



# Programme

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# 2

## SUB THEME ACCOUNTING AND FINANCE

WEDNESDAY, OCTOBER 9<sup>th</sup> 2013

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ROOM : MELATI

TIME : 13.00-14.30 PM

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MODERATOR

*Dr. Abdul Kohar*

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Berto Usman
8. LEVERAGE AND CORPORATE DEMAND FOR INSURANCE IN MALAYSIA  
Mohamad Abdul Hamid
9. EFFECT OF PROFITABILITY AND INVESTMENT OPPORTUNITY SET OF CASH DIVIDEND POLICY WITH THE LIQUIDITY AND LEVERAGE  
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10. INFLUENCE OF FOREIGN BOARD MEMBERSHIP, BOARD INDEPENDENCE AND FOREIGN OWNERSHIP TO FIRM VALUE (EMPIRICAL STUDY ON MANUFACTURING COMPANY LISTED AT BEI YEAR OF 2009-2011)  
Sigit Arifianto, Nikmah, Fitrawati Ilyas
11. THE EFFECT OF UNDERSTANDING OF TAX ACCOUNTING, SERVICE QUALITY OF TAX OFFICERS, AWARENESS OF TAXPAYERS AND TRANSPARENCY IN TAXATION TOWARD OBEDIENCE OF CORPORATE TAXPAYERS IN BENGKULU CITY  
Sriwidharmanely, Darman Usman, Emilda Sulastri
12. DOES INCOME GAP MATTERS FOR THE HOUSEHOLD DEBT ACCUMULATION?  
Mohd Afzanizam Abdul Rashid, Tamat Sarmidi, Nor Ghani Md Nor, Abu Hassan Shaari Md Noor

# **EFFECT OF PROFITABILITY AND INVESTMENT OPPORTUNITY SET OF CASH DIVIDEND POLICY WITH THE LIQUIDITY AND LEVERAGE**

**(Studies in Non-Financial Companies That Listed on  
Indonesia Stock Exchange Period 2005-2009)**

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Fenny Marietza  
Pratana Puspa Midiastuty**

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## **ABSTRACT**

**This research aim to examine the effect of profitability and investment opportunities of the cash dividend policy by using the liquidity and leverage as a moderating variable. The sample in this study amounted to 114 companies that are non-financial firms that distribute cash dividend period 2005-2009.**

**The research data was analyzed using linear regression analysis and moderated regression analysis with SPSS version 16.0. The results of this research indicates that profitability variable proxie by ROA has a positive effect on company cash dividend policy. IOS was analyzed by confirmatory factor analysis also has a positive effect on the company's cash dividend policy. For moderating variable is found that liquidity proxie by Current Ratio and leverage proxie by Time Interest Earned Ratio is not a moderating variable.**

**Keyword: Cash Dividen Policy, Profitability, IOS, Liquidity, Leverage.**

## **I. INTRODUCTION**

### **I.1. Background**

When a company decides to invest the company will need funds. Sources of funding can be obtained either from internal and external funds. At the time the company decided to use external financing, the company will be dealing with the interests of shareholders or investors. In general, the investor has the main objective to improve the well-being that is the expected return as much as possible with a certain risk of the investment that they do, both in the form of cash dividends, stock dividends, or capital gains.

Payment of cash dividends is a return on their investment in the company, due to the payment of cash dividends to boost investor confidence in the company, thereby reducing the uncertainty of investors in their funds into the company.

Dividend policy is a decision that was not easy for the company management. According to Black (1976) dividend policy is a puzzle that is hard to explain, and always raises a big question mark for investors, creditors, even in academic circles. Determination of the exact amount to be paid as dividends is a difficult financial decisions for the management (Ross, 1977), because the decision of the company regarding cash dividends diintegrasikan with financing decisions and investment decisions.

Profitability is the net profit level obtained by the company in its operations. Dividends are a partial payment from the company's net profit, and the company will distribute dividends if the company make a profit. Companies that have stable profits can specify the level of dividend payments with confidence. Miller and Modigliani (1961) argues that the profitability of a significant positive effect on dividend policy of the company.

Suharli and Oktorina (2005) examined the predicted rate of return on investments in equity securities through profitability, liquidity, and debt of public corporations. The results showed the level of profitability and liquidity has a positive relationship with dividend policy. Meanwhile, the level of leverage is negatively related to dividend policy.

Based on the research Suharli (2007) demonstrated empirically that positively impact profitability on dividend policy and strengthened the liquidity variable. Whereas leverage, Rozeff (1982) in Suharli (2006) stated that the company is operating or financial leverage high will give a low dividend. Sadalia and Saragih (2008) said that the investment opportunities or often called the Investment Opportunity Set (IOS) can affect the company's shareholders on dividends received. If the condition is very good company then the management will tend to prefer the new investment rather than

paying high dividends. Funds that would otherwise be paid as a cash dividend to shareholders will be used to purchase a profitable investment.

Some form of proxy for IOS has been shown to have a relationship with the funding policy and dividend policy. The results Suharli (2007) shows that investment opportunities can negatively affect the cash dividend policy which strengthened liquidity variables. Leverage the company will affect the size of the dividends paid to the company's high leverage on debt repayment in the future, cash dividends paid would be lower.

This study aims to test whether the profitability, iOS influence on corporate cash dividends, and whether the presence of variable liquidity and leverage as a moderating variable will strengthen or weaken the effect of profitability and the company's IOS to the cash dividend.

## **I.2. Problem formulation**

Based on the background of the problems that have been described, the issues to be addressed in this study are:

1. Is cash dividend policy affects the profitability of the company?
2. Is investment opportunities affect dividend policy of the company?
3. Is liquidity moderating influence of profitability on corporate dividend policy?
4. Whether the liquidity of the investment opportunity moderating influence on corporate dividend policy?
5. Is moderating influence profitability leverage against company dividend policy?
6. Is moderate leverage effect of investment opportunities on corporate dividend policy?

## **II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **II.1. Theory of Dividend Policy**

Cash dividend policy is a decision whether profits from the company will be distributed to shareholders as dividends or be retained by the company in the form of retained earnings to finance investment in the future (Sartono, 2001). The shareholders want the company distributed cash dividends on profits generated, while the manager wants reinvested earnings. However, when managers use the profits to invest in investments that are not profitable, it will result in losses for the company, which would cause the value of the company will go down and the company's performance will get worse. Therefore, many companies prefer to use the company's net profit as cash dividend to be paid so that the decline in value of the company through an unfavorable investment undertaken by managers can be avoided (Pramastuti, 2007) in (Cecilia, 2010).

Some theories are relevant in the dividend policy proposed by Suharli and Harahap (2004), among others:

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1. <i>Dividen Irrelevance Theory</i> | 2. <i>Bird in the Hand Theory</i>    |
| 1. <i>Clientele Effect Theory</i>    | 4. <i>Dividend Signalling Theory</i> |

### **II.2. Effect the profitability of the cash dividend**

Denis and Osobov (2005) in Cecilia (2010), that the higher profitability of the company will have a high tendency in the payment of dividends. It is also obtained in the study Suharli (2005) based on his research that the profitability level has a direct relation to the payment of dividends to investors. Thus the hypothesis can be formulated researchers are:

**H1: Profitability affect dividend policy of the company in a positive**

### **II.3. Investment Opportunity influence the cash dividend**

Management will tend to prefer the new investment rather than paying high dividends if the company is very good condition. Funds that would otherwise be paid as a cash dividend to shareholders will be used to purchase a profitable investment, even to address the underinvestment problem. Instead, the company experienced slow growth in higher dividends tend to overcome the problem of overinvestment. The results Wirjolukito et al (2003) which measures the utilization of investment opportunities using a net increase in fixed assets found no association parameter estimation and variable direction of investment opportunities on dividend policy is positive. Norpratiwi (2005) examined how the influence of investment opportunity set on stock returns that companies publish their financial reports consistently from the period 2001-2003. Based on the results of the four tests conducted IOS proxy variables Norpratiwi (2005) in general can be shown that there is a significant correlation between the ratio of IOS proxies with stock return.

Because of the inconsistent results of previous studies, the researchers wanted to test whether investment opportunities affect dividend policy, with a hypothesis that can be formulated thus researchers are:

**H2: investment opportunities affect dividend policy of the company in a negative cash**

### **II.4. Liquidity As Variable Moderation**

Companies that have better liquidity it will be able to pay more dividends. At the company posted higher profits (high profitability), plus a better liquidity, the greater the amount of the dividends. In companies that invest more funds will cause the amount of cash dividends paid is reduced, but both capable of eliminating the liquidity (weaken) the hypothesis since then the company may defer payment of short-term debt (Suharli, 2007)

Thus hypotheses can be formulated regarding the liquidity moderating effect of profitability on dividend payment policy is:

**H3a: Liquidity moderate the effect of profitability on corporate dividend policy.**

**H3b: Liquidity moderate the effect of investment opportunities on dividend policy of the company.**

## **II.5. Leverage as a moderating variable**

In relation to the cash dividend, the company has a greater leverage ratio should share dividends in smaller quantities due to profits earned are used to pay off liabilities. Wirjolukito et al (2003) found that the capital structure is proxied by DER, negatively affect dividend policy. While research Suharli and Harahap (2004), Suharli and Oktorina (2005) and Suharli (2006) find that leverage has no effect on the amount of cash dividends.

