THE EFFECT OF INSIDER OWNERSHIP, DEBT TO EQUITY RATIO, CASH FLOW, INVESTMENT OPPORTUNITIES, PROFIT GROWTH ON DIVIDEND PAYOUT RATIO

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## A BACHELOR DEGREE THESIS

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## My Great Thanks



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#### Abstract

Annisa. (2007). The Effect of Insider Ownership, Debt to Equity Ratio, Cash Flow, Investment Opportunities, and Profit growth on Dividend Payout Ratio. Accounting Department. International Program. Faculty of Economics. Islamic University of Indonesia, Yogyakarta.

Dividend is source information for shareholders and investors as a signal whether the company has capability to get high profit and will distribute as well as profit earned. The dividend decides in the general shareholder's meeting which is consist of directors, managers, and shareholders. Dividend policy is a policy to set the portion of dividend paid to shareholders.

The purpose of this study is to examine the dividend payout determinants of manufacturing companies listed in Jakarta Stock Exchange (JSX). The researcher intends to analyze the effect of insider ownership, debt to equity ratio, cash flow, investment opportunities, and profit growth on dividend payout ratio. In order to achieve that purpose, the multiple linear regression model uses to analyze the population consist of 25 manufacturing companies listed in JSX during the research period of 2002-2004.

The results of final regression analysis show that insider ownership, debt to equity ratio, cash flow has no significant influence on dividend payout ratio while investment opportunities and profit growth has significant influence on dividend payout ratio. Some of the relationship between independent variables on dependent variable is not as the researcher expected to be.


Keywords: dividend, insider ownership, debt to equity ratio, cash flow, investment opportunities, profit growth, dividend policy.



#### Abstract

ABSTRAK

Annisa. The Effect of Insider Ownership, Debt to Equity Ratio, Cash Flow, Investment Opportunities, and Profit growth on Dividend Payout Ratio. Jurusan Akuntansi. Program Internasional. Fakultas Ekonomi. Universitas Islam Indonesia. Yogyakarta. 2007.

Dividen adalah sumber informasi bagi pemegang saham dan investor sebagai sinyal apakah perusahaan bisa memperoleh leba yang tinggi yang nantinya akan dibagikan sebagai keuntungan kepada mereka. Dividen diputuskan dalam Rapat Umum Pemegang Saham (RUPS) yang terdiri dari direktur, manager, dan pemegang saham. Kebijakan dividend adalah kebijakan untuk menentukan porsi dividen yang akan dibagikan kepada pemegang saham.

Tujuan dari poenelitian ini adalah untuk menguji factor-faktor yang menentukan pembayaran dividen pada perusahaan manufaktur yang terdaftar di Jakarta Stock Exchange (JSX). Peneliti bermaksud untuk menganalisa pengaruh dari Kepemilikan Orang Dalam, Rasio Utang terhadapa Ekuitas, Arus kas, Kesempatan Investasi, dan Pertumbuhan Laba terhadap Rasio Pembayaran Dividen. Untuk mencapai tujuan tersebutregresi linear berganda digunakan untuk menganalisa populasi yang terdiri dari 25 perusahaan manufaktur yang terdaftar di JSX selama periode 2002-2004.

Hasil dari analisis regresi akhir menunjukkan bahwa Kepemilikan Orang Dalam, Rasio Utang terhadapa Ekuitas, Arus kas tidak mempunyai pengaruh yang signfikan terhadap rasio pembayaran dividen sedangkan Kesempatan Investasi dan Pertumbuhan Laba mempunyai pengaruh yang signifikan terhadap rasio pembayaran dividen. Sebagian hubungan dari dependen bebas dan dependen terikat ada yang tidak sesuai dengan apa yang diharapkan oleh peneliti.


Kata kunci: Dividen, Kepemilikan Orang Dalam, Rasio Utang terhadapa Ekuitas, Arus kas, Kesempatan Investasi, Pertumbuhan Laba, Kebijakan Dividen

## CHAPTER I

## INTRODUCTION

### 1.1. Background of the Study

Dividend is a payment to the shareholders as contribution because of their investments. To set the amount of dividend payment, a company uses dividend policy. Dividend policy is decision to determine the level of earnings shares to be allocated to stockholder and shares to be retained in the company (Weston and Copeland, 1996).

The dividend itself, is decided in a special meeting called General Meeting of Shareholders (RUPS). In this meeting, shareholders and management try to influence the amount of dividend paid. Both parties, shareholders and management, force their needs onto the other party. They want the other party to follow their way of thinking.

Management, the agent who gives contribution to shareholders in terms of dividend or capital gain, tends to hold the profits as retained earnings. Unfortunately, the researcher cannot see directly inside the company, but the researcher can see indirectly, through certain indicators that explain the decision to retain the profits, for example, through its investment opportunities. If investment opportunities are high, the company tends to hold the profits as retained earnings because they want to reinvest the profits for the purpose of getting more profits, and finally the company can pay more to the shareholders. In contrast, if investment opportunities of the company are low, they tend to
distribute the dividend to the shareholders because the company realizes that they might be getting lower profits than before as result of making investments.

Shareholders, the agent who do investment in the company, tend to get contribution in form of dividend or capital gain. Some of them believe taking dividend is better than capital gain if there is likelihood that the company's profit is low. Then, if shareholders keep taking the contribution in form of capital gains, it might cause loss for shareholders themselves. However, others believe taking capital gains will cause the company to get high profits. This can be see from the higher the market value of equity, the higher the share price, the higher the profits the company will get. Then company will give contributions to the shareholders in form of capital gains.

The amount of dividend paid to shareholders is based on how much profit is earned by the company. There are many alternatives in measuring the proportion of dividend paid, but the researcher uses dividend payout ratio to measure the dividend paid by its percentage. The payout ratio provides an idea of how well earnings support the dividend payments. More mature companies will typically have a higher payout ratio. Dividend per share divided by earning per share is measuring for dividend payout ratio.

The researcher cannot directly be involved in companies' activities, even more so, cannot find out directly what factors influence dividend payout ratio. Instead, the researcher examines the companies only from the outside through some indicators. The following paragraph will describe these indicators.

Many researches have been done by previous researchers about dividend policy. For example, Sartono (2001) studies the relationship between insider ownership, debt, and dividend policy through the agency theory. Sartono uses 232 company samples from the period of 1995-1998. The results show that: 1) Dividend policy has no significant relationship toward insider ownership; 2) Insider ownership has a significant relationship toward debt; 3) Insider ownership and debt have a significant relationship toward the dividend policy.

Taswan (2003) analyzes the influence of insider ownership, debt policy, and dividend toward the value of a company, and the factors that influence it. Using 95 company samples from the Jakarta Stock Exchange, the results find that: 1) Insider ownership has a positive and significant influence toward a firm's value; 2) Profitability has a negative and significant influence toward debt; 3) Growth rate, firm size, and risk have no significant influence toward the debt policy.

Endang and Minaya (2003), analyze the influence of insider ownership, dispersion ownership, collaterizable assets, free cash flow, and growth rate of company toward dividend policy, using 12 manufacturing company samples listed in the Jakarta Stock Exchange from the period of 2000-2002. The results find that: 1) Insider ownership and growth rate have a negative and significant influence toward dividend policy; 2) Dispersion of ownership, free cash flow, have a positive but not significant influence toward dividend policy. 3) Collaterizable assets show a negative but not significant influence toward the dividend policy; 4) Simultaneous tests shows that the dependent variables in this research have
significant influence toward the dividend policy (dividend payout ratio). Insider ownership, dispersion of ownership, collaterizable assets, free cash flow, and growth rate together has significant relationship toward the dividend policy.

Based on previous research, the researcher wants to modify Endang and Minaya's (2003) research by adding some variables; debt to equity ratio, cash flow, investment opportunities, profit growth, as independent variables and Dividend Payout Ratio as dependent variable.

Insider ownership means that management has two positions, as a manager, who manages the company and makes the decisions about dividend payments, and as a shareholder. Those positions will make the management think carefully about which is the best decision for the allocation of dividends.

The variable of debt to equity ratio and cash flow relates to the liquidity of dividends companies pay. The amount of cash and debt the company has influence the dividend payment. The higher the company's debt, the lower the dividends that will be paid. The higher the cash flow, the higher the dividends that will be paid.

Dividend payout ratio can determine the proportion of dividend payments from a company and investment opportunities and company profitability. The higher the profitability, the higher the investment opportunities, and therefore, the lower dividend payments to shareholders.

Based on these variables, the researcher takes title of "The Effect of Insider Ownership, Debt to Equity Ratio, Cash Flow, Investment

Opportunities, Profit Growth on Dividend Payout Ratio" as the topic of this research.

### 1.2. Problem Formulation

1. Does Insider Ownership have a significant effect on Dividend Payout Ratio?
2. Does Debt to Equity Ratio have a significant effect on Dividend Payout Ratio?
3. Does Cash Flow have a significant effect on Dividend Payout Ratio?
4. Does Investment Opportunities have a significant effect on Dividend Payout Ratio?
5. Does Profit Growth have a significant effect on Dividend Payout Ratio?

### 1.3. Research Objectives

The objectives of this research are to provide significant proof that insider ownership, debt to equity ratio, cash flow, investment opportunities, profit growth have positive impact toward dividend payout ratio.

### 1.4. Research Contribution

This research is about the effect of insider ownership, debt to equity ratio, cash flow, investment opportunities and profit growth on the dividend policy of Indonesian manufacturing firms. It is expected that this research will make several
contributions, first, for the researcher, this research can add to the knowledge about dividend policy, emphasizing the factors that affect dividend policy, providing more information about some theories relating to dividend policy, and which theories are actually suitable for Indonesian manufacturing firms.

