The Impact of Corporate Governance Mechanism on Fair Value Measurement in the Indonesian Banking and Financial Industries

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ABSTRACT

Fair value is one of an important measurement since the diffusion of International Financial Reporting Standards around the world. Studies of manager opportunistic behaviors through fair value numbers in developing countries have been overlooked. This study aims to investigate the influence of corporate governance mechanism towards an opportunistic behavior through fair value measurement i.e. fair value inputs level 3. This study applied multiple regression and used samples of banking and financial companies listed in Indonesia Stock Exchange between 2015 and 2019. The corporate governance is proxied by three measurements i.e. managerial ownership, institutional ownership and audit committee educational background. This study finds that managerial ownership and institutional ownership have positive influences on fair value inputs level 3. Meanwhile, the independent commissioners and audit committee educational background have negative influences on fair value inputs level 3. Therefore, this study provides evidence that independent commissioners and audit committee educational background can reduce management opportunistic behaviors which is conducted through fair value measurement.

Keywords:
Audit committee, corporate governance, fair value, institutional ownership, managerial ownership, opportunistic behaviour

1. Introduction

The diffusion of International Financial Reporting Standards (IFRS) has led the issues to fair value to be more prominent. Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions.”
Previous studies indicate fair value implementation is challenging both in advanced (Gebhardt, 2012) and emerging markets (He et al., 2012; Nugraheni et al., 2022). Emerging markets face more challenges given that market transaction does not reflect arm’s length transaction among market participants and limited assets have quoted price in the market (Xiao & Hu, 2017).

Fair value measurement assumes the exchange of assets or liabilities in an orderly transaction between market participants at the measurement date based on current market conditions (IASB, 2018). IFRS 13 explained that the valuation technique in measuring fair value is useful for maximizing observable inputs and minimizing unobservable inputs. Level 1 inputs are quoted prices that can be found in active markets, level 2 inputs are inputs other than quoted prices that can still be observed either directly or indirectly, while level 3 inputs are unobservable inputs and rely on modelling and management discretion.

Since fair value level 3 inputs are based on modelling, companies are required to disclose how they measure fair value. Although disclosure of the fair value method is mandatory, companies still have the option to adopt the level to measure fair value. These conditions raise special concerns regarding the use of level 3 fair value inputs (Zhang et al., 2019).

Standard for fair value measurement in Indonesia is Pernyataan Standar Akuntansi Keuangan/ PSAK or Indonesian Statement of Financial Accounting Standards No. 68 which based on IFRS 13 Fair Value Measurement. It has been effectively implemented since 2013 hence Indonesian public companies must comply with that particular standard when applying fair value measurement. Fair value numbers are generated from direct quoted market, value of other similar assets or calculation by the preparers through modelling. Fair value numbers generated from other than quoted market is subject to management discretion, and they may reflect management vested interests. Banking and financial companies prefer to apply fair value through price modelling (fair value inputs level 3) for their assets including financial instruments especially when market liquidity is less (Botosan, 2011). Fair values of complex securities, asset-backed securities such as mortgage, private equity shares, and debt securities are primarily estimated using pricing model (input level 3). When market liquidity is less, limited assets are traded in the market hence it is challenging to generate direct quoted market price from the market. Less liquidity of market is shown by the existence of some assets which have not been actively traded. They have low trading volume hence some prices are not readily available due to uncertainty of its value. Using inputs level 3 also allows greater flexibility for manager to achieve their objectives in preparing financial reports. This flexibility provides opportunities for managers to manipulate accounting numbers. Managers may choose techniques or estimations which favor their interests.

Studies of fair value accounting have been conducted by some scholars (Šodan, 2015; Yao et al., 2016; Zhang et al., 2019). Šodan (2015) conducts research about the association of fair value and earnings quality. Meanwhile, Yao et al., (2016) investigate the determinants of fair value measurement and Zhang et al. (2019) focus on the association between fair value, corporate governance and social responsibility performance.

To limit manager opportunistic behavior, company must have good governance. There are some mechanisms of good governance such as the ownership composition, the role of independent commissioners and the audit committee competencies to oversight company operations. Therefore, this study aims to investigate the influence of corporate governance mechanism towards fair value measurement in banking and

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1 The three levels of fair value inputs are inputs level 1 (direct quoted market) and inputs level 2 and 3 otherwise
financial companies especially fair value using inputs level 3 representing opportunistic behavior of managers.

Zhang et al. (2019) find that banking companies having stronger corporate governance will have lower fair value measurement. Corporate governance can be used as a mechanism to prevent opportunistic behaviors of which is applying fair value level 3 inputs representing management’s vested interest. Committing in opportunistic behaviors will endanger company performance including banking and financial companies. Banking and financial companies play important roles in contributing the growth of a country’s economy. Thus, banking and financial companies must have reliable financial reports.

