The Mediating Role of Corporate Social Responsibility Disclosure on Cash Holding: Evidence from Basic Industry and Chemical Companies in Indonesia

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Abstract
Objective – This study aims to examines the role of corporate social responsibility (CSR) disclosure in mediating the influence of financial leverage, profitability, and ownership of institutional on cash holding.

Design/Methodology – The population of this study consists of 203 observations in basic industry and chemical companies listed on the Indonesia Stock Exchange from 2015 to 2020. This study utilizes secondary data obtained from annual report, and the data is subsequently analyzed using path analysis.

Results – According to the findings of this study, financial leverage and profitability have a negative effect on CSR disclosure, whereas institutional ownership has a positive impact. Financial leverage reduces cash holding, but profitability, institutional ownership, and CSR disclosure increase cash holding. CSR disclosure mediates the financial leverage and institutional ownership effects on cash holding. It does not, however, as mediating effect of profitability on cash holding.

Research limitations/implications – Because the researchers only looked at basic industry and chemical companies on the IDX, the results cannot be applied to all companies on the IDX. The findings of this research have implications for the importance of efficiently managing cash holding by paying attention to the factors that influence them, which include financial leverage, profitability, institutional ownership, and CSR disclosure.

Novelty/Originality – CSR disclosure is used in this study to mediate the financial leverage, profitability, and ownership of institutional effects on cash holding. It is analyzed using path analysis, which has never been used in previous studies. In addition, this study used a relatively long period with a larger number of observations.

Keywords: Cash holding, financial leverage, institutional ownership, CSR disclosure, profitability

1. Introduction
This study aims to investigate whether corporate social responsibility (CSR) disclosure mediates the effect of financial leverage, profitability, and ownership of institutional effects on cash holding. Cash holding are cash the company has on hand or that is available for payout to investors or investment in tangible assets (Gill & Shah, 2012). According to Bates, Kahle, & Stulz (2009), cash holding in American corporations grew from 1980 to 2006. Datta & Jia (2012) found that companies in Australia, Canada, France, Germany, the United States, and the United Kingdom also saw an increase in cash holding. In addition, Al-Amarneh (2015) also found that cash holding in Jordan increased during the global financial crisis. The exception occurred in Japan, where the trend in cash holding actually decreased. The increasing amount of
The phenomena of cash holding have also occurred in Indonesia. The phenomenon shows that cash holding percentages vary greatly among basic industry and chemical companies on the Indonesian Stock Exchange (https://www.idx.co.id). Notably, the percentage of cash holding can vary significantly within the same company over different periods (https://www.idx.co.id). Yanti et al. (2023) found that the cash holding of manufacturing companies from 2017 to 2018 continued to decrease. Additionally, Maulana et al. (2022) also found a decrease in cash holding of consumer goods industry from 2017 to 2018.

According to the factual facts shown above, corporations in different countries maintain varying amounts of cash. This is because different corporations have different cash holding practices depending on their goals. Companies manage the usage of cash at the maximum level based on the trade-off theory by weighing the cash holding's marginal benefit against its marginal cost (Maulana et al., 2022, Nnubia & Ofoegbu, 2019, Opler et al., 1999, Ferreira & Vilela, 2004, Afza & Adnan, 2007). Therefore, it is important to be studied the factors that affect cash holding. Different levels of cash holding can be caused by different factors that can affect a company's management policy in determining the level of cash holding (Yanti et al., 2019). The aforementioned phenomena are substantial enough to suggest that there is an intriguing subject to be studied in terms of cash holding for the 2015-2020 period from basic industry and chemical companies on the Indonesia Stock Exchange. As a result, it is required and fascinating to investigate the elements that are strongly suspected of influencing (explaining variations) the company's cash holding determination, either directly or indirectly through other factors.

According to the findings of previous research, financial leverage is a factor that affect cash holding (Ali et al. 2021; Sitorus et al. 2020; Tahir et al. 2020; Saputri & Kuswardono 2019; Arfan et al. 2017; Cheryta et al. 2017; and Jamil et al. 2016), demonstrating that financial leverage had a negative impact on cash holding. However, Kariuki et al. (2015) found that financial leverage had a positive effect on cash holding. Profitability is used in research by Ali et al. (2021), Nnubia & Ofoegbu (2019), Saputri & Kuswardono (2019), Arfan et al. (2017), and Cheryta et al. (2017), showing that profitability has a positive impact on cash holding, while study conducted by Ridha, Wahyuni, & Sari (2019) which demonstrated that profitability has a negative impact on cash holding. Jiang et al. (2021), Ullah, Rehman, Saeed, & Zeb (2018), and Azinfar & Shiraseb (2016) found that ownership of institutional has a positive impact on cash holding, whereas Ridha et al. (2019), Mohd et al. (2015), and Christina & Ekawati (2014) found that ownership of institutional has a negative impact on cash holding. CSR disclosure has been implemented. CSR disclosure has been employed in studies by Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourel (2015), which demonstrate that it has a beneficial influence on cash holding. According to Nurleni, Bandang, and Amiruddin (2017), Soliman, Bahaa, and Din (2012), and Murwaningsari (2010), ownership of institutional has a good impact on CSR.