Inneke (2008) found that IOS and profitability moderate the relationship development policy to leverage corporate dividends. Research results found that the lower the Investment Opportunity Set (IOS) of the company, the more powerful influence of dividend policy on firm leverage. The study also found a negative effect of dividend policy on firm leverage.

Because of the inconsistency of previous studies, the researchers intend to test again whether the leverage effect on cash dividend policy. However, in this study leverage a moderating variable, ie whether the company's leverage to strengthen or weaken the relationship between profitability and IOS on corporate dividend policy.

Based on these explanations, the hypothesis is formulated as follows:

**H4A: Leverage moderate the effect of profitability on corporate dividend policy**



**H4b: Leverage moderate the effect of investment opportunities on corporate dividend policy.**

### **III. METHODS**

#### **III.1. Research's Sample**

The criteria for the study sampled companies are:

1. Non-financial companies listed on the Indonesia Stock Exchange (BEI) and publishes its financial statement as of December 31 in the year 2005 to 2009
2. The company announced a cash dividend during the observation period 2005-2009.
3. The financial statements are presented in the currency.

#### **III.2. Data Collection Method**

This study is a secondary data of listed companies in Indonesia Stock Exchange. Secondary data from this study in the form of financial statement data from the Indonesia Stock Exchange during the observation period 2005-2009.

#### **III.3. Operational Definition and Measurement**

1. Dependent Variables

dividend policy is proxied by the House (dividend payout ratio) by using the formula (Hanafi and Halim, 2003):

$$DPR = \text{DPSI, } t / \text{Epsi, } t$$

2. Independent Variables

a. Profitability

1. ROA

This ratio measures the company's ability to generate net income under a certain level of assets. The ROA formula used is (Hanafi and Halim, 2003):  $\text{ROA} = \text{Net income} / \text{Total assets}$

## 2. ROE

This ratio measures the company's ability to generate profits based on certain share capital. ROE formula (Hanafi and Halim, 2003):

$$\text{ROE} = \text{Net Income} / \text{Total Equity}$$

## 3. Gross Profit Margin (GPM)

calculate the extent of the company's ability to generate profits from the gross sales. Gross Profit Margin formula (Sartono, 2001):

$$\text{GPM} = \text{Gross Profit} / \text{Sales}$$

## 4. Net Profit Margin (NPM)

This ratio calculates the amount of net income earned by the company for sale. Formula Net Profit Margin (Sartono, 2001):

$$\text{NPM} = \text{Net income} / \text{Sales}$$

## b. IOS

### 1. Rasio *Market Value to Book Value of Asset* (MVABVA)

This proxy is used to measure the growth prospects of the company based on the number of assets used in the operations. MVABVA formula is:

$$\text{MVABVA} = \frac{\text{Assets} - \text{Total Equity} + (\text{Shares} \times \text{Closing Price})}{\text{total Assets}}$$

### 2. Rasio *Market Value to Book Value of Equity* (MVEBVE)

The difference between market value and book value of equity investment opportunities the company suggests. The formula used (Norpratiwi, 2004):

$$\text{MVEBVE} = \frac{\text{Shares Outstanding} \times \text{Closing price of shares}}{\text{Total Equity}}$$

3. *Capital Expenditures to Book Value of Asset (CAPBVA).*

The formula used (Saputro, 2003):

$$\text{CAPBVA} = \frac{\text{book value of Fixed Assets}_t - \text{Book Value of Fixed Assets}_{t-1}}{\text{Total Assets}}$$

4. *Capital Expenditures to Market Value of Asset (CAPMVA).*

This ratio is used to measure the ratio between the difference in the value of fixed assets of the company this year with the previous year, with appreciation of investors which is reflected by the level of market valuation on the economic value of the company. The formula used (Saputro, 2003):

$$\text{CAPMVA} = \frac{\text{book value of Fixed Asset}_t - \text{Book Value of Fixed Assets}_{t-1}}{\text{Assets} - \text{Total Equity} + (\text{Shares Outstanding} \times \text{Closing price of shares})}$$

3. Variable Moderation

a. *Liquidity*

1. *Current ratio*

*Current Ratio* measures a company's ability to meet its short-term debt using the assets

smooth. The formula used (Hanafi and Halim, 2003):

$$\text{CR} = \text{Current Assets} / \text{Current Liabilities}$$

2. *Quick ratio*

$$\text{Qr} = (\text{Current assets} - \text{inventory}) / \text{Current liabilities}$$

3. *Cash ratio*

This ratio measures the amount of cash available compared with current liabilities. Calculation formula is (Sawir, 2005):

$$\text{Cash ratio} = (\text{Cash} + \text{Marketable Securities}) / \text{Current liabilities}$$



b. *Leverage*

1. DER

DER is a consideration between total debt to equity (Sartono's, 2001).

The formula used (Sartono, 2001):  $DER = \text{Debt} / \text{Equity}$

2. DAR

This ratio measures the company's ability to meet its obligations. The

formula used (Sartono, 2001):  $DAR = \text{Total Debt} / \text{Total Assets}$

3. *Time Interest Earned Ratio*

This ratio is the ratio of earnings before interest and taxes (EBIT) to interest expense. The formula used (Sartono, 2001):

$TIE = \text{EBIT} / \text{Interest Expense}$

#### III.4. Methods of data analysis

(1). **Normality test** will be performed using Kolmogorof Sminov (KS). Normal distribution of data if the p-value test Kolmogorof Sminov > 0.05 (Ghozali, 2006).

(2). **Autocorrelation test** aims to test whether a linear regression model is no correlation between the error bullies in period t-1 (previous). Autocorrelation test used is the Durbin-Watson (DW test).

(3). **Heteroscedasticity test** used is the glacier. Heterokedastisitas problem does not occur if the test results unstandardized residual values > 0.05 (Ghozali, 2006).

(4). **Multicollinearity test** aims to test whether there is a correlation between the regression model of independent variables (independent). Multicollinearity is said to be free if the VIP value <10 and tolerance values > 0.1 (Ghozali, 2006).

(5). **Hypothesis Test**

On hypotheses 1 and 2 used a simple linear regression, while equation used is:

Hypothesis 1 :  $Y = \alpha + \beta_1 X_1 + e_i \dots \dots \dots (1)$

Hypothesis 2 :  $Y = \alpha + \beta_1 X_2 + e_i \dots \dots \dots (2)$

**Keterangan:**

Y : Dividend Payout Ratio (DPR)

X<sub>1</sub> : Profitability

X<sub>2</sub> : IOS

$b_1, b_2$  : Regression coefficients

For hypotheses 3 and 4 are used Moderating Regression Analysis (MRA), while the equation is:

$$Y = a + b_1 X_1 + b_3 X_3 + e \quad (3) \quad Y = a + b_1 X_1 + b_3 X_3 + b_4 X_1 \cdot X_3 + e \quad (4)$$

$$Y = a + b_2 X_2 + b_3 X_3 + e \quad (5) \quad Y = a + b_2 X_2 + b_3 X_3 + b_5 X_2 \cdot X_3 + e \quad (6)$$

$$Y = a + b_1 X_1 + b_6 X_4 + e \quad (7) \quad Y = a + b_1 X_1 + b_6 X_4 + b_7 X_1 \cdot X_4 + e \quad (8)$$

$$Y = a + b_2 X_2 + b_6 X_4 + e \quad (9) \quad Y = a + b_2 X_2 + b_6 X_4 + b_8 X_2 \cdot X_4 + e \quad (10)$$

**Keterangan:**

Y : Dividend Payout Ratio (DPR)

X<sub>1</sub> : Profitability

X<sub>2</sub> : IOS

X<sub>3</sub> : Liquidity

X<sub>4</sub> : Leverage

#### IV. HYPOTHESIS TESTING AND DISCUSSION

#### IV.1. Pearson Correlation and regression backward

Entire proxy ratios of profitability, liquidity, leverage. In this research will then be tested using the correlation matrix (Pearson Correlation) so it can be seen in Table 1 below:

----- Table 1 here -----

Based on Table 1 it can be seen that no one has a significant correlation with the alternative that researchers take a backward regression. Results of backward regression can be seen in Table 2 below:

----- Table 2 here -----

#### IV.2. Confirmatory Factor Analysis for the Joint Proxy iOS

Results of the CFA can be seen in Table 3 below

----- Table 3 here -----

### IV.3. Descriptive Statistics

Results of descriptive statistics can be seen in Table 4 below:

----- Table 4 here-----

### IV.4. Normality Test Results

Normality test results can be seen in Table 5 below:

----- Table 5 here-----

### IV.5. Autocorrelation Test Results

Autocorrelation test results can be seen in Table 6 below:

