FINANCIAL RATIO ANALYSIS IN PREDICTING CHANGE IN PROFIT IN AUTOMOTIVE COMPANIES LISTED IN BEI (INDONESIAN STOCK EXCHANGE) IN THE PERIOD OF 2006-2010

THESIS

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INTERNATIONAL PROGRAM

FACULTY OF ECONOMICS

UNIVERSITAS ISLAM INDONESIA

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Presented as a Partial Fulfillment of the Requirements
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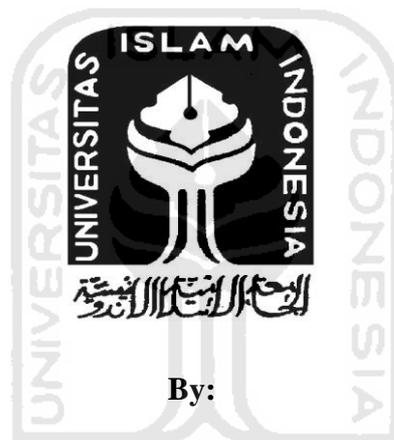
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March 14, 2012

FINANCIAL RATIO ANALYSIS IN PREDICTING CHANGE IN PROFIT IN AUTOMOTIVE COMPANIES LISTED IN BEI (INDONESIAN STOCK EXCHANGE) IN THE PERIOD OF 2006-2010

A BACHELOR DEGREE THESIS

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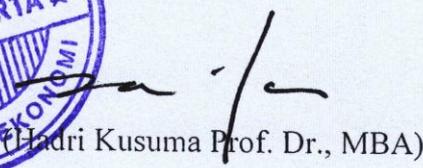
(Hadri Kusuma Prof. Dr., MBA)

DECLARATION OF AUTHENTICITY

Herein I declare the originality of the thesis; I have not presented anyone else's work to obtain my university degree, nor have I presented anyone else's words, ideas or expression without acknowledgment. All quotations are cited and listed in the bibliography of the thesis.

If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, January 20th, 2012

Febby Satrio Wardana

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ABSTRACT

One of methods to analyze a financial report in business world is by using financial ratio analysis. The purpose of this research is to examine the effect of several financial ratios in predicting change in profit. The data used are automotive company's annual financial statements listed in Indonesian Stock Exchange (IDX) for 5 years periods which are 2006,2007,2008,2009, and 2010. The researcher used 5 independent variables; Return on Equity, Asset Turnover, Inventory Turnover, Current Ratio, and Leverage to test the hypotheses of the effect of financial ratio in predicting change in profit. The dependent variable is change in profit. The results of the hypotheses testing showed that Return on Equity and Inventory Turnover have significantly positive effects to changes in profit while the rest variables, Asset Turnover, Current Ratio and Leverage, partially do not have any significant effect to changes in profit.
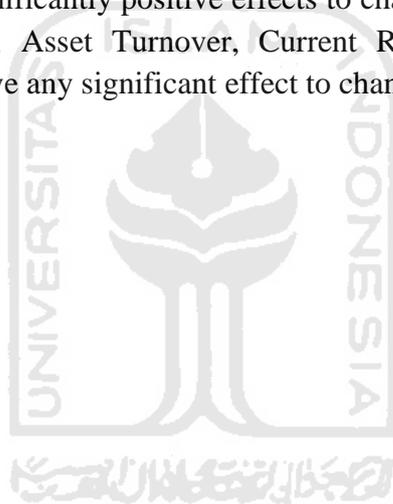
ABSTRAK

Salah satu metode untuk menganalisis laporan keuangan di dunia bisnis adalah dengan menggunakan analisa rasio keuangan. Penelitian ini dimaksudkan untuk menguji pengaruh rasio keuangan dalam memprediksi perubahan laba. Data yang digunakan adalah laporan keuangan tahunan perusahaan otomotif yang terdaftar di Bursa Efek Indonesia (BEI) periode waktu 5 tahun, yaitu 2006,2007,2008,2009, dan 2010. Pengujian hipotesis pengaruh rasio keuangan dalam memprediksi perubahan laba menggunakan 5 variabel independen yaitu Return on Equity, Asset Turnover, Inventory Turnover, Current Ratio, dan Leverage. Variabel dependen yang digunakan adalah perubahan laba. Hasil pengujian hipotesis menunjukan bahwa. Return on Equity dan Inventory Turnover secara parsial terbukti berpengaruh positif signifikan terhadap perubahan laba. Sedangkan variabel Asset Turnover, Current Ratio, dan Leverage sercara parsial tidak berpengaruh signifikan terhadap perubahan laba.
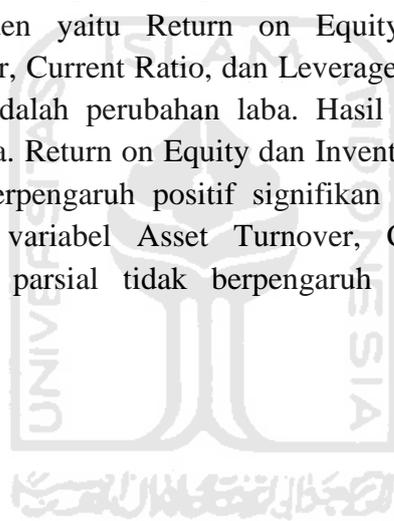
CHAPTER I

INTRODUCTION

A. STUDY BACKGROUND

Accounting can be defined as a process of identifying, measuring, recording, and communicating economic information that can be used for assessment and decision making by users. Accounting is a language of business and various transactions are communicated through accounting. Financial data is recorded, analyzed and interpreted in an appropriate way that the users can make a judgment about the financial condition and profitability of the business operations. The accounting shows a real and true position of the firm of the business. Accounting information is used to reduce uncertainty in decision making by the users.

Users of accounting information can be generally grouped into two groups, namely internal and external users. External users are investors or prospective investors that include stock or bond purchasers, creditors or borrowers of bank funds, suppliers, and other users, such as employees, financial analysts, stockbrokers, government. Internal users are management, employees, and others. Internal users usually have greater access to the accounting information. They use accounting information to make decisions about whether to buy, hold, sell, lend, continue a relationship, or make an agreement. Generally the use of financial information is as the basis of prediction of the users. Therefore, financial analysis is needed to explain the financial report.

One method to analyze financial report in business world is by using financial ratio analysis. This research is intended to perform further testing on financial ratios, especially its usefulness in predicting future profit. The reason why the profit chosen is because the profit reflects the company's performance, the amount of profit will reflect whether the company has a good performance or not. This research will strengthen previous empirical finding about predicting profit using financial ratio analysis. This research will convince the financial information users that the financial ratio analysis is very useful knowledge that should be known by them.

According to Mamduh and Halim (2003) that the analysis of financial ratios is grouped into five categories: 1) liquidity ratio, which is the ratio that measures a company's ability to meet its short term obligations, 2) the ratio of the activity, which is the ratio that measures the extent to which the effectiveness of the use of assets by looking at the activity level of assets; 3) solvency ratio, which is the ratio that measures the extent to which the company's ability to meet its long term liabilities, 4) the profitability ratio, which is the ratio of the view ability of companies to make profit (profitability); 5) Market ratio, which is the ratio that show company's relative development compared to book value.

Widiasih (2006) tested financial ratio in predicting the changes of profit by categorizing the financial ratio into three groups based on Weston & Copeland (1992) which are performance measure, operating efficiency measure and financial policy. Performance measure uses Earning Per Share and Price Earning Ratio as the proxies. The operating Efficiency Measure uses Inventory Turn Over,

Asset Turn Over and Gross Profit Margin, while Financial Policy uses Leverage as proxy. Nur Ari Widiasih used Manufacture Companies as the sample. The categorization intended to know which one is the dominant ratio in predicting profit. The result is that two from the three categories of the ratio could be used for predicting profit changes.

Suwarno (2004) in Widiasih (2006) examined the empirical findings of financial ratios, particularly in predicting the change in profit from 2000 to 2002 in manufacturing companies listed on the Bursa Efek Jakarta. The result of this study is the ratio of long term liabilities to shareholder equity, operating profit to profit before taxes, and net income to sales can be used in predicting changes in profit in 2000. Ratios that can be used to predict changes in profit in 2001 are the ratio of operating profit to profit before taxes, inventory to working capital, and net income to net worth. But profits changes in 2002 could not be predicted by using financial ratios in 2001. Asyik and Sulistyo (2000) in Widiasih (2006) conducted research on the ability of financial ratios to predict profit. Financial ratios are useful for calculations in predicting changes in profit in the future. This study tested the ability of financial ratios to predict profit in the future and where the ratio is a significant discriminator.

Furthermore, this study is a replication of a research conducted by Widiasih (2006) in which financial ratios are categorized into measures of performance, size of operating efficiency and financial policy measurement. In this research will specify to automotive companies listed in Bursa Efek Indonesia. There are 18 companies that have been listed in BEI. Indonesia is capable to be a

base of automotive production. Nowadays Indonesia has much better and stable in social, politic, and economic condition so that it is the best time to prove that Indonesia has a very good market especially in automotive sectors (Prijono, 2010). Most of automotive companies listed in BEI manage to book net profit (ICMD). In addition, the number of local and foreign companies is considered able to increase their investment. This research is expected to give benefits for investors in automotive sectors. The research will use some ratios in predicting profit and it is expected can give positive contributions.

Based on the description above, the title of this research will be **"Financial Ratio Analysis in Predicting Profit Changes in Automotive Companies Listed in BEI (Indonesian Stock Exchange) in the Period of 2006 – 2010".**

B. PROBLEM FORMULATION

Based on the study background above, the researcher formulates the problems of this research as follows:

Do Return on Equity (ROE), Asset Turn Over (ATO), Inventory Turn Over (ITO), Current Ratio (CR), and Leverage have any affect in predicting the profit changes in automotive companies listed in the BEI?

