, 2021) State that investors will evaluate and pay attention to the company's value side when investing their capital, so management will maximize its value by increasing profitability. If the company can make the best use of its assets, the profitability value of the company will also increase (Hirdinis, 2019). Research finished by (Sari, 2020) found that profitability has a significant positive effect partially on firm value. Similar results by (Dewi and Abundanti, 2019) show that profitability influences firm value growth.

**H4:** Profitability partially has a significant positive effect on firm value.
According to its purpose, this investigation is causal to determine the cause and effect between the independent and dependent variables. In her book, (Ratna et al., 2021) explain that causal research is conducted to answer problem formulations related to the cause-and-effect connection between an independent and dependent variable. The theory development of the research process used is deduction. Deductive research is carried out to answer the formulation of problems with theories and concepts so that a hypothesis can be formulated to be tested (Ratna et al., 2021)

In conducting research, it is usually concerned with the phenomenon of research variables. Several experts have expressed their opinions regarding the definition of variables. According to (Ratna et al., 2021), a variable is an object of research observation to determine research objectives. To facilitate measurement and the acquisition of data sources, the operational definitions of all the variables used in this research are outlined in detail in Table 2.

Table 2. Operational Variabel

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Independent Variables</th>
<th>Indicators</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Capital (IC)</td>
<td>Intellectual capital is the relationship between all the company's capabilities used to + (Value Added Capital Employed)</td>
<td>VAIC = (Value Added Human Capital)</td>
<td></td>
<td>Ratio</td>
</tr>
<tr>
<td>Managerial Ownership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Research’s Model
Source: Processed data, 2023

Description:
= Partial
= Simultaneous
carry out business activities to create value. This investigation measures intellectual capital by Value Added Intellectual Coefficients (VAIC). (VAIC) is an assessment method to measure the company's ability to achieve efficiency to generate value by considering the relationship between three main components: capital employed, human capital, and structural capital. (Suzan and Aini, 2022).

Managerial Ownership
Managerial ownership is the ownership of the value of shares by internal parties, including commissioners and directors, who have a stake in making company decisions. (Dewi and Abundanti, 2019)

Profitability
Profitability is the firm's capacity to earn a profit; this can also describe the level of operational efficiency of the company in utilizing its assets (Hirdinis, 2019). The level of profitability is calculated using the return on assets (ROA) ratio.

Firm Value
Firm value is a number that can show a company's condition (Dewi and Abundanti, 2019). The firm value is modelled with Tobin's Q ratio.

Dependent Variable
Tobin's Q= (Equity Market Value) + (Debt) / (Total Asset) (Dzahabiyya et al., 2020)

MOWN (Managerial Ownership) = (Total of Managerial Shares) / (Total of Shares Outstanding) x 100 per cent (Putranto and Kurniawan, 2018)

ROA (Return On Asset) = (Net Profit) / (Total Asset) (Ardianto and Suzan, 2021)

Population and sample. The unit of analysis of this case is companies listed as the consumer non-cyclical industries. Research was conducted on companies of time series data for the 2018-2022 period and cross-section data with 72 companies. The data is then analyzed to answer research questions and prove hypotheses objectively. In this case, the population is a business operating as a non-cyclical consumer. Sampling in this study uses a purposive sampling technique. According to (Ratna, 2021), in purposive sampling, there is judgment sampling, meaning that sampling is carried out based on several criteria that have been compiled based on considerations made by the researcher. The table below shows the sampling criteria for this observation:

Table 3. Purposive Sampling

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-cyclical consumer sector companies that entered on the Indonesia Stock Exchange (IDX) for the 2018-2021 periods.</td>
<td>72</td>
</tr>
<tr>
<td>Non-cyclical consumer field companies entered the Indonesia Stock Exchange (IDX) and were identified as the main listing board for the 2018-2021 period.</td>
<td>26</td>
</tr>
</tbody>
</table>
Non-cyclical consumer sector companies that consistently publish financial reports and have been audited for the 2018-2021 period (0)
Non-cyclical consumer sector companies that do not provide data for research needs (data for firm value, intellectual capital, managerial ownership, and profitability) (23)

