

Global Perspectives on Financial Policy Optimization: Addressing Overinvestment and its Impact on Corporate Profitability (Study on Indonesia Stock Exchange)

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Abstract. *The primary objective of this research is to investigate the impact of overinvestment on corporate performance. It also seeks to analyze the effectiveness of debt policy, dividend policy, and the combined use of debt and dividend policy in alleviating the adverse effects of overinvestment on corporate performance. The study utilizes data from a sample of 53 non-financial companies that carried debt and consistently distributed dividends from 2010 to 2022. Overinvestment is assessed through two methods: the residual value derived from the new investment equation and the Hodrick-Prescott (HP) filter. The data is then transformed into panel data, and various models such as fixed effect, random effect, and common effect are applied to identify the most suitable model. The findings indicate a negative correlation between overinvestment and corporate performance. Debt policy emerges as a mitigating factor, addressing agency conflicts and reducing the adverse impact of overinvestment on company performance. Similarly, dividend policy proves effective in mitigating the negative effects of overinvestment by constraining excess cash. The combination of debt and dividend policies is identified as a comprehensive strategy to mitigate overinvestment, as it aids in curbing excessive free cash flow. However, it is noted that this combination also lowers financing funds to their minimum level, potentially leading to a shortage of funds for future profitable projects. Consequently, careful calculations are emphasized to ensure companies strike a balance, avoiding neglect of profitable investments in the future.*

Keywords: *Company Performance, Overinvestment, Debt Policy, Dividend Policy*

Introduction

Debt, dividend, and investment policies are three important financial decisions in companies (Trong and Nguyen, 2020). According to Miller and Modigliani, (1958) debt policy and dividend policy are not related to investment policy and firm performance in a perfect capital market, assuming no taxes, all kinds of costs and asymmetry information. Trong and Nguyen (2020) imperfect capital market, show the interdependence between debt policy, dividend policy and investment in corporate decision making in increasing profitability.

The profitability of company depends on investment strategy of company in a context full of uncertainty (Kannadhasan, 2011). Managers must allocate capital resources efficiently to achieve optimal levels of investment. Inefficient investment decisions will lead to overinvestment problems that make the company's operations less effective (Trong and Nguyen, 2020). Overinvestment occurs because of differences in interests between managers and investors, as well as excess cash (Bhuiyan and Hooks, 2019). According to Brigham and Ehrhardt (2015: 8) managers enlarge the assets they manage to accumulate personal profits,

while investors focus more on maximizing profits to increase the value of the company in the future.

Limiting the bad behavior of managers, investors incur large costs to monitor the directors and management in aligning the interests of both parties. Ineffective investment decisions and expensive monitoring costs worsen company performance (Jensen, 1986). Overinvestment is an inefficient investment made by managers to gain profits by investing in unprofitable projects, requiring large costs to reduce the overinvestment problem. Based on the agency theory point of view, the use of debt and dividend payments requires managers to make efficient investments to increase profitability and fulfill commitments to debtholders and investors (Wei et al, 2018). Jiang et al. (2019) the use of investment policies, debt policies, and dividends shares the burden of supervision with various parties in the capital market thereby reducing the company's monitoring costs.

The agency theory proposed by Jensen and Meckling (1976) is the gap in the relationship between the principal and the agent due to the delegation of authority by the principal to carry out company activities or activities, including the authority to make decisions. The cause of the emergence of conflict of interest is because there are differences in views between the principal and the agent, the principal wants to maximize wealth in the company while the agent wants to increase the company's profitability. This difference will make managers as agents to overinvest to get their own benefits. The company's activities in taking steps to minimize agency conflicts through a mechanism for monitoring the interests of both parties can cause costs called agency costs. According to Jensen and Meckling (1976) there are three ganenan costs, namely bonding costs, residual costs, and monitoring costs.

Overinvestment is the abuse of decision-making power by investing in unprofitable or high-risk projects carried out by company management and can damage the interests of shareholders and creditors (Jensen and Meckling, 1976). Overinvestment is caused by conflicts between managers and shareholders, who invest in risky projects (risk shift or asset substitution), caused by conflicts between shareholders and debt holders; (La Rocca et al., 2007). Overinvestment refers to the type of inefficient investment behavior of the company which means that the company receives several investment opportunities that may be suboptimal for the company's performance, especially projects whose NPV (net present value) is less than zero thereby reducing the efficiency of capital allocation (Trong and Nguyeng, 2020).

