

**THE IMPACT OF DIVIDEND POLICY
ON SHARE PRICE VOLATILITY**

(A Case Study in Manufacturing Companies Listed in IDX from 2007-2012)

A THESIS

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



By

HARI PRAWIRA DANI

Student Number: 09312022

DEPARTMENT OF ACCOUNTING

INTERNATIONAL PROGRAM

FACULTY OF ECONOMICS

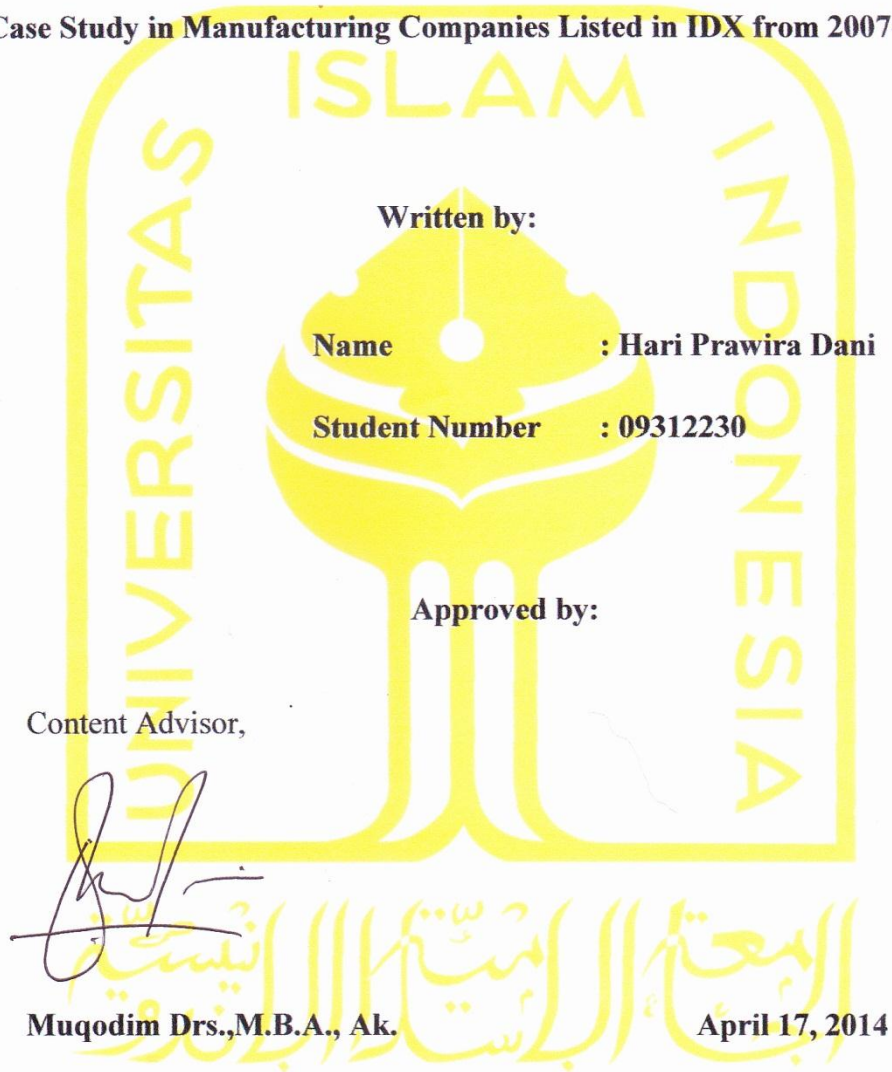
UNIVERSITAS ISLAM INDONESIA

2014

THE IMPACT OF DIVIDEND POLICY

ON SHARE PRICE VOLATILITY

(A Case Study in Manufacturing Companies Listed in IDX from 2007-2012)



Language Advisor,

[Signature]

Nina Fitriana, MA

April 17, 2014

**THE IMPACT OF DIVIDEND POLICY
ON SHARE PRICE VOLATILITY**

(A Case Study in Manufacturing Companies Listed in IDX from 2007-2012)

A BACHELOR DEGREE THESIS

By:

HARI PRAWIRA DANI

Student Number: 09312022

Defended before the Board of Examiners
on April,30, 2014 and Declared Acceptable

Board of Examiners

Examiner I



Muqodim, Drs., M.B.A., Ak

April 30th, 2014

Examiner II



Ataina Hudayati, Dra., M.Si., Ph.D., Ak

April 30th, 2014

Yogyakarta, April 30th, 2014
Faculty of Economics
Universitas Islam Indonesia
Dean



Hadri Kusuma Prof. Dr., MBA., DBA

DECLARATION OF AUTHENTICITY

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

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

Yogyakarta, April 17, 2014



Hari Prawira Dani

ACKNOWLEDGEMENT



Assalamualaikum Wr.Wb

Alhamdulillah rabbil‘alamin. All praises are given to Allah SWT for blessing and guiding me so that I can finish my study, and for giving me great family, lecturers, friends, everyone, and everything who always support me in my life. Finally, I can finish my thesis with the title of **“The Impact of Dividend Policy on Share Price Volatility”**. I realize that this thesis cannot be finished without them who ever gave me help, trust, spirit and support. In this occasion, I would like to say thank you to:

1. Allah SWT, for all of Your Kindness, Mercy, Grace, Joys, Happiness, and Lessons that You always give to me.
2. Muhammad SAW, for being a great figure as The Last Prophet and making this life becomes brighter than before
3. Prof. Hadri Kusuma, MBA., as the Dean of Economic Faculty, Universitas Islam Indonesia.
4. Muqodim, Drs., M.B.A., Ak as my content advisor .I really appreciate your time who had provided me valuable time to have consultation and gave me a lot of advices rearding my thesis. Thank you so much for always be patient in teaching and helping me to finish my thesis. May Allah SWT bless you and your family.

5. Nina Fitriana, MA as my language advisor who is always available and patient for correcting my grammar. Thank you for every help, time, and willingness. May Allah SWT bless you and your family.
6. Ataina Hidayati, Dra., M.Si., Ph.D., Ak as my thesis examiner. Thank you very much for giving me many advices, criticisms and suggestions for the improvement of my thesis. Hopefully, I can take lessons from you in order to be better researcher in the future.
7. Bu Erni who had helped me to provide data relating to my thesis. Thank you so much for your kindness.
8. My beloved family, who always support and pray for me to do all of my activities and my thesis, therefore I can finish this thesis. For my parents who always remind me to finish my thesis immediately. Thank you for your support and pray that always flow to me. My deepest thankfulness for both of you will never end till the end of time. All of my family members especially for my sister, my little brother. Once again, thank you for your help, pray and support. Hopefully, I can make you all proud of me and give the best for us.
9. Asma'i Ishak, Drs., M. Bus., Ph.D as the Dean of International Program Universitas Islam Indonesia.
10. Isti Rahayu., Dra., M.Si., Ak as the chairwoman of Accounting Department and FE UII.

