## THE INFLUENCE OF FINANCIAL RATIO ON PROFIT GROWTH IN MANUFACTURING COMPANIES LISTED ON IDX FOR PERIOD 2008 TO 2012

#### **THESIS**

## Submitted as Partial Fulfillment of Requirement for the Undergraduate Degree in Accounting Department Faculty of Economics

By: POPY ANA PUTRI 0910534036



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#### ACCOUNTING DEPARTMENT

#### **FACULTY OF ECONOMICS**

#### ANDALAS UNIVERSITY

#### THESIS APPROVAL LETTER

Herewith, Head of Accounting Department, Head of Accounting International Program and Thesis Advisor, stated that:

Name : **POPY ANA PUTRI** 

Student's ID Number : 0910534036

Field of Study : Accounting

Degree : Bachelor Degree of Economics (S1)

Thesis Title : The Infuence of Financial Ratio on The Profit

**Growth in Manufacturing Companies Listed** 

on IDX for Period 2008-2012

Has already passed the thesis seminar on Friday November 29th, 2013 based on procedures and regulations prevailed in the Faculty of Economics, Andalas University.

Padang, January 16 2014

Thesis Advisor

#### Drs.Riwayadi, MBA, Ak, CRSR

NIP.196412281992071001

#### Approved by:

Head of Accounting Department Head of AccountingInternational Program

Dr. Efa Yonnedi SE, MPPM,Ak

Rayna Kartika, SE, M.Com, Ak

NIP. 197205021996021001

NIP. 198103112005012001

No.Alumni Universitas	Popy Ana Putri	No.Alumni Fakultas	
BIODATA			
a). Tempat/Tgl Lahir: Bu : Musdawarman/Yuniarti e). No.BP: 0910534036 f : Sangat Memuaskan h). Alamat Orang Tua: Bukit	c). Fakultas : Ekonomi ). Tgl Lulus : 7 Januari IPK : 3,27 i). Lama Stu	d). Jurusan : Akuntansi 2014 g). Predikat Lulus	

## The Infuence of Financial Ratio on The Profit Growth in Manufacturing Companies Listed on IDX for Period 2008-2012

Thesis By: Popy Ana Putri

Thesis Advisor: Drs.Riwayadi, MBA, Ak, CRSR

#### **ABSTRACT**

This research examines the effects of Working Capital to Total Asset (WCTA), Current Liabilities To Inventory (CLI), Operating Income to Total Assets (OITL), Total Asset Turnover (TAT), Net Profit Margin (NPM) dan GrossProfit Margin (GPM) to profit growth of manufacture company.

The sampling technique used in this research is purposive sampling, with some criteria, those are: (1) the manufacture company listed in IDX in research period and still operating consistenly in the research period; (2) issuing of financial statement as the research period; (3) the manufactur company having the positive profit. The result of this research shows that the data has fulfill the classical asumption, such as: no multicolinearity, no autocorrelation, no heteroscedasticity and distributed normally. From the hyphothesis testing, found that partially Gross Profit Margin (GPM) variable, has a positive and significant influence on profit growth of manufacture company, while Working Capital to Total Asset (WCTA), Current Liabilities To Inventory (CLI), Operating Income to Total Assets (OITL), TotalAsset Turnover (TAT), and Net Profit Margin (NPM) don't have influence on profit growth of manufacture company. From the research also known that those six variable (WCTA, CLI, OITL, TAT, NPM, and GPM) simultaneously have an influence on profit growth of manufacture company. All of independent variables in this study are only accounted for 6,7% that affect on dependent variable and the remaining 93,3% is influenced by other factors that are not included in the regression model as shown in the adjusted R2 value.

Keywords: Working Capital to Total Asset (WCTA), Current Liabilities ToInventory (CLI), Operating Income to Total Assets (OITL), Total Asset Turnover(TAT), Net Profit Margin (NPM), Gross Profit Margin (GPM) and profit growth.

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Skripsi telah dipertahankan di depan sidang penguji dan dinyatakan lulus pada tanggal 29 November 2013, dengan penguji :

Tanda Tangan	1.	2.
Nama Terang	Drs.Riwayadi, MBA, Ak, CRSR	Rayna Kartika, SE, M.Com, Ak

Mengetahui:

Ketua Jurusan Akuntansi: Dr. Efa Yonnedi SE, MPPM, Ak

NIP. 197205021996021001 Tanda Tangan

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#### **CHAPTER I**

#### INTRODUCTION

#### 1.1 Background

The success of an enterprise is measured based on its performance. The company's performance can be assessed through financial statements presented on a regular basis every period (Juliana and Sulardi, 2003). Brigham and Enhardt (2003) stated that the accounting information on the activities of the company's operations and financial position of the company can be obtained from the financial reports. Accounting information in financial statements is very important for the business person such as investors in decision-making. Investors will invest in companies that can provide a high return.

The Financial Accounting Standards Board (FASB) (1978), Statement of Financial Accounting Concepts No.1, stated that the main focus of the financial statements is profit, so the information of financial statements should have the ability to predict profit in the future. Profit as a performance measurement process, reflect the company's increase or decrease in capital transactions from various sources (Takarini and Ekawati, 2003). The company expected earnings each period will increase, so that the profit estimate is needed to achieve the company for the coming period. Estimation of profit can be made by analyzing financial statements. Analysis of financial statements conducted can be either through interpretation and calculation of financial ratios.

Meythi (2005) States that one of the ways to predict the company's profit was using financial ratios. Financial ratio analysis can help the business person and the Government in evaluating the financial state of the company's past, present and projected the results or profits that will come (Juliana and Sulardi, 2003). In General, financial ratios can be grouped into liquidity ratios, leverage ratio, the ratio of activity and profitability ratios (Riyanto 1995). According to research Takarini and Ekawati (2003) liquidity ratio of positive influence significantly to profit growth into next year is the Working Capital to Total Assets (next called the WCTA). WCTA shows the ratio between the working capital (current assets minus debt) to total assets. The higher of the WCTA showed the greater working capital acquired the company than the total of its assets. With a large working capital, the company's operations to be clear so that earned income is increasing and this resulted in profits gained on the rise. However, research conducted by Mahfoedz (1994) and Suwarno (2004) shows that the WCTA has no effect against a significant profit growth in coming years. Machfoedz (1994) in his research showed that the ratio of leverage that influence significantly to profit growth is the Current Liability to Inventory (CLI) and Operating Income to Total Liabilities (OITL). CLI is a comparison between the current debt (Current Liabilities) of the preparation (Inventories) (Machfoedz, 1994). A high CLI shows the dependence of the company on high supplier or the amount of short-term debt of the company to finance its preparation. This can lead to considerable risks for the company when the company is unable to pay the liabilities at maturity, so that it will interfere with the continuity of operations of the company. In addition, the company will be faced with high interest charges so as to lower the company's

earnings. This is according to research by Machfoedz (1994) and Ediningsih (2004) show that significant negative effect CLI to predict a profit growth in coming years. This means that the company cannot make its debt to gain profit. However, research Takarini and Ekawati (2003) showed that the CLI does not influence significantly to predict profit growth one year ahead.

OITL is the ratio between operating profit before interest and taxes (i.e. the result of the reduction in net sales minus the cost of goods sold and operating expenses) to total debt (Riyanto, 1995). The larger the OITL, pointed out that the revenue generated from sales activities than the total debt, meaning that the companies is able to pay their debt. Thus the continuity of the company's operations will not be disrupted, so that earned income be increased and profits obtained huge. Mahfoedz (1994) and Ediningsih (2004) in his research showed that significant positive effect OITL predicts profit growth for one year to the next. While research and Takarini Ekawati (2003) and Suwarno (2004) indicates that no effect significant OITL predicts profit growth for one year to the next.

Ou (1990) showed that the ratio of an influential activity to predict significant growth in profit is Total Assets Turnover (TAT). TAT is an comparison between the net sales to total assets. TAT function to measure the company's ability to use a total of its assets in generating net sales. The larger the TAT shows increasingly efficient use of all the company's assets to support sales activities. This shows that the better the performance of the company, thus investors keen to invest its capital, so that it can increase the profits of the company.

The research by Ou (1990) and Asyik and Sulistyo (2000) show that the positive effect of TAT significant profit growth. While the study conducted by Suwarno (2004), Takarini and Ekawati (2003), Juliana and Sulardi (2003) and Meythi (2005) indicates that TAT does not influence significantly to earnings growth. Asyik and Soelistyo (2000) in his research showed that the ratio of profitability that influence significantly to profit growth is the Net Profit Margin (NPM) and the Gross Profit Margin (GPM). NPM is a comparison between the net profit after taxes (i.e. profit before income tax is reduced by income tax) of net sales. This ratio measures the company's ability to generate revenue to achieved net sales company (Riyanto, 1995). The higher the NPM shows that increasing net profit achieved the company against net sales. Increasing NPM will improve the attraction of investors to invest its capital, so that the company's earnings will increase. Mahfoedz (1994), Asyik and Soelistyo (2000), and also Suwarno (2004) in his research suggests that the positive influence of NPM significant profit growth one year ahead. However, research results from Usman (2003), Meythi (2005), Takarini and Ekawati (2003) and Juliana and Sulardi (2003) showed that the NPM has no effect against the significant profit growth one year ahead.

GPM is the ratio between the gross profit (i.e. net sales minus the cost of goods sold) of net sales (Ang, 1997). GPM which increase shows the greater the level of refund for gross profits that accrue to the company against net sales. This means the more efficiently costs the company incurred to support sales activities so that the earned income be increased. Research results from Juliana and Sulardi (2003) suggest that the positive effect of the GPM significant profit growth one year ahead. While the results of the research by Meythi (2005) and Usman (2003)

showed that the GPM has no effect against the significant profit growth one year ahead. Based on empirical evidence that links between financial ratios (WCTA, CLI, OITL, TAT, NPM and GPM) against earnings growth (growth of Earning After Tax) still shows different results, then this study examines how the influence of the ratio of these financial-ratio of profit growth especially in the manufacturing sector in Indonesia Stock Exchange (IDX) of the period 2008 to 2012.

Selection of manufacturing companies in IDX because the manufacturing industry is the most industry many listed in IDX. Until now, the economy of Indonesia has not fully recovered from the economic crisis that faced Indonesia at the domestic level since mid-1997 and even in 2008 has the global economic crisis which impacted to the economy of Indonesia, therefore it is expected in 2008 to 2012 can improve economic conditions and profit growth will increase.

#### 1.2 Formulation of the problem

This research was conducted to examine the influence of the WCTA, CLI, OITL, TAT, NPM and GPM of profit growth in the future in manufacturing companies registered in IDX period 2008 to 2012, so that the research question can be derived as follows:

- 1. How does the WCTA influence the profit growth at the company's manufacturing in the future?
- 2. How does the CLI influence the profit growth at the company's manufacturing in the future?

- 3. How does the OITL influence the profit growth at the company's manufacturing in the future?
- 4. How does the TAT influence the profit growth at the company's manufacturing in the future?
- 5. How does the NPM influence the profit growth at the company's manufacturing in the future?
- 6. How does the GPM influence the profit growth at the company's manufacturing in the future?