Second, for the new investors, company management, scholars, and other parties who are new in this field. This research can contribute important information to be considered if they want to set dividend policy for a firm, especially in considering the effect of insider ownership, debt to equity ratio, cash flow, investment opportunities and profit growth regarding those dividend policies. Then, for financial managers, this study can help them in considering how to optimize funds for paying dividend and reinvesting.

Finally, this research can provide more information for the government that can be used for making economic policies especially, investment policy and financing decisions for Indonesian companies. This research can also help the government in making rules of order to control the economic equilibrium of the country carefully.

### 1.5. Thesis Content

## CHAPTER I Introduction

This chapter will discuss about the background of study, problem formulation, research objectives and research contribution.

## CHAPTER II Review of Related Literature

This chapter consists of theoretical review, theoretical framework, and hypothesis building.

## CHAPTER III Research Method

This chapter will discuss type of study, research subject, population, research setting, research variables, model formulation and hypothesis testing.

## CHAPTER IV Research Findings, Discussion and Implications

This chapter will discuss the result of independent variables impact on dependent variable from hypothesis testing.

CHAPTER V Conclusion and Recommendations
This chapter will conclude the result of research and make recommendations for the next researcher.


## CHAPTER II

## REVIEW OF RELATED LITERATURE

### 2.1. Dividend and Dividend Policy

Dividend is a part of companies' profit that is allocated to shareholders. In a special meeting between management and shareholders, called shareholders meeting, the amount of dividend is stated. Both parties have their own standpoint and want the other party to agree with them (management and shareholders). In other words, fight for their own interests. In some cases, the management want to distribute large amounts of dividend but on the contrary, the shareholders will not accept managements' policy.

From management's standpoint, they prefer to distribute large amounts of dividend, whether the company's profit was very low even a loss. Bad or low expected company performance is also seen as a good reason for management to distribute a big amount of dividend. This is because of the need of the management to be seen as a perfect management by the shareholders. Having this result, the management will have a continuing contract from the shareholders to run the business.

Unfortunately, sometimes the management's interest is not in line with the shareholders' interest. If the shareholders predict that the company's future is good, they want the management catch this opportunity. To support the management, the shareholders will keep the companies profit in the company and use the profit as a fund for expansion. Shareholders prefer to have a good/high
returns from capital gains. In other words, shareholders will not allow the management to distribute profit as dividend, when the dividend will hurt the future capital gain.

Based on those inconsistencies between management and shareholders, then dividend policy arises to solve that conflict. This policy is made by both parties in the General Meeting of Shareholders (RUPS). Dividend policy is a number of policies to set an allocated amount of the company's profit that will go to shareholders as dividend or capital gain, or will be held by management as retained earnings.

The outsider, or researcher, cannot directly determine the dividend policy; meanwhile they can determine the process of dividend policy through the following variables used as indicators, they are: insider ownership, debt to equity ratio, cash flow, investment opportunities, and profit growth.

### 2.2. Insider Ownership

Insider ownership is an important determinant variable in dividend policy of the company (Taswan, 2003). Insider ownership occurs when a manager is also the owner of shares. A company with high insider ownership has better investment performance than those with lower insider ownership. High occurrence of insider ownership is a good signal for shareholders.

There are some theories that support insider ownership such as agency theory, asymmetrical theory, and signaling theory. Based on agency theory, the relationship arises when one party (principal) pays another party (agent) for
services and delegates the authority of decision making to the agent. In the context of a company, shareholders are the principal, and the manager is the agent. Shareholders pay the agent and hope the agent take action based on their interests. One key element from the agency theory is that there is a preferred differentiation of interests between the principal and agent. (Puput Tri Komalasari, 1999).

Based on Easterbrook (1984), as cited by Fauzan (2002), the different interests between shareholders and management may cause conflict. MC Jensen \& W.H.Meckling (1976) define the agency relationship as a contract made by one or more people (principal), whom employ the services of another person (agent), to serve the principal interests through the delegation of the authority of decision making to the agent. Based on Agus Sartono (2001), agency theory gives descriptive analysis in realizing the interest between agent and principal, manager and creditor (debt holder), and between shareholders, manager, and debt holders caused by agency relationship. Then, this research will only discuss the relationship between management and shareholders.

In a company, interest conflict happen between the management and shareholders. Conflict of interests arises because there is exceeds in cash. Exceeds in cash flow tend to be reinvested over the optimum value and consumed for activities besides the main activities of company. Such conflict might happen because of difference of opinion between shareholders, who tend to prefer high risk investment and hope for high returns, and management, who tends to prefer low risk investment to ensure the safety of their position. (Keown, 2000: 609)

Another theory that supports insider ownership is asymmetrical information. Actually, it has a strong relation to agency theory. Information asymmetry occurs when one party of a transaction has more, or better, information than the other party. Information about the firm has important roles for investors and other market participants. Usually managers of firms have better information than outside investors, which can create the appearance of asymmetric information. According to Subekti and Suprapti (2002), asymmetric information occurs when one part of a body has more information compared to other parts of the body. Scott (1997) divided asymmetric information into (1) adverse selection and (2) moral hazard. Adverse selection relates to the unavailability of disclosure published by the management of a company. Actually internal structure organizations of the company, such as managers, have more information about the condition and the prospects of the company, compared to the investors. However, management tends to be reluctant to convey this information to the investors, which is actually done by disclosure. On the contrary, moral hazard emphasizes motivation and effort of management to optimize their own interests. Stockholders and debt holders do not actually know what kinds of activities are actually conducted by managers. This condition makes it easy for managers to do certain activities that break the rules or contract that has been agreed to, in an effort to increase their own wealth.

The signaling theory relates to insider ownership, the management always sends positive signals to the shareholders. The implementation of good signal itself is distributing large dividends to the shareholders, whether performance of
internal company is good or not is a way of sending a good signal. In other words, the management always wants the company to be seen as a perfect company by the shareholders. Thus, the higher the insider ownership, the higher the dividends paid to shareholders.

Previous research has found that insider ownership has significant influence toward dividend payout ratio. Taswan (2003) said that insider ownership has a positive and significant relationship to dividend payout ratio. Hatta (2002) analyzed the factors influencing the dividend policy and found that there is a relationship between the dividend payout ratio with the focus, total asset, and insider ownership, amount of common stockholder, free cash flow, and growth rate.

Based on the above explanation, the hypothesis formulation is:
Ha: Insider ownership has positive and significant effect on Dividend Payout Ratio

### 2.3. Debt to Equity Ratio

Debt to Equity Ratio, also referred as Debt Ratio, Financial Leverage Ratio, or Leverage Ratio. This group of ratios calculates the proportionate contribution of owners and creditors to a business, sometimes a point of contention between the two parties. Creditors, like owners, participate to secure their margin of safety, while management enjoys the greater opportunities for risk, shifting and multiplying the returns on equity that debt offers.

This ratio reflects the ability of companies in fulfilling their obligations,
by paying debts from their own capital. The higher the debt to equity ratio, the higher the obligations, and the lower the debt to equity ratio, the higher the ability of companies to fulfill their obligations. Increasing debt influences the available rate of net income for shareholders, which means the higher the obligations of the company, and the lower the ability of companies in paying dividend.

Based on financial leverage ratios, debt to equity ratio provides an indication of long-term solvency of a firm. Unlike liquidity ratios that are concerned with short-term assets and liabilities, financial leverage ratios measure the extent to which the firm is using long-term debt. The upper acceptable limit of the debt to equity (debt or financial leverage) ratio is usually $2 ; 1$, with no more than one-third of debt in the long term. A high financial leverage or debt to equity ratio indicates possible difficulty in paying interest and principal while obtaining more funding.

Debt to equity ratio is one of the most fundamental measures in corporate finance. It is the great test of the financial strength of a company. Although used universally, it unfortunately turns up under many different names and with different methods of calculation. The purpose of ratio is to measure the mix of funds in the balance sheet and to make a comparison between those funds that supplied the owners (equity) and those, which have been borrowed (debt).

Sutrisno (2000) said that one of the factors influencing dividend policy is company controlling, where in some cases the owner did not want to lose his/her control of the company. If the company uses their own capital as the fund resources, it will open the possibility for new investors to invest their money, and
absolutely, it will reduce right of the old owner in controlling that company. Nevertheless, if the company uses debt as their fund resources, it will increase risk. As the result, companies tend to hold dividends in order for the owner to hold onto control.

Debt to equity ratio (DER) measures the company capability in paying debt from their own capital. As stated by Riyanto (1995), DER is capital that is used as collateral for debt. While Fraser and Ormiston (2000), DER can measure the capital structure risk of a company; in this case, it relates to funds obtained from a creditor (debt), and investor (equity).

Previous research has found that the debt to equity ratio has a negative influence on dividend payout ratio. Ramli (1994), quoted by Hatta (2002), shows that debt to equity negatively influences dividend policy. Research done by Mutamimah and Sulistyo (2000) states that debt to equity ratio negatively influences dividend payout ratio. Previous research done by Sutrisno (2000) shows that one of the factors effecting dividend policy is obligation to settle the debt, which means that the more debt that has to be paid, the more capital that has to be available. Thus, it will reduce the dividend that will be paid, except if the company pays debt that is already matures with new debt or by rolling over the debt.

Based on the explanation above, when the debt to equity ratio is high, the company will reduce the amount of dividends shared with the shareholders. Moreover, the hypothesis for this variable is:

Ha: Debt to Equity Ratio has a negative and significant effect on Dividend Payout Ratio

### 2.4. Cash Flow

The objective of this variable offers relevant information about cash flow in an entity. Another objective is to determine the liquidity and solvability of a company, and its financial flexibility. Liquidity is the ability to convert assets into cash, while solvability is the ability of a company to pay debt at a mature date. Financial flexibility is the ability of company to get quick cash in order to fulfill unexpected contingency or to take advantage from beneficial chance.