----- Table 6 here-----

### IV.6. Multicollinearity Test Results

Multicollinearity test results can be seen in Table 7 below:

----- Table 7 here -----

### IV.7. Heteroskedasticity Test Results

Heteroscedasticity test results can be seen in Table 8 below:

-----Table 8 here-----

### IV.8. Hypothesis 1 Test Results

Results of regression hypothesis 1 can be seen in Table 9 below:

-----Table 9 here-----

Based on the regression results in Table 9 above, shows that the first hypothesis with the equation  $Y = b_1 X_1 + e$  obtained *Adjust R Square* value of 0.491 indicates that 49.1% DPR variable that can be explained by the variable profitability (ROA), while the remaining 50.9 % explained by other variables not included in this equation. F statistic value of 284.03 with a significance value of  $p = 0.000 < 0.05$ . Because the significance probability is much smaller than 0.05, it significantly affects the profitability of cash dividend policy. The test results also showed the value of the coefficient  $b_1$  of 0.220 and 16.853 t statistic with a significance value  $0.000 < 0.05$ ,



which means that there is a positive and significant impact on the profitability of variable cash dividend policy. The test results in line with the hypotheses that have been made that the profitability's effect of the cash dividend is positive which means that **the hypothesis is accepted.**

#### **IV.9. Hypothesis 2 Test Results**

Hypothesis 2 regression results can be seen in Table 10 below:

-----Table 10 here-----

Based on the regression results in Table 10 it can be seen that the second hypothesis with the equation  $Y = b_2X_2 + e$  obtained adjusted R square value of 0.255, indicating that 22.5% DPR variable that can be explained by the IOS variable, while the remaining 74.5% is explained by the variables others are not included in this equation. F statistic value of 65.855 with a significance value of  $p = 0.000 < 0.05$ . Because a significant probability of less than 0.05, this means that the IOS affect cash dividend. Test results also showed that the value of coefficient  $b_2$  of 0.509 and t-statistic value of 8.115 with a significance value  $0.000 < 0.005$  which means that there are positive and significant influence of the IOS variable dividends in cash. This suggests that the greater the dividends paid iOS is also getting bigger. Due to the different coefficients towards the direction in which it has been hypothesized that **the second hypothesis is rejected.**

#### **IV.10. Hypothesis 3a Test Results**

Hypothesis 3 regression results can be seen in Table 11 below:

-----Table 11 here-----

For the statistical value of F on the fourth equation is equal to 8.623 with a significance level of  $0.000 < 0.05$ , which indicates that the profitability, liquidity and interactions together influence the dividend policy. The F value decreased prior to the interaction test is 12.818 in the third equation. In the fourth equation coefficient ( $b_0$ ) of 0.027 and

t-statistic 0.000 10.135 with a significance level of  $<0.05$  was significant. Coefficient (b1) of 0.9093 and a t-statistic 0.000 4.016 with a significance level of  $<0.05$  was significant, the profitability has a significant positive effect on dividend policy in cash. Coefficient (b3) is 0.000 and the t-statistic -0.450 with a significance level of 0.653  $> 0.05$  is not significant, then the negative effect of liquidity does not significantly affect the cash dividend policy. Value of the interaction coefficient (b4) of -0.003 and -0.541 with a t-statistic significance level 0.589  $> 0.05$  is not significant. Coefficient  $b_{\sim 4}$  is the result of the interaction between profitability and liquidity. So for the third hypothesis which states that liquidity profitability moderating influence on dividend policy is not significant, then **the third hypothesis (a) is rejected.**

The next step was followed by the Sharma models by regressing the liquidation of DPR can be seen in Table 12 below:

-----Table 12 here-----

test results obtained in Table 12, the value of the regression coefficient -0.004 with a significance level of 0.000  $<0.05$ . Because the result is not significant then the liquidity variable but as a moderating variable exogenous variables, prediction, intervening, antecedent or suppressor.

#### IV.11. Hypothesis 3b Test Results

3 b the regression results shown in Table 13 below:

-----Table 13 here-----

Statistical value of F on the sixth equation is equal to 3.556 with a significance level of 0.015  $<0.05$ , which indicates that the IOS, liquidity and interactions together influence the dividend policy. The statistical F value decreased prior to the interaction test is 3.888 at the fifth equation. Coefficient (b0) of 0.030 and 9.508 with a t-statistic of 0.000 significance level  $<0.05$  was significant. Coefficient (b2) of 0.001 and 2.728 with a t-statistic of 0.007 significance level  $<0.05$  is significant, then the iOS influence on

dividend policy. Coefficient (b3) of 0.001 and 0.703 with a t-statistic significance level of  $0.483 > 0.05$  is not significant, it does not significantly affect the liquidity of the cash dividend policy. Value of the interaction coefficient (b5) of 2.881 and t-statistic -1.681 with a significance level of  $0.094 > 0.05$  is not significant. Coefficient  $b_{\neg 5}$  is the result of interaction between IOS and liquidity. So for the third hypothesis (b) which states that moderate the effect of liquidity on investment opportunities cash dividend policy is not significant, then **the third hypothesis (b) is rejected.**

The next step is to regress between liquidity and DPR can be seen in Table 14 below:

-----Table 14 here-----

test results obtained in Table 14, the value of the regression coefficient -0.508 with a significance level of  $0.000 < 0.05$ . Because the result is not significant then the liquidity variable but as a moderating variable exogenous variables, prediction, intervening, antecedent or suppressor.

#### **IV.12. Hypothesis 4a Test Results**

4a regression results shown in Table 15 below:

-----Table 15 here-----

Statistical value of F on the eighth equation is equal to 9.276 with a significance level of  $0.000 < 0.05$ , which indicates that profitability, leverage and interactions together influence the dividend policy. The F value decreased prior to the interaction test is 13.132. Coefficient (b0) of 0.026 and t-statistic 0.000 12.367 with a significance level of  $< 0.05$  was significant. Coefficient (b1) of 0,100 and 5,104 t-statistic of 0.000 with a significance level of  $< 0.05$  was significant, significantly affect the profitability of the cash dividend policy. Coefficient (b6) of 3.300 and a t-statistic of 0.000 with a significance level of  $1.000 > 0.05$  is not significant, then the leverage does not significantly affect the cash dividend policy. Value of the interaction coefficient (b7) of



0.000 and t-statistic -1.233 with a significance level of  $0.219 > 0.05$  is not significant. Coefficient  $b_{\gamma 7}$  is the result of the interaction between profitability and leverage. So for the fifth hypothesis which states that leverage does not significantly moderate the effect of profitability on dividend policy then **the fourth hypothesis (a) is rejected**.

The next step is to regress *the leverage* with DPR can be seen in the table below:

-----Table 16 here-----

test results obtained in Table 16 with their value regression coefficient is 9.366 with a significance level  $0.000 < 0.05$ . Because the result is significant then the liquidity variable not a moderating variable but as *an exogenous, a prediction, a intervening, an antecedent or suppressor* variables.

#### IV.13. Hypothesis 4b Test Results

Hypothesis 4b regression results can be seen in the table below:

-----Table 17 here-----

F statistic values on the tenth equation is 2.355 with a significance level of  $0.073 > 0.05$ , which indicates that the IOS, leverage and interaction together does not affect the cash dividend policy. The F value decreased from 3.494. Coefficient ( $b_0$ ) of 0.032 and t-statistic 0.000 14.344 with a significance level of  $< 0.05$  was significant. Coefficient ( $b_2$ ) of 0.001 and 2.412 with a t-statistic significance level of  $0.017 < 0.05$  is significant, then the IOS significantly affects the cash dividend policy. Coefficient ( $b_6$ ) of -8.813 and -0.351 t-statistic with a significance level of  $0.726 > 0.05$  is not significant, then the leverage does not significantly affect the cash dividend policy. Value of the interaction coefficient ( $b_8$ ) of -1.309 and -0.325 with a t-statistic significance level  $0.745 > 0.05$  is not significant. Coefficient  $b_{\gamma 8}$  is the result of interaction between IOS and leverage. Obtained from the test results did not significantly moderate the effect of leverage between IOS and cash dividend policy. Then for the sixth hypothesis which states

leverage moderating influence on policy IOS cash dividends is not significant, then **the fourth hypothesis (b) is rejected.**

The next step is to regress *the leverage* with DPR can be seen in the table below:

-----Table 18 here-----

with the test results obtained in Table 4:19 regression coefficient -0.247 with a significance level of  $0.00 < 0.05$ .

## **V. CONCLUSION, LIMITATION, DAN RESEARCH IMPLICATIONS**

### **V.1. Conclusion**

1. Hypothesis 1 suggests that the hypothesis is **accepted**. Profitability is proxied by Return on Assets (ROA) affect positively the cash dividend policy.
2. Hypothesis 2 shows the results of testing the hypothesis that the hypothesis is **rejected** stating that iOS negatively affect corporate dividend policy.
3. Hypothesis 3 in this research were divided into two,
  - a. Hypothesis 3a shows that the hypothesis is **rejected**.
  - b. Hypothesis 3b also shows that the hypothesis is **rejected**.
4. Hypothesis 4 in this research is also divided into two,
  - a. Hypothesis 4a shows that the hypothesis is **rejected**. Because of *the leverage* variable is not a moderating variable.
  - b. Hypothesis 4b also shows that the same results with the previous hypothesis that the hypothesis is **rejected**.