#### 1.3 Purpose and Usability

#### 1.3.1. Research Objectives

The purpose of doing this research is:

- 1. Analyze the effect on profit growth against the WCTA manufacturing company.
- 2. Analyze the influence of the CLI to profit growth at the company's manufacturing.
- 3. Analyze the effect on profit growth against OITL manufacturing company.
- 4. Analyze the effect of TAT to profit growth at the company's manufacturing.
- 5. Analyze the influence of NPM to profit growth at the company's manufacturing.
- 6. Analyze the influence of the GPM of profit growth at the company's manufacturing.

#### 1.3.2. The Usefulness of The Research

This research is expected to be beneficial to:

#### 1. For Issuers

The results of this research are expected to be used as one of the basic considerations in decision-making in the areas of finance, especially in order to maximize the profit of the company having regard to the factors examined in this study.

#### 2 For investors

The results of this research are expected to be used as a consideration in the decision making investments in manufacturing companies in Indonesia stock exchange (IDX).

#### 1.4 Writing Systematic

The writing systematic of this study is divided into five chapters and each chapter divided into some subchapter. The first chapter are describes about the research backgrounds, problem definitions, research objectives, research benefits, and writing systematic.

The second chapter is literature review, theoretical framework and hypothesis that discuss about the theoretical analysis of this study that gathered from some sources, such as books, journals, internet, and previous research and discuss about hypothesis development.

The third chapter discusses the research methodology used in the preparation of this study, type of research, population and sampling, variable definition and measurement, types of data, data collection method, data analysis method, classical basic assumption and hypothesis testing which used to analyze the data and any information needed.

Chapter fourth describes the result of research based on the data and information gathered related with problems definitions.

The last chapter is conclusions, this chapter presents the conclusions which consist of the entire conclusion that have been taken and also consist of suggestion from the author as a result form the problem that hopefully will be useful for certain of people.

#### **CHAPTER II**

#### LITERATURE REVIEW

#### 2.1 Literature Review.

#### 2.1.1 Financial Statement Analysis

According to the Hanafi and Halim (2005), there are three forms of financial statements i.e. Statement of Financial Position, Income Statement, and Cash Flow statement.

#### (1) Statement of Financial Position

Statement of Financial Position, also known as the Balance Sheet, presents the financial position of an entity at a given date. The statement of financial position is a systematic report on assets, debt as well as the capital of a company on a particular date/time. The statement of financial position is made up of three main parts, namely assets, liabilities and capital. Assets consists of:

#### a) Current assets

Current assets are a wealth of company money and intangibles can be disbursed in the short term (less than one year). For example: cash (company property in the form of cash), while investments/short term (investing in bonds, stocks, securities that are maturing in less than one year), receivable or accounts receivable (trade accounts receivable that arise due to the credit sales), inventory (inventory of the purchased items as well as the resulting goods, both raw materials, half-finished goods or finished goods).

#### b) Fixed assets

Fixed assets are intangible wealth the company money and could be disbursed in long-term (over one year). For example: bonds, land, buildings and machinery.

Liabilities is all the company's financial obligations to the other party that has not been fulfilled. Liabilities is a source of funds/capital companies that derived from the lender. Liabilities can be divided into two (Ang, 1997):

#### a) Current liabilities

Current liabilities are liabilities that maturities of less than one year. For example: short-term bank loans, notes payable and account payables (a liabilities arising from a purchase of goods in credit).

#### b) Non-current liabilities

Non-current liabilities is a liability maturities of more than one year. For example: bank loans, long term note payables, bonds liabilities and debts to shareholders.

Capital or equity is right or part owned by the owner of the company indicated in the capital post, surplus assets and retained earnings. Can also meant an excess value of assets owned by the company to the rest of what he owes (Munawir, 2004).

#### (2) Income Statement

Income Statement is a systematic report of revenue, costs of loss or profit the company earned during the time period (Munawir, 2004).

#### (3) Cash Flow Statement

This report presents information on the flow of cash into or out of a period that is the result of the company's principal activities, namely the operation, investment and funding. Operating activities include the transaction involving the production, sale, receipt of goods and services. Investment activities include the purchase or sale of investments in buildings, plant and equipment. Activity and industry average (comparison with industry average from the same industry with a company that will be analyzed).

#### 2.1.2 Financial Ratio Analysis

Dennis (2006) States that the financial ratio analysis is a method that is best used to obtain an overview of the overall financial condition of the company. According to Usman (2003), this analysis is useful as an internal analysis of the management of the company to figure out the financial results that have been achieved in the forthcoming planning and also for internal analysis for creditors and investors to determine the policy of granting credit and investing in a company. This financial ratio analysis can be divided into two types based on the variate which is used in the analysis, namely (Ang, 1997):

#### 1. Univariate Analysis Ratio

Univariate Analysis Ratio is a financial ratio analysis using a single variate in doing analysis. Examples likes *Profit Margin Ratio*, Return On Assets (ROA) and Return On Equity (ROE).

#### 2. Multivariate Analysis Ratio

Multivariate Analysis Ratio is a financial ratio analysis of which use more than one variate in doing analysis, such as the Alman's Z-Score and Zeta Score.

Financial ratio is a comparison of two data contained in the companies financial report. Financial ratios used by the creditor to determine the performance of a company by looking at the ability of the companies to pay off their liabilities (Dennis, 2006).

Financial ratios are grouped with different terms, in accordance with the purpose of its analysis. According to Nugroho (2003), several financial ratios that are often used by an analysis in achieving its objectives, i.e. profitability ratios that is used to measure the company's ability to earn income in relation to sales, total assets and equity and liquidity ratios, to measure the company's ability to meet short-term financial liabilities on time.

Brigham and Daves (2001) in Meythi (2005) classifies financial ratios into liquidity ratio, leverage ratio, activity ratios and profitability ratios. Weygandt et. al (1996) in Meythi (2005) classifies financial ratios into three kinds, liquidity ratio profitability ratio and leverage ratio. In General, financial ratios can be grouped into liquidity ratios, leverage ratio, activity ratios and profitability ratios (Riyanto, 1995).

#### 1) Liquidity Ratio

This ratio indicates the company's ability to complete short-term liabilities (less than one year). According to Munawir (2004), the ratio of liquidity can be divided into three:

a. Current Ratio (CR): comparison between current assets and current liabilitiesb.Quick Ratio (QR), namely a comparison between current assets minus inventories of current liabilities.

c. Working Capital to Total Assets (WCTA) i.e. comparison between current assets reduced by current liabilities to total assets. In this research the ratio of liquidity with can be proxy right with WCTA, according to previous researchs, this ratio is the most effect on profit growth. WCTA can be formulated as follows (Riyanto, 1995).

#### WCTA = (current assets-current liabilities)

#### Total assets

Current assets such as cash, inventories and trade receivables (income from trade). Current liabilities in the form of trade payable, taxes payable and current maturities of long term debt. Total assets is the sum of current assets and fixed assets (ICMD 2004).

#### 2) Leverage Ratio

This shows the company's ability to meet long-term liabilities. This ratio can be a proxy right with (Ang, 1997, Mahfoedz, 1994 and Ediningsih, 2004):

- a. Debt Ratio (DR) the comparison between the total liabilities with total assets
- b. Debt to Equity Ratio (DER) the comparison between the amount of current liabilities and long-term liabilities of its equity.
- c. Long Term Debt to Equity Ratio (LTDER) the comparison between long-term liabilities with its equity
- d. Times Interest Earned (TIE) that is a comparison between earning before tax, (hereinafter referred to as EBIT) with interest on long-term debt.

- e. Current Liability to Inventory (CLI) that is a comparison between the current liabilities of the inventory.
- f. Operating Income to Total Liability (OITL) the comparison between the operating profit before interest and tax (reductions result from net sales minus the cost of goods sold and operating expenses) to the total liabilities.

In this research leverage ratio can be proxy right with CLI and OITL, according to previous research, this ratios is the most effect on profit growth. The CLI can be formulated as follows (Machfoedz, 1994).

## CLI = current liabilities inventory

Inventories means the goods that are purchased by the company to be sold again. Examples likes: raw materials, operating supplies (goods used in the production of the company but did not become part of the final product, such as fuel), spare parts (goods produced by other companies purchased in order to produce a product, such as tyres for car factory, a shoe factory to string) (Reksoprayitno, 1991). OITL can be formulated as follows (Riyanto, 1995):

### OITL = operating profit before interest and taxes

#### The amount of liabilities

Operating profit before interest and taxes is the result of a reduction of net sales, cost of goods sold and operating expenses. The amount of liabilities means are sums of current liabilities and fixed (ICMD 2004).

#### 3) Activity Ratios

According to Ang (1997) this ratio shows the capabilities and efficiency of the company in utilizing its own assets or turnover of assets. Activity ratio can be a proxy right with:

- a. Total Asset Turnover (TAT) the comparison between the net sales by the number of assets
- b. Inventory Turnover (IT) the comparison between the cost of goods sold with average inventory
- c. Average Collection Period (ACP) the comparison between the average accounts receivable multiplied 360 compared with credit sales.
- d. Working Capital Turnover (WCT) the comparison between the net sales to working capital.

In this research the activities ratio of can be proxy right with a Total Asset Turnover (TAT), according to the previous researchs, this ratio is the most effect on profit growth. TAT can be formulated as follows (Ang, 1997).

Net sales is the result of net sales during one year. Total assets is the sum of the total current assets and fixed assets.

#### 4) Profitability ratio

According to Husnan and Pudjiastuti (1994), profitability ratios used to measure the efficiency of a company in the use of its assets, this efficiency

associated with the sale of the works were created. Profitability ratio can be proxy right with:

- a. Net Profit Margin (NPM) the comparison between the net profit after tax on total sales.
- b. Gross Profit Margin (GPM): a comparison between the gross profit on net sales.
- c. Return on Asset (ROA) is a comparison between the profits after tax with total assets.
- d. Return on Equity (ROE) as a comparison between the profits after tax to capital on its own.

In this research profitability ratio can be proxy right with NPM and GPM, according to previous research, the ratios of the most effect on profit growth.

NPM can be formulated as follows (Ang, 1997).

$$NPM = \underbrace{Net profit after tax}_{Net sales}$$

Net profit after tax is calculated from the profit before tax deducted by sales tax. Net sales indicate the magnitude of the proceeds received by the company from the sale of merchandise or the results of own production (Reksoprayitno, 1991). GPM can be formulated as follows (Ang, 1997):

Gross profit can be calculated from the net sales minus the cost of goods sold.

#### 2.1.3 Profit Growth

The main focus of the financial statements is profit. Profit is the operating results of a company in an accounting period. Profit information is very useful for owners, investors. The profit increase is good news to investors, while the profit decrease is bad news for investors (Wijayati, et al, 2005). For the general public and the business community, profit refers to the acceptance of the company reduced costs explicit or cost accounting firms. Explicit costs are the costs the company incurred to buy or rent the required inputs in production. These expenditures include wages to hired labor force, capital, interest rates for equity, leases of land and buildings and also the expenses for raw materials (Salvatore, 2001). Belkaoui (1993) suggests that profit is a basic and important post from the financial highlights has a variety of uses in many different contexts. Profits are generally seen as a basis for taxation, on the policy determinants of dividend payment, investment guidelines and decision and prediction.