Riyanto said that liquidity of the company is an essential factor to bet considered for decision-making in determining the proportion of dividends distributed to shareholder. The higher the liquidity of companies, the higher the dividends paid.

Cash flow liquidity ratio is one of liquidity ratios. Based on Fraser and Ormiston (2001) cash flow liquidity ratio is one of the liquidity ratios where as the calculation that consists of elements, such as: cash sources, cash, and marketable securities, show current assets in real company. While, an other element of cash flow liquidity ratio is cash flow from operating activities, which is the present amount of cash for company operations, such as the company's ability to sell inventory and ability to gather cash from selling. We can conclude that higher cash flow liquidity ratio is expected to cause higher dividend payout ratio for shareholder.

Companies need sufficient liquidity of cash outflow to pay dividends. The higher the liquidity owned by companies, the higher the ability to pay dividends. Gill and Green (1993), cited by Adedeji (1998), found that liquidity of a company has a positive relationship to dividend payout ratio.

The signaling theory is consistent with this variable. The signaling theory of dividend states that managers use dividend policy to send signals about the firm's future earnings (Bhattacharya, 1979; Miller and Rock, 1985; and John and Williams, 1985, as quoted by Deshmukh, 2005). According to signaling theory, dividend should reflect the manager's superior inside information about the firm's future earnings conditions. One of the key implications of these signaling models is that dividend changes followed by changes in earnings and profitability in the same direction. Higher dividends signal better earnings performance and therefore, lead to a higher market value.

The manager, as an insider who has complex information about the cash flow of the company will choose to create a clear signal about company's future. The ascending dividend paid will send a signal to the market as to whether the company has improved or not, and how well. The market (investors and decision makers) believes that a company that sends signals through its cash flow, is an example of a successful company.

Previous research supports the above explanation; Endang and Minaya (2003), propose that the more cash flow owned by a company the more dividends paid to the shareholders, thus conflict between management and shareholders is reduced by dividend payments. Other supporting research was done by Hartono
(2004), where he shows that dividend payment is a signal of a company's ability in producing cash flow in the future, thus it will be a positive signal.

The researcher makes this hypothesis formulation based on the above explanation:

Ha: Cash flow has a positive and significant effect on dividend payout ratio

### 2.5. Investment Opportunities and Profit Growth

Myers (1977), as quoted by Hamidi (2003), stated that investment opportunities are a combination of assets in place and investment options in the future, this is called Investment Opportunity Set (IOS). Fast growing companies need more funds for investment. Those funds are taken from internal equity, because more funds are allocated as retained earnings, this decreases the earnings for dividend payment. Barclay (1995) states that the higher growing companies need more funds, which causes lower dividend payments.

The higher dividend payment the lower investment, because the available profits more allocated for paying dividend than hold as retained earning for reinvestment. On the contrary, if the investment opportunities are low, the shareholders will ask the management for higher dividends unless the dividends reinvest. The shareholders do not to risk losing their returns if they keep the dividends in the company.

Profitability is the primary goal of all business ventures. Without profitability, the business will not survive in the end. Therefore, measuring
current and past profitability and projecting future profitability is very important. Profitability can be done either in the short-term or long-term performance of business. One of long-term strategy for maximizing performance of profitability is through investment. Investment means that the company intends to get more returns (profit). The amount of profit earned is used to pay dividends to shareholders. The higher the profit the higher the dividend paid.

Both of investment opportunities and profit growth are supports by signaling theory. The signaling theory of dividend states that managers use dividend policy to send signals about the firm's future earnings (Bhattacharya, 1979; Miller and Rock, 1985; and John and Williams, 1985), as quoted by Deshmukh (2005).

Bhattacharya (1979) creates an early model of dividend signaling, in which managers signal the quality of an investment project by adhering to a specific dividend policy. The "investment project quality", measured as the expected profitability, is private information known only to managers. A key assumption of this model is that, if the payoffs from the project are not sufficient to cover the committed dividends, the firm will resort to outside financing to cover the shortfall that may involve significant transaction costs. Thus, a firm with an investment project of genuinely high quality would have lower expected transaction costs to meet its committed dividend obligations than would a firm with a low quality project. Accordingly, it would be unprofitable for the later firm to mimic the dividend policy of the firm having a high quality project.

In previous research, cited by Deshmukh (2003), Myers and Majluf (1984) argued that as the size of the investment increases, other things equal, the ex-ante loss resulting from underinvestment increases as the firm now has to rely more on external sources for funds. The size of the investment required will be an increasing function of the firm's growth opportunities, and controlled by increasing the amount of slack available. Therefore, a firm that expects rapid growth should lower its dividend payout to accumulate financial slack to reduce the likelihood of underinvestment. Subekti (2000) succeeds in determining the growing and not growing company as proxy of IOS by using factor analysis. The kind of company shows that a growing company has lesser dividend payout ratio than a not growing company. In other words, the growing company has bigger investment opportunities; it means that it has negative correlation toward dividend payout ratio.

The findings of Barclay et al (1999), replicated by Hamidi (2003), show that the beneficial investment opportunities will earn higher capital expenditure and give a positive signal, because manager tries to take those opportunities with the purpose of maximizing the shareholders' wealth. The conclusion of his findings is the companies that need more capital will decrease its dividend payment then investment opportunities have negative relationship to dividend payout ratio. These findings are also supported by Adedaji (1998), where he states that there is a negative relationship between investment and dividend payout ratio.

Because investment opportunities have a negative relationship to dividend payout ratio, profitability has a positive relationship to investment on dividend
payout ratio. Theobald (1978), cited by Florentina (2001), found that profitability has a positive influence on dividend payout ratio.

Based on the above explanation, the researcher formulated the following hypotheses:

Ha1: Investment Opportunities have a negative and significant effect on Dividend Payout Ratio

Ha2: Profit Growth has a positive and significant effect on Dividend


## CHAPTER III

## RESEARCH METHOD

### 3.1. Type of Study

This research uses quantitative analysis method. The quantitative analysis method states the variables in numerical form.

### 3.2. Research Subject

This research uses secondary data collected from the Jakarta Stock Exchange (JSX). The data used in this research are audited financial statements, the years from 2002-2004 such as balance sheet, income statement and statements of cash flow.

### 3.3. Population

Population for this research is manufacturing companies listed in the JSX from the year 2002 to 2004. There are 150 companies listed in 2002, 2003, and 2004.

The researcher used the purposive sampling technique in this research. To be included in the population, firms must fulfill the following requirements:

1. Companies with missing data and negative equity will be deleted from the sample.
2. The number of companies in population that have complete data, initially set the population.

However, 25 companies met the requirements as the population. Those companies are listed in Table 3.1 as follows:

TABLE 3.1
List of Manufacturing Companies as Population Research

| No | Manufacturing Companies | Type of Industries |
| :---: | :---: | :---: |
| 1. | PT. ANDHI CHANDRA AUTOMOTIVE | Automotive and Allied Products |
| 2. | PT. ASAHIMAS FLAT GLASS Tbk. | Plastic and Glass Products |
| 3. | PT. AQUA GOLDEN MISSISSIPPI Tbk. | Food and Beverages |
| 4. | PT. ARWANA CITRAMULIA Tbk. | Stone, Clay, Glass and Concrete |
|  |  | Products |
| 5. | PT. ASTRA GRAPHIA Tbk. | Electronics and Office Equipment |
| 6. | PT. ASTRA OTOPARTS Tbk. | Automotive and Allied Products |
| 7. | PT. DELTA DJAKARTA Tbk. | Food and beverages |
| 8. | PT. DANKOS LABORATORIES Tbk. | Pharmaceuticals |
| 9. | PT. EKADHARMA TAPE INDUSTRIES | Adhesive |
| 10. | PT. FASTFOOD INDONESIA | Food and Beverages |
| 11. | PT. GOODYEAR INDONESIA Tbk. | Automotive and Allied Products |
| 12. | PT. GUDANG GARAM | Tobacco Manufacturers |
| 13. | PT. HM. SAMPOERNA | Tobacco Manufacturers |
| 14. | PT. INTANWIJAYA INTERNATIONAL Tbk. | Adhesive |
| 15. | PT. INDOFOOD SUKSES | Food and Beverages |
| 16. | PT. KIMIA FARMA Tbk. | Pharmaceuticals |
| 17. | PT. LION METAL WORKS Tbk. | Metal and Allied Products |
| 18. | PT. LIONMESH PRIMA Tbk. | Metal and Allied Products |
| 19. | PT. LAUTAN LUAS | Chemical and Allied Products |
| 20. | PT. MANDOM INDONESIA Tbk. | Consumer goods |


| 21. | PT. MERCK Tbk. | Pharmaceuticals |
| :--- | :--- | :--- |
| 22. | PT. MULTI BINTANG INDONESIA Tbk. | Food and Beverages |
| 23. | PT. SURYA TOTO INDONESIA | Stone, Clay, Glass and Concrete |
| 24. | PT. TEMBAGA MULIA SEMANAM Tbk. | Products |
| 25. | PT. TUNAS RIDEAN Tbk. | Metal and Allied Products |

### 3.4. Research Setting

The JSX corner in Faculty of Economics University Islam Indonesia, as the representative of JSX, was used as the setting of this research because data downloading was accessible. The activity of the JSX corner includes the services such as providing data and information required for the purposes of research.

### 3.5. Research Variables

The researcher defines the dependent and independent variables that will be used in the regression analysis. The dependent variable is dividend payout ratio and the independent variables are insider ownership, debt to equity ratio, cash flow, investment opportunities, and profit growth. There is a dummy variable to control the variance of the data. The detailed description of dependent and independent variables is described below.

