

**The Effect of Good Corporate Governance and Leverage on Financial
Distress with Operating Cash Flow and Firm Size as Control Variables
(Empirical Study on Regional Development Bank listed on Financial Services
Authority in Indonesia year 2017-2021)**



THESIS

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DEPARTMENT OF ACCOUNTING

INTERNATIONAL PROGRAM

FACULTY OF BUSINESS AND ECONOMICS

UNIVERSITAS ISLAM INDONESIA

YOGYAKARTA

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A THESIS

Presented as a Partial Fulfillment of the Requirements to Obtain the Bachelor
Degree in Accounting Department

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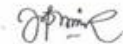
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DECLARATION OF AUTHENTICITY

Hereby I declare the originality of the thesis. I have not presented someone else's work to obtain my university degree, nor I have presented someone's else words, ideas or expressions without any of the acknowledgements. All quotations are cited and listed in the bibliography of the thesis. If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, 09 March 2023



Agrilla Putra Pramuda

اجتازت

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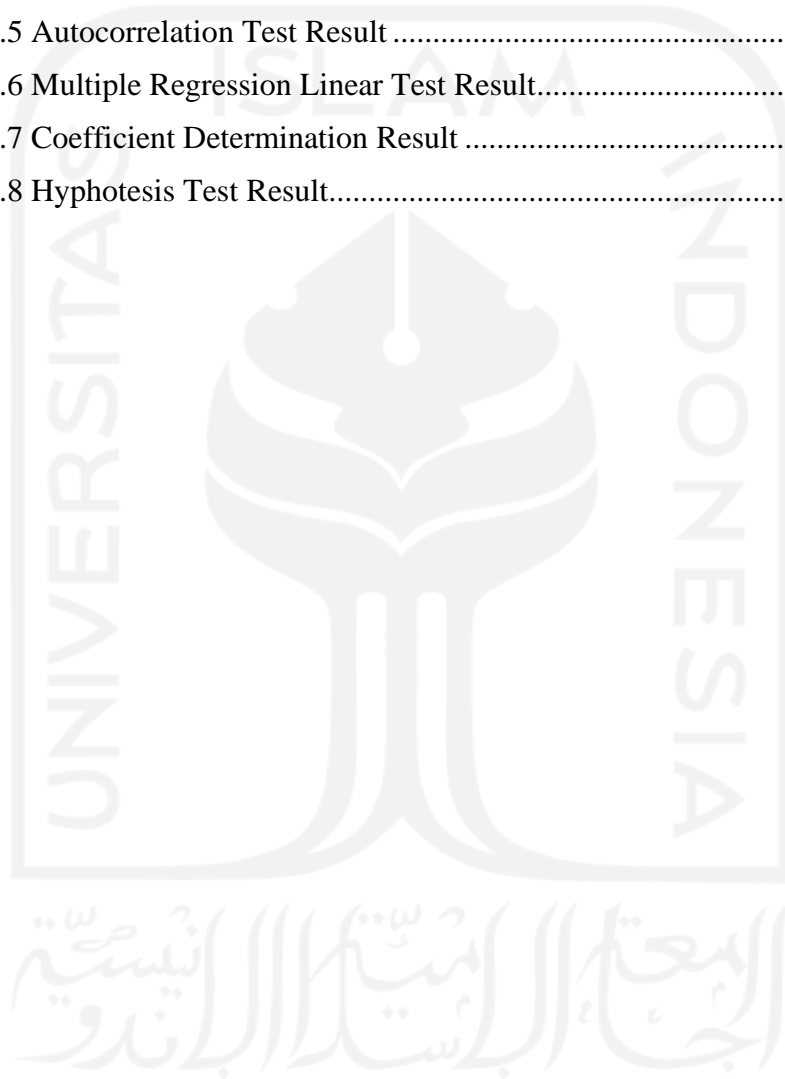


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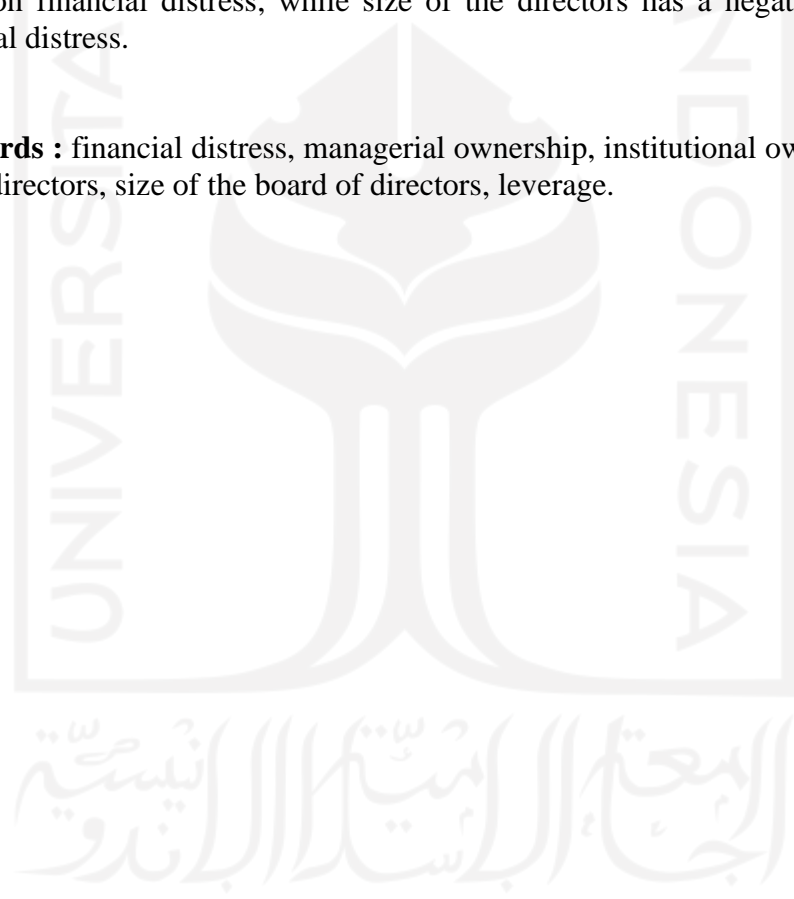
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ABSTRACT

This study aims to find out the effect of good corporate governance (GCG) and leverage towards financial distress. The type of this study is an empirical study that was conducted on regional development banks in Indonesia. The sample in this study were 25 regional development banks listed on Financial Services Authority that published annual reports for the period of 2017-2021. The method used to take the sample was purposive sampling. This study used descriptive statistical tests, classical assumption tests, normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, multiple regression test and hypothesis test with IBM SPSS Statistics 26. The results of this study show that managerial ownership, institutional ownership, size of the board of directors, and leverage have a positive effect on financial distress, while size of the directors has a negative effect on financial distress.

Keywords : financial distress, managerial ownership, institutional ownership, size of the directors, size of the board of directors, leverage.



ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh *good corporate governance* (GCG) dan *leverage* terhadap *financial distress*. Jenis penelitian ini adalah studi empiris yang dilakukan pada bank pembangunan daerah di Indonesia. Sampel dalam penelitian ini adalah 25 bank pembangunan daerah yang terdaftar di Otoritas Jasa Keuangan yang mempublikasikan laporan tahunan periode 2017-2021. Metode yang digunakan untuk mengambil sampel adalah purposive sampling. Penelitian ini menggunakan uji statistik deskriptif, uji asumsi klasik, uji normalitas, uji multikolinieritas, uji heteroskedastisitas, uji autokorelasi, uji regresi berganda dan uji hipotesis dengan program IBM SPSS Statistics 26. Hasil penelitian ini menunjukkan bahwa kepemilikan manajerial, kepemilikan institusional, ukuran dewan komisaris, dan *leverage* berpengaruh positif terhadap *financial distress*, sedangkan ukuran dewan direksi berpengaruh negatif terhadap *financial distress*.

Kata kunci : *financial distress*, kepemilikan manajerial, kepemilikan institusional, ukuran dewan direksi, ukuran dewan komisaris, *leverage*.

CHAPTER I

INTRODUCTION

1.1 Study Background

Corporate business sustainability is essential to implement in this era, based on a structured and focused good corporate governance (GCG) system. Good corporate governance is a corporate framework that directs and controls the setting of corporate objectives and monitoring performance against those objectives. Good corporate governance is expected to enable companies to be able to manage their position in their market better and maintain the edge. In this case, good corporate governance can avoid and overcome if there is financial distress for the company. The company needs the proper steps to strive for this so that good corporate governance activities run well. Financial distress can occur if the company does not provide direction and control over the company's environment, hence the emergence of a GCG system functions to overcome financial distress.

Financial distress is a stage of significant deterioration in financial condition, so that it can be identified as a precursor to serious financial problems such as liquidation or bankruptcy. Financial distress is a broad concept that consists of several situations in which the company faces financial difficulties, so it requires some solutions and anticipation to deal with it. The internal factors influencing financial distress are cash difficulty, poor corporate governance system, significant liabilities, and company losses due to operational activities. A healthy company has advantages that match its business environment and can exploit the market to produce company growth. However, the higher the intensity of the company's

competition the higher the cost to be incurred, which will affect the company's performance. The company will experience losses that leads to financial distress if the company is not able to control and compete. Companies tend to be able to analyze possible risks that occur in the internal environment because they better understand company conditions (Dwiantari et al., 2020). A company's bankruptcy can be measured from the company's financial statements, which are helpful for decision-making. One of the factors that can affect the company's bankruptcy is financial difficulties or, by other names, financial distress. Financial distress begins when the company cannot meet scheduled payments or when cash flow projections indicate that the company is unable to make payments.

In Indonesia, there are regional-owned enterprises (BUMD), primarily regional development banks (BPD) in several provinces. BUMD has the task of realizing regional prosperity by contributing to local own-source revenue (PAD) through dividends and taxes (Azre, 2017). It shows that regional development banks as a driver of the pace of regional development aims to improve people's welfare. The progress of the regional development bank must be aligned with the implementation of good corporate governance contained in the corporation. Good corporate governance (GCG) is one of the keys for the company's success in growing and being profitable in the long term so as to win the global business competition (Furqani & Andini, 2013). In this case, regional development banks (BPD) must implement GCG with the principles of transparency, accountability, responsibility, independence, and fairness to face global challenges, one of which is financial distress.

In this study, financial distress can also be caused by the company's financial ratios, namely leverage, operating cash flow, and firm size. A leverage is a ratio to help the company understand the extent to which the company is financed by debt or outside parties when running operational activities. This ratio assesses the company's ability to pay all debts or obligations by using the assets and capital of the company. The higher use of the debt will be riskier because the company will be included in an extreme leverage. The leverage ratio commonly used is the debt ratio calculated by dividing total debt by total assets. The leverage represents debt burdens by the company that uses external funds because using debt at an optimal level could increase the company's value.

The company also applies operating cash flow measurement to predict financial distress. Operating cash flow is cash generated by the company as a result of business operations used to check the quality of the company's profit (Amanda & Muslih, 2020). It indicates that the company with high operating cash flow means it has a source of funds to carry out its operating activities. The company maintains the quality of profits by measuring operating cash flow used to carry out operational activities, such as: interest income, income tax payments, employee salary payments.

The last factor that examines the financial distress prediction is a firm size. The firm size is a ratio that determines the size of company's total assets. The firm size reflects the total assets controlled by the company, so the higher the number of the company's total assets shows that the larger the size of the company or assets owned by the company. Therefore, the companies with higher total assets indicate

that they have reached the maturity level and have good prospects in the long term, which have positive cash flows. The firm size can be divided into three categories: large, medium, and small.

Several studies have been conducted to analyze the financial distress condition of a company. Manzaneque et al. (2016) have shown evidence that the interrelationship of good corporate governance characteristics can affect the financial distress condition of a company. A similar study was also conducted by Pramudena (2017), Baklouti et al. (2016), Agustina & Anwar (2021), Martsila & Meiranto (2013), which generally explains the condition of the company's financial distress that is influenced by several characteristics of good corporate governance. Meanwhile, financial distress can also be influenced by the company's financial ratios, as well as Good Corporate Governance. Oktasari (2020) has proven in research that financial ratios, such as: liquidity, leverage, and company size can affect the financial distress condition of a company. Amanda & Muslih (2020) stated that operating cash flow, size of board commissioners, and capital structures also influence financial distress.

1.2 Problem Formulation

Problem formulation in this research that has been explained in the background are:

1. Does good corporate governance consisting of managerial ownership, institutional ownership, size of the directors, and size of the board of directors affect on the possibility of financial distress?
2. Do leverage, operating cash flow, and firm size affect on the possibility of financial distress?

1.3 Study Objectives

This research has several objectives as follows:

1. To analyze empirical evidence of the effect of good corporate governance which consists of managerial ownership, institutional ownership, size of the directors, and size of the board of directors, on the possibility of financial distress.
2. To analyze empirical evidence of the effect of leverage, operating cash flow, and firm size, on the possibility of financial distress.

1.4 Research Contributions

This research study has benefits for:

1. For companies, this research is expected to be useful for providing information for the company in avoiding financial distress.
2. For academics, this study is expected to be beneficial for the level of education in the world which can be used for references or additional information for future researchers who will conduct the research with the same topic.
3. For the researchers, this study provides knowledge and insights of writer regarding the effect of managerial ownership, institutional ownership, size of the directors, size of the board of directors, leverage, operating cash flow, and firm size towards financial distress.

1.5 Systematics of Writing

The systematics of the discussion aims to make it easier for readers to understand the contents of the research. The systematic discussion in this study is divided into five chapters and explained as follows.

CHAPTER I: INTRODUCTION

The introduction chapter contains the study background, problem formulation, study objectives, research contribution, and systematization of discussion. The study background contains systematically arranged information regarding phenomena and problematic issues that are of interest to research. Problem formulation is a statement about circumstances, phenomena, and or concepts that require solving and or require answers through research. Study objectives and the usefulness of research for related parties.

CHAPTER II: LITERATURE REVIEW

Literature review discusses the theories that underlie this research and become the basis for the theoretical references used in the analysis of this research. With the theoretical basis and previous research, a research framework will be created and become the basis for the preparation of hypotheses.

CHAPTER III: RESEARCH METHODS

This research method chapter describes the operational description of the research, population and sample, types and sources of data used, and data collection methods in research.

CHAPTER IV: RESULT AND ANALYSIS

This chapter contains a description of the object of research, data analysis, and discussion of the issues raised based on the results of data processing and relevant theoretical basis.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

The concluding chapter contains conclusions containing a brief presentation of what has been obtained from the discussion of the interpretation of the results, and the recommendations of the research that outline the research.



CHAPTER II

LITERATURE REVIEW

2.1 Agency Theory

Agency theory explains that there is a separation of duties between shareholders and managers so that they can carry out their responsibilities results more efficiently and effectively. The main principle of this theory states that there is a working relationship between the parties involving principal or shareholders with the party receiving the authority which is agent or the manager in the form of a cooperation contract. The relationship between GCG mechanism and the likelihood of financial distress is based on agency theory (Witiastuti & Suryandari, 2016). Corporate governance mechanism is implemented by aligning executive interests with shareholder's interests that lead to business performance.

Agency theory describes the relationship between shareholders as principals and management as agents, in which the management is the party contracted by shareholders to work for the interests of the shareholders (Zakiyah, 2017). The principal has committed to control the management activities, while the agent is the decision maker. According to the agency theory, separation of interests between company owners and managers companies can lead to a conflict. It happened because the interests between the principal with the agent are not always same that may cause conflicts of interest by the principal and the agent as the party entrusted with the authority to manage the company. Conflicts of interest occur when agents prioritize their own interests over increasing shareholder returns which leads agency problem (Batra et al., 2022).

Agency theory is concerned with managerial ownership in the relationship between principals and agents. Managerial ownership is a share ownership structure owned by management that affects the company's decision making. Significant managerial ownership can effectively monitor and control the performance of company so that agency problems between principals and agents will be avoided. The relationship between agency theory and managerial ownership can prevent the company from financial distress if the decision making of the principals and agents runs with aligned goals.

The relationship between agency theory and institutional ownership may also affect on the possibility of financial distress. Supervision that is carried out becomes effective if institutional ownership is large because it can overcome the opportunistic behaviour of managers so that it can overcome the agency problem in agency theory. Financial distress is also affected by the existence of institutional ownership which is optimal supervision of the company in order to prevent financial distress. Institutional ownership increases control of management performance to achieve alignment of decisions between principals and agents in agency theory.