C. RESEARCH OBJECTIVES

Based on the problem formulation above, the purpose of this research is to analyze the ROE, ATO, ITO, CR, and Leverage's effects in predicting the profit changes in automotive companies listed in the BEI.

D. RESEARCH CONTRIBUTION

1. For Investors and Prospective Investors

The result of this research is expected to be used as an input and consideration in decision making process to buy or sell their stocks and to give contribution for automotive companies in predicting their profit in the future.

2. Future Research

The result of this research is expected to provide contributions in the development of theories related to management accounting, financial accounting and stock market.

E. DEFINITION OF TERM

CHAPTER I: INTRODUCTION

The first chapter explains about study background, problem formulation, research objectives, research contribution, and definition of term.

CHAPTER II: REVIEW OF RELATED LITERATURE

This chapter explains about theoretical reviews and previous research that will be used as references in order to examine the problem such as the effect of financial ratio in predicting profit in previous research, and to formulate research hypotheses.

CHAPTER III: RESEARCH METHOD

This chapter explains about the research method including population and sample, source of data, variable identification: dependent variable

(change in profit) − independent variable (ROE, ATO, ITO, CR, LEVERAGE), and analysis method.

CHAPTER IV: DATA ANAYLISIS

This chapter explains data from the research. The data analysis consists of descriptive statistics, classic assumption testing, multiple linear regression analysis, hypothesis test and descriptions about the research results.

CHAPTER V: CONCLUSIONS, LIMITATIONS and SUGGESTIONS

This chapter explains about the conclusion, research limitation and suggestion of this research.
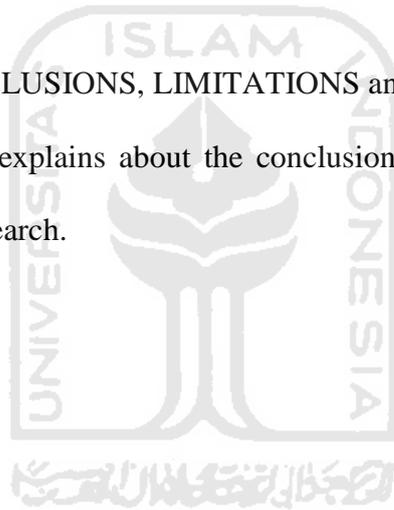
CHAPTER II

REVIEW OF RELATED LITERATURE

1. Theoretical Review

a. Financial Statement Analysis

Zainudin and Hartono (1999) interpreted the financial statements as the result of accounting process that can be used as a tool for communication between the financial data of an enterprise or activity by the parties concerned with the data or the activity of the company. The parties interested in the financial position and development of a business are the owners of the company, managers of the company concerned, creditors, bankers, investors and governments in which the company is domiciled, unions and other parties.

The components of the complete financial statements according to Generally Accepted Accounting Principles consists of the balance sheet, income statement, statement of changes in equity, cash flow statement and notes to financial statements. According to Martono and Agus (2002), analysis of financial statements is an analysis of conditions involving a company balance sheet and income statement. Balance (balance sheet) is a report that describes the amount of wealth (assets), liabilities (debts), and the capital of a company at any given moment. Wealth or property is presented in the assets, while liabilities or debt and equity are presented on the liabilities side. Income statement (income statement) is a report that

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describes the amount of income or income and expenses of a company in a certain period. From the income statement will be obtained profits or losses of the company of financial statements balance sheet and profit and loss can be produced several reports of retained earnings statement, reports the source and use of funds, and cash flows.

Zainudin and Hartono (1999) described the Statement of Financial Accounting Concept (SFAC) No.1 Objective of Financial Reporting by Business Enterprises Financial Accounting Standards Board (FASB 1978) that the first objective of financial statements is to provide useful information to investors, creditors, and other users both current and potential in making investment, credit and similar decisions are rational. The second objective is to provide information to help investors, creditors, and other users both current and potential in assessing the amount, timing, uncertainty in the cash receipts from dividends and interest in the future. The second objective of financial reporting implies that investors want information about outcomes and risks of the investment made.

SFAC No.2 Qualitative Characteristics of Accounting Information explained that one of the qualitative characteristics that must be owned by the accounting information for financial reporting purposes can be achieved is the ability of prediction. This suggested that such accounting information can be used by potential investors in making predictions of dividend and interest receipts in the future. Dividends to be received by investors will depend on the amount of profits derived by an enterprise in the future.

Therefore, company's profit forecast by using financial statement information is very important to do.

A financial statement is one of the important sources for users of financial statements in order to make an economic decision. On the other hand, it does not become the primary when considering its limitations. Financial statement analysis is helpful in assessing the company's performance management so as to take further decisions both in investment, expansion, or corporate funding. On the other hand, analysis of financial statements can also be used by investors who want to invest their funds into the company.

b. Change in Profit

Profit forecast is often used as a basis in investment decisions and performance assessment of a company's management to the future. Assessment of management capabilities and availability of adequate information is an important factor in making profit forecast for the foreseeable future. Profit can be predicted uses trend analysis tools, Break Even Point (BEP) and regression analysis.

Profit forecast using trend analysis can be done by comparing among accounts or group accounts which are elements of forming corporate profits in a financial report and report for financial periods in different books to produce a relationship of each account which is incorporated in the elements. The trend analysis will be able to show a profit having a tendency to be decreased, increased or fixed and can indicate whether the trend is

profitable or not. While the profit forecast by using Break Even Point (BEP) can be done by looking at the behavior of costs classified based on the principal functions of the company in relation to changes in volume and sales results that aim to find out the extent of the profit generated (Harnanto in Purnawati, 2005).

Final analysis tool used in predicting profit changes that are discussed in this research is regression analysis. Regression in the modern sense is the study of how the dependent variable is influenced by one or more independent variables in order to estimate or predict the average value of the dependent variable is based on the value of the independent variables that are known (Widarjono, 2005). It uses multiple regression analysis as a tool to predict changes in earnings. The regression analysis may explain the relationship between independent variables and dependent variables. It shows a relationship variables influence the direction of the financial ratios of the variables change in earnings. Independent variables used in previous study by Lina were eight financial ratios consisting of the current ratio, gross profit margin, operating profit margin, return on equity, inventory turnover, total asset turnover, net income to sales and sales to current liabilities

Financial ratios used as independent variables in predicting changes in earnings because the financial ratios have a nature "future oriented" so that it can be used to predict earning changes to come.

c.   Financial Ratio

To evaluate financial condition of the company and its performance, checking process is needed. A general tool for the checking process is financial ratio. Each financial analysis can be formulated by certain ratio that is considered to reflect certain aspects. Overall, the aspects to be clarified are typically aspects of liquidity, activity, profitability or efficiency, solvability and market value ratios (Mamduh and Halim, 2003).

According to Harahap (2002), there are several advantages of ratio analysis, which are the ratio:

1) Is a summary of the numbers or statistics that are easier to read and interpret.

2) Is a substitute for the more modest of the information presented by financial reports that are very detailed and complicated.

3) Can be used to know the company's position in the middle of other industries.

4) Is very useful for filling materials in the decision-making models and model predictions (Z-score).

5) is easier to compare one company with other companies, or to see the company's development of a periodic or "time series"

6) is easier to see trends and make predictions on the company's future

According to Harahap (2002), the types of financial ratios which are often used are:

1) Liquidity ratio, a ratio that describes the company's ability to resolve short-term liabilities.

2) Solvency ratio, this ratio describes the company's ability to pay its long-term liabilities or obligations if the company is liquidated.

3) The ratio of earnings / profitability, this ratio describes the company's ability to make profits through all abilities and existing sources such as sales activities, cash, capital, number of employees and so on.

4) Leverage ratio, this ratio describes the relationship between corporate debt to capital and assets.

5) Activity ratio, this ratio describes the activities of the company in running its operations such in the activities of sales, purchases or other activities.

6) Growth ratio, this ratio describes the percentage of increase sales in this year compared with last year. The higher means the better.

7) The market valuation, this ratio is used specifically in the capital market in which the company describes the situation in the capital markets.

8) Productivity ratio, this ratio shows the level of productivity of the unit or activity being assessed.

Another point of view, Weston & Copeland (1992) grouped the financial ratios into three groups, namely measurement of performance, measurement of operating efficiency, and measurement of financial policy:

1) Performance Measurement

Performance measurement was analyzed in three groups, namely:

a) The ratio of profitability (profitability ratios), to measure the effectiveness of management based on the returns generated from sales and investment. Stream of future cash flows are the result of a large number of policies and decisions. With historical data about cash flow and profitability, strategic analysis operation is required further to make meaningful projections for the future. The proxies this ratio are: i) NOI/Sales, ii) NOI/Asset, iii) NOI/capital, iv) NI/Sales, v) ROE, NOI/capital turnover and vi) NI/equity turnover.

b) The ratio of growth (growth ratios), to measure the company's ability to maintain its economic position in the economy and growth in the industry or product market in which it operates. The proxies for this ratio are: i) sales, ii) NOI, iii) EAT, iv) EPS

c) Size assessment (valuation measures), to measure the ability of management to achieve market values in excess of cash disbursements. It is the most comprehensive performance measurement for a company because it reflects the combined influence of the ratio of return and risk. The proxies of this measure are: i) price/profit, ii) market value of equity/book value of equity, iii) the dividend + capital gains (or the result of shareholder returns).

