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The Effects of Managerial Overconfidence and Corporate Governance on Investment Decisions: An Empirical Study from Indonesia

Zaludin ZALUDIN[1], Buyung SARITA[2], Dedy Takdir SYAIFUDDIN[3], Sujono SUJONO[4]

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Abstract

This research aims to analyze the effects of managerial overconfidence and corporate governance on investment decisions. Besides, it also tries to discover the effect of internal financing mediation between managerial overconfidence and corporate governance on investment decisions. This study employed panel data from 44 manufacturing companies from 2014 to 2019, out of a total of 117, thus the total observations are 264. The hypothesis was verified through structural equation modeling (Smart PLS 2). The study revealed as follows: 1) Managerial overconfidence has a positive and significant effect on internal financing, while corporate governance has a negative and significant effect on internal financing, 2) managerial overconfidence, internal financing, and corporate governance have a positive and significant effect on investment decisions, 3) internal financing partially mediated the effect of managerial overconfidence on investment decisions, However, internal financing does not mediate the effect of corporate governance on investment decisions. The findings in this study will help company managers implement good corporate governance to improve investment efficiency. In addition, managers can reduce the proportion of retained earnings and increase the proportion of dividend payout ratios, and increase the use of external sources of funds in making investments to minimize agency costs and manager's opportunistic behavior.

Keywords: Managerial Overconfidence, Corporate Governance, Internal Financing, Investment Decisions, Indonesia Stock Exchange

JEL Clasification Code: C30, G30, G41

1. Introduction

Investment decision-making is a completely rational process, but some studies show that this is not always the case because investment decisions are made by individuals who have interests to fulfill (Atrill, 2017). Managerial factors, such as manager irrationality, are considered important in influencing the company's investment policy (Malmendier et al., 2011). Investment in good capital projects will bring added value to the company, and it is very rational for managers to pursue as many investment opportunities as possible to maximize the available value (Naeem & Li, 2019). Practically, the managers tend to waste funds, use excess funds in worthless projects, or under-utilize them by holding back investments despite profitable opportunities. Excessive or underutilization of funds can hinder investment efficiency (Jensen, 1986).

Managerial overconfidence is irrational behavior, and company managers tend to make business decisions (Roll, 1986). Managers have information about the company's profitability, while external investors cannot access more comprehensive information about the company's investment decisions. It will give managers the flexibility to follow policies that do not maximize long-term profitability but increase the manager's immediate reputation (Hirshleifer, 1993). Previous research has shown that managerial overconfidence results in overinvestment or underinvestment (Wang et al., 2016).

When the company has ample internal funds, managerial overconfidence will overstate the results of their investment projects, whereas they will limit investment when using external funding sources since they regard external funds as very expensive. (He et al., 2019; Malmendier & Tate, 2005b).

[1]First Author and Corresponding Author. Postgraduate Program, Halu Oleo University, Indonesia [Postal Address: Jl Kosgoro Kendari, Southeast Sulawesi, 93116, Indonesia] Email: zaludin@uho.ac.id
[2]Lecturer, Postgraduate Program, Halu Oleo University, Indonesia. Email: buyungsarita_buyung@yahoo.com
[3]Lecturer, Postgraduate Program, Halu Oleo University, Indonesia. Email: dtakdirsyaifuddin@gmail.com
[4]Lecturer, Postgraduate Program, Halu Oleo University, Indonesia. Email: drsujono111@gmail.com

Companies with overconfident managers will fund their business with internal financing, but this can lead to excessive investment. Kaplan and Zingales (1997) argued that managers' choices of expensive investments indicate a conflict of interest between managers and shareholders. Conflict of interest includes agency theory as established by Jensen and Meckling (1976) stated that the leading cause of conflict of interest between shareholders and managers related to investment is the preference to build power (Jensen, 1986). Managers have short-term goals, managers only care about their careers (Holmström, 1999), and managers are overconfident (Malmendier & Tate, 2005b). The research of He et al. (2019) and Wang et al. (2016) recommended adding corporate governance variables to minimize the opportunistic role of managers so that the investment becomes efficient.