<table>
<thead>
<tr>
<th>Total sample (number of firms)</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of years observations per firm</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total observation</strong></td>
<td><strong>96</strong></td>
</tr>
</tbody>
</table>

Source: Processed data, 2023

Table 3 shows recognizes that the samples used in this case were 24 firms with 96 observational data. This investigation uses the secondary data. In this case, the secondary data were taken from company financial statement information accessed through the official website of each company in the consumer non-cyclical sector, which is entered on the IDX. The data used in this study were compiled using literature and documentation study methods. This secondary data is an annual report published by each company in the non-cyclical consumer field on the IDX for 2018-2021, and this data can be viewed through the official website [www.idx.co.id](http://www.idx.co.id).

**Data analysis technique.** This analysis used the descriptive statistics technique. Descriptive statistics is a form of analysis used to describe data, indicators or variables that are calculated according to the needs of researchers (Ratna, 2021). In this research, descriptive analysis was used to describe intellectual capital (IC), managerial ownership (MOWN), profitability (ROA) and firm value (Tobin’s q). The classic assumption test used is the Ordinary Least Squared (OLS) approach, which includes several tests, including linearity, heteroscedasticity, multicollinearity, autocorrelation, and normality tests. In the classic assumption test of this study, the linearity test was not carried out because it was assumed that the model was linear. Then, the normality test is optional to be carried out in the classic assumption test for panel data. The autocorrelation test is only carried out on time series data because testing on cross-section data has no impact (Basuki and Prawoto, 2017).

**Panel Data Regression Estimation Model.** In estimating the panel data regression model, several estimates can be taken (Basuki and Prawoto, 2017), including common-effect, random-effect, and fixed-effect. Several tests are carried out to determine which model to use to manage panel data: chow-test, Hausman-test, and Lagrange-multiplier test.

**Panel data regression analysis.** This research conducts panel data regression analysis because there is more than one sample period data. The time series in this study is four years in the 2018-2021 period. The following is a data panel regression model reported to (Basuki and Prawoto, 2017):

\[
\text{Tobin's Q} = \alpha + B_1 \text{IC}_{it} + B_2 \text{MOWN}_{it} + B_3 \text{ROA}_{it} + \varepsilon_{it} \tag{1}
\]

Where:
Tobin’s q is the value of firm value, \( \alpha \) is the value of constanta. The IC is the value of intellectual capital proxied by VAIC, the value of managerial ownership proxied by MOWN, and the ROA is the value of profitability. Then, \( B_{1,2,3} \) are the number of regression coefficients of the independent variables. \( i \) is the number of observation units or the cross-sectional unit, and \( t \) is the number of periods from 2018 to 2021. \( \varepsilon \) is an error term.
RESULTS

Outliers. The observation data used in this research were 96 obtained from 24 sample companies; after the observational data was processed, there was extreme data, so the statistical test results could not be used to make decisions. After outliers are made, researchers get the latest observation data 76 from 23 sample companies. This study eliminates the detected outlier data because it refers to the balanced panel results. Eliminating observations is another way to balance the panel data results.

Descriptive Statistics. According to the definition of descriptive statistical analysis, data that has been collected describes the data without including specific or broader conclusions. This descriptive statistic provides illustrations and explanations related to the data obtained regarding the research variables. This study uses descriptive statistical analysis and panel data regression analysis.

The results of this case, explained by descriptive statistics, classical assumptions, and panel data regression test, are detailed in the next section. Table 4 shows the consequent and predictor variables' quartil (median), average (mean), standard deviation, minimum, and maximum values. Descriptive statistics by processing data from each variable for four periods recorded as non-cyclical consumer sector companies with an accumulation of 76 observation data.