2) Operating Efficiency Measurement

Operating Efficiency Measurement was analyzed in two groups, namely:

a) Asset management and investment management, to measure the effectiveness of corporate investment decisions and economic resource utilization in power. Investments are made to generate profitable sales. The proxies are: i) CGS / Inventory, ii) average collection period, iii) sales / fixed assets, iv) sales / total capital, v) sales / total assets, vi) change in total capital / total capital

b) Management fees (cost management), to measure each element of cost control. The proxies are: i) gross profit/sales (gross margin), ii) marketing and administrative expenses/sales, iii) labor costs/sales, iv) growth rate of employees, v) pension cost per employee, vi) research and development expenses / sales

3) Financial Policy

The third group in the financial relationship is the financial policy decision, which relates to strategic decisions, investment management and cost management. The size of the financial policy consists of two main types, namely:

a) The ratio of leverage (leverage ratios), to measure the degree to which assets of a company have been financed by the use of debt. Leverage ratios have several implications.

First, creditors are looking at equity as a protector or a debt repayment basis. Second, by raising funds through debt, owners benefit from having control over a company with limited commitment. Third, the use of debt with a fixed interest rate magnifies both gains and losses for the owners. Fourth, the use of debt with fixed interest with certain maturity date increases the risk that the company may be unable to fulfill its obligations. Leverage is achieved by two approaches, namely examining the balance sheet ratios and determining the extent to which borrowed funds have been used to finance the company. Another approach to measure risk ratio of debt to income calculations is designed to determine how many times the fixed costs are covered by operating profit.

b) The liquidity ratio (liquidity ratios), to measure the company's ability to meet maturing obligations. The liquidity ratio consists of the current ratio, liquid ratio (quick ratio acid), and the financing of investment (investment financing).

According to Mamduh and Halim (2003), the analysis of financial ratios is grouped into five categories : 1) liquidity ratio, is the ratio that measures a company's ability to meet its short term obligations, 2) activity ratio, is the ratio that measures the effectiveness of the use of assets by looking at the activity level of assets; 3) solvency ratio is the ratio that measures the company's ability to meet its long term liabilities, 4) profitability ratio is the ratio of the view ability of

companies to make profit (profitability), and 5) market ratio, which is the ratio that show company's relative development compared to book value.

1) **Liquidity Ratio**

Mamduh and Halim (2003) mentioned that there are two commonly used liquidity ratios: Current Ratio (CR) and Quick Ratio (QR). CR is one of the variables chosen to represent the liquidity ratio. CR is calculated by dividing current assets by current debts. This ratio indicates the amount of cash that belongs to the company plus assets that can be turned into cash within one year, relative to the amount of debt – debt that matures in the short term.

According to Munawir in Ihsan (2009) the most common ratios used to analyze a company's working capital position is the current ratio is the ratio between the amounts of current assets to current debt. This ratio indicates that the current property value (which can be used as money) there are so many right short-term debt.

2) **Activity Ratio**

The activity ratio is the ratio to determine how efficient the asset used by the company. This ratio is used to see how much money is embedded in the company's assets. If funds embedded in a particular asset are large enough, while these funds should be used for investment for other assets which are more productive, then the profitability of the company is not as good as they should be. Some activity ratios often used are the average of accounts

receivable, fixed assets turnover, inventory turnover (ITO) and total assets turnover (ATO).

3) Solvency Ratio

Leverage ratio which is also called as the ratio of debtor is also known as solvency measure of a company's ability to meet its long-term liabilities. Companies that are not solvable are those with total debt are greater than their total assets. Several ratios are used to measure the leverage ratio that is: DAR, DER, TIER (Times Interest Earned Ratio) and the Fixed Charge Coverage Ratio.

4) Profitability Ratio

The profitability ratio is the ratio to see the ability of companies in making profits (Mamduh and Halim, 2003). Meanwhile, according to Sutrisno, profitability ratio is the ratio used to measure the effectiveness of the company in profit. Proxies which are commonly used for this ratio are ROA, ROE and NPM.

5) Market Ratio

The ratio of the market aims to look at the prospects and risks of the company in the future. Prospects in the ratio of these factors will affect the expectations of investors against companies in the future and also the measurement of stock market prices relative to book value using the price earnings ratio, yield and payout ratio dividend.

d. **Financial Ratio in This Research**

By combining grouping financial ratios, Weston & Copeland (1992) used by Widiasih, with financial ratios by Mamduh and Halim (2003), the following are financial ratios that will be used to predict changes in profit:

1) **Return on Equity Ratio**

ROE measures the ability of companies to make profits based on certain capital. ROE is calculated by dividing net income or earnings after tax (EAT) with a total equity. According to Helfert in Baridwan & Legowo (2002), ROE is more to the attention of the shareholders (stockholders) as it pertains to the share capital that is invested to run the management. For internal management of the company, ROE has significance for assessing the performance of the company in meeting the expectations of shareholders (stockholders).

Various studies on the effects of Return on Equity (ROE) to the price of stocks have been done. The following studies demonstrate the various capabilities of ROE ratio in predicting stock prices occurred, including Andriani in Baridwan & Legowo (2002). The result of this study revealed that ROE and Dividend Payout Ratio have a strong influence on stock prices. Supriyono in Baridwan & Legowo (2002) examined the financial variables that affect the company's stock beta, and it was found that partially ROE and ROA ratios have the most significant effect on beta stocks, while the stock beta is a measure of risk that will determine the rate of return on stocks.

2) Asset Turnover

The asset turnover is total sales produced for each number of rupiah of asset in a company. This can be calculated by dividing total sales in rupiah with asset in rupiah. The asset turnover measures the efficiency of some companies in using their assets to produce sales or income, and the higher ratio the better. This ratio shows the price strategy. A company with low profit margin tends to have high asset turnover. On the other hands, the company with high profit margin tends to have low asset turnover. This ratio is very useful for the company development to check whether the company is developing in the right proportion of sales income or not.

3) Inventory Turnover

The inventory turnover is a ratio that shows how many times the number of inventory sales and restock in a period. Inventory turnover reflects the ability of a company to sell its products so that the products are not stored in a warehouse in a long time. High level of inventory stock is not good for the company, because it means that the company does an investment with zero rate of return. The problem will get worse when the price of stored inventory is decreased because of defects, etc. To get accurate calculation, this ratio compares costs of good sold and average of inventory. The average of inventory can be calculated by summing

begining inventory and ending inventory then divide it by 2. [(beginning inventory + ending inventory) / 2]

4) **Current Ratio**

Mamduh and Halim (2003) and Ihsan (2009) said that the most common ratio used to analyze a company's working capital position is the current ratio. Current ratio is a liquidity ratio that measures a company's ability to pay short term liabilities. This ratio is mainly used to provide a snapshot of the company's ability to repay short-term liabilities (debt and payables) with short-term assets (cash, inventory, receivables). The higher the current ratio, the better the company's ability to pay its liabilities. Current ratio demonstrates the efficiency of the operational cycle of the company or the ability to alter its products into cash. Companies that have difficulty in getting payments on their accounts or have a long inventory turnover will have a liquidity problem because they cannot pay their liabilities. This ratio is similar, except that the quick ratio quick ratio excludes inventories in the calculation of current assets.

5) **Leverage**

This ratio is to measure how far the company uses their debt. Several analyses use another term which is solvability ratio, which means to measure the company's ability to fulfill their debt. Leverage measures the total assets financed by the owner when compared with the financing provided by the creditor. Leverage ratio contains several implications. First, the creditors will see the company's own capital, or funds provided

by the owner to determine the safety margin (margin of safety). Second, by looking for funds derived from debt, owners will have benefits from maintaining control of a company with a limited investment. Third, if the company makes profit which is greater than the borrowed funds, the result of return to the owners will increase rather than be paid as interest. If the debt is greater, then the cost of debt should be covered from the profits derived from their own capital. High return is expected by increasing the risk. The consequences faced by the company if they cannot meet interest payments or obligations due. Leverage is calculated by comparing the company's total debt to total assets owned by the company. As a result, a financial analyst will know what proportion of debt to assets owned by the company.

2. Previous Research

Widiasih (2006) tested financial ratio in predicting the changes of profit by categorizing the financial ratio into three groups based on Weston & Copeland (1992) which are performance measure, operating efficiency measure and financial policy. The categorization is intended to know which one is the dominant ratio in predicting the profit. The purpose of the research was to examine the benefits of financial ratio in predicting changes in earnings in the future. Data used are manufacturing company's financial statements listed on the Jakarta Stock Exchange (JSE) for three years: 2001, 2002 and 2003. Multiple regressions, F test and T test is used to test the hypothesis in this research. There

are 36 financial ratios based on Weston and Copeland (1992) and then 18 were selected. However there are only 6 financial ratios which are free from classical assumptions. The result of the research stated that there are two variables which have positive partial influences in predicting profit: Gross Profit Margin and Leverage. The other 4 independent variables (Earning per share, Price Earnings Ratio, inventory turnover, and assets turnover) do not have partial influence toward predicting profit.

Suwarno (2004) in Widiasih (2006) examined the empirical findings of financial ratios, particularly in predicting the change in profit from 2000 to 2002 in manufacturing companies listed on the BEJ. The results of this study is the ratio of long term liabilities to shareholder equity, operating profit to profit before taxes, and net income to sales can be used in predicting changes in profit in 2000. Ratios that can be used to predict changes in profit in 2001 is the ratio of operating profit to profit before taxes, inventory to working capital, and net income to net worth. But profits changes in 2002 could not be predicted by using financial ratios in 2001.