The problem of conflict of interest between managers and shareholders arises when the interests of managers differ from those of shareholders so that the value of the company becomes low (Jensen & Meckling, 1976). Governance mechanisms are designed to address these issues, such as the supervisory role of the board of directors and the board of commissioners. Investors want the managers not to divert their investments to unproductive goals. Thus, it is necessary to have a solid corporate governance mechanism (Naeem & Li, 2019; Shahid & Abbas, 2019). The implementation of corporate governance creates confidence for the company, especially for shareholders. With this trust, the company can obtain financing sources from outside investors, which can be a source of survival and growth for the company itself. Thus, corporate governance practices can ensure the validity of accountability mechanisms and improve the reliability and quality of financial information and capital market efficiency to increase investor confidence.

Manufacturing firms are the most popular investment industry in Indonesia. The contribution of the manufacturing industry sector to economic growth in 2019 was 19 percent, which shows that the manufacturing industry sector is the leading sector that provides the most significant contribution to Gross Domestic Product (GDP) compared to other sectors (BPS-Statistics Indonesia, 2019). Investment in manufacturing companies listed on the Indonesia Stock Exchange in 2015–2018 experienced an average growth of 23.5 percent. On the other hand, the company's profit during 2015–2018 only grew by 1.18 percent. Therefore, the findings of this paper will help managers in Indonesia gain the necessary insights in making efficient investment decisions, using optimal financing sources and minimizing the opportunistic behavior of managers, and minimizing agency costs.

2. Literature Review and Hypothesis Development

Agency theory and information asymmetry have long been used to explain overinvestment and the sensitivity of investment to cash flows. The principal-agent theory argues that, because of the conflict of interest between managers and shareholders, managers make investment decisions in their interests, for example, building large business empires. In general, high external financing costs are more likely to limit managers' investment levels, while free cash flow (FCF) allows managers to over-invest or under-invest (Jensen, 1986). Information asymmetry theory believes that managers will limit external financing to avoid dilution of shares in the interests of shareholders. Under these circumstances, managers will use free cash flow in increasing the company's investment. Therefore, both principal-agent theory and information asymmetry theory assume that managers and investors are rational decision-makers who pursue utility maximization (Myers & Majiuf, 1984).

Managers tend to exhibit "irrational" traits that affect investment decisions and financing efficiency (He et al., 2019). Thus, an improved corporate governance structure involving a more active board of directors is needed to achieve optimal levels of investment. Similarly, according to Malmendier et al. (2011) managerial factors, such as manager irrationality, are also important, especially in inefficient financial markets and companies with poor corporate governance.

2.1. Managerial Overconfidence

Overconfidence was constructed from the social psychology literature, a better than average effect. When individuals judge their relative skills, managers tend to overestimate their relative sharpness to average abilities (Alicke et al., 1995). Research in psychology has found that most people are too confident in their abilities and too optimistic about their future (Weinstein, 1980). This effect extends to economic decision-making (Camerer & Lovallo, 1999). Since individuals expect their behavior to lead to success, they are more likely to attribute outcomes to good with their actions (Miller & Ross, 1975).

Factors that trigger overconfidence, among others: the illusion of control, high commitment to good results, and difficult reference points to compare performance between individuals; these three factors are relevant to the company's investment (Weinstein, 1980; Alicke et al., 1995). A Chief Executive Officer (CEO) who handpicks an investment project tends to believe that he can control the outcome and underestimate the probability of failure (March & Shapira, 1987). CEOs in general also have a high commitment to the company's performance because their personal wealth and the value of their human resources fluctuate with the company's stock price. Heaton (2002) and Malmendier and Tate (2005a) revealed that general distortions in corporate investment can be caused by managers overestimating their return on investment. According to Ackert and Deaves (2010), overconfidence is the tendency of people to overestimate their knowledge, abilities, and accuracy of the information or be overly optimistic about the future and their ability to control it. The literature documents that overconfidence occurs because it is associated with increased performance and competition (Thaler, 2005).