Furthermore, financial leverage, profitability, and ownership of institutional all have an impact on CSR disclosure. Dewanti & Widyadmono (2018), Putri (2017), and Yanti & Budiasih (2016) discovered that leverage of financial has a positive impact on CSR disclosure, whereas Saleh & Yenti (2022), Asteria & Riauwanto (2022), Krisna & Suhardianto (2016) and Swandari & Sadikin (2016) discovered that leverage of financial has a negative impact on CSR disclosure. Profitability has a positive impact on CSR disclosure, according to research conducted by Mardiati et al. (2023), Putri (2017), Wulandari & Zulhaimi (2017), Swandari & Sadikin (2016), and Yanti & Budiasih (2016) whereas profitability has a negative impact on CSR disclosure, according to the findings of research by Saleh & Yenti (2022), (Anto, 2021), Rosa & Octaviani (2020), Arjanggie

According to the explanation, there is still a research gap between the conflicting outcomes of prior investigations. The phenomenon of cash holding was discovered as a practical gap from basic industry and chemical companies, and the role of CSR disclosure as a mediator has never been studied previously. As a result, the researchers want to see if CSR disclosure functions as a moderator in the relationship between leverage of financial, profitability, institutional ownership, and cash holding from basic industry and chemical companies listed on the Indonesia Stock Exchange.

Previous studies have treated CSR disclosure as a dependent variable to examine the influence of financial leverage, profitability, and institutional ownership on CSR disclosure. However, others have considered it as an independent variable testing its impact on cash holding. Based on the phenomena observed in earlier studies, it can be argued that CSR disclosure is neither an independent variable nor a dependent variable, but rather serves as a mediating variable, mediating the impact of independent variables (financial leverage, profitability, and institutional ownership) on the dependent variable (cash holding) because this variable can be influenced by other variables (independent) and can also influence other variables (dependent). However, previous studies did not examine CSR disclosure as a mediator of the influence of financial leverage, profitability, and institutional ownership on cash holding. To address this gap in prior research, this study treats CSR disclosure as a mediator of the influence of financial leverage, profitability, and institutional ownership on cash holding. This distinction sets this study apart from previous research, and the analysis approach is also different from earlier studies, as previous research still employed unstandardized regression, while this study employs path analysis (standardized regression).

The following areas of this work include the literature review and hypothesis development, research methodology, results and discussion, conclusions, limits, and suggestions.

2. Literature Review, Theoretical Framework, and Hypothesis Development

2.1 Literature Review and Theoretical Framework

This study utilizes several relevant theories in the issues of cash holding comprising of trade-off, pecking order, agency, legitimacy and stakeholder theory. Under trade off theory, the ideal cash level of holding is identified by comparing the marginal benefit to the marginal cost of storing the cash (Maulana et al., 202; Nnubia & Ofoegbu, 2019; Opler et al, 1999; Ferreira & Vilela, 2004; Afza dan Adnan, 2007). Cash holding has several advantages, including limiting the potential for financial troubles and minimizing costs associated with external funding or liquidating assets to support the company's operational needs (Foulkender & Wang, 2006; Fresard, 2010).

Pecking Order theory explains how to evaluate investments by considering how they are funded. Retained earnings can be used by companies to finance investments, followed by debt, and equity. According to (Myers & Majluf, 1984), there is no objective or optimal amount for determining cash holding. Meanwhile under agency theory, Jansen & Meckling (1976) explain that agency theory is based on contractual relationships between members of a company, where principals (shareholders) and agents (management) are the main actors. In order to maximize performance, management must disclose CSR, with a focus on social performance. Thus, the positive response from stakeholders toward management is increasing.

Meanwhile from the perspective of legitimacy theory, the necessity of corporate disclosure tactics, particularly corporate social reporting, is emphasized by legitimacy
theory. One of the social and environmental accounting theories that is most commonly debated and mentioned is this one. The purpose of CSR reporting is to influence how stakeholders and the general public see an organization's legitimacy, as well as give information that encourages corporations to prioritize corporate social responsibility (Tan et al., 2016). This has also been emphasized under stakeholder theory where the focus is not only on profit, which is the goal of the organization, but also on providing advantages to stakeholders (Wulandari & Zulhaimi, 2017).

2.2 Hypothesis Development

2.2.1 Financial Leverage and CSR Disclosure
Financial leverage is a measurement of how much a corporation uses stock and debt to fund its operations. With a high level of financial leverage, companies depend on external borrowing to fund their operations. The company's excessive financial leverage can increase its risk because the high amount of debt requires high-interest payments, reducing the availability of capital to carry out CSR operations (Swandari & Sadikin, 2016). Less CSR-related data is typically disclosed in annual reports by companies that participate in fewer CSR efforts. Stakeholder theory suggests that companies may increase their financial leverage but reduce CSR disclosure to avoid attracting the attention of creditors (Wulandari & Zulhaimi, 2017). According to the findings of Saleh & Yenti (2022), Asteria & Riauwanto (2022), Krisna & Suhardianto (2016) and Swandari & Sadikin (2016), leveraged finance has a detrimental effect on CSR disclosure. The first hypothesis presented based on this explanation is as follows:

H1: Financial leverage has a negative effect on CSR disclosure.