Asyik and Sulistyo (2000) in Widiasih (2006) conducted a research on the ability of financial ratios to predict profit. Financial ratios are useful for calculations in predicting changes in profit in the future. This study tested the ability of financial ratios to predict profit in the future and which the ratio is a significant discriminator.

Another research has been conducted by Winingsih (2005). She used go public companies as the research sample, and 10 financial ratios as independent

variables in this research. The dependent variable in this research is profit before tax. F test and T test are used to test the hypothesis in this research. The financial ratios are current ratio, leverage ratio, debt to equity ratio, gross profit margin ratio, operating profit margin ratio, net profit margin ratio, return on equity ratio, return on investment ratio, inventory turnover, and total asset turnover. The result of this research stated that there are some significant ratios in predicting profit changes partially: current ratio, return on equity, inventory turnover, and total asset turnover. All the ratios are positive and significant when they are tested simultaneously to predict next year profit changes. However, it is not significant when used to test the next two year profit changes.

Tamsil (2004) also conducted a research about the ability of financial ratios in predicting profit. Sylviana used 15 automotive companies listed in 1994-2000 (before and during the economic crisis) and 30 financial ratios as independent variables and profit changes as dependent variable. She used the multiple regression t test and f test. From the 30 ratios, there are only 9 ratios passed the multicollinearity test (classic assumption). The 9 financial ratios are operating profit margin, account receivable turnover, fix asset turnover, sales to cash ratio, inventory to sales ratio, days sales outstanding ratio, cumulative asset turnover, earning per share ratio, and price earnings ratio. The result of the test was there is no significant financial ratio in predicting both profit partially and simultaneously. Determination coefficient shows 0.045, which means that financial ratio affecting is 4.5% in predicting profit and the 95.5% is affected by other factors that are not observed yet.

Another research was also conducted by Junaidi (2004). The research is also concerned about the effect of financial ratio to change in profit. The dependent variable in this research is change in profit, and the independent variables used are the 4 ratio categories: liquidity, solvability, activity and profitability. The test uses T test, F test, and determination test. The result of F test showed that there is a simultaneous effect between independent variables (financial ratios) and dependent variable (change in profit). Determination test showed that 40.2% of financial ratios can be used to predict next year profit and 59.8% is affected by another factor. The T test showed only ROE that can be used significantly in predicting the next year profit.

Wicaksono (2005) conducted a research about financial ratio analysis in change of income in manufacturing companies. The study used 5 basic categories of financial ratio; liquidity ratio (Current Ratio, Quick Ratio, cash to current liabilities), profitability ratio (net profit margin, ROE, ROA), productivity ratio (receivable turnover, inventory turnover, cash turnover), leverage (debt ratio, debt equity ratio), and market ratio (PER, price to book value, dividend yield, dividend payout ratio). Wicaksono concluded that there are 2 variables which are the most significant; Price Earnings Ratio and Return on Equity.

3. HYPOTHESIS FORMULATION

The previous research in Widiasih (2006) was conducted by Machfoedz (1994) used 84 companies in BEJ as samples and financial report of 1989, 1990, 1991 to measure financial ratios of year 1990, 1991, 1992 in order to calculate

change of profit. 47 ratios were used and grouped into 9 groups which are: short term liquidity, long term solvency, profitability, productivity, indebtness, investment intensiveness, leverage, return on investment and equity. MAXR selection was used to choose the best ratios and 5 groups with 13 ratios were produced. The result of analysis of the first hypothesis showed that 13 financial ratios as independent variables are significant. The results support the first hypothesis that financial ratios are useful in predicting change of profit. Regression analysis shows that the dummy variable to represent measurement of big and small companies is not significant. Third hypothesis indicates that the change in financial ratios is only related to the changes of short term profit and not related to the long term profit changes. Fourth hypothesis test is to test the relationship between financial ratios used by state companies and the changes in profit are also conducted using the regression analysis. The result of analysis shows that one ratio which is significant is operating incomes to sales.

Widiasih (2006) tested financial ratios in predicting the changes of profit by categorizing financial ratios into three groups based on Weston & Copeland (1992) which are performance measure, operating efficiency measure and financial policy. The categorization is intended to know which one is the dominant ratio in predicting the profit. The purpose of the research was to examine the benefits of financial ratio in predicting changes in earnings in the future. Data used are manufacturing company's financial statements that have been listed on the Jakarta Stock Exchange (JSE) for three years: 2001, 2002 and 2003. Multiple regressions, F test and T test is used to test the hypothesis in this

research. There are 36 financial ratios based on Weston and Copeland (1992) and then 18 were selected, but only 6 financial ratios which were free from classical assumption. The result of the research stated that there are two variables which have positive partial influences in predicting profit: gross profit margin and leverage. The other 4 independent variables (earning per share, price earnings ratio, inventory turnover, and assets turnover) do not have partial influences toward predicting profit.

Another research is conducted by Suwarno in Purnawati (2005). The data used are pooled time series (time series and cross site). This research used purposive sampling method with 42 manufacture companies in predicting profit in 2000, 39 manufacture companies in predicting profit in 2001, 49 manufacture companies in predicting profit 2002. The selection of ratios used stepwise regression method, while the hypothesis test used multiple regression, t test, and f test. The result of the first hypothesis of this research is that financial ratios in 1999 are significant in predicting profit in 2000. The ratios are: long term liabilities to share holders' equity, operating profit to profit before taxes, and net income to sales. The second hypothesis shows that there were 3 significant ratios in predicting profit in 2001: inventory to working capital, net income to net worth, and operating profit to profit before taxes. The third hypothesis shows that operating profit before taxes and profit after taxes to fixed assets is not significant in predicting profit in 2002.

Based on the theory and previous research above, the hypothesis will be formulated as follows:

a.   **Return on Equity (ROE) to Profit Changes**

Return on Equity Ratio can be used to measure the profitability from the perspective of ordinary shareholders. Return for the holders of ordinary shares is the company's net profit. This ratio indicates how many dollars derived from net income for each dollar invested by the shareholders (owners). This ratio can be calculated by dividing net income by shareholders' equity (Simamora, 2000). The ability of the company in determining the appropriate type of investment can also affect the profits to be obtained. The influence of the ratio of return on equity of changes in net income company is the higher value of this ratio. The higher level of profits resulted from the addition of working capital can be used to finance the company's operations which could ultimately result in profits (Suwarno in Purnawati, 2005). In line with Purnawati (2005), Winingsih (2005) concluded on her research that ROE has a positive impact on profit changes.

Furthermore, the hypothesis for ROE is:

Ha1 : ROE has a positive effect in predicting change in profit

b. **Asset Turn Over to Profit Changes**

Total assets turnover ratio measures the activity and the ability the company in generating sales through the use of these assets. This ratio can also be used to measure how efficient the assets have been used to earn

income so that this ratio can used to predict the future earnings (Mamduh and Halim, 2003).

This ratio can be used to predict earnings for total assets and sales that are the components in generating profits. The effect of total assets turnover ratio to changes in profit is that the faster the rate of assets turnover the bigger the profit will be produced, because the company is able to utilize these assets to increase sales influencing on income. The increase in revenue can increase net profit of the company (Mamduh and Halim, 2003).

In relation to ATO, Purnawati (2005) and Winingsih (2005) concluded in their research that ATO has a positive effect on profit changes. Therefore, the hypothesis based on this situation is:

Ha2 : Asset turnover has a positive effect in predicting change in profit

a. **Inventory Turnover to Profit Changes**

Inventory turnover ratio could be used to measure how many times inventory sold during a specific period average. The faster the inventory sold the faster the company creates the accounts which are receivable and collects cash. This ratio indicates how effective the company in business activities, showing in the amount of existing investments in inventory and cycle operations to fill the cash back. This ratio can be calculated by dividing costs of goods sold by inventories (Simamora, 2000).

Assessment of the ability of stock to be converted into cash through the sale can be used as an indicator of how much profit margins can be realized in the future because of supply presented in the balance sheet based

on the lowest cost among the principal cost and market cost (Harnanto, 1984). Inventory is one element of working capital. A rapid increase in inventory turnover will result in increasing revenues and net earnings in the foreseeable come (Suwarno in Purnawati, 2005).

In relation to ITO, Purnawati (2005) and Winingsih (2005) concluded in their research that ITO has a positive effect on profit changes. Therefore, the hypothesis based on the situation is:

Ha3 : Inventory turnover has a positive effect in predicting change in profit

d. Current Ratio to Profit Changes

The current ratio is a measurement used to know the ability to fulfill short term liabilities by comparing current assets which are belong to the company and the short term liabilities. The high current ratio shows bad condition of business. The use of cash is not effective and also sales of inventories are not in optimal position. The decline of current ratio sometimes shows the improvement of the business activity, for example: sales that is increasing when the improvement of the business happens. The number of inventory will decrease and increase in the revenue. The situation has an implication to the level of profit condition.

This ratio is also called working capital ratio indicating the amount of current assets available which is owned by the company to respond to the business needs and continue daily business activities. The low of this ratio will show a high liquidity risk.

Moreover, current ratio can give information about the margin of safety against possible decline in value of current assets and losses arising from events which are unpredictable and may result in cash expenditures or interruption of the flow of funds into the company (Harnanto in Purnamawati, 2005). This information may affect the confidence of the short-term creditors in providing loans to companies used to finance its business activities to generate income.