According to Thaler (2005), managers want to maintain free cash flow and invest it in projects that increase managerial benefits. Managerial overconfidence leads to a preference for internal funds. Managers who are optimistic and rely on external finance sometimes reject projects with positive NPV because managers believe that the costs of external finance are too high, therefore, free cash flow can be valuable (Heaton, 2002). Reflection theory argues that managers' irrational behavior contributes to decision-making, particularly financial decisions (Gervais et al., 2007). With overly optimistic managers, free cash flow can help the company.

The behavioral finance literature emphasizes the importance of examining managers' psychological and behavioral aspects to understand variations in financing decisions and capital structure (Malmendier et al., 2011). Companies that have managerial overconfidence invest more and tend not to pay dividends, besides that they value external financing as expensive so managers prefer to use internal financing. Research by Bilicka (2020) and Chen et al. (2016) found that managerial overconfidence has a positive and significant effect on internal financing.

The characteristics of the CEO, especially overconfidence, can affect the company's investment and financing decisions. The assumption underlying financial behavior is that market participants' information structure, and characteristics systematically influence investment decisions (Kahneman & Tversky, 1979). These processes result in irrational actions by managers who are averse to risk and make mistakes in predicting investment opportunities. Prospect theory, according to Kahneman and Tversky (1979) states that people's actual decision-making methods tend not to follow rational calculations. Therefore, overconfident managers will invest more (Camerer & Lovallo, 1999). Thaler (2005) also revealed that optimistic managers want to invest more. The consequences of managerial optimism show that managers overestimate the probability of their company's future performance so that managers will make high investments (Heaton, 2002). Research by He et al. (2019), Yang and Kim (2020), and Nguyen et al. (2020) revealed that managerial overconfidence has a positive and significant effect on investment decisions. Considering these results, this study will construct a hypothesis:

H1: *Managerial overconfidence has a positive and significant effect on internal financing.*

H2: *Managerial overconfidence has a positive and significant effect on investment decisions.*

2.2. Corporate Governance

The modern organizational and corporate theory state that there must be a clear separation between control activities and operational activities in an organization. In this case, there must be a separation between the Board of directors representing the shareholders who carry out the control function of the company's operations, and the Board of management - CEO as the party running the company's operations (Berle, 1932). Subsequent developments, agency theory states that companies that separate the management function from the ownership function will be vulnerable to agency conflict (Jensen & Meckling, 1976). It is due to the separation of roles between shareholders as principals and managers as agents, so managers have significant control rights regarding allocating investor funds (Jensen & Meckling, 1976). The basic assumption in agency theory is that managers will act opportunistically by taking advantage of personal interests before meeting the interests of shareholders.

Corporate governance is concerned with how investors believe that managers will benefit them, believe that managers will not embezzle or invest in unprofitable projects, and how investors control managers (Shleifer & Vishny, 1997). The corporate governance mechanism consists of external and internal controllers. External mechanisms are explained through outsiders, these include institutional shareholders, outside block holdings, and take over activities while internal control mechanisms are directly related to the company's decision-making process such as the board of commissioners and the board of directors (Agrawal & Knoeber, 1996).

According to Brigham and Houston (2019), corporate governance provisions affect the choice of the company's capital structure. Strong corporate governance can reduce agency costs. The existence of the Board of Directors is one of the important elements of the corporate governance mechanism which has a role to oversee the effectiveness and running of the company. Corporate governance plays an important role in reducing company failure (Chancharat et al., 2012). The optimal board size depends on company characteristics, monitoring costs, and organizational complexity (Uchida, 2011).

Zhou et al. (2021) examined the correlation between corporate governance and financial leverage in non-financial firms in China during 2000-2018. Empirical results showed that improving the quality of corporate governance has a strong and negative effect on leverage. Atanassov and Mandell (2018), researching the relationship between corporate governance and dividend policy, found that if companies implement better governance, the profits earned by the company are mainly used as retained earnings to be reinvested rather than paying dividends for short-term benefits. Rodrigues et al. (2020) found that corporate governance has a positive and significant effect on internal financing.