Table 4. Descriptive Statistics Results

<table>
<thead>
<tr>
<th>Firm Value</th>
<th>Intellectual Capital</th>
<th>Managerial Ownership</th>
<th>Profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.413</td>
<td>2.895</td>
<td>0.092</td>
</tr>
<tr>
<td>Median</td>
<td>1.051</td>
<td>2.658</td>
<td>0.019</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.885</td>
<td>6.837</td>
<td>0.805</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.341</td>
<td>-1.075</td>
<td>0.000</td>
</tr>
<tr>
<td>Std Dev</td>
<td>0.929</td>
<td>1.769</td>
<td>0.161</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

Table 4 shows, descriptive statistical results of the company value proxied in Tobin's-q show a standard deviation value of 0.929 and an average or (mean) of 1.414. The average is higher than the deviation standard and proposes that this variable is homogeneous. The minimum value of Tobin's q is 0.341 by PT Austindo Nusantara Jaya Tbk (ANJT) in 2021, while the maximum value of Tobin's q is 3.885 by PT Indofood CBP Sukses Makmur Tbk (ICBP) in 2018.

Then, the descriptive statistical results of intellectual capital (IC) proxied by VAIC show a deviation-standard value of 1.770 and an average value (mean) of 2.895. A mean number higher than the standard deviation values indicates that the intellectual capital variable in this study is homogeneous. The minimum VAIC value was -1.075 by PT Salim Ivomas Pratama (SIMP) in 2019, while the maximum VAIC value was 6.837 by PT Mayora Indah Tbk in 2018.

The table also shows the descriptive statistical results of managerial ownership proxied by MOWN, showing a standard deviation value of 0.161 and an average value (mean) of 0.092. The average value, which is better than the standard deviation, indicates that the managerial ownership variable in this study is heterogeneous. The minimum value of MOWN is 0.000 by PT Mandom Indonesia Tbk (TCID) in 2018 and 2019, while the
The maximum value of MOWN is 0.805 by PT Indofood CBP Sukses Makmur Tbk (ICBP) in 2018 and 2021.

The descriptive statistical results of profitability proxied by ROA show a standard deviation value of 0.078 and an average value (mean) of -0.003. The average value, which is smaller than the standard deviation value, indicates that the profitability variable in this study is heterogeneous. The minimum ROA value was -0.208 by PT Ultrajaya Milk Industry Tbk (ULTJ) in 2019, while the maximum ROA value was 0.083 by PT Mandom Indonesia Tbk (TCID) in 2021.

**Classical Assumption Test.** In this study, a classical assumption test was carried out to explain the unbiased coefficient values produced. Testing technique used to detect signs of multicollinearity and heteroscedasticity—data analysis using panel data regression analysis with Eviews 12.0.

The multicollinearity tests were conducted to detect a connection between the predictor variables in the regression model. Her work (Ratna, 2021) defines multicollinearity as a condition of relationship between variables, especially predictor variables. The model regression can be improved if there are no connections between the independent variables in a study. If the correlation value is 0.800, there are no signs of multicollinearity among the predictor variables (Ratna et al., 2021). The following are the results of the classic assumption test for the multicollinearity test:

**Table 5. Multicollinearity Test Results**

<table>
<thead>
<tr>
<th></th>
<th>IC</th>
<th>MOWN</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>1.000</td>
<td>0.199</td>
<td>-0.283</td>
</tr>
<tr>
<td>MOWN</td>
<td>0.199</td>
<td>1.000</td>
<td>-0.027</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.283</td>
<td>-0.027</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Output Software *Eviews* 12.0, 2023

The multicollinearity test results, Table 5 shows that intellectual capital, managerial ownership, and profitability variables have a correlation value below 0.8, meaning there are no symptoms of multicollinearity data in this research. This implies no contamination among the independent variables, so the data regression model is feasible for further analysis.

The heteroscedasticity test is a test that aims to detect in the research regression model the variance and dissimilarity of the residuals from one observation to another by looking at the resulting probability level (Suzan and Aini, 2022). If the residuals from each observation to another are static, that is homoscedasticity, and the opposite is heteroscedasticity. The heteroscedasticity test in this study used the white test, in which the Prob-value is higher than 0.050; it can be said that there are no signs of heteroscedasticity in the results. Following are the results of this study's heteroscedasticity test:

**Table 6. Heteroscedasticity Test Results**

<table>
<thead>
<tr>
<th>Test</th>
<th>F-statistic</th>
<th>Prob. F(9,66)</th>
<th>Obs*R-squared</th>
<th>Prob. Chi-Square(9)</th>
<th>Scaled explained SS</th>
<th>Prob. Chi-Square(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Test</td>
<td>1.235</td>
<td>0.289</td>
<td>10.957</td>
<td>0.278</td>
<td>9.178</td>
<td>0.421</td>
</tr>
</tbody>
</table>

Source: Output Software *Eviews* 12.0, 2023
Heteroscedasticity-test can be seen that the Obs*R-squared value is 10.957 and Prob. The Chi-Square of Obs*R-squared is higher than 0.050 (α = 5 per cent), and the value is 0.278, indicating that there is no signal heteroscedasticity in the data analysis results so that it is said to be appropriate for further testing (Table 6).

**Panel Data Regression Analysis.** Analysis with data panel regression is to test how much of a significant effect the predictor variable has on the consequent variable. This research uses panel data, a mix of the cross-section and time series. The estimation method of this model can be done in three models: common-effect, random-effect, and fixed-effect mode (Basuki and Prawoto, 2017).

**Panel Data Model Selection.** In determining the correct type of technical tools to evaluate data panel regression, it is crucial to test the significance of the fixed effect with the Chow test to select the common-effect or fixed-effect method. Hausman test to filter among fixed-effect or random-effect models. The last step is the Lagrange Multiple Test (LM) test to select common effect or random effect techniques-the data panel regression selection test results for this test.

**Table 7. Chow Test Result**

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>3.131</td>
<td>(18,540)</td>
<td>0.295</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>54.331</td>
<td>18</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

The cross-section chi-square probability on the Chow-tests has a value of 0.000, which signifies that the probability value is less than 0.050 or less than the significance value of 5 per cent. It can be concluded that H0 is denied, and the better model used in data panel regression based on the Chow test is the fixed effect model. Next, the Hausman test is carried out to determine the test on the fixed effect and random effect models (Table 7).

**Table 8. Hausman Test Result**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>3.706</td>
<td>3</td>
<td>0.295</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

The probability value (random cross-section) on the Hausman-tests results with a value of 0.295 indicates that the probability value is more than 0.050 or greater than the 5 per cent significance value. H0 is accepted, and the better model used in panel data regression based on the Hausman test is the random-effect model. After doing the two previous tests, the last model test that needs to be done is the Lagrange Multiple Test (LM). LM is carried out to know the test in the common-effect and random effect (Table 8).

**Table 9. Lagrange Multiplier Test Result**

<table>
<thead>
<tr>
<th>Test Hypothesis</th>
<th>Cross-section</th>
<th>Time</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan</td>
<td>10.821</td>
<td>1.545</td>
<td>12.366</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.213)</td>
<td>(0.000)</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023
The Lagrange Multiplier test above obtained the Prob-value (cross-section Breusch-Pagan) with a value of 0.001, which shows that the probability is below the significance value or 0.001 smaller than 0.050, it can be concluded that H0 is denied, and the more appropriate model to use is the random effect model (Table 9).

Panel Data Regression Equation. After conducting the previous three tests, it is agreed that the most applicable data panel regression used in this case is the Random Effect test.

Table 10. Results of the Random Effects Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.788</td>
<td>0.217</td>
<td>3.618</td>
<td>0.000</td>
</tr>
<tr>
<td>IC</td>
<td>0.162</td>
<td>0.058</td>
<td>2.767</td>
<td>0.007</td>
</tr>
<tr>
<td>MOWN</td>
<td>1.574</td>
<td>0.619</td>
<td>2.543</td>
<td>0.013</td>
</tr>
<tr>
<td>ROA</td>
<td>-2.773</td>
<td>1.296</td>
<td>-2.138</td>
<td>0.035</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

The output of a random-effect model test that matches for use in this study, the panel data equation is accepted as follows (Table 10):

\[
\text{Tobin's Q} = 0.788 + 0.162*\text{IC} + 1.574*\text{MOWN} - 2.773*\text{ROA} + e
\]

The equation statement explained that if the constant value (c) of 0.788 by the predictor variables, which include the three variables: intellectual capital (IC), managerial ownership (MOWN), and profitability (ROA), is zero or constant, then the firm value will be 0.788. This shows that the company's value has increased. Then, Intellectual capital (IC) has a regression coefficient of 0.162, meaning that for every one-unit addition to intellectual capital hypothesized that other variables are zero or constant, the company value increases by 0.162 units. Managerial ownership (MOWN) has a coefficient value of 1.574, which means that for every one-unit addition to MOWN hypothesized that other variables are zero or constant, the company value increases by 1.574. Then, the profitability variable (ROA) has a coefficient value of -2.773, which indicates that for every unit addition to profitability, it is hypothesized that other variables are zero or constant. The company value decreases by -2.773 units.