Purnawati (2005) and Winingsih (2005) concluded on their research that current ratio has a positive effect on profit changes. Therefore, the hypothesis based on this situation is:

Ha4 : Current Ratio has a positive effect in predicting change in profit

e. Leverage to Profit Changes

The leverage is a measure to determine how far the companies use debt. Some use the term solvency ratio, which means measuring a company's ability to meet financial obligations. Leverage ratio measures the extent of total assets financed by the owner when compared to the financing provided by creditors. By seeking funds derived from debt, the owners of the company have benefit from maintaining control with a limited investment. Thus, if the company makes profit which is greater than the borrowed funds, the result of return to the owners will increase rather than be paid as interest. The opinion is consistent with the results of Widiasih's research (2006) concluded that leverage has positive effect on earnings changes. The hypothesis base on the situation is:

Ha5 : Leverage has a positive effect in predicting change in profit

RESEARCH MODEL

This model shows the relationship between independent variables (financial ratios) and dependent variables (change in profit).

Independent Variables   **Dependent Variable**
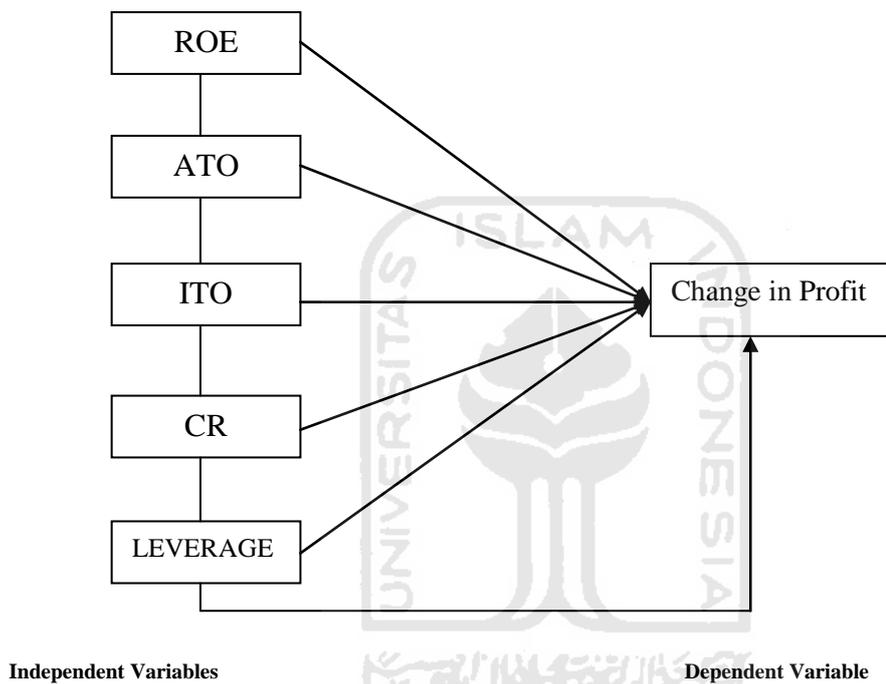
Research Framework

CHAPTER III

RESEARCH METHOD

1.   Population and Sample

The population in this research is automotive companies listed in PT. Bursa Efek Indonesia in the period of 2006-2010. Purposive Sampling method is used to determine the sample, which is determined based on the criteria as follows:

1. Automotive companies listed in Bursa Efek Indonesia in the period of 2006-2010

2. The sample companies have already published their financial reports in year 2006-2010 and had complete data in the research period.

3. This research also used data from 2005 to calculate change in profit and inventory turnover (ITO).

2.   Sources of Data

The data acquired from the summary of financial statements for automotive companies listed and published in Bursa Efek Indonesia from Indonesian Capital Market Directory (ICMD) year 2006-2010. The data are secondary data presented in ICMD year 2006-2010.

3. **Variable Identification**

    a. **Dependent Variable**

    Dependent variable in this research is change in profit. The profit used is profit before tax. The purpose is to avoid the use of different tax rates use in different analyzed period (Suwarno in Widiasih, 2006). Change in profit can be calculated by using the formula below:

    $$\Delta Y = \frac{Y_{it} - Y_{it-1}}{Y_{it-1}}$$

ΔY	: Which have complete data in research period.
Y	: Profit
t	: Period
i	: Individual firm

    b. **Independent Variables**

    The independent variable in this research is the change of financial ratios.

    i. Return on Equity   : Return on Equity is a ratio to measure the ability of management to manage the existing capital to get net income

    $$\text{Return on Equity} \ = \frac{\text{Net Profit}}{\text{Total Equity}}$$

    ii. Asset turnover   : Asset turnover is used to measure sales value of the company from the asset. This ratio is measured by dividing total sales with total asset belongs to the company.

    $$\text{Asset turnover} \ = \frac{\text{Total Sales}}{\text{Total Assets}}$$

iii.   Inventory turnover   : Inventory turnover is measured by dividing

cost of goods sold (CGS) with inventory number average [(beginning

inventory + Ending inventory) / 2].

$$\text{Inventory turnover} = \frac{\text{CGS}}{\text{Average of inventory}}$$

iv.   Current Ratio   : Current ratio is used to know the ability to

fulfill short term liabilities by comparing current assets which are

belong to the company and the current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Short Term Liability}}$$

v.   Leverage   : Leverage is a measurement to know how far the

company is using the debt to finance total asset. Leverage can be

measured by comparing between total debt and total assets

$$\text{Leverage} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

4.   Analysis Method

The tool to process the data in this research is SPSS 16.00

software. Analysis methods that will be used in this research are:

a. Descriptive statistics

This statistics is used to show the characteristics of the data like how

much are the maximum, minimum, range, mean and standard deviation.

Descriptive analysis in this research is the measurement of financial ratio

that includes ROE, ATO, ITO, CR, and Leverage also Profit changes.

b. Classical Assumption Test

Classic assumption test's processes are as follows:

1) Normality Test

The normality test aims to see whether or not there is a normal distribution on the variable being analyzed. The normal distribution means that samples can be considered as the representative of the population. On the other hand, if the distribution is not normal, it can be concluded that the sample is not representative or cannot represent the actual population so that the results do not deserve to be generalized to the population.

2) Multicollinearity Test

This test is needed to test whether there is a correlation among independent variables or dependent variables. Regression model will be good if there is no correlation among independent variables. Multicollinearity test also have a purpose to avoid bias in determining the conclusion about the effect of partial test of each independent variable toward dependent variable.

3) Autocorrelation Test

The autocorrelation test has an objective to test whether there is a correlation between residual in linear regression model in t-1 period. Problem may occur if there is a correlation in the autocorrelation. The autocorrelation occurs because of sequence observations happened is connected each other. The problems arise when the

residual is not free from one to other observations. A good regression model should be free from the autocorrelation. To detect whether the autocorrelation occurs or not is by using Durbin Watson test. This model will be free from the autocorrelation if the value of Durbin Watson is around 2.

4)   Heteroscedasticity Test

The heteroscedasticity test has a function to test if there are differences in regression model's variance from one residual to another observation. Heteroscedasticity will not occur in a good model. To detect this heteroscedasticity, it can be seen from the pattern of Scatter Plot of the model. If the model of multiple linear regression is free from the classical assumption of heteroscedasticity, it can be used for the research in which the output of Scatter Plot shows a distribution point as follows:

i.   Points' distribution are above and below or around zero value

ii.   Points do not only accumulate in one area (top only or bottom only)

iii.   Distribution of points are not supposed to create a wave pattern, widen narrowed and then widened again

iv.   Distribution of points are not supposed to have a pattern

c.   Multiple Linear Regression Analysis

This study uses multiple regressions for the analysis of the influence of independent variables on the dependent variable. This model was chosen because this study was designed to investigate the effect of independent variables on the dependent variable.

1) **Coefficient of Determination**

Test coefficient of determination (R^2) was undertaken to measure how far the ability of models to explain variation in the dependent variable. In this study, the magnitude of the direct and indirect effects can be seen from the standardized coefficients that give a path or paths. The value of determination coefficient is between zero and one. Adjusted R^2 values are small meaning that the ability of independent variables in explaining variations in the dependent variable is very limited. The value near one means independent variables provide almost all the information needed to predict the variation of the dependent variable.

2) **The Multiple Linear Regression Model**

The model in equation is as follows:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + e$$

Whereas:
Y = *change in profit*
b0 = *constant coefficient*
b1,b2...b5 = *Regression coefficient*
X_1 = *Return on Equity*
X_2 = *Asset Turnover*
X_3 = *Inventory Turnover*
X_4 = *Current Ratio*
X_5 = *Leverage*

3) **Hypothesis Testing**

The hypothesis test is conducted to test the congruence between the theory and the result of regression. Hypothesis test is using t test to test the effect of independent variables to dependent variable. If probability < 0.05 so Ha = accepted. It means that independent variables (ROE, ATO, ITO, CR and Leverage) partially have effects to the dependent variable Y.

4) **Discussion**

The discussion will explain about the result of all the analyses based on the available data: descriptive statistics, classical assumption test, multiple linier regression analysis, and hypothesis testing compared to theoretical concepts and previous research.
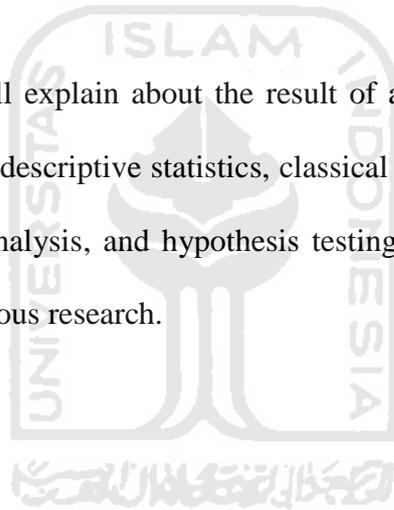
CHAPTER IV

DATA ANALYSIS AND DISCUSSION

A. Description of Research Object

Objects of this research are the automotive companies listed in Indonesia Stock Exchange (IDX) with an observation period of five years from 2006 until 2010. Based on data obtained by the method of purposive sampling, the number of automotive companies listed on the Indonesia Stock Exchange (BEI) is the 18 companies. From the 18 companies, there is a company, PT. Albond Makmur, Tbk, which in 2010 was no longer listed on the Stock Exchange. Because it does not suitable with the sample criteria, PT. Albond Makmur, Tbk was excluded from the observation. From the remaining 17 companies, the researcher obtained 85 data of observations as the samples to be analyzed in this study. The research also uses data from 2005 to calculate certain ratios.