### 3.5.1. The Dependent Variable

The dependent variable in this research is dividend policy. Dividend policy is a manager's decision about the percentage of profit that will be allocated
to the payment of dividends or held as retained earnings for reinvest in the company. Actually, there are three alternatives to measure dividend policy: (1) dividend paid or declared per share, (2) dividend payout ratio (dividend per share divided by after-tax earnings per share), and (3) dividend yield (dividend per share divided by price per share). The payout ratio provides an idea of how well earnings support the dividend payments. More mature companies will typically have a higher payout ratio. In this research, the researcher follows Endang and Minaya (2003) by using the dividend payout ratio as a proxy of dividend policy. The dividend policy can be measured by dividing the dividend per share with earning per share.

$$
D P R=\frac{D P S}{E P S}
$$

> Where:
> DPR = Dividend Payout Ratio
> DPS = Dividend Per Share
> EPS = Earning Per Share

For example; the DPS value of PT. Delta Djakarta is 34.998 where EPS is 2.417. to calculate the DPR, 34.998 divided by 2.417 and got the result 14.48 as DPR of PT. Delta Djakarta.

### 3.5.2. The Independent Variables

### 3.5.2.1. Insider Ownership ( $\mathbf{X}_{1}$ )

Most of the agency theory problem is influenced by insider ownership that is director and commissaries. The bigger the amount of insider ownership, the
lesser the conflict that will occur between shareholders and management. This is because the insider will act carefully, considering the consequences that might arise from their decisions. Insider ownership influences dividend policy because there is a relationship between the agency problems caused by insider ownership with dividend policy issued by management. Insider ownership is the owner as well as the person who handles the company. It can be measured using this formula:

INSOWN $=\frac{\text { the amount of share owned by commissaries and director }}{\text { Amount of share }}$

There is dummy variable to control the variance of the data which is
1 = firms that have insider ownership
$0=$ firms that have no insider ownership

### 3.5.2.2. Debt to Equity Ratio ( $\mathbf{X}_{\mathbf{2}}$ )

Debt to equity ratio (DER) reflects a company's ability in fulfilling their liabilities, that is shown by capital that is used for paying debt. The lower the DER, the higher the company's ability in fulfilling liabilities. The use of debt for financing activities will cause the company to have a current expense in terms of rate and debt actually. The higher proportion of debt which is used in capital structure, the higher the liabilities incurred by the company itself. In addition, increasing of debt will effect the net profit which is available for shareholders, including dividend, however, company liabilities will be considered higher priority than dividend payout itself. If DER becomes high then the company's
ability in dividing dividend to the shareholder will become smaller. In conclusion, DER has a negative relationship to dividend payout ratio. It can be measured by this formula:

$$
D E R=\frac{C L+L D}{E}
$$

## Where:

DER = Debt to Equity Ratio
CL =Current Liabilities; in the consolidated balance sheet
LD = Long Term Debt; in the consolidated balance sheet
E = Equity; in the consolidated balance sheet

### 3.5.2.3. Cash Flow ( $\mathbf{X}_{3}$ )

The Signaling and the pecking order theory implies that, other things equal, dividends should be positively related to some measure cash flow. Gombala and Ketz (1983) have developed research about cash flow by calculating working capital from operation and cash flow from operation. There are two concepts of financial ratio; (1) working capital from operation divided by sales and total assets and (2) cash flow from operation divided by sales and total assets.

In this research, the researcher uses cash flow from operation based on the research that has been developed by Gombala and Ketz (1993) as quoted from the research of Tumirin and Kusuma (2003). The cash flow from operation ratio (CFO) is equal to cash flow from operation divided by total assets.

$$
C F O=\frac{\text { Cash Flow fromOperation }}{\text { Total Assets }}
$$

## Where:

Cash Flow from Operation = in the statement of cash flow
Total Assets = in the consolidated balance sheet as the result of current assets and non current assets.

### 3.5.2.4. Investment Opportunities ( $\mathbf{X}_{4}$ )

Myers and Majluf (1984) argue the firm which expects rapid growth should lower its dividend payout to accumulate financial slack so as to reduce the likelihood of underinvestment. The growth measure (MTOB), defined as the ratio of the market value of asset to the book value of assets, is used as proxy for growth opportunities.

$$
M T B V=\frac{M V \text { of Assets }}{\text { BV of Assets }}
$$

## Where:

Market Value of asset = Market Value of equity + Book Value of total liabilities Market Value of equity = number outstanding shares $x$ closing price Number outstanding share $=$ profit after taxes: earning per share

### 3.5.2.5. Profit growth $\left(\mathbf{X}_{\mathbf{s}}\right)$

A financial gain, esp. the difference between the amounts earned and the amount spent in buying, operating, or producing something that is growing rapidly in comparison to previous profit in its field or the economy as a whole.

$$
\operatorname{Profit} \text { Growth }=\frac{\operatorname{Profit} n-\operatorname{Profit}_{n-1}}{\operatorname{Pr} o f i t_{n-1}}
$$

Profit ${ }_{n}=$ profit current year Profit $_{n-l}=$ profit previous year

### 3.6. Model Formulation

This research is using the multiple linear regression models with Microsoft Excel as the computer software. This model is used to see the significance relationship of independent variable toward the dependent variables or to analyze the relationship of insider ownership, debt to equity ratio, cash flow, investment opportunities, and profit growth toward the dividend payout ratio. Then the multiple linear regressions that can be used to test the hypothesis of the relationship between the variables and dividend payout ratio can be stated as follows:

$$
\begin{equation*}
Y=a+b_{1} X_{1}+b_{2} X_{2}+b_{3} X_{3}+b_{4} X_{4}+b_{5} X_{5}+e . \tag{3.2}
\end{equation*}
$$

Where :
$\boldsymbol{Y} \quad$ : dividend payout ratio
$X_{I} \quad$ : insider ownership
$X_{2}$ : debt to equity ratio
X3 : cash flow
$X_{4} \quad$ investment opportunities
$X_{5} \quad$ :profit growth

### 3.7. Hypothesis Testing

## 1. F-test

This function produces one side of F-test probability from two sets of data.
The hypothesis used is that there is no significant difference between variances on those two sets of data. The result shown is the value of error probability.

With significance level ( $\alpha$ ) of $5 \%$, then:
If probability F>10\% = not significant; accept Ho
If probability F 5\%-10\% = weak significant; reject Ho
If probability F $1 \%-4.999 \%=$ moderate significant; reject Ho
If probability $\mathrm{F}<1 \% \quad=$ strong significant; reject Ho

## 2. T-test

This test is used to determine whether each independent variable has an influence on the dependent variable in regression. The hypothesis used is stated as below:

With significance level ( $\alpha$ ) of 5\%, then:
If probability $\mathbf{t}>\mathbf{1 0 \%}=$ not significant; accept Ho

| If probability t $5 \%-10 \%$ | $=$ weak significant; reject Ho |
| :--- | :--- |
| If probability t $1 \%-4.999 \%$ | $=$ moderate significant; reject Ho |
| If probability $\mathrm{t}<1 \%$ | $=$ strong significant; reject Ho |

## 3. $\mathbf{R}^{2}$-test

$\mathbf{R}^{2}$-test is used to show the degree of the independent variables' influence on the dependent variable. This is conducted to explain the total variations of the dependent variable.

## CHAPTER IV

## RESEARCH ANALYSIS AND IMPLICATIONS

### 4.1. Descriptive Statistics

Descriptive statistics are used to know the character of the sample used in the research. The samples in this research consist of Indonesian manufacturing firms listed on the Jakarta Stock Exchange (JSX) from 2001-2004. Descriptive statistics about this research can be seen in table 4.1 below:

Table 4.1
Descriptive Statistics

|  | DPR | DER | CASH FLOW | MTBV | PROFIT <br> GROWTH |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Kurtosis | 0.28213 | 2.13845 | -0.279862 | 3.36889 | 3.8002171 |
| Skewness | 0.81471 | 1.5948 | -0.000605 | 1.404837 | 1.0596972 |
| Minimum | 0.18 | 0.13 | -0.110719 | 0.3 | -0.993211 |
| Maximum | 86.6 | 4.23 | 0.321858 |  | 6 |

Table 4.1 shows that minimum value of dividend payout ratio (DPR) of 0.18 with the maximum value of 86.6 , the kurtosis is 0.28213 and skewness of 0.81471 . The result is still categorized as homogeny data though the value of kurtosis is not more than the value of skewness. The minimum value of DER $\left(\mathrm{X}_{2}\right)$ is 0.13 with the maximum value of 4.23 ; the kurtosis is 2.13845 , and skewness of 1.5948. It is absolutely shown that the data used in this variable is homogeny; the value of kurtosis is more than value of skewness. The minimum value of CASH FLOW $\left(\mathrm{X}_{3}\right)$ is -0.11071876 with the maximum being 0.388218 ; the kurtosis is 0.279862 , and the skewness is $\mathbf{- 0 . 0 0 0 6 0 5}$. In this case, kurtosis and skewness
show negative value, this does not mean the data is heterogeneous, it could be said that the data is almost zero or it will appear as a straight line. The minimum value of MTBV $\left(\mathrm{X}_{4}\right)$ is 0.3 with the maximum value of 6 ; the kurtosis is 3.36889 , and skewness of 1.404837. The minimum value of PROFIT GROWTH $\left(X_{5}\right)$ is 0.993211 with the maximum value of 2.221182 ; the kurtosis is 3.8002171 , and skewness of 1.0596972 . Because of the value of kurtosis is more than the value of skewness toward MTBV and PROFIT GROWTH, the data categorized into homogenous data.

From the results above, it can be seen that the researcher used homogenous and normally distributed data. There is no extreme data shown in the research, making it easier to be analyzed in proving the hypothesis as outlined in the previous chapter.

### 4.2. Hypothesis Testing

This research uses the multiple linear regression analysis as a tool to see the significances of the variables. The previous chapter stated that this research intends to analyze whether the variables mentioned have significant influence on the dividend payout ratio. Multiple linear regression analysis is a test to see the significance of the relation between independent variables to the dependent variable, or to analyze the factors influencing the dividend policy. This test uses the Microsoft Excel.