2.2.2 Profitability and CSR Disclosure
Profitability is a company's ability to produce profits in order to boost shareholder value (Kasmir, 2014). Companies with strong profitability tend to limit CSR disclosure since financial statement users are already concerned with the company's ability to produce profits. According to the legitimacy theory, one of the reasons for the relationship between profitability and the CSR disclosure level is that companies with high profits consider it unnecessary to disclose information that could potentially disrupt their ability to generate profits, and vice versa (Donova & Gibson, 2007). According to Saleh & Yenti (2022), Anto, (2021), Rosa & Octaviani (2020), Arjanggie & Zulaikha (2015), and Chaucan & Amit (2014), profitability has a detrimental impact on CSR disclosure. The second hypothesis offered is based on this explanation:

H2: Profitability has a negative effect on CSR disclosure.

2.2.3 Institutional Ownership and CSR Disclosure
Institutional ownership refers to the ownership of a company's shares by groups such as foundations, banks, insurance companies, investment firms, pension funds, Limited Liability Corporations (PT), and other similar entities are referred to as institutional ownership (Nurleni, et al., 2017). Relatively large institutional ownership in a company requires management to CSR disclosure. According to stakeholder theory, the bigger a company's institutional ownership, the greater the requirement for its management to reveal its CSR practices.

Imron (2023), Nugraheni et al. (2022), Nurleni et al. (2017), Soliman, Baha, & Din (2012), and Murwaningsari (2010) discovered a favorable association between ownership of institutional and CSR disclosure. The greater the institutional ownership, the greater the demand on management to disclose its CSR policies, because institutional shareholders examine not only profits but also a company's long-term viability. The third hypothesis offered is based on this explanation:

H3: Institutional ownership has a positive effect on CSR disclosure.
2.2.4 Financial Leverage and Cash Holding

Companies with high financial leverage, according to the trade-off hypothesis, strive to minimize cash costs through external funding. Large debt ratios result in poor cash reserves since corporations must pay loan installments and interest, claim Opler et al., (1999). Financial leverage has a detrimental impact on cash holding, according to research by Ali et al. (2021), Sitorus et al. (2020), Tahir et al. (2020), Saputri & Kuswardono (2019), Arfan et al. (2017), Cheryta et al. (2017), and Jamil et al. (2016). In other words, when financial leverage grows, so does cash holding. Although debt can be used to replace cash as a source of investment, organizations that can easily get debt financing do not need to keep substantial quantities of cash on hand. The fourth hypothesis offered is based on this explanation:

\[ H_4: \text{Financial leverage has a negative effect on cash holding.} \]

2.2.5 Profitability and Cash Holding

A company's ability to create big profits is shown by its high profitability. Companies with stronger financial outcomes, will pay more attention to the degree of liquidity in accordance with the pecking order theory. This is done to assist the company by allowing it to accumulate the created cash flow. As a result, controlling investment is a very profitable corporation with a lot of cash. As a result, it is possible to assert that corporate profitability and cash holding are positively correlated. Several investigations, including Ali et al. (2021), Saputri & Kuswardono (2019), Arfan et al. (2017), and Cheryta et al. (2017) support this idea. This illustrates that profitability affects cash holding favorably. The fifth hypothesis suggested is based on this explanation:

\[ H_5: \text{Profitability has a positive effect on cash holding.} \]

2.2.6 Institutional Ownership and Cash Holding

Ownership of institutional in a corporation can be used to oversee managers' decision-making (Jensen & Meckling, 1976). Furthermore, a company's institutional ownership percentage affects its cash holding. As the percentage of institutional ownership increases, managers tend to increase cash holding to maintain liquidity and reduce the risk of bankruptcy (Rehman & Wang, 2015). This is in accordance with Jiang et al. (2021), Ullah et al. (2018), and Azinfar & Shiraseb (2016) findings that ownership of institutional has a beneficial effect on cash holding. To put it another way, as institutional ownership grows, so does cash holding. The sixth hypothesis given is based on this explanation:

\[ H_6: \text{Institutional ownership has a positive effect on cash holding.} \]

2.2.7 CSR Disclosure and Cash Holding

CSR disclosure refers to the communication of the social responsibility practices and initiatives that a company has implemented (Tan, Benni, & Liani, 2016). Concerns raised by stakeholders concerning the company's influence on environmental, social, governance, and economic issues are addressed through CSR reporting. When making investment decisions, investors regard CSR disclosure as extra-financial information. CSR disclosure provides information that helps monitor managers’ investment decisions and improve cash management. According to Chang et al. (2019) organizations with high CSR disclosure levels maintain sizable cash reserves as a sign of their dedication to stakeholders.