Tabel. 1
Sample Selection Criteria

Criteria	Objects
The automotive companies listed in Indonesia Stock Exchange (IDX)	18
Automotive company which was not listed in 2010	1
Published the financial reports regularly among 2006 – 2010	17
Final Samples	17

B. Data Analysis and Discussion

The tool to process the data is by using SPSS 16.00 software.

1. **Descriptive Statistics Analysis**

Descriptive statistics are used to give a description of the data used in this study including mean, standard deviation and minimum and maximum values. The descriptive analysis of 85 observational data in this study shows in the table 2 below.

Table 2
Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	85	-.46110	.41700	.1340232	.14457843
ATO	85	.27000	3.96206	1.1902759	.53993399
ITO	85	.59000	23.88000	6.2435604	4.40870919
CR	85	.67037	4.98000	1.5947504	.75600077
LEVERAGE	85	.16662	.91817	.5670185	.19061321
PROFIT CHANGE	85	-9.85181	9.19319	.2743918	3.01596808
Valid N (listwise)	85				

Source: Appendix

Based on the table 2, the average ratio of profits of 17 companies in this study is 0.2743918, with the lowest Return on Equity (ROE) is -0.46110 owned by PT. Multi Prima Sejahtera Tbk. In 2007, the highest value with ROE=0.41700 is owned by PT. United Tractors Tbk in 2006. The value of ROE standard deviation is 0.14457843. It indicates that the ROEs owned by 85 companies in this study are varied enough because the value is greater than 20% of the mean (0.026805).

In the group of Asset Turn Over (ATO), it shows that the ratio of the efficiency use of assets' ability to generate revenue of overall corporate average is 1.1902759. The lowest value is owned by PT. Multi Prima Sejahtera Tbk in 2006 with a value of 0.27000, while the highest value is owned by PT. Tunas Ridean Tbk in 2010 with a value of 3.96206. The standard deviation of 0.53993399 shows that the ATO among companies in this study are varied enough because the ATO standard deviations are greater than 20% of the mean (0.2380552).

The mean of inventory ratio in this research shows a value of 6.2435604. This means that during a specific period the companies in this research have sold 6.23435604 times inventory turnover, with the lowest ITO of 0.5900 that is owned by PT. Multi Prima Sejahtera Tbk in 2007 and the highest one is 23.88000 owned by PT. Goodyear Tbk year 2009. The standard deviation of 4.40870919 shows that the ability of the companies in this research to sell the inventory turnover is varied enough because the ITO standard deviations are greater than 20% of the mean (1.248712).

The ability to fulfill short term liabilities by comparing current assets which are belong to company and the short term liabilities in this research has the mean of 1.5947504, with the lowest CR = 0.67037 that is owned by PT. Multistrada Arah Sarana Tbk in 2010 while the highest one is 4.9800 owned by PT. Indokordsa in 2007. The standard deviation of 0.75600077 shows the current ratio among

companies in this study is varied enough because the standard deviations of CR are greater than 20% of the mean (0.31895).

The last independent variable is leverage that measures how far the company is using the debt for operational activities. Its mean is 0.5670185 with the lowest leverage is 0.16662 owned by PT. Multi Prima Sejahtera in 2007 and the highest one is 0.91817 owned by PT. Goodyear Tbk in 2009. The standard deviation of 0.19061321 shows the leverage among companies in this research is varied enough because the standard deviations of leverage are greater than 20% of the mean (0.1134037).

The dependent variable of this research has a mean of 0.2743918 with the lowest profit change is -9.85181 that is owned by PT. Multi Prima Sejahtera in 2007 and the highest one is 9.19319 owned by PT. Goodyear Tbk in 2009.

2. Classic Assumption Test

a. Normality Test

The normality test uses Kolmogorov Smirnov Z method. The result of Kolmogorov Smirnov Z method to *Unstandardized Residual* is shown in the table 3 below.

Table 3
Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		85
Normal Parameters(a,b)	Mean	.0000000
	Std. Deviation	1.27626396
Most Extreme Differences	Absolute	.104
	Positive	.104
	Negative	-.104
Kolmogorov-Smirnov Z		.955
Asymp. Sig. (2-tailed)		.322

a Test distribution is Normal.
b Calculated from data.

Source: Appendix

In the variable Unstandardized Residuals, it can be seen that the significance value is 0.322 that is greater than 0.05. Then, the model is normally distributed.

b. **Multicollinearity Test**

Multicollinearity test aims to test the correlation among the independent variables. A good regression model is a model with no multicollinearity problem. The result of multicollinearity test can be seen in the table 4 below.

Table 4
Multicollinearity Test

MODEL	Collinearity Statistics	
	Tolerance	VIF
ROE	0,407	2,457
ATO	0,992	1,008
ITO	0,236	4,233
CR	0,901	1,110
LEVERAGE	0,144	6,949

Source: Appendix

Based on the table 4, it can be concluded that all independent variables are all free of multicollinearity problem because they have VIF < 10 and the Tolerance > 0.1.

c. **Autocorrelation Test**

By using the significance level of 95%, with the sample size is 85 and 5 independent variables, the Durbin Watson table of values obtained is du=1,75 so that there is 4-du=2,25.

The result of the autocorrelation test is shown in the table 5 below.

Table 5
Autocorrelation Test

Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906(a)	.821	.810	1.31603247	1.823

a Predictors: (Constant), LEVERAGE, ATO, CR, ROE, ITO
b Dependent Variable: PROFIT CHANGE

Source: Appendix

The result of the autocorrelation test shows that the Durbin Watson value is 1,823. Because the value is in the interval du < DW < 4-du   or   1.75<DW<2.25 so that this can be concluded that this model is free from the autocorrelation problem. In other words, in this linear regression model, there is no correlation among the errors in period t with the error in period t-1.

d. Heteroscedasticity Test

The result of the heteroscedasticity test shows in the capture 2 below. Based on the capture, it can be concluded that there is no heteroscedasticity problem in this model regression because there is a pattern of scatter plot in the model.

Scatterplot

Dependent Variable: PROFIT CHANGE
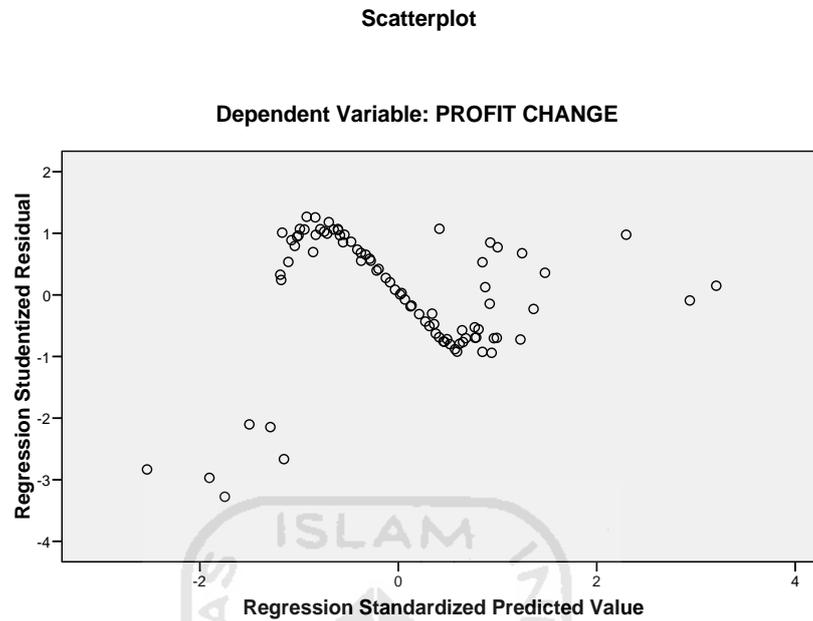
Source: Appendix

Capture 2
Heteroscedasticity Test

3. Coefficient of Determination

The coefficient of determination measures how far the ability of the model can explain the dependent variable variation. Based on the output in the table 5, the value of adjusted R square is 0,810. This means that 81% of profit change variation in this research can be explained by ROE, ATO, ITO, CR and leverage. And, the residual (100% - 81% = 19%) is influenced by other factors that are not explained in this research.

The value of standard error of estimate (SEE) is 1.31603247, this value shows the error in the model in predicting dependent variable.

4. *Goodness of Fit Model*

The goodness of fit model is used to test the ability of model and how far the model is able to explain the existence of dependent variable. The result of F test showing the goodness of fit model is described in the table 6 below.

Table 6
The Goodness of Fit Test (F test)

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	627.246	5	125.449	72.433	.000(a)
	Residual	136.823	79	1.732		
	Total	764.069	84			

a Predictors: (Constant), LEVERAGE, ATO, CR, ROE, ITO
b Dependent Variable: PROFIT CHANGE

Source: Appendix

Because the p – value has a value 0,000 which is $\leq 0,05$ so that it can be concluded that the model is good to answer the questions in this research and the independent variables can explain about the existence of a good dependent variable.

5. Multiple Linear Regression Model

The multiple linear regression model of this research can be seen in the table 7 below.