The running of a company is also inseparable from the existence of a the directors and board of directors who play a role in the company's performance in order to minimize the possibility of agency problems occurring. The separation of roles between the directors and the board of directors in the company aims to seek alignment of goals between shareholders as principal and management as agent in agency theory. The directors have the role of managing resources in the company

and determining policies and strategies, both long-term and short-term. Meanwhile, the board of directors has the authority to provide advice in the form of an assessment of management performance and the preparation of strategies in the operation of the company.

There is a relationship between financial performance, such as leverage, operating cash flow and firm size with agency theory in this study. The higher the value of the company's leverage ratio makes the greater the proportion of debt in its capital structure so that the higher the agency costs. On the other hand, operating cash flow also has a relationship with agency theory that is the amount of cash flow coming from operating activities is an indicator that determines the company's operations can generate cash flow for loan repayments and dividend payments so that it can avoid the agency costs. Whereas, the firm size also has a relationship with the agency theory. The agency theory states that large companies have greater agency costs than small companies.

2.2 Financial Distress

Financial distress is the stage of decreasing the company's financial condition where the worsening financial distress will result in the bankruptcy of the company (Putri & Merkusiwati, 2014). Bankruptcy is usually defined as failure of the company in running the company operations to make a profit. There are criteria for companies that are experiencing financial distress are: (1) the company has a negative net operating income in some years, (2) termination of payment dividend, and (3) undergoing large restructuring or discontinuation of business. According to Altman & Hotchkiss (2006), financial distress is classified into four terms, there are

business failure, economic failure, insolvent, and legal bankruptcy. The indications of the occurrence of a financial distress can be identified from the financial performance of a company based from the financial statements.

According to Altman & Hotchkiss (2006), a business failure occurs when a rate of return realized on invested capital, with allowance for risk considerations is significantly lower than the rate of prevailing on similar investments. It shows that these economic situations led to not making any statements about the existence or discontinuation of the entity. Meanwhile, the insolvency involves an eventually bankrupt company that were apparently to be kept alive and to the detriment of the creditors (Altman & Hotchkiss, 2006). It means that the insolvency has more serious bankruptcy condition requires a comprehensive valuation analysis, which is usually not performed until asset liquidation is considered.

2.3 Good Corporate Governance

In terminology, corporate governance relates to the consequences of the separation of ownership and control of modern corporations (Lukviarman, 2016). The concept of corporate governance is at the strategic level of the organization where the directors (BOD) has a role in the strategic process related to monitoring and advising in corporate governance.

According to Furqani & Andini (2013), there are five principles that can be used as important aspects of good corporate governance, they are:

1. *Transparency*, about it relates to information disclosure both in decision-making process and in disclosing material and relevant information about the company.

2. *Accountability*, the principle that regulate the clarity of functions, structures, systems, and accountability of company organs so that the management of the company is carried out effectively.
3. *Responsibility*, the aspect of corporate responsibility is conformity compliance in the organizing the company with the healthy principles and applicable laws and regulations.
4. *Independency*, corporate principles managed professionally without any conflict of interest that is not in accordance with applicable regulations and healthy corporate principles.
5. *Fairness*, the principle of fair treatment in fulfilling the rights of stakeholders arising under the agreement and applicable laws.

2.3.1 Managerial Ownership

Managerial ownership can be defined as the percentage of shares owned by managers and directors of the company at the end of a period. This variable is used to identify the benefits of ownership in the mechanism of reducing agency conflict so that the agency problem is assumed to disappear if a manager is also the owner. Managers will reduce the tendency to optimize the use of resources while reducing agency costs due to differences in interests if the management has greater share ownership. Therefore, the management who owns shares in the company tends to develop strategies to improve performance companies, especially in long-term company performance (Martsila & Meiranto, 2013).

Managerial ownership has an influence on the corporation which affects the performance within the corporation to achieve goals, that is maximizing corporate

value and avoid financial distress that cause bankruptcy (Mappadang, 2021). The higher the managerial ownership, the lower the debt of company will be because the existence of shared ownership by the management will promote careful management in using debt in order to minimizing or avoiding financial distress which can lead to bankruptcy. The amount of managerial ownership can reduce the agency cost because it serves to align the interests of management and shareholders.

2.3.2 Institutional Ownership

Institutional ownership is share ownership by companies or other institutions which can be in the form of insurance companies, banks, investment companies, and other institutional ownership (Witiasuti & Suryandari, 2016). It shows that the existence of institutional ownership can increase supervision of management to generate profits for shareholders. Institutions have the strength in terms of supervision of management to optimize the sustainability of the company.

According to Khafid (2017), increased institutional ownership is stated in agency theory that problems among managers can be prevented by implementing an effective monitoring mechanism. Institutional ownership is measured by calculating the percentage of the company's shares of all outstanding institutional shares which shows that the greater the proportion of institutional ownership, the greater the influence of the institutional party. Institutional accumulation of a shares can significantly improve the company's performance and may affect investors outside the institution in convincing them of the benefits and safety of the investment.

2.3.3 Size of The Directors

The number of the directors is the number of the board positioned as head or a person who has full power to lead operations in a company. The directors are collegially tasked and responsible for managing the company. The directors in a company will determine the policy or strategies to be taken both in the short and long term. All departments and company's progress are monitored and ensured by a large number of the directors in order to avoid from the threat of financial distress (Pramudena, 2017). In this study, the size of the directors was measured by counting the number of members the directors in the company in period t , including the CEO.

2.3.4 Size of The Board of Directors

The board of directors has a role to monitor the implementation board of director's policy. The implementation of control function which carried out by board of directors is one of the practical forms of agency theory (Rachmania, 2017). The internal mechanism of commissioners performs the supervisory function of the principal and control management's opportunistic behaviour. The composition of the board of directors must be such that enable effective, precise and fast decision making and can act independently in the sense of not having an interest that can interfere with their ability to carry out their duties independently and critically in relation to each other and to the directors. In this study, the board of directors was measured by calculating the number of existing commissioners in period t .

2.4 Leverage

Leverage is a measurement ratio of the company to understand the extent to which the company is financed with debt or from outside parties in running the company operational activities (Dwiantari et al., 2020). The company that has lower leverage indicates that the company does not use a lot of debt to finance the company's operations. Leverage ratio is a ratio used to measure the extent to which the company assets are financed with debt. It means that the amount of debt used by the company to finance its business activities when compared to using its own capital. It will allow the company to be unable to pay the debts in the future if the company uses more debt for financing because of the high interest and will ultimately disrupt the company's operational activities and their potential for financial distress.

In this study the equation used to calculate leverage is as follows (Dwiantari et al., 2020)

$$\text{Leverage} = \text{Total Liabilities} / \text{Total Equity}$$

2.5 Operating Cash Flow

The operational activities of a company are related to profit derived from net cash inflows and net cash outflows. Operating cash flow is the main cash flow from the company's activities because its information to investors is useful to find out the company's debt payments (Dillak & Fitri, 2020). Operating cash flow can be positive or negative. Operating cash flow is positive if the cash inflow to operations is greater than the cash outflow and vice versa. It is related to the

avoidance of financial distress with an increase in operating cash flow that is generated by the company.

In this study the equation used to calculate operating cash flow is as follows (Amanda & Muslih, 2020).

$$\text{Operating Cash Flow} = \text{Operating Cash Flow} / \text{Current Liabilities}$$

2.6 Firm Size

Firm size is a scale of the size of the company that is classified according to various ways, including total assets, log size, or market value of stocks (Oktasari, 2020). The size of the company will affect the company's ability to bear the risks that may occur from various situations facing by the company. The measurement of firm size can be described from the amount of total assets the company has. According to Dirman (2020), the cash flow has relevant information in identifying a company's financial health or decline. A large company cannot just produce and sell more goods efficiently but also on a larger scale so that the profit is greater than a small company. The company that has large total assets indicated the company has reached the level of maturity which is considered to have a good prospect in a relatively long-period (Wangsih et al., 2020).

In this study the equation used to calculate firm size is as follows (Wangsih et al., 2020):

$$\text{Firm Size} = \text{Ln} (\text{Total Assets})$$

2.7 Prior Research

No	Authors	Tittle	Variables	Result
1.	Pramudena,	The Impact of	institutional	The results of

	S (2017)	Good Corporate Governance on Financial Distress in the Consumer Goods Sector	ownership (X1), managerial ownership (X2), size of the board of directors (X3), size of the directors (X4), financial distress (Y).	this study show that institutional ownership (IO) has an inverse effect on the financial distress of a company, managerial ownership also inversely affects financial distress. On the other hand, the proportion of the board of directors positively affects the company's financial distress and the number of directors also has a positive effect on the probability of financial distress
2.	Arifin (2020)	The Influence of Good Corporate Governance, Firm Size, Sales Growth Towards Financial Distress	Managerial ownership (X1), Institutional ownership (X2), Audit committee (X3), Independent commissioner board (X4), Firm size (X5), Sales growth (X6), Financial Distress (Y).	Managerial ownership has a positive significant influence on the financial distress, Institutional ownership has a positive significant influence on the financial distress, Audit committee does not influence towards financial distress,

				independent commissioner board has a significant influence towards financial distress, Firm size does not influence towards financial distress, and Sales growth does not influence towards financial distress.
3.	Manzanaque, Priego, & Merino (2015)	Corporate governance effect on financial distress likelihood: Evidence from Spain	Firms with high ownership concentration (X1), Firms with high institutional ownership (X2), Firms with high board ownership (X3), Firms with CEO duality (X4), Firms with high proportion of independent directors (X5), Firms with high board size (X6), Financial Distress (Y).	The results show that corporate governance mechanisms as board ownership, proportion of independent directors and board size reduce the financial distress likelihood. However, ownership concentration, institutional or non-institutional large shareholders and CEO duality have no significant impact on financial distress

				likelihood.
4.	Martsila & Meiranto (2013)	Pengaruh Corporate Governance Terhadap Kinerja Keuangan Perusahaan	Independent Commissioner (X1), Size of the Board of directors (X2), Managerial Ownership (X3), Concentration of ownership (X4), leverage (X5), Company's Financial Performance (Y).	Board size has a significant positive effect on ROA, while the PER has a significant negative effect. Concentration of ownership significant positive effect on ROA and ROE and significant negative effect against PER. Leverage has a negative and significant effect on ROA, PER and Tobins'Q. The study also found a positive and significant effect between firm size with the company's financial performance as proxied by ROA, ROE, PER and Tobins' Q.
5.	Sadana Nur Rachmania, (2017)	The Effect of Good Corporate Governance and Financial Performance on Financial Distress Prediction (Empirical Study	Directors (X1), Board of directors (X2), Managerial Ownership (X3), Institutional Ownership (X4), Return on Assets	The directors has a significant negative effect on financial distress, the board of directors has a negative effect

		of Manufacturing Companies Listed on the Indonesia Stock Exchange 2012-2015)	(X5), Debt to Equity Ratio (X6), Cash Flow to Sales (X7), Financial Distress (Y).	on financial distress, managerial ownership has a significant negative effect on financial distress, institutional ownership has a significant negative effect on financial distress, profitability has a significant negative effect on financial distress, leverage has no significant effect on financial distress, operating cash flow has a significant negative effect on financial distress.
6.	Oktasari (2020)	The Effect of Liquidity, Leverage and Firm Size of Financial Distress	Liquidity (X1), leverage (X2), firm size (X3), financial distress (Y).	The result is liquidity and company size have positive significant effect and leverage does not have a significant effect on financial distress
7.	Wangsih, Yanti, & Yohana (2020)	Influence of Leverage, Firm Size, and Sales Growth on Financial Distress	Leverage (X1), Firm Size (X2), Sales Growth (X3), Financial Distress (Y).	The results shows that leverage has a significance value of 0,041

				<p>(sig < 0,05) and a positive B regression coefficient (2,303) then Ho is rejected and Ha is accepted, which means partially leverage has significant positive effect on financial distress. Firm size has a significance value of 0,027 (sig < 0,05) and a negative B regression coefficient (-0,527) then Ho is rejected and Ha is accepted, which means partially firm size has significant negative effect on financial distress. Sales growth has a significance value of 0,655 (sig > 0,05) then Ho is accepted and Ha is rejected, which means partially sales growth has no significant effect on financial distress.</p>
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8.	Dirman (2020)	Financial Distress: The Impacts of Profitability, Liquidity, Leverage, Firm Size, and Free Cash Flow	Profitability (X1), Liquidity (X2), Leverage (X3), Firm Size (X4), Free Cash Flow (X5), Financial Distress (Y).	The results of this study indicate that the profitability variable has a positive effect on financial distress; variable liquidity, leverage, and free cash flow do not effect financial distress; and firm size variables have a negative effect on financial distress
9.	Mahrani & Soewarno (2018)	The effect of good corporate governance mechanism and corporate social responsibility on financial performance with earnings management as mediating variable	GCG mechanism (X1), CSR (X2), Earnings management (X3), financial performance (Y1), earnings management (Y2).	The effect of GCG mechanisms on the financial performance shows positive and significant effect, the CSR variable has a positive effect on financial performance, the GCG mechanism has a significant negative effect on the earnings management, CSR has a significant positive effect on earnings

				management, earnings management has a significant negative effect on financial performance, here is a negative and significant effect between GCG mechanism and earnings management, and there is a positive and significant effect between CSR on earnings management
10.	Eloumi & Gueyié (2014)	Financial Distress and Corporate Governance: An Empirical Analysis	The proportion of outside directors (X1), joint CEO-board chair structure (X2), The proportion of outside directors (X3), experienced a CEO change (X4), financial distress (Y)	The proportion of outside directors is negatively associated with financial distress, financial distress has greater incidence of joint CEO-board chair structure than healthy firms, The proportion of outside directors is positively associated with the financial distress, financial distress that have experienced a CEO change

				have lower incidence.
11.	Witiastuti & Suryandari (2016)	The Influence of Good Corporate Governance Mechanism on the Possibility of Financial Distress	Managerial Ownership (X1), Institutional Ownership (X2), Independent commissioner (X3), Financial Distress (Y)	Managerial ownership has no influence on the possibility of financial distress, Institutional ownership variable in this study had no influence on the possibility of financial distress, Independent commissioner influence negatively on the possibility of financial distress
12.	Baklouti et al., 2016	Corporate Governance and Financial Distress of European Commercial Banks	Concentration of Ownership (X1), Directors (X2), Size of the Directors (X3), Combination of Functions of Chief Executive Officer (CEO) (X4), Investor Protection (X5), The bank size (X6), Financial Distress (Y).	A positive relationship exists between the concentration of ownership and the likelihood of financial distress in commercial banks, the size of the directors and the likelihood of financial difficulties are negatively associated with the commercial banks, There is a positive relationship between the

				accumulation of functions and financial distress banks, The level of investor protection decreases the probability of the bank's financial distress, There is a positive relationship between the size of the bank and the likelihood of financial distress
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2.8 Hypothesis Development

2.8.1 The Effect of Managerial Ownership on Financial Distress

Agency theory describes the relationship between principals and agents in carrying out various company activities. The relationship between principals and agents is that principals delegate decision-making authority to managers as agents so that managers are responsible for managing the company. Agency theory assumes that each individual is motivated by their own interests, resulting in a conflict of interest between the principals and the agents which is called agency problems (Rachmania, 2017).

Based on agency theory, the separation of interests between principles and agents can lead to agency problems. Shareholder interests is related to obtaining dividends, while managers interests is related to retained earnings. The perspective of agency theory shows that the management of the company carried out by the manager is able to increase responsible results so that the company's performance

improved. Managerial ownership is a measurement of percentage ownership shares by management which provide an opportunity to controlled by management (Mappadang, 2021). Managerial ownership is implemented to increase the company value which is achieved through improved financial performance with a separation of interests required to harmonize differences of interest to avoid financial distress that can arise due to agency problems.

The managerial ownership is the company shares owned by management where directors, commissioners, company secretaries, or employees can own shares of the company. The manager who owns the shares has the right to give the advice for the company. When the agency problems in the company decreases, the managerial ownership increases and it will reduce or avoid the possibility experiencing financial distress. The greater the managerial share ownership of a company, the lower the agency problem and the company can avoid the possibility of financial distress.