Coefficient Determination Test ($R^2$). The coefficients-determination tests are carried out to show the proportion of the consequent-variable variation to all independent variables simultaneously.

Table 11. Determination Coefficient Test Results

<table>
<thead>
<tr>
<th>R-squared</th>
<th>Mean dependent var</th>
<th>0.793</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared</td>
<td>0.252</td>
<td>SD dependent var</td>
</tr>
<tr>
<td>SE of regression</td>
<td>0.679</td>
<td>Sum squared resid</td>
</tr>
<tr>
<td>F-statistic</td>
<td>9.427</td>
<td>Durbin-Watson stat</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

As evidenced by Table 11, the coefficients-determination tests are carried out to
simultaneously show the proportion of the consequent-variable variation to all independent variables. The value of determination starts from 0 to 1. If the value of R2 gets closer to 0, the capacity of the predictor variable is higher in presenting almost all the information needed when describing the dependent variable (Ghozali, 2018). The coefficient determination can be found that intellectual capital (IC), managerial ownership (MOWN), and profitability (ROA) can explain the value of the company (Tobin's q), which is 0.282 or 28.200 per cent. At the same time, 71.8 per cent (100 per cent - 28.200 per cent) can be influenced by different variables that are not the focus and are observed in this study.

**Simultaneous Hypothesis Test (F-test).** A simultaneous test is a hypothesis test that aims to know whether the predictor variables simultaneously or with each other substantially affect the consequent variable (Sahir, 2021). If the significance value is lower than 0.050, it means H0 declined and H1 retrieved, or if Sig is higher than 0.050, it means H0 accepted, and H1 rejected (Ratna et al., 2021). The results of the analysis of the simultaneous F test are as follows:

**Table 12. Simultaneous Test Results (Test-F)**

<table>
<thead>
<tr>
<th>R-squared</th>
<th>0.282</th>
<th>Mean dependent var</th>
<th>0.793</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared</td>
<td>0.252</td>
<td>SD dependent var</td>
<td>0.785</td>
</tr>
<tr>
<td>SE of regression</td>
<td>0.679</td>
<td>Sum squared resid</td>
<td>33.256</td>
</tr>
<tr>
<td>F-statistic</td>
<td>9.427</td>
<td>Durbin-Watson stat</td>
<td>1.726</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

The Prob value (F-statistic) is 0.000. This result is below the tolerable value of 5 per cent, 0.050 value is higher than 0.000, it is stated that H0 is declined and H1 is retrieved. It can be interpreted that there is a significant impact together from Intellectual Capital (IC), Managerial Ownership (MOWN), and Profitability (ROA) on Firm Value (Tobin's q) for non-cyclical consumer fields industries entered the Indonesia Stock Exchange (IDX) on the period 2018-2021 (Table 12).

**Partial test (t-test).** The partial test is used to show the partial effect of each independent variable, namely intellectual capital (IC), managerial ownership (MOWN), and profitability (ROA), on the dependent variable, namely firm value (Tobin's q). The following results of the partial test in this study are attached in Table 13:

**Table 13. Partial Test Results (t-test)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.788</td>
<td>0.217</td>
<td>3.618</td>
<td>0.000</td>
</tr>
<tr>
<td>IC</td>
<td>0.162</td>
<td>0.058</td>
<td>2.767</td>
<td>0.007</td>
</tr>
<tr>
<td>MOWN</td>
<td>1.574</td>
<td>0.619</td>
<td>2.543</td>
<td>0.013</td>
</tr>
<tr>
<td>ROA</td>
<td>-2.773</td>
<td>1.296</td>
<td>-2.138</td>
<td>0.035</td>
</tr>
</tbody>
</table>