The result of the test from the multiple linear regression analysis of the factors (insider ownership, debt to equity ratio, cash flow, investment
opportunities, profit growth) influence on dividend policy of manufacturing companies listed in the Jakarta Stock Exchange from 2002-2004 can be seen in table 4.2 below:

Table 4.2
Regression result of the factors influencing the Dividend Payout

## Ratio (DPR) using Microsoft Excel

## SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.47227 |
| R Square | 0.22304 |
| Adjusted R Square | 0.16234 |
| Standard Error | 19.4673 |
| Observations | 70 |

ANOVA

|  |  |  |  |  | Significance |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | $d f$ | $S S$ | $M S$ | $F$ | $F$ |
| Regression |  | 5 | 6962.61 | 1392.523 | 3.674421 | 0.0055096 |
| Residual |  | 64 | 24254.6 | 378.9774 |  |  |
| Total |  | 69 | 31217.2 |  |  |  |


|  | Coefficients | Error | $t$ Stat | P-value |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | 25.4399 | 6.54695 | 3.885765 | 0.000245 |
| Intercept | -2.9814 | 4.92922 | -0.604844 | 0.547421 |
| INSOWN | -5.6392 | 2.51208 | -2.244834 | 0.028242 |
| DER | 8.2976 | 27.4364 | 0.302431 | 0.763305 |
| CASH FLOW | 5.75523 | 2.58459 | 2.22675 | 0.02949 |
| MTBV | -10.176 | 4.68904 | -2.170192 | 0.03371 |
| PROFIT GROWTH |  |  |  |  |

From the result of double linear regression test, the equation shows:

$$
\begin{aligned}
& Y=25.4399-2.9814 \text { INSOWN - 5.6392 DER + 8.2976 CASH FLOW } \\
& +5.75523 \text { MTBV - 10.176 PROFIT GROWTH }
\end{aligned}
$$

### 4.2.1. Model Test 1

The F test shows a strong significance, 0.0055096 or $0.55096 \%$ supported it. The result means that the model has a mistake probability below $1 \%$, the greatest value of significancy. These models also have a high correlation degree (the relationship between the dependent variable and the independent variables as a whole) that is 0.47227 , and have adjusted $R^{2}$ of 0.16234 or $16.23 \%$. It shows that each independent variable influences the dependent variable around $3.246 \%$ and others influence the rest. Coefficient correlation (Multiple R) shows the ability of the model built to explain the dependent variable. It means that $\mathbf{2 2 . 3 0 \%}$ DPR can be explained by the independent variable consisting of INSOWN ( $\mathrm{X}_{1}$ ), DER ( $\mathrm{X}_{2}$ ), CASH FLOW ( $\mathrm{X}_{3}$ ), MTBV $\left(\mathrm{X}_{4}\right)$, and PROFIT GROWTH $\left(\mathrm{X}_{5}\right)$. Adjusted $\mathbf{R}^{2}$ shows the trust that can be put toward the model built.

The probability value of intercept is 0.000245 ; this means that the intercept of this model is significant, intercept influences the model. This should not occur because it is categorized as a problem then the research could not proceed. This problem can be solved by making the intercept through (0,0), constanta which does not influence the model at all. This can be seen in table 4.3 below.

## Table 4.3

## Regression result of the factors that influence the Dividend Payout

## Ratio (DPR) using Microsoft Excel

SUMMARY OUTPUT

| Regression Statistics |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Multiple R | 0.78866 |  |  |  |  |
| R Square | 0.62199 |  |  |  |  |
| Adjusted R Square | 0.58335 |  |  |  |  |
| Standard Error | 21.4751 |  |  |  |  |
| Observations | 70 |  |  |  |  |
| ANOVA |  |  |  |  |  |
| 4 |  |  |  |  | Significance |
| 111 | $d f$ | SS | MS | F | F |
| Regression Residual Total | 5 | 49325.2 | 9865.047 | 21.39081 | $1.625 \mathrm{E}-12$ |
|  | 65 | 29976.8 | 461.1815 |  |  |
|  | 70 | 79302 |  |  |  |
|  | Coefficients | Standard Error | $t$ Stat | $P$-value |  |
|  |  |  |  |  |  |
| Intercept - | 0 | \#N/A | \#N/A | \#N/A |  |
| INSOWN | 7.21291 | 4.60346 | 1.566847 | 0.122006 |  |
| DER | -0.9965 | 2.43766 | -0.408791 | 0.684037 |  |
| CASH FLOW | 52.9637 | 27.4817 | 1.927238 | 0.058323 |  |
| MTBV | 9.90635 | 2.5962 | 3.815705 | 0.000305 |  |
| PROFIT GROWTH | -8.3021 | 5.14522 | -1.613553 | 0.111469 |  |

From the result of double linear regression test, the equation shows:
$\mathrm{Y}=$ 7.21291 INSOWN -0.9965 DER + 52.9637 CASH FLOW + 9.90635
MTBV - 8.3021 PROFIT GROWTH

### 4.2.2. Model Test 2

The F test shows strong significance with $1.625 \mathrm{E}-12$ supporting this result. The low value of Significance $F$ shows that the model above shows a small probability of mistakes that is below $1 \%$. These models also have a high degree of correlation (the relationship between the dependent variable to the independent variable as a whole) that is 0.78866 and have adjusted $\mathrm{R}^{2}$ as much as 0.58335 or $\mathbf{5 8 . 3 3 5 \%}$. This value is much better than the first test done by the researcher which was intercepted through by $(0,0)$, increasing the ability of the independent variables in influencing the dependent variable. This means that each independent variable influences around $11.667 \%$ of the dependent variable. This result is quite good since we all know that there are so many independent variable influences on the dividend payout ratio, or there are so many factors influencing the dividend payout ratio. Coefficient correlation (Multiple R) shows the ability of the model to explain the dependent variable. This means that $62.199 \%$ DPR can be explained by the independent variable consisting of INSOWN $\left(X_{1}\right)$, DER $\left(X_{2}\right)$, CASH FLOW $\left(\mathrm{X}_{3}\right)$, MTBV $\left(\mathrm{X}_{4}\right)$, and PROFIT GROWTH $\left(\mathrm{X}_{5}\right)$. Adjusted $\mathrm{R}^{2}$ shows the trust that can be put in the model.

As previously stated, this model is intercepted through by $(0,0)$, thus constanta does not influence the model at all. This works well because the result of each independent variable is quite good compared with previous results from the first test.

### 4.2.3. Variable Test

### 4.2.3.1. Insider Ownership ( $\mathbf{X}_{1}$ )

$\mathrm{Ho}_{1}=$ Insider ownership does not have a positive but does have a significant impact on Dividend Payout Ratio
$\mathrm{Ha}_{1}=$ Insider ownership has a positive and significant impact on Dividend Payout Ratio

Based on the table analysis obtained regression coefficient is 7.21291 and probability 0.122006 . Because the coefficient value is positive and probability is $>0.05$, it in partially rejects Ho and conversely partially accepts Ha . This shows that the insider ownership has a positive but not significant influence on the dividend payout ratio. This result means that the higher the share owned by management, the higher dividend paid to the shareholders will be.

The more shares owned by management, the more the manager tends to pay dividend, because the management has two positions, as a manager of company and as the shareholder. With those positions, management has capability and right to decide how many dividends will go to them. Meanwhile, the less shares owned by management, the less the manager will tend to pay dividend, because some of the capital will be used as retained earning for increasing company wealth and growth. However, insider ownership not significantly influence dividend payout ratio because the management itself will have problems from within, then the ability to set the dividend policy will not work well.

This result is consistent with the research done by Taswan (2003) that shows that insider ownership has a positive significant relationship toward the
dividend policy. He believes that the more share owned by the insider, the more the manager tends pay dividends more, with the assumption dividends earned by insider ownership will be used to increase their own wealth and also for company growth.

This result is contradictory to the research done by Nupikso (2000) and Endang and Minaya (2003). Endang's and Minaya's results show negative and significant relationship between dividend payout ratio and the amount of insider ownership of shares, as management tends to hold dividend payment. This result supports Nupikso research. He believes that companies that have more insider ownership will have better investment environment than companies which have small insider ownership, as dividends earned by company tend to be held as retained earnings, so dividends that will be distributed to the shareholders become less.

The data is limited because the researcher used dummy variables in analyzing the relationship between insider ownership and the dividend payout ratio. Using dummy variables means that only the existence of insider ownership was considered, not the amount of its percentage, and automatically the variation of this data is smaller which causes the validation of data to smaller also.

The researcher suggests that future research should not use dummy variables, but use the continuous variables to have different results such as, using the amount of ownership in percentage. It is better for the company to have higher insider ownership of shares, because the fact is that management which is also as a shareholder has the capability to analyze and decide whether the profit should
be allocated to the dividend payment or allocated to finance the company as retained earning.

### 4.2.3.2. Debt to Equity Ratio ( $\mathbf{X}_{2}$ )

$\mathrm{Ho}_{1}=$ Debt to Equity Ratio does not have a negative but does have a significant impact on Dividend Payout Ratio $\mathrm{Ha}_{1}=$ Debt to Equity Ratio has negative and significant impact on Dividend Payout Ratio

Based on the table analysis, we can see that regression coefficient is -0.9965 with a probability of 0.684037 . Because the coefficient value is negative and the probability $>0.05 \mathrm{Ho}$ is partially rejected, conversely Ha is partially accepted. This shows that debt to equity ratio has a negative impact and not significant impact on dividend payout ratio. The negative significant of debt to equity ratio (DER) toward dividend payout ratio (DPR) is caused when there is different pattern of kurtosis and skewness between DPR and DER, as shown in the table 4.1. It shows the pattern of DPR is 0.28213 for kurtosis and 0.81471 for skewness. Meanwhile, the result of DER is 2.13845 for kurtosis and 1.5948 for skewness. Basically, debt to equity ratio should have a negative relationship to dividend payout ratio, because the higher DER the lower dividend payout ratio for shareholder.