One of the three main activities of corporate management is making corporate investment decisions. Investment decisions play an important role in achieving the company's strategic plans. Due to the involvement of large sums of money, this decision is crucial for all stakeholders. Thus, the assessment of investment decisions is very important for company managers. Theoretically, company managers should protect the rights of shareholders. However, managers often act in their own interests (Jensen & Meckling, 1976). The independent Board of directors and commissioners can monitor managers (Jensen & Meckling, 1976; Fama, 1980). Corporate governance protects the rights of shareholders during the investment decision-making process (Shahid & Abbas, 2019). Good corporate governance practices enhance the monitoring function of board members to control the interests of shareholders adequately. Therefore, corporate managers make decisions effectively. Chen et al. (2016) and Lee (2015) found that corporate governance is significantly related to firm-level investment. Chung et al. (2003) examined the relationship between corporate governance and R&D investment, confirming that R&D investment depends on the composition of the board size. Related to these results, this study will construct a hypothesis:

H3: *Corporate governance has a positive and significant effect on internal financing.*

H4: *Corporate governance has a positive and significant effect on investment decisions.*

2.3. Internal Financing

The importance of internal financing for corporate investment and financing decision-making has been studied extensively (Hall, 2002). Previous research noted a positive relationship between cash flow and firm investment (Hubbard, 1998). There are two explanations for this relationship: first is information asymmetry and agency costs. According to Myers and Majiuf (1984), in imperfect capital markets, information asymmetry increases the cost of capital and is expensive for companies to obtain external finance. Therefore, external financing constraints force firms to reduce their investment worth and invest more in the presence of internally generated free cash flow due to their lower cost of capital (Hubbard, 1998). The explanation of agency costs suggests that management tends to invest in projects that are beneficial from a management perspective but may not be suitable for the company's owner, especially when monitoring of management is weak. Richardson (2006) examined overinvestment in firm-level free cash flow and found that overinvestment was concentrated in firms with the highest levels of free cash flow, this is consistent with the agency cost explanation.

2.3.1. Internal Financing and Investment Decision

Theoretical contributions in the information economy have explained the effect of internally generated funds on investment. Myer (1984) explained that asymmetric information between company insiders and capital markets creates a pecking order for financing options where internally generated funds are preferred over external funds, and debt financing is preferred over external equity. According to the free cash flow theory, internal finance, especially cash flow, is important in explaining the company's investment (Fazzari & Petersen, 1993). Phan and Nguyen (2020) and Chen et al. (2016) investigated whether and how free cash flow affects firm-level investment and found that overinvestment is seen in firms with positive free cash flow. Related to these results, this study will construct a hypothesis:

H5: *Internal financing has a positive and significant effect on investment decisions.*

2.3.2. Managerial Overconfidence and Investment Decisions Mediated by Internal Financing

Heaton (2002) examined managerial optimism and corporate finance and found that according to the agency cost explanation, excess investment is concentrated in companies with the highest free cash flow rates. Malmendier and Tate (2005a) examined CEO overconfidence and corporate investment in the United States and found that overconfident managers overestimate the returns on the investment projects and view external funds as too expensive. Hence, they overinvest when they have ample internal funds but limit investments when they need external financing. He et al. (2019), researching managerial overconfidence, internal financing, and investment efficiency in China, found that internal financing can fund business opportunities and reduce capital shortages but can also cause overinvestment, especially in companies with overconfident managerial skills. In his research, Yang and Kim (2020) found that systemically overconfident managers overinvest with a greater preference for internal funds than debt or equity. Related to these results, this study will construct a hypothesis:

H6: *Managerial overconfidence has a positive and significant effect on investment decisions mediated by internal financing.*

2.3.3. Corporate Governance and Investment Decisions are Mediated by Internal Financing

Good corporate governance mechanisms can link shareholders' and managers' interests to overcome agency problems. It will compensate for the manager's overinvestment. Strong governance can lead to increased investment since differences in governance systems impact investment decisions, resulting in investment efficiency, which determines investment returns (Gugler et al., 2003). Chen et al. (2016) examined free cash flow, overinvestment, and corporate governance and found that corporate governance is significantly related to corporate investment. Related to these results, this study will construct a hypothesis:

H7: *Corporate governance has a significant effect on investment decisions mediated by internal financing.*