According to Brigham and Ehrhardte, (2015:98) Profitability is the result of a number of policies and decisions, the profitability ratio shows the combined effect of liquidity, asset management and debt on operating results. The profitability ratio also provides a measure of the effectiveness of a company's management as indicated by the profit generated from sales and investment income. According to Trong and Nguyeng (2020) company performance is the

company's ability to use its assets to generate profitability; in Trong and Nguyeng's research the proxy for company performance is the profitability ratio.

Higher levels of debt can affect manager behavior in two opposing ways. First, when the times are good, managers may waste cash flow on additional income and unnecessary expenses called agency costs. Both threats of bankruptcy reduce wasted spending, which increases FCF. The bad effect is that a manager may become afraid and reject a project that has a positive NPV if it is risky (Brigham and Ehrhardte, 2015). It can be concluded that debt can reduce the effect of agency problems and affect company performance. According to Brigham and Ehrhardte (2015: 528) dividend policy is a trade-off for the company; whether the company will distribute profits to shareholders or will hold these profits as retained earnings for future investment projects. Dividend payments are used as a tool to reduce agency problems because they distribute cash so that the company does not have too much cash.

There are different results obtained by Trong and Nguyen's (2020) research finding that overinvestment has a negative effect on company performance in Vietnam and Tumba and Murtini's (2021) research found that overinvestment has a positive effect on company performance in Indonesia. This is the basis for the author to conduct research on overinvestment on the company's performance. The problem of overinvestment can affect the company's performance in the future, so the manager or company owner must be able to overcome the overinvestment problem that exists in the company. This research is expected to be able to provide recommendations for companies whether debt and dividend policies can mitigate the negative effect of overinvestment on company performance.

This study focuses on examining the effect of overinvestment on company performance, and looking at the effect of debt and dividend policies in mitigating the negative effect of overinvestment on company performance. The main theory used in this research is agency theory. The sample of this research is non-financial companies for the period 2010 - 2022 which are listed on the Indonesia Stock Exchange.

Research Methods

This research data uses secondary data in the form of financial statements of non-financial companies listed on the Indonesia Stock Exchange (IDX) for the period 2010 - 2022. The data used in this study are time series data and cross section (panel data). The sample selection used in this study used purposive sampling method. According to Copper and Schinder, (2014:359) purposive sampling is a sampling technique with certain considerations. Purposive sampling criteria in this study are as follows. 1) Non-financial companies listed on the Indonesia Stock Exchange. 2) Have debt from 2010-2022 period. 3) Consistently distribute dividends from 2010 - 2022.

Research Freamwork

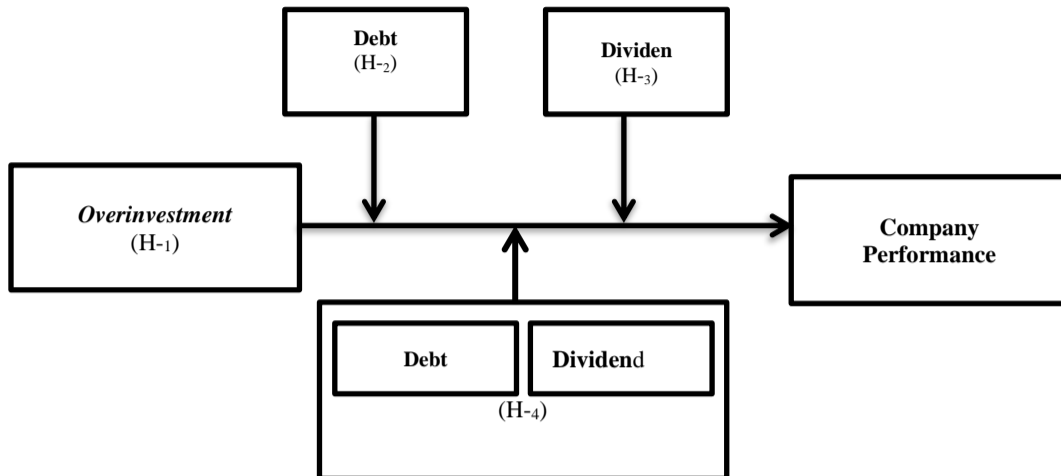


Figure 1. Conceptual Framework

The hypothesis in this study is:

Overinvestment and Company Performance

Conflicts of interest occur because of differences in rights between shareholders and management (Jensen and Meckling, 1976). Company management has a comprehensive understanding of the company's internal operations so managers make decisions to benefit themselves with higher salaries, promotions, and other perks under their control. This is the driving force behind management to carry out overinvestment. If shareholders fail to detect their behavior through monitoring business activities, the problem may worsen (Myers and Majluf, 1984). As a result, overinvestment will result in investment in projects with negative NPV values and indirectly damage company value (Bhuiyan and Hooks, 2019).

Several previous empirical studies show a negative relationship between overinvestment and profitability. Trong and Nguyen (2020) found that overinvestment was negatively related to the performance of non-financial companies in Vietnam in the 2008 - 2018 period, which was proxied by the profitability ratio. Shima (2010) found a negative effect of overinvestment on company performance in Singapore listed companies in the period 2005 - 2011, Farooq et al., (2014) categorized investment into three different levels of overinvestment, optimal investment and underinvestment for companies listed in Singapore from 2005 - 2011. Guariglia and Yang, (2016) found that suboptimal investment due to agency problems would worsen company performance. Thus, the first hypothesis in this research is as follows.

H1: Overinvestment has a negative effect on company performance

Debt Policy, Overinvestment, and Company Performance

Grossman and Hart (1982) argue that the use of corporate debt can result in financial

difficulties and bankruptcy. On the other hand, strict debt agreements with creditors create pressure on managers to manage the company well. If a company continues to place more investment in bad projects, managers can put themselves at risk of losing benefits and jobs (Brigham and Ehrhardt, 2015;622). Research conducted by Trong and Nguyen (2020) found that debt can weaken or reduce the negative influence of overinvestment on company performance. The existence of debt will make managers manage the company carefully because by investing in bad projects the impact will make the company experience financial difficulties and even bankruptcy, which will make managers lose their jobs. Good company management will improve company performance. Thus, the second hypothesis in this research is as follows.

H2: Debt policy can moderation the negative impact of overinvestment on company performance.

Dividend Policy, Overinvestment, and Company Performance

Dividend policy can help withstand the bad effects of overinvestment with lower free cash flow in the company, and can be monitored better by outside parties (Alli et al., 1993). Research by Abdeljawad et al (2022) found that dividend policy can reduce the negative influence between overinvestment and company performance. Lang and Litzenberger (1989) found that reducing overinvestment can increase firm value by increasing dividend payments. Thus, the third hypothesis in this research is as follows.

H3: Dividend policy can moderation the negative impact of overinvestment on company performance.

Debt Policy, Dividend Policy, Overinvestment, and Company Performance

Excessive free cash flow creates opportunities for managers to gain personal profits by using discretionary funds to increase the resources under control and improve their position by making more investments (Richardson, 2006; Shi, 2019;). Reducing free cash flow could be a solution to reduce the effects of managers' takeover behavior (Jensen, 1986; Ali et al., 1993). In this situation debt and dividend policies can help withstand the bad effects of overinvestment with lower free cash flow in the company can be better monitored by outside parties (Alli et al., 1993; Cho et al., 2021) The role of monitoring can limit excess flows free cash thereby reducing the impact of overinvestment (Richardson, 2006). Apart from that, it was also found that reducing overinvestment can increase company value by increasing dividend payments. Thus, the fourth hypothesis in this research is as follows.

H4: Debt and dividend policies can moderation the negative impact overinvestment on company performance.