Table 7
The Coefficient of Regression Model

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-4.611	.746		-6.180	.000
	ROE	5.984	1.557	.287	3.844	.000
	ATO	.305	.267	.055	1.144	.256
	ITO	.404	.067	.591	6.029	.000
	CR	.023	.200	.006	.117	.907
	LEVERAGE	2.046	1.986	.129	1.030	.306

a Dependent Variable: PROFIT CHANGE

Source: Appendix

Based on the table 7, the multiple linear regression model of this research is:

$$Y = -4{,}611 + 5{,}984 \, X_1 + 0{,}305 \, X_2 + 0{,}404 \, X_3 + 0{,}023 \, X_4 + 2{,}046 \, X_5$$

According to the equation, without the change of ROE, ATO, ITO, CR and leverage, the ratio of change in profits is -4.611. An increase of 1 point of ROE ratio, it will result in an increase in change in profit of 5.984 points. For every increase of 1 point of ATO will give an effect to the increase in the ratio of change in profit of 0.305 points.   Likewise,   the ITO, for every   increase of 1   point then   it

will increase the ratio of change in profit of 0.404 points. For every increase of 1 point of the current ratio will give an effect to the increase in the ratio of change in profit of 0.023 points and for every increase of 1 point of leverage it will be followed by a rise in the ratio of earnings changes for 2.046 points.

6. Hypothesis Testing

Ha1 : ROE has a positive effect in predicting change in profit

Based on the table 7, the p − value of t test for ROE is 0.000. Because B coefficient + and the p − value $\leq$ 0.05, it can be concluded that ROE has a significant positive effect in predicting change in profit. Then, the first hypothesis is accepted.

The result of this research is in line with Winingsih (2005) concluded that ROE has a positive impact to profit change. The influence of the ROE ratio to changes in profit of the company is that the higher value of this ratio the higher the level of profits will result from the addition of working capital that can be used to finance the company's operations which could ultimately result in profits. The higher ROE will give an impact to the rise of profit change of the company because ROE can be used to measure the profitability from the perspective of ordinary shareholders. Return for the holders of ordinary shares is the company's net profit.

Ha2 : Asset turnover has a positive effect in predicting change in profit

Based on the table 7, the p − value of t test for ATO is 0,256. Because B coefficient + and the p − value > 0.05, it can be concluded that ATO has no significant positive effect in predicting change in profit. So the second hypothesis is rejected.

This conclusion is different from the result of Purnawati (2005) and Winingsih's research (2005) concluded that ATO has a positive effect to profit change. This condition occurs because the ATO allows a ratio which is measured by sales and total assets. The greater the sales to assets ratio the greater the ATO will be. However, the increased sales are not always followed by an increase in profits for the company. That is because the sale does not necessarily give a net profit for the company. From these sales, there is an expense to be issued. If the company's operating efficiency is low then allow the condition where the expense will be greater than the revenue. One of which is obtained from the sale. Based on the data, it can be seen the increase in the value of the ATO which indicates an increase in sales which is not followed by a significant increase in the ratio of profit changes. That condition resulted in rejection of the hypothesis in this study.

Ha3 : Inventory turnover has a positive effect in predicting change in profit

Based on the table 7, the p − value of t test for ITO is 0,000. Because B coefficient + and the p − value ≤ 0.05, it can be concluded that ITO has a significant positive effect in predicting change in profit. Therefore, the third hypothesis is accepted.

This conclusion is similar with the result of Purnawati (2005) and Winingsih's research (2005) stated that ITO has a positive effect to profit changes. Suwarno in Purnawati (2005) said that the rapid increase of inventory turnover will result in increasing revenues and net earnings in the foreseeable to come. Thus, the faster inventory turnover has an effect to the larger the profit received by the company.

Ha4 : Current Ratio has a positive effect in predicting change in profit

Based on the table 7, the p − value of t test for CR is 0.907. Because B coefficient + and the p − value > 0.05, it can be concluded that CR has no significant positive effect in predicting change in profit. Therefore, the fourth hypothesis is rejected.

This finding is different from the Purnawati (2005) and Winingsih's research (2005) concluded that CR has a positive effect to change in profit. CR indicates the company's ability to meet its short term liabilities as measured by current assets to current liabilities. The companies which are able to meet its short term obligations are

assumed as a company with a good finance performance. Though a company that has a good ability to meet its short term obligations is not necessarily immediately followed by its ability to improve profits. Thus, any increase in its current ratio is not necessarily accompanied by an increase in its profit margins.

A reality is also an evident from the data in this study. Most companies in this study, in year 2006 - 2008, have a tendency to increase current ratio. Conversely in some companies are experienced a decline in their profit change.

Ha5 : Leverage has a positive effect in predicting change in profit

Based on the table 7, the p – value of t test for Leverage is 0.306. Because B coefficient + and the p – value > 0.05, it can be concluded that leverage has no significant positive effect in predicting change in profit. Therefore, the fifth hypothesis is rejected.

This conclusion is different from the result of Widiasih (2006) concluded that leverage has a positive effect to profit changes. At some companies that have high leverage ratios, it indicates that they have debts amounted almost equals to the assets they have. In this research, it has been proved by leverage in some of the companies which are between 0.7 to 0.95. This condition does not actually show a healthy financial performance of the company because the composition of the debt that is not proportional to its ability to repay the debt.

It is different from the conception by Widiasih (2006) about the positive effect of the leverage to change in profit. This opinion is suitable for the companies that the leverage ratio is proportional about the debt and the assets. Therefore, the debt can produce revenue from good operational activities, and give profits for the companies significantly.

Because in this research, there were 26 observation data that the leverage ratio > 0.7 so that these companies' debt did not give any profit for the companies. That is why this hypothesis is rejected.

CHAPTER V

CONCLUSIONS, LIMITATIONS, AND SUGGESTIONS

5.1 Conclusions

Based on the data analysis in Chapter IV, the conclusions can be made are as follows:

1. Hypothesis statement: ROE has a positive effect in predicting change in profit is accepted. It is based on the result that p-value is $0.000 < 0.05$ and B coefficient is 5.984. It means that the higher value of ROE, the higher change in profit of the company.

2. Hypothesis statement: ATO has a positive effect in predicting change in profit is rejected. It is based on the result that p-value is $0.256 > 0.05$ and B coefficient is .305. It means that the higher value of ATO is not always followed by the higher change in the company profit.

3. Hypothesis statement: ITO has a positive effect in predicting change in profit is accepted. It is based on the result that p-value is $0.000 < 0.05$ and B coefficient is .404. It means that the higher value of ITO the higher change in profit of the company.

4. Hypothesis statement: CR has a positive effect in predicting change in profit is rejected. It is based on the result that p-value is $0.907 > 0.05$ and B coefficient is .023. It means that the higher value of ATO is not always followed by the higher change in profit of the company.

5. Hypothesis statement: CR has a positive effect in predicting change in profit is rejected. It is based on the result that p-value is $0.306 > 0.05$ and B coefficient is 2.046. It means that the higher value of ATO is not always followed by the higher change in profit of the company.

5.2 Research Limitations

This study has several limitations that may affect research results to be achieved. These limitations are:

1. The research only used automotive companies listed in BEI. Automotive companies cannot represent all the Indonesian companies. Different elements of financial report can give effects in ratio calculation

2 The research only used 5 year research period. The longer research period will probably cause different results of this research

5.3 Suggestions

Based on the limitations of the research, the researcher realizes that there is no perfect research. That is why suggestions for future research are needed, as follows:

1. It is better for not only focusing on automotive companies, but also including all companies listed in BEI

2. It is suggested to use another kind of financial ratio because there are so many ratios that can be used to predict profit changes

3. It is suggested to use another analytical tool other than regression.

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No	ROE	ATO	ITO	CR	Leverage	Profit
1	0.1659	0.96	10.4	2.45	0.81071	3.26989
2	0.417	1.22	9.21	2.2	0.78624	2.71622
3	0.3103	2.16	8.39	2.15	0.73325	1.65106
4	0.0023	0.66	1.96	0.89	0.29736	-2.55469
5	0.34003	1.11	8.75	2.17	0.76137	2.00054
6	-0.2134	0.82	1.42	0.78	0.26544	-8.61291
7	0.033	1.36	15.91212	3.44	0.88152	4.73431
8	0.0027	0.4	2.18	0.91	0.31692	-1.63377
9	0.1141	1.16	11.72	3.1	0.86844	3.9647
10	0.022	0.99	10.18	2.25	0.69336	2.77126
11	0.029	0.73	2.72	1.01711	0.3817	-0.93805
12	-0.0218	2.16	1.5	0.84	0.28415	-6.22948
13	0.2604	1.23	7.62	1.99	0.70689	0.6971
14	0.0083	0.8	2.35	0.98	0.33175	-1.52068
15	0.0065	1.26	2.27	1.08	0.327	-1.54815
16	0.29558	1.18	8.36	1.08	0.73282	1.52797
17	0.3549	0.27	8.86	0.8	0.78167	2.61457
18	0.2758	1.1	7.91	1.32	0.71103	1.06528
19	0.239	1.4	6.82	1.34	0.66827	0.50793
20	0.1416	1.88	10.38	1.35	0.79863	2.82941
21	0.0126	1.04	2.48049	0.84	0.33438	-1.29214
22	0.2356	1.21	6.74	2.2	0.66684	0.49215
23	0.0227	1.93	2.5	2.25	0.36806	-1.18503
24	0.2217	1.32	22.99	1.15	0.91395	8.20383
25	0.31284	0.5	8.48	1.32	0.73758	1.70883
26	0.22168	1.26	6.31	1.22	0.65613	0.45977
27	0.2418	1	7.14	4.98	0.68624	0.6862
28	0.13206	0.82	4.65	2.45	0.5482	0.24693
29	0.24001	1.88	7.09	1.35	0.68585	0.66913
30	0.12508	1.28	4.54	1.71	0.54404	0.23999
31	0.1256	0.94	11.37906	1.07	0.85945	3.86567
32	0.0027	1.21	2.07	1.05	0.29912	-2.06351
33	0.0494	1.4	3.19	1.05	0.43513	-0.39168
34	-0.4611	0.35	0.59	1.7	0.16662	-9.85181
35	0.2134	1.2	6.1	1.32	0.64613	0.44484
36	0.2669	1.22	7.87	1.64	0.3072	0.8805
37	-0.1291	1.22	1.47	1.49	0.27176	-6.51734
38	0.0804	1.47	13.76	0.91	0.87221	4.51217
39	0.1666	1.34	5.60253	2.13	0.59617	0.33706
40	-0.2605	1.04	1.27	0.99	0.19026	-8.62493
41	0.1675	1.55	5.66799	1.41	0.62057	0.36024
42	0.044	0.56	3.10396	0.89	0.43495	-0.39204
43	0.1048	1.52	4.24575	1.4	0.49744	0.13436
44	0.29134	1.98	8.25591	2.19	0.71781	1.409
45	0.35126	0.99	8.86	2.15	0.76421	2.09081