CSR disclosure has a beneficial impact on cash holding, based on research by Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourlet (2015). CSR disclosure is a significant factor in determining the company's cash balance since funding for CSR initiatives can impact financial managers' decisions. The seventh hypothesis offered is based on this explanation:

\[ H_7: \text{CSR disclosure has a positive effect on cash holding.} \]
2.2.8 CSR Disclosure as a Mediator in the Effect of Financial Leverage on Cash Holding

Companies with a high level of financial leverage are more likely to limit CSR disclosure in their annual reports. This is because companies prioritize their obligations to creditors. Companies tend to disclose information needed by creditors to ensure that creditors will get their money back rather than increasing CSR disclosures that creditors consider unnecessary (Dewanti & Widyadmono, 2018). According to the findings of Krisna & Suhardianto (2016) and Swandari & Sadikin (2016), financial leverage has a detrimental effect on CSR disclosure. Furthermore, financial leverage has an impact not only on CSR disclosure but also on cash holding. The level of the company’s cash holding decreases as financial leverage increases. This is so because the definition of financial leverage is the capacity to take on more debt. Companies with high financial leverage, according to the trade-off principle, strive to minimize cash costs through external funding. Financial leverage negatively impacts cash holding, as demonstrated by Ali et al. (2021), Sitorus et al. (2020), Tahir et al. (2020), Saputri & Kuswardono (2019), Arfan et al. (2017), Cheryta et al. (2017), and Jamil et al. (2016).

Determining the amount of cash holding in a corporation is a critical decision. In addition to debt repayment, the corporation needs funding for CSR disclosure. CSR disclosure has a favorable impact on the cash holding of the company, according to a study by Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourlet (2015) found that CSR disclosure has a positive impact on the cash holding of the company. According to this, companies with strong social performance are more likely to have large cash holding. The eighth theory given is based on this explanation:

\[ H_8: \text{CSR disclosure mediates the effect of financial leverage on cash holding} \]

2.2.9 CSR Disclosure as a Mediator in the Effect of Profitability on Cash Holding

Companies with high profitability may reduce CSR disclosure because they prioritize reporting information that showcases their success in generating profits. This is in line with the theory of legitimacy, which holds that high-profitability corporations restrict CSR disclosure to avoid interfering with their ability to generate profits. According to the findings of Saleh & Yenti (2022), Anto, (2021), Rosa & Octaviani (2020), Arjanggie & Zulaikha (2015), Chaucan & Amit (2014), profitability has a negative impact on CSR disclosure. Profitability affects cash holding in addition to CSR disclosure. It depicts how profitability influencing cash holding, showing that the better the profitability, the more cash the company has on hand. This is consistent with the theory of pecking order, which states that organizations with strong financial performance tend to have more liquidity. Several studies have indicated a positive relationship between profitability and cash holding, including Ali et al. (2021), Saputri & Kuswardono (2019), Arfan et al. (2017), and Cheryta et al. (2017).

Companies with a high level of CSR transparency are likely to have larger cash reserves (Scheinkman, 2012). This demonstrates their commitment to stakeholders in a credible manner. CSR disclosure can help investors oversee managers more effectively. This can result in more effective use of cash holding on more effective projects, boosting the cash holding value. CSR disclosure has a beneficial influence on cash holding, according to research by Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourlet (2015). In light of this, it is feasible to draw the conclusion that CSR disclosure can decrease the impact of profitability on cash holding. In other words, profitability has an effect on cash holding, either directly or indirectly via CSR disclosure. The ninth hypothesis suggested is based on this explanation:

\[ H_9: \text{CSR disclosure mediates the effect of profitability on cash holding} \]
2.2.10 CSR Disclosure as a Mediator in the Effect of Institutional Ownership on Cash Holding

Companies with significant institutional ownership are more likely to boost CSR disclosure (Murwaningsari, 2010). Companies with high institutional ownership tend to have better supervision and control over management, thus reducing the likelihood of opportunistic behavior. With the existence of high institutional ownership, it can demand that management disclose CSR. Stakeholder theory also explains that the company’s high institutional ownership results in higher pressure on the management of the company to disclose CSR. Institutional ownership has a favorable influence on CSR disclosure, based on research by Nurleni et al. (2017), Soliman, Baha, & Din (2012), and Murwaningsari (2010).

Institutional ownership has an impact on cash holding in addition to CSR disclosure. The larger a company’s institutional ownership, the more likely its managers are to boost cash reserves for greater liquidity and a lesser danger of bankruptcy. According to Jiang et al. (2021), Ullah et al. (2018), and Azinfar & Shiraseb (2016), institutional ownership has a beneficial effect on cash holding. CSR disclosure has an impact on cash holding as well. The greater the level of CSR disclosure, the greater the cash holding. These findings are consistent with those of Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourlet (2015), who discovered that CSR disclosure has a beneficial influence on cash holding. It is therefore conceivable to draw the conclusion that CSR disclosure can decrease the impact of institutional ownership on cash holding. In other words, institutional ownership has an effect on cash holding, either directly or indirectly via CSR disclosure. The eleventh theory given is based on this explanation:

\( H_{10} \): CSR disclosure mediates the effect of institutional ownership on cash holding.