Profit is a measure of the stewardship management of resources and the size of a unified management efficiency in the conduct of business of a company (Belkaoui, 1993). Profit used in this research is profit after taxes (Earning After Tax) profit growth, can be formulated as follows (Usman, 2003):

$$\Delta Y_{it} = \underbrace{\left(Y_{it} - Y_{it-l}\right)}_{V_{t-1}}$$

Where:  $\Delta Y_{it}$  = profit growth in the period t

 $Y_{it}$  = profit companies i in period t

 $Y_{it-1}$  = profit companies i in period t-1

#### 2.2 Previous Research

Research on financial ratios to profit growth has a lot to do. Some research has ever been done before, among others:

- 1) Research conducted by Ou (1990) is "The Information Content of Nonearnings Accounting Numbers as Earnings Predictors". Sample research used 637 companies in America that always presents the financial statements as of 31 December during the year 1978 to 1983. Independent variable used is inventory to total assets (GWNVN), Net Sales to Total Assets (GWSALE), Dividend per share (CHGDPS), Depreciation expense (GWDEP), Capital Expenditure to Total Assets (GWCP) and Income before extraordinary items (ROR). The dependent variable is profit growth. Results of the Logit equation shows that a positive influential GWSALE and ROR significantly to profit grow th a year in the future.
- 2) Mahfoedz research (1994) entitled "Financial Ratio Analysis and The Prediction of Earning Changes In Indonesia". Samples of his work as much as 68 manufacturing companies listed on the BEJ during the period 1989-1992. Machfoedz analyze 47 financial ratios to predict profit growth. Results of the regression analysis shows only 13 financial ratios that are significant positive effect on the level of significance of 5% in predicting profits one year ahead, the ratio-a ratio that is: Cash Flow to Current Liabilities (CFCL), Net Worth and Long Term Debt to Fixed Assets (NWTLFA), Gross Profit to Sales (GPS), Operating Income to Sales (OIS), Net Income to Sales (NIS), Net Income to Net

Worth (NINW), Quick Assets to Inventory (QAI) and Operating Income to Total Liabilities (OITL). While Net Worth to Sales (NWS), Current Liabilities to Inventory (CLI), Net Income to Total Liabilities (NITL), Current Liabilities to Net Worth (CLNW), and Net Worth to Total Liabilities (NWTL) shows negatively to profit growth.

- 3) Asyik and Soelistyo (2000) research about "Ability financial ratios in predicting profit" at 50 manufacturing companies listed on the BEJ during the period 1995-1996. Of the 21 financial ratios that are used in their research, only five influential financial ratios significantly to profi growth in the manufacturing company. Discriminat analysis results indicate that Sales to Total Assets (S/TA), Long Term Debt to Total Assets (LTD/TA) and Net Income to Sales (NI/S) significant positive effect on earnings growth while the Dividens to Net Income (DIV/NI) and Plant & Equipment to Total Uses (INPPE/TU) negative effect significantly to the growth of profit a year ahead.
- 4) Takarini and Ekawati (2003) analyze financial ratios in predicting profit growth at a manufacturing company in the Indonesia capital market with the sample as much as 42 manufacturing companies listed on the BEJ during the years 1997-2000. Independent variables analysed are: Current Liabilities to Inventory (CLI), Current Liabilities to Equity (CLE), Operating Income to Total Liabilities (OITL), Current Ratio (CR), Cash Flow to Current Liabilities (CFCL), Working Capital to Total Assets (WCTA), Sales to Total Assets (STA), Inventory to Net Working Capital (INWC), Quick Assets to Inventory (QAI), Net Worth to Sales (NWS), the Net Profit Margin (NPM), Return on Assets (ROA) and Return on Equity (ROE) with the dependent is profit growth. Result of Logistic

Regression indicate that CLE and WCTA influential positive significantly to profit growth in future where is a significance level of 5%, while ROE has significant negative effect to profit growth for one year ahead at 5% significance level. The ratio of the CLI, the STA and the NPM does not influence significantly to predict profit growth.

- 5) Usman (2003) research about "Analysis of Financial Ratios to Predict Changes in Profits at Banks in Indonesia", with a period of observation in 1995-1997. The dependent variable used is: Quick Ratio (QR), Bank Ratio, Gross Profit Margin (GPM), Net Profit Margin (NPM), Gross Yield on Assets (GYTA), Net Income on Assets (NITA), Leverage Multiplier, Asset Utilization, Credit Risk Ratio, Deposit Risk Ratio, Primary Ratio, Capital Adequacy Ratio. Independent variables was Earning After Tax (EAT). Result of Multiple regression indicate that there is no financial ratios that affect Earning After Tax (EAT) at the level of significance of 5%, GPM and the NPM does not have an effect on changes in profit growth.
- 6) Juliana and Sulardi (2003) conducting research on the benefits of financial ratios to predict changes in earnings at 52 manufacturing companies listed on the BEJ with years of observations of 1998-2000. Independent variable used is the CR, GPM, *Operating Profit Margins* (OPM), NPM, TAT, ROI, ROE and the *Leverage Ratio* (LR). The dependent variable used is the profi growth. Results of the regression shows GPM and OPM positive effect significantly to profit growth one-year changes on the level of significance of 5%, while TAT and the NPM does not influence significantly to changes. Multiple regression analysis showed that the GPM and OPM have significant positive impact to predict profit

growth a year ahead with the level of statistical significance less than 5%. While the TAT and the NPM does not influence significantly to changes.

7) Suwarno (2004) research the benefits of information regarding financial ratios in predicting changes in earnings on 162 manufacturing company that has go public in BEJ with observation period 1998-2002. As many as 35 financial ratios are used as the independent variable and the dependent variable changes as profit growth. Multiple regression analysis showed that *Operating Profit to Profit Before Taxes* (OPPBT) *Inventory to Working Capital* (IWC) and *Net Income to Sales* (NIS) have significant positive effect to profit growth one year ahead with the significance of less than 5% whereas the WCTA, OITL, TAT has no effect significant changes in profit a year.

8) Ediningsih (2004) research entitled "Financial ratios and Forecast profit growth: Empirical Study On manufacturing companies on the BEJ". His sample 30 manufacturing company from 1993 to 1999. Independent variable used is Operating Income to Sales (OIS), Operating Income to Net income Before Taxes (OINBT), Earning BeforeTaxes (EBTS), Quick Assets to Inventory (QAI), Sales to Total Assets (STA), Current Assets to Total Assets (CATAS), Operating Income to Total Liabilities (OITL), Current Liabilities to Inventory (CLI), Current Liabilities to Net Worth (CLNW), Total Liabilities to Current Assets (TLCA), Current Assets to Sales (CAS), Net Worth to Sales (NWS) and Sales to Fixed Assets (SFA). Multiple regression analysis showed that the OIS, EBTS, and OITL have positive significant effect to profit growth one and the next two years with a 5% significance level. While the CLI, TLCA and NWS have negatively profit growth significantly to one and two years.

9) Meythi (2005) analyze financial ratios that are best to predict profit growth on manufacturing companies listed on the BEJ. The sample used is *basic sector and chemical company* from 2000 to 2003. The independent variables used are: CR, DR, QR, *Equity to Total Taxes* (ETA), *Equity to Total Liabilities* (ETL), *Equity to Fixed Assets* (EFA), NPM, GPM, ROA, ROE, *Inventory Turnover* (ITO), *Average collection Period* (ACP), *Fixed Assets Turnover* (FAT), *Total Asset Turnover* (TAT) and the *growth of profit* (PL). The results of *factor analysis* shows that ROA significant positive effect against profit growth. The ratio of TAT, NPM and GPM has no effect against the significant profit growth. Briefly, the results of previous researchers may be presented in the following table 2.1

TABLE 2.1

REVIEW OF PREVIOUS RESEARCH SUMMARY

No	Researcher	Title of Object Research	Analysis	Research Result
			Method	
1	Ou (1990)	The Information Content of	Logit	GWSALE and ROR
		Nonearnings Accounting	Model	significant positive
		Numbers as Earnings		effect on profit
		Predictors		changes
2	Machfoedz	Financial Ratio Analysis and	Multiple	• NIS, OITL positive
	(1994)	The Prediction of Earning	linear	effect to predict
		Changes In Indonesia	regression	changes in profit
				over the next year.
				CLI negative effect
				on profit changes.
				• WCTA no
				significant effect on
				profit changes

No	Researcher	Title of Object Research	Analysis	Research Result
			Method	
3	Asyik and	Capabilities Financial Ratios	discriminat	S/TA, LTD/TA,
	Soelistyo	Predicting Earnings	analysis	NI/S positive effect
	(2000)			on profit changes.
4	Takarini and	Financial Ratio Analysis	Logit	CLE and WCTA
	Ekawati	Predicting Changes In	Model	significant positive
	(2003)	Earnings In Manufacturing		effect on changes in
		Company in Indonesia Capital		profits at a
		Market		significance level of
				5%
				• CLI, STA and
				NPM ratio not
				significant to predict
				changes in profits.
5	Usman	Financial Ratio Analysis	Multiple	GPM and NPM not
	(2003)	Predicting Changes in Profit at	linear	effect on the change
		Banks in Indonesia	regression	in profit in 5%
				significance level
6	Juliana and	Benefits of Financial Ratios to	Multiple	GPM and OPM
	Sulardi	Predict Changes in Profit in	linear	significant positive
	(2003)	Manufacturing Company	regression	effect on changes in
				profit of one year
				ahead at a
				significance level of
				5% TAT and NPM
				not significant effect
				on the change in
				profit.
7	Suwarno	Benefits of Information Predict	Multiple	• OPPBT, IWC and
	(2004)	Changes in Financial Ratios	linear	NIS positive
		Profit (Empirical Study on	regression	influence on

No	Researcher	Title of Object Research	Analysis	Research Result
			Method	
		Manufacturing Companies Go		changes in profit
		Public in the BEJ)		over the next year.
		Twone in the Batty		• WCTA, OITL,
				TAT not significant
				effect on the change
				in profit one year
				ahead.
8	Ediningsih	Financial Ratios and Profit	Multiple	• OIS, EBTS and
	(2004)	Growth Prediction: The	linear	OITL significant
		Empirical Study of	regression	positive effect on
		Manufacturing at BEJ		changes in profit
				one and two years at
				a 5% significance
				level.
				• NWS CLI and
				TLCA significant
				negative effect on
				changes in profit
				one and two years
9	Meythi	The Most Good Financial	factor	• Only ROA a
	(2005)	Ratios to Predict Profit Growth	analysis	significant positive
		In Manufacturing Company		effect in predicting
		Listed on BEJ		profit growth
				• TAT NPM and
				GPM no significant
				effect on profit
				growth.