Source: Output Software Eviews 12.0, 2023

Table 13 shows the probability value is obtained for each research variable. Next, check out the following information on the partial hypothesis testing results on each predictor variable on the consequent variable. Intellectual capital (IC) significantly influences firm value (Tobin's Q). This can be viewed from the probability value, which is above the tolerable error value of 5 per cent, where the value of 0.007 is lower than the...
value of 0.050. Managerial ownership (MOWN) substantially influences firm value (Tobin’s q). This can be viewed from the probabilities value, which is above the tolerable error value of 5 per cent; the MOWN value of 0.013 is lower than 0.050. Profitability (ROA) has a significant influence on firm value (Tobin’s q). This can be seen from the probability value above the tolerable error value of 5 per cent, where 0.035 is lower than the 0.050 value.

The test results of panel data regression analysis show that intellectual capital has a coefficient of determination of 0.162 with a probability level of 0.007, less than $\alpha$ or 0.050 (5 per cent significance level). This shows that the hypothesis can be accepted. It can be summarized that intellectual capital (IC), as measured by VAIC, partially has a positive influence, and the results of this test follow the research framework that IC influences firm value.

DISCUSSION

The Effect of Intellectual Capital, Managerial Ownership, and Profitability on Firm Value. The F-test is conducted to determine the effect of independent variables, namely intellectual capital, managerial ownership, and profitability, on firm value together or simultaneously. Based on the test results, a significance value of 0.000 is obtained. This value is smaller than the significance level of 0.050, meaning the three variables simultaneously affect firm value.

The results of hypothesis testing show that the independent variables can explain the dependent variable, namely firm value (PBV). This is evidenced by the R-squared value or the so-called coefficient of determination of 0.282 or 28.20 per cent. This means that the independent variable can explain the dependent variable by 28.20 per cent while the rest is explained by other variables not proposed in this study. Thus, the hypothesis stating the simultaneous influence between intellectual capital, managerial ownership, and profitability on firm value as the first hypothesis is accepted.

The Effect of Intellectual Capital on Firm Value. The test results of panel data regression analysis show that intellectual capital has a coefficient of determination of 0.162 with a probability level of 0.007, less than $\alpha$ or 0.050 (5 per cent significance level) and a coefficient value of 0.162, and is positive. This shows that the second hypothesis can be accepted. It can be interpreted that the more the value of Intellectual Capital by the company increases, the higher the Firm Value proxied by the value of Tobin’s q in non-cyclical consumer companies on the Indonesia Stock Exchange, which are categorized as companies in the main listing. Using intellectual capital owned by the company will create added value for the company because it can support its operations to provide returns to shareholders. This gives a tendency for investors to choose stocks for companies with higher intellectual resources than other companies. An increase in investors investing in the company can increase the company’s share price. The rise in share price provides an increase in company value.

Then, based on previously tested descriptive statistics, there are 33 samples of above-average intellectual capital with 13 samples of average firm value and 20 samples below average. Then, intellectual capital with a below-average number of 43 samples with a company value above the average number of 15 samples and the rest is a company value below average. This indicates that below-average intellectual capital tends to have below-average firm value. Thus, the hypothesis that states the partial influence between
intellectual capital and firm value as the second hypothesis is accepted. This is the same as studied by an analytical study conducted by (Suzan and Devi, 2021); (Fitriasari and Sari, 2019); (and Santiani et al., 2018) that intellectual capital has a positive and significant effect on the company, the higher the intellectual capital value of a company, the higher the value of the company proxied in Tobin's q value. However, there are conflicting research results by (Sari et al., 2021); (and Deffi et al., 2020) that intellectual capital has a negative and insignificant effect on firm value.

**The Effect of Managerial Ownership on Firm Value** The results of the panel data regression analysis show that managerial ownership has a coefficient of determination of 1.574 with a probability level of 0.013, less than α or 0.050 (5 per cent significance level), and a coefficient value of 1.574 which is positive. So, it can be concluded that managerial ownership partially has a positive and significant effect on firm value and proves the third hypothesis. This result shows that the positive direction indicates that the higher the managerial ownership, the higher the firm value. Managerial ownership can support and increase profits and a good return on shares to shareholders, especially for management because of the same goal.