In this study, the ownership by commissioners is not included as criteria for managerial ownership because the tasks of commissioners are controlling the management which is led by the directors of the company. The previous research conducted by Pramudena (2017) stated that managerial ownership variable has a negative effect on financial distress. According to Agustina & Anwar (2021), managerial ownership has a negative effect on condition of financial distress. Based on the above considerations, the first alternative hypothesis of this research is:

H1: Managerial ownership has a negative effect on financial distress.

2.8.2 The Effect of Institutional Ownership on Financial Distress

Agency theory implies that the relationship between principals (investors) authorizes agents (managers) in carrying out company operations that managers have the responsibility of determining company policies. In agency theory, principals and agents have a separation of interests that may lead to conflicts of interest. It shows that the agents have more company information than the principals to increase the utilization of each of them. Delegation of authority from principals to agents requires transparency in managing the company (Sari, 2018).

Agency theory underlies the implication of GCG in financial distress possibility. Based on the agency theory perspective, institutional ownership becomes principals that can improve company's performance to cope with the possibility of financial distress. The institutional ownership is a component used to reduce the impact of agency problems with individual shareholders who make decisions for their own interests at the cost of minority shareholders (Kirimi et al., 2022). The existence of institutional ownership enables to control management in carrying out the company's operational activities. Management decisions become more responsible in order to align with the interests of shareholders because the existence of institutional ownership.

Institutional ownership is the ownership of proportion shares by institutions or firms (Witiastuti & Suryandari, 2016). The larger of institutional ownership will encourage to supervise management's performance and evaluate the company's performance. Increased supervision which is carried out by institution can optimize the company in minimizing or avoiding financial distress. Institutional ownership has a huge influence on management as the majority shareholders which can affect

investors in making decisions. Institutional ownership maintains the company performance by monitoring the manager's performance so as to prevent opportunistic manager actions and large institutional ownership that will increase the use of company assets so as to minimize financial distress.

The previous research conducted by Sudiyatno et al. (2022) and Witiastuti & Suryandari (2016) stated that institutional ownership has a negative impact towards financial distress. According to Pramudena (2017), institutional ownership has a negative impact on financial distress. Based on the above considerations, the second alternative hypothesis of this research is:

H2: Institutional ownership has a negative effect on financial distress.

2.8.3 The Effect of Size of the Directors on Financial Distress

Agency theory implies that a contractual relationship between principals and agents to synchronize information and company conditions. The basis of agency theory is the assumption that the interests of principals and agents are different resulting in a separation of ownership and control in the company (Baklouti et al., 2016). The implementation of agency theory in the company raises agency problems that occur is due to differences in interests between principals and agents. The occurrence of differences in interests between principals and agents due to asymmetric information. Asymmetric information is a condition in which one party has information that the other party does not have, hence some consequences of the selected decision cannot be ascribed to either party (Witiastuti & Suryandari, 2016).

The foundation of agency theory is created when the principals give responsibility to the agents to manage the company and carry out the company's operational activities properly. On the basis of agency theory, directors are referred to as agents with the implications for managing the company with reference to orders given by the company owner. The determination of the number of directors is carried out by the owner of the company which aims to improve the company's performance, both in managing the company and seeking company profits.

In avoiding financial distress, the number of directors will improve the performance of directors if the number is large. A large number of directors is able to supervise all departments of the company, hence it can monitor the progress of the company which can avoid the threat of financial distress (Pramudena, 2017). The greater size of the directors will improve managing of resources which the company can avoid financial distress. It shows that the company's financial information is reviewed by the directors to make decisions in order to prevent the company from financial distress.

The previous research conducted by Baklouti et al. (2016) stated that the size of the directors is negatively impact on financial distress. According to Julasaria & Mandal (2022) and Pramudena (2017), the size of director has a negative impact towards financial distress. Based on the above considerations, the third alternative hypothesis of this research is:

H3: Size of the directors has a negative effect on financial distress.

2.8.4 The Effect of Size of the Board of Directors on Financial Distress

Agency theory defines the relationship between principals and agents whose implementation is principals as investors or company owners and agents as company managers. The principals authorize the management of the company to the agents which can trigger a conflict of interest. The lack of transparency from the agent on their activities also triggers a loss of trust from the principals so that the company can lose the principals as a capital provider.

In the characteristics of corporate governance, board of directors have a role in reducing agency problems between shareholders and managers. The existence of a board of directors provides control of the running of the company through ownership concentration. Board of directors must be of an uninterrupted nature and free from business interests that could be perceived as an intervention to act in the beneficial interest of the company. Agency theory explains that the interests of principals and the interests of agents are differentiated but aligned with the company's goals so that the board of directors as the mediator and advisor between those two parties.

Board of directors has an important task in controlling the performance of the directors and include in the characteristics of corporate governance to minimize the agency problem by mediating between ownership and managers. Supervision carried out by the board of directors aims to minimize agency problems in order to achieve the objectives and maximization of shareholder wealth (Julasaria & Mandal, 2022). In this regard, a significant number of board of directors influence

the management with reference to the policies of directors that can prevent financial distress.

The previous research conducted by Witiastuti & Suryandari (2020) stated that size of the board of directors has a negative effect on financial distress. Putri & Merkusiwati (2014) and Julasaria & Mandal (2022) indicated that the size of the board of directors has a negative effect towards financial distress. Based on the above considerations, the fourth alternative hypothesis of this research is:

H4: Size of the board of directors has a negative effect on financial distress.

2.8.5 The Effect of Leverage on Financial Distress

Agency theory applies the contractual relationship between principals and agents in running the company. The agents carry out the management of the company which is authorized by the principals as investors in a company. In running a company, principals and agents trigger a conflict of interest called the agency problem. It is due to the agents with opportunistic nature having more information than the principals.

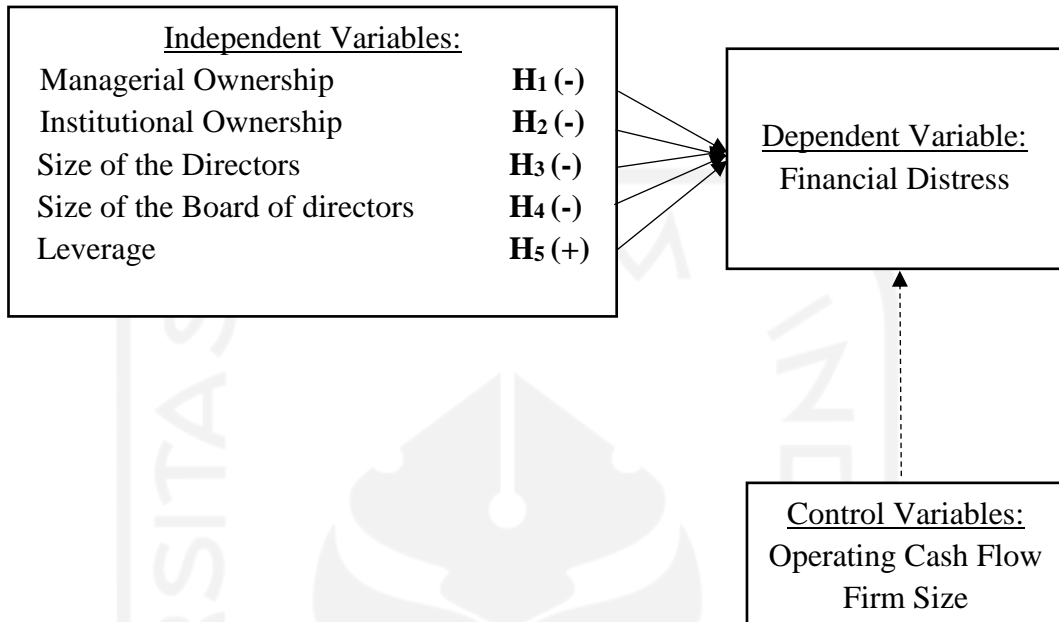
The relationship between principals and agents can be carried out properly if it meets the needs and can achieve goals in implementing agency theory. Agency theory explains that the higher leverage of the company makes the better the transfer of prosperity from creditors to shareholders of the company. Leverage as a measurement of a company's ability to borrow the capital to increase profit of the company. It can be indicated that the company has higher agency costs if the proportion of debt is greater in its capital structure.

Leverage ratio represents the interest rate expenses and debt burden incurred by companies that use external funds (Masdupi et al., 2018). The emergence of payment difficulties with a larger amount can occur because the company pays debt using the company's capital. It will lead to financial distress if it cannot be overcome because the bankruptcy of the company starts from the company's inability to pay debts so that the debt becomes more excessive. It means that the probability of financial distress will increase with those condition.

The previous research conducted by Amanda & Muslih (2020) showed that the leverage has positive effect towards financial distress. According to Dwiantari et al. (2020), the leverage ratio has a positive effect on financial distress. In this study, the measurement of leverage ratio uses Debt to Equity Ratio (DER). It proves that the greater the debt owned by the company, the bigger possibility it will experience financial distress. It concludes that leverage has a positive effect towards financial distress. Based on the above considerations, the fourth alternative hypothesis of this research is:

H5: Leverage has a positive effect on financial distress.

2.9 Theoretical Framework



CHAPTER III

RESEARCH METHODS

3.1 Population and Sample

The population in this study is Regional Development Banks (BPD) listed on Financial Services Authority (OJK) in Indonesia. Meanwhile, the sample that used in this study is regional development banks in Indonesia during January 1, 2017 to December 31, 2021. The reason for choosing regional development banks in this study is the regional development banks have a contribution to BUMD which can increase the level of local-revenue (PAD) in order to improve the welfare of the people in Indonesia. In addition, the number of regional development banks in Indonesia is significant so that it can fulfil the minimum number of eligible samples used in the study. The sample selection in this study using purposive sampling with the following criteria:

1. Regional development banks (BPD) listed on Financial Services Authority (OJK) in Indonesia during 2017-2021.
2. Regional development banks (BPD) in Indonesia that publish annual reports and financial statements during 2017-2021.
3. Regional development banks (BPD) in Indonesia that publish annual reports that provides all the data needed required regarding the variables.

3.2 Data Type and Source

The data type which used in this study is secondary data. The data sources in this study from annual report and audited financial statement of regional

development banks listed in Financial Services Authority (OJK) in Indonesia on the official website from each regional development banks (BPD).

3.3 Definition and Measurement of Research Variables

3.3.1 Dependent Variable

A dependent variable is the variable that is affected and resulted of an independent variable. In this study, the dependent variable is financial distress for company (Y). Financial distress is the condition of financial company which experienced the difficulties financial condition. In this study financial distress uses the Z-score analysis of Altman Modified. The Altman Z-score Modified formula is as follows:

$$Z_i = 6,56X_1 + 3,26X_2 + 6,72X_3 + 1,05X_4$$

$$X_1 = \text{working capital} / \text{total assets}$$

$$X_2 = \text{retained earnings} / \text{total assets}$$

$$X_3 = \text{earnings before interest and taxes} / \text{total assets}$$

$$X_4 = \text{book value of equity} / \text{book value of debt}$$

3.3.2 Independent Variables

There are four independent variables in this study that are examined against the possibility on financial distress:

3.3.2.1 Managerial Ownership

Managerial ownership is the proportion of shares owned by management in the company which can make the position between shareholders and managers can be accommodated due to the availability of managerial share ownership (Witiastuti & Suryandari, 2016). The calculation of managerial ownership is calculated by

dividing the total number of shares owned by managerial with the total shares of the current company in that year.

$$\text{MO} = \frac{\text{Number of stocks owned by the managerial}}{\text{Total number of outstanding stocks}}$$

3.3.2.2 Institutional Ownership

Institutional ownership is the ownership of shares by entities or financial institutions. Institutions invest by buying shares and then handing over the responsibility of managing the company to managers. In this study, the measurement of institutional ownership variables can be identified by calculating the percentage of company shares owned by institutional parties from the total number of shares of the company (Pramudena, 2017).

$$\text{IO} = \frac{\text{Number of stocks owned by the institutions}}{\text{Total number of outstanding stocks}}$$

3.3.2.3 Size of The Directors

The size of the directors determines the company's performance in implementing GCG to lead and be responsible for the company's operations. In this study, the size of the directors is examined by computing the number of directors members, including the CEO in the company during the time period of t (Pramudena, 2017).

3.3.2.4 Size of The Board of Directors

Board of directors is formed by the general meeting of shareholders (RUPS) whose duty is to supervise and advise the directors (Pramudena, 2017). The size of the board of directors has an important role in controlling the implementation of the

policies of directors. This study measures the size of the board of directors by computing the number of members of the board of directors in the company during the time period of t (Pramudena, 2017).

3.3.2.5 Leverage

Leverage is a ratio that assesses the company to understand where the company is financed by debt or from outside parties in carrying out the company's operational activities. In this study, the equation used to compute leverage is as follows (Dwiantari et al., 2021).

$$\text{Leverage} = \text{Total Liabilities} / \text{Total Equity}$$

3.3.3 Control Variables

3.3.3.1 Operating Cash Flow

Operating cash flow determines the ability of the company's operations to generate cash that can be used to pay off loans and maintain the company's operating ability in order to avoid financial distress. In this study, the equation used to measure the operating cash flow is as follows (Amanda & Muslih, 2020).

$$\text{Operating Cash Flow} = \text{Operating Cash Flow} / \text{Current Liabilities}$$

3.3.3.2 Firm Size

Firm size represents how much total assets the company has. Companies that have significant total assets will be easier to diversify and not significantly experience bankruptcy. In this study the equation used to calculate firm size is as follows (Wangsih et al., 2020):

$$\text{Firm Size} = \text{Ln} (\text{Total Assets})$$

3.4 Data Analysis Method

3.4.1 Descriptive Statistical Analysis

Descriptive analysis is used to provide an overview of the research conditions variables in the form of tables, graphs and descriptions. The measurements used in this study are the average value, minimum value, maximum value, and standard deviation.

3.4.2 Classic Assumption Test

Classical assumption testing purposes to determine and test the feasibility of regression the model used in this study. This test is also intended to ensure that the resulting data are normally distributed and in the regression model used multicollinearity or heteroscedasticity.

3.4.2.1 Normality Test

The normality test determines whether independent variable and dependent variable, or both, are regularly distributed in the regression model. The regression model that is feasible is normally or almost normally distributed. In this normality test, there are two ways to detect whether the residuals are normally distributed or not, namely by graphical analysis and statistical tests. The test tool used is histogram analysis graphs and graphs of normal probability plots and statistical tests with Kolmogorov-Smirnov Z (1-sample KS). To detect data normality, it can also be done through statistical analysis, one of which can be seen through the Kolmogorov-Smirnov test (K-S). The K-S test is done by making a hypothesis:

H_0 = Residual data is normally distributed

H_a = Residual data is not normally distributed

The basis for decision making in the K-S test is as follows:

- 1) If the probability of the Z value of the K-S test is statistically significant then H_0 is rejected, which means the data are not normally distributed.
- 2) If the probability of the K-S test Z value is not statistically significant then H_0 is accepted, which means the data is normally distributed.

To detect the normality of the data can be tested with Kolmogorov-Smirnov with decision making:

- a. The value of $\text{sig} < 0.05$, the distribution is not normal.
- b. The value of $\text{sig} > 0.05$, the distribution is normal.

3.4.2.2 Multicollinearity Test

Multicollinearity testing is used to find out whether the regression model found a correlation among independent variables. A good regression model should not have a correlation among independent variables. One way to detect multicollinearity symptoms is to look at the tolerance value or Variance Inflation Factor (VIF). These measurements demonstrate how well one independent variable may be explained by the other independent variables. A common cut off value is a tolerance value of > 0.10 , which corresponds to a VIF of < 10 , it can be concluded that there are no symptoms of Multicollinearity between independent variables on the regression model.

3.4.2.3 Heteroscedasticity Test

The heteroscedasticity test aims to determine whether in the regression model there is an inequality of variance and residuals from one observation to another. A good regression model is the symptoms of heteroscedasticity is not

occur. Rachmania (2017) stated that to detect the existence or non-existence of heteroscedasticity can be carried out by looking at the scatterplot graph with the basis of analysis.

3.4.2.4 Autocorrelation Test

Autocorrelation test is carried out for the purpose of testing the relationship of time series data in a study in each time. Autocorrelation test uses the Durbin Watson test which if the significance value is more than 0.05 (> 0.05), it can be concluded that the data tested do not occur heteroscedasticity. Data can be classified as free from autocorrelation if the DW value is value is greater than the upper limit (d_u) and less than $4-d_l$ ($d_u < d < (4 - d_l)$).