11. Mr. Anas Hidayat, Drs, MBA, Ph.D, as the director of International program FE UII and Mr. Sigit Handoyo,, S.E., M. Bus as vice director of IPFE UII. Thank you so much for your kindness and help. May Allah always be with you and your family and gives you His Blessing and Kindness.
12. All of Accounting Department IP FE 09 students' thank you for spending time together to study in IP (although a million times were spent to play instead of study), and many things (happiness & sadness) you gave to me. At first, I deem that you're all **strange** and **bizarre** but I'm happy to be your friend and glad to meet you all **GUYS**. Hopefully, someday we can reunite again in the next occasion.
13. For all of IP students, whatever your generation or your major thank you guys for getting to know you each other. You gave me many unforgettable and precious memories when I studied in IP. We had shared our knowledges together by learning some organizations and getting soft skill, character building which are very important and worthwhile for us.
14. All of IP and Academic Office such as Pak Ahmad, Mas Kandri, Pak Kus ,Mbak Alfi, Mas Erwan and FE UII staffs and lecturers thank you for your kindness and help during at college. May Allah always be with you and your family

15. All of the individuals or parties who have been involved in the completion process of my thesis and study.
16. All of you who are not mentioned in these pages, I'm sorry I have forsaken you. But don't worry, perhaps you may find your names stated in other extended and informal version of my thesis acknowledgement.

The last but not least, the researcher hopes this research will be helpful to give any inspiration in improving knowledge in the future.

Wassalamualaikum.Wr.Wb

Yogyakarta, 7 May, 2014

Hari Prawira Dani

LIST OF CONTENTS

Page of title	i
Approval page	ii
Legalization page	iii
Declaration page	iv
Acknowledgement	v
List of Contents	ix
List of Appendices	xiv
List of Tables.....	xv
List of Figures	xvi
Abstract in English.....	xvii
Abstract in Indonesia.....	xviii

CHAPTER I INTRODUCTION

1.1 Background of the Study.....	1
1.2 Problem Identification.....	9
1.3 Problem Formulation	11
1.4 Research Objectives	11
1.5 Research Contribution.....	12
1.6 Systematical Writing.....	12

CHAPTER II THEORITICAL BACKGROUND

2.1 Theoritical Review	15
2.1.1 Dividend	15
2.1.1.1 Cash Dividend.....	15

2.1.1.2 Shares Dividend	16
2.1.1.3 Property Dividend	16
2.1.1.4 Liquidating Dividend	17
2.1.2 Dividend Payment Procedure	17
2.1.2.1 Declaration Date	17
2.1.2.2 Record Date	18
2.1.2.3 Ex-Dividend date	18
2.1.2.4 Dividend Payment Date	19
2.1.3 Dividend Policy.....	19
2.1.3.1 Irrelevance of dividend theory	20
2.1.3.2 Clientele dividend theory	21
2.1.3.3 Signaling dividend theory	22
2.1.3.4 Bird-in-the-hand theory	24
2.1.3.5 Agency cost theory	24
2.1.3.6 Tax preference theory	25
2.1.4 Shares	26
2.1.4.1 Ordinary Shares	27
2.1.4.2 Preferred Shares	27
2.1.5 Volatility	28
2.1.6 Dividend Policy Measurement	30
2.1.6.1 Dividend Yield.....	30
2.1.6.2 Dividend Payout Ratio.....	31
2.1.7 Related Factors of Volatility	31

2.1.7.1 Firm's Size	32
2.1.7.2 Earnings Volatility	32
2.1.7.3 Leverage.....	34
2.1.7.4 Asset's Growth.....	35
2.2 Review Previous Study	36
2.3 Theoretical Framework.....	40
2.4 Hypothesis Formulation	42
2.1.6.1 Dividend Yield and Share Price Volatility	42
2.1.6.2 Dividend Payout Ratio and Share Price Volatility	43
2.5 Research Model.....	44
CHAPTER III RESEARCH METHOD	
3.1 Research Method.....	47
3.2 Population and Sample.....	47
3.3 Data Resources and Collection Method.....	48
3.4 Research Variable	48
3.4.1 Dependent Variable.....	49
3.4.1 Independent Variable	50
3.4.1 Control Variable.....	52
3.5 Data Analysis Method.....	55
3.5.1 Descriptive Statistics.....	55
3.5.2 Classical Assumption Test	54
3.5.2.1 Normality Test	56
3.5.2.2 Heteroscedasticity Test	57

3.5.2.3 Multicollinearity Test.....	58
3.5.2.4 Autocorrelation Test	59
3.5.3 Multiple Regression Analysis	59
3.5.4 Hypothesis Testing.....	61
3.5.4.1 Determination Coefficient (R^2).....	61
3.5.4.2 F Test	62
3.5.4.3 Partially Test	62
CHAPTER IV RESEARCH FINDINGS AND RESULT DISCUSSION	
4.1 Research Description	64
4.1.1 Data Identification and Variable Measurement	64
4.2 Research Findings	64
4.2.1 Descriptive Statistics.....	64
4.2.2 Classical Assumption Test.....	71
4.2.2.1 Normality Test	71
4.2.2.2 Heteroscedasticity Test	74
4.2.2.3 Multicollinearity Test.....	77
4.2.2.4 Autocorrelation Test	78
4.2.3 Multiple Regression Analysis	80
4.2.4 Hypothesis Testing.....	86
4.2.4.1 Determination Coefficient (R^2).....	86
4.2.4.2 F Test	88
4.2.4.3 Partially Test	90
4.3 Research Discussion.....	95

4.3.1 Dividend Yield and Share Price Volatility	96
4.3.2 Dividend Payout Ratio and Share Price Volatility	98
4.3.3 Related Factors and Share Price Volatility.....	98
4.3.3.1 Firm's Size	97
4.3.3.2 Earnings Volatility	98
4.3.3.3 Leverage.....	99
4.3.3.3 Asset's Growth.....	100
 CHAPTER V CONCLUSION, IMPLICATIONS, AND	
RECOMMENDATIONS	
5.1. Conclusion	102
5.2. Implications.....	103
5.3. Research Limitations.....	104
5.3. Recommendations	105
REFERENCES	107
APPENDICES	111

LIST OF APPENDICES

Appendix 1 List of Samples	111
Appendix 2 List of Variable Value	113
1. Tabulation of Data.....	113
2. SPV	115
3. DY	119
4. DPR.....	123
5. SIZE	127
6. EVOL	135
7. LEV	141
8. GROWTH	143
Appendix 3 Descriptive Statistic Analysis.....	151
Appendix 4 Classical Assumption Test	151
1. Normality Test	151
2. Heteroscedasticity Test	153
3. Multicollinearity Test.....	155
4. Autocorrelation Test.....	156
Appendix 5 Multiple Regression Analysis	157
1. Determination Coefficient (R^2).....	157
2. F Test.....	158
3. Partially Test	158