#### 2.3 Theoretical Framework

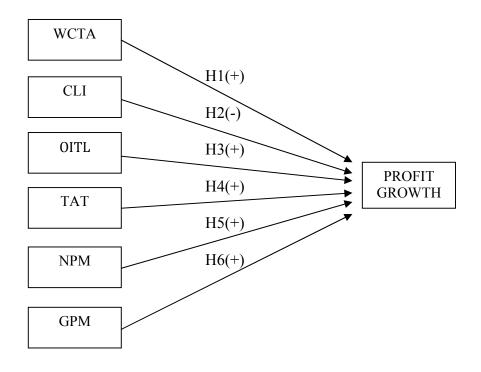
Performance of an enterprise can be assessed through financial statements presented on a regular basis every period (Juliana and Sulardi, 2003). The main focus of the financial statements is profit, so the information financial statements should have the ability to predict future earnings financial statements Analysis that can be done the calculations and interpretation through the financial ratios. In General, financial ratios can be grouped into liquidity ratios, leverage ratio, the ratio of activity and profitability ratios (Riyanto, 1995).

In this study used six variables that reflect the ratio-ratio of the sixth, the variable that is the WCTA, CLI, OITL, TAT, NPM and GPM. It is expected the higher the ratio, the WCTA OITL, TAT, NPM and GPM, then profit growth will increase, so that the five positive influence this ratio to earnings growth. While increasing the CLI which is a leverage ratio will result in profit growth that descends, so this ratio is negatively to profit growth. Theoretical Framework can be created in following figure 2.1

FIGURE 2.1

Theoretical Framework WCTA, CLI, OITL, TAT, NPM and GPM to Profit

Growth



## 2.4 Hypothesis Development

# 2.4.1 Relationship Working Capital to Total Assets (WCTA) against Profit Growth

WCTA become higher in the operational capital showed large companies compared to the amount of its assets (total assets). A large of working capital will facilitate the company's operations so that the company is able to pay its liabilities, thereby increasing earned profit (Reksoprayitno, 1991). Runy (2002) argues that the greater of WCTA will increase the return that would affect increase in profit growth. This is due to the efficiency of the difference between current assets and current liabilities. The influence of optimum WCTA against

profit growth is different from one industry to another (Mc Cosker, 2000). Takarini Ekawati and research results (2003) suggest that the positive effect of the WCTA is profit growth one year to come. Based on these thoughts, hypotheses can be derived as follows.

H1: WCTA Ratio effect positively to profit growth

## 2.4.2 Relationship Current Liability to Inventory (CLI) against Profit growth

The higher of CLI means current liabilities of the companies to finance the inventory in the warehouse be higher, so the liabilities of the company become higher either. This will be a considerable risk for the company when the company is unable to pay the liabilities at maturity, the company will also be faced with the expense of great interest, so that it will interfere with the continuity of operations of the company and the profit obtained by the company will be reduced (Reksoprayitno, 1991). This is according to research by Machfoedz (1994) and Ediningsih (2004) indicating that the CLI negatively to predict a profit growth in coming years. This proves that the company is unable to harness his liabilities to add a business expansion in order to gain an advantage. Based on these thoughts, hypotheses can be derived as follows.

H2: CLI influential negatively against profit growth

# 2.4.3 Relationship Operating Income to Total Liabilities (OITL) against Profit Growth

The bigger of OITL shows the largerer profit obtained from sales activities againts total liabilities of the company. The acquisition of a large profit resulting

in the company being able to pay off her liabilities. Thus the operating activities to be clear and earned income is increased, so increased profit growth. It is supported by Mahfoedz (1994) and Ediningsih (2004) that in his research shows that positive effect OITL to predict profit growth one year ahead. Based on these thoughts, hypotheses can be derived as follows.

H3: OITL influential positive Ratio of profit growth

## 2.4.4 Relationship a Total Assets Turnover (TAT) against Profit Growth

TAT shows efficiency of whole assets (total assets) to support the company's sales (sales) (Ang, 1997). Larger of TAT shows efficiency of company in using their companies assets to show net sales. Faster rotation of the assets of a company in order to support the net sales activities, then earned income increases so that the profits obtained will be huge (Ang, 1997). This is supported by the Ou (1990) and Asyik and Sulistyo (2000) while in their research shows TAT has positive effects with profit growth. Based on these thoughts, can be hypothesis is derived as follows.

H4: TAT influential positive effect against profit growth

# 2.4.5 Relationship Net Profit Margin (NPM) against Profit Growth

NPM shows company's ability to generate their net sales against total net sales (Riyanto, 1995). NPM getting large show that become large of net profit can be obtained by company earned from sales activities. With a huge net profit, can gain wide opportunity for the company to enlarge its business without equity through recently liabilities, so that revenue obtained can be increased

(Reksoprayitno, 1991). It is supported by Mahfoedz (1994), Asyik and Soelistyo

(2000) and also Suwarno (2004) that in his research suggests that the positive

influence of NPM significant profit growth one year ahead. Based on these

thoughts, hypotheses can be derived as follows.

H5: NPM influential positive against profit growth

2.4.6 Relationship Gross Profit Margin (GPM) against Profit Growth

GPM indicates the level of refund for gross profit against net sales (Ang,

1997). GPM which increase shows that the larger of the gross profit earned by the

company against net saled. This shows that the company is able to cover

administrative costs, depreciation costs and also the expense of interest on the

liabilities and taxes. This means the company's performance rated well and this

can increase the attraction of investors to infuse equtiy in the company, so the

earned income by company will be increased (Reksoprayitno, 1991). Research

results by Juliana and Sulardi (2003) suggest that the positive effect of the GPM

significant profit growth one year ahead. From the results of these thought the

hypothesis can be derived as follows:

H6: GPM influential positive against profit growth

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#### **CHAPTER III**

#### RESEARCH METHODS

## 3.1 Type of Research

The types used in this research is descriptive and verification with quantitative approach. Using type of research will be known a significant relationship between the variables examined so that conclusions that will clarify the picture of the object being studied. Type of descriptive and quantitative verification approach is a type that aims to describe the truth of the facts. Facts explain the relationship between variables was investigated by collecting data, process, analyze, and interpret data in a statistical hypotesis testing. In this study descriptive and verification are uses to test the influences of WCTA, CLI, OITL, TAT, NPM and GPM on Pofit Growth as well as to the theory by testing a hypothesis is accepted or rejected

#### 3.2 Research Variables and Operational Definition of Variables

#### 3.2.1 Research Variables

The research variables are the changes that have variations in value (Ferdinand, 2006). In this study, using two variables:

## 1. Dependent Variable

The dependent variable is the variable that is affected by the independent variables that are not able to stand on its own as well as being a major concern of researchers. In this study, the dependent variable is the profit growth.

## 2. The Independent Variables

The independent variables are variables that affect the dependent variable, either positively or negatively, and can stand alone nature. In this study, the independent variables are WCTA, CLI, OITL, TAT, NPM, and GPM

## 3.2.2 Operational Definition of Variables

# 3.2.2.1 Dependent Variable

The dependent variable in this study is the profit growth. Profit in the study interface is Earning After Tax, it can be formulated as follows (Usman, 2003).

$$\Delta Y_{it} = \frac{}{}$$

Where:  $\Delta Y_{it}$  = profit growth in the period t

 $Y_{it}$  = profit companies i in period t

 $Y_{it-1}$  = profit companies i in period t-1

#### 3.2.2.2 Independent variable

1) Working Capital to Total Assets (WCTA)

This variable is taken from previous research by Machfoedz (1994), Takarini

and Ekawati (2003). Working Capital to Total Assets (WCTA) is a comparison between current assets minus current liabilities against the total assets. WCTA can be formulated as follows (Riyanto, 1995).

WCTA =	
WCIA =	

2) Current Liabilities to Inventory (CLI)

The CLI is taken from the previous research by Machfoedz (1994) and Ediningsih (2004), Takarini and Ekawati (2003).

The CLI can be formulated as follows (Machfoedz, 1994).

3) Operating Income to Total Liabilities (OITL)

The variable of OITL is taken from Machfoedz (1994) and Suwarno (2004).

OITL can be formulated as follows (Riyanto, 1995):

4) Total Asset Turnover (TAT)

This variable is taken from previous research by Juliana and Sulardi (2003), Suwarno (2004) and Meythi (2005). TAT can be formulated as follows (Ang, 1997).

$$TAT =$$

## 5) Net Profit Margin (NPM)

NPM shows company's ability to generate revenue againts his net sales (Riyanto, 1995). This variable is taken from previous research by Juliana and Sulardi (2003).

NPM can be formulated as follows (Ang, 1997).

NPM =

## 6) Gross Profit Margin (GPM)

GPM is one of the ratios which indicate the level of refund for gross profit against net sales (Ang, 1997). This variable is taken based on the previous research by Juliana and Sulardi (2003).

GPM can be formulated as follows (Ang, 1997)

GPM = \_\_\_\_\_

Table 3.1

Operational Definition

No	Variable	Definition	Scale	Formulation	Literature
1	Working Capital to Total Assets	comparison between current assets reduced by current liabilities to total assets	Ratio		Riyanto,1995
2	Current Liabilities to Inventory	comparison between the current liabilities of the inventory.	Ratio	_	Machfoedz, 1994
3	Operating Income to Total Liability	comparison between the operating profit before interest and tax (reductions result from net sales minus the cost of goods sold and operating expenses) to the total liabilities	Ratio		Riyanto, 1995
4	Total Asset Turnover	comparison between the net sales by the number of assets	Ratio	_	Ang, 1997
5	Net Profit Margin	comparison between the net profit after tax on total sales.	Ratio		Ang, 1997
6	Gross Profit Margin	comparison between the gross profit on net sales.	Ratio	_	Ang, 1997

## NOTES:

CA: Current Assets, CL: Current Liabilities, TA: Total Assets, I: Inventory

OPBIT : Operating Profit before Interest and Taxes, L : Liabilities NS: Net Sales, NPAT: Net Profit After Tax, GP: Gross Profit

#### 3.3 Population and Sample

#### 3.3.1 Population

The population used for this research is the entire manufacturing company listed in IDX since 2008 to 2012 which includes 123 manufacturing companies. Based on previous research which the researches analyze the financial ratio at a manufacturing company listed on the IDX in generally. In previous researches used the pre-2008 period, while this study used the time period from 2008 -2012, more updates in the years of observation. In this research choosing the manufacturing company because the manufacturing company as the number of public companies that are included in the manufacturing sector looks to dominate listed in IDX.

#### 3.3.2 Samples

The selection of the sample was determined by *purposive sampling* with purpose to get a representative sample in accordance with the specified criteria. The criteria to be selected into the sample are:

- Manufacturing companies registered in IDX during the research period (2008 to 2012).
- 2. Manufacturing company which published the financial statements during the research period (2008 to 2012).
- 3. Company does not produce negative profits during the period 2008 to 2012.