Debt is something that must be paid by a company in any way to complete it. More debt means more capital that should be possessed by company. The results of this research show the debt to equity ratio has a negative relationship
toward dividend payment. This means that the companies do not want to take a risk in paying more dividends when they have more debt. It is better for them to pay lower dividend payments or sell their inventories or other assets rather than borrow money from a bank complete dividend payments and increase their debt.

This result is consistent with the findings of Ramli (1994) as quoted by Hatta (2002) that shows debt to equity negatively influences dividend policy. And research done by Mutamimah and Sulistyo (2000) which also shows debt to equity ratio negatively influences dividend payout ratio. Other support comes from Sutrisno's research (2000) that finds one of the factors effecting dividend policy is obligation to settle the debt, which means that the more debt has to be paid the more capital has to be available. Thus, it will reduce the dividend that must be paid, except if the company pays the debt that is already mature with the new debt or by doing debt roll over.

This result is contradictory to the research done by Sutojo \& Irianto (1995) as quoted by Surasni (1998) that shows the group of companies with high debt to equity ratio, will have high dividend payout ratio also. It is such doing debt roll over to pay dividend. The company would rather pay dividends or even pay more by lending some money than did not pay the dividend or only pay less.

The limitation of this variable is that the researcher uses debt to equity as the proxy which is analyzes the solvency of the firm using shareholder equity, while there is another proxy which is analyzed the solvency of the firm using assets called financial leverage equity.

Future researchers are expected to try to analyze other proxies as a part of
leverage ratios such as equity ratio where the ratio of common stockholder equity (including earned surplus) to total capital of the business shows how much of the total capitalization actually comes from the owners. The equity ratio can be calculated as common shareholder equity divided by total capital employed.

### 4.2.3.3. Cash Flow ( $\mathbf{X}_{\mathbf{3}}$ )

$\mathrm{Ho}_{1}=$ Cash Flow does not have a positive but does have a significant impact on Dividend Payout Ratio
$\mathrm{Ha}_{1}=$ Cash Flow has positive and significant impact on Dividend Payout Ratio

Based on the table analysis, the regression coefficient is positive 52.9637 with a probability of cash flow is 0.058323 . This means that cash flow has a positive impact on dividend payout ratio and the size of this variable significantly influences dividend payout ratio. The results shown by this variable reject Ho and conversely accept Ha. Positive relationship between cash flow and dividend payout ratio means the more cash flow owned by company the more dividend should be paid. While the positive significant of cash flow on dividend payout ratio can be seen from the results in table 4.1 of the pattern of skewness and kurtosis on variable cash flow, which is similar to patterns of variable dividend payout ratio.

Cash flow and liquidity are two things that have relation. Liquidity means the ability to convert assets into cash, it can be achieved by selling inventory and submitting the cash from that selling. Liquidity itself is an important factor that should be considered in determining the proportion of dividend that should be
paid to shareholder. Indirectly, dividend can be called as cash outflow, then the stronger the liquidity position of the company where cash flow inside it, the higher the ability of the company in paying dividend. And the significance of this variable to dividend payout ratio is shown by the conflict can be reduced by dividend payment.

This result supports the research done by Endang and Minaya (2003), where they propose that the more cash flow owned by a company the more dividend should be paid to the shareholders, thus conflict between management and shareholders can be reduced by dividend payment. The results of this research, also support research done by Hartono (2004) where he said that dividend payment is a signal of a company's ability in producing cash flow in the future, thus it will be a positive signal.

While it is in contradiction with the research done by Handoko (2002), where he proposes that cash flow in the crisis condition significantly influence dividend payout ratio with the assumption that a company prefers to hold onto cash flow in order to survive in facing crisis which attack economic stability in Indonesia. In some cases, it is a wise decision to hold onto cash flow for company longevity.

A limitation of the data is that only data from operating activities in cash flow statement on the financial statement of companies was used. Cash flow statement itself consists of three activities; operating activities, investing activities and financing activities. Each of these activities can be used as proxy to get different results.

Future research should attempt analyze different types of activities in cash flow statements such as investing and financing activities. This would provide different results and could be used to compare against the variables used in this research.

### 4.2.3.4. MTBV $\left(\mathbf{X}_{4}\right)$

$\mathrm{Ho}_{1}=$ MTBV does not have negative but does have a significant impact on Dividend Payout Ratio
$\mathrm{Ha}_{1}=$ MTBV has negative and significant impact on Dividend Payout Ratio
The regression coefficient shown by the table analysis is positive 9.90635 and the probability of MTBV or this investment opportunities variable is 0.000305 which is less than $5 \%$ of standard error. Because the coefficient value is positive and the probability $<0.05$, Ho is rejected, and conversely Ha is accepted. This means that investment opportunities (MTBV) have a positive influence on dividend payout ratio and the size of this variable significantly influences dividend payout ratio. We can see in table 4.1, the pattern of skewness and kurtosis between DPR and MTBV is different, but this can have a positive significant influence on dividend policy. This is because there is an excess of market value of book value then there is possibility for shareholders to ask for the results in form of dividend.

The result of the data is different with the researcher hypothesis. This happens might be because the researcher uses low number of data as the population and there is some extreme data that cannot be eliminate.

The positive result means that the more investment opportunities a company has, the more shares should be paid to its shareholders, with this assumption, companies tend to invest as much as possible in order to get more profit from their investment. Thus, the company could pay more dividends to its shareholders from the profit earned. This also gives a good signal to prospective investors to invest their money into the company.

This result is consistent with the research done by Smith \& Watts cited by Fitrijanti and Hartono (2002). They use signaling theory as the basis theory in determining that investment opportunities can be have a positive relationship to dividend payout ratio. Because in signaling theory, the management gives clues to investors about information related with investment opportunities and the investors give good signal also toward management action because they believe that the success company gives that signal. This means that investment opportunities have a positive relationship to dividend payout ratio.

This result is in contradiction with previous research done by Ayu Faye (2000), where she proposes that investment opportunities have a negative relationship but significant influence on dividend payout ratio. Gaver \& Gaver (1993) and Sami and friends (1999) also propose that investment opportunities have negative relationship and do not have a significant influence on dividend payout ratio.

The limitation of this variable is that it consists of market value and book value of asset. Calculating investment opportunities is not only counted by MV
and BV of assets but can also be counted by MV and BV of equity or other proxies.

Different results may be obtained if future researchers use another proxy such as market value and book value of equity or earning/price ratio, which would be useful to compare with previous research also.

### 4.2.3.5. Profit Growth ( $\mathbf{X}_{\mathbf{s}}$ )

$\mathrm{Ho}_{1}=$ Profit Growth does not have a positive but does have a significant impact on Dividend Payout Ratio
$\mathrm{Ha}_{1}=$ Profit Growth has positive and significant impact on Dividend Payout Ratio
Based on the table analysis obtained regression coefficient is -8.3021 and the probability is 0,111469 . Because the coefficient is negative and probability is $\mathbf{> 0 , 0 5}$ so Ho is partially accepted and conversely Ha is partially rejected. This shows that profit growth has a positive and significant impact on dividend payout ratio. Which means that the higher the company growth rate (implemented in profit growth in this case), the higher the dividend paid to the shareholders.

This relates to the previous variable that is investment opportunities. If investment opportunities have a positive impact on dividend payout ratio, a company can expect more profit from their investment, which means they will be able to pay more dividends to shareholders. In other words, the more profit earned by a company the more dividends will be paid to its shareholders.

The capital owned by company can be allocated into several objectives. It can be allocated to dividend payments for shareholders and it can be allocated to
reinvestment as retained earning. The negative relationship occurs between profit growth and dividend payout ratio because much of the capital is allocated to retained earnings or it could be said that company chooses to reinvest their money in order to increase the wealth of company rather than divide it between the shareholders.

This result is in consistent with previous research done by Endang and Minaya (2003). Their research shows growth rate has a negative impact on dividend payout ratio, because the higher the dividends paid to shareholders, the lower the retained earnings, and as a consequence this will be a barrier to the growth of the company itself. This is also supported by Nupikso (2000), who proposes that growth rate has negative impact on dividend payout ratio. The higher the chances of growth, the more likely dividend payments will decrease, this is because earnings earned by a company tend to be used for investing in order to increase company growth.

Limitation of this variable is that the specification of growth in form of profit and the proxy used in this research only consists of profit from last year and profit from the current year. There are still so many proxies that can be counted as the growth such as size growth.

The researcher suggests that future researchers use other proxies of growth such as size growth. The reason being, to get different results and to compare them with previous research.

## CHAPTER V

## CONCLUSION AND RECOMMENDATION

### 5.1. Research Conclusions

1. Insider Ownership has a positive but does not have a significant impact on Dividend Payout Ratio.
2. Debt to Equity Ratio has a negative and does not have significant impact on Dividend Payout Ratio.
3. Cash Flow has a positive and significant impact on Dividend Payout Ratio.
4. Investment Opportunities have a negative and significant impact on Dividend Payout Ratio.
5. Profit Growth has a negative and does not have significant impact on Dividend Payout Ratio.

### 1.2. Research Limitations

1. The researcher used dummy variables in analyzing the relationship between insider ownership and the dividend payout ratio.
2. The researcher uses debt to equity as the proxy which is analyzes the solvency of the firm using shareholder equity.
3. The researcher uses data of cash flow from operating activities.
4. The researcher uses market value and book value of asset as data for investment opportunities.