LIST OF TABLES

Table 3.1 Sample Selection Procedure.....	48
Table 3.2 Durbin Watson Analysis	59
Table 4.1 Descriptive Statistics.....	65
Table 4.2 Normality Test (First Model).....	73
Table 4.3 Normality Test (Second Model)	73
Table 4.4 Glejser Test (First Model).....	76
Table 4.5 Glejser Test (Second Model)	76
Table 4.6 Multicollinearity Test (First Model)	77
Table 4.7 Multicollinearity Test (Second Model).....	78
Table 4.8 Autocorrelation Test	80
Table 4.9 Summary of Regression Estimation (First Model)	82
Table 4.10 Summary of Regression Estimation (Second Model).....	84
Table 4.11 Determination Coefficient (R^2) (FirstModel)	87
Table 4.12 Determination Coefficient (R^2) (Second Model)	87
Table 4.13 F Test (First Model)	88
Table 4.14 F Test (Second Model).....	89
Table 4.15 Partially Test (First Model).....	90
Table 4.16 Result of Hypothesis Testing (First Model).....	92
Table 4.17 Partially Test (Second Model)	92
Table 4.18 Result of Hypothesis Testing (Second Model)	95

LIST OF FIGURES

Figure 2.1 Research Model (First Model).....	45
Figure 2.2 Research Model (Second Model)	46
Figure 4.1 Normality Test (First Model)	71
Figure 4.2 Normality Test (Second Model)	72
Figure 4.3 Heteroscedasticity Test (First Model)	74
Figure 4.4 Heteroscedasticity Test (Second Model)	75
Figure 4.3 The boundaries of Autocorrelation (First Model)	79
Figure 4.4 The boundaries of Autocorrelation (Second Model)	79

ABSTRACT

The purpose of this research is to examine and analyze the impact of dividend policy on share price volatility in manufacturing companies listed in Indonesian Stock Exchange (IDX) in the period of 2007-2012. For this purpose, a sample 77 companies from 149 manufacturing companies listed in IDX for six years were selected based on criteria applied. As proxy for dividend policy, the researcher used dividend yield and dividend payout ratio. This study also use some control variables to ensure the likelihood influence on share price volatility which comprised of firm's size, earnings volatility, leverage, and asset's growth. Multiple regression analyses are used in order to explore the influence of dividend yield, dividend payout ratio and other control variables on fluctuation of share price changes. The result of this study shows that only dividend payout ratio has a significant influence to the share price volatility, while dividend yield does not appear significant although show negative influence. From the empirical result obtained, it can be interpreted that the higher payout ratio, the lower share price volatility, and vice versa. In addition, the control variables that have a significant influence are earning volatility and leverage. Both of them have positive influence among others, which means that the higher earnings volatility and leverage will lead to the higher volatility of share price.

Keywords: *Dividend Policy, Share Price Volatility, Dividend Yield, Dividend Payout Ratio, Firm's Size, Earnings Volatility, Leverage, Asset's Growth*

ABSTRAKSI

Tujuan dari penelitian ini adalah untuk menguji dan menganalisa dampak kebijakan dividen terhadap volatilitas harga saham di perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) pada tahun 2007-2012. Untuk tujuan penelitian ini, peneliti menggunakan sampel 77 perusahaan dari 149 perusahaan manufaktur yang terdaftar di BEI pada kurun waktu 6 tahun berdasarkan kriteria yang telah diterapkan. Sebagai pengukur kebijakan dividen, peneliti akan menggunakan *dividend yield* dan *dividend payout ratio*. Penelitian ini juga menggunakan beberapa variabel pengendali yang terdiri dari ukuran perusahaan, volatilitas laba, rasio hutang jangka panjang, dan tingkat pertumbuhan aktiva perusahaan. Analisis regresi berganda digunakan dalam rangka menguji pengaruh *dividend yield*, *dividend payout ratio*, dan variabel pengendali lainnya terhadap fluktuasi perubahan harga saham. Dari hasil penelitian menunjukkan bahwa hanya *dividend payout ratio* yang mempunyai pengaruh signifikan terhadap volatilitas harga saham, sedangkan *dividend yield* tidak tampak signifikan meskipun menunjukkan pengaruh negatif. Dari hasil kajian empiris yang telah didapat, hal ini dapat diinterpretasikan bahwa kenaikan ratio pembayaran dividen, menurunkan volatilitas harga saham, dan sebaliknya. Selanjutnya, variabel pengendali yang memiliki pengaruh yang signifikan adalah volatilitas laba dan hutang jangka panjang. Keduanya mempunyai pengaruh yang positif yang kuat diantara variabel lainnya yang berarti bahwa kenaikan volatilitas laba dan hutang jangka panjang akan menyebabkan kenaikan volatilitas harga saham.

Kata Kunci: Kebijakan Dividen, Volatilitas Harga Saham, *Dividend Yield*, *Dividend Payout Ratio*, Ukuran Perusahaan, Volatilitas Laba, Hutang Jangka Panjang, Tingkat Pertumbuhan Aktiva Perusahaan.

CHAPTER I

INTRODUCTION

1.1. Background of the Study

Dividends are the cash payment or earning distributed and made by corporations to their shareholders. The board of directors will decide what dividend policy best serves the common shareholders of the firm. In addition, they also decide dividend that should be paid or earnings that should be generated to be reinvested for the next project that can result in the future benefit for common shareholders. Furthermore, if dividends are distributed, the board of directors should also consider the proportion of earning or profit that must be paid and must be returned to the business (Hashemijoo, et al, 2012). Baker and Powel (1999) asserted that dividend become one of the most important financial decisions that corporate manager encounter. If firm's managers deem that the future will relatively bright, they may pay large dividends to pleasant shareholders. On the other hand, if manager perceive that bad conditions are coming, they may decide to keep firm's cash instead of paying dividend.

The company needs a strategic policy regarding to dividend payments. This is because current and potential shareholders generally do not like to be inclined to be irregular; it means shareholders who liked the last dividend cannot be sure that they also like the next one. It also refers the uncertainty for the payment of earnings, which can lead a drop in the company's share price. When shareholders feel that they do not get what they are expected, they can show their

displeasure by selling their share. Therefore, a well-planned strategic policy regarding with payment of dividend can prevent unpleasant erratic for current or potential shareholders and protect the price of share. Khan (2011) supported that dividend policy is not only source of income for investor but also signal of firm performance, so that it is important for corporate finance managers of the companies to distribute profits or to make investment in the business. So selecting a suitable dividend policy becomes the important decision for management and investor.