3.4.3 Multiple Linear Regression

Multiple linear regression is a technique that measures the influence of some independent variables on dependent variables. In this study, the multiple linear regressions will be modified into moderated regression. Moderated Regression Analysis (MRA) is a multiple linear regression special application that is a regression equation consisting of interaction (multiply two or more independent variables). The multiple linear regression analysis is formulated as follow:

$$FD = a + \beta_1 MO + \beta_2 IO + \beta_3 BD + \beta_4 BC + \beta_5 Lev + \beta_6 OCF + \beta_7 FS + \epsilon$$

FD : Financial Distress

a : Constants displaying the value of Y when X = 0.

$\beta_1 - \beta_7$: Regression Coefficient

MO : Managerial Ownership

IO : Institutional Ownership

BD : Size of the Directors
BC : Size of the Board of directors
Lev : Leverage
OCF : Operating Cash Flow
FS : Firm Size
 ϵ : error

3.4.4 Coefficient Determination (Adj. R²)

Determination of coefficient tests is used to find out the high degree of influence between the independent variable and dependent variable. The value of coefficient determination near 1 shows that the independent variable has a greater influence on the dependent variable. The value of R^2 is between $0 < R^2 < 1$ means that the closer to one, the greater the ability of the independent variables to explain the dependent variable.

3.4.5 Hypothesis Test

Hypothesis testing is used to measure and analyze each independent variable (X) towards the dependent variable (Y). There are criteria for acceptance or rejection of the hypothesis in this test.

- If Sig. < 0.05 , then H_0 is rejected and H_a is accepted, meaning that there is an influence of the independent variable (X) on the dependent variable (Y).
- If Sig. > 0.05 , then H_0 is accepted and H_a is rejected, meaning that there is no influence of the independent variable (X) on the dependent variable (Y).

CHAPTER IV

RESULT AND ANALYSIS

4.1 Population and Sample

The population in this study are Regional Development Banks (BPD) listed on Financial Services Authority (OJK) in Indonesia year 2017-2021. The sample selection technique used is purposive sampling. Based on the criteria determined in the previous chapter, the samples that met criteria amounted to 25 Regional Development Banks. The following sampling process can be seen in Table 4.1:

Table 4.1
Research Sampling Criteria

No.	Notes	Total
1	Regional Development Banks (BPD) listed on Financial Services Authority (OJK)	25
2	Regional Development Banks which did not publish annual reports during 2017 – 2021	0
3	Regional Development Banks that did not have complete data for at least 5 years between 2017 – 2021	0
	Number of sample companies	25

Based on the sample criteria above, 25 regional development banks fulfilled the sample criteria. Hence, the total samples during the study period are 125 samples (25 x 5 years).

4.2 Descriptive Statistical Analysis

Descriptive statistical analysis is used to provide a description of data. In this study, descriptive statistical analysis was examined using the minimum value,

maximum value, average and standard deviation. The results of descriptive statistics can be seen in Table 4.2.

Table 4.2
Descriptive Statistical Analysis Result

Descriptive Statistics					
	N	Minimu m	Maximu m	Mean	Std. Deviation
FD	125	.530	2.032	1.32903	.299373
MO	125	.000	.083	.00139	.010451
IO	125	.750	1.000	.98060	.062204
BOD	125	1	7	4.40	1.063
BOC	125	1	6	3.29	.982
LEV	125	.960	10.716	6.26910	1.675071
OCF	125	-.138	1.437	.06357	.165664
FS	125	15.476	18.880	16.7745 0	.799004
Valid n (listwise)	125				

Source: IBM SPSS Statistics 26

Based on the results of descriptive statistical analysis on Table 4.2 above, the following conclusions can be drawn:

1. Table 4.2 shows financial distress data with a minimum value of 0.530, a maximum value of 2.032, a mean value of 1.32903, and a standard deviation value of 0.299373. Financial distress variable has a standard deviation value of 0.299373 which is lower than a mean value of 1.32903. The result shows a relatively small spread, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of financial distress variable have a relatively small distribution.

2. Table 4.2 shows managerial ownership data with a minimum value of 0.000, a maximum value of 0.083, a mean value of 0.0139, and a standard deviation value of 0.01451. Managerial ownership variable has a standard deviation value of 0.01451 which is higher than a mean value of 0.0139. The result shows a relatively large distribution, because the standard deviation value is greater than the mean value. Therefore, it can be concluded that the data of the managerial ownership have a relatively large distribution.
3. Table 4.2 shows institutional ownership data with a minimum value of 0.75, a maximum value of 1.0, a mean value of 0.9806, and a standard deviation value of 0.062204. The institutional ownership variable has a standard deviation value of 0.062204 which is lower than a mean value of 0.9806. The result shows a relatively small distribution, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of the institutional ownership have a relatively small distribution.
4. Table 4.2 shows the size of the directors data with a minimum value of 1, a maximum value of 7, a mean value of 4.40, and a standard deviation value of 1.063. The size of the directors variable has a standard deviation value of 1.063 which is lower than a mean value of 4.40. The result shows a relatively small distribution, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of the size the of directors have a relatively small distribution.
5. Table 4.2 shows the size of the board of directors data with a minimum value of 1, a maximum value of 6, a mean value of 3.29, and a standard deviation

value of 0.982. The size of the board of directors variable has a standard deviation value of 0.982 which is lower than a mean value of 3.29. The result shows a relatively small distribution, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of the size of board commissioners have a relatively small distribution.

6. Table 4.2 shows leverage data with a minimum value of 0.96, a maximum value of 10.716, a mean value of 6.26910, and a standard deviation value of 1.675071. The leverage variable has a standard deviation value of 1.675071 which is lower than a mean value of 6.26910. The result shows a relatively small distribution, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of the leverage have a relatively small distribution.
7. Table 4.2 shows operating cash flow data with a minimum value of -0.138, a maximum value of 1.437, a mean value of 0.06357, and a standard deviation value of 0.165664. The operating cash flow variable has a standard deviation value of 0.165664 which is higher than a mean value of 0.06357. The result shows a relatively large distribution, because the standard deviation value is greater than the mean value. Therefore, it can be concluded that the data of the operating cash flow have a relatively large distribution.
8. Table 4.2 shows firm size data with a minimum value 15.476, a maximum value of 18.880, a mean value of 16.77450, and a standard deviation value of 0.799004. The firm size variable has a standard deviation value of 0.799004 which is lower than a mean value of 16.77450. The result shows a relatively

small distribution, because the standard deviation value is smaller than the mean value. Therefore, it can be concluded that the data of the firm size have a relatively small distribution.

4.3 Classic Assumption Test

4.3.1 Normality Test

The normality test aims to determine whether the residuals have a normal distribution or not in the regression model. The normality test in this study uses the *One Sample Kolmogorov-Smirnov Test* by assessing the significance level of 5% (0.05). The followings are the results of the normality test for the entire study model:

Table 4.3

Normality Test Result

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		125
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.25394034
	Most Extreme Differences	
	Absolute	.057
	Positive	.057
	Negative	-.041
Test Statistic		.057
Asymp. Sig. (2-tailed)		.200

Source: IBM SPSS Statistics 26

Based on the data in Table 4.3 above, the normality test has the results of the Asymp. Sig. (2-tailed) with 0.200. It concludes that the residual data in the

regression model are normally distributed because the Asymp. Sig. (2-tailed) is above 0.05.

4.3.2 Multicollinearity Test

Multicollinearity test has purpose to measure the correlation or relationship between independent variables in the regression model. The absence of correlation between independent variables is a requirement for a good regression model. Analysis of the tolerance value and variance inflation factor (VIF) can be seen from the tolerance value > 0.10 or $VIF < 10$ to detect whether there is a multicollinearity in the regression model. The multicollinearity test results are as follows:

Table 4.4
Multicollinearity Test Result

Model	Collinearity Statistics	
	Tolerance	VIF
1		
(Constant)		
MO	.876	1.141
IO	.548	1.826
BOD	.499	2.004
BOC	.657	1.521
LEV	.664	1.505
OCF	.785	1.274
FS	.429	2.333

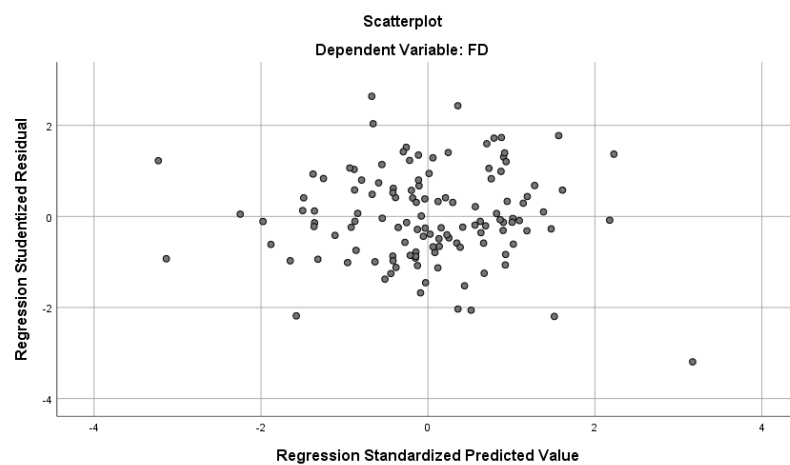
Source: IBM SPSS Statistics 26

Based on the results of the data Table 4.4 above, the VIF value in all independent variables is less than 10 ($VIF < 10$) and the tolerance value is above 0.1 (Tolerance > 0.1). These results can be interpreted that all independent variables in this study have no symptoms of multicollinearity.

4.3.3 Heteroscedasticity Test

Heteroscedasticity test has the aim of testing whether there is inequality between variants of the residuals from one observation to another in the regression model. The followings are the results of the heteroscedasticity test:

Figure 1
Heteroscedasticity Test Result



Source: IBM SPSS Statistics 26

Based on the Scatterplot graph in Figure 1, the points spread randomly and are scattered above and below the 0 Y-axis. The results indicate that there are no symptoms of heteroscedasticity in the regression model and it can be used for further analysis.

4.3.4 Autocorrelation Test

Autocorrelation test aims to test the existence of a relationship at each time in the time series data. In this study, autocorrelation test uses Durbin Watson test which can classified as free from autocorrelation if the DW value is greater than the

upper limit (du) and less than ($4-dl$). The following are the results of the autocorrelation test:

Table 4.5

Autocorrelation Test Result

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.764 ^a	.584	.555	.199596	1.859

Source: IBM SPSS Statistics 26

Based on the results of the data Table 4.6 above, the Durbin Watson value shows 1.859, which is compared with dl and du using a significance level of 0.05, with $n= 125$ and $k= 7$. It resulted in a value ($4-dl$) of 2.4083 and du of 1.8276. The Durbin Watson value of 1.859 is between the du and $4-dl$ thresholds. It can be concluded there is no autocorrelation problem in this study.

4.4 Multiple Linear Regression

The data analysis of this study uses multiple linear regression model which aims to test the effect of the independent variable on the dependent variable. Multiple linear regression tests the variables, such as managerial ownership, institutional ownership, size of the directors, size of the board of directors, leverage, operating cash flow, and firm size. Multiple linear regression testing in this study uses IBM SPSS Statistics 26. The results of multiple linear regression analysis are as follows:

Table 4.6**Multiple Linear Regression Result**

		Coefficients^a				
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
Model	B	Std. Error	Beta			
1	(Constan)	3.733	1.042		3.582	.000
	MO	-3.752	2.400	-.131	-1.563	.121
	IO	-1.065	.510	-.221	-2.088	.039
	BOD	.002	.031	.009	.078	.938
	BOC	-.043	.029	-.142	-1.469	.145
	LEV	-.090	.017	-.506	-5.255	.000
	OCF	-.692	.160	-.383	-4.324	.000
	FS	-.036	.045	-.097	-.813	.418

a. Dependent Variable: FD

Source: IBM SPSS Statistics 26

Based on Table 4.6 above, the multiple linear regression model obtained is as follows:

$$FD = 3.733 - 3.752MO - 1.065IO + 0.002BOD - 0.43BOC - 0.9LEV - 0.692OCF - 0.036FS$$

Based on the results of the regression model equation above, the conclusions that can be drawn are as follows:

1. The constant value is 3.733. This result can be interpreted that if the value of all independent variables is 0, then the value of financial distress will be 3.733.
2. The regression coefficient value of managerial ownership is -3.752. The result can be interpreted that the value of managerial ownership variable increases by

one unit, then the financial distress will decrease 3.752 with the assumption that all other independent variables are constant.

3. The regression coefficient value of institutional ownership is -1.065. The result can be interpreted that the value of institutional ownership variable increases by one unit, then the financial distress will decrease 1.065 with the assumption that all other independent variables are constant.
4. The regression coefficient value of the size of directors is 0.002. The result can be interpreted that the value of the size of directors variable increases by one unit, then the financial distress will increase 0.002 with the assumption that all other independent variables are constant.
5. The regression coefficient value of the size of board the directors is – 0.43. The result can be interpreted that the value of the size of the board of directors variable increases by one unit, then the financial distress will decrease 0.43 with the assumption that all other independent variables are constant.
6. The regression coefficient value of leverage is -0.9. The result can be interpreted that the value of leverage variable increases by one unit, then the financial distress will decrease 0.9 with the assumption that all other independent variables are constant.
7. The regression coefficient value of operating cash flow is -0.692. The result can be interpreted that the value of operating cash flow variable increases by one unit, then the financial distress will decrease 0.692 with the assumption that all other independent variables are constant.

8. The regression coefficient value of firm size is -0.036. The result can be interpreted that the value of firm size variable increases by one unit, then the financial distress will decrease 0.036 with the assumption that all other independent variables are constant.

4.5 Coefficient Determination (Adj. R2)

Coefficient determination test aims to measure the ability of model in predicting the independent variable in this study. The following the result of the coefficient determination analysis test can be seen in Table 4.8 below:

Table 4.7
Coefficient Determination Result
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764 ^a	.584	.555	.199596

Source: IBM SPSS Statistics 26

The calculation of the coefficient determination resulted Adjusted R Square of 0.555. The results of this calculation show that the degree of variation in the independent variables in influencing the regression equation model is 55.5% and the remaining 44.5% is influenced by other factors that are not included in the regression model.

4.6 Hypothesis Test

Table 4.8

Hypothesis Test Result

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.733	1.042		3.582	.000
	MO	-3.752	2.400	-.131	-1.563	.121
	IO	-1.065	.510	-.221	-2.088	.039
	BOD	.002	.031	.009	.078	.938
	BOC	-.043	.029	-.142	-1.469	.145
	LEV	-.090	.017	-.506	-5.255	.000

a. Dependent Variable: FD

Source: IBM SPSS Statistics 26

1. First hypothesis analysis

The first hypothesis in this study is managerial ownership has a negative effect on the financial distress. Based on Table 4.8 above, the relationship between the managerial ownership and the financial distress is -3.752 (B= -3.752) and a significance value of 0.121. At a significance value of $\alpha = 5\%$; the regression coefficient is $\rho = 0.121 > 0.05$. Based on the result of hypothesis testing above, the result of the first hypothesis test is insignificant. It can be concluded that managerial ownership does not affect on the financial distress. Therefore, **the first hypothesis of this study cannot be supported.**

2. Second hypothesis analysis

The second hypothesis is institutional ownership has a negative effect on financial distress in this study. Based on Table 4.8 above, the relationship between institutional ownership and financial distress is -1.065 (B= -1.065) and a

significance value of 0.039. At a significance value of $\alpha = 5\%$; the regression coefficient is $\rho = 0.039 < 0.05$. Based on the result of hypothesis testing above, it can be concluded that institutional ownership has a negative effect on the financial distress. Therefore, **the second hypothesis of this study can be supported.**

3. Third hypothesis analysis

The third hypothesis in this study is the size of directors has a negative effect on financial distress. Based on Table 4.8 above, the relationship between the size of directors and the financial distress is 0.002 (B= 0.002) and a significance value is 0.938. At a significance value of $\alpha = 5\%$; the regression coefficient is $\rho = 0.938 > 0.05$. Based on the result of hypothesis testing above, the result of the third hypothesis test is insignificant. It can be concluded that the size of directors does not affect on the financial distress. Therefore, **the third hypothesis of this study cannot be supported.**

4. Fourth hypothesis analysis

The fourth hypothesis in this study is the size of board of directors has a negative effect on financial distress. Based on Table 4.8 above, the relationship between the size of board of directors and the financial distress is -0.043 (B= -0.043) and a significance value is 0.145. At a significance value of $\alpha = 5\%$; the regression coefficient is $\rho = 0.145 > 0.05$. Based on the result of hypothesis testing above, the result of the fourth hypothesis test is insignificant. It can be concluded that the size of board of directors does not affect on the financial distress. Therefore, **the fourth hypothesis of this study cannot be supported.**

5. Fifth hypothesis analysis

The fifth hypothesis is leverage has a positive effect on financial distress in this study. Based on Table 4.8 above, the relationship between the leverage and the financial distress is -0.09 (B= -0.09) and the significance value is 0.00. At a significance value of $\alpha = 5\%$; the regression coefficient is $\rho = 0.00 < 0.05$. Based on the result of hypothesis testing above, it can be concluded that leverage has a negative effect on the financial distress. Therefore, **the fifth hypothesis of this study cannot be supported.**

4.7 Discussions

4.7.1 The Effect of Managerial Ownership on Financial Distress

The p -value of this study is 0.121 which is above of 0.05 and the regression coefficient is -3.752. The result of the study is the managerial ownership does not affect the financial distress. The result is not support for the first hypothesis which indicates that the higher or lower amount of the managerial ownership cannot affect the occurrence of financial distress.