#### 3.4 Data

## 3.4.1 Types and Sources of Data

Type of data used in this research is quantitative data, if a series of observations (measurements) can be expressed in numerical values, so the collection of numerical values itself on the observation called quantitative data (Lincolin Arsyad, 1997). The sources of data from secondary data that is in the form of annual financial statements of listed manufacturing companies in IDX with year-end bookkeeping on December 31 2008, 2009, 2010, 2011 and 2012. The data source can be obtained from the Indonesian Capital Market Directory (ICMD) and IDX official website.

## 3.4.2 Methods of collecting Data

The Data in this study were obtained by using the method of documentation i.e. data collection by way of collecting secondary data from the financial statements that have been published on the IDX. The financial statements of companies listed in ICMD 2008, ICMD 2009, ICMD 2010, ICMD 2011, ICMD 2012 and also from official website of IDX.

#### 3.5 Classic Assumption Test

#### 3.5.1 Normality Test

Normality test is to testing whether in regression model, the dependent variable and the independent variable has a normal distribution or not. Good of regression Model has a normal distribution of the data or close to normal. To detect the normality can be done with statistical tests. Statistic Tests used include: analysis of the histogram graph, *normal probability plots* and *Kolmogorov* 

Smirnov test (Ghozali, 2005). This normality test can be done through graph analysis and statistical analysis.

## 1. Graph analysis

One of the easiest ways to see residual normality is by looking at the histogram graph that compares between the observation data with the normal approach to the distribution. However, just by looking at the histogram, it can be confusing, especially for a small number of samples. Another method that can be used is to look at *normal probability plot* that compares the cumulative distribution from normal distribution. The basis of decision-making analysis from normal probability plot is as follows:

- a. If the data is spread around the diagonal line and follow the direction of a diagonal line indicates the pattern of a normal distribution, so regression models meet the assumption of normality.
- b. If the data spread away from the diagonal line and or do not follow the direction of a diagonal line pattern does not show a normal distribution, regression model does not fulfill the assumption of normality.

#### 2. Statistical Analysis

To detect the normality of data can be done through statistical analysis which can be seen through the Kolmogorov-Smirnov test (K-S).

Basic of decision making in the K-S test is as follows:

- a. If the probability of value Z the K-S test statistically significant so Ho is rejected, which means a distributed data is not normally.
- b. If the probability of value Z the K-S test was not significant statistically so Ho accepted, which means that the data is distributed normally.

Guidelines for decision making are as follows:

- a) Value sig. or significance or probability value < 0.05 distribution is not normal.
- b) The value of sign. Or significance or probability value > 0.05 distribution is normal.

#### 3.5.2 Multicollinearity Test

According to Ghozali (2005), this test is used to determine whether there is a correlation between independent variables in the regression model. A good regression model should not have correlation between independent variables. If there is a correlation between independent variables, these variables are not orthogonal. Orthogonal variable is the independent variable that value of a correlation between fellow independent variables is zero. To detect there is or no multicollinearity in regression models can be seen from the *tolerance value* or the *variance inflation factor* (VIF). See as the basis it can be concluded:

- If the tolerance value > 0.1 VIF value < 10, it can be concluded that there is no multicollinearity between independent variables in the regression model.
- 2. If the tolerance value < 0,1 VIF value > 10, it can be concluded that there is multicollinearity among the independent variables in the regression model.

#### 3.5.3 Autocorrelation Test

Autocorrelation test aimed to test whether linear regression model has correlation between fault disturber in the t period with fault disturber in the period t-1 (earlier). If there is a correlation, so there is a problem of autocorrelation. Autocorrelation arises due to successive observation at all times in relation to another. This problem occurs because the residual (fault disturber) is not free from one observation to another observation, usually found in time series data. The consequences of the presence of autocorrelation in regression model is a *variance sample* can't describe the population variance, so the result of regression model can't be used to estimate the value of dependent variable in value of certain independent (Ghozali, 2005)

To detect autocorrelation, statistical tests can be done through test Durbin-Watson (DW test) (Algifari, 2000). The basic decision can be there is or no autocorrelation is:

Table 3.2
Autocorrelation

INTERVAL	DECISION			
< 1	There is autocorrelation			
1,1 – 1,54	Without conclusion			
1,55 – 2,46	There is no autocorrelation			
2,46 – 2,9	Without conclusion			
> 2,9	There is autocorrelation			

Source: Algifari (2000)

#### 3.5.4 Heterocedasticity Test

This test aims to test whether the regression model occured inequality variance from residual one observation to other observation. If the residual variance from one observation to another observation remains, it is called Homocedasticity and if different called Heterocedasticity. Good of regression Model is homocedasticity or heterocedasticity does not occur. To detect the presence of heterocedasticity is done by looking at the plot graph between the value prediction variable (ZPRED) and the residual (SRESID). The basis of analysis:

- If there is a particular pattern, such as points that form a specific pattern, a regular (wavy, widened, then narrowed), indicates there has been a heterocedasticity.
- 2. If there is no specific pattern and also the points spread above and below zero on the Y axis, then it doesn't occured heterocedasticity, and indicates there has been a heterocedasticity. Analysis with plots graph has significant weaknesses because of the number of observation affects the result of ploting. Fewer the number of observations, will more difficult to interpret the results of plot graph.

#### 3.6 Analysis Techniques

The study uses Multiple Regression Analysis. Multiple linear regression analysis was used to examine the influence of financial ratios to profit growth.

The Model in this research are:

$$Y_t = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

Where :  $Y_t$  = Profit Growth

a = Constant coefficient

b = Regression coefficient of each variable

 $X_1 = WCTA$ 

 $X_2 = CLI$ 

 $X_3 = OITL$ 

 $X_4 = TAT$ 

 $X_5 = NPM$ 

 $X_6 = GPM$ 

e = Error Coefficient (disturbing variable)

## 3.7 Hypothesis Testing

After doing normality test and the classical assumptions test, the next step is doing the testing of 1st hypothesis ( $H_1$ ) up to the 6th hypothesis ( $H_6$ ). Test of significance is a procedure where the results of the sample used to test the truth of a hypothesis (Gujarati, 1999). Analysis tools use t-test and Coefficients determinantion ( $H_2$ ). Statistical calculation called statistically significant if the test values the statistics are in critical areas (area where  $H_0$  is rejected). Instead, it is called not significant value when the statistic tests are in the area where the  $H_0$  is accepted.

## 3.7.1 Coefficient Determination (R<sub>2</sub>)

Coefficient of determination  $(R_2)$  essentially measures how much the ability of the model explains dependent variables. The small value of  $R_2$  means

the ability of independent variables in explaining the dependent variable, is limited. Instead, the value of  $R_2$  that approximates the one signifying the independent variables provide almost all of the information required by the dependent variable (Ghozali, 2005). The value used is the adjusted  $R_2$  because independent variables used in this study more than two pieces.

#### 3.7.2 F Test Statistic

F statistical test basically shows whether all the independent variables were entered independently or jointly influence on the dependent variable or bound (Ghozali, 2006).

How to test F are as follows:

- 1. Comparing the results chance to make mistake (level of significance) appears, with the advent of the incidence rate of chance (probability) that was set at 5% or 0.05 on the output, to make a decision to reject or accept the null hypothesis (Ho):
  - a. If the significance of> 0.05 then the decision is to accept Ho and reject Ha
  - b. If the significance of <0.05 then the decision is to reject Ho and accept Ha
- 2. Comparing the value of the F statistic is calculated with F statistics value table:
  - a. If the value of the F test <F table, then Ho is accepted
  - b. If the statistical value of F test > F table, then Ho is rejected

F-test formula is (Priyatno, 2008):

$$=\frac{1}{(1- )} (1- )$$

Where:

= squared multiple correlation coefficient

n = Total sample

k = Total independent variable

#### 3.7.3 T test Statistic

T statistical test basically shows how far the influence of the explanatory variables / independent individual in explaining the variation in the dependent variable (Ghozali, 2006). How to perform a t-test is as follows:

- 1. Comparing the results much chance it false (level of significance) appears, with the advent of the incidence rate of chance (probability) that was set at 5% or 0.05 on the output, to make a decision to reject or accept the null hypothesis (Ho):
  - a. If the significance of > 0.05 then the decision is to accept Ho and reject Ha
  - b. If the significance of < 0.05 then the decision is to reject Ho and accept Ha

- 2. Comparing the value of t statistics calculated by the value of t statistics table:
  - a. If the statistical value t test < t table, then Ho is accepted
  - b. If the statistical value t test > t table, then Ho is rejectedT test formula is (Priyatno, 2008):

$$to = \frac{b}{Sb}$$

Where:

To = t arithmetic

Bi = coefficient regression

Sbi = standar error

#### **CHAPTER IV**

## **RESULTS AND DISCUSSION**

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# 4.1. General Overview and Descriptive Data of Research Object

## 4.1.1. Research Object Overview

As the sampling criteria, this research used a sample of manufacturing companies during the period 2008 to 2012 issuing a annual financial report with positive profit information. Obtained 10 companies sampled which is then used as a source of data for analysis. The sample selection process is presented in Table 4.1 below.

Table 4.1
Selection Sample

Criteria	Total
Companies listed on IDX during the year 2008 to 2012	123
Companies that do not have complete annual financial	
statements	(64)
Subtotal	59
Companies that have negative profit during 2008 to 2012	(49)
Total Sample	10

Source : ICMD 2008-2012

Based on Table above companies that do not have complete annual financial statements as many as 64. AQUA company as example, in a 2008 reported financial statements then in 2009 did not report financial statements but in 2010 reported financial statements. Companies that have negative profit during 2008 to 2012 as many as 49 companies.

### 4.1.2 Descriptive Data

This research uses the data in the form of pooled cross sectional. The research was conducted in 2008 to 2012 with a sample of 10 manufacturing companies, it is a pooled cross-sectional obtained a number of 10 companies x 5 years = 50 observations. Independent variables used in this study is WCTA, CLI, OITL, TAT, NPM and GPM, while the dependent variable is profit growth. Data for variables WCTA, CLI, OITL, TAT, NPM, GPM and profit growth obtained through calculations based on annual financial report prepared obtained from IDX.

Descriptive statistics to be discussed include: the number of data (N), the sample average (mean), maximum value, minimum value, and standard deviation ( $\delta$ ) for each variable, as shown in Table 4.2

Table 4.2 Description of Research variables beginning observations  $(n{=}50)$  Descriptive Statistics

	N	Minimum	Maximum Mean		Minimum Maximum Mean Std. Dev		Std. Deviation
PG	50	2.14	1566.20	74.7412	227.43664		
WCTA	50	-20.85	297.80	28.0708	43.12425		
CLI	50	50.60	1055.00	250.0660	223.16015		
OITL	50	2.90	135.59	36.0674	33.24446		
TAT	50	47.60	812.00	185.3884	153.78779		
NPM	50	.28	63.14	9.1742	9.45891		
GPM	50	1.40	67.38	29.1242	18.00676		
Valid N	50						
(listwise)							

Source: SPSS 19

Based on calculations in Table 4.2, it appears that from the 10 companies with 50 observations, the mean profit growth during the observation period (2008 to 2012) of 74.7412 with  $\delta$  at 227.43664; whereby these results indicate that the value of  $\delta$  > mean profit growth, as well as the minimum value that is smaller than the mean (2.14) and the maximum value is greater than the mean (1566.20).