The basic objective of shareholders is to maximize their return in the form of dividend and capital gain. Dhanani (2005) revealed that dividend policy is important in maximizing shareholder value. This is because of dividend policy can be intermediary such as information asymmetry between managers and shareholders, mitigate agency problems, and enhance firm's value to shareholders. Arnold (2008) explained the main objective of dividend policy is to maximize shareholder's wealth by maximizing their purchasing power. It may be noted that maximizing shareholder's wealth depends on the dividend policy of the company since shareholders would be pleased from their purchasing of shares and consumption of earnings in form of cash. Shareholder's wealth is represented in the market price of the company common stock, which in turn is the function of investment, financing, and dividend decision for company (Azhagiyah, and Priya, 2008). Based on their research revealed that higher dividend will increase the market value of shares, meanwhile the lower dividend will bring the market value of the shares decrease. It highlights that the optimal dividend policy is the one that

maximizes the company share price, which cause to maximization shareholder's wealth. Dividend announcement is one of the information can affect the price of securities in the capital market because information about the dividend policy is important for investors where share prices react to the information in the market, one of which is information about the distribution of dividends. Information regarding the distribution of dividends is believed to be able to influence the behavior of share prices in the market because of the actions of investors who want to get benefit. Thereunto, investors generally expect the distribution of dividend is relatively stable, since the stability of dividend payments indicates as signal for investors than can increase their confidence in the company, thereby reducing the uncertainty of investors to invest their funds into the company.

Dividends are paid in form of cash; so that a firm's cash flow is crucial factor that affecting dividend policy. Ahmed & Javid (2009) in which they analyzed the factors that determine dividend showed that most of companies decide their cash dividend payment on the basis of their current and previous year profits. It indicates that the firms having high net profit pay larger dividends to their shareholders. Another study conducted by Afza & Mirza (2010) discussed that ownership of firm, cash flow sensitivity, size, and leverage are negatively related, whereas operating cash flow and profitability are positively related to cash dividend. Ling, et al (2008) stated that dividend-paying companies are more profitable and less risky in their activities as compared to non-dividend paying companies.

Dividend policy is one of the attractive topics in the literature of finance and research field, since most of academicians and researchers try to examine the relationship of the dividend policy and share price of a company. Many researchers have attempted to examine those relationship or causal effect of dividend policy toward share price. Unfortunately, there are several polemics that arising from the result. There is no consensus and absolute result among researchers about the causal effect of dividend policy toward share price because it remains the mystery that dividend policy affect share price or not. Previous studies conducted on dividend policy provide strong evidence for the presence of relationship between dividend policy and stock prices.

Rational investors will use all the information they have available in order to determine share price on the basis of the expected cash flow to be received from shares. The information is the key to determine share price that usually called as efficient market concept. An efficient market is one in which the prices of securities fully reflect all available information about asset where investors take all relevant information into prices either to buy or to sell shares. According to the idea of Efficient Market Hypothesis (EMH) stated that share price will always relate and reflect all available information in the market. One of the part form of efficient market hypothesis which correlate to the dividend policy is semi strong form. That part of EMH stating that prices reflect all publicly available information, such as earnings, dividends, share split annoucement. Thus, information about the dividend policy is important for investors because share prices react to the information in the market, one of which is information about

the distribution of dividends. Information about the increase and decrease in cash dividends distributed by the company is one of the information that is deemed important enough, since the information contained in the signal with respect to the prospect of benefits to be generated by firms in the future.

Many differences of empirical researches have been performed to investigate the impact of dividend policy on share prices. Lintner (1956) conducted research for determinants of corporate dividend policy and its effect on firm's market value by interviewing of top managements of 28 firms. The result showed that firm's market value depends on the dividend payout. The concept of Dividend Irrelevance from Miller and Modigliani (1961), also known as M & M, theorized that dividend policy is irrelevant because the only thing that can affect a firm's value is the investment policy or firm's earnings and not the dividend policy of firm. M & M showed how the value of a company is determined by income generated from its assets, not from dividend policy. According to them, the way of company's income is distributed in form of capital gains or a dividend does not affect the overall value of firm. Gordon (1963) criticized Dividend Irrelevance Theory by arguing that dividend policies do affect the firm value and dividend policy has significant positive effect on stock prices. He provided argument investors always prefer current income in the form of dividend over capital gains. Further, he concluded that the firms that pay larger amounts of dividend to their shareholders face less risk or in terms of share price volatility. Firm value can be viewed as how well a firm enriches shareholder's wealth and the capability the firm to generate earnings from the capital invested by

shareholders. Murekefu and Ouma (2013) in their study also noted that dividend policy affects firm performance, which is measured by profitability as measurement. It shows that dividend policy is relevant and affects the performance of a firm; hence, its value is contrary to the theory that views dividend policy as irrelevant.

Dividend has been adjudged to be catalyst for movement of firm's share price (Ilaboya and Aggreth, 2013). Baskin (1989) attempted to examine the impact of dividend policy on share price volatility. His findings reported that if dividend yield increases by 1 %, the volatility of share price movement decreases by 2.5 %. The study also conducted by Nishat and Irfan (2004) in order to investigate the impact of dividend policy on share price risk. The share price risk refers to the volatility as a benchmark measuring risk. It means, the more considerable volatility implies the possibility of gain or loss is higher in given time. The volatility of share price represents the variability of share prices change that could be perceived as measure risk by investors (Ilaboya and Aggreth, 2013). In addition, investors usually want to take less risky investment since less investment is better than those with higher risk (Kinder, 2002). This refers to the risk averse where investors reluctant to accept uncertainty portfolio from their investment made and they attempt to stay away from high-risk investment, which can lead to loss. In other words, the lesser risk of given share implies greater desirability is.

The focus of this study is the relationship between dividend policy and share price volatility. Several researchers have investigated the relationship

between dividend policy and share price volatility at different times. The relationship between dividend policy and the volatility of share has been explored by (Black and Scholes, 1974; Baskin, 1989; Allen and Rachim, 1996; Nishat and Irfan, 2004; Anil and Kapoor, 2008; Hussainey, et al, 2011; Hashemijoo, et al, 2012). It indicates that the volatility of the share price has been concerned to researchers. Many researchers have explored and documented the evidence either to promote or to refute the link of dividend policy and share price volatility. Allen & Rachim (1996) stated that paying large dividend reduces risk. This result is in contrary with Black & Scholes (1974) who found there is no relationship between dividend policy and share price. Gordon (1962) developed a model to describe dividend price ratio in order to predict discount rate and may describe lower volatility. Baskin (1989) also had different approach to study the impact of dividend policy on share price. He used four basic models as he called these as duration of effect, rate of return effect, arbitrage-pricing effect, and informational effect. The difficulty to examine the link of dividend policy and share price volatility lies in the setting up of adequate control over factors that affect both of them. Therefore, Baskin (1989) suggested using control variables to test the significance relationship between dividend policy and share price volatility. The variables that he used are comprised dividend yield, earning volatility, size of the firm, debt, payout ratio, and growth.