Based on the agency theory, managerial ownership is able to prioritize the interests of management and shareholders by making the right decisions. Managerial ownership is shares owned by the management of the company. The result of this study reflects that the large or small amount of share ownership owned by manager does not guarantee the avoidance of the possibility financial distress because managerial performance is not considered by the amount of managerial ownership. Large or small amount of managerial share ownership cannot affect the financial distress of the company because it is used to attract investor. In this study,

there are only a few data regarding managerial ownership in the number of study years conducted on the companies sampled.

The implication of the result is managerial ownership in regional development banks in Indonesia is still relatively small so that the composition of managerial share ownership has no significant effect on financial distress. It leads to not optimal performance from managerial share ownership so that the company cannot avoid financial distress. It happened because there are still many regional development banks in Indonesia that do not implement a policy to own company shares for the management of the company.

This result is in line with the research of Arifin (2020) and Mappadang (2021) that prove that the managerial ownership has no significant effect on the financial distress. According to Witiastuti & Suryandari (2016), the managerial ownership has no significant influence on the possibility of the financial distress.

4.7.2 The Effect of Institutional Ownership on Financial Distress

The ρ -value of this study is 0.039 which is lower than 0.05 and the regression coefficient is -1.065. The result of this study is the institutional ownership has a negative effect on financial distress. It indicates that the higher of institutional ownership will decrease the possibility of financial distress or the lower of institutional ownership will increase the possibility of financial distress.

Based on the agency theory, institutional ownership can control and monitor the agents in carrying out their operational activities. Institutional ownership is the proportion of company shares owned by institutions. The existence of institutional ownership is expected to increase company performance to prevent the occurrence

of financial distress by monitoring the company's operational activities effectively. In this study, the results state that the institutional ownership has a negative effect on the financial distress, which indicates that the existence of share ownership by institutions can monitor the management in carrying out the company's operational activities. The large number of share ownership by institutions can control the company's management performance to be optimal and effective in making decisions for the company to avoid financial distress.

The implication of the results of this study in regional development banks as the service and investment sectors is the higher of institutional ownership decreases the possibility of financial distress, while the lower of institutional ownership increases the financial distress. It signifies that the large amount of institutional ownership does ensure that it can reduce financial distress. Institutional shareholders in regional development banks in Indonesia should be able to control management in managing the company so that can reduce the financial distress.

This result is consistent with at the research of Rachmania (2017) that stated that institutional ownership has a negative effect on the financial distress. The previous research by Pramudena (2017) also concluded that the institutional ownership has a negative effect on the financial distress.

4.7.3 The Effect of Size of The Directors on Financial Distress

The p -value of this study is 0.938 which is above of 0.05 and the regression coefficient is 0.002. The result of this study shows that the size of the directors does not affect towards the financial distress. It shows that the large or small of the size of the directors has no significant effect on the financial distress.

Based on the principal of the agency theory which refers to the directors being responsible for making policies within the company in minimizing the agency problem. In this study, the size of the directors at regional development banks in Indonesia has an average of 4.40 of the board of members in each company with a maximum of 7 of the board members. It leads long decision making from the directors so that the decisions made become ineffective which can affect company's performance not optimal. The size of the directors does not guarantee to affect the occurrence of financial distress because the ability of the directors to manage the company has an important role in determining whether or not financial distress occurs.

The implication of the results is the higher or lower of the size of the directors in the regional development banks in Indonesia does not affect the occurrence of financial distress. The large or small size of the directors in the regional development banks in Indonesia cannot affect the occurrence of financial distress but it is caused by the ability of the directors to manage the company. The ability of the directors to manage the company's operations effectively is important in influencing whether or not financial distress occurs.

The result is compatible with the previous research by Agustina & Anwar (2021) that concluded that the size of the directors has no significant effect towards the financial distress. According to Lestari & Wahyudi (2021) the size of the directors does no impact towards the possibility financial distress.

4.7.4 The Effect of Size of The Board of Directors on Financial Distress

The p -value of this study is 0.145 which is above of 0.05 and the regression coefficient is -0.043. The result of this study shows that the size of the board of directors does not affect on the financial distress. It indicates that the large or small of the size of the board of directors has no significant effect on the financial distress.

Based on the agency theory, the size of the board of commissioner has a role to controlling the operational activities of company by the management. The composition of the board of directors is organized without considering their capability and integrity so they cannot provide recommendations to management. In this study, large or small number of sizes of the board of directors does not affect the supervisory and control functions carried out by the board of directors and makes it ineffective in carrying out its functions. This situation causes operational activities to run ineffectively. Therefore, the supervision and control which is the responsibility of the members of the board of directors is ineffective.

It can be implied that the size of the board of directors of regional development banks in Indonesia cannot be determined by greater or smaller of the size the board of directors. The number of board of directors at regional development banks cannot be a reference as an influence on the occurrence of financial distress because the ability of the directors to control management in managing the company determines whether or not there is an impact on financial distress. Therefore, the number of board of directors is only a formality to monitor the policies made by management because the existence or not of an influence on

financial distress is determined by the ability of the board of directors to oversee management performance.

The result of this study is supported by the previous research by Rachmania (2017) that stated that size of the board of directors does not affect the financial distress. According to Pramudena (2017), the size of the board of directors has no significant impact on the possibility financial distress.

4.7.5 The Effect of Leverage on Financial Distress

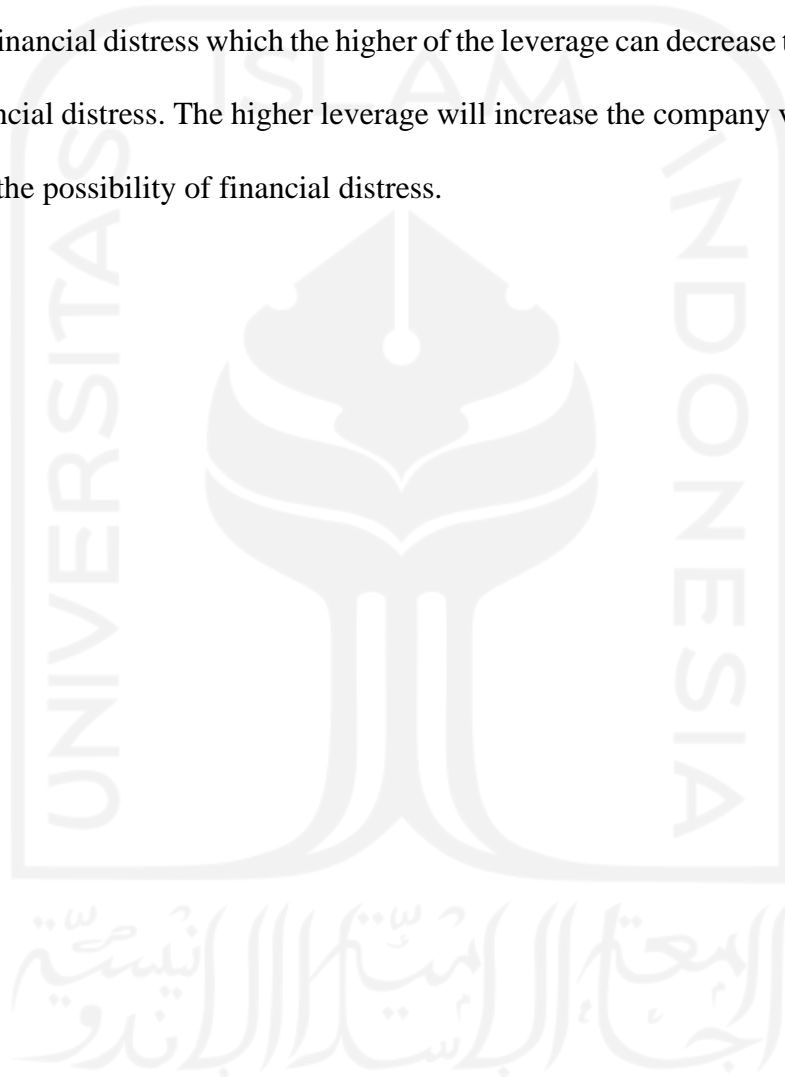
The ρ -value of this study is 0.000 which is lower than 0.05 and the regression coefficient is -0.090. The result of this study shows that leverage has a negative effect on the financial distress which indicates that the higher of the leverage will decrease the possibility of financial distress. It indicates that the result does not support the fifth hypothesis.

Based on the agency theory which states that high leverage is used to increase the company's operational activities which makes a larger proportion of debts in its capital structure, so it has higher agency costs. It emphasizes that the use of leverage by companies is to maintain the sustainability of the company's business. On the other hand, a high leverage ratio can increase the value of the company so that it can reduce the possibility of financial distress.

The implication of the result of this study is the regional development banks in Indonesia that has higher leverage will decrease the occurrence of financial distress. It proves that regional development banks in Indonesia that use debt to finance all company assets to increase company value which aims to increase profits so as to prevent the financial distress. In addition, the banking system in

regional development banks applies customer savings funds into debt or credit posts, which causes the company's leverage ratio to be high.

The result of this study is supported by the previous research by Masdupi et al. (2018) and Oktasari (2020) that stated that the leverage ratio has a negative effect on the financial distress which the higher of the leverage can decrease the possibility on financial distress. The higher leverage will increase the company value that will reduce the possibility of financial distress.



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the results of the analysis and discussion, the research conclusions are as follows:

1. The result of this study cannot prove that managerial ownership has a negative effect on financial distress. It concluded that the managerial ownership does not affect on the financial distress. In this study, the majority of regional development banks (BPD Banks) did not implement a share ownership policy by management and only a few banks implemented it with a small proportion. Therefore, the first hypothesis cannot be supported.
2. The result of this study can prove that the institutional ownership has a negative effect on the financial distress. It signifies that the higher of institutional ownership will reduce the possibility of the financial distress. In this study, the control of management by the large proportion of institutional ownership is able to overcome the possibility of agency conflicts so as to avoid financial distress. Therefore, the second hypothesis can be supported.
3. The result of this study shows that the size of the directors does not affect on the financial distress. It means that the large or small of the size of the directors has no significant effect on the financial distress. The ability of the directors to carry out company management is an important aspect to avoid the financial distress. Therefore, the third hypothesis cannot be supported.

4. The result of this study is the size of the board of directors does not affect on the financial distress. It indicates that the size of the board of directors does not influence the financial distress. The board of directors carries out its supervisory and control function without depending on the number of its members to assess its effectiveness. Therefore, the result cannot prove that the size of the board of directors has a negative effect on financial distress.
5. The result of this study is the leverage has a negative effect on the financial distress. The higher leverage will reduce the possibility of the financial distress. Regional development banks apply customer savings funds into debt or credit which will increase company value so that can avoid the financial distress. Therefore, the fifth hypothesis cannot be supported.

5.2 Study Limitations

In this study, there are several limitations that may affect the results of the study, as follows:

1. In this study, the data collection method is secondary data through regional development banks websites, hence the data obtained is not varied.
2. Several regional development banks websites are still difficult to access because there are errors that make it difficult to download financial statements.

5.3 Recommendations

The recommendations given for further research are as follows:

1. Future research is expected to add other potential external variables such as rupiah exchange rate, inflation, interest rate, and others.

2. For further research, the calculation of financial distress using the Altman Z-Score method must be careful in categorizing between service companies and trading companies because there are different formulas.
3. The results of this study are expected to be considered by regional development banks (BPD Banks) in Indonesia to improve services on the website to make it easier to access those related to the banking system.



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APPENDICES

APPENDIX 1

Company Samples

Company Name
Bank BPD Aceh
Bank BPD Bali
Bank BPD Bengkulu
Bank BPD DIY
Bank BPD Jambi
Bank BPD Jateng
Bank DKI
Bank Jabar
Bank Jatim
Bank Kalbar
Bank Kalsel
Bank Kalteng
Bank Kaltimara
Bank Lampung
Bank Maluku
Bank Nagari
Bank NTB Syariah
Bank NTT
Bank Papua
Bank Sulselbar
Bank Sulteng
Bank Sultra
Bank SulutGo
Bank SumselBabel
Bank Sumut

APPENDIX 2

Current Assets and Current Liabilities Data

Companies Name	Current Assets					Current Liabilities				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	21.989.048	22.422.851	24.418.362	24.744.072	27.394.739	19.789.056	20.250.501	21.894.193	22.018.628	24.512.303
Bank BPD Bali	21.787.772	22.084.550	24.283.948	25.731.842	28.472.644	18.795.904	18.975.115	21.114.986	22.866.436	25.554.102
Bank BPD Bengkulu	5.686.914	5.711.466	6.486.505	7.493.336	7.942.807	5.142.205	5.119.237	5.734.062	6.583.036	6.956.969
Bank BPD DIY	10.427.492	11.731.843	13.385.810	14.351.919	15.317.894	9.007.184	10.059.683	11.361.010	12.333.784	13.064.537
Bank BPD Jambi	9.397.150	10.747.433	11.524.737	11.137.934	12.875.337	8.241.115	9.395.865	10.050.692	9.595.064	11.166.406
Bank BPD Jateng	59.647.202	64.746.557	69.569.889	70.688.723	77.495.941	52.342.832	56.367.934	61.658.428	64.604.369	71.321.360
Bank DKI	49.447.431	50.826.199	53.194.596	60.700.929	68.233.132	38.945.917	41.212.321	45.144.046	49.367.751	55.087.663
Bank Jabar	109.820.793	114.809.863	117.701.451	134.167.980	151.010.754	96.142.832	97.327.186	97.129.390	111.376.527	125.793.707
Bank Jatim	50.094.097	61.203.261	75.157.380	81.465.633	98.790.721	42.405.729	53.491.619	65.659.392	72.983.149	89.157.503
Bank Kalbar	15.821.234	16.667.700	17.927.582	18.033.055	22.655.449	13.490.887	13.587.614	14.368.675	14.478.412	18.519.037
Bank Kalsel	11.579.664	12.876.862	13.611.510	14.475.444	16.036.120	9.235.662	10.582.652	10.862.435	11.420.473	12.696.747
Bank Kalteng	6.018.740	7.650.999	8.848.548	9.891.297	11.291.500	4.798.973	6.301.480	7.455.432	8.467.134	9.587.328
Bank Kaltimara	21.289.810	24.314.997	28.215.657	28.493.812	31.437.774	18.089.296	21.396.945	24.846.088	25.732.665	28.425.981
Bank Lampung	5.861.313	7.236.135	7.852.060	7.805.871	10.398.875	5.067.180	6.184.890	6.973.123	6.856.984	9.298.713
Bank Maluku	6.075.326	6.587.169	7.595.169	8.112.604	8.637.057	5.382.868	5.727.179	6.553.446	7.007.919	7.397.137
Bank Nagari	20.710.087	22.514.451	23.661.191	24.714.854	27.141.566	17.235.587	18.857.139	19.513.263	19.910.328	21.736.331
Bank NTB Syariah	8.671.339	6.855.680	8.446.747	10.201.848	10.964.187	7.454.348	5.595.684	7.075.200	7.676.506	8.432.181
Bank NTT	10.076.329	10.891.955	14.127.267	14.249.132	15.035.444	8.199.465	8.871.917	12.236.265	12.286.533	13.035.989
Bank Papua	19.576.680	21.931.392	27.694.015	25.314.783	25.579.302	17.717.214	19.087.134	24.667.975	22.668.134	22.597.401
Bank Sulselbar	17.314.529	20.318.556	23.250.858	24.504.405	27.133.015	13.691.221	16.349.095	18.664.972	19.799.420	22.266.780
Bank Sulteng	5.156.619	5.937.296	7.455.273	8.267.301	10.904.901	4.551.014	5.203.245	6.568.709	7.192.010	9.680.598
Bank Sultra	5.953.915	6.775.302	9.669.273	10.277.626	11.747.243	5.241.253	5.911.541	8.351.388	9.153.159	10.490.024
Bank SulutGo	13.702.910	14.025.897	14.739.158	15.895.317	17.942.061	12.605.326	12.798.406	13.517.270	14.085.234	16.866.589
Bank SumselBabel	20.694.567	23.911.111	26.344.583	26.397.978	30.202.457	18.217.753	21.495.092	23.720.621	24.105.240	27.259.747
Bank Sumut	27.824.224	27.003.765	30.614.192	32.415.178	36.918.381	23.468.094	22.420.541	25.388.028	26.691.083	30.923.005