3. Research Methods

3.1. Variables and Measurements

In this study, the dependent variable was investment decisions (ID), with measurements: investment scale, as adopted by previous research (He et al., 2019; Huang et al., 2011; Richardson, 2006). The investment scale model is:

$$Inv_t = a_1\, IE_{t\text{-}1} + a2\, Q_{t\text{-}1} + a3\, Cash_{t\text{-}1} + a4\, Age_{t\text{-}1} + a5\, Size_{t\text{-}1} + a6\, Leverage_{t\text{-}1} + a7\, Return_{t\text{-}1}$$

Where IE (investment expenditure) is the total investment expenditure in the current year t, calculated as the sum of fixed assets, construction in progress, intangible assets, and long-term investments, all divided by total assets, $Q_{t\text{-}1}$ is the growth opportunity in the previous year, which is represented by Tobin's Q; $\text{Cash}_{t\text{-}1}$ is the balance of cash flows at the beginning of the year divided by total assets; $\text{Age}_{t\text{-}1}$ is the company's age since its initial public offering (IPO), measured by the natural logarithm of the company's age; $\text{Size}_{t\text{-}1}$ is the size of the company, measured by the natural logarithm of total assets at the beginning of the year; $\text{Leverage}_{t\text{-}1}$ is the financial leverage of the previous year, which is indicated by the debt to equity ratio; $\text{Return}_{t\text{-}1}$ is the stock's rate of return for the year before the investment year. In contrast, the total investment is the total investment expenditure in the current year, calculated as the number of fixed assets, construction in progress, intangible assets, and long-term investment, all divided by total assets.

In this study, the independent variables are (1) managerial overconfidence (MO), with measurements of a) income estimates, as adapted from He et al. (2019) and Huang et al. (2011), b) profile photos of directors, as adapted from Ting et al. (2016) and Schrand and Zechman (2012). The income forecast measurement was calculated in the regression model as income prediction or actual income minus residual, then measured by the natural logarithm of income prediction. Meanwhile, the profile photo of the directors was the size of the photo of the directors on the annual report page. (2) corporate governance (GCG), with measurements: (a) board size adapted from Zhou et al. (2021) and Shahid and Abbas (2019), (b) independent Board adapted from Shahid and Abbas (2019) and Rodrigues et al. (2020), and (c) joint meeting between directors and commissioners. The intervening variable in this study is internal financing (IF), with measurements of: (a) retained earnings, as adapted from Bilicka (2020) and He et al. (2019). The measurement of retained earnings was the total retained earnings in year t divided by total assets in year t.

3.2. Data

This study employed secondary data from the Indonesia Stock Exchange (www.idx.co.id). Sampling was carried out by purposive sampling, with the following criteria: a) manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2019, b) presenting annual reports for 2014–2019 on each company's website or the Indonesia Stock Exchange website, c) have a positive retained earnings during 2014–2019, d) invest annually during 2014–2019. Based on the above criteria, 44 companies were selected from 117 companies. Because the research data used panel data, the research sample amounted to 264 company data.

4. Results

4.1. Descriptive Analysis

Descriptive analysis displayed the average value (mean), maximum value, and minimum value of each indicator used in research variables. Descriptive statistical values can be displayed in Table 1:

Table 1 shows that all indicators obtain a greater mean value than the standard deviation. It indicates that the current mean value shows a good representation of the overall data. The managerial overconfidence (MO) variable proxied by the profit forecast showed a mean value of 10.50. It showed that managers in manufacturing companies in Indonesia predict a profit greater than the actual profit. Likewise, the mean value of the photos of the Board of directors included in the annual report was 0.60, which shows that managers in manufacturing companies in Indonesia have overconfidence. Corporate governance variables were proxied by board size, independence commissioner, and joint meeting. The board size of manufacturing companies in Indonesia is on average 5.52 or greater. There must be at least three directors, as mandated by Indonesia's Financial Services Authority. However, some companies had only two directors. The average of independent commissioners was 40% more than the standard of independent commissioners of at least 30%. Meanwhile, the average number of joint meetings between directors and commissioners was 5.93 per year, although what was required was at least three per year.