### **V.2. Limitation**

Several limitations to this study are:

- a. Regression results in this research mostly produce *Adjusted R Square* value is quite low and formulated several hypotheses rejected.
- b. Several hypotheses were rejected because of alleged improper use of proxies.

### V.3. Research Implications

The results provide additional evidence about the influence of profitability, iOS, liquidity, and *leverage* on the cash dividend policy of a company that may be useful to investors in making the investment. In addition, this research is expected to be a reference in the field of financial accounting. Particularly regarding the moderating variable on dividend policy of the company.

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## Attachment

**Table 1**  
**Pearson Correlation**

No	Variable	Pearson Correlation	Significant
A	<b>Profitability Ratio</b>		
	ROA	0,074	0,179
	ROE	0,056	0,306
	Gross Profit Margin	-0,015	0,783
	Net Profit Margin	0,005	0,929
B	<b>Liquidity Ratios</b>		
	Current Ratio	-0,026	0,638
	Quick Ratio	-0,022	0,691
	Cash Ratio	-0,003	0,951
C	<b>Leverage Ratio</b>		
	Debt to Equity Ratio	-0,002	0,971
	Debt to Asset Ratio	0,002	0,975
	Time Interest Earned Ratio	-0,039	0,479

Source: Data processed 2011

**Table 2**  
**Backward**

Variable		Model	T	Sig.
<b>A. Profitability</b>	1	(Constant)	4.346	.000
		ROA	1.230	.220
		ROE	.004	.997
		GPM	-.433	.665
		NPM	-.732	.464
	2	(Constant)	4.435	.000
		ROA	1.628	.104
		GPM	-.434	.665
		NPM	-.746	.456
	3	(Constant)	4.784	.000
		ROA	1.604	.110
		NPM	-.877	.381
<b>B. Liquidity</b>	4	(Constant)	4.759	.000
		ROA	1.347	.179
		(Constant)	8.543	.000
	1	(Constant)	7.026	.000
		CR	-.149	.882
		QR	-.001	.999
		CSHR	.192	.848
	2	(Constant)	7.084	.000
		CR	-.546	.586
		CSHR	.283	.778
<b>C. Leverage</b>	3	(Constant)	7.118	.000
		CR	-.472	.638
		(Constant)	8.543	.000
		(Constant)	3.134	.002
	1	DER	-.071	.943

	DAR	-.043	.966
	TIE	-.718	.473
2	(Constant)	6.340	.000
	DER	-.153	.878
	TIE	-.724	.470
3	(Constant)	8.263	.000
	TIE	-.709	.479
4	(Constant)	8.543	.000

Source: Data processed 2011

Table 3  
CFA

Communalities				
IOS	MVABVA	MVEBVE	CAPBVA	CAPMVA
Communalities	0,960	0,960	0,929	0,929
Eigenvalue				
Factor	1	2	3	4
Eigenvalue	2,016	1,760	0,144	0,80

Source: Data processed 2011

Table 4  
Descriptive Statistics

Variable	N	Average	Value Min.	Value Max.	Standard deviation
DPR	334	0.0444	-0,9385	1.0591	0.0949
Profit	334	0.0890	-0.0212	0.4067	0.0811
IOS	334	4.5928	0.1406	66.1499	7.1563
Liquidity	334	2.7829	0.2392	39.6172	3.7295
Leverage	334	3.8178	-0.5353	116.25	104.826

Source: Data processed 2011

Table 5  
Normality Test Results

	K-S test	Asymp. Sig.	p-value	Conclusion
DPR	5.710	0.000	P<0,05	Distribution is not normal
ROA	2.495	0.000	P<0,05	Distribution is not normal
IOS	5.056	0.000	P<0,05	Distribution is not normal
CR	4.769	0.000	P<0,05	Distribution is not normal
TIE	6.505	0.000	P<0,05	Distribution is not normal

Source: Data processed 2011

Table 6  
Autocorrelation Test Results

Equation	DW	Information
III	2,007	There is no positive and negative autocorrelation
IV	2,008	There is no positive and negative autocorrelation
V	2,023	There is no positive and negative autocorrelation
VI	2,019	There is no positive and negative autocorrelation
VII	2,013	There is no positive and negative autocorrelation
VIII	2,009	There is no positive and negative autocorrelation
IX	2,018	There is no positive and negative autocorrelation
X	2,018	There is no positive and negative autocorrelation

Source: Data processed 2011

Table 7  
Multicollinearity Test Results

	Tolerance	VIF	Conclusion
Equation 3			
ROA	0.989	1.011	Not occur multicollinearity
CR	0.989	1.011	Not occur multicollinearity
Equation 4			
ROA	0,544	1,837	Not occur multicollinearity
CR	0,274	3,652	Not occur multicollinearity
ROAxCR	0,210	4,772	Not occur multicollinearity
Equation 5			
IOS	0.999	1.001	Not occur multicollinearity
CR	0.999	1.001	Not occur multicollinearity
Equation 6			
IOS	0,313	3,199	Not occur multicollinearity
CR	0,284	3,525	Not occur multicollinearity
IOSxCR	0,180	5,547	Not occur multicollinearity
Equation 7			
ROA	0.940	1.064	Not occur multicollinearity
TIE	0.940	1.064	Not occur multicollinearity
Equation 8			
ROA	0.763	1,310	Not occur multicollinearity
TIE	0.279	3.585	Not occur multicollinearity
ROAxTIE	0.241	4,154	Not occur multicollinearity
Equation 9			
IOS	1,000	1.000	Not occur multicollinearity
TIE	1,000	1.000	Not occur multicollinearity
Equation 10			
IOS	0.922	1.084	Not occur multicollinearity
TIE	0.349	2.863	Not occur multicollinearity
IOSxTIE	0.340	2.944	Not occur multicollinearity

Source: Data processed 2011



Table 8  
Heteroskedasticity Test Results

Pengujian	Variable	Significance	Conclusion
Equation 3	ROA	0.577	Free heterocedastisity
	CR	0.450	Free heterocedastisity
Equation 4	ROA	0.789	Free heterocedastisity
	CR	0.960	Free heterocedastisity
	ROAxCR	0.766	Free heterocedastisity
Equation 5	IOS	0.459	Free heterocedastisity
	CR	0.469	Free heterocedastisity
Equation 6	IOS	0,782	Free heterocedastisity
	CR	0,868	Free heterocedastisity
	IOSxCR	0,865	Free heterocedastisity
Equation 7	ROA	0,587	Free heterocedastisity
	TIE	0,437	Free heterocedastisity
Equation 8	ROA	0,576	Free heterocedastisity
	TIE	0,613	Free heterocedastisity
	ROAXTIE	0,922	Free heterocedastisity
Equation 9	IOS	0,470	Free heterocedastisity
	TIE	0.264	Free heterocedastisity
Equation 10	IOS	0,519	Free heterocedastisity
	TIE	0,596	Free heterocedastisity
	IOSxTIE	0,877	Free heterocedastisity

Source: Data processed 2011

Table 9  
Hypothesis 1 Test Results

Variable	Equation 1			Hypothesis
	Coeff. Value	t-Statistics	Sig.	<b>Accepted</b>
Profitability (ROA)	0,220	16,853	0,000	
R Square	0,493			
Adjusted R Square	0,491			
F	284,03			
Sig	0,000			

Source: Data processed 2011

Table 10  
Hypothesis 2 Test Results

Variable	Equation 2			Hypothesis
	Coeff. Value	t-Statistics	Sig.	<b>Rejected</b>
IOS	159,501	8,115	0,000	
R Square	0,259			
Adj R Square	0,255			
F	65,855			
Sig	0,000			

Source: Data processed 2011

Table 11  
Hypothesis 3a Test Results

Variable	Equation 3			Equation 4		
	Coefficient	T	Sig.	Coefficient	T	Sig.
Constanta	0,028	12,068	0,000	0,027	10,135	0,000
(ROA)	0,085	4.907	0,000	0,093	4,016	0,000
Liquidity (CR)	0,000	-1,741	0,083	0,000	-0,450	0,653
Interaction				-0,003	-0,541	0,589
R Square	0,077			0,078		
Adj. R Square	0,071			0,069		
F	12,818			8,623		
Sig.	0.000			0,000		

Source: Data processed 2011

Table 12  
Hypothesis 3a Moderation Test Results

Variable	Coefficient	Adj R Square	F Value	T Value	Sig (p)
Liquidity (CR)	0,004	0,189	73,596	8,579	0,000