APPENDIX 3

Working Capital and Retained Earnings Data

Companies Name	Working Capital					Retained Earnings				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	2.199.992	2.172.350	2.524.169	2.725.444	2.882.436	1.229.543	1.367.132	1.513.163	1.534.110	1.659.710
Bank BPD Bali	2.991.868	3.109.435	3.168.962	2.865.406	2.918.542	1.585.159	1.650.129	1.736.663	1.442.372	1.521.886
Bank BPD Bengkulu	544.709	592.229	752.443	910.300	985.838	466.878	502.874	579.535	642.193	676.684
Bank BPD DIY	1.420.308	1.672.160	2.024.800	2.018.135	2.253.357	639.422	707.130	821.216	726.885	826.381
Bank BPD Jambi	1.156.035	1.351.568	1.474.045	1.542.870	1.708.931	603.468	309.386	889.338	1.011.599	1.156.074
Bank BPD Jateng	7.304.370	8.378.623	7.911.461	6.084.354	6.174.581	2.406.510	2.953.213	3.286.545	3.078.487	3.617.027
Bank DKI	10.501.514	9.613.878	8.050.550	11.333.178	13.145.469	2.501.591	3.088.245	3.665.392	3.336.296	3.889.459
Bank Jabar	13.677.961	17.482.677	20.572.061	22.791.453	25.217.047	5.282.711	5.955.385	6.634.450	6.381.857	7.471.750
Bank Jatim	7.688.368	7.711.642	9.497.988	8.482.484	9.633.218	2.977.508	3.577.430	4.270.070	7.092.646	5.824.847
Bank Kalbar	2.330.347	3.080.086	3.558.907	3.554.643	4.136.412	1.361.724	1.554.300	1.546.857	1.642.932	1.841.471
Bank Kalsel	2.344.002	2.294.210	2.749.075	3.054.971	3.339.373	603.266	516.785	598.705	590.607	662.482
Bank Kalteng	1.219.767	1.349.519	1.393.116	1.424.163	1.704.172	514.902	575.462	601.251	608.845	615.884
Bank Kaltimara	3.200.514	2.918.052	3.369.569	2.761.147	3.011.793	1.082.254	500.333	514.470	613.142	735.293
Bank Lampung	794.133	1.051.245	878.937	948.887	1.100.162	615.628	671.825	741.369	799.646	866.368
Bank Maluku	692.458	859.990	1.041.723	1.104.685	1.239.920	562.752	718.296	869.585	942.296	1.076.765
Bank Nagari	3.474.500	3.657.312	4.147.928	4.804.526	5.405.235	1.040.710	1.174.314	1.311.759	1.345.591	1.523.183
Bank NTB Syariah	1.216.991	1.259.996	1.371.547	2.525.342	2.532.006	595.813	628.675	686.190	696.203	738.474
Bank NTT	1.876.864	2.020.038	1.891.002	1.962.599	1.999.455	565.400	600.761	617.772	515.793	537.308
Bank Papua	1.859.466	2.844.258	3.026.040	2.646.649	2.981.901	671.809	963.710	1.003.961	564.897	779.657
Bank Sulselbar	3.623.308	3.969.461	4.585.886	4.704.985	4.866.235	1.801.207	2.069.015	2.330.821	2.509.034	1.832.880
Bank Sulteng	605.605	734.051	886.564	1.075.291	1.224.303	351.911	423.685	423.685	500.909	614.383
Bank Sultra	712.662	863.761	1.317.885	1.124.467	1.257.219	184.945	216.886	251.477	260.031	271.542
Bank SulutGo	1.097.584	1.227.491	1.221.888	1.810.083	1.075.472	472.831	573.294	541.269	433.778	426.124
Bank SumselBabel	2.476.814	2.416.019	2.623.962	2.292.738	2.942.710	1.135.312	1.313.958	1.509.576	1.534.518	1.803.745
Bank Sumut	4.356.130	4.583.224	5.226.164	5.724.095	5.995.376	977.091	890.700	967.422	974.008	1.108.091

APPENDIX 4

Total Assets, Total Liabilities, and Total Equity Data

Companies Name	Total Assets					Total Liabilities					Total Equity				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	22.612.007	23.059.159	25.121.063	25.480.963	28.170.826	2.859.005	3.453.363	3.124.398	2.430.570	2.729.176	2.169.482	2.217.946	2.447.168	2.481.831	2.843.682
Bank BPD Bali	22.150.905	22.454.491	24.655.732	26.109.365	28.910.973	18.881.996	19.060.035	21.154.012	22.904.658	25.591.631	3.268.909	3.394.457	3.501.720	3.204.707	3.319.342
Bank BPD Bengkulu	5.865.005	5.893.388	6.678.350	7.724.522	8.167.684	5.151.824	5.124.055	5.820.632	6.637.439	7.044.149	713.182	769.333	857.718	1.087.083	1.123.535
Bank BPD DIY	10.695.373	11.993.576	13.652.980	14.707.047	15.765.333	9.048.451	10.085.779	11.373.366	12.355.764	13.096.673	1.646.922	1.907.797	2.279.614	2.351.283	2.668.660
Bank BPD Jambi	9.526.849	10.895.787	11.716.841	11.389.694	13.116.343	8.242.714	9.435.035	10.092.500	9.625.064	11.181.236	1.284.134	1.460.751	1.624.341	1.764.631	1.935.108
Bank BPD Jateng	61.466.427	66.844.677	71.860.453	73.106.134	80.348.339	54.816.028	60.017.840	64.003.629	65.042.465	71.580.907	6.650.399	6.826.837	7.856.824	8.063.669	8.767.432
Bank DKI	51.417.045	53.027.916	55.600.923	63.046.131	70.741.743	39.762.304	41.605.888	45.163.704	50.044.688	55.791.473	8.203.337	8.586.431	9.292.406	9.183.671	9.700.587
Bank Jabar	114.980.168	120.191.387	123.536.474	140.934.002	158.356.097	98.820.526	104.035.920	105.920.991	122.676.832	137.955.374	10.104.975	11.285.315	12.042.629	12.005.800	13.084.033
Bank Jatim	51.518.681	62.689.118	76.756.313	83.619.452	100.722.330	43.702.607	54.217.182	67.734.755	73.614.504	89.812.791	7.816.074	8.471.936	9.021.558	10.004.948	10.910.539
Bank Kalbar	16.575.747	17.457.762	18.494.496	18.608.650	23.236.975	14.242.315	14.694.950	15.610.234	15.508.608	19.842.069	2.333.432	2.762.811	2.884.262	3.100.042	3.394.906
Bank Kalsel	11.881.754	13.182.395	13.954.838	14.852.362	16.535.442	9.469.939	10.614.222	10.957.677	11.733.834	13.190.281	1.771.595	1.771.434	1.894.847	1.856.103	1.979.329
Bank Kalteng	6.226.933	7.847.306	9.065.881	10.154.159	11.569.477	4.835.573	6.365.701	7.510.877	8.546.138	9.702.998	1.391.360	1.508.605	1.555.004	1.608.021	1.866.478
Bank Kaltimara	22.696.975	25.344.194	29.034.027	30.231.839	33.132.942	18.182.190	21.469.421	25.038.872	25.824.985	28.582.281	4.514.786	3.874.773	3.995.155	4.406.854	4.550.661
Bank Lampung	5.979.450	7.348.167	7.972.990	8.072.135	10.703.980	5.170.097	6.526.323	7.066.849	6.948.409	9.387.970	809.354	821.844	906.140	1.123.725	1.316.009
Bank Maluku	6.369.510	6.877.907	7.861.601	8.409.165	8.949.078	5.476.355	5.809.494	6.625.876	7.097.205	7.534.737	893.155	1.068.413	1.235.725	1.311.959	1.414.341
Bank Nagari	21.371.464	23.190.691	24.433.596	25.559.008	27.982.085	17.560.536	19.051.763	19.675.587	20.189.001	22.140.296	2.683.687	2.900.347	3.149.766	3.207.856	3.416.642
Bank NTB Syariah	8.864.392	7.038.647	8.640.305	10.419.759	11.215.180	7.591.223	5.703.202	7.239.946	9.022.667	9.759.810	1.273.169	1.335.445	1.400.359	1.397.091	1.455.370
Bank NTT	10.379.174	11.215.954	14.520.409	14.720.355	15.666.743	8.569.715	9.277.181	12.527.058	12.654.342	13.358.535	1.809.460	1.938.772	1.993.351	2.066.013	2.308.208
Bank Papua	20.400.813	22.456.759	28.183.686	25.876.101	26.122.559	17.725.809	19.285.891	24.745.539	22.759.105	22.691.147	2.675.004	3.170.867	3.438.147	3.116.996	3.431.412
Bank Sulselbar	17.545.644	20.576.423	23.541.662	24.830.410	27.784.973	14.271.238	16.889.095	19.410.805	20.485.210	22.715.081	2.700.284	3.034.585	3.443.748	3.686.519	4.231.714
Bank Sulteng	5.259.524	6.042.682	7.608.507	8.349.647	11.011.187	4.587.011	5.205.885	6.587.068	7.238.049	9.748.597	672.513	836.797	1.021.439	1.111.598	1.252.590
Bank Sultra	6.161.553	7.050.027	10.003.054	10.597.047	12.056.269	5.245.593	5.994.270	8.769.641	9.262.353	10.590.405	915.960	1.055.757	1.233.414	1.334.694	1.465.864
Bank SulutGo	14.075.392	14.429.287	15.147.947	16.406.431	18.472.196	12.629.450	12.811.590	13.529.596	14.885.234	16.895.519	1.445.942	1.617.696	1.618.351	1.521.197	1.576.677
Bank SumselBabel	22.145.410	25.672.240	27.983.090	28.058.169	31.626.365	19.168.354	22.402.196	24.481.486	24.441.787	27.690.490	2.977.056	3.270.044	3.501.604	3.616.382	3.935.875
Bank Sumut	28.931.824	28.121.107	31.736.073	33.530.317	38.012.388	23.965.600	22.960.782	26.138.888	27.562.121	31.811.045	2.994.537	3.173.606	3.501.065	3.887.791	4.114.177

APPENDIX 5

EBIT and Outstanding Stocks Data

Companies Name	EBIT					Outstanding Stocks				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	532.687	540.281	545.850	420.076	502.172	102.625.993	104.229.535	106.179.535	107.954.317	110.098.743
Bank BPD Bali	705.818	733.152	771.227	697.561	721.035	1.741.992	1.788.492	1.822.300	1.823.300	1.861.250
Bank BPD Bengkulu	138.516	107.626	147.014	158.110	116.548	23.408	27.728	30.114	45.116	45.116
Bank BPD DIY	298.058	311.321	368.230	312.758	346.000	1.000.000	1.000.000	1.365.107	1.559.398	1.699.398
Bank BPD Jambi	325.165	314.185	320.724	368.521	406.791	681.778	719.469	746.133	772.537	775.037
Bank BPD Jateng	1.646.603	1.733.766	1.351.504	1.540.480	1.737.813	2.960.661	3.134.187	3.643.739	3.643.739	3.838.039
Bank DKI	966.809	1.073.665	1.103.006	797.336	913.989	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159
Bank Jabar	1.631.965	1.937.044	1.977.962	2.168.028	2.587.582	9.696.291.166	9.838.787.161	9.838.787.161	9.838.787.161	9.838.787.161
Bank Jatim	1.636.941	1.753.698	1.864.133	1.507.367	1.937.974	14.974.591.382	14.978.134.982	15.002.370.582	15.015.498.082	15.015.498.082
Bank Kalbar	477.556	488.472	508.482	540.090	517.374	961.694	1.199.694	1.326.694	1.417.694	1.517.494
Bank Kalsel	224.177	180.304	221.598	270.885	282.868	4.715.244	5.027.245	5.127.245	5.307.245	5.367.245
Bank Kalteng	283.716	306.347	294.040	302.452	319.941	92.886	92.886	94.013	98.037	105.175
Bank Kaltimara	642.476	597.585	343.308	362.754	417.609	642.006	651.394	660.909	666.835	697.672
Bank Lampung	182.622	183.040	207.514	237.982	225.360	21.221.064	22.587.989	24.287.989	29.067.552	38.041.955
Bank Maluku	211.193	223.222	233.016	239.422	272.939	311.450	382.025	408.090	408.090	424.590
Bank Nagari	408.084	461.504	504.817	450.718	510.971	1.547.985	1.625.285	1.687.697	1.716.847	1.748.498
Bank NTB Syariah	226.127	53.360	224.376	176.165	188.731	68.804.962	74.254.962	75.764.962	77.489.978	78.031.578
Bank NTT	341.638	342.070	323.514	323.944	302.510	121.089.835	128.459.835	132.777.335	148.938.498	173.545.756
Bank Papua	144.385	283.793	342.624	457.266	447.293	381.570	406.189	460.160	510.019	510.419
Bank Sulselbar	723.977	802.245	829.543	820.900	854.201	886.670	961.160	1.098.410	1.143.160	2.137.296
Bank Sulteng	138.378	152.398	152.398	233.041	273.489	2.578.090	3.137.789	3.665.077	4.269.900	4.269.900
Bank Sultra	249.923	296.227	335.873	341.690	353.624	372.370.381.934	429.891.524.318	513.810.627.392	5.632.208.960	5.802.470.697
Bank SulutGo	391.412	346.509	229.010	256.636	231.509	8.158.137	8.158.137	9.456.914	9.939.134	10.244.134
Bank SumselBabel	411.104	447.557	489.097	551.609	625.136	934.141	963.021	995.030	1.048.705	1.094.440
Bank Sumut	843.146	673.542	731.020	651.347	762.172	124.052.538	139.375.707	184.895.923	205.486.522	205.486.522