Based on this description, the schematic model of this research is shown in Figure 1.

3. Research Method

3.1 Research Design

This study adopts the research design proposed by Sekaran & Bougie (2016). The aim of this study is to conduct a hypothesis testing study, specifically focusing on causal relationships. The intervention level of researcher is minimal. This study is done in noncontrived setting. The unit of analysis for this research comprises basic industry and chemical companies listed on the IDX. This study utilizes pooled data from 2015 to 2020.

3.2 Population and Sample

The population of this research is composed of basic industry and chemical companies listed on the IDX between 2015 and 2020, based on the researcher’s specified criteria. For the 2015-2020 observation period, the criteria for companies included in this research are basic industry and chemical companies listed on the IDX that report company financial statements in Rupiah (IDR) and have a percentage of
institutional ownership, yielding a population of 203 observations. Because all units of analysis were studied, this research was a population or census study.

### 3.3 Source and Techniques of Data Collection

The source of data for this research is secondary data, specifically the annual financial reports of companies that are members of basic industry and chemical companies from 2015 to 2020 collected from the website www.idx.co.id. The data used in this investigation is panel data.

### 3.4 Variable Operationalization

This study uses two types of variables, namely endogenous variables which consist of the dependent variable (cash holding) and intervening variable (CSR disclosure), and exogenous variable is the independent variable (financial leverage, profitability, and institutional ownership).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Holding</td>
<td>Cash holding is cash in the company or available for investment in physical assets and distribution to investors (Gill &amp; Shah, 2012)</td>
</tr>
<tr>
<td></td>
<td>Cash holding = [ \frac{\text{Cash and cash equivalents}}{\text{Total assets}} ] (Hengsaputri &amp; Bangun, 2020)</td>
</tr>
<tr>
<td>CSR Disclosure</td>
<td>CSR disclosure refers to the communication of the social responsibility practices and initiatives that a company has implemented (Andreas &amp; Liani, 2015)</td>
</tr>
<tr>
<td></td>
<td>[ CSRI_j = \frac{\sum X_{ij}}{n_j} ] (Imron, 2023)</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>Financial leverage is a measure of how much a company uses equity or debt to finance its assets to get a return that is greater than interest costs (Abdul &amp; Adelabu, 2015)</td>
</tr>
<tr>
<td></td>
<td>[ \text{DAR} = \frac{\text{Total liabilities}}{\text{Total assets}} ] (Alicia et al., 2020)</td>
</tr>
<tr>
<td>Profitability</td>
<td>Profitability is the ability of a company to earn profits (Kasmir, 2014)</td>
</tr>
<tr>
<td></td>
<td>[ \text{ROA} = \frac{\text{Earning After Taxes}}{\text{Total Assets}} ] (Kasmir, 2014)</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>Institutional ownership refers to the shares of a company owned by institutions such as foundations, banks, insurance companies, investment companies, pension funds, Limited Liability Companies (PT), and other similar entities (Nurleni et al., 2017).</td>
</tr>
<tr>
<td></td>
<td>Number of shares owned by the ins [ \frac{\text{Number of shares owned by the ins}}{\text{Total outstanding shares}} ] (Nurleni et al., 2017)</td>
</tr>
</tbody>
</table>

Table 1. Variable Operationalization
3.5 Model of Analysis

In this research, data were analyzed quantitatively using techniques of path analysis. This technique was chosen because, in path analysis, the effect of the independent variable on the dependent variable can be direct and indirect effects. Hypothesis testing was performed in this work utilizing the substructure I and substructure II models.

The substructural equation model I is:

\[ CD = \rho_{CDF} FL_{i,t} + \rho_{CDPR} PR_{i,t} + \rho_{CDIO} IO_{i,t} + \rho_{CD} \varepsilon_{1,i,t} \]  

(1)

The substructural equation model II is:

\[ CH = \rho_{CHFL} FL_{i,t} + \rho_{CHPR} PR_{i,t} + \rho_{CHIO} IO_{i,t} + \rho_{CHCD} CD_{i,t} + \rho_{CH} \varepsilon_{2,i,t} \]  

(2)

The causal step approach devised by Baron & Kenny (1986) was used to test the analysis of mediating variables. By comparing the path coefficient values of the three regression equations, the causal step technique determines if mediation occurs.