Table1: Descriptive Statistics

Indicators	*N*	Minimum	Maximum	Mean	Std.Deviation
Profit Forecast (MO_1)	264	–12.25	17.01	10.50	5.97
Photos of the Directors (MO_2)	264	0.20	1.00	0.60	0.29
Board size (GCG_1)	264	2.00	16.00	5.52	2.67
Independence Commissioner (GCG_2)	264	0.17	0.80	0.40	0.10
Joint Meeting (GCG_3)	264	2.00	14.00	5.93	3.22
Retained Earnings (IF_1)	264	−0.08	0.86	0.36	0.22
Investment Scale (ID_1)	264	15.34	49.51	21.86	5.53

Table 2: Estimated Parameters of Measurement Model

Indicators	Outer Loadings	*T*-statistics	*P*-value
MO_1 ← MO	0.8899	11.561	0.000***
Mo_2 ← MO	0.5388	2.6606	0.008***
GCG_1 ← GCG	0.7119	5.9191	0.000***
GCG_2 ← GCG	0.6201	2.4607	0.015**
GCG_3 ← GCG	0.3864	2.6695	0.008***
Q Square (predictive relevance) = 0.519			

Notes: **p*-value < 0.1; ***p*-value < 0.5; ****p*-value < 0.01. Significant at the 0.05 level.

Table 3: Path Coefficient

Hypothesis	Path Coefficient	*T*-statistics	*P*-value	Conclusion
MO → IF	0.364	4.004	0.000***	Supported
MO → ID	0.172	2.100	0.037**	Supported
GCG → IF	–0.237	2.587	0.010***	Not Supported
GCG → ID	0.576	6.710	0.000***	Supported
MO → IF → ID	0.068	2.194	0.028**	Supported
GCG → IF → ID	–0.045	–1.836	0.066*	Not Supported

Notes: **p*-value < 0.1; ***p*-value < 0.5; ****p*-value < 0.01. Significant at the 0.05 level.

Internal financing accounted for 0.36 percent of total assets on average. It revealed that, on average, the company saves a part of its profits as retained earnings. Negative retained earnings reflected a decreasing trend in the company's profit accumulation over several years. Investment decisions were proxied by an average investment scale of 21.86, illustrating that the average expected investment or investment expectation was 21.86 percent. It illustrates that companies in Indonesia showed good investment opportunities.

4.2. Structural Model Analysis

Table 2 shows that the loading factor value was greater than 0.5 or the *p*-value was significant at the 1% level, so all indicators were considered strong enough to explain the latent construct. The *Q*-Square value of 0.519 showed that the contribution of managerial overconfidence and corporate governance variables to investment decisions mediated by internal financing was 51.91 percent.

4.3. Path Coefficient

The path coefficient determines the magnitude of the influence of the independent variable on the dependent variable and determines its significance by comparing the *t*-statistic value with the *t*-table value or comparing the *p*-value with a significance level of 1% or 5%. The path coefficient values and *p*-values can be presented in the following table:

Table 3 showed the effect of managerial overconfidence on internal financing with a path coefficient of 0.364