APPENDIX 6

Z-Score Data

Companies Name	X1					X2					X3					X4					Z-Score				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	0,097	0,094	0,100	0,107	0,102	0,054	0,059	0,060	0,060	0,059	0,024	0,023	0,022	0,016	0,018	0,050	0,050	0,047	0,047	0,043	1,027	1,021	1,051	1,058	1,029
Bank BPD Bali	0,135	0,138	0,129	0,110	0,101	0,072	0,073	0,070	0,055	0,053	0,032	0,033	0,031	0,027	0,025	0,095	0,094	0,086	0,080	0,073	1,433	1,466	1,373	1,163	1,078
Bank BPD Bengkulu	0,093	0,100	0,113	0,118	0,121	0,080	0,085	0,087	0,083	0,083	0,024	0,018	0,022	0,020	0,014	0,045	0,054	0,052	0,051	0,048	1,075	1,117	1,224	1,235	1,208
Bank BPD DIY	0,133	0,139	0,148	0,137	0,143	0,060	0,059	0,060	0,049	0,052	0,028	0,026	0,027	0,021	0,022	0,111	0,099	0,120	0,126	0,130	1,369	1,385	1,476	1,337	1,392
Bank BPD Jambi	0,121	0,124	0,126	0,135	0,130	0,063	0,028	0,076	0,089	0,088	0,034	0,029	0,027	0,032	0,031	0,083	0,076	0,074	0,080	0,069	1,319	1,180	1,334	1,479	1,423
Bank BPD Jateng	0,119	0,125	0,110	0,083	0,077	0,039	0,044	0,046	0,042	0,045	0,027	0,026	0,019	0,021	0,022	0,054	0,052	0,057	0,056	0,054	1,144	1,195	1,057	0,884	0,853
Bank DKI	0,204	0,181	0,145	0,180	0,186	0,049	0,058	0,066	0,053	0,055	0,019	0,020	0,020	0,013	0,013	0,111	0,107	0,098	0,089	0,079	1,742	1,627	1,401	1,530	1,568
Bank Jabar	0,119	0,145	0,167	0,162	0,159	0,046	0,050	0,054	0,045	0,047	0,014	0,016	0,016	0,015	0,016	0,025	0,024	0,023	0,020	0,018	1,051	1,249	1,399	1,333	1,327
Bank Jatim	0,149	0,123	0,124	0,101	0,096	0,058	0,057	0,056	0,085	0,058	0,032	0,028	0,024	0,018	0,019	0,086	0,069	0,055	0,051	0,042	1,471	1,254	1,214	1,117	0,989
Bank Kalbar	0,141	0,176	0,192	0,191	0,178	0,082	0,089	0,084	0,088	0,079	0,029	0,028	0,027	0,029	0,022	0,068	0,082	0,085	0,091	0,076	1,455	1,721	1,809	1,832	1,656
Bank Kalsel	0,197	0,174	0,197	0,206	0,202	0,051	0,039	0,043	0,040	0,040	0,019	0,014	0,016	0,018	0,017	0,124	0,118	0,117	0,113	0,102	1,717	1,486	1,662	1,720	1,677
Bank Kalteng	0,196	0,172	0,154	0,140	0,147	0,083	0,073	0,066	0,060	0,053	0,046	0,039	0,032	0,030	0,028	0,160	0,146	0,125	0,115	0,108	2,029	1,783	1,574	1,436	1,439
Bank Kaltimara	0,141	0,115	0,116	0,091	0,091	0,048	0,020	0,018	0,020	0,022	0,028	0,024	0,012	0,012	0,013	0,177	0,152	0,132	0,129	0,122	1,456	1,137	1,037	0,881	0,882
Bank Lampung	0,133	0,143	0,110	0,118	0,103	0,103	0,091	0,093	0,099	0,081	0,031	0,025	0,026	0,029	0,021	0,041	0,035	0,034	0,042	0,041	1,455	1,440	1,237	1,336	1,122
Bank Maluku	0,109	0,125	0,133	0,131	0,139	0,088	0,104	0,111	0,112	0,120	0,033	0,032	0,030	0,028	0,030	0,057	0,066	0,062	0,058	0,056	1,284	1,448	1,494	1,479	1,565
Bank Nagari	0,163	0,158	0,170	0,188	0,193	0,049	0,051	0,054	0,053	0,054	0,019	0,020	0,021	0,018	0,018	0,088	0,085	0,086	0,085	0,079	1,446	1,423	1,518	1,613	1,650
Bank NTB Syariah	0,137	0,179	0,159	0,242	0,226	0,067	0,089	0,079	0,067	0,066	0,026	0,008	0,026	0,017	0,017	0,091	0,130	0,105	0,086	0,080	1,386	1,653	1,585	2,011	1,893
Bank NTT	0,181	0,180	0,130	0,133	0,128	0,054	0,054	0,043	0,035	0,034	0,033	0,030	0,022	0,022	0,019	0,141	0,138	0,106	0,118	0,130	1,733	1,706	1,254	1,260	1,215
Bank Papua	0,091	0,127	0,107	0,102	0,114	0,033	0,043	0,036	0,022	0,030	0,007	0,013	0,012	0,018	0,017	0,108	0,105	0,093	0,112	0,112	0,866	1,166	1,000	0,979	1,079
Bank Sulselbar	0,207	0,193	0,195	0,189	0,175	0,103	0,101	0,099	0,101	0,066	0,041	0,039	0,035	0,033	0,031	0,062	0,057	0,057	0,056	0,094	2,032	1,915	1,897	1,853	1,669
Bank Sulteng	0,115	0,121	0,117	0,129	0,111	0,067	0,070	0,056	0,060	0,056	0,026	0,025	0,020	0,028	0,025	0,056	0,060	0,056	0,059	0,044	1,209	1,258	1,139	1,290	1,124
Bank Sultra	0,116	0,123	0,132	0,106	0,104	0,030	0,031	0,025	0,025	0,023	0,041	0,042	0,034	0,032	0,029	0,071	0,072	0,059	0,061	0,055	1,204	1,262	1,233	1,057	1,012
Bank SulutGo	0,078	0,085	0,081	0,110	0,058	0,034	0,040	0,036	0,026	0,023	0,028	0,024	0,015	0,016	0,013	0,065	0,064	0,070	0,067	0,061	0,876	0,916	0,821	0,985	0,605
Bank SumselBabel	0,112	0,094	0,094	0,082	0,093	0,051	0,051	0,054	0,055	0,057	0,019	0,017	0,017	0,020	0,020	0,049	0,043	0,041	0,043	0,040	1,077	0,947	0,951	0,891	0,971
Bank Sumut	0,151	0,163	0,165	0,171	0,158	0,034	0,032	0,030	0,029	0,029	0,029	0,024	0,023	0,019	0,020	0,052	0,061	0,071	0,075	0,071	1,348	1,397	1,409	1,423	1,339

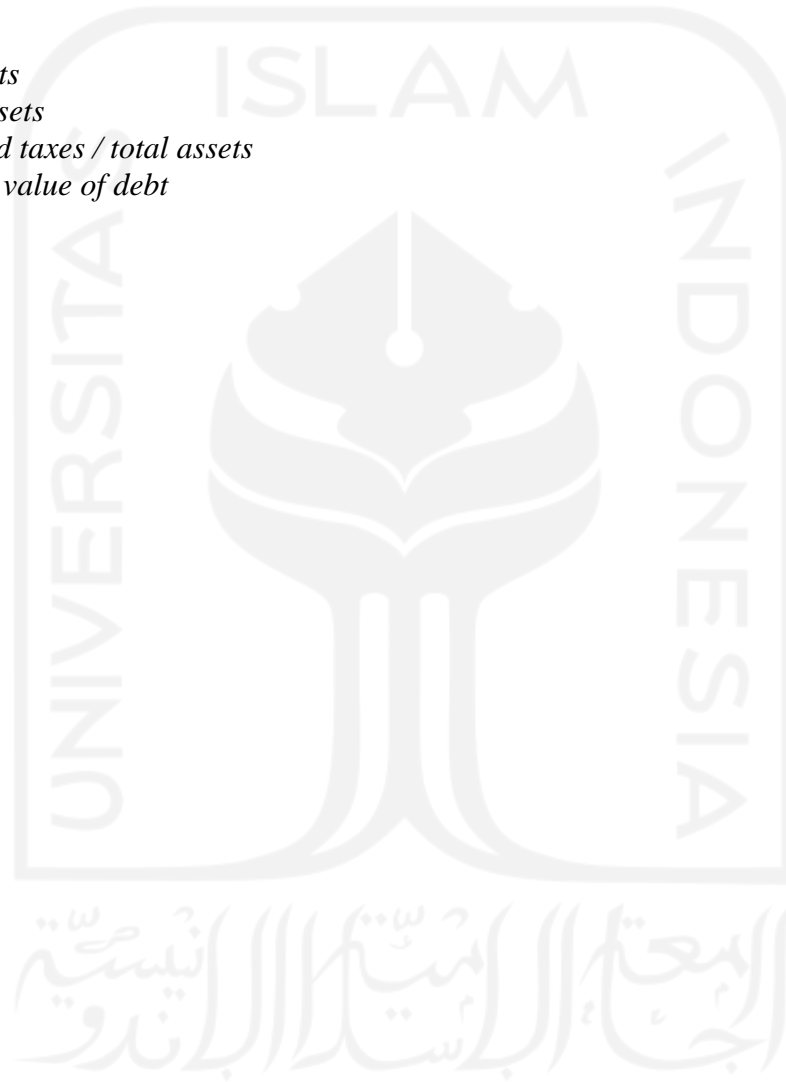
Notes:

$X1 = \text{working capital} / \text{total assets}$

$X2 = \text{retained earnings} / \text{total assets}$

$X3 = \text{earnings before interest and taxes} / \text{total assets}$

$X4 = \text{book value of equity} / \text{book value of debt}$



APPENDIX 7

GCG Mechanism Data

Companies Name	Board of Directors					Board of Commissioners					Managerial Ownership				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	4	4	4	5	5	3	3	3	3	4	0	0	0	0	0
Bank BPD Bali	5	3	5	5	5	4	4	5	5	5	0	0	0	0	0
Bank BPD Bengkulu	4	3	4	4	2	2	2	3	2	2	0	0	0	0	0
Bank BPD DIY	4	4	4	4	4	3	3	3	3	3	0	0	0	0	0
Bank BPD Jambi	4	4	4	4	4	4	3	3	3	3	0	0	0	0	0
Bank BPD Jateng	5	6	6	6	5	3	3	3	3	3	0	0	0	0	0
Bank DKI	6	6	6	6	5	4	4	4	3	2	0	0	0	0	0
Bank Jabar	6	4	6	7	7	5	2	5	5	3	0	0	0	0	0
Bank Jatim	7	7	5	5	5	5	4	6	6	6	0	0	0	0	0
Bank Kalbar	4	3	4	4	3	3	3	2	4	3	0	0	0	0	0
Bank Kalsel	4	4	3	2	3	4	4	3	3	2	0	0	0	0	0
Bank Kalteng	4	5	5	5	5	3	3	3	3	3	0	0	0	0	0
Bank Kaltimara	5	5	5	4	5	4	3	4	3	4	0	0	0	0	0
Bank Lampung	4	1	2	5	4	3	2	2	3	4	0	0	0	0	0
Bank Maluku	3	3	3	3	4	3	3	1	2	3	0	0	0	0	0
Bank Nagari	5	5	5	5	5	4	4	4	4	3	0	0	0	0	0
Bank NTB Syariah	5	4	4	5	5	4	3	3	3	5	0	0	0	0	0
Bank NTT	4	5	5	4	5	2	3	3	3	3	0	0	0	0	0
Bank Papua	5	5	5	5	5	2	4	4	4	3	0	0	0	0	0
Bank Sulselbar	4	4	4	4	4	2	2	2	3	4	0	0	0	0	0
Bank Sulteng	4	4	3	4	4	3	3	3	3	4	0	0	0	0	0
Bank Sultra	4	3	3	3	3	2	2	2	3	3	0	0	0	0	0
Bank SulutGo	5	5	5	5	5	5	4	5	5	5	0	0	0	0	0
Bank SumselBabel	3	2	4	5	5	2	2	2	4	4	0	0	0	0	0
Bank Sumut	4	4	5	5	5	3	3	3	2	3	0	0	0	0	0

APPENDIX 8

Institutional Ownership Data

Companies Name	Outstanding Stocks					Institutional					IO				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	102.625.993	104.229.535	106.179.535	107.954.317	110.098.743	102.625.993	104.229.535	106.179.535	107.954.317	110.098.743	1,000	1,000	1,000	1,000	1,000
Bank BPD Bali	1.741.992	1.788.492	1.822.300	1.823.300	1.861.250	1.741.992	1.788.492	1.822.300	1.823.300	1.861.250	1,000	1,000	1,000	1,000	1,000
Bank BPD Bengkulu	23.408	27.728	30.114	45.116	45.116	23.408	27.728	30.114	41.366	41.366	1,000	1,000	1,000	0,917	0,917
Bank BPD DIY	1.000.000	1.000.000	1.365.107	1.559.398	1.699.398	1.000.000	1.000.000	1.365.107	1.559.398	1.699.398	1,000	1,000	1,000	1,000	1,000
Bank BPD Jambi	681.778	719.469	746.133	772.537	775.037	681.778	719.469	746.133	772.537	775.037	1,000	1,000	1,000	1,000	1,000
Bank BPD Jateng	2.960.661	3.134.187	3.643.739	3.643.739	3.838.039	2.960.661	3.134.187	3.643.739	3.643.739	3.838.039	1,000	1,000	1,000	1,000	1,000
Bank DKI	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	4.431.159	1,000	1,000	1,000	1,000	1,000
Bank Jabar	9.696.291.166	9.838.787.161	9.838.787.161	9.838.787.161	9.838.787.161	7.272.218.666	7.414.714.661	7.414.714.661	7.414.714.661	7.414.714.661	0,750	0,754	0,754	0,754	0,754
Bank Jatim	14.974.591.382	14.978.134.982	15.002.370.582	15.015.498.082	15.015.498.082	11.934.147.982	11.934.147.982	11.934.147.982	11.934.147.982	11.934.147.982	0,797	0,797	0,795	0,795	0,795
Bank Kalbar	961.694	1.199.694	1.326.694	1.417.694	1.517.494	961.694	1.199.694	1.326.694	1.417.694	1.517.494	1,000	1,000	1,000	1,000	1,000
Bank Kalsel	4.715.244	5.027.245	5.127.245	5.307.245	5.367.245	4.715.244	5.027.245	5.127.245	5.307.245	5.367.245	1,000	1,000	1,000	1,000	1,000
Bank Kalteng	92.886	92.886	94.013	98.037	105.175	92.886	92.886	94.013	98.037	105.175	1,000	1,000	1,000	1,000	1,000
Bank Kaltimara	642.006	651.394	660.909	666.835	697.672	642.006	651.394	660.909	666.835	697.672	1,000	1,000	1,000	1,000	1,000
Bank Lampung	21.221.064	22.587.989	24.287.989	29.067.552	38.041.955	21.221.064	22.587.989	24.287.989	29.067.552	38.041.955	1,000	1,000	1,000	1,000	1,000
Bank Maluku	311.450	382.025	408.090	408.090	424.590	311.450	382.025	408.090	408.090	424.590	1,000	1,000	1,000	1,000	1,000
Bank Nagari	1.547.985	1.625.285	1.687.697	1.716.847	1.748.498	1.547.985	1.625.285	1.687.697	1.716.847	1.748.498	1,000	1,000	1,000	1,000	1,000
Bank NTB Syariah	68.804.962	74.254.962	75.764.962	77.489.978	78.031.578	68.804.962	74.254.962	75.764.962	77.489.978	78.031.578	1,000	1,000	1,000	1,000	1,000
Bank NTT	121.089.835	128.459.835	132.777.335	148.938.498	173.545.756	121.089.835	128.389.835	132.707.335	148.857.773	173.415.031	1,000	0,999	0,999	0,999	0,999
Bank Papua	381.570	406.189	460.160	510.019	510.419	381.570	406.189	460.160	510.019	510.419	1,000	1,000	1,000	1,000	1,000
Bank Sulselbar	886.670	961.160	1.098.410	1.143.160	2.137.296	886.670	961.160	1.098.410	1.143.160	2.137.296	1,000	1,000	1,000	1,000	1,000
Bank Sulteng	2.578.090	3.137.789	3.665.077	4.269.900	4.269.900	2.578.090	3.137.789	3.665.077	4.269.900	4.269.900	1,000	1,000	1,000	1,000	1,000
Bank Sultra	372.370.381.934	429.891.524.318	513.810.627.392	5.632.208.960	5.802.470.697	372.370.381.934	429.891.524.318	513.810.627.392	5.632.208.960	5.802.470.697	1,000	1,000	1,000	1,000	1,000
Bank SulutGo	8.158.137	8.158.137	9.456.914	9.939.134	10.244.134	8.158.137	8.158.137	9.456.914	9.939.134	10.244.134	1,000	1,000	1,000	1,000	1,000
Bank SumselBabel	934.141	963.021	995.030	1.048.705	1.094.440	934.141	963.021	995.030	1.048.705	1.094.440	1,000	1,000	1,000	1,000	1,000
Bank Sumut	124.052.538	139.375.707	184.895.923	205.486.522	205.486.522	124.052.538	139.375.707	184.895.923	205.486.522	205.486.522	1,000	1,000	1,000	1,000	1,000