### 1.3. Research Recommendations

1. The researcher suggests that future research should not use dummy variables, but use the continuous variables to have different results such as, using the amount of ownership in percentage.
2. Future researchers are expected to try to analyze other proxies as a part of leverage ratios such as equity ratio where the ratio of common stockholder equity (including earned surplus) to total capital of the business shows how much of the total capitalization actually comes from the owners.
3. Future research should attempt analyze different types of activities in cash flow statements such as investing and financing activities. This would provide different results and could be used to compare against the variables used in this research.
4. Different results may be obtained if future researchers use another proxy such as market value and book value of equity or earning/price ratio.


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## APPENDIX 1

## List of Manufacturing Companies as Sample Research

| NO | COMPANY | CODE |
| :---: | :---: | :---: |
| 1 | PT. AQUA GOLDEN MISSISSIPPI Tbk. | AQUA |
| 2 | PT. DELTA DJAKARTA | DLTA |
|  | PT. FASTFOOD INDONESIA | FAST |
|  | PT. INDOFOOD SUKSES | INDF |
|  | PT. MULTI BINTANG INDONESIA Tbk. | MLBI |
|  | PT. GUDANG GARAM | GGRM |
|  | PT. HM. SAMPOERNA | HMSP |
|  | PT. LAUTAN LUAS | LTLS |
|  | PT. EKADHARMA TAPE INDUSTRIES | EKAD |
|  | PT. INTANWDAYA INTERNATIONAL Tbk. | INCI |
| 11 | PT. ASAHIMAS FLAT GLASS Tbk. | AMFG |
|  | PT. LIONMESH PRIMA Tbk. | LMSH |
| 13 | PT. LION METAL WORKS Tbk. | LION |
|  | PT. TEMBAGA MULIA SEMANAM Tbk. | TBMS |
|  | PT. ARWANA CITRAMULIA Tbk. | ARNA |
|  | PT. SURYA TOTO INDONESIA | TOTO |
|  | PT. ASTRA GRAPHIA Tbk. | ASGR |
|  | PT. ANDHI CHANDRA AUTOMOTIVE | ACAP |
|  | PT. ASTRA OTOPARTS Tbk. | AUTO |
|  | PT. GOODVEAR INDONESIA TbK. | GDYR |
|  | PT. TUNAS RIDEAN Tbk. | TURI |
| 22 | PT. DANKOS LABORATORIES Tbk. | DNKS |
| 23 | PT. KIMIA FARMA Tbk. | KAEF |
|  | PT. MERCK Tbk. |  |
|  | PT. MANDOM INDONESIA Tbk. |  |

## APPENDIX 2

Dividend Payout Ratio

| No. | Company Code | 2002 | 2003 | 2004 |
| :---: | :---: | :---: | :---: | :---: |
| 01. | AQUA | 17.12 | 16.96 | 16.95 |
| 02. | DLTA | 14.29 | 14.69 | 14.48 |
| 03. | FAST | 18.96 | 19.68 | 22.4 |
| 04. | INDF | 32.74 | 43.81 | 44.96 |
| 05. | MLBI | 76.72 | 78.05 | 73.25 |
| 06. | GGRM | 27.66 | 31.39 | 53.74 |
| 07. | HMSP | 13.46 | 38.38 | 60.51 |
| 08. | LTLS | 20.05 | 20.4 | 25.54 |
| 09. | EKAD | 53.69 | 10.3 | 50.01 |
| 10. | INCI | 34.02 | 42.13 | 38.26 |
| 11. | AMFG | 14.7 | 21.26 | 20.99 |
| 12. | LMSH | 16.22 | 14.04 | 6.97 |
| 13. | LION | 30.66 | 37.3 | 22.08 |
| 14. | TBMS | 8.72 | 23.07 | -47.34 |
| 15. | ARNA | 0.3 | 0.35 | 0.36 |
| 16. | TOTO | 0.14 | 0.31 | 0.38 |
| 17. | ASGR | 0.2 | 0.75 | 2.2 |
| 18. | ACAP | 86.6 | 143.49 | 39.33 |
| 19. | AUTO | 0.25 | 0.18 | 0.21 |
| 20. | GDYR | 40.46 | 41.32 | 38.39 |
| 21. | TURI | 30.36 | 20.38 | 24.66 |
| 22. | DNKS | 19.17 | 7.11 | 4.02 |
| 23. | KAEF | 300.07 | 0.39 | 0.29 |
| 24. | MERK | 0.06 | 62 | 54.79 |
| 25. | TCID | 40.27 | 41.19 | 37.82 |

Source: Indonesian Capital Market Directory, year 2002, 2003, and 2004

## APPENDIX 3

## Insider Ownership (INSOWN)

| No. | Company Code | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{0 1 .}$ | AQUA | 0 | 0 | 0 |
| 02. | DLTA | 0 | 0 | 0 |
| 03. | FAST | 0 | 0 | 0 |
| 04. | INDF | 1 | 1 | 1 |
| 05. | MLBI | 0 | 0 | 0 |
| 06. | GGRM | 1 | 1 | 1 |
| 07. | HMSP | 0 | 0 | 0 |
| 08. | LTLS | 1 | 1 | 1 |
| 09. | EKAD | 0 | 0 | 0 |
| 10. | INCI | 0 | 0 | 0 |
| 11. | AMFG | 1 | 1 | 1 |
| 12. | LMSH | 1 | 1 | 1 |
| 13. | LION | 1 | 1 | 1 |
| 14. | TBMS | 0 | 0 | 0 |
| 15. | ARNA | 0 | 0 | 1 |
| 16. | TOTO | 0 | 0 | 0 |
| 17. | ASGR | 1 | 1 | 1 |
| 18. | ACAP | 1 | 0 | 0 |
| 19. | AUTO | 1 | 1 | 1 |
| 20. | GDYR | 0 | 0 | 0 |
| 21. | TURI | 1 | 1 | 1 |
| 22. | DNKS | 0 | 0 | 0 |
| 23. | KAEF | 1 | 1 | 1 |
| 24. | MERK | 0 | 0 | 0 |
| 25. | TCID | 1 | 1 | 1 |

Source; Jakarta Stock Exchange file; "Pojok BEJ" FE UII

## APPENDIX 4

Debt to Equity Ratio (DER)

| No. | Company Code | 2002 | 2003 | 2004 |
| :---: | :---: | :---: | :---: | :---: |
| 01. | AQUA | 1.43 | 0.93 | 0.87 |
| 02. | DLTA | 0.25 | 0.22 | 0.29 |
| 03. | FAST | 0.79 | 0.69 | 0.66 |
| 04. | INDF | 3.16 | 2.74 | 2.5 |
| 05. | MLBI | 0.68 | 0.8 | 1.11 |
| 06. | GGRM | 0.59 | 0.58 | 0.69 |
| 07. | HMSP | 0.89 | 0.77 | 1.31 |
| 08. | LTLS | 1.27 | 2.08 | 1.97 |
| 09. | EKAD | 0.2 | 0.22 | 0.18 |
| 10. | INCI | 0.18 | 0.17 | 0.17 |
| 11. | AMFG | 1.07 | 0.73 | 0.52 |
| 12. | LMSH | 2.1 | 1.69 | 1.45 |
| 13. | LION | 0.15 | 0.16 | 0.22 |
| 14. | TBMS | 4.23 | 3.83 | 5.46 |
| 15. | ARNA | 1.2 | 0.94 | 1.01 |
| 16. | TOTO | 4.13 | 3.29 | 3.88 |
| 17. | ASGR | 1.27 | 1.12 | 0.72 |
| 18. | ACAP | 0.16 | 0.2 | 0.25 |
| 19. | AUTO | 0.75 | 0.64 | 0.62 |
| 20. | GDYR | 0.43 | 0.4 | 0.54 |
| 21. | TURI | 1.64 | 2.16 | 2.67 |
| 22. | DNKS | 1.38 | 1.1 | 0.81 |
| 23. | KAEF | 0.53 | 0.81 | 0.44 |
| 24. | MERK | 0.15 | 0.26 | 0.3 |
| 25. | TCID | 0.17 | 0.13 | 0.19 |

Source; Jakarta Stock Exchange file; "Pojok BEJ" FE UII

## APPENDIX 5

## Cash Flow

| No. | Company <br> Code | 2002 | 2003 | 2004 |
| :---: | :---: | :---: | :---: | :---: |
| 01. | AQUA | 0.12302324 | 0.11135118 | 0.10379589 |
| 02. | DLTA | 0.10683028 | 0.04202658 | 0.21937642 |
| 03. | FAST | 0.31507585 | 0.26199061 | 0.30757143 |
| 04. | INDF | -0.0165088 | 0.10172217 | 0.28663708 |
| 05. | MLBI | 0.21801351 | 0.22697328 | 0.26882741 |
| 06. | GGRM | 0.14339601 | 0.12183755 | 0.04053549 |
| 07. | HMSP | 0.18606094 | 0.19854129 | 0.24544738 |
| 08. | LTLS | 0.06675284 | -0.0219481 | 0.06675284 |
| 09. | EKAD | 0.11914397 | 0.07342102 | 0.00063603 |
| 10. | INCI | 0.08138053 | 0.01982733 | 0.09489228 |
| 11. | AMFG | 0.13289791 | 0.11355921 | 0.19626493 |
| 12. | LMSH | 0.00236663 | 0.10966186 | 0.16726825 |
| 13. | LION | 0.1182242 | 0.09622335 | 0.042566671 |
| 14. | TBMS | 0.0336493 | 0.11700807 | 0.0711807 |
| 15. | ARNA | 0.07809414 | 0.17272015 | 0.10581424 |
| 16. | TOTO | 0.11360914 | 0.10254437 | 0.06511574 |
| 17. | ASGR | 0.21807973 | 0.31218697 | 0.14404638 |
| 18. | ACAP | 0.21780311 | 0.11412091 | -0.0046424 |
| 19. | AUTO | 0.03879315 | 0.04640569 | 0.05046335 |
| 20. | GDYR | 0.10373024 | 0.10538278 | 0.07300619 |
| 21. | TURI | 0.11558439 | -0.1107188 | -0.0957593 |
| 22. | DNKS | 0.19903454 | 0.11074569 | 0.26136055 |
| 23. | KAEF | -0.06842596 | 0.22996634 | -0.0639532 |
| 24. | MERK | 0.23501438 | 0.17268948 | 0.17617113 |
| 25. | TCID | 0.36965147 | 0.36907088 | 0.38821797 |
|  |  |  |  |  |