Variable Measurement

Overinvestment measurement

The authors estimate the overinvestment variable using the demand residual with the following equation:

$$Invesment_{i,t}^{New} = \alpha + \beta_1 Debt_{i,t-1} + \beta_2 Risk_{i,t-1} + \beta_3 Size_{i,t-1} + \beta_4 Growth_{i,t-1} + \beta_5 Asset\ turnover_{i,t-1} + \beta_6 Tobins\ Q_{i,t-1} + \beta_7 Cash\ Flow_{i,t-1} + \varepsilon_{i,t} \dots \dots \dots (1)$$

Residual regression shows the extent to which the company’s actual new investment deviates from the normal investment. When the residual value is greater than zero or positive value, this indicates that the company is experiencing an overinvestment problem. When the residual value of the investment is less than zero or negative, it indicates that the company is not experiencing overinvestment.

Hodrick and Prescott Filter (HP Filter)

This research utilizes HP Filter to draw the company’s investment trend line. It further subtracts the true investment value from the filter’s investment trend line. A positive difference means that the real investment value lies above the trend line. If the lines are above the trend, the company is categorized as a sign of overinvestment because the current level of investment is higher than long-term investment.

Table. 1 Variable measurement

Variable	Proxy	Formula	Reference
Dependent Company performance	ROA	$\frac{Net\ Income}{Total\ Aset}$	(Brigham and Ehrhardt, 2015), (Erkan dan Nguyen, 2021)
	Basic Earning Power (BEP)	$\frac{EBIT}{Total\ Asset}$	(Trong and Nguyen, 2020) and (Brigham and Ehrhardt,2015)
	Net Profit Margin (NPM)	$\frac{EAT}{Revenue}$	(Brigham and Ehrhardt,2015)
Independent Overinvestment	Residual of Investment equation and HP filter	If the residual value of the investment equation is above 0 or positive, the company is overinvested and if it is below 0, the company is not overinvested	Biddle dkk (2009), Trong and Nguyen (2020) Richardson (2006) (Erkan and Nguyen (2021) and Jiang dkk (2019)

Moderation	Debt	Debt	$\frac{\text{Total Debt}}{\text{Total Asset}}$	(Erkan and Nguyen, 2021), (Weidkk, 2018)
	Dividend	Dividend	$\frac{\text{Dividends distributed}}{\text{Net profit}}$	Erkan and Nguyen, (2021)

Source: Data processed based on literature review, 2023

Empirical Model

The equation to answer the proposed hypothesis is as follows.

$$\text{Performance}_{i,t} = \beta + \beta_1 \text{Overinvestment}_{i,t} + e_{it} \dots\dots\dots(2)$$

$$\text{Performance}_{i,t} = \beta + \beta_1 \text{Overinvestment}_{i,t} + \beta_2 \text{Debt}_{i,t} + \beta_3 \text{Dividend}_{i,t} + \beta_4 \text{Debt} \times \text{Overinvestment}_{i,t} + \mu_{i,t} \dots\dots\dots(3)$$

$$\text{Performance}_{i,t} = \beta + \beta_1 \text{Overinvestment}_{i,t} + \beta_2 \text{Debt}_{i,t} + \beta_3 \text{Dividend}_{i,t} + \beta_4 \text{Dividend} \times \text{Overinvestment}_{i,t} + \mu_{i,t} \dots\dots\dots(4)$$

To test the estimation of the appropriate model, this study uses the Chow test, Hausman test and LM test whether to use the fixed effect model, random effect model, or the common effect model. After getting the best model, then look at the value of the t-statistic test based on the p-value or a certain level of significance, to see the effect of the independent variable on the dependent variable partially.

Results and Discussion

Table 2 Comparison of the performance of Overinvestment and non-overinvestment companies (t-test)

Company Performance	Equal variances assumed (Sig. 2-tailed)
Return on Asset (ROA)	0,002
Basic Earning Power (BEP)	0,000
Net Profit Margin (NPM)	0,000

Source: Data processed, 2023

Table 2 shows that the performance of companies that overinvest and companies do not overinvest has a significant difference, this can be seen from the t-test based on the assumed equal variances value (Sig. 2-tailed) below 0.05. ROA has an assumed equal variance value (Sig. 2-tailed) < 0.05, which is 0.002, while BEP and NPM each have a value of 0.000. So that it can be said that the company's performance is not excessive and there is no excess investment which is found to be significantly different after the independent sample t-test is carried out. The performance of overinvestment companies is lower than companies that do not overinvest. Overinvestment is an investment decision that is not optimally made by company managers for personal interests, without considering the NPV of the selected project. The selected project may have an NPV below 0 which will cause a decrease in company performance due to investment in

unprofitable projects.