Level 3 valuation gives managers the flexibility to manipulate earnings because their value is estimated internally by the management and not provided by the market. Moreover, it is measured using discounted cashflow or price models as a reflection of management’s judgement and assumptions Yao et al. (2016). Thus, banks may opportunistically choose to classify more financial assets at level 3 for the purpose of earnings management (Chong et al., 2012; Yao et al., 2016). Chong et al. (2012) finds banks use level 3 inputs for earnings management and there is positive association between level 3 inputs towards poor performance of banking industries.

Previous study provides evidence a negative association between corporate governance and the use of level 3 inputs, in where companies with higher corporate governance level will have lower level of fair value using level 3 inputs (Zhang et al., 2019). Corporate governance is a combination of policies, laws and instructions that affect the way a company manages and controls its organization (Buallay et al. 2017). Good corporate governance can be implemented through the board of commissioners and directors who carry out their duties and responsibilities, the existence of audit and risk committees who carry out their duties appropriately.

Fair value implementation is challenging in emerging countries such as in China (Xiao et al., 2017). The study conducts survey to on the Chief Financial Officer (CFO), auditors, and financial analysts and finds several challenges, one of which is the difficulty in obtaining fair value information. Difficulty in obtaining fair value information occurs because of certain shares are inactive. This happens on fair values at levels 2 and 3 as they are not available in an active market.

Regarding inactive stocks, Indonesia market has some stocks which are not actively traded driving same challenges in applying fair value measurement (Nugraheni et al., 2022). Moreover, Indonesia market has low liquidity because there are quite a lot of dormant or inactive stocks (Linawati, 2016). The capital market in Indonesia is still experiencing several problems, one of which is the very limited availability of products in the capital market due to the lack of number and diversity of products. This condition differs with other countries having more advanced market, such as US, Singapore or Hongkong. On June 15, 2021 the Indonesia Stock Exchange recorded transactions of 18,194,000,000 shares while on the same date the Hong Kong Stock Exchange (The Stock Exchange of Hong Kong Limited) reported transactions of 261,555,408,371 shares. This considerable difference illustrates that the capital market in Indonesia is still less liquid when compared to another country. Given that Indonesia has less liquid market, Indonesian companies measure their financial assets with levels 2 and 3 indicating that quoted prices for assets and liabilities in active markets are still limited.

This study tests whether the good corporate governance influence the level of fair value inputs level 3 in the banking and financial companies. This study use data from banking and financial industries from 2015 to 2019. Banking industry is an industry which support country economic stability and growth (Zhang et al., 2019), including Indonesia. In addition, the banking company has significant number of financial instruments where the implementation of fair value has substantial effects
on them (Beatty & Liao, 2014; Mauro et al., 2017). Fair value reporting is very important for banking industry because it helps to increase trust, accountability, transparency, and commitment to financial markets and society (Zhang et al., 2019). Fair value also helps improve the efficiency of internal decision-making and the accuracy of revenue forecasts (Xiao et al., 2017).

Despite some favorable features of fair value, Zhang et al. (2019) argue that company using level 3 fair value measurement tend to disguise a poor performance, including in banking industry. Banks with poor performance are more likely to use the discretion available in measuring the fair value of level 3 assets to engage in opportunistic behavior (Yao et al., 2016). Wang & Zhang (2017) state there is an increase in agency conflict which is driven by the measurement of fair value that is less reliable (fair value level 3) due to the manager's opportunistic behavior and estimation errors. Therefore, it can be interpreted that there is opportunistic behavior in the level 3 fair value measurement which is used to disguise poor company performance.

Previous research examines how the corporate governance affects opportunistic behaviors through fair value inputs level 3 and use an existing score for corporate governance (Zhang et al., 2019). As opposed, this study uses governance indicators based on self-assessment and is divided into 4 types of governance mechanisms i.e., managerial ownership, institutional ownership, independent commissioner board size, and audit committee size.

First mechanism is managerial ownership as one of the corporate governance mechanisms in which managers also act as shareholders of the company (Aprianingsih & Yushita, 2016). It drives management to align their interests with other shareholders while monitoring and directing management and this will have a major impact in deterring managers’ opportunistic behavior (Agustiany, 2020; Mwapula, 2016; Sianturi et al., 2017).

Second is institutional ownership defined as the percentage of company shares owned by institutions (Giovani, 2019). Herdjiono & Sari (2017) argue that institutional ownership leads to increase a supervision by institutional investors which can reduce managers' opportunistic behavior.

Third is the independent board of commissioners defined as member of board of commissioners who have no relationship with the management of the company (Rimardhani et al., 2016). Aprianingsih & Yushita (2016) argue that an independent board of commissioners can carry out supervision and provide input to the board of directors more objectively. The independence of the board of commissioners is key in ensuring that managers not to engage in opportunistic behavior (Mwapula, 2016).