From the previous research, Baskin (1989) reported a significant negative relationship between dividend yield and dividend payout and share price volatility. Allen and Rachim (1996) showed positive relation between share price

and dividend yield, size, earnings volatility, leverage, and negative relation between share price and payout ratio. Nishat and Irfan (2004) revealed dividend policy, which is measured by dividend yield and payout ratio as proxy for measurement, shows significant impact on the share price volatility. This suggests that dividend policy affect volatility of the share price. Rashid and Rahman (2008) evidence from Bangladesh, showed the relationship of dividend yield, leverage, and growth are positive, but insignificant to share price volatility. Then earning volatility, payout ratio, and size are negative, but only payout ratio and size are significant in relation to share price volatility. Hussanay, et al (2011) UK evidence, examined dividend policy and share price volatility. Their result showed that dividend yield give insignificant positive impact on share price risk, and also dividend payout ratio give significant negative to the volatility of share price. Asghar, et al (2011) in Pakistan, noted from the result of their study that share price volatility and dividend yield have strong positive correlation but highly negatively correlated with growth. The empirical research also conducted by Hashemijoo, et al (2012) in the Malaysian stock market, they discovered significant relationship between share price volatility and two main measurement of dividend policy which are dividend yield, and payout. They also found that dividend yield and size induce greatest influence on share price volatility among other variables. Habib, et al (2012) evidence from Pakistan, conducted the research regarding those relationships, and their findings indicate that payout ratio is significantly positive related with share price volatility, but size, and debt negatively related with share price volatility. Recently, Ilaboya and Aggreth

(2013) in Nigeria also conducted study regarding dividend policy and share price volatility, their result revealed that dividend yield and growth are positive and significant related with share price volatility, while payout, size, and earnings volatility are negative and insignificant related with share price volatility, as well as leverage, which appeared positive but insignificant. Following research also investigated by Kenyuru, et al (2013) in Kenya, they found that dividend yield is insignificantly positive related with share price volatility, and payout is significantly negative related with share price volatility. On the other hand, their results are in contrary with the study of Kyle and Bacon (2013) evidence from USA, showed that dividend yield related negatively to share price volatility, which means still consistent with the result from Baskin (1989), and positive relation between payout and share price volatility that produced anomalous result.

From the difference of several studies regarding dividend policy and share price volatility and there are ambiguous result among variables that affecting share price volatility. Therefore, the researcher wants to retest and investigate the influence of dividend policy on share price volatility. Moreover, this study will be used two independents variables as proxy of dividend policy (dividend yield, and payout) and four control variables (size, debt, earning volatility, and growth). The data will be taken from manufacturing companies listed in Indonesian Stock Exchange from 2007 until 2012. Hence, the researcher would like to present a research with a title of **“THE IMPACT OF DIVIDEND ON SHARE PRICE VOLATILITY (FROM THE COMPANIES LISTED IN INDONESIAN STOCK EXCHANGE IN THE PERIOD 2007-2012)”**.

1.2. Problem Identification

There are so many companies registered in the stock exchange, hence various decisions will be chosen and made by potential shareholders to determine the beneficial investment. Similarly, investors will consider some information when they buy shares for the purpose of investment. Due to the activity, come from capital market requires knowledge and ability related to the change of share price and its factors. This is very crucial for current shareholders and potential shareholders to mitigate possibility of risk that might happened.

In addition, there are external and internal factors that can influence share price. External factors are factors that cannot be controlled by company such as factors from shareholders, government policy, and accidental phenomenon that cannot be predicted. Then, internal factors are factors that arise from internally, and these can be controlled and made by company, such as financial stability, profitability, dividend policy, and so on. Those factors can impact the fluctuation of share price, so that shareholders either can get profit or suffer loss. The profit received by shareholders can be in the form of capital gain or dividend. One of them is dividend that is usually distributed in form of cash to shareholders in accordance their percentage ownership.

With regards to dividend payment, corporate manager also must approach the decision on dividend whether how much of company's profit are needed for investment but take into consideration concerned with the possible effect of their decisions on share price. In relation to preceding explanation, this research will focus to elaborate the impact of dividend policy on share price volatility.

Prior researchers have found several factors as measurement of dividend policy that affect the share price volatility such as dividend yield, payout, and related control variable such as size, earning volatility, debt, and growth. However, the result among variables was still ambiguous. It indicates that those factors still can impact the share price volatility. Hence, the basic problem in this research is to analyze and discuss the impact of dividend policy on share price volatility by using some variables such as dividend yield, payout as a proxy measurement for dividend policy and control variables that comprised of size, earning volatility, debt, and growth.

1.3. Problem Formulation

This study aims to investigate the empirical study of the impact of dividend policy on share price volatility by using two independent variables comprised of dividend yield, and payout, while control variables that consist of size, earning volatility, debt, and growth. Therefore, the problem is formulated as follows:

1. Does dividend yield have influence on share price volatility?
2. Does dividend payout have influence on share price volatility?

1.4. Research Objectives

Based on the problem formulation, the objective of this research is to examine and give explanation about the impact of dividend policy on share price volatility in the long run, which is important for firms, investor, and next researchers.

1.5. Research Contributions

This research is conducted with an expectation that it can give additional scientific benefits and input as well as a new reference for future research. The result of this research is expected to benefit these following parties:

1. Investors

The result of this research is expected to give investors more insight regarding the impact of dividend policy on share price volatility, so that they could be more wisely for their consideration to choose certain investment.

2. Firms and Management

This research is expected to give firm and management concerned with decision on dividend and become more awareness in distributing cash dividend regarding several factors that can affect share price volatility.

3. Students and Academicians

This research is expected to give information which hopefully In the long term it also can be a useful reference for further researches related to, and to develop or improve the ability in analyzing and interpreting several factors regarding the impact and relationship dividend policy and share price volatility.

1.6. Systematical Writing

This research consists of five chapters. It consists of chapter one which discuss about introduction, chapter two contains review of related

literature, chapter three depicts research method, chapter four explains research findings and discussion, and chapter five presents conclusion, implications, and recommendation. The description of each chapter will be explained more as follows:

CHAPTER I:

INTRODUCTION

This chapter describes the background of the study, problem identification, problem formulation, research objectives, research contributions, and systematical writing.

CHAPTER II:

REVIEW OF RELATED LITERATURE

This chapter contains theoretical review that is used to discuss the issues raised in this study, including theories and concepts that are relevant and supportive to the analysis of problem solving in this study. It also contains the review of previous study, theoretical framework, hypothesis formulation, and research model

CHAPTER III:

RESEARCH METHOD

This chapter contains research method, population and sample, data resources and collection method, research variables, and data analysis method. This chapter is the basis for analyzing the data.

CHAPTER IV:

RESEARCH FINDINGS AND DISCUSSION

This chapter contains research description and research findings. This chapter gives general depiction from the research object in this thesis by describing the existing research findings systematically, and then discussion is made based on the results.