Equation I: \[ CH = \rho_{CHFL} FL_{i,t} + \rho_{CHPR} PR_{i,t} + \rho_{CHIO} IO_{i,t} + \rho_{CH} \varepsilon_{1,i,t} \]  

(3)

Equation II: \[ CD = \rho_{CDF} FL_{i,t} + \rho_{CDPR} PR_{i,t} + \rho_{CDIO} IO_{i,t} + \rho_{CD} \varepsilon_{2,i,t} \]  

(4)

Equation III: \[ CH = \rho_{CHFL} FL_{i,t} + \rho_{CHPR} PR_{i,t} + \rho_{CHIO} IO_{i,t} + \rho_{CHCD} CD_{i,t} + \rho_{CH} \varepsilon_{3} \]  

(5)

Requirements that must be met in order to achieve mediation are:

\( \rho_{CHFL}, \rho_{CHPR}, \rho_{CHIO} \neq 0 \) (equation I)
\( \rho_{CDF}, \rho_{CDPR}, \rho_{CDIO} \neq 0 \) (equation II)
\( \rho_{CHCD} \neq 0 \) (equation III)

Mediation occurs when the path coefficient value in equation III is smaller/decreases than the path coefficient value in equation I. To determine whether full mediation or partial mediation is based on the condition that the path coefficient value in equation III is smaller/decreased than equation I, and the value is equal to zero, full mediation occurs, however, if the path coefficient value in equation III is smaller/decreased than in equation I but not equal to zero, then partial mediation occurs.

4. Results and Discussion

4.1 Description of Research Data

This section of the study offers the findings from the descriptive analysis of the data obtained. The maximum, minimum, and average values of the variables evaluated are shown in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial leverage</td>
<td>203</td>
<td>0.10238</td>
<td>0.99873</td>
<td>0.4706725</td>
<td>0.20912667</td>
</tr>
<tr>
<td>Profitability</td>
<td>203</td>
<td>-0.17316</td>
<td>0.33797</td>
<td>0.0391372</td>
<td>0.05762943</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>203</td>
<td>0.01948</td>
<td>0.99711</td>
<td>0.6666788</td>
<td>0.20530270</td>
</tr>
<tr>
<td>CSR Disclosure</td>
<td>203</td>
<td>0.06593</td>
<td>0.51648</td>
<td>0.1848645</td>
<td>0.09584266</td>
</tr>
<tr>
<td>Cash holding</td>
<td>203</td>
<td>0.00064</td>
<td>0.43268</td>
<td>0.0914526</td>
<td>0.09189987</td>
</tr>
</tbody>
</table>

Table 2. Descriptive Statistics

4.2 Hypothesis Testing Results

The results of hypothesis testing were not carried out by a significance test because the research was carried out on the population, and the path coefficient value obtained was the actual path coefficient value of the population (Sugiyono, 2014).
To see how much the independent variables contribute, namely financial leverage, profitability, and institutional ownership on CSR disclosure by looking at the value of the determination coefficient ($R^2$).

To find out the magnitude of the residual coefficient ($\varepsilon_1$) use the formula $\varepsilon_1 = \sqrt{1 - R^2} = \sqrt{1 - 0.019} = 0.990$. As a result, the substructural I equation regression is produced, which is as follows:

$$CD = -0.113FL - 0.082PR + 0.122IO + 0.990\varepsilon_1$$ \hspace{1cm} (6)

The value of the determination coefficient ($R^2$) in Table 4 shows how much the independent factors, namely financial leverage, profitability, institutional ownership, and CSR disclosure, contribute to cash holding.

To find out the magnitude of the residual coefficient ($\varepsilon_1$) can be found by the formula $\varepsilon_1 = \sqrt{1 - R^2} = \sqrt{1 - 0.338} = 0.813$. Thus, the substructure II regression equation is obtained, namely:

$$CH = -0.554FL + 0.075PR + 0.053IO + 0.037CD + 0.813\varepsilon_2$$ \hspace{1cm} (7)

### 4.3 Mediation Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Standardized Coefficients</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Holding (CH)</td>
<td>Financial Leverage</td>
<td>-0.556</td>
<td>0.337</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>0.074</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institutional Ownership</td>
<td>0.056</td>
<td></td>
</tr>
<tr>
<td>CSR Disclosure (CD)</td>
<td>Financial Leverage</td>
<td>-0.113</td>
<td>0.019</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>-0.082</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institutional Ownership</td>
<td>0.122</td>
<td></td>
</tr>
<tr>
<td>Cash Holding (Z)</td>
<td>Financial Leverage</td>
<td>-0.554</td>
<td>0.338</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>0.075</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institutional Ownership</td>
<td>0.053</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSR Disclosure (CD)</td>
<td>0.037</td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 7, the regression equation to test mediation is as follows:

Equation I : $CH = -0.556FL + 0.074PR + 0.056IO + 0.814\varepsilon_1$ \hspace{1cm} (8)
Equation II : CD = -0.113FL – 0.082PR + 0.122IO + 0.990ε2  
(9)
Equation III : CH = -0.554FL+0.075PR+0.053IO+0.037CD+0.813ε3  
(10)

Mediation occurs when the path coefficient value in equation III is smaller/decreases than the path coefficient value in equation I. For financial leverage variable (FL) path coefficient value \( \rho_{CHFL} = -0.554 \) (equation III) < \( \rho_{CHFL} = -0.556 \) (equation I), then there is partial mediation because the path coefficient value in equation III is smaller/decreases than equation I but not equal to zero. Next, for the variable profitability (PR) path coefficient value \( \rho_{CHPR} = 0.075 \) (equation III) > \( \rho_{CHPR} = 0.074 \) (equation I) then mediation does not occur because the path coefficient value in equation III increases from the equation I. Institutional ownership variable (IO) with the path coefficient value \( \rho_{CHIO} = 0.053 \) (equation III) < \( \rho_{CHIO} = 0.056 \) (equation I), then there is partial mediation because the path coefficient value in equation III is smaller/decreases than equation I but not equal to zero.