Finally, there are various kinds of effective oversight and governance mechanisms by the audit committee, including the number of audit committee meetings, the number or proportion of audit committees with an accounting and/or financial background, and the number or proportion of independent audit committees (Pamudji & Trihartati, 2012). This study uses the proportion of audit committees having accounting and/or finance backgrounds with the total audit committee owned by the company. Audit committee mechanism will reduce the opportunistic behavior by the manager (Huang et al., 2016; Lawrence et al., 2000; Perdana, 2019).

Thus, this study aims to investigate the influence of corporate governance mechanism towards an opportunistic behavior through fair value measurement i.e., fair value inputs level 3. The next section discusses about corporate governance and fair value concepts and hypotheses development. Section three describes how this study designed, while section four demonstrates the research findings and results discussion. The last section summarizes the results findings and suggest theoretical and practical implications.
2. Literature review and hypotheses development

Corporate governance

Corporate governance often emerges as a response to systemic crises or corporate failures and has evolved over the centuries (International Finance Corporation (IFC), 2014). Examples are the collapse of the British South Sea Company in 1720 which then comes up with a system that revolutionized law and business practice in England, the failure of famous companies such as Barings Bank in England, Enron in the United States, and the Parmalat scandal in Italy. Those scandals and failures were responded with the adoption of new governance frameworks such as the Sarbanes-Oxley Act for public company accounting reform and investor protection, other similar corporate governance codes, and the current trend of requiring more stringent oversight on banks and other financial institutions in each country.

Indonesia has also experienced a major financial crisis in 1997-1998 which has social, economic and political impacts. Many experts argue that the crisis was triggered by very poor supervision of the financial sector and weak regulation of the central bank. However, this incident increases understanding and awareness of the importance of corporate governance. These changes are consistent with ongoing progress made on a legal and regulated corporate governance framework.

Corporate governance refers to the way of company to run, regulate, and control its operation and it can affect the success of the company. The relationship between managers, the board of commissioners, employees, and other stakeholders is very influential on the governance system of a company. Corporate governance also provides a structure that can be used to set corporate goals, ways to achieve these goals and monitor company performance (Buallay, 2017; Chorafas, 2006; Herdjiono & Sari, 2017; Huang et al., 2016; ICSA, 2020; World-Bank, 2018; Zhang et al., 2019).

At present, the implementation of corporate governance is very necessary in order to fulfill public trust and helps company to grow successfully hence it can achieve the ultimate goal of maximum profit, company growth, company sustainability, and the welfare of members and the community. Good corporate governance encourages sustainable business growth by facilitating company access to capital and protecting the rights of stockholders and stakeholders (Buallay, 2017; Das, 2014). The corporate governance mechanism may include institutional ownership, managerial ownership, independent board of commissioners, board of directors, and audit committee mechanism (Putri & Suprasto, 2016).

The principles of corporate governance throughout the world are constantly evolving. In 2015, the Organization for Economic Co-operation and Development (OECD) published a final revision to address these developments.

Fair value

Studies show fair value is more prominent when the diffusion of IFRS happens around the world (Nugraheni et al., 2022). In the US, companies are required to disclose the techniques used to measure fair value based on SFAS 157. The publication of SFAS 157 was then followed by the publication of IFRS 13 which led other countries to adopt fair value and even became a reference for countries to develop reporting standards regarding fair value.

Indonesia establishes PSAK 68 which is based on IFRS 13. The definition of fair value in PSAK 68 (2013) is “the price that would be received when selling an asset or the price that would be paid when transferring a liability in an orderly transaction between market participants on the measurement date”. Orderly transactions mean that these transactions occur in general and not due to pressure, for example, such as forced liquidations or forced sales. Meanwhile, the definition of market participants according to PSAK 68 are buyers and sellers in the main market who have certain characteristics.

There are three levels of the fair value hierarchy described in PSAK 68 (2013), i.e., 1) Inputs level 1, quoted prices for an asset or liability that can be
found in an active market and can be accessed by the entity at the measurement date. Quoted prices that can be found in an active market are the most reliable evidence and do not require adjustment 2) Inputs level 2, are inputs that can still be observed either directly or indirectly but in addition to quoted prices which are included in level 1, 3) Inputs level 3, are unobservable inputs for assets or liabilities. These unobservable inputs represent the assumptions market participants use when pricing an asset or liability, including assumptions about risk.