Source: Data processed 2011

Table 13  
Hypothesis 3b Test Results

Variable	Equation 5			Equation 6		
	Coefficient	t	Sig.	Coefficient	T	Sig.
Constanta	0,034	13,167	0,000	0,030	9,508	0,000
IOS	0,000	2,380	0,012	0,001	2,728	0,007
Liquidity (CR)	0,000	-1,144	-1,359	0,001	0,703	0,483
Interaction				2.881	-1,681	0,094
R Square	0,035			0,047		
Adj. R Square	0,026			0,034		
F	3,888			3,556		
Sig.	0.022			0,015		

Source: Data processed 2011

Table 14

Hypothesis 3b Moderation Test Results

Variable	Coefficient	Adj R Square	F Value	T Value	Sig (p)
Liquidity (CR)	0,004	0,189	40,768	7,234	0,000

Table 15  
Hypothesis 4a Test Results

Variable	Equation 7			Equation 8		
	Coefficient	t	Sig.	Coefficient	t	Sig.
<b>Constanta</b>	0,026	12,475	0,000	0,026	11,367	0,000
<b>(ROA)</b>	0,090	5,075	0,000	0,100	5,104	0,000
<b>Leverage (TIA)</b>	-2.561	-1,902	0,058	3,300	0,000	1,000
<b>Interaction</b>				0,000	-1,233	0,219
<b>R Square</b>	0,079			0,083		
<b>Adj. R Square</b>	0,073			0,074		
<b>F</b>	13,132			9,276		
<b>Sig.</b>	0.000			0,000		

Source: Data processed 2011

Table 16  
Hypothesis 4a Moderation Test Results

Variable	Coefficient	Adj R Square	F Value	T Value	Sig (p)
Leverage(TIE)	9,366	0,062	21,447	4,631	0,000

Source: Data processed 2011

Table 17  
Hypothesis 4b Test Results

Variable	Equation 9	Equation 10
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	<b>Coefficient</b>	<b>t</b>	<b>Sig.</b>	<b>Coefficient</b>	<b>t</b>	<b>Sig.</b>
<b>Constanta</b>	0,032	14,513	0,000	0,032	14,344	0,000
<b>IOS</b>	0,001	2,422	0,016	0,001	2,412	0,017
<b>Leverage (TIE)</b>	-1.539	-1,039	0,300	-8,813	-0,351	0,726
<b>Interaction</b>				-1,309	-0,325	0,745
<b>R Square</b>	0,031			0,032		
<b>Adj. R Square</b>	0,022			0,018		
<b>F</b>	3,494			2,355		
<b>Sig.</b>	0.032			0,073		

*Source: Data processed 2011*

Table 18  
Hypothesis 4b Moderation Test Results

<b>Variable</b>	<b>Coefficient</b>	<b>Adj R Square</b>	<b>F Value</b>	<b>T Value</b>	<b>Sig (p)</b>
Leverage (TIE)	8,33	0,056	14,172	3,765	0,000

*Source: Data processed 2011*

## 6

SUB THEME  
ACCOUNTING AND FINANCEWEDNESDAY, OCTOBER 9<sup>th</sup> 2013

ROOM : MELATI

TIME : 14.45-16.00 PM

MODERATOR

*Dr. Amzul Rifin*

30. ACCOUNTABILITY CAMPAIGN FUNDS: EFFECT OF THE LEVEL OF PUBLIC UNDERSTANDING AND POLITICAL PARTY MEMBERS ON ACCOUNTABILITY (STUDY OF PERCEPTION KPU AND PANWASLU IN BENGKULU CITY)  
Fachruzzaman, Morry Putrado
31. FINANCIAL PERFORMANCE OF LOCAL GOVERNMENT, LKPD OBTAINING WTP OPINION, AND CAUSE CONTROVERSY DECISION IN THE PROVINCE BENGKULU  
Kamaludin, Fachruzzaman
32. THE EFFECT OF REPUTATION, ETHICS AND SELF ESTEEM ON BUDGETARY SLACK WITH LOCUS OF CONTROL AS A MODERATING VARIABLE  
Lisa Martiah Nila Puspita, Etika Yessianti
33. THE EFFECT OF FIRM SIZE, DEBT TO EQUITY RATIO TO PROFITABILITY WITH EARNINGS GROWTH AS MODERATING VARIABLE ON THE FIRM OF REAL ESTATE LISTED IN INDONESIA STOCK EXCHANGE  
Danang Adi Putra, Madani Hatta, Pratana Puspa Midiastuty
34. ANALYSIS RELATED EARNINGS OF GENUINESS AREA, TRANSFER OF CENTRAL GOVERNMENT, BY INDEPENDENCE AREA THE LOCAL GOVERNMENT AREAS IN PROVINCE BENGKULU  
Fachruzzaman, Ahmad Fajri Afrendi

**THE EFFECT OF FIRM SIZE, *DEBT TO EQUITY RATIO* TO PROFITABILITY WITH  
EARNINGS GROWTH AS MODERATING VARIABLE ON THE FIRM OF  
REAL ESTATE LISTED IN INDONESIA STOCK EXCHANGE**

**Danang Adi Putra  
Madani Hatta  
Pratana Puspa Midiastuty**

**University of Bengkulu**

**Danang.danangadiputra.adiputra@gmail.com**

**ABSTRACT**

This research aims to examine the effect of firm size, debt to equity ratio to profitability with earning growth as moderating variables. In this research, firm size measured by using a proxy the natural logarithm of total assets, profitability as measured by proxy Return On Equity (ROE). The population of this research are all listed real estate company in Indonesia Stock Exchange (BEI) in the period 2002-2009. Based on purposive sampling method, the total sample used by as many as 37 companies with 296 observations. The research data was analyzed by using linear regression analysis and moderated regression analysis with SPSS version 16.0.

Result of linear regression test showed that there was a significant positive effect of firm size to profitability. Debt to equity ratio has a significant positive effect to profitability. The test result moderated regression analysis on the influence of the firm size to profitability with earning growth as moderating variables found evidence that earning growth is not a moderating variable but exogenous, prediction, intervening, antecedent or suppresor variable. But the effect of debt to equity ratio to profitability with earning growth as moderating variable found evidence that earning growth is pure moderating variable.

**Keywords:** Capital Structur Theory, Firm Size, *Debt to Equity Ratio*, Earning Growth

## **I. INTRODUCTION**

### **I.1. Background**

The financial statements are essentially the result of the accounting process presented in quantitative form, in which the information presented in it may help various stakeholders (within and outside the company) to make decisions that greatly affect for the viability of the company (Istikomah, 2005). The use of the information in the financial statement by parties outside (*external*) company aims to make investment

decisions and to decide on the provision of credit by creditor. The financial statements are prepared to provide information relating to *solvency* and *profitability*. One of the information that be there in the financial statement is regarding the profitability or the ability to generate profits. Profit is one of the main objective of the company, therefore the company will strive to earn the highest profits derived from the use of assets that companies have.

The bigger a company the capital of which is owned by the company are also great good that comes from their own capital and foreign capital (Hadianto, 2008). If capital is derived from the capital itself of course the profits they make these companies will also be greater because the company does not have the obligation to make payments to any party which can reduce the profits will be obtained by the company, but if the capital comes from foreign capital would it will reduce the profits of the company. This is because the profits from the company at the end of the period will be reduced by the amount of interest on the debt will be paid by the company.

The greater the capital owned by a company, the level of profitability of the company is also getting larger (Kodrat, 2004). This is because the capital available in the company are used for production activities. The higher the prudction activities of the company will have an on the greater number of products which will then affect the company's increasing sales volumes and eventually will increase the profitability of the company.

The research's result of Wijaya (2006) which divides the size of the company into a company with a large size and small size companies to obtain the result that for large-sized companies get the results that size does not affect the company's profitability. However, in the small-sized companies, there is significant difference between firm size and profitability.



Capital structure is a combination of funds from external loans and capital owners (Riyanto, 2001). Funds from external loans will be the company's liabilities at the end of the period. One ratio that is used to see the effect of using debt is the Debt to Equity Ratio (DER). DER is the ratio between total liabilities by the number of own capital. According Suryana (2007), DER is a ratio that measures how much the company uses debt financing and explain the magnitude of the proportion of short-term and long-term valuation of the company's assets. Companies with high levels of DER will cause the level of profitability of the enterprise is low. It can be seen from the higher DER caused by the magnitude of the debt owned by the company.

This is consistent with the theory developed by Modigliani Miller, later known as MM theory, this theory explains that the companies prefer to use funding from debt rather than using funding from its own capital. Funding from debt will lead to the company's obligation to pay the amount of interest that would reduce corporate profits. So according to the MM theory, this research is payable in debt to equity ratio will negatively affect the profitability of the company.

Authors try to put a moderating variable to indicate whether the presence of these moderating variables weaken or strengthen the relationship between the dependent variable and the independent variables. Moderating variables used in this research is earnings growth. Earnings growth into earnings growth moderating variable because theoretically have a positive impact on profitability. According Suryana (2007) companies with growing earnings, can amplify the effect of firm size and profitability.

This study aims to test whether the size of the company, debt to equity ratio has a positive effect on profitability, as well as whether the presence of a variable as a moderating variable profit growth will strengthen or weaken the effect of firm size on profitability and debt-to-equity ratio to profitability.