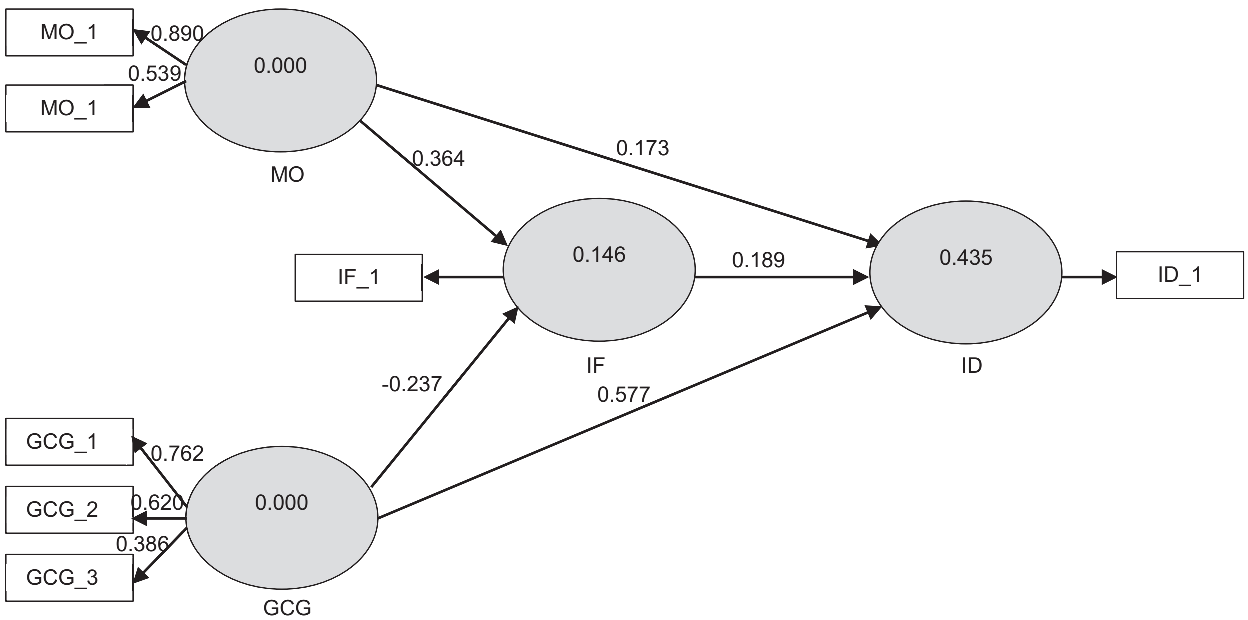

Figure 1: The Result of the Full Model

and a *p*-value of 0.000 or positive and significant effect. The effect of managerial overconfidence on investment decisions had a path coefficient of 0.172 and a *p*-value of 0.037 or positive and significant effect. The effect of corporate governance on internal financing had a path coefficient of –0.237 and a *p*-value of 0.010 or negative and significant effect. The influence of corporate governance on investment decisions had a path coefficient of 0.576 and a *p*-value of 0.000 or positive and significant effect. The effect of internal financing on investment decisions had a path coefficient of 0.188 and a *p*-value of 0.010 or positive and significant effect. The indirect effect of managerial overconfidence on investment decisions mediated by internal financing showed a *p*-value of 0.047 or significant. In contrast, the indirect effect of corporate governance on investment decisions mediated by internal financing showed a *p*-value of 0.066 or not significant. Visually the research results can be presented through the following chart (Figure 1):

5. Discussion

Based on the development of hypotheses, seven research hypotheses were formulated: five hypotheses analyzing the direct effect and two hypotheses analyzing the indirect effect (mediation). The analysis results showed five supported hypotheses because the path coefficient was positive and statistically significant. At the same time, the two hypotheses were not supported because the path coefficient was statistically negative.

The study results: first, managerial overconfidence had a positive and significant effect on internal financing. This shows that overconfident managers would always set aside the profits earned as retained earnings to increase their equity rather than being distributed to owners as dividends. The results of this study support the research of He et al. (2019) and Deshmukh et al. (2013) that overconfident managers tend not to pay dividends and withhold earnings as retained earnings for corporate financing. Managers who were too confident preferred retained earnings in the company's capital structure because managers had greater control over retained earnings. The results of this study support the attribution theory proposed by Heider (1958) that overconfident managers prefer to hold earnings as retained earnings to be used in company financing.

Second, managerial overconfidence had a positive and significant effect on investment decisions. It showed that overconfident managers perceive that they have good knowledge, have more accurate predictions, and make higher investments. The results of this study supported Longjie and Anfeng (2017) who stated that managerial circles believe that their knowledge is more accurate than facts or that the weight of their information is greater than the weight of facts. Likewise, Yang and Kim (2020) stated that overconfident managers feel they have control over the company and desire to expand power in the company. Likewise, research by Nguyen et al. (2020) showed that companies with overconfident managers have more investment spending.