Source: Jakarta Stock Exchange file; "Pojok BEJ" FE UII

## APPENDIX 6

Investment Opportunities (MTBV)

| No. | Company Code | 2002 | 2003 | 2004 |
| :---: | :---: | :---: | :---: | :---: |
| 01. | AQUA | 2.24 | 2.33 | 1.78 |
| 02. | DLTA | 0.44 | 0.43 | 0.66 |
| 03. | FAST | 2.94 | 2.49 | 2.41 |
| 04. | INDF | 1.54 | 1.85 | 1.78 |
| 05. | MLBI | 2.05 | 2.51 | 3.39 |
| 06. | GGRM | 1.64 | 2.39 | 2.14 |
| 07. | HMSP | 3.2 | 3.49 | 6 |
| 08. | LTLS | 0.35 | 0.56 | 0.63 |
| 09. | EKAD | 0.46 | 0.85 | 1.02 |
| 10. | INCI | 0.33 | 0.35 | 0.52 |
| 11. | AMFG | 0.79 | 1 | 0.9 |
| 12. | LMSH | 0.3 | 0.43 | 0.84 |
| 13. | LION | 0.41 | 0.44 | 0.73 |
| 14. | TBMS | 0.3 | 0.35 | 0.5 |
| 15. | ARNA | 0.81 | 2.09 | 1.83 |
| 16. | TOTO | 2.54 | 1.78 | 2.05 |
| 17. | ASGR | 1.13 | 1.34 | 1.3 |
| 18. | ACAP | 3.04 | 3.13 | 3.2 |
| 19. | AUTO | 1 | 0.98 | 1.6 |
| 20. | GDYR | 0.66 | 0.58 | 1.23 |
| 21. | TURI | 0.94 | 0.88 | 1.59 |
| 22. | DNKS | 1.29 | 2.77 | 2.4 |
| 23. | KAEF | 1.52 | 1.55 | 1.44 |
| 24. | MERK | 1.5 | 2.25 | 3.32 |
| 25. | TCID | 0.77 | 1.08 | 1.57 |

Source; Jakarta Stock Exchange file; "Pojok BEJ" FE UII

## APPENDIX 7

## Profit growth

| No. | Company <br> Code | 2002 | 2003 | 2004 |
| :---: | :---: | :---: | :---: | :---: |
| 01. | AQUA | 0.37689007 | -0.0610951 | 0.47543942 |
| 02. | DLTA | 0.00547147 | -0.1492005 | 0.01465307 |
| 03. | FAST | 0.45383635 | -0.0363878 | 0.02855058 |
| 04. | INDF | 0.07543982 | -0.2481234 | -0.3588547 |
| 05. | MLBI | -0.2528726 | 0.06081129 | -0.0435038 |
| 06. | GGRM | -0.0002242 | -0.1189424 | -0.0263581 |
| 07. | HMSP | 0.74906977 | -0.1581249 | 0.41583004 |
| 08. | LTLS | -0.6028382 | -0.6068583 | -0.9932108 |
| 09. | EKAD | 0.04534806 | -0.3049464 | -0.046292 |
| 10. | INCI | -0.7759805 | 0.61496571 | 0.47720744 |
| 11. | AMFG | 0.63653063 | -0.2099098 | 0.26633354 |
| 12. | LMSH | 0.54223149 | 0.15551048 | 2.22118198 |
| 13. | LION | 0.01253304 | 0.05675312 | 0.87673307 |
| 14. | TBMS | 0.08603093 | -0.6221937 | 487397.51 |
| 15. | ARNA | 0.40837401 | 0.37348354 | 0.21975249 |
| 16. | TOTO | 3.4607513 | -0.5399715 | -0.1832155 |
| 17. | ASGR | 1.68953624 | -0.7014971 | 0.74343678 |
| 18. | ACAP | -0.2562328 | 0.20706592 | 0.45923758 |
| 19. | AUTO | 0.00667652 | -0.1980775 | 0.08120234 |
| 20. | GDYR | 0.29626471 | -0.0207237 | 0.67893853 |
| 21. | TURI | -0.0742117 | 0.1173502 | 0.85935331 |
| 22. | DNKS | 0.57852472 | 0.34744671 | 0.53880649 |
| 23. | KAEF | -0.6444801 | 0.21240962 | 0.81124648 |
| 24. | MERK | -0.3363417 | 0.35135857 | 0.13165283 |
| 25. | TCID | 0.2417249 | 0.07549605 | 0.31995648 |

Source; Jakarta Stock Exchange file; "Pojok BEJ" FE UII
Descriptive Statistics

|  | DPR | INSOWN | DER | CASH FLOW | MTBV | PROFIT <br> GROWTH |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Mean |  |  |  |  |  |  |
| Standard Error | 26.20928571 | 0.5 | 1.0545714714 | 0.12715694 | 1.51042857 | 0.15142476 |
| Median | 2.542278858 | 0.06019293 | 0.11683148 | 0.01183231 | 0.12579724 | 0.06098469 |
| Mode | 21.125 | 0.5 | 0.76 | 0.1124552 | 1.295 | 0.07546793 |
| Standard Deviation | 21.27023097 | 0.50361016 | 0.97748225 | 0.06675284 | 1.78 | \#N/A |
| Sample variance | 452.4227256 | 0.25362319 | 0.95547155 | 0.0989962 | 1.05249522 | 0.51023454 |
| Kurtosis | 0.282126918 | -2.0597015 | 2.13845174 | -0.2798621 | 1.10774619 | 0.26033929 |
| Skewness | 0.814710735 | $9.9381 \mathrm{E}-18$ | 1.59480005 | -0.0006046 | 1.36888959 | 3.80021707 |
| Range | 86.42 | 1 | 4.1 | 0.43257663 | 5.7 | 1.05969723 |
| Minimum | 0.18 | 0 | 0.21439278 |  |  |  |
| Maximum | 86.6 | 1 | 0.13 | -0.1107188 | 0.3 | -0.9932108 |
| Sum | 1834.65 | 70 | 35 | 73.23 | 0.32185787 | 8.9009856 |
| Count | 70 | 70 | 105.73 | 10.5997335 |  |  |

## Regression Output 1

SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.472 |
| R Square | 0.223 |
| Adjusted R Square | 0.162 |
| Standard Error | 19.47 |
| Observations | 70 |

## ANOVA

|  | $d f$ | SS | MS | $F$ | Significance $F$ |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- |
| Regression | 5 | 6962.613 | 1392.52254 | 3.67442078 | 0.00550958 |
| Residual | 64 | 24254.56 | 378.977428 |  |  |
| Total | 69 | 31217.17 |  |  |  |


|  | Coefficients | Standard Error | t Stat | P-value | Lower $95 \%$ | Upper 95\% | Lower 95.0\% Upper 95.0\% |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Intercept | 25.44 | 6.546949 | 3.8857645 | 0.00024464 | 12.3608678 | 38.5189355 | 12.3608678 | 38.5189355 |
| INSOWN | -2.981 | 4.929221 | -0.6048437 | 0.54742145 | -12.82866 | 6.86584314 | -12.82866 | 6.86584314 |
| DER | -5.639 | 2.512083 | -2.244834 | 0.02824232 | -10.657673 | -0.6207467 | -10.657673 | -0.6207467 |
| CASH FLOW | 8.298 | 27.43636 | 0.30243066 | 0.76330451 | -46.512827 | 63.1080181 | -46.512827 | 63.1080181 |
| MTBV | 5.755 | 2.584586 | 2.22674987 | 0.0294899 | 0.59192241 | 10.9185288 | 0.59192241 | 10.9185288 |
| PROFIT GROWTH | -10.18 | 4.689041 | -2.1701918 | 0.03371018 | -19.543553 | -0.808682 | -19.543553 | -0.808682 |

Regression Output 2
SUMMARY OUTPUT

| Regression Statistics |  |
| :--- | ---: |
| Multiple R | 0.789 |
| R Square | 0.622 |
| Adjusted R Square | 0.583 |
| Standard Error | 21.48 |
| Observations | 70 |

ANOVA

|  | Coefficients Standard Error | $t$ Stat | P-value | Lower $95 \%$ | Upper 95\% | Lower 95.0\% | Upper $95.0 \%$ |  |  |
| :--- | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intercept | 0 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |  |
| INSOWN | 7.213 | 4.603457 | 1.56684675 | 0.12200633 | -1.9808269 | 16.406651 | -1.9808269 | 16.406651 |  |
| DER | -0.996 |  | 2.43766 | -0.4087911 | 0.68403673 | -5.8648377 | 3.87184999 | -5.8648377 | 3.87184999 |
| CASH FLOW | 52.96 | 27.48167 | 1.92723797 | 0.05832255 | -1.9209667 | 107.848421 | -1.9209667 | 107.848421 |  |
| MTBV | 9.906 | 2.596203 | 3.81570483 | 0.00030511 | 4.72136969 | 15.0913221 | 4.72136969 | 15.0913221 |  |
| PROFIT GROWTH | -8.302 | 5.145219 | -1.6135529 | 0.11146927 | -18.577796 | 1.97362908 | -18.577796 | 1.97362908 |  |