## **I.2. Problem Formulation**

Issues tested in this research are :

1. Does firm size has a positive effect on profitability?
2. Is the debt-to-equity ratio (DER) has a negative impact on profitability?
3. Is moderate earnings growth effect of firm size on profitability?
4. Is moderate earnings growth effect of debt to equity ratio (DER) to profitability?

## **I.3. Research Objectives**

As for the goals of this research are :

1. To provide evidence on whether firm size has a positive effect on profitability.
2. To provide evidence of whether the debt-to-equity ratio has a negative effect on profitability.
3. To provide evidence on whether earnings growth moderating effect of firm size on profitability.
4. To provide evidence on whether earnings growth moderating effect of debt-to-equity ratio to profitability.

## **II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **II.1. Theory of Capital Structure**

Theory of capital structure explain whether there are effects of capital structure change on firm value. Basically the task of the corporate financial managers are trying to find a financial balance sheet required and for the qualitative composition of the balance sheet as well as possible. The selection of the qualitative composition of the assets will determine the structure of the company's assets, while the selection of the qualitative composition of the liabilities and equities will determine the financial structure and capital structure of the company (Riyanto, 2001). Capital structure is a balance between the amount of short-term debt that is permanent, long-term debt, preferred stock and common stock.

Mix of debt and equity financing for companies is the main subject of capital structure decisions. Efficient mix of capital that can reduce the cost of capital (cost of capital), which could increase the net economic returns and enhance shareholder value. Companies that use only called unlevered firm's equity, while those using a mix of various debt and equity called levered firm.

## **II.2. Effect of Firm Size on Profitability**

Firm size is associated with the company's capital, firms with large size tend to have a large capital too. If capital is derived from the capital itself of course would not have liability company which will reduce the profitability of the company. Thus, the effect of firm size and profitability is positive. The bigger a company will be higher levels of profitability.

Research conducted by Setiawan (2006) examined the effect of firm size and profitability of the companies in the Jakarta Stock Exchange in 2001 and 2002 found evidence that there are significant positive association between firm size and profitability. This is supported by research conducted Suryana (2007) on banking companies find a positive effect of the size of the company to profitability.

Based on some research, Author can take the hypothesis that:

### **H1: Firm size has a positive effect on profitability**

## **II.3. Debt to Equity Ratio Influence on Profitability**

According to Modigliani - Miller theory of the Debt to equity ratio has a negative effect on profitability. So the higher the ratio of debt to equity a company, the lower the profitability of the company. In theory MM companies prefer to use debt financing in the form of the debt-to-equity ratio (DER). The use of high debt will surely lead to the payment of interest to be borne by the company, with interest payments will reduce the amount of profit that will be received by the company. Small profits rate will reduce the profitability of the company.

MM theory is consistent with research conducted by Suryana ( 2007 ) which concluded that the effect of DER on profitability is negative . Research conducted by Suryana (2007 ) is consistent with previous research conducted by Myers (1984 ) , Gordon Donaldson (1961 ) and Bready (1984 ) , Titman and Wessels (1988 ) , in research Sofiati (2001 ) which states that the effect of Debt to-equity ratio ( DER ) with profitability is negative.

Based on some research , Author can take the hypothesis that :

**H2: *Debt to equity ratio (DER) has a negative impact on profitability***

#### **II.4. Effect of Firm Siza on Profitability with Earning Growth as Variable Moderation**

Company size theoretically have a positive effect on profitability , the greater the growth of the company, the higher the expected profit . Research conducted by Suryana ( 2007 ) is consistent with previous research studies conducted by Elton and Gruber ( 1994 ) in Hartono ( 2000 ) formulate large companies deemed to have less business risk than smaller companies , because large firms more have access to the capital markets than large firms also have better management , and it is easier for large companies to obtain additional funds that can then increase profitability.

Berdasarkan dari beberapa penelitian di atas, penulis dapat mengambil hipotesis bahwa :

**H3: *Earning Growth to Moderate Effect of Firm Size on Profitability***

#### **II.5. Debt to Equity Ratio Influnce on The Profitability of The Variable Earning Growth as Moderation**

Theoretically, the effect of the debt-to- equity ratio is negative profitability . This is consistent with the effect of the debt-to- equity ratio is also negative earnings growth . DER high will cause earnings to decline because of the interest payments , profits will lead to declining profits grow even become negative.

Results of research conducted Suryana ( 2007) in line with some previous studies that says that the growth of the negative earnings impact between Debt to equity ratio to profitability . It is supported by many researchers such as Porter (1980 : 161) in Hamid (2001 ), suggests that the company is in the growth phase and has a high profit margin . This is supported by research Ang Chua and McConnell (1982) in Sofiati (2001) , they found a negative effect of profitability on debt . While Myers (1984) , Gordon Donaldson (1961 ) and Bready (1984) , Titman and Wessels (1988) , in research Sofiati (2001) which stated that the negative effect of debt on profitability . The results are also consistent with the results of research conducted Myers (1984) in Sofiati (2001) , that firms with high earnings growth tend to take less debt.

Based on some researcher, Author can take the hypothesis that:

**H4: Earning Growth Moderating Influence Debt to Equity Ratio (DER) to Profitability**

**III. RESEARCH'S METHOD**

**III.1. The Research's Sample**

The sample selection sampling method possible is probably non purposive sampling . The sample selection criteria include the following : 1 ) . issued financial statements for 8 years in a row , 2 ) . has a financial report fiscal year ending December 31.

**III.2. Data Collection Method**

This Research is a secondary data of listed companies in Indonesian Stock Exchange . Secondary data from this research in the form of financial statement data from the Indonesian Stock Exchange during the observation period 2002-2009.

### III.3. Operational Defenition and Measurement

Variable used in this research :

#### 1) Dependent Variable

Profitability in the proxy it with ROE. ROE is a company's ability to generate profit in relation to the use of capital ROE sought by the formula (Sartono, 2001) :

$$ROE = \text{Net Income} / \text{Capital}$$

#### 2) Moderation Variable

Earning growth is the change in the company's earning from the current year minus the previous year's earning compared with the previous year. Earning growth can be calculated by the following formula (Munawir, 2001) :  $PL = (Ni_t - Ni_{t-1}) / Ni_{t-1}$

#### 3) Independent Variable

Firm size indicates the size of a company. Firm size can be calculated using the following equation :

$$UP = \ln \text{Total Aset}_t$$

DER shows a comparison between the capital debt. Equations used in calculating the DER ( Sartono, 2001) :

$$DER = \text{Total Debt} / \text{Total Equity}$$

### III.4. Data Analysis Method

- (1). **Normality Test** will be performed using Kolmogorof Sminov (K-S). Normal distribution of data if the value of *p-value* K-S test > 0,05 (Ghozali, 2006).
- (2). **Autocorrelation Test** aims to test whether a linear regression model was no correlation between the error bullies in period t-1 (previous). Autocorrelation test used is the Durbin-Watson test (D-W test).
- (3). **Heteroscedasticity Test** used is the park . Heteroscedasticity trouble-free if the test results unstandardized residual values > 0.05 (Ghozali, 2006).

(4). **Multicollinearity Test** aims to test whether the regression model there is a correlation between the independent variables ( independent ) . Multicollinearity is said to be free if the VIP value < 10 and tolerance values > 0.1 (Ghozali, 2006).

(5). **Hypothesis Testing**

On hypothesis 1 and 2 used a simple linear regression, while equation used is :

Hypothesis 1 :  $Y = \alpha + \beta_1 UP + ei \dots \dots \dots (1)$

Hypothesis 2 :  $Y = \alpha + \beta_1 DER + ei \dots \dots \dots (2)$

For hypothesis 3 and 4 are used Moderating Regression Analysis (MRA), while the equation is:

Hypothesis 3 :  $Y = \alpha + \beta_1 UP + \beta_2 PL + ei \dots \dots \dots (3)$

$Y = \alpha + \beta_1 UP + \beta_2 PL + \beta_3 (UP \times PL) + ei \dots \dots (4)$

Hypothesis 4 :  $Y = \alpha + \beta_1 DER + \beta_2 PL + ei \dots \dots \dots (5)$

$Y = \alpha + \beta_1 DER + \beta_2 PL + \beta_3 (DER \times PL) + ei \dots \dots (6)$

Notes :

Y = The dependent variable profitability ( *Return On Equity* ).

$\alpha$  = constant.

UP = independent variable is the size of the company.

DER = independent variable *Debt to Equity Ratio* (DER).

PL = variable moderating the earning growth

$\beta_1$ - $\beta_3$  = regression coefficient of the independent variable which states that the change relative of a dependent variable that varies with changes relative in relation to the independent variable.

UPxPL = Moderation between firm size and earning growth.