4.4 Discussion
4.5.1 Financial Leverage Effect on CSR Disclosure
The results of this research reveal that financial leverage has a negative effect on CSR disclosure, based on the findings of the first hypothesis's testing. This research’s findings are congruent with Saleh & Yenti (2022), Asteria & Riauwanto (2022), Krisna & Suhardianto (2016), and Swandari & Sadikin (2016), who found that financial leverage had a negative impact on CSR disclosure. Companies with substantial financial leverage can limit CSR disclosure because they prioritize their commitments to creditors. Company risk can increase with the use of high debt. This is because the higher the quantity of corporate debt, the more interest expenses must be paid, reducing the availability of cash for CSR disclosure. The findings of this research are congruent with the stakeholder theory, which states that companies may increase their financial leverage but reduce CSR disclosure to avoid attracting the attention of creditors.

4.5.2 Profitability Effect on CSR Disclosure
The results of this research reveal that profitability has a negative effect on CSR disclosure, based on the results of testing the second hypothesis. These findings are congruent with those of Saleh & Yenti(2022), (Anto, 2021), Rosa & Octaviani (2020), Arjanggie & Zulaikha (2015) and Chaucan & Amit (2014), who found that profitability had a negative impact on CSR disclosure. According to (Donova & Gibson, 2007), one of the reasons for the relationship between profitability and the CSR disclosure level is such that companies with high profitability may consider it unnecessary to disclose information that could potentially disrupt the perception of their ability to generate profits.

4.5.3 Institutional Ownership Effect on CSR Disclosure
The results of this research reveal that institutional ownership has a favorable effect on CSR disclosure based on the results of testing the third hypothesis. This research's findings are congruent with Imron(2023, Nugraheni et al. (2022, Nurleni et al., (2017), Soliman, Baha, & Din (2012), and Murwaningsari (2010), who found that institutional ownership had a favorable impact on CSR disclosure. These findings suggest that companies with dominant institutional ownership will have greater supervision and control over management in order to prevent opportunistic behavior by managers and improve the quality of investment decisions in corporate social responsibility activities, and that companies with a high level of institutional ownership will tend to make CSR disclosure more broadly. Stakeholder theory explains that each stakeholder determines the company's performance, including social performance. Institutional ownership is considered capable of controlling management performance in decision-making when the proportion of ownership is large.
4.5.4 Financial Leverage Effect on Cash Holding

The results of this research reveal that financial leverage has a negative effect on cash holding, based on the results of testing the fourth hypothesis. According to the findings of Ali et al. (2021), Sitorus et al. (2020), Tahir et al. (2020), Saputri & Kuswardono (2019), Arfan et al. (2017), Cheryta et al. (2017), and Jamil et al. (2016), cash holding is negatively impacted by financial leverage. Companies with high debt ratios have low cash reserves, according to the trade-off theory (Nnubia & Ofoegbu, 2019). Ferreira & Vilela (2004) discovered that the larger the firm’s financial leverage, the easier it is to secure external finance, allowing the company to reduce its cash holding.

4.5.5 Profitability Effect on Cash Holding

The findings of this research demonstrate that profitability has a favorable effect on cash holding based on the findings of evaluating the fifth hypothesis. This research’s findings are congruent with Ali et al. (2021), Nnubia & Ofoegbu (2019), Saputri & Kuswardono (2019), Arfan et al. (2017), and Cheryta et al. (2017) who found that profitability had a beneficial effect on cash holding. A company’s ability to create big profits is shown by its high profitability. According to the theory of pecking order, companies prefer to employ retained earnings as extra capital rather than obtain it through the comparatively expensive issuance of shares.

4.5.6 Institutional Ownership Effect on Cash Holding

According to the results of the research’s testing of the sixth hypothesis, institutional ownership has a favorable effect on cash holding. The findings of this study are consistent with Jiang et al. (2021), Ullah et al. (2018), and Azinfar & Shiraseb (2016) that demonstrate the beneficial impact of institutional ownership on cash holding. Regarding agency theory, agents and principals each want to maximize their prosperity. These differences in interests can bring the potential for agency conflict. One way to reduce agency conflict is monitoring by institutional investors. Institutional ownership will supervise managers when making decisions in determining the cash held level by the company (Azinfar & Shiraseb, 2016).