This suggests that profit growth variable indicates unfavorable outcome, because  $\delta$  which reflects the deviation of the variable data is quite high as greater than the mean. Similar results were above six independent variables, namely WCTA, CLI, OITL, TAT, NPM and GPM. WCTA average during the observation period 2008 to 2012 was 28.0708 with  $\delta$  = 43.12425; CLI mean of 250.0660 with  $\delta$  = 223.16015; OITL mean of 36.0674 with  $\delta$  = 33.24446; mean TAT was 185.3884 with  $\delta$  = 153.78779; NPM mean of -9.1742 with  $\delta$  = 9.45891, and 29.1242 for GPM mean with  $\delta$  = 18.00676.

## 4.2. Classic Assumption Test

Classic Assumption test is used to test, whether the regression model used in this research were tested or not feasible. Classical assumption test is used to ensure that multicollinearity, autocorrelation, and heteroscedasticity are not included in the model used and the resulting data were normally distributed. If the overall requirements are met, means that the model had decent analysis used (Gujarati, 1999). Deviance test classic assumptions, can be described as follows.

## 4.2.1. Normality Test

This test aims to determine whether or not the data were normally distributed were performed using linear regression analysis. Good regression models is the distribution of each data normal or near-normal variables. Test for normality test is done by Kolmogorov - Smirnov test performed on the data model of the regression residuals. The total sample test data is presented in Table 4.3 below

Table 4.3

Result of Normality Test (Beginning Data)

(n=50)

One-Sample Kolmogorov-Smirnov Test

		PG	WCTA	CLI	OITL	TAT	NPM	GPM
N		50	50	50	50	50	50	50
Normal	Mean	74.7412	28.0708	250.0660	36.0674	185.3884	9.1742	29.1242
Parameters <sup>a</sup>	Std.	227.43664	43.12425	223.16015	33.24446	153.78779	9.45891	18.00676
,b	Deviation							
Most	Absolute	.375	.271	.186	.235	.259	.174	.137
Extreme	Positive	.369	.271	.172	.235	.259	.170	.137
Differences	Negative	375	165	186	159	185	174	074
Kolmogorov-	Smirnov Z	2.650	1.920	1.313	1.660	1.830	1.227	.971
Asymp. Sig.	(2-tailed)	.000	.001	.064	.008	.002	.098	.303

- a. Test distribution is Normal.
- b. Calculated from data.

Source: SPSS 19

Normality test results on the testing of the 50 preliminary data showed that all the variables have not shown as a normal model shown with sig Z <0.05. For the improvement of data need to be done by eliminating outlier data (data that is too extreme), with eliminating outlier data the variables like WCTA, CLI, NPM, GPM and also Profit Growth can be improved so after eliminating outlier data the final data obtained by 31 data and testing is carried again. The results of testing 31, the data presented in Table 4.4.

Table 4.4

Normality Test (Data without outlier)
(n=31)

One-Sample Kolmogorov-Smirnov Test

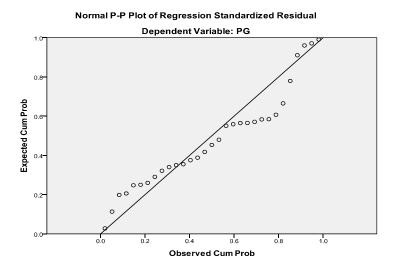
		PG	WCTA	CLI	OITL	TAT	NPM	GPM
N		31	31	31	31	31	31	31
Normal	Mean	29.3845	24.6732	183.1177	34.9458	132.6290	9.2642	35.3952
Parameters <sup>a,b</sup>	Std.	28.58992	19.06209	124.90375	22.12829	56.35185	4.42236	16.32708
	Deviation							
Most	Absolute	.222	.078	.205	.242	.233	.099	.150
Extreme	Positive	.222	.078	.205	.242	.233	.084	.150
Differences	Negative	175	078	144	123	116	099	120
Kolmogorov-Smirnov Z		1.238	.434	1.142	1.345	1.295	.552	.837
Asymp. Sig. (2-tailed)		.093	.992	.147	.054	.070	.920	.485

- a. Test distribution is Normal.
- b. Calculated from data.

Souce: SPSS 19

The results of normality test which not include outliers shows that all the variables are shown with normal reach sig Z > 0.05 on the observed number of 31 data. Determination of a normally distributed variable or not can also be viewed through the normal probability plot of the distribution of the points should be not far variability around the line Y = X and histogram which forms a normal curve (normal curve). The graph plots the study shown in Figure 4.1 below.

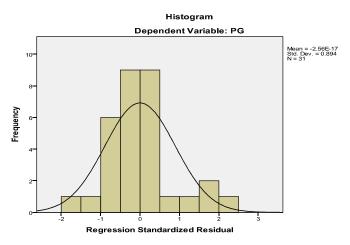
Figure 4.1 Graphic Plot



Source: The research data were analyzed using SPSS 19

From Figure 4.1, it is seen that the points are variable around the line Y = X or spread around the diagonal line and its distribution following the direction of the diagonal line, this indicates that the data was normally distributed. While this research histogram shown in Figure 4.2 below.

Figure 4.2 Histogram plot



Source: The research data were analyzed using SPSS 19

From Figure 4.2, it is seen that the histogram chart gives a close to normal distribution patterns.

## **4.2.2** Multicollinearity Test

Multicollinearity test is intended to determine whether there is a perfect intercorrelations between the independent variables used in this research. This test is performed with Tolerance Value and Variance Inflation Factor (VIF). To avoid multicollinearity, Tolerance limit Value> 0.1 and VIF <10. The multicollinearity test results in this research can be seen in Table 4.5.

Table 4.5

Multicollinearity Test Result

Coefficients<sup>a</sup>

		dardized cients	Standardized Coefficients			Colline Statis	· ·	
Model		В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	95.130	30.975		3.071	.005		
	WCTA	542	.386	361	-1.403	.173	.470	2.129
	CLI	064	.056	277	-1.133	.269	.518	1.930
	OITL	.524	.351	.405	1.493	.149	.422	2.372
	TAT	069	.118	135	582	.566	.577	1.733
	NPM	-2.576	1.527	399	-1.688	.104	.558	1.793
	GPM	737	.337	421	-2.189	.039	.840	1.190

a. Dependent Variable: PG

Source: SPSS 19

Based on Table 4.5, the tolerance values > 0.1 and VIF < 10, so it can be concluded that all six independent variables was no multicollinearity correlation and can be used to influence the profit growth during the observation period.

#### 4.2.3 Autocorrelation Test

Autocorrelation indicates a correlation between the disturber error in period t with error in period t-1. Consequently, the variation of the sample can't describe population variation. Further consequence, the resulting regression model can't be used to assess the value of the dependent variable from its independent variable. To find out the availability of autocorrelation in a regression model, performed Durbin-Watson test (DW) under the conditions presented in Table 4.6 as follows (Algifari, 2000).

Table 4.6
Autocorrelation

INTERVAL	DECISION			
	-			
< 1	There is autocorrelation			
1,1 – 1,54	Without conclusion			
1,55 – 2,46	There is no autocorrelation			
2,46 – 2,9	Without conclusion			
> 2,9	There is autocorrelation			

Source: Algifari (2000)

On the this research data, a score of DW is 2,367 as shown in Table 4.7.

Table 4.7
Autocorrelation Test Result
Model Summary<sup>b</sup>

-		R		Std. Error of the	
Model	R	Square	Adjusted R Square	Estimate	Durbin-Watson
1	.503 <sup>a</sup>	.253	.067	27.61767	2.367

a. Predictors: (Constant), GPM, TAT, CLI, NPM, WCTA, OITL

b. Dependent Variable: PG

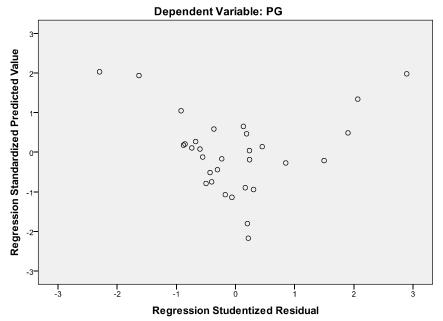
Source: SPSS 19

Based on calculations using SPSS 19 in Table 4.7 DW value is between 1.55 to 2.46, so it can be concluded that there is no autocorrelation in the regression equation in this research.

## 4.2.4 Heterocedasticity test

This test aims to test whether there is inequality variance and the residual of the observation to other observations in the regression model. Models of good research is homocedastisity, is the variance and residual one observation to other observation results remain. There are several ways to detect the presence heterocedasticity that shows that research model is less feasible. In this research used point diagram (scatter plot) that should the dots randomly distributed so that there are no heterocedasticity. The results of heterocedasticity test in this study are presented in Figure 4.3 below.

Figure 4.3
Scatter Plot Diagram
Scatterplot



Source: The research data were analyzed using SPSS 19

By looking at the scatterplot graphs, dots randomly spread, and spread both above and below the 0 on the y-axis it can be concluded that there are no symptoms of heteroscedasticity in regression models were used.

# 4.3 Multiple Regression Analysis

From the classic assumption test can be concluded that the existing data are normally distributed, there is no multicollinearity and heterocedasticity so compliant to perform multiple regression analysis. Hypothesis testing using the coefficient of determination  $(R^2)$ , F test and T test.

# 4.3.1 Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) was essentially measure how far the ability of the model in explaining the dependent variable. Small value of R<sup>2</sup> which means the ability of the independent variables in explaining the dependent variable is limited. In contrast, the value of R<sup>2</sup> close to unity indicates the independent variables provide almost all the information required by the dependent variable (Ghozali, 2005). The value used is the adjusted R<sup>2</sup> for the independent variables used in this study is more than two pieces. The adjusted R<sup>2</sup> value of the calculation using SPSS 19 is shown in Table 4.8.

Table 4.8

R<sup>2</sup> Value

Model Summary<sup>b</sup>

				Std. Error of the
Model	R	R Square	Adjusted R Square	Estimate
1	.503 <sup>a</sup>	.253	.067	27.61767

Source: SPSS 19

From the calculation results of the influence of the independent variable on the dependent variable that can be explained by the model of this equation is equal to 6.7% and the rest equal 93.3% is influenced by other factors that are not included in the regression model.

### 4.3.2 F test Statistic

This test is intended to determine the effect of independent variables and dependent variable together (simultaneously). Based on regression analysis results can be seen that six independent variables in together significant effect on earnings growth. It can proof of the value of F smaller size of 0.001 significance level that is as large as 0.05 as shown in table 4.9 as follows:

Table 4.9
F test Regression Result
ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6215.852	6	1035.975	1.358	.001 <sup>a</sup>
	Residual	18305.655	24	762.736		
	Total	24521.507	30			•

a. Predictors: (Constant), GPM, TAT, CLI, NPM, WCTA, OITL

b. Dependent Variable: PG Source: SPSS 19

#### 4.3.3 t Test Statistic

This test aims to determine whether or not the influence of the independent variable on the dependent variable (partially) with regard to other independent variables constant. The test is performed by comparing the significance value indicated by Sig t of t in Table 4.10 with a significance level taken, in this case 0.05. If the Sig value of t <0.05 then the independent variables affect the dependent variable.