CHAPTER V:

CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter describes the conclusions and implications from the results of the analysis have been done, and the recommendations that may be proposed and implemented for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1. Theoretical Review

This chapter will present related literatures that explain about dividend policy, volatility and any other explanation related to the topic of this study. Any existing prior studies as well as the hypothesis formulation are also included in this chapter.

2.1.1 Dividend

Dividend is a distribution of a portion amount of a firm's earnings that is decided by corporation, or determined by board of directors to class of shareholders in form of cash payment in certain amount of money. Apparently, dividends are paid in cash, though the rules may allow other forms of payment. Dividends distributed to shareholders could be in form of another type as alternative way. Kieso, et al (2010) classified where there are types of dividends given by the corporation to a shareholder, which consists following form:

2.1.1.1 Cash Dividend

Cash dividend is the common type of dividend in form of cash that distributed to shareholders on a monthly, quarterly, or yearly basis. It represents a transfer of economic value from the company to the shareholders rather than the company using the

money for next operations. Generally, board of directors of corporation will determine how much the amount of earnings distributed to shareholders who have right to share in the profits of the firm based on the financial and economic factors. It can be decrease or increase according company's performance. Before, cash dividend is paid to common shareholders; it must be paid to the every preferred shareholder first.

2.1.1.2 Shares Dividend

A dividend payment can be made in the form of additional share, rather than cash. This is what we called share dividend in which dividend paid in form of share as a replacement for cash dividend. Van Horne (2008) stated that share dividend represents nothing more than a bookkeeping shift within the shareholders' equity account on the firm's balance sheet, therefore a shareholder's proportional ownership in the firm remains unchanged.

2.1.1.3 Property Dividend

Occasionally, as an alternative for cash or share dividend. Asset such as inventory, land, and equipment or other than cash can be distributed as dividend. Apparently, a property dividend can either include shares of a subsidiary company or physical assets that the corporation holds. Indeed, the corporation must have adequate earned capital, and it must have assets that can be

distributed. A property dividend is recorded at the market value of the asset provided.

2.1.1.4 Liquidating Dividend

Liquidating dividend is a type of payment made by a corporation to its shareholders out of a corporation's capital or assets, rather than its generated earnings. It occurs when a corporation pays more than its total profit in dividends since shareholders believe that the firm is no longer sustainable or profitable. In addition, a liquidating dividend is held when a corporation is dissolving and distributing its assets to its shareholders, which paid after settlement all corporate debts. Thus, liquidating dividend is considered a return of shareholders' investments instead of profit.

2.1.2 Dividend Payment Procedure

Whether in what amount to pay cash dividend to common shareholders is decided by board of directors at quarterly or semiannual meetings. Dividends payment set by board of directors and paid out to shareholders a few weeks later after going through several steps. The chronology of a dividend payment involves the following:

2.1.2.1 Declaration Date

On the declaration date, the board of directors announces how much the amount of the dividend will be paid. A company is obliged to pay dividends once they have been declared. The period

for paying dividends is established by decision of the General Meeting of Shareholders (GMS). Unless, companies must pay dividends no later than 60 days after they are declared.

2.1.2.2 Record Date

After the board of directors of a corporation declares a cash dividend, they must specify a record date. According to Van Horne (2008) stated that at the close of business on that date, a list of shareholders is drawn up by the company from its share-transfer books. Shareholders on the list are entitled to the dividend, whereas shareholders who come on the books after the record date are not entitled to the dividend. In other words, dividend is paid to shareholders who are holders of record as of the date of record and these shareholders will receive the dividend.

2.1.2.3 Ex-Dividend Date

The ex-dividend date is the date on which investors are cut off from receiving a dividend. It means anyone or investors purchasing a share on or after the ex-dividend date does not receive the dividend. The ex-dividend date is important in order to avoid confusion about which investors are entitled to dividends when shares are sold just prior to the record date. Therefore, there is a rule to confine new shareholders who are entitled to dividend only if they acquire share at least 2-business day before the date of

record. Otherwise, if they purchase after that time the shareholder is not entitled to receive dividend.

2.1.2.4 Dividend Payment Date

The last step is the date of dividend payment which current dividend is paid out to shareholders based on the record. This involves mailing out the dividend checks on the dividend payment date. In general, the payment date is two to three weeks after the holder of the record date.

2.1.3 Dividend Policy

Dividend policy is an integral part of the firm's financing decision, since it determines the amount of earnings that can be retained in the firm as a source of financing (Van Horne, et al, 2008). The greater amount that must be retained, the fewer amount will be available to be distributed. Therefore, the main aspect of dividend policy is relating to the determination of appropriate allocation of profit between dividend payments and reinvestment of firm. In other words dividend policy concerns with the decision making pertaining to pay earnings versus retaining and reinvesting them. Thus, dividend policy can be defined as important part of company's long run financing strategies. The decision may arise, when the firm begins to generate profits, should the firm distribute all or proportion of earned profits in the form of dividends to the shareholders, or should it be reinvested into the business. The firm's dividend policy represents the plan of the firm to make the decision

regarding dividend. Dividend itself reflects the source of cash flow to shareholders and provides information pertaining to performance of firm, because it shows the earnings that company generating.

Numerous theories and studies regarding dividend policy have been documented in financial literature. These theories provide interesting insight about dividend policy. Although the findings still debatable among researchers and yet to be resolved, dividend policy become popular topic among financial researchers for several decades. A number of questions arise regarding what effect dividend policy on share price, and is there any model that can be used to evaluate dividend policy in view of share value. From the arising these questions, many researchers attempt to link the influence of corporation dividend on share price although they had conflicting result. These theories are discussed in turn below, as follows:

2.1.3.1 Irrelevance of dividend theory

Miller & Modigliani (1961) or commonly referred to as M & M proposed the irrelevance of dividend theory. M & M stated that the value of a company is determined by the income generated from its asset, not by its dividend policy. It indicates that the value of the firm is determined by solely by the earning power of firm's asset and investment decision. They argued that dividend and capital gain are two main ways that can contribute profits of firm to shareholders. M & M also assumed perfect capital markets where there are no transactions costs, no flotation costs, and no taxes. It

implies if shareholders get desirable or unpleasant dividend, then shareholders can use these amounts to buy or sell shares and hereafter they can create their own dividend policy without incurring taxes, or other costs, so that the corporate dividend policy would be irrelevant. In other word, shareholders have ability to manufacture or commonly known as homemade dividends. Since shareholders can create their own dividend policy under perfect capital markets, then dividend policy would truly irrelevant. This theory is supported by Black and Scholes (1974), they used capital asset pricing model to test the relationship between dividend and expected return. They found there is no significant relationship between dividend policy, which is measured by dividend yield, and expected return. According to them, there is no evidence that dividend policy will affect share price, so that their finding support the argument of M & M about irrelevant dividend theory.