APPENDIX 9

Leverage Data

Companies Name	Total Liabilities					Total Equity					LEV				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	2.859.005	3.453.363	3.124.398	2.430.570	2.729.176	2.169.482	2.217.946	2.447.168	2.481.831	2.843.682	1,318	1,557	1,277	0,979	0,960
Bank BPD Bali	18.881.996	19.060.035	21.154.012	22.904.658	25.591.631	3.268.909	3.394.457	3.501.720	3.204.707	3.319.342	5,776	5,615	6,041	7,147	7,710
Bank BPD Bengkulu	5.151.824	5.124.055	5.820.632	6.637.439	7.044.149	713.182	769.333	857.718	1.087.083	1.123.535	7,224	6,660	6,786	6,106	6,270
Bank BPD DIY	9.048.451	10.085.779	11.373.366	12.355.764	13.096.673	1.646.922	1.907.797	2.279.614	2.351.283	2.668.660	5,494	5,287	4,989	5,255	4,908
Bank BPD Jambi	8.242.714	9.435.035	10.092.500	9.625.064	11.181.236	1.284.134	1.460.751	1.624.341	1.764.631	1.935.108	6,419	6,459	6,213	5,454	5,778
Bank BPD Jateng	54.816.028	60.017.840	64.003.629	65.042.465	71.580.907	6.650.399	6.826.837	7.856.824	8.063.669	8.767.432	8,243	8,791	8,146	8,066	8,164
Bank DKI	39.762.304	41.605.888	45.163.704	50.044.688	55.791.473	8.203.337	8.586.431	9.292.406	9.183.671	9.700.587	4,847	4,846	4,860	5,449	5,751
Bank Jabar	98.820.526	104.035.920	105.920.991	122.676.832	137.955.374	10.104.975	11.285.315	12.042.629	12.005.800	13.084.033	9,779	9,219	8,796	10,218	10,544
Bank Jatim	43.702.607	54.217.182	67.734.755	73.614.504	89.812.791	7.816.074	8.471.936	9.021.558	10.004.948	10.910.539	5,591	6,400	7,508	7,358	8,232
Bank Kalbar	14.242.315	14.694.950	15.610.234	15.508.608	19.842.069	2.333.432	2.762.811	2.884.262	3.100.042	3.394.906	6,104	5,319	5,412	5,003	5,845
Bank Kalsel	9.469.939	10.614.222	10.957.677	11.733.834	13.190.281	1.771.595	1.771.434	1.894.847	1.856.103	1.979.329	5,345	5,992	5,783	6,322	6,664
Bank Kalteng	4.835.573	6.365.701	7.510.877	8.546.138	9.702.998	1.391.360	1.508.605	1.555.004	1.608.021	1.866.478	3,475	4,220	4,830	5,315	5,199
Bank Kaltimtara	18.182.190	21.469.421	25.038.872	25.824.985	28.582.281	4.514.786	3.874.773	3.995.155	4.406.854	4.550.661	4,027	5,541	6,267	5,860	6,281
Bank Lampung	5.170.097	6.526.323	7.066.849	6.948.409	9.387.970	809.354	821.844	906.140	1.123.725	1.316.009	6,388	7,941	7,799	6,183	7,134
Bank Maluku	5.476.355	5.809.494	6.625.876	7.097.205	7.534.737	893.155	1.068.413	1.235.725	1.311.959	1.414.341	6,131	5,437	5,362	5,410	5,327
Bank Nagari	17.560.536	19.051.763	19.675.587	20.189.001	22.140.296	2.683.687	2.900.347	3.149.766	3.207.856	3.416.642	6,543	6,569	6,247	6,294	6,480
Bank NTB Syariah	7.591.223	5.703.202	7.239.946	9.022.667	9.759.810	1.273.169	1.335.445	1.400.359	1.397.091	1.455.370	5,962	4,271	5,170	6,458	6,706
Bank NTT	8.569.715	9.277.181	12.527.058	12.654.342	13.358.535	1.809.460	1.938.772	1.993.351	2.066.013	2.308.208	4,736	4,785	6,284	6,125	5,787
Bank Papua	17.725.809	19.285.891	24.745.539	22.759.105	22.691.147	2.675.004	3.170.867	3.438.147	3.116.996	3.431.412	6,626	6,082	7,197	7,302	6,613
Bank Sulselbar	14.271.238	16.889.095	19.410.805	20.485.210	22.715.081	2.700.284	3.034.585	3.443.748	3.686.519	4.231.714	5,285	5,566	5,637	5,557	5,368
Bank Sulteng	4.587.011	5.205.885	6.587.068	7.238.049	9.748.597	672.513	836.797	1.021.439	1.111.598	1.252.590	6,821	6,221	6,449	6,511	7,783
Bank Sultra	5.245.593	5.994.270	8.769.641	9.262.353	10.590.405	915.960	1.055.757	1.233.414	1.334.694	1.465.864	5,727	5,678	7,110	6,940	7,225
Bank SulutGo	12.629.450	12.811.590	13.529.596	14.885.234	16.895.519	1.445.942	1.617.696	1.618.351	1.521.197	1.576.677	8,734	7,920	8,360	9,785	10,716
Bank SumselBabel	19.168.354	22.402.196	24.481.486	24.441.787	27.690.490	2.977.056	3.270.044	3.501.604	3.616.382	3.935.875	6,439	6,851	6,992	6,759	7,035
Bank Sumut	23.965.600	22.960.782	26.138.888	27.562.121	31.811.045	2.994.537	3.173.606	3.501.065	3.887.791	4.114.177	8,003	7,235	7,466	7,089	7,732

APPENDIX 10

Operating Cash Flow Data

Companies Name	Operating Cash Flow					Current Liabilities					OCF				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	4.090.674	1.089.517	2.225.776	25.589	1.446.543	2.847.005	3.438.608	3.071.309	2.309.534	2.529.532	1,437	0,317	0,725	0,011	0,572
Bank BPD Bali	525.360	391.264	877.416	129.504	966.292	18.795.904	18.975.115	21.114.986	22.866.436	25.554.102	0,028	0,021	0,042	0,006	0,038
Bank BPD Bengkulu	478.715	- 133.235	93.008	- 45.635	204.035	5.142.205	5.119.237	5.734.062	6.583.036	6.956.969	0,093	-0,026	0,016	-0,007	0,029
Bank BPD DIY	546.651	537.860	619.314	731.956	523.147	9.007.184	10.059.683	11.361.010	12.333.784	13.064.537	0,061	0,053	0,055	0,059	0,040
Bank BPD Jambi	252.580	300.196	- 38.293	- 389.382	1.683.512	8.241.115	9.395.865	10.050.692	9.595.064	11.166.406	0,031	0,032	-0,004	-0,041	0,151
Bank BPD Jateng	2.817.843	626.399	3.900.509	3.987.778	7.097.571	52.342.832	56.367.934	61.658.428	64.604.369	71.321.360	0,054	0,011	0,063	0,062	0,100
Bank DKI	11.161.485	- 5.667.502	- 573.576	11.635.155	6.586.425	38.945.917	41.212.321	45.144.046	49.367.751	55.087.663	0,287	-0,138	-0,013	0,236	0,120
Bank Jabar	2.582.207	- 6.071.169	- 6.593.634	- 1.385.925	11.649.347	96.142.832	97.327.186	97.129.390	111.376.527	125.793.707	0,027	-0,062	-0,068	-0,012	0,093
Bank Jatim	6.663.420	9.427.320	2.337.757	- 230.109	26.161.949	42.405.729	53.491.619	65.659.392	72.983.149	89.157.503	0,157	0,176	0,036	-0,003	0,293
Bank Kalbar	3.907.351	- 233.185	386.200	- 687.783	2.339.146	13.490.887	13.587.614	14.368.675	14.478.412	18.519.037	0,290	-0,017	0,027	-0,048	0,126
Bank Kalsel	- 240.568	799.121	- 420.503	19.512	1.692.653	9.235.662	10.582.652	10.862.435	11.420.473	12.696.747	-0,026	0,076	-0,039	0,002	0,133
Bank Kalteng	- 135.350	1.022.976	- 210.521	- 443.379	201.346	4.798.973	6.301.480	7.455.432	8.467.134	9.587.328	-0,028	0,162	-0,028	-0,052	0,021
Bank Kaltimara	935.919	2.622.074	1.845.344	- 801.056	- 323.697	18.089.296	21.396.945	24.846.088	25.732.665	28.425.981	0,052	0,123	0,074	-0,031	-0,011
Bank Lampung	179.885	968.791	- 76.186	- 793.630	1.155.790	5.067.180	6.184.890	6.973.123	6.856.984	9.298.713	0,036	0,157	-0,011	-0,116	0,124
Bank Maluku	- 118.174	109.950	45.416	152.675	26.131	5.382.868	5.727.179	6.553.446	7.007.919	7.397.137	-0,022	0,019	0,007	0,022	0,004
Bank Nagari	57.124	851.298	285.373	622.492	1.773.317	17.235.587	18.857.139	19.513.263	19.910.328	21.736.331	0,003	0,045	0,015	0,031	0,082
Bank NTB Syariah	832.957	- 711.409	- 128.141	-100.484	522.940	7.454.348	5.595.684	7.075.200	7.676.506	8.432.181	0,112	-0,127	-0,018	-0,013	0,062
Bank NTT	- 128.268	- 110.955	1.583.400	430.651	558.951	8.199.465	8.871.917	12.236.265	12.286.533	13.035.989	-0,016	-0,013	0,129	0,035	0,043
Bank Papua	- 138.088	26.988	1.359.802	- 1.456.931	766.363	17.717.214	19.087.134	24.667.975	22.668.134	22.597.401	-0,008	0,001	0,055	-0,064	0,034
Bank Sulselbar	- 1.440.635	121.601	208.040	- 480.643	1.786.482	13.691.221	16.349.095	18.664.972	19.799.420	22.266.780	-0,105	0,007	0,011	-0,024	0,080
Bank Sulteng	304.183	588.087	941.905	243.989	1.655.224	4.551.014	5.203.245	6.568.709	7.192.010	9.680.598	0,067	0,113	0,143	0,034	0,171
Bank Sultra	204.830	199.869	297.910	- 263.421	520.058	5.241.253	5.911.541	8.351.388	9.153.159	10.490.024	0,039	0,034	0,036	-0,029	0,050
Bank SulutGo	786.738	237.091	733.435	16.749	1.278.034	12.605.326	12.798.406	13.517.270	14.085.234	16.866.589	0,062	0,019	0,054	0,001	0,076
Bank SumselBabel	2.480.783	2.676.034	299.280	804.900	503.770	18.217.753	21.495.092	23.720.621	24.105.240	27.259.747	0,136	0,124	0,013	0,033	0,018
Bank Sumut	- 873.245	185.981	1.559.678	3.281.696	1.126.174	23.468.094	22.420.541	25.388.028	26.691.083	30.923.005	-0,037	0,008	0,061	0,123	0,036

APPENDIX 11

Firm Size Data

Companies Name	Total Assets					Ln (Total Asset)				
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Bank Aceh	22.612.007	23.059.159	25.121.063	25.480.963	28.170.826	16,934	16,954	17,039	17,053	17,154
Bank BPD Bali	22.150.905	22.454.491	24.655.732	26.109.365	28.910.973	16,913	16,927	17,021	17,078	17,180
Bank BPD Bengkulu	5.865.005	5.893.388	6.678.350	7.724.522	8.167.684	15,585	15,589	15,714	15,860	15,916
Bank BPD DIY	10.695.373	11.993.576	13.652.980	14.707.047	15.765.333	16,185	16,300	16,429	16,504	16,573
Bank BPD Jambi	9.526.849	10.895.787	11.716.841	11.389.694	13.116.343	16,070	16,204	16,277	16,248	16,389
Bank BPD Jateng	61.466.427	66.844.677	71.860.453	73.106.134	80.348.339	17,934	18,018	18,090	18,107	18,202
Bank DKI	51.417.045	53.027.916	55.600.923	63.046.131	70.741.743	17,755	17,786	17,834	17,959	18,075
Bank Jabar	114.980.168	120.191.387	123.536.474	140.934.002	158.356.097	18,560	18,605	18,632	18,764	18,880
Bank Jatim	51.518.681	62.689.118	76.756.313	83.619.452	100.722.330	17,757	17,954	18,156	18,242	18,428
Bank Kalbar	16.575.747	17.457.762	18.494.496	18.608.650	23.236.975	16,623	16,675	16,733	16,739	16,961
Bank Kalsel	11.881.754	13.182.395	13.954.838	14.852.362	16.535.442	16,291	16,394	16,451	16,514	16,621
Bank Kalteng	6.226.933	7.847.306	9.065.881	10.154.159	11.569.477	15,644	15,876	16,020	16,133	16,264
Bank Kaltimara	22.696.975	25.344.194	29.034.027	30.231.839	33.132.942	16,938	17,048	17,184	17,224	17,316
Bank Lampung	5.979.450	7.348.167	7.972.990	8.072.135	10.703.980	15,604	15,810	15,892	15,904	16,186
Bank Maluku	6.369.510	6.877.907	7.861.601	8.409.165	8.949.078	15,667	15,744	15,878	15,945	16,007
Bank Nagari	21.371.464	23.190.691	24.433.596	25.559.008	27.982.085	16,878	16,959	17,011	17,057	17,147
Bank NTB Syariah	8.864.392	7.038.647	8.640.305	10.419.759	11.215.180	15,998	15,767	15,972	16,159	16,233
Bank NTT	10.379.174	11.215.954	14.520.409	14.720.355	15.666.743	16,155	16,233	16,491	16,505	16,567
Bank Papua	20.400.813	22.456.759	28.183.686	25.876.101	26.122.559	16,831	16,927	17,154	17,069	17,078
Bank Sulselbar	17.545.644	20.576.423	23.541.662	24.830.410	27.784.973	16,680	16,840	16,974	17,028	17,140
Bank Sulteng	5.259.524	6.042.682	7.608.507	8.349.647	11.011.187	15,476	15,614	15,845	15,938	16,214
Bank Sultra	6.161.553	7.050.027	10.003.054	10.597.047	12.056.269	15,634	15,769	16,118	16,176	16,305
Bank SulutGo	14.075.392	14.429.287	15.147.947	16.406.431	18.472.196	16,460	16,485	16,533	16,613	16,732
Bank SumselBabel	22.145.410	25.672.240	27.983.090	28.058.169	31.626.365	16,913	17,061	17,147	17,150	17,270
Bank Sumut	28.931.824	28.121.107	31.736.073	33.530.317	38.012.388	17,180	17,152	17,273	17,328	17,453

APPENDIX 12

Processing Results Data

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	FS, OCF, MO, BOC, LEV, IO, BOD ^b		Enter
a. Dependent Variable: FD			
b. All requested variables entered.			

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.764 ^a	.584	.555	.199596	1.859
a. Predictors: (Constant), FS, OCF, MO, BOC, LEV, IO, BOD					
b. Dependent Variable: FD					

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.117	7	.445	6.516	.000 ^b
	Residual	7.996	117	.068		
	Total	11.113	124			
a. Dependent Variable: FD						
b. Predictors: (Constant), FS, OCF, MO, BOC, LEV, IO, BOD						



Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.733	1.042		3.582	.000		
	MO	-3.752	2.400	-.131	-1.563	.121	.876	1.141
	IO	-1.065	.510	-.221	-2.088	.039	.548	1.826
	BOD	.002	.031	.009	.078	.938	.499	2.004
	BOC	-.043	.029	-.142	-1.469	.145	.657	1.521
	LEV	-.090	.017	-.506	-5.255	.000	.664	1.505
	OCF	-.692	.160	-.383	-4.324	.000	.785	1.274
	FS	-.036	.045	-.097	-.813	.418	.429	2.333

a. Dependent Variable: FD

Collinearity Diagnostics ^a											
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	MO	IO	BOD	BOC	LEV	OCF	FS
1	1	6.000	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.997	2.453	.00	.80	.00	.00	.00	.00	.05	.00
	3	.860	2.641	.00	.07	.00	.00	.00	.00	.70	.00
	4	.067	9.459	.00	.03	.01	.05	.44	.01	.00	.00
	5	.044	11.651	.00	.00	.00	.05	.00	.76	.16	.00
	6	.029	14.384	.00	.00	.00	.58	.52	.03	.01	.00
	7	.002	49.567	.01	.03	.38	.22	.02	.19	.05	.19
	8	.000	135.961	.99	.07	.61	.10	.02	.00	.01	.80

a. Dependent Variable: FD



Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	n
Predicted Value	.81694	1.83177	1.32903	.158551	125
Residual	-.773767	.670692	.000000	.253940	125
Std. Predicted Value	-3.230	3.171	.000	1.000	125
Std. Residual	-2.960	2.566	.000	.971	125

a. Dependent Variable: FD



Charts