Table 4.10
t Test Regression Result
Coefficients<sup>a</sup>

		Unstandardized		Standardized		•
		Coefficients		Coefficients		
Model		В	Std. Error	Beta	Т	Sig.
1	(Constant)	95.130	30.975		3.071	.005
	WCTA	542	.386	361	-1.403	.173
	CLI	064	.056	277	-1.133	.269
	OITL	.524	.351	.405	1.493	.149
	TAT	069	.118	135	582	.566
	NPM	-2.576	1.527	399	-1.688	.104
	GPM	737	.337	421	-2.189	.039

Source: SPSS 19

So based on Analysis technique which the formula is:

$$Y_t = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

We can make the profit growth formula as follows:

$$\Delta$$
 PROFIT = 95,130 - 0,542 WCTA - 0,064 CLI + 0,524 OITL

$$-0,069 \text{ TAT} - 2,576 \text{ NPM} - 0,737 \text{ GPM} + e$$

Based on calculations using SPSS 19, it can be seen that only one independent variable is the variable GPM which significantly affect the dependent variable is profit growth, with a significance level of 0.039 while the variable WCTA, CLI, OITL, TAT, NPM has no significant effect on profit growth. This is because the value for the variable t sig WCTA, CLI, OITL, TAT and NPM respectively 0.173; 0.269; 0.149; 0.566; and 0.104, which means greater than the significance level of 0.05.

#### **4.4 Hyphotesis Testing**

## 4.4.1 Hyphotesis 1 (H1)

The first hypothesis proposed in this research is the ratio of Working Capital to Total Assets (WCTA) positive effect on profit growth. From these results obtained regression coefficients for variables WCTA of -0.542 with a significance value of 0.173, where the value is not significant at the 0.05 level because of greater than 0.05. Thus the first hypothesis which states that the ratio WCTA has a positive influence on the growth of profit is not acceptable.

Based on empirical data exist and the results of research are obtained, indicating that the proportion of the rise and fall variables WCTA which is the ratio between working capital (ie current assets less current liabilities) to total assets does not affect profit growth. These results same with the results of research conducted by Mahfoedz (1994) and Suwarno (2004) which states that the variable WCTA no effect on profit growth in manufacturing companies.

## 4.4.2 Hyphotesis 2 (H2)

The second hypothesis proposed in this research is the ratio of Current Liabilities to Inventory (CLI) negative effect on profit growth. From these results obtained for the regression coefficient of -0.064 CLI variables with a significance value of 0.269, where the value is not significant at the 0.05 level because of greater than 0.05. Thus the second hypothesis which states that the ratio of CLI has a negative effect on earnings growth can not be accepted.

Based on existing empirical data and results obtained from, this indicates that the rise and fall of the CLI does not affect the magnitude of the ratio of earnings growth. These results same with the results of research conducted by Takarini and Ekawati (2003) which states that the CLI variable does not affect the company's profit growth in manufacturing.

#### 4.4.3 Hyphotesis 3 (H3)

The third hypothesis proposed in this research is the ratio of Operating Income to Total Liablities (OITL) positive effect on earnings growth. From these results obtained for the regression coefficient of 0.524 OITL variables with a significance value of 0.149, where the value is not significant at the 0.05 level

because of greater than 0.05. Thus the third hypothesis which states that the ratio OITL have a positive effect on profit growth can not be accepted.

Based on existing empirical data and results obtained from, indicating that the rise and fall OITL will not affect the magnitude of profit growth. These results same with the results of research conducted by Takarini and Ekawati (2003) and Suwarno (2004) which states that the variable OITL does not effect on profit growth in manufacturing companies.

## 4.4.4 Hyphotesis 4 (H4)

The fourth hypothesis proposed in this research is the ratio of TAT positive effect on earnings growth. The results were obtained for the regression coefficient of -0.069 TAT variables with a significance value of 0.566, where the value is not significant at the 0.05 level because of greater than 0.05. Thus the fourth hypothesis which states that the ratio of TAT has a positive effect on earnings growth can not be accepted.

Based on empirical data exist and the results of research are obtained, indicating that the proportion of the rise and fall variables TAT does not effect profit growth, these results support the results of Juliana and Sulardi (2003) and Meythi (2005) which stated that the TAT had no significant effect on profit growth.

### 4.4.5 Hyphotesis 5 (H5)

The fifth hypothesis proposed in this research is the ratio of NPM positive effect on profit growth. The results were obtained for the regression coefficient of -2.576 NPM variables with a significance value of 0.104, where the value is not significant at the 0.05 level because of greater than 0.05. Thus the fifth hypothesis which states that the ratio of NPM has a positive effect on earnings growth can not be accepted. These results same with the results of research conducted by Takarini and Ekawati (2003), Usman (2003), Juliana and Sulardi (2003) and Meythi (2005) which states that the variable of NPM had no effect on profit growth.

### 4.4.6 Hyphotesis 6 (H6)

Sixth hypothesis proposed in this research is the ratio GPM positive effect on earnings growth. The results were obtained for the regression coefficient of -0.737 GPM variables with a significance value of 0.039, where the value is significant at the 0.05 level because of less than 0.05. Thus the sixth hypothesis which states that the ratio of GPM has a positive effect on profit growth is acceptable. These results same with the results of research conducted by Juliana and Sulardi (2003) which states that the GPM variable has significant effect on profit growth

#### 4.5 Discussion

The higher of the WCTA showed the greater working capital acquired the company than the total of its assets. With a large working capital, the company's operations to be clear so that earned income is increasing and this resulted in

profits gained on the rise. Based on these results obtained regression coefficients for variables WCTA of -0.542 with a significance value of 0.173, where the value is not significant at the 0.05 level because of greater than 0.05. The ratio of WCTA ha no significant effect on profit growth. These results support with the research by Mahfoedz (1994) and Suwarno (2004) that shows WCTA has no significant influence on profit growth.

The ratio of Current Liabilities to Inventory (CLI) has negative effect on profit growth. From these results obtained for the regression coefficient of -0.064 CLI variables with a significance value of 0.269, where the value is not significant at the 0.05 level because of greater than 0.05. A high CLI shows the high dependence of the company on supplier or the amount of short-term debt of the company to finance its inventory. This can lead to considerable risks for the company when the company is unable to pay the liabilities at maturity, so that it will interfere with the continuity of operations of the company. In addition, the company will be faced with high interest charges so as to lower the company's earnings. This results consistent with the research by Takarini and Ekawati (2003) which states that the CLI variable does not affect the company's profit growth in manufacturing.

OITL is the ratio between operating profit before interest and taxes to total debt. The larger the OITL, pointed out that the revenue generated from sales activities than the total debt, meaning that the companies is able to pay their debt. Thus the continuity of the company's operations will not be disrupted, so that earned income be increased and profits obtained huge. These results obtained for the regression coefficient of 0.524 OITL with a significance value of 0.149, where

the value is not significant at the 0.05 level because of greater than 0.05. These results support with the research conducted by Takarini and Ekawati (2003) and Suwarno (2004) which states that the OITL does not effect on profit growth in manufacturing companies.

The larger the TAT shows increasingly efficient use of all the company's assets to support sales activities. This shows that the better the performance of the company, thus investors keen to invest its capital, so that it can increase the profits of the company. The result of ratio of TAT were obtained for the regression coefficient of -0.069 TAT variables with a significance value of 0.566, where the value is not significant at the 0.05 level because of greater than 0.05. These results support the results of the research Juliana and Sulardi (2003) and Meythi (2005) which stated that the TAT had no significant effect on profit growth.

NPM is a comparison between the net profit after taxes of net sales. This ratio measures the company's ability to generate revenue to achieved net sales company. The higher the NPM shows that increasing net profit achieved the company against net sales. Increasing NPM will improve the attraction of investors to invest its capital, so that the company's earnings will increase. The results from this research were obtained for the regression coefficient of -2.576 NPM variables with a significance value of 0.104, where the value is not significant at the 0.05 level because of greater than 0.05. These results same with the results of research conducted by Takarini and Ekawati (2003), Usman (2003), Juliana and Sulardi (2003) and Meythi (2005) which states that the variable of NPM had no effect on profit growth.

GPM is the ratio between the gross profit of net sales. GPM which increase shows the greater the level of refund for gross profits that accrue to the company against net sales. This means the more efficiently costs the company incurred to support sales activities so that the earned income be increased. In this research is the ratio GPM positive effect on earnings growth. The results were obtained for the regression coefficient of -0.737 GPM variables with a significance value of 0.039, where the value is significant at the 0.05 level because of less than 0.05. The ratio of GPM has a positive effect on profit growth is acceptable. These results same with the results of research conducted by Juliana and Sulardi (2003) which states that the GPM variable has significant effect on profit growth.

#### **CHAPTER V**

#### **CONCLUSIONS**

#### **5.1 Conclusion**

Based on the analysis of data and discussion that has been done, we can conclude the following.

- 1) Of the six variables (ie WCTA, CLI, OITL, TAT, NPM and GPM) that allegedly effect on profit growth, only one variable is significant and positive effect on profit growth, that is GPM while the other five variables, namely WCTA, CLI,
  - OITL, TAT, and NPM do not significantly affect profit growth.
- 2) From the results of the F test, proved that the significance F value is smaller than the value predetermined significance, ie 0.05. This means that all independent variables in this study together ( simultaneously) significant effect on profits growth as a variable dependent.
- 3) All of the independent variables in this study are only accounted for 6.7% of all independent variables as shown in the adjusted R2 value. Means there are still 93,3% other independent variables which are not known and studied scientifically, affect profit growth. Because this research only pay attention to the company's fundamentals without regard to macroeconomic conditions that might affect profit growth.

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### 5.2 Implication of The Research

Result of this research stated that GPM has significant effect on the growth of company profits. From GPM, management can empower its assets properly and optimally. Management should also be able to reduce the cost of production to the maximum, so that the large profits and profit growth will increase. Future research is expected to increase the time span of the research. So the results will be more accurate. Adding factors such as the macro economy: inflation, economic growth, government policies and political conditions of the country's economy.

#### **5.3** Limitations of Research

The results showed little effect of the independent variables affect the dependent variable, which only amounted to 6.7% and the remaining 93.3% is influenced by other factors that are not included in the regression model, including macroeconomic factors.

In this research, there are limitations that can hamper results of research consistent with the hypothesis proposed by researchers. The limitations are:

- 1. The relatively small sample size of 10 companies of 123 Manufacturing companies listed on the IDX. A relative short period of observation, this study only uses as much as 5 year time span that is 2008-2012.
- 2. There are limitations in analyzing the hypothesis, because of the weaknesses of the assumptions used. In the proposed hypothesis that WCTA, OITL, TAT, NPM and GPM positive significant effect on Profit Growth and CLI negative effect on Profit Growth but the results of the study stated that WCTA,

CLI, OITL, TAT and NPM negative effect on Profit Growth and GPM significant and positive effect on Profit Growth.