2.1.3.2 Clientele dividend theory

The clientele dividend theory is based on the view that investors are attracted to particular firm in part because of its dividend policy. Al- Malkawi, Rafferti & Pillai, 2010 who reviewed dividend theories cited that investors often face different tax treatments for dividend and capital gains, and incur costs when they trade securities in the form of transaction costs. These reasons based on different investors situations, taxes and transaction costs

may create investor (clienteles), such as tax minimization induced clientele and transaction cost minimization induced clientele respectively. These clienteles will be attracted to firms that follow dividend policies that best suit their particular situations. Al Malkalwi (2007) in his study on determinants of corporation dividend affirmed that firms in their growth stage, which tend to pay lower dividends, would attract clientele that desire capital appreciation in the form of capital gains to dividends. On the other hand, firms that pay a large amount of their earnings as dividends attract a clientele that prefers high dividends.

2.1.3.3 Signaling dividend theory

The signaling dividend theory is based on the statement that the management of a company knows more about the future financial prospect of the firm than shareholders. It implies, if a company declares large amount of dividend, this will be indicated as a signal that the future financial prospects of the firm are brighter. On the other hand, if company cuts dividend, it will be interpreted as a signal that management expects poor earnings. According to the signaling theory, investors can infer information about a firm's future earnings through the signal coming from dividend announcements, both in terms of the stability of, and changes in dividends. This argument is based on the information asymmetry between managers and shareholders, where managers

have private information about the current performance and future fortunes of the firm that is not available to shareholders or outsiders. M&M (1961) stated that managers and outside investors have free, equal access to the same information regarding a firm's prospects and performance. However, managers who look after the firm usually possess information about its current and future prospects that is not available to shareholders. This informational gap between management and shareholders may arise regarding the true value of the firm that is unavailable to the market. If so, share price may not always be an accurate measure of the firm's value. In an attempt to close this gap, managers may need to share their knowledge with outsiders so they can more accurately understand the real value of the firm. Therefore, dividends come to provide a useful way for managers in which to convey their private information to the market because investors used cash flows to equity as a way of valuing a firm. According to Miller & Rock (1985) dividends contain private information and therefore can be used as a signaling device to influence share price. An increasing dividend is viewed as a positive signal then shareholders buy more shares that causing increase in the share price. Conversely, decreasing in dividends is viewed as a negative signal that can lead share price drop since shareholders sell their shares for anticipation of future financial difficulty of the firm.

2.1.3.4 Bird-in-the-hand theory

The bird-in-the-hand theory notices that shareholders prefer to receive dividends instead of having earnings reinvested in the firm. Gordon (1959) and Linter (1962) argued that investors view current dividends as less risky than future dividends or capital gains. It demonstrates that shareholders expect to receive benefits in the form of dividend instead of earnings are retained and reinvested in their company. For this reason, since shareholders who receive earnings now in form of dividend, they can use whatever they desired. (Hussainey, Oscar Mgbame, and Chijoke-Mgbame, 2010) asserted a bird in hand (dividend) is worth more than capital gains because owing to the uncertainty of future cash flow, investors will often tend to prefer dividends to retained earnings. This finding in line with Gordon (1959) based on his empirical study who found that dividends have greater influence on share price than retained earnings.

2.1.3.5 Agency cost theory

The agency cost theory predicts that dividend payments can reduce the problems associated with information asymmetry. Dividends may also serve as a mechanism to reduce cash flow under management control, and thus help to mitigate the agency problems (Al-Malkawi, 2007). This is the conflict of interest that exists between shareholders and management that comes when

management acts in their own interest rather than on behalf of the shareholders who own the firm. Jensen (1986) asserted that firms to reduce agency problems could use dividend policy. According to him, if dividends are not distributed to shareholders, then managers will use these amounts for their private benefit. Therefore, dividend policy helps the firms to know how firms can control the agency costs by maintaining dividend policy. Easterbrook (1984) also gave opinion that dividends may help to minimize agency costs and help to prevent managers from taking self-serving actions that are costly to the company. From the empirical study conducted by Al-Malkawi (2007) regarding the determinant of corporation dividend, he noticed that the use of dividends as an intermediary mechanism to reduce agency costs is less important when there is higher insider ownership. His finding still consistent with proceeding study conducted by Rozeff (1982) who asserted that the benefits of dividends in reducing agency costs are smaller for companies with lower dispersion of ownership , in other words with higher insider ownership result in lower dividend paid external shareholders.

2.1.3.6 Tax preference theory

Miller & Modigliani (1961) affirmed that a perfect capital market exclude tax effect. However, it cannot be denied that in the real world taxes exist and may have significant influence on dividend policy as well as the value of the firm. Ordinarily, there is

differential in tax treatment between dividends and capital gains. This would suggest that tax also become important consideration for investors since capital gains are taxed at a lower rate than dividends. Therefore wealthy investors prefer to have companies retain earnings as business investment rather than to distribute as dividend. In accordance with Brigham & Ehrhardt (2002) who stated that earnings growth would presumably lead to share price increases, and lower taxed capital gains would be substituted for higher taxed dividends. In other words, low dividend payout ratios contribute to maximizing the firm's value with the on assumption that dividends are taxed at higher rates than capital gains by reason of dividends are taxed immediately, while taxes on capital gains are deferred until the gains are actually realized. Thus, investor will prefer to value the money from capital gains rather than a money of dividends since taxes are not paid on the gain until share is sold.

2.1.4 Shares

Shares are a partial claim of ownership in the company, including claim on profits, dividends as well as claim on obligation for debts and losses. It represents unit of ownership in form of certificate of share, in which every holder has claim on part of the company's asset. The ownership is determined by the number of shares a person owns relative to the number of outstanding shares. Generally, shares can be bought and sold in capital market through participant broker as middleman who

provides service on our behalf. There are two main types of share, which comprised ordinary shares and preferred shares. The differences of the two types of shares are as follows:

2. 1.4.1 Ordinary Shares

Ordinary shares or usually called as common shares are the most prevalent type of shares as a unit of ownership and voting right that can be used in corporation's decision together with shareholder proportion to their percentage ownership in the company. These shares are the majority of shares that are issued by corporation in this form. In the ordinary shares, the board of directors of company or corporation will decide whether or not to pay a dividend. It means every investor or shareholder has variable dividends that are never guaranteed.

2. 1.4.2 Preferred Shares

A type of share that promises a fixed dividend, according to the discretion of the board of directors. It has preference over ordinary share in the payment of dividends and claims on assets (Van Horne, et al, 2008). The differences between ordinary shares and preferred shares lies on the preferred shareholders have a greater claim to a company's assets and earnings. Indeed, when the company has excess cash and decides to distribute in the form of dividends to its investors. The preferred shareholders must be paid first before common shareholders in the time that distribution is

made. In these shares some investors or shareholders are usually guaranteed a fixed dividend forever. In addition, the most important thing is when the company must liquidate and pay all creditors and bondholders, common shareholders will not receive any money until after the preferred shareholders are paid out.