Level 1 fair value assets are also known as mark-to-market because they are traded in an active market whereas level 2 and level 3 assets are illiquid assets and are known as mark-to-model because their value cannot be found in an active market (Nugraheni et al., 2022; Zhang et al., 2019). Those studies argue that the three levels have different levels of objectivity. Level 1 has the highest objective level because it is in an active market while level 2 is less objective because the price is obtained from similar assets or liabilities found in an active market. The level 2 is less objective because the price is obtained from similar assets or liabilities in an active market. Finally, level 3 is considered the least objective because it only relies on market information as input for the estimation of fair value.

Chong et al. (2012) argue that banks that have poor performance tend to use level 3 input and use it as a loophole to manage income. This condition can occur because level 3 is an estimate that includes valuation techniques (discounted cash flow models and income approaches) that only rely on information and assumptions (Mauro et al., 2017).

Xiao et al. (2017)) show the challenges in the application of fair value accounting in China are high difficulty in obtaining fair value information of assets and liabilities, lack of technical knowledge related to fair value and professional judgment skills among accountants and complexity in measuring fair value. Moreover, implementation of fair values is costly and volatized revenue. It worsens by inadequate guidance on fair value implementation, imperfect facilities and support systems, low level of independence and competence of auditors and asset appraisers.

Hypotheses development

Corporate governance is an internal control mechanism that oversees managers in disclosing items fairly and ensures that managers act in the interests of shareholders. Corporate governance has an important role in supervision and acts as a mechanism to ensure effective corporate decision making to safeguard the interests of stakeholders (Mwapula, 2016; Zhang et al., 2019). Corporate governance may reduce opportunistic behavior (Wu et al., 2020), including through fair value level 3 inputs (Ghio et al., 2018; Song et al., 2010). Firms with strong governance are less likely to use level 3 fair value inputs as a loophole to engage in opportunistic behavior such as earnings management and proves that corporate governance scores are significantly negatively related to the percentage of level 3 assets, meaning that banks with strong corporate governance tend to use fewer level 3 fair value inputs (Zhang et al., 2019).

Managerial ownership and fair value input level 3

Managerial ownership is one of the corporate governance mechanisms in which managers also act as shareholders of the company (Aprianingsih & Yushita, 2016; Ulfa & Asyik, 2018). The larger the managerial ownership of the company is, the higher management motivation to further maximize its performance. Managerial ownership leads managements benefit from their decisions and at the same time bear the risk if they make the wrong decision (Hartono & Nugrahanti, 2014).

Managerial ownership will provide assurance that management will align their interests with other shareholders while monitoring and managing a company hence deters managers' opportunistic behavior (Agustiany, 2020; Mwapula, 2016; Sianturi et al., 2017). This study suggests that as managerial ownership increases, corporate performance also increases, and the opportunistic
behavior of manager will monotonically decrease. This aligns with the theory of managerial ownership effects on manager’s incentives. The agency theory supports this argument that managers’ shareholding may align their interest with those of shareholders (Jensen and Meckling, 1976). Regarding this study, managerial ownership will minimize the level 3 fair value input which represents managers' opportunistic behavior. The higher level of managerial ownership will lead to more effective controlling mechanism and enhance the financial report quality. Therefore, the higher the managerial ownership is, the lower the level 3 fair value input.

\( \text{H}_1 \): Corporate governance as measured by managerial ownership has a negative effect on level 3 fair value inputs.

**Institutional ownership and fair value input level 3**

Institutional ownership is the percentage of company shares owned by other institutions (Giovani, 2019). Institutional ownership could be an insurance company, investment company, government, and other institutions that invest in a company and have rights in decision making (Abduh & Rusliati, 2018). Herdjiono & Sari (2017) and Hartono & Nugrahanti (2014) argue that institutional ownership leads to increased supervision by institutional investors which can reduce managers' opportunistic behavior.

Institutional investors are normally large and sophisticated investors who monitor company in enhancing the quality of financial report. They play significant roles in accounting choices and to monitor management. They also participate in strategic decision and have ability to generate and process information to improve governance structure which has been proven could prevent the earnings management (Khurana et al., 2018; Roychowdhury, 2006).

Generally, institutions have a special department for investment so that supervision becomes more stringent, which can then help reduce manager's opportunistic behavior. Therefore, the interests between management and stakeholders can be aligned and can have a positive impact on company performance (Agustiany, 2020; Hartono & Nugrahanti, 2014; Wimelda & Chandra, 2018). Regarding this study, institutional ownership of shares is expected to help minimize the manager's opportunistic behavior that can occur through level 3 fair value inputs. When the number of institutional ownerships is greater, the monitoring process will be tighter, the governance structure will increase and opportunistic behavior will decline. Therefore, the higher the institutional ownership, the lower the use of level 3 fair value input.

\( \text{H}_2 \): Institutional ownership has a negative effect on input fair value level 3.