Equations to answer hypotheses 1,2,3 and 4

Table 3. Regression results using the Fix effect Model

	Company Performance		
	ROA	BEP	NPM
C	0,9447*** (4,1708)	1,7756*** (7,8902)	-2,1355*** (-5,7929)
Overinvestment	-0,0446*** (-2,6230)	-0,0536*** (-3,1692)	-0,0013*** (-0,0882)
Debt	-0,3265*** (-7,0866)	-0,2705*** (-5,9087)	-0,3862** (-9,2460)
Dividend	-0,0519*** (-2,6242)	-0,0641*** (-3,2598)	-0,0188** (-1,0596)
Debt*Overinvestment	0,0812*** (2,3518)	0,1028*** (2,9961)	0,0013** (0,0420)
Dividend*Oveinvestment	0,0364* (1,5977)	0,0405** (1,7906)	0,0050* (0,2443)
Debt*Dividend* Overinvestment	0,0412** (0,8239)	0,0667* (1,3404)	0,0081* (0,1814)
Debt*Dividen	0,0622*** (1,3548)	0,0984** (2,1582)	0,0171* (0,4155)
<i>Adjusted R-squared</i>	0,6470	0,7393	0,7814

Source: Processed Data

Information : * Significant at 10%, ** Significant at 5% , *** Significant at 1%

Table 3 shows that debt and dividend policies can mitigate the negative effect of overinvestment on company performance. The negative coefficient of overinvestment indicates that overinvestment has a negative effect on company performance. The negative effect of overinvestment is explained in the agency problem theory. Agency theory explains that conflicts of interest between managers and shareholders can harm the company (Jensen and Meckling, 1976). Managers wish to increase financial resources under management by increasing investment. Managers invest in unprofitable projects, which leads to overinvestment problems. The results of this study are consistent with several empirical studies on overinvestment in several Chinese companies (Wei et al., 2018) (Trong and Nguyeng, 2020) and (Jiang et al., 2019). The obligation to pay interest and dividends to debtholders and shareholders also encourages managers to manage the company more efficiently.

According to the free cash flow hypothesis, the use of debt requires the company to meet obligations to creditors, which reduces the company's cash to make inefficient investments. Thus, debt can mitigate the negative effect of overinvestment on company performance. The payment of dividends implies that the company is trying to fulfill obligations to shareholders, which reduces the financing funds to invest. It can be said that dividend policy can reduce the negative effect of overinvestment on company performance. The results of this study also

support the study by Ha et al., (2019) and Oded (2020) that debt policy and dividend payments can reduce excessive free cash flow and reduce overinvestment problems.

The combination of using debt and paying dividends can help reduce excessive free cash flow. On the other hand, it can also reduce financing funds to the lowest level. If a company needs to finance profitable projects in the future, it will be short on funds and will have to ignore profitable investments (Trong and Nguyeng, 2020; Zhao et al 2022). An appropriate calculation is needed so that the company does not have low financing funds so that it does not ignore profitable investments in the future.

Discussion

Debt policies and dividend distribution can reduce the negative impact of overinvestment on company performance (Nghĩa, & Thành, 2018). The negative overinvestment effect, which is characterized by a negative coefficient, indicates that overinvestment has a detrimental influence on company performance (Cai, 2013). This negative impact of overinvestment can be explained in the context of agency problem theory, which describes a conflict of interest between managers and shareholders that is potentially detrimental to the company (Stein, 2003). Managers, with a desire to increase the financial resources they control, tend to overinvest in less profitable projects, creating an overinvestment situation. The findings of this research are in line with various empirical studies that have been conducted previously on overinvestment in various companies in China (Wei et al., 2018; Trong and Nguyen, 2020; Jiang et al., 2019).