### **5.4 Suggestion**

Other factors that influence the change in profit growth should receive attention before making an investment decision. So it is not only financial ratios such as WCTA, CLI, OITL, TAT, NPM and GPM but can also use other ratios that can affect changes on profit growth in manufacturing company.

For further research is not only limited to manufacturing firms but rather to specific companies or groupings such as real estate, food and beverage, construction, etc for the results obtained will be more accurate and efficiently.

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### **APPENDIXES**

**APPENDIX I** 

#### **REGRESSION**

**KOLMOGOROV BEGINNING (n=50)** 

One-Sample Kolmogorov-Smirnov Test

		PG	WCTA	CLI	OITL	TAT	NPM	GPM
N		50	50	50	50	50	50	50
Normal	Mean	74.7412	28.0708	250.0660	36.0674	185.3884	9.1742	29.1242
Parameters <sup>a</sup>	Std.	227.4366	43.1242	223.1601	33.2444	153.7877	9.4589	18.0067
,b	Deviatio	4	5	5	6	9	1	6
	n							
Most	Absolut	.375	.271	.186	.235	.259	.174	.137
Extreme	е							
Differences	Positive	.369	.271	.172	.235	.259	.170	.137
	Negativ	375	165	186	159	185	174	074
	е							
Kolmogorov-Smirnov		2.650	1.920	1.313	1.660	1.830	1.227	.971
Z								
Asymp. Sig.	(2-tailed)	.000	.001	.064	.008	.002	.098	.303

- a. Test distribution is Normal.
- b. Calculated from data.

# Descriptive statistics

**Descriptive Statistics** 

		Boodilpare			
	N	Minimum	Maximum	Mean	Std. Deviation
PG	50	2.14	1566.20	74.7412	227.43664
WCTA	50	-20.85	297.80	28.0708	43.12425
CLI	50	50.60	1055.00	250.0660	223.16015
OITL	50	2.90	135.59	36.0674	33.24446
TAT	50	47.60	812.00	185.3884	153.78779
NPM	50	.28	63.14	9.1742	9.45891
GPM	50	1.40	67.38	29.1242	18.00676
Valid N (listwise)	50				

## KOLMOGOROV AFTER ELIMINATING (n=31)

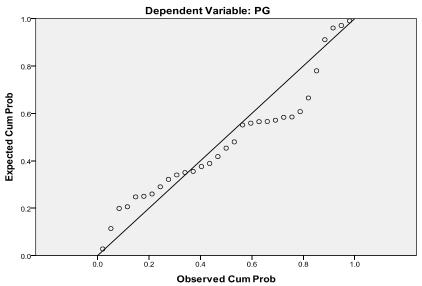
**One-Sample Kolmogorov-Smirnov Test** 

		PG	WCTA	CLI	OITL	TAT	NPM	GPM
N		31	31	31	31	31	31	31
Normal	Mean	29.384	24.6732	183.1177	34.9458	132.629	9.2642	35.3952
Parameters <sup>a</sup>		5				0		
b	Std.	28.589	19.0620	124.9037	22.1282	56.3518	4.42236	16.3270
	Deviation	92	9	5	9	5		8
Most	Absolute	.222	.078	.205	.242	.233	.099	.150
Extreme	Positive	.222	.078	.205	.242	.233	.084	.150
Differences	Negative	175	078	144	123	116	099	120
Kolmogorov-Smirnov Z		1.238	.434	1.142	1.345	1.295	.552	.837
Asymp. Sig.	(2-tailed)	.093	.992	.147	.054	.070	.920	.485

- a. Test distribution is Normal.
- b. Calculated from data.

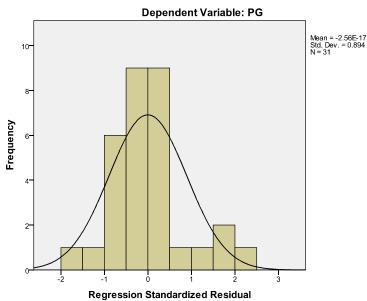
# Graphic plot

Normal P-P Plot of Regression Standardized Residual



## Histogram plot





# Multicollinearity test

# Coefficients<sup>a</sup>

Unstand Coeffic			Standardized Coefficients			Colline Statis	,	
Model		В	Std. Error	Beta	Т	Sig.	Tolerance	VIF
1	(Constant)	95.130	30.975		3.071	.005		
	WCTA	542	.386	361	-1.403	.173	.470	2.129
	CLI	064	.056	277	-1.133	.269	.518	1.930
	OITL	.524	.351	.405	1.493	.149	.422	2.372
	TAT	069	.118	135	582	.566	.577	1.733
	NPM	-2.576	1.527	399	-1.688	.104	.558	1.793
	GPM	737	.337	421	-2.189	.039	.840	1.190

a. Dependent Variable: PG

#### Autocorrelation test

Model Summary<sup>b</sup>

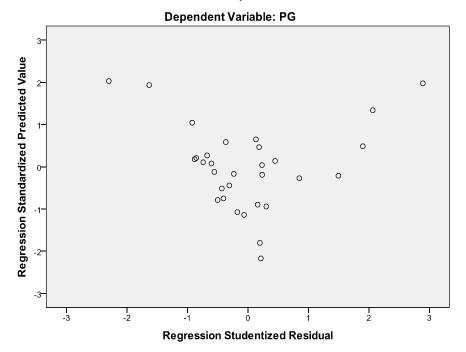
-		R	Adjusted R		
Model	R	Square	Square	Std. Error of the Estimate	Durbin-Watson
1	.503ª	.253	.067	27.61767	2.367

a. Predictors: (Constant), GPM, TAT, CLI, NPM, WCTA, OITL

b. Dependent Variable: PG

# Heteroscedasticity

Scatterplot



## R square test

Model Summary<sup>b</sup>

				Std. Error of the
Model	R	R Square	Adjusted R Square	Estimate
1	.503 <sup>a</sup>	.253	.067	27.61767

### F test

# $ANOVA^b$

Model	l	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6215.852	6	1035.975	1.358	.001 <sup>a</sup>
	Residual	18305.655	24	762.736		
	Total	24521.507	30			

a. Predictors: (Constant), GPM, TAT, CLI, NPM, WCTA, OITL

b. Dependent Variable: PG

## T test

## **Coefficients**<sup>a</sup>

		Unstandardized S		Standardized Coefficients		
Model		В			Т	Sig.
1	(Constant)	95.130	30.975		3.071	.005
	WCTA	542	.386	361	-1.403	.173
	CLI	064	.056	277	-1.133	.269
	OITL	.524	.351	.405	1.493	.149
	TAT	069	.118	135	582	.566
	NPM	-2.576	1.527	399	-1.688	.104
	GPM	737	.337	421	-2.189	.039

# APPENDIX II

	LIST OF EACH VARIABLE											
	YEAR	WCTA	CLI	OITL	TAT	NPM	GPM	PF				
INDF	2008	-4,67	268,3	16,42	97,99	2,67	23,14	5,51				
	2009	4,4	218,05	20,1	91,97	5,59	27,25	100,68				
	2010	21,6	174,7	30,01	81,23	7,69	32,47	42,25				
	2011	21,36	54,2	22,9	63,66	11,28	28,37	28,99				
	2012	22,11	168,07	25,05	84,38	10,33	27,09	15,43				
INDS	2008	5,19	133,8	21,7	104,9	3,3	26,02	221,88				
	2009	27,5	128,9	5,52	115,95	8,16	13,03	84,64				
	2010	15,34	129,7	22,02	189,1	6,92	20,23	21				
	2011	44,6	70,05	25,2	171,8	9,68	21,79	21,17				
	2012	297,8	70,33	40,3	88,72	63,14	19,93	11,34				
CPIN	2008	14,08	164,42	24,96	266,15	1,92	13,2	23,82				
	2009	27,59	114,63	85,78	247	11,08	19,71	122,15				
	2010	43,16	93,99	135,59	231,3	14,66	24,9	52,01				
	2011	37,67	83,32	113,54	171,4	14,36	22,13	29,3				
	2012	36,03	64,39	80,93	97,48	16,52	43,86	13,47				
ASSI	2008	10,71	310,21	29,57	120,22	9,47	22,29	40,98				
	2009	11,09	362,2	31,88	110,78	10,19	23,11	9,24				
	2010	8,6	342,41	27,18	115,18	11,05	20,67	43,09				
	2011	11,47	403,43	33,17	105,89	12,97	19,71	46,71				
	2012	11,86	490,07	15,3	55,93	11,85	37,74	7,89				
PYFA	2008	16,39	141,54	20,94	121,2	1,93	65,53	32,43				
	2009	23,83	90,03	25,37	132,08	2,86	63,82	63,41				
	2010	31,25	73,3	24,2	140,04	2,98	63,73	11,3				
	2011	33,07	70,24	21,8	99,48	4,6	67,38	23,32				
	2012	29,56	372,5	18,48	130,09	3,83	65,45	2,63				
TSPC	2008	51,18	96,36	55,39	122,5	8,82	38,93	15,19				
	2009	51,34	116	54,36	137,84	8	37,25	12,26				
	2010	51,75	132	62,55	143,03	9,52	36,9	35,82				
	2011	51	130,5	50,6	102,95	12,16	39,77	5,2				
	2012	49,57	143,5	57,99	143,12	13	37,52	8,3				
UNVR	2008	0,19	240,6	100,97	239,48	15,45	48,99	22,53				
	2009	1,92	257,82	111,61	243,78	16,68	49,58	26,46				
	2010	-7,5	279,72	97,64	226,29	17,2	51,83	11,26				
	2011	-11,19	312,77	66,99	286,65	17,47	51,32	10,65				
	2012	-20,85	365,48	81,06	227,81	17,44	50,87	16,21				
ALKA	2008	30,97	807	5,99	812	0,35	1,4	29,36				
	2009	35,09	694	7,87	565	0,96	2,4	16,33				

	2010	30,8	1055	4,7	531	0,49	1,85	11,68
	2011	38,9	759	4,98	338	0,76	2,02	16
	2012	35,16	654	17,6	378	1,1	2,69	38,12
IMAS	2008	-5,6	490,07	5,02	146,9	0,28	13,19	1566,2
	2009	-3,96	399,8	2,9	125,5	1,69	13,12	410,23
	2010	3,66	273,3	5,15	136,9	4,1	12,85	281,54
	2011	17,3	211,4	15,55	614,9	7,03	12,2	69,52
	2012	10,52	204,8	8,84	59,25	5,25	12,39	7,39
AMFG	2008	39,3	51,6	17,4	112	10,21	30,81	15,13
	2009	27,9	55,2	4,7	97	3,52	16,27	2,14
	2010	40,4	66,5	17,9	102	13,64	26,87	20,51
	2011	44,6	50,6	12,3	96	13,36	27,44	11,54
	2012	39,5	63,5	15,4	47,6	1,2	25,2	2,85