**Independence of the board of commissioners and fair value input level 3**

Independent commissioners are members of the company's board of commissioners who are independent and have no special relationship with board of directors of a company (Putri & Suprasto, 2016; Rimardhani et al., 2016). (Wimelda & Chandra, 2018) states that the independent board of commissioners is a tool to monitor shareholders and control company management. The ratio of independent commissioners determines the quality of decisions taken by the board (Wu et al., 2020).

Aprianingsih & Yushita (2016) argue that an independent board of commissioners can carry out supervision and provide objective inputs to the board of directors. The independence of the board of commissioners is an important key in ensuring that managers do not engage in opportunistic behaviors (Mwapula, 2016). The existence of an independent board of commissioners is expected to provide stricter and objective supervision of management so as to help the company and stakeholders to avoid opportunistic behavior of managers. Opportunistic behavior can be reflected through fair value input level 3 because its calculation involves management discretion, judgment, and estimation. Manager uses fair value input level 3 to inflate earnings and performance (Goh et al., 2015; Milbradt, 2012). The
greater proportion of independent board of commissioner will provide more people to monitor the company. Therefore, the higher the size of the independent board of commissioners, the lower the level 3 fair value input of the company's financial assets.

H₃: Independent board of commissioners has a negative effect on the fair value input level 3.

**Audit committee mechanism and fair value input level 3**

Aprianingsih & Yushita (2016) explain that the audit committee is responsible for carrying out internal supervision of the company in the process of preparing financial statements, conducting audits, risk management, and implementing corporate governance. The establishment of the audit committee aims to improve oversight of the company's financial statements and ensure that the company's management works in accordance with the interests of shareholders and stakeholders (Lawrence et al., 2000; Perdana, 2019; Verriest et al., 2008).

Herdjiono & Sari (2017) argue that the audit committee can reduce managers' opportunistic behavior through supervision of financial statements, external audits, and supervision of the company's internal control system. The audit committee can carry out internal control that monitors the effectiveness of the company's internal controls and reduce the opportunistic behavior of managers (Wimelda & Chandra, 2018). The higher the number of audit committees owned by the company, the higher the supervision of the company, especially in the company's financial statements Measurement of the audit committee can be done by looking at several characteristics, one of which is the educational background of the audit committee (Pamudji & Trihartati, 2012).

The existence of a competent audit committee can increase investor confidence in the company's financial statements and minimize corporate governance violations (Lawrence et al., 2000). It proves that the existence of a competent audit committee can help to minimize fraud and misstatement of financial statements. Audit committee competences can be indicated by their educational backgrounds. Audit committee having financial and accounting backgrounds have better understanding of company financial performance and reporting, internal control mechanism and implementation of auditing in the company. They will have knowledge and skill to identify whether financial reports and performance are presented in accordance with accounting standards. They also have responsibility that internal and external audits are conducted with applicable audit standards and the findings have been followed up by the management. When the number of competent audit committee increases, there will be more competent people monitor and control the company activities. Therefore, the higher the number of audit committees having financial and accounting background owned by the company, the lower the financial assets classified at fair value level 3.

H₄: Audit committee having financial and/or accounting backgrounds have a negative effect on the level 3 fair value input.

**3. Research method**

**Population and samples**

Population of this study is banking and financial companies listed in Indonesia Stock Exchange (IDX). The sample in this study are banking and financial companies that apply PSAK 68 in measuring the fair value of their financial instruments. The research sample was obtained using purposive sampling method. The following are some of the sample criteria:

2. Banking and financial companies that use the fair value hierarchy, namely the fair value measurement of their financial assets, are guided by PSAK 68.
Table 1. Samples

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Banking and financial companies listed in the IDX from 2015-2019.</td>
<td>86</td>
<td>89</td>
<td>91</td>
<td>96</td>
<td>99</td>
<td>461</td>
</tr>
<tr>
<td>2.</td>
<td>Companies do not apply the fair value hierarchy (level 1, 2 and 3)</td>
<td>(20)</td>
<td>(20)</td>
<td>(21)</td>
<td>(21)</td>
<td>(22)</td>
<td>(104)</td>
</tr>
<tr>
<td></td>
<td>Companies use input level 3</td>
<td>34</td>
<td>32</td>
<td>35</td>
<td>33</td>
<td>35</td>
<td>169</td>
</tr>
</tbody>
</table>

Operational definitions and variable measurement

**Independent variables**

**Managerial ownership**

Managerial ownership is the proportion of the number of company shares owned by managers (Anwar et al., 2013). Managerial ownership is measured by the following formula:

\[ MO = \frac{\text{Management owned shares}}{\text{Total shares outstanding}} \times 100\% \]

Description:
- **MO**: Managerial ownership
- **Management owned stock**: Number of shares owned by the board of directors
- **Total shares outstanding**: Total number of company outstanding shares

**Institutional ownership**

Institutional ownership is the percentage of company shares owned by institutions such as insurance companies, banks, and other institutions that exist outside and within the country (Giovani, 2019).