DERxPL = Moderation between *debt to equity ratio* to earning growth.

ei = *error*

#### **IV. HYPOTHESIS TESTING AND DISCUSSION**

##### **IV.1. The Research Sample**

The sample was successfully obtained by the method of purposive sampling are presented in Table 1 below :

-----Table 1 here -----

##### **IV.2. Descriptive Statistics**

Descriptive statistics of the 248 observations of 30 real estate companies from the year 2002 to 2009 can be seen in Table 2 below :

-----Table 2 here -----

##### **IV.3. Normality Test Result**

Normality test results can be seen in Table 3 below :

-----Table 3 here -----

##### **IV.4. Autocorrelation Test Result**

Autocorrelation test results can be seen in Table 4 below :

-----Table 4 here -----

##### **IV.5. Autocorrelation Medical Test Results**

Results of treatment trials autocorrelation problem can be seen in Table 5 below:

-----Table 5 here-----

##### **IV.6. Heteroscedasticity Test Result**

Heteroscedasticity test results can be seen in Table 6 below:

-----Table 6 here -----

##### **IV.7. Heteroscedasticity Medical Test Results**

Heteroscedasticity treatment test results can be seen in Table 7 below:

-----Table 7 here-----



#### IV.8. Multicollinearity Test Results

Multicollinearity test results can be seen in Table 8 below:

-----Table 8 here-----

#### IV.9. Multicollinearity Medical Test Results

Results of treatment trials multicollinearity problem can be seen in Table 9 below

-----Table 9 here-----

#### IV.10. Hypothesis Testing Result 1

Hypothesis testing is done with a simple regression equation  $Y = \alpha + \beta_1 + UP_{ei}$ , results of testing hypothesis 1 can be seen in Table 10 below :

-----Table 10 here-----

Based on the results of the regression is known that the first hypothesis with the equation  $Y = \alpha + \beta_1 + UP_{ei}$  obtained Adjust R Square value of 0.157 indicates that 15.7% profitability variables that can be explained by the variable size of the company, while the remaining 84.3% is explained by other variables that does not appear in this equation. F statistic value of 50.680 with a significance value of  $p = 0.000 < 0.05$ . Because the significance probability is much smaller than 0.05 then this means that the size of the company affects profitability. The test results also showed the value of the coefficient  $b_1$  of 0.401 with a significance value  $0.000 < 0.05$ , which means that there is a positive and significant impact on the profitability of the company size variable. The test results in line with the hypothesis that have been made in which the effect of firm size on profitability is positive. T-value of 7.119 while the t-table by 1.65. If  $t_{count} > t_{table}$  of the significant value is less than 5% and the **hypothesis is accepted**. This suggests that large companies will be able to increase profits. Because large firms tend to have a large capital companies can use to increase profits, either by increasing production so that the increased production sales also increased which will increase

the company's profits to be gained. Size large companies have better management and have access to additional funds larger so as to increase its profit.

The results are consistent with previous research conducted by Setiawan (2006) which examines the effect of firm size and profitability of the company on the Jakarta Stock Exchange in 2001 and 2002, as well as research conducted by Suryana (2007). Both researchers found a positive effect of the size of the company to profitability.

#### **IV.11. Hypothesis Testing Result 2**

Hypothesis testing 2 is done with a simple regression equation  $Y = \alpha + \beta_1 + e_i$  DER , results of testing hypothesis 2 can be seen in Table 11 below :

-----Table 11 here-----

Based on the results of the regression is known that the second hypothesis with the equation  $Y = \alpha + \beta_1 + e_i$  DER obtained adjusted R square value of 0.801 , indicating that 80.1 % profitability variable that can be explained by the variable debt to equity ratio ( DER ) , while the remaining 19 , 9 % is explained by other variables not included in this equation . Statistical value of F for 1192 with a significance value of  $p = 0.000 < 0.05$  . Because a significant probability is much smaller than 0.05 , this means that the debt-to- equity ratio affects profitability . The test results also showed that the value of the coefficient  $b_1$  of 0.895 with a significance value  $0.000 < 0.005$  which means that there is a positive and significant effect of the variable debt to equity ratio to profitability . This shows that the larger the debt to equity ratio also generated huge profitability.

T- value of 34.530 while the t - table value of 1.6508 . If t count > t - table of the significant value is less than 5 % . Research results and hypotheses that have built a different direction , in the direction of the hypothesis debt to equity ratio on profitability is negative but the opposite direction of the hypothesis of the research is

positive so **the hypothesis is rejected** . This is because the company will try to take advantage of the high debt in order to increase profits to be obtained by the company , company with high debt composition can not be judged that the company is bad , but how the company can use the debt as much as possible and not cause harm . The results are consistent with research conducted by Wibowo (2006 ) and Tobias (2006 ) , where the two researchers found results that the debt-to- equity ratio has a positive effect on profitability.

#### **IV.12. Hypothesis Testing Result 3**

In the third hypothesis testing using the Moderate Regression Analysis ( MRA ) . The third hypothesis in this study was moderate earnings growth effect of firm size on profitability . Regression analysis third hypothesis ( H3 ) for the third equation can be seen in Table 12 below :

-----Table 12 here-----

Value Adj R Square in the third equation 0.172 which means that 17.2 % variability in profitability can be explained by the variability of firm size and variability of earnings growth , while the remaining 72.8 % is explained by other factors outside of this equation . In the fourth equation which is the equation of moderation where Adj R Square value increased by 0.0000198 rise Adj R-square is very small.

F statistic value of the third and fourth equations are the same size is 13.444 with a significance level of  $0.000 < 0.05$ , which indicates that the size of the company and interaction jointly affect profitability . Coefficient (  $b_0$  ) of - 36.959 -5.554 and t - statistic of 0.000 with a significance level of  $< 0.05$  was significant . Coefficient (  $b_1$  ) of 10.404 and 5.182 with a t - statistic of 0.000 significance level  $< 0.05$  was significant . In the third equation coefficients (  $b_2$  ) of -0.022 and -0.256 t - statistic with a significance level of  $0.798 > 0.05$  is not significant . This means that income growth does not affect profitability . While the value of the interaction coefficient (  $b_3$  ) of at -0.007 and -0.251

with a t - statistic significance level  $0.803 > 0.05$  is not significant . Regression results of this third hypothesis states that profit growth moderating effect of firm size on profitability can not be accepted ( rejected ) as a moderating variable that is an interaction between firm size and earnings growth is not significant , so it can be concluded that the variable profit growth is not a moderating variable , which indicates that **the third hypothesis is rejected**.

Because the value of the interaction is not significant then the next step is to step Sharma to three , three- step regression results can be seen in table 13 below:

-----Table 13 here-----

The results of data processing carried out by the regression analysis in Table 13 shows that the value of the regression coefficient of 0.669 with a significance level of 0.000, which means significantly . So according to the *framework* variable profit growth is *exogenous variable , prediction , intervening , antecedent or suppressor*.

This study is consistent with previous research conducted by Suryana ( 2007 ) in which large companies are considered to have less business risk than smaller companies , because large firms have more access to capital markets than the large companies also have better management , and it makes it easy for large companies to obtain additional funds that can then increase profitability . Results of this study are also supported by Elton and Gruber (1994 ) in Hartono (2000 ).

#### **IV.13. Hypothesis Testing Result 4**

In the fourth hypothesis testing using the Moderate Regression Analysis ( MRA ) . Regression analysis fourth hypothesis ( H4 ) for the fifth and sixth equations can be seen in Table 14 below:

-----Table 14 here-----

Adjust the value of R Square of the equation are the fifth and sixth equations increases . Adjust R Square on the fifth equation of 0.913 indicates that 91.3 %

variability in profitability can be explained by the variability of debt-to- equity ratio and profit growth while the remaining 8.7 % is explained by other variables that are not in the equation. In the sixth equation increased Adjust R Square of 0.001317 to 0.914 indicates that 91.4 % variability in profitability can be explained by the variability of debt to equity ratio , earnings growth and interaction , while the remaining 8.6 % is explained by other variables not included in equation.

Value of the F statistic is the sixth equation of 716.036 with a significance level of  $0.000 < 0.05$ , which indicates that the debt to equity ratio , earnings growth and interaction jointly affect profitability . Coefficient (  $b_0$  ) of -0.019 and -2.404 t - statistic with a significance level of  $0.017 < 0.05$  was significant . Coefficient (  $b_1$  ) of -0.025 and -8.530 with a t - statistic of 0.000 significance level  $< 0.05$  was significant . Coefficient (  $b_2$  ) of 0.001 and 2.076 with a t - statistic of 0.000 significance level  $< 0.05$  was significant . This means that income growth affects the profitability . While the value of the interaction coefficient (  $b_3$  ) is at 0.001 and 2.015 with a t - statistic of 0.045 significance level  $< 0.05$  was significant . Regression results for the fourth hypothesis states that profit growth moderating effect of debt-to- equity ratio to profitability is welcome , so it can be concluded that the variable profit growth is moderating variables , which means that **the fourth hypothesis is accepted.**

Because the value of a significant interaction that step Sharma proceed to step 2 , the results of the second regression step Sharma can be seen in table 15 below:

-----Table 15 here-----

From the regression results in 15 can be explained that the value of the regression coefficient of -0.022 with a significance level of  $0.720 > 0.05$  . Of significant levels of it can be concluded that the growth in earnings for the fourth hypothesis is ***pure moderation.***

The results are consistent with previous research conducted by Suryana (2007), which found that companies with growing earnings , will strengthen the relationship between DER profitability where profitability will increase with lower DER . Besides Suryana (2007) research is also supported by Porter (1980) in Hamid (2001) , Anthony and Ramesh (1992) in Hamid (2001).