46	0.03009	1.22	2.87572	1.49	0.42221	-0.72841
47	0.0931	1.46	3.79988	1.82	0.49168	0.09958
48	0.2778	1.05	8.11246	1.07	0.71302	1.22572
49	-0.0153	0.74	1.53	1.01	0.28706	-6.00245
50	0.0438	1.48	3.05	1.04	0.42835	-0.43106
51	0.0311	0.32	2.93	1.3	0.42293	-0.62186
52	0.0903	1.11	3.72	1.37	0.48328	0.06763
53	0.2025	1.2	5.76331	1.66	0.63799	0.41337
54	0.00226	0.88	1.79	2.53	0.29152	-2.64507
55	0.2012	1.36	5.69	0.93	0.62664	0.37126
56	0.11	1.13	4.50901	2.17	0.54374	0.22698
57	0.0214	0.84	2.49	1.09	0.35234	-1.22737
58	0.10808	2.76	4.27	1.35	0.50968	0.16804
59	0.1198	0.67	20.69	0.86	0.90953	7.68852
60	0.343	1.57	10.84	1.57	0.81318	3.707
61	0.0557	1.11	3.26	3.44	0.44102	-0.16739
62	0.1467	1.08	5.31	1.75	0.56113	0.29138
63	0.2915	1.15	23.88	0.9	0.91817	9.19319
64	0.1511	1.46	5.46	1.59	0.58737	0.29408
65	0.25732	1.16	7.62	1.27	0.70654	0.69442
66	0.28962	0.38	8.13525	2.03	0.71406	1.30147
67	0.2517	0.89	7.39	0.99	0.70488	0.6942
68	0.2394	0.42	7.07	2.27	0.68544	0.65421
69	0.1416	1.15182	4.9	1.2618	0.555	0.28222
70	0.08546	1.25666	3.46	1.56592	0.46382	-0.07035
71	0.0734	0.95009	3.45	1.76087	0.45995	-0.12027
72	0.339	1.36948	8.69	1.06939	0.54403	1.79637
73	0.2317	1.11981	6.49	1.75735	0.65997	0.47229
74	0.0698	1.9631	3.44	1.13738	0.45572	-0.14567
75	0.0577	3.96206	3.35	1.51169	0.44982	-0.15278
76	0.0903	0.66049	3.67	0.67037	0.47997	-0.01303
77	0.086	1.55865	3.58	1.77215	0.36727	-0.02996
78	0.2392	1.20944	7.03	4.01758	0.6828	0.59699
79	0.2689	0.93748	7.91	1.22551	0.70995	0.93447
80	0.0315	1.51444	2.97	0.86419	0.42444	-0.49088
81	0.095	1.46358	4.15	2.17411	0.4961	0.10171
82	0.16043	1.33287	5.56	1.28667	0.49615	0.31404
83	0.0228	0.62169	2.56459	1.448	0.38137	-1.0502
84	0.2929	1.18746	8.3446	1.01711	0.72797	1.49085
85	0.20163	0.39433	5.69	2.51658	0.63166	0.40455

APPENDICES

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	85	-.46110	.41700	.1340232	.14457843
ATO	85	.27000	3.96206	1.1902759	.53993399
ITO	85	.59000	23.88000	6.2435604	4.40870919
CR	85	.67037	4.98000	1.5947504	.75600077
LEVERAGE	85	.16662	.91817	.5670185	.19061321
PROFIT CHANGE	85	-9.85181	9.19319	.2743918	3.01596808
Valid N (listwise)	85				

Normality Test

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		85
Normal Parameters a,b	Mean	.0000000
	Std. Deviation	1.27626396
Most Extreme Differences	Absolute	.104
	Positive	.104
	Negative	-.104
Kolmogorov-Smirnov Z		.955
Asymp. Sig. (2-tailed)		.322

a. Test distribution is Normal.

b. Calculated from data.

Multicollinearity Test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-4.611	.746		-6.180	.000		
	ROE	5.984	1.557	.287	3.844	.000	.407	2.457
	ATO	.305	.267	.055	1.144	.256	.992	1.008
	ITO	.404	.067	.591	6.029	.000	.236	4.233
	CR	.023	.200	.006	.117	.907	.901	1.110
	LEVERAGE	2.046	1.986	.129	1.030	.306	.144	6.949

a. Dependent Variable: PROFIT CHANGE

Autocorrelation Test

Model Summary^b

| Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906^a	.821	.810	1.31603247	1.823

a. Predictors: (Constant), LEVERAGE, ATO, CR, ROE, ITO

b. Dependent Variable: PROFIT CHANGE

Heteroscedasticity Test

Scatterplot

Dependent Variable: PROFIT CHANGE
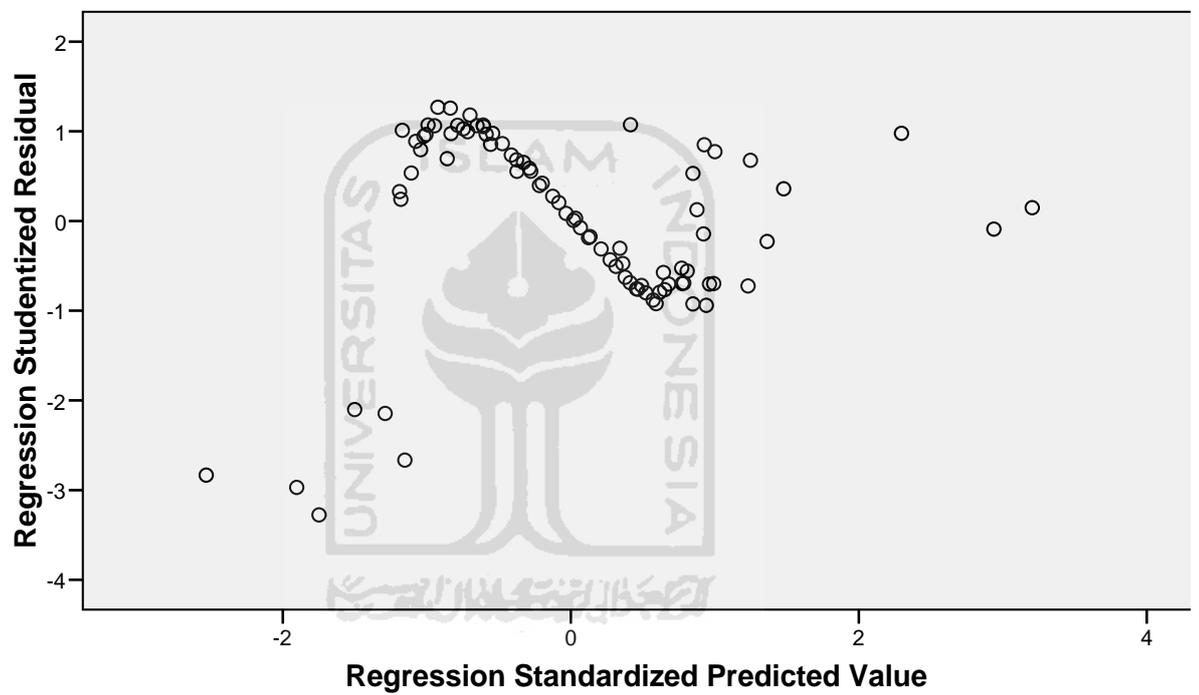
Multiple Linear Regression

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	LEVERAGE, ATO, CR, ROE, ITO[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: PROFIT CHANGE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.906[a]	.821	.810	1.31603247	1.823

a. Predictors: (Constant), LEVERAGE, ATO, CR, ROE, ITO

b. Dependent Variable: PROFIT CHANGE

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	627.246	5	125.449	72.433	.000[a]
	Residual	136.823	79	1.732		
	Total	764.069	84			

a. Predictors: (Constant), LEVERAGE, ATO, CR, ROE, ITO

b. Dependent Variable: PROFIT CHANGE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.611	.746		-6.180	.000
	ROE	5.984	1.557	.287	3.844	.000
	ATO	.305	.267	.055	1.144	.256
	ITO	.404	.067	.591	6.029	.000
	CR	.023	.200	.006	.117	.907
	LEVERAGE	2.046	1.986	.129	1.030	.306

a. Dependent Variable: PROFIT CHANGE