\[ IO = \frac{\text{Institutional owned shares}}{\text{Total shares outstanding}} \times 100\% \]

Description:
- **IO**: Institutional ownership
- **Institutional owned shares**: Number of shares owned by the institution
- **Total shares outstanding**: Total number of companies outstanding shares

**Board of independent commissioners**

Giovani (2019), states that the independence of the board of commissioners is the proportion of the independent board of commissioners who are members of the company's board of commissioners.

\[ IC = \frac{\text{N. of independent commissioners}}{\text{Total board of commissioners}} \times 100\% \]

Description:
- **IC**: Board of independent commissioners
- **N. of independent commissioners**: Number of independent commissioners
- **Total board of commissioners**: Total company board of commissioners

**Audit committee size**

The size of the audit committee is measured using the proportion of audit committees that have an accounting and/or financial background owned by the company (Sari & Husaini, 2016).

\[ ACS = \frac{\text{Number of audit committees with accounting/finance background}}{\text{Total audit committee}} \times 100\% \]

**Dependent Variable**

The fair value input percentage of level 3 financial assets is the total fair value of company assets classified as level 3 compared to the total fair value (Chong et al., 2012).
\[
\text{FV level 3} = \frac{\text{Fair value financial asset level 3}}{\text{Total fair value of financial assets}} \times 100\%
\]

**Description:**
- FVIP Level 3: Fair value input percentage level 3
- FV financial asset level 3: Total fair value of level 3 financial assets
- Total FV financial asset: Total fair value of the company’s financial assets

Hypothesis testing in this study was carried out using multiple linear regression tests, with the following equation model.

\[
\text{FV_LV3} = \beta_0 + \beta_1 \text{MO} + \beta_2 \text{IO} + \beta_3 \text{IC} + \beta_4 \text{ACS} + \varepsilon
\]

**Description:**
- \(\beta_0\): Constant
- \(\beta_1 - \beta_3\): Independent variable coefficient
- MO: Managerial ownership
- IO: Institutional ownership
- IC: Independent Commissioners
- ACS: Audit committee size

### 4. Results and discussion

#### Descriptive statistics

The data of banking companies that meet the research criteria initially amounted to 169 and decreased to 127 after underwent classical assumption tests. Following is table of descriptive statistics from 127 research sample:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
<th>Deviation Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>127</td>
<td>0.000</td>
<td>0.117</td>
<td>0.0078</td>
<td>0.01782</td>
</tr>
<tr>
<td>IO</td>
<td>127</td>
<td>0.000</td>
<td>0.942</td>
<td>0.7955</td>
<td>0.19571</td>
</tr>
<tr>
<td>IC</td>
<td>127</td>
<td>0.333</td>
<td>1.000</td>
<td>0.5694</td>
<td>0.06335</td>
</tr>
<tr>
<td>ACS</td>
<td>127</td>
<td>0.200</td>
<td>0.410</td>
<td>0.2152</td>
<td>0.08132</td>
</tr>
<tr>
<td>FV_LV3</td>
<td>127</td>
<td>0.001</td>
<td>0.917</td>
<td>0.4874</td>
<td>0.23751</td>
</tr>
</tbody>
</table>

The dependent variable of this study is the fair value input level 3 (FV_LV3). The minimum value of the variable is 0.001 while the maximum value of the variable is 0.917. The average variable FV_LV3 is 0.4874 means that the average value of samples classifying its financial assets at fair value level 3 is 48.74% of total financial assets measured using fair value. The standard deviation of fair value level 3 is 0.38421. Examples of assets measured using fair value input level 3 are securities which are not actively traded, complex securities or derivatives, currency swap, asset-backed securities such as mortgage, private equity shares, and debt securities (PWC, 2022). Interestingly, fair value inputs level 3 is also applicable for held for trading and available for sale securities (Kisseleva et al., 2016). Fair value inputs level 3 is used for financial instruments when they are traded infrequently thus has limited pricing information (Kisseleva et al., 2016; PWC, 2022).

Moreover, when there is lack of observable inputs, banking companies will apply internal modelling and significant assumption regarding the adjustment of credit value and discount rate. The information of fair value levels for company’s financial instruments is provided in the notes of financial statement. It provides information of fair value levels form level 1, 2 and/or 3. Banking companies apply fair value level 3 when there is any lack of observable valuation inputs.

The managerial ownership variable (MO) is obtained from the number of shares owned by the board of directors and the board of commissioners divided by the total number of outstanding shares. The minimum value for the MO variable is 0.000 and the maximum value is 0.117. The average MO variable is 0.0078 which explains that the average managerial ownership in this research data is 0.78% of the company’s total outstanding shares. The
The variable of institutional ownership (IO) is obtained from the number of company shares owned by the institution divided by the total number of outstanding shares. The minimum and maximum values of this variable are 0.000 and 0.942 respectively. The average institutional ownership variable (IO) is 0.7955, which means that the average company shares in this research sample are owned by institutions of 79.55% of the total number of outstanding shares. The value of the standard deviation of the institutional ownership variable is 0.19571.