Third, corporate governance had a negative and significant effect on internal financing. It revealed that the board of directors and the board of commissioners' supervisory functions were not expected to decrease information asymmetry between managers and principals since the use of internal funds would result in an imbalance of information held by management and shareholders. To minimize this situation, the supervisory function needs external financing for corporate financing because external financing would reduce the asymmetry of information between managers and principals. The results of this study supported the research of Musa et al. (2015) and Francis et al. (2013) that better corporate governance can reduce the company's dependence on internally generated cash flows. Similarly, research by Nazar (2021) showed that board size has a positive and significant effect on the dividend payout ratio. A large number of the board of directors can balance the power and authority of the CEO to act in the company's interests.

Fourth, corporate governance had a positive and significant effect on investment decisions. It proved that the higher the composition of the board of directors and the board of commissioners, the more organs the company had to monitor over-investment and under-investment, thereby increasing the efficiency of the company's investment. The findings also revealed that effective corporate governance can attract investors, facilitating the company to raise its investment. Corporate governance, as a proxy for the size of the Board of commissioners, could affect the level of company investment. The result is in line with the opinion of Shahid and Abbas (2019) who stated that the level of investment was higher in companies with good corporate governance practices.

Fifth, internal financing has a positive and significant effect on investment decisions. It proved that the company prefers internal funding sources when it comes to investing because internal financing is considered cheap while external funds are considered expensive. The results of this study supported the research of Phan and Nguyen (2020), who showed that internal financing from cash flow had a positive and significant effect on company investment because cash flow was the main measure of a company's financial strength. Internal funds are the most significant source of financing, especially in countries where external funds are more expensive. The results of this study supported Yeo (2018) who showed that free cash flow is a determinant of investment and dividends. Greater free cash flow leads firms to increase investment and reduce dividends. The use of debt alleviates overinvestment

Sixth, managerial overconfidence had a positive and significant effect on investment decisions mediated by internal financing. Since retained earnings will be used for corporate investments, managerial overconfidence emphasizes withholding earnings as retained earnings rather than distributing profits to shareholders as dividends. The study results supported the research of He et al. (2019) and Malmendier et al. (2011) who stated that overconfident managers are more likely to affect the efficiency of investment projects with internal financing because they have greater control over internal funds.

Seventh, corporate governance had a negative and significant effect on investment decisions mediated by internal financing. The results proved that the company's supervisory organs are proxied by the size of the board of commissioners, and independent commissioners want the company to make investments that can improve the company's performance. There needs to be a limit on the use of internal funds in making investments because investments that only rely on internal funds will cause information asymmetry and high agency costs (due to conflicts of interest between stakeholders and managers). Thus, corporate governance plays an essential role in monitoring and creating a balance between shareholders and management so as to reduce agency problems. The results of this study supported the opinion of Jensen and Meckling (1976) who stated that debt financing strategies are the key to good corporate governance practices because they can lessen agency problems by reducing free cash flow and bankruptcy risk. This study also supported the research of Javeed et al. (2014) who stated that the ultimate goal of corporate governance is to limit asymmetric information and make the company stay in business for a long time.

6. Conclusion

The results discover a positive and significant effect of managerial, corporate governance, and internal financing on investment decisions. Managerial overconfidence also has a positive and significant effect on internal financing. Partial internal financial mediation between managerial overconfidence and investment decisions shows a positive and significant effect. Corporate governance has a negative and significant effect on internal financing. However, internal financing does not mediate the effect of corporate governance on investment decisions. The results of this study can have implications for companies that there needs to be a limit on the use of internal funds in making investments because investments that only rely on internal funds will cause information asymmetry and high agency costs. Companies with a debt-to-equity ratio of less than four need to prioritize the use of debt in investment activity. Companies that experience share price growth will prioritize the issuance of shares in investment activity funds. This aims to minimize underinvestment and overinvestment as well as reduce information asymmetry and agency costs.

Limitations: This study examines only internal factors that influence investment decisions. According to experts' opinions, investment decisions are influenced by internal company factors and external factors or macroeconomic factors such as economic growth, inflation, and interest rates. Therefore, it is expected that further researchers will add macroeconomic factor variables so that the research contribution will be more significant.

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