4.5.7 CSR Disclosure Effect on Cash Holding

The findings of this research show that CSR disclosure has a favorable effect on cash holding, according to the results of testing the seventh hypothesis. The findings of this research are congruent with Jadiyappa et al. (2021), Chang et al. (2019), Foroghi et al. (2018), Lu et al. (2016), Cheung (2016), and Arouri & Pijourlet (2015), which shows that disclosure of CSR has a positive effect on cash holding. According to the findings, businesses that function well on a social level typically have larger financial reserves. The purpose of agency theory is to improve the decision-making ability of both principals and agents in evaluating the environment. The principal party has the desire to obtain as much CSR disclosure as possible (Yip et al., 2011). These findings support the notion that managers can lessen conflicts between the interests of shareholders and other stakeholders by disclosing CSR information.

4.5.8 CSR Disclosure as a Mediator in the Effect of Financial Leverage on Cash Holding

The result shows that CSR disclosure acts as a mediator in the effect of financial leverage on cash holding in the form of partial mediation, in the sense that financial leverage affects cash holding, either directly or indirectly, through CSR disclosure. In other words, financial leverage without CSR disclosure has the potential to directly affect cash holding, but financial leverage with CSR disclosure has the potential to indirectly affect cash holding.
Due to their high-interest costs, businesses with high financial leverage are riskier. Consequently, these companies may reduce their CSR disclosure. Stakeholder theory states that companies with high financial leverage are more likely to limit their CSR disclosure in order to avoid attracting creditors’ attention (Wulandari & Zulhaimi, 2017). The result of this study also indicates that a low level of financial leverage requires high CSR disclosure, and high CSR disclosure requires high cash holding. This aligns with agency theory, which aims to improve the decision-making of principles and agents in evaluating their environment. The principal party desires to obtain as much CSR disclosure as possible (Yip et al., 2011).

4.5.9 CSR Disclosure as a Mediator in the Effect of Profitability on Cash Holding
The result of this study shows that CSR disclosure does not act as a mediator in the effect of profitability on cash holding. In order to maintain the company’s level of liquidity and to avoid increasing CSR disclosure, the company’s cash holding tend to be higher when profitability is strong. This is because the companies may perceive that disclosing non-financial information could potentially affect their positive financial performance.

4.5.10 CSR Disclosure as a Mediator in the Effect of Institutional Ownership on Cash Holding
The finding suggests that CSR disclosure acts as a mediator in the influence of institutional ownership on cash holding in the form of partial mediation, in the sense that institutional ownership affects cash holding, either directly or indirectly, through CSR disclosure. In other words, without CSR disclosure, institutional ownership can directly affect cash holding, and on the other hand, CSR disclosure can mediate the institutional ownership effect on cash holding.

Companies with high institutional ownership will keep an eye on opportunistic management’s actions since they prioritize their interests over those of other stakeholders, especially shareholders or investors. High institutional ownership will prevent management from behaving opportunistically, in order to help managers avoid conflicts of interest, management will strengthen CSR disclosure. Imron (2023), Nugraheni et al. (2022), Nurleni et al., (2017), Soliman, Baha, & Din (2012), and Murwaningsari (2010) found that institutional ownership has a positive effect on CSR disclosure. Companies that disclose their CSR activities extensively will have substantial financial reserves. The higher the CSR disclosure, the higher the cash holding required by the companies to support their corporate social activities.

5. Conclusion
It may be inferred from the findings of the hypothesis testing that profitability and financial leverage have a negative effect on CSR disclosure. Institutional ownership, on the other hand, provides a benefit. Additionally, cash holding are negatively impacted by financial leverage while being positively impacted by profitability, institutional ownership, and CSR disclosure. The results of mediation testing show that CSR disclosure acts as a mediator of the financial leverage and institutional ownership effect on cash holding. However, CSR disclosure cannot partially mediate the profitability effect on cash holding.

This study has several limitations, including researchers only examine basic industry and chemical companies listed on the IDX, so the results cannot be generalized to all companies listed on the IDX. This research's internal performance measures variables are only represented by financial leverage and profitability, while the corporate governance variable is only represented by institutional ownership. However, the study only considered financial leverage, profitability, and institutional ownership as factors influencing CSR disclosure and cash holding.

The study’s findings have academics implications, namely for further research need to consider a broader industrial sector not only in basic industry and chemical companies.
companies. Future research should explore other factors that can impact CSR disclosure and cash holding, such as company size, industry type, opportunities’ growth, and dividend policies because the variables studied in this study can only explain 1.19% of CSR disclosure. From a practical standpoint, the study’s findings highlight the importance of managing cash holding effectively into account the influencing factors contained in this study. In addition, will make it easier for investors to determine the company in which to invest, even though in the financial statements the cash holding companies’ level is high, CSR disclosure at a high level explains CSR to investors that high cash holding is because the company needs large funds to disclose CSR for its sustainability.

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The Mediating Role of Corporate Social Responsibility Disclosure on Cash Holding: Evidence from Basic Industry and Chemical Companies in Indonesia


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The Mediating Role of Corporate Social Responsibility Disclosure on Cash Holding: Evidence from Basic Industry and Chemical Companies in Indonesia

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