The variable of the independent board of commissioners (IC) is obtained from the number of independent commissioners of the company divided by the total number of the company's board of commissioners. The minimum value for the variable of the independent board of commissioners is 0.333 while the maximum value is 1.000. The average value of the independence of the board of commissioners in this study is 0.5694, which means that the average sample in this study has the independent board of commissioners of 56.94% of the total company's board of commissioners. The variable of the independent board of commissioners in this study has a standard deviation of 0.06335.

The variable the audit committee size (ACS) is measured by the percentage audit committees having financial and/or accounting backgrounds divided by the total number of company audit committees. The minimum and maximum values for this variable are 0.200 and 0.410 respectively. Meanwhile, the average value is 0.2152 which means that the average sample in this study has an independent audit committee of 21.52% of the total number of company audit committees. The proportion of audit committee having financial and accounting background has a standard deviation of 0.08132.

**Fit model test and coefficient of determination**

The F test has significance value of 0.000 or lower than 0.05 hence this research model is classified as robust and fit. Meanwhile, the adjusted R2 in this study of 0.639. This means that independent variables in the model of this study can explain 63.9% of the dependent variable while the rest is explained by other variables.

**Hypothesis testing**

The following table is showing the result of the hypothesis testing:

<table>
<thead>
<tr>
<th>Variable</th>
<th>P value</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>0.001***</td>
<td>6.349</td>
</tr>
<tr>
<td>IO</td>
<td>0.024**</td>
<td>11.967</td>
</tr>
<tr>
<td>IC</td>
<td>0.044**</td>
<td>-2.741</td>
</tr>
<tr>
<td>ACS</td>
<td>0.038**</td>
<td>-6.579</td>
</tr>
<tr>
<td>R2</td>
<td>0.63</td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at the 0.01 level; **Significant at the 0.05;
It is a 2-tailed test.

**Hypothesis 1 : Managerial ownership and input fair value level 3**

Based on table 3, the managerial ownership variable has p value of 0.001 and t value of 6.349. The p value is significant at the level of 1% but the direction of the coefficient contradicts hypothesis 1 stating that managerial ownership has a significant negative effect on the fair value input of level 3 financial assets. Positive sign of the coefficient shows that the higher managerial ownership, the higher fair value input level 3 is. The positive association can occur because managers who own company shares will have a personal interest in controlling the company i.e. the interest to increase profits by showing good company performance in order to attract more investors.

Interestingly, this result indicates a positive and significant correlation between managerial ownership and the fair value input of level 3 financial assets. This indicates the opposite results as proposed in hypothesis. According to Wimelda & Chandra (2018), this may happen because managers
who act as management as well as shareholders can bias the control function.

This result supports previous study conducted by Agustia (2013) explaining that managers who own company shares tend to think from the investor's point of view so that managers tend to want to make up the company's financial performance with the aim of attracting more and more investors. Utami (2016) also states that the ownership of company shares by managers will increase personal interests in the form of return on shares investment. It can be concluded that high managerial ownership cannot be a good control function but will instead encourage managers to commit fraud by classifying their financial assets at fair value level 3.

The results of this study contradict the findings of Song et al. (2011) and Zhang et al. (2019) where estimation errors and opportunistic behavior through level 3 fair values can be prevented through good corporate governance mechanisms. On the contrary, the results of this study are in line with previous research by Aygun et al. (2014), Agustia (2013), and Haryati et al. (2017) which find that managerial ownership has a significant positive effect on the practice of company opportunistic behavior through earnings management.

Hypothesis 2: Institutional ownership and input fair value level 3

The p value of the institutional ownership variable is 0.024 and t value of 11.967. The p is significant at the level of 5% but the direction of the coefficient contradicts hypothesis 2 stating that institutional ownership has a negative effect on the fair value input of level 3 financial assets. This result contradicts the direction of hypothesis which indicate that there is a negative association between institutional ownership and fair value inputs level 3. This means that the higher institutional ownership, the higher fair value inputs level 3 is.

According to Kirana et al. (2020), this can happen because institutional investors tend to be short-term profit oriented so that they prefer financial statements with high profit levels. This encourages companies to take opportunistic actions with the aim of producing the best possible company financial statements. Institutional investors can push the company's management to take policies that can benefit investors (Agustia, 2013).

It can be concluded that institutional ownership cannot be a good control mechanism but instead encourages company management to classify its financial instruments at fair value level 3. The pressure from institutional investors towards company management to take policies that benefit investors makes management take advantage of loopholes that can be used to disguise the company's poor performance through input of the fair value of level 3 financial instruments.