Conflicts of interest arise due to a mismatch in rights between shareholders and company management (Jensen and Meckling, 1976). Company management has a thorough understanding of the company's internal operations, allowing them to make decisions that tend to benefit themselves, such as getting higher salaries, promotions, and other perks under their control. This motivation is the main driver for management to engage in overinvestment. If shareholders fail to monitor such behavior through monitoring business activities, the crisis may worsen (Laeven, 2013). As a result, overinvestment can result in investment in projects with negative NPV values and indirectly damage company value (Bhuiyan and Hooks, 2019).

The use of corporate debt can present financial challenges and bankruptcy risks. However, strict debt contracts with lenders encourage managers to carry out their duties in managing the company well. If a company continually allocates resources to unprofitable projects, managers risk losing their benefits and positions (Brigham and Ehrhardt, 2015;622). The findings of this research are in line with research by Trong & Nguyen (2020) shows that debt can reduce or dampen the negative impact of overinvestment on company performance. The presence of debt encourages managers to carefully consider the management of the company, because investments in unprofitable projects can threaten the financial stability of the company and result

in bankruptcy, which in turn can result in managerial dismissal. Effective company management practices are needed to improve company performance.

Dividend policy can overcome the adverse effects of overinvestment by reducing the amount of free cash flow available to the company, thus encouraging more effective monitoring from outside parties. The findings of this research are in line with (Baker, & Weigand, 2015). shows that dividend policy can reduce the negative influence between overinvestment and company performance. In addition, Hoffmann (2014) found that reducing overinvestment can increase firm value through increasing dividend payments.

Excess free cash flow provides managers with opportunities to gain personal profits by using discretionary funds to increase the resources they control and improve their positions through additional investments (Shi, 2019). Reducing free cash flow can be a solution to reduce managers' takeover behavior (Ayash, 2020). In this context, debt and dividend policies can help overcome the negative impact of overinvestment by reducing free cash flow in the company, which in turn can enable more effective monitoring from outside parties (Cho et al., 2021). The monitoring role can limit excess free cash flow and reduce the impact of overinvestment (Kapellas & Siougle, 2017). Apart from that, reducing overinvestment can also increase company value through increasing dividend payments (Ping & Murapiro, (2021).

The free cash flow hypothesis, use of debt requires a company to fulfill its obligations to creditors, which in turn can reduce the company's cash funds available for inefficient investments. Therefore, debt can help mitigate the negative impact of overinvestment on company performance. While dividend payments demonstrate the company's commitment to fulfilling its obligations to shareholders, it can reduce the funds available for investment. Thus, dividend policy can help reduce the negative impact of overinvestment on company performance. The results of this research also support the concept that debt and dividend payment policies can reduce excess free cash flow and improve the problem of overinvestment (Ha et al., 2019).

The combination of using debt and paying dividends can help overcome excess free cash flow. On the other hand, this can also reduce the level of financing funds to a minimum level. If a company needs funding sources for potentially profitable projects in the future, the lack of such funds may result in the abandonment of profitable investments (Trong and Nguyen, 2020). Therefore, proper calculations are needed to ensure that the company does not experience a lack of funds that could result in the abandonment of potential investments in the future.

Conclusion

Based on the results and discussions that have been described previously, the conclusions in this study are that overinvestment has a negative effect on company performance, debt policy

can reduce agency conflict so that it can mitigate the negative effect of overinvestment on company performance, dividend policy can mitigate the negative effect of overinvestment on company performance because it can reducing excess cash, and a combination of debt and dividend policies can mitigate the negative effects of overinvestment, as it can help reduce excess free cash flow and help reduce the costs of conflict of interest.

Recomendation that can be made for further research because of the limitations in this study are to use the company's market performance proxy to test the consistency of the results obtained because in this study only financial performance is used to focus on asset management owned by the company, adding industry variables as control variables, and use other alternative overinvestment measurements and can compare the results of this study with the new overinvestment measurement.

The implications of this study empirically support agency theory because the use of debt and dividends can reduce the problem of overinvestment in the company. The practical implication is that companies can collaborate on the use of debt and dividend payments to limit excessive free cash flow so that it can limit the problem of overinvestment. In addition, companies can improve governance to overcome agency problems in this case overinvestment, because overinvestment will have a negative effect on company performance.

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