Then, based on previously tested descriptive statistics, the company with managerial ownership whose position is above the average value or 0.092 is dominated by the value of the firms with a value below the average value or 1.413, which total 14 samples. At the same time, managerial ownership that is below the average is dominated by companies with values below the average with 34 samples. This indicates that low managerial ownership results in low firm value even though different things occur with above-average managerial ownership. The descriptive results follow the hypothesis stating the partial influence between managerial ownership and firm value, so the second hypothesis is accepted. This is consistent with a study conducted by (Dewi and Abundanti, 2019); (Widayanti and Yadnya, 2020); managerial ownership influences firm value. It has contradictory results with research conducted by (Apriantini et al., 2022); (Lestari et al., 2022) that there is no relationship between managerial ownership and firm value.

**The Effect of Profitability on Firm Value.** The panel data regression analysis test results show that profitability has a coefficient of determination of -2.773 with a probability level of 0.0358, smaller than α or 0.050 (5 per cent significance level), and the coefficient value of -2.773 is negative. Based on the results of the previous analysis, the hypothesis that partially states that there is a positive and significant influence between profitability (ROA) and firm value is rejected. This study's results align with (Ali and Faroji, 2021), which state that profitability negatively and significantly affects firm value. The rate of return on assets or ROA (return on assets) is in the opposite direction to the company value, meaning that if the ROA value increases, the company value decreases. This is because companies in the consumer non-cyclical sector cannot manage their assets effectively and maximally to increase firm value.

In the descriptive statistical results, profitability with a value above the average or -0.003 is dominated by companies with a value below the average or 1.413 in as many as 32 out of 46 samples; the value of companies above the average fills the rest. This indicates that the sample profitability value has a unidirectional relationship with firm value, so companies must manage their assets optimally to produce high profitability values. The results of this test are not by the research framework that profitability has a significant negative effect on firm value, and the fourth hypothesis is rejected. The results of this study contradict research conducted by (Apriantini et al., 2022), which found that profitability
has a positive and significant effect partially on firm value-supported by (Dewi and Abundanti, 2019), who found that profitability has a unidirectional relationship to firm value growth.

CONCLUSION

This paper investigated the effect of intellectual capital, managerial ownership, and profitability on firm value. According to this study, these factors significantly influence, with a percentage of 28.500 per cent. Intellectual capital management has a good influence on business; companies need to consider utilizing resources in the form of employees and company infrastructure effectively to obtain good company value.

Managerial ownership involves the board commissioners and the management team in a business process. Significant managerial ownership can make it easier for companies to determine clear goals so that they affect firm value. The overall effectiveness of assets in generating profits or profitability through available assets and the power to create profits from invested capital shows that companies need to maximize business processes when facing an uncertain business environment. Then, concerning the low rate of return on assets, although it does not have a direct relationship to the company, they need to pay attention and manage their assets optimally, especially by the non-cyclical consumer sector companies listed in the main listing.

By understanding this relationship, this research can help companies determine priorities that can increase their value, for example, by understanding the human resource and infrastructure needs that support the company's operations. In terms of investors, investors, management, and parties with a relationship are advised to be more considerate and wiser in taking every step of the decision when investing their capital with good company value.

The recommendation from the researcher for further research in the theoretical aspect is for academics and researchers to be able to observe different and related variables, for example, company value as measured by the PBV proxy, institutional ownership, and so on, that can present company value. In addition, the author also suggests involving different research periods and selecting other objects to increase the accuracy and credibility of the research. Some companies with incomplete data and operating at a loss could not be analyzed in this study. In addition, some observational data are also classified as outliers. As a result, the selected research sample must be more representative of all consumer non-cyclical field companies entered on the IDX main list in Indonesia.

REFERENCES


Ginting, M. C., and Sagala, L. (2020). Pengaruh Modal Intelektual Terhadap Nilai Perusahaan...