The results of this study are not in line with the research conducted by Song et al. (2011) and Zhang et al. (2019) which states that a good corporate governance mechanism can reduce the adverse impact of level 3 fair value. The corporate governance mechanism proxied by institutional ownership is not able to minimize the percentage of input fair value of level 3 financial assets which is often used as loopholes to conduct opportunistic behavior. Fair value input level 3 creates opportunities for manager to use discretion for estimating discount rates, credit value and other assumptions because financial instruments are not actively traded, hence there are no market price available. The results of this study support previous research by Perdana (2019) who prove that high institutional ownership increases the practice of managers' opportunistic behavior through earnings management.

Hypothesis 3: Indenpendency of board of commissioners and input fair value level 3

The p value of the independent board of commissioners’ variable is 0.044 and t value of -2.741. This means that the independence of the board of commissioners has a significant negative effect on the fair value inputs of level 3 financial instruments. The negative sign is consistent with the
hypothesis 3 which predict the independence of the board of commissioners has a significant negative effect on the fair value input level 3. The higher the independence of the board of commissioners of a company is, the lower the financial instruments measured at fair value level 3.

This result supports studies conducted by Mwapula (2016) and Wu et al. (2020) who state that the role of the independent board of commissioners is very important in reducing opportunistic behavior and helping to produce quality decisions. It also can be interpreted that if a company has a high independence of the board of commissioners, the supervision of the company's operations will be more stringent. The results of this study are consistent with previous research by Song et al. (2011) and Zhang et al. (2019) who find that improved corporate governance mechanisms can help minimize estimation errors and opportunistic behavior practices through fair value level 3 because financial instruments are not actively traded representing less market liquidity for those instruments.

Hypothesis 3: Audit committee size and input fair value level 3

The p value of the audit committee size variable as measured by the level of educational background is 0.038 and t value of -6.579. This means that the size of the audit committee measured by educational background has a significant negative effect on the fair value input of level 3. This result is consistent with the hypothesis 4 which predict that the size of audit committee having financial and accounting background has a significant negative effect on the fair value input level 3. It can be concluded that the higher the number of audit committees with accounting/finance background, the lower the financial instruments classified at fair value level 3 is. This result supports studies conducted by Lawrence et al. (2000), Sari & Husaini (2016) and Wimelda & Chandra (2018) suggesting that the role of the audit committee is very important in reducing the possibility of fraud committed by the company.

Company having a high proportion of competent audit committees will have objective and accurate supervision of the financial statements. Audit committee members with finance/accounting background will be able to conduct appropriate review on financial statement and ensure the proper implementation of internal control mechanism. Therefore, the opportunity for managers to commit fraud through financial statements, especially fair value level 3 will decrease. This study also supports previous studies conducted by Song et al. (2011) and Zhang et al. (2019) which state that the better the corporate governance mechanism, the lower the estimation error and opportunistic behavior that may occur through level 3 fair value. Inputs level 3 are applied when there are shortages in observable inputs. Management use internal estimation and modelling creating opportunities to boost performance based on management’s interests.

5. Conclusions

This study aims to examine the effect of corporate governance mechanisms proxied by managerial ownership, institutional ownership, independence of the board of commissioners, and the committee audit educational background on the fair value input of level 3 financial assets. Findings of this study are: 1) managerial ownership has a significant positive effect on the fair value input of financial assets level 3; 2) institutional ownership has a significant positive effect on the fair value input of financial assets level 3; 3) the independence of the board of commissioners has a significant negative effect on the fair value input of financial assets level 3; 4) the size of the independent audit committee has a significant negative effect on the fair value input of level 3 financial assets.

This study provides some theoretical implication in some ways. First, this study provides an enrichment to the existing literature on the implementation of fair value in developing countries. Some previous research on fair value, especially fair value level 3 by Chong et al. (2012), Yao et al. (2016) and Zhang et al. (2019) were
conducted in the developed countries such as in the United States. This study suggests conducting more studies of fair value implementation in developing countries. Second, this study is also able to provide additional understanding of the effects of corporate governance on the implementation of fair value, especially fair value level 3 in the Indonesian context. Previous studies by Song et al. (2010) and Zhang et al. (2019) showing the effects of corporate governance and fair value level 3 in developed countries.

This study also has some practical implications. First, banking and financial companies in Indonesia need to pay more attention to the measurement and disclosure of fair value, especially fair value level 3 because the fair value disclosure can theoretically be relevant information to determine the performance and condition of a company. Second, investors in Indonesia can use level 3 fair value as an additional indicator to assess the performance of a company because the disclosure of fair value can theoretically be relevant information to determine the performance and condition of a company.

References