## **V. CONCLUSIONS, LIMITATIONS AND IMPLICATIONS OF RESEARCH**

### **V.1. Conclusion**

From the tests could be concluded , that

1. Firm size has a positive effect on profitability.
2. *Debt to equity ratio* has a positive effect on profitability.
3. Earnings growth is not able to moderate the influence of firm size on profitability.
4. Earning Growth proved to be able to moderate the influence of debt-to- equity ratio to profitability.

### **V.2. Limitations of Research**

This research has several limitations , which are as follows:

1. This research did not consider other variables that may affect profitability such as working capital , while this study only assumes the size of the company , debt to equity ratio and profit growth as a moderating variable.
2. This study can not be separated from the problem of multicollinearity problems , especially classical assumptions that make profit growth variables excluded from the equation.

### **V.3. Research Implications**

This research will be very useful , if the results of the analysis can be used as a consideration for improvement . For the implications of this study are the results of this peneliitian is expected to enrich the research in the field of accounting reference particular financial effect of firm size , debt to equity ratio of profitability in the future.

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## VII. APPENDIX TABLE

**Table 1**  
**Number of Observation**

Company Research Sample	40 companies	
Number of Preliminary observations	320	100%
Observations were excluded from the research:		
Listing Out the observations	(16 observations)	(5%)
Delisting experience in years of observations	(8 observations)	(2,5%)
Observations used in the research	296 observations	92,5%

*Sources: Data Secondary Processed, 2011*

**Table 2**  
**Descriptive Statistics**

	N	Average	Minimum.	Maximum.	Deviation Standart
ROE	296	0.0782	-3.9193	1.00171	0.7574
UP	296	27.4151	24.59131	30.1265	1.352081
DER	296	1.91217	-20.5632	100.3229	8.83149
PL	296	-0.96524	-59.7175	20.4966	5.86671

*Sources: Data Secondary Processed, 2011*

**Table 3**  
**Normality Test Results**

	KS test	Asymp. Sig.	p-value	Conclusions
ROE	7.473	0.000	P<0,05	Distribution Not Normal
UP	2.138	0.000	P<0,05	Distribution Not Normal
DER	8.087	0.000	P<0,05	Distribution Not Normal
PL	5.705	0.000	P<0,05	Distribution Not Normal

*Sources: Data Secondary Processed, 2011*

**Table 4**  
**Autocorrelations Test Results**

Equation	DW	Specification
$Y = \alpha + \beta_1 UP + \beta_2 PL + ei$	2,092	Free Autocorrelation
$Y = \alpha + \beta_1 UP + \beta_2 PL + \beta_3 (UP \times PL) + ei$	2,092	Free Autocorrelation
$Y = \alpha + \beta_1 DER + \beta_2 PL + ei$	1,394	Affected Autocorrelation
$Y = \alpha + \beta_1 DER + \beta_2 PL + \beta_3 (DER \times PL) + ei$	1,775	Affected Autocorrelation

*Sources: Data Secondary Processed, 2011*

**Table 5**  
**Autocorrelations Medical Test Results**

Equation	DW	Specification
$\Delta Y = \alpha + \beta_1 \Delta \text{DER} + \beta_2 \Delta \text{PL} + e_i$	2,959	Free Autocorrelation
$\Delta Y = \alpha + \beta_1 \Delta \text{DER} + \beta_2 \Delta \text{PL} + \beta_3 \Delta (\text{DER} \times \text{PL}) + e_i$	2,885	Free Autocorrelation

*Sources: Data Secondary Processed, 2011*

**Table 6**  
**Heterocedasticity Test Results**

Testing	Variable	Significance	Conclusion
Equation 3	UP	0.000	Affected Heterocedasticity
	PL	0.168	Free Heterocedasticity
Equation 4	UP	0.000	Affected Heterocedasticity
	PL	0.749	Free Heterocedasticity
	UPxPL	0.777	Free Heterocedasticity
Equation 5	$\Delta \text{DER}$	0.639	Free Heterocedasticity
	$\Delta \text{PL}$	0.353	Free Heterocedasticity
Equation 6	$\Delta \text{DER}$	0.972	Free Heterocedasticity
	$\Delta \text{PL}$	0.281	Free Heterocedasticity
	$\Delta \text{DER} \times \text{PL}$	0.057	Free Heterocedasticity

*Sources: Data Secondary Processed, 2011*

**Table 7**  
**Heterocedasticity Medical Test Results**

Testing	Variable	Significance	Conclusion
Equation 3	LnUP	0.057	Free Heterocedasticity
	LnPL	0.371	Free Heterocedasticity
Equation 4	LnUP	0.088	Free Heterocedasticity
	LnPL	0.522	Free Heterocedasticity
	LnUPxPL	0.532	Free Heterocedasticity

*Sources: Data Secondary Processed, 2011*

**Table 8**  
**Multicollinearity Test Results**

	Tolerance	VIF	Conclusion
Equation 3			
LnUP	1.000	1.000	Free Multicollinearity
LnPL	1.000	1.000	Free Multicollinearity
Equation 4			
LnUP	0.437	2.287	Free Multicollinearity
LnPL	0.000	4355	Multicollinearity Occurs
Ln(UPxPL)	0.000	4353	Multicollinearity Occurs
Equation 5			
Δ DER	1.000	1.000	Free Multicollinearity
Δ PL	1.000	1.000	Free Multicollinearity
Equation 6			
Δ DER	0.997	1.003	Free Multicollinearity
Δ PL	0.999	1.001	Free Multicollinearity
Δ (DERxPL)	0.997	1.003	Free Multicollinearity

*Sources: Data Secondary Processed, 2011*

**Table 9**  
**Multicollinearity Medical Test Results**

	Tolerance	VIF	Conclusion
Equation 3			
LnUP	1.000	1.000	Free Multicollinearity
LnUpxLnPL	1.000	1.000	Free Multicollinearity

*Sources: Data Secondary Processed, 2011*

**Table 10**  
**Hypothesis Testing Results 1**

Variable	Equation I			Hypothesis
	Coefficient Value	t-Stat	Sig.	Be Accepted
Firm Size	0,401	7,119	0,000	Accepted
R Square	0,161			
Adj R Square	0,157			
F	50,680			
t-table	1,65			
Sig	0,000			

*Sources: Data Secondary Processed, 2011*

**Table 11**  
**Hypothesis Testing Results 2**

Variable	Equation 2			Hypothesis
	Coefficient Value	t-Stat	Sig.	Denied
<i>Debt to Equity Ratio</i>	0,895	34,530	0,000	
R Square	0,802			
<i>Adj R Square</i>	0,801			
F	1192			
t-table	1,5608			
Sig	0,000			

*Sources: Data Secondary Processed, 2011*

**Table 12**  
**Hypothesis Testing Results 3**

Variable	Equation 3			Equation 4		
	Coefficient	t	Sig.	Coefficient	t	Sig.
Constant	-36,989	-5,555	0,000	-36,959	-5,55	0,000
UP	10,413	5,185	0,000	10,404	5,182	0,000
PL	-0,022	-0,256	0,798			
Interaction				-0,007	-0,25	0,803
R Square	0,186			0,186		
Adj. R Square	0,172			0,172		
F	13,444			13,443		
Sig.	0,000			0,000		

*Sources: Data Secondary Processed, 2011*

**Table 13**  
**MRA Testing Result For Hypothesis 4 (PL to *Profitability*)**

Variable	Coefficient	Adj R Square	F Value	T Value	Sig (p)
PL	0,669	0,443	97,098	9.854	0,000

*Sources: Data Secondary Processed, 2011*

**Table 14**  
**Hypothesis Testing Results 4**

Variable	Equation 5			Equation 6		
	Coefficient	T	Sig.	Coefficient	T	Sig.
Constant	-0,009	-2,614	0,010	-0,019	-2,404	0,017
<i>DER</i>	-0,019	-45,806	0,000	-0,025	-8,530	0,000
PL	0,001	1,831	0,069	0,001	2,076	0,039
Interaction				0,001	2,015	0,045
R Square	0,914			0,916		
Adj. R Square	0.913			0.914		
F	1056			716,036		
Sig.	0.000			0,000		

*Sources: Data Secondary Processed, 2011*

**Table 15**  
**MRA Testing Result For Hypothesis 4 (PL to *Debt to Equity Ratio*)**

Variable	Coefficient	Adj R <sup>2</sup> Square	F Value	T Value	Sig (p)
PL	-0,047	-0,003	0,442	-0,665	0,507

*Sources: Data Secondary Processed, 2011*