2.1.5 Volatility

Risk attaches to some degree in all investment markets, and volatility is one reflection of this risk. Volatility related to the amount of uncertainty or risk about the size of changes in a security's value. It is a measure for variation of price of a financial instrument over time. In addition, share's volatility is measured by beta that represents of the risk. A beta below 1 can indicate an investment with lower volatility, while a beta is greater than 1 indicates that the price of securities will be more volatile. In other words, the high beta index shows up as volatility. A higher volatility means that a security's value can potentially be spread out over a larger range of values. It means that the price of the security can change dramatically over a short time period in either direction. Meanwhile, a lower volatility means that a security's value does not fluctuate dramatically, but changes in value at a steady movement over a period of time. In other words, it can be simplified that volatility of share price is the fluctuation of share price without regard for direction.

According to Grouard, et al (2013) noted that volatility of returns is the most widely used concept for representing risk. He argued that historical volatility is used to analyze past or present prices and expected volatility is used to predict future price changes. Standard deviation can reflect only as measurement of historical volatility. The standard deviation essentially reports a fund's volatility, which indicates the tendency of the returns to rise or fall drastically in a short period of time. A security that is volatile is also considered higher risk because its performance may change quickly in either direction at any moment. The standard deviation of a fund measures this risk by measuring the degree to which the fund fluctuates in relation to its mean return, the average return of a fund over a period of time.

Ambrosio & Kinniry (2008) stated that to obtain any knowledge about future volatility, an investor has to make the assumption that future volatility is represented by the distribution of historical volatility results. In other words they can estimate the probabilities of potential gains or losses associated with each amount. Moreover, Grouard (2013) stated that the high price volatility is sign of high illiquidity risk or due to illiquidity and not to changes in the fundamental value of the assets. In other words, liquidity may be a critical factor for interpreting volatility. To summarize, the least amount of risk that is involved, the better the investment is. Therefore, volatility becomes great concern for investors dealing with their investment since they want to minimize the risk.

2.1.6 Dividend Policy Measurement

In this study, the researcher will use two proxies as measurement for dividend policy. Generally the measurement of dividends paid by a firm using two proxies. First, it is the dividend yield, which relates the dividend, paid to the price of the share. Second measurement that will be used to measure of dividend policy is the dividend payout ratio, which relates dividends paid to the earnings of the firm. Explanation below will discuss about the two proxies as measurement of dividend policy for further.

2. 1.6.1 Dividend Yield

Dividend yield is the ratio of annual dividend divided by the market price of share. It shows the how much firm pays dividend each year relative to its share price. Investors also use the dividend yield to measure of risk and to screen investment, that is, they invest in shares with high dividend yields. It can be indicated that shares with high dividend yields, after adjusting for market performance and risk, get excess returns. Dividend yield is a way to measure how much cash flow that investors getting for each amount invested. Fama & French (1988) proved that using dividend yield provide more reliable evidence to forecast returns. Their result confirmed that expected return high relative to dividend, so that dividend yield can vary with expected return.

2. 1.6.2 Dividend Payout Ratio

The dividend payout ratio determines the amount of earnings that can be retained in the firm as a source of financing (Van Horne, et al, 2008). It implies that retaining a greater amount of current earnings in the firm means that less money will be available for dividend payments. Dividend payout ratio itself is total accumulation of annual dividends divided by annual earnings after tax or alternatively could be represented as dividends per share divided by earnings per share. The ratio indicates the percentage of a company's earnings that is paid out to shareholders in cash. It means the dividend payout measures how much profit company gives back to shareholders as a dividend. Dividend payout ratio is used in valuation as a way of estimating dividends in future periods, since most analysts estimate growth in earnings rather than dividends. Therefore, dividend payout indicates how well those earnings support the dividend payment.

2.1.7 Related Factors of Volatility

In addition, it is necessary to prove that the volatility of the share price has relationship with dividend payout ratio and dividend yield. Numerous researchers such as Baskin (1989), Rashid & Rahman (2008), Nazir, Nawas, Anwar & Ahmed (2010), Hussaniey, Mgbame & Chijoke-Mgbame (2011), and Hashemijoo, Ardekani & Younesi (2012) add several factors that can influence the share price volatility in their earlier studies.

They mentioned that size, debt, earnings volatility, and growth can lead to the volatility. Therefore, this study will also enclose some factors as a control variable that can be an indicator of the volatility of share price.

2. 1.7.1 Firm's Size

The larger firms have easier access to external capital market and can borrow on better terms (Kapoor, et al, 2010). They argued that larger firms tend to be more diversified and their cash flow are more regular so that less volatile. In addition, larger the size of firm, the greater availability of free cash flow then greater will be dividend paid (Gupta & Banga, 2010). It indicated that larger firms should be more willing to pay higher dividend. Small firms that are not supposed to be highly diversified in their operations make investors are less interested in these types of firms. They are less interested in the share of these small firms. This could cause of small firms less informed in market and illiquid, so that it can lead to greater of volatility of their shares. Thus, larger firms are generally expected to run lower risks as compared to smaller companies.

2. 1.7.2 Earnings Volatility

According to Dichev & Tang (2008) earnings volatility can arise from two factors such as volatility due to economic shocks and volatility due to problems in the accounting determination of income, and both of these factors reduce the predictability of

earnings. It implies that the reduction of predictability can induce to the risk in market price. Goel and Thalor (2003) affirmed that the greater earnings volatility leads to a bigger informational advantage for informed investors over uninformed investors. When many current shareholders are less informed and may need to trade in the future for liquidity reasons, an increase in the volatility of reported earnings will enhance these shareholders trading losses. This means many shareholders who possess higher expected losses, they really dislike earnings volatility and pay less for firms with higher earnings volatility since high perceived earnings volatility will increase the possibility of the firm going bankrupt and investors usually avoid firms that have large variations in earnings that are viewed as risky. Hereafter, market risk may have impact on the dividend policy of firm. Therefore, earnings volatility is included to ensure the influence of earnings volatility and dividend policy. Nishat (2004) confirmed that firm with high earnings volatility are expected to pay lower dividend and to be viewed as more risky. Dichev & Tang (2008) gave their opinion on earnings volatility, they viewed earnings with low volatility have remarkably high persistence while earnings with high volatility show quick reversion to the mean and little reliable predictability. Nishat (2004) argued that earnings volatility has positive association

with share price volatility. It means that greater earning volatility will lead to greater share price volatility also.

2. 1.7.3 Leverage

In a business relation, leverage links to the use of fixed costs in an attempt to increase profitability. This may arise due to fixed operating costs associated with the production of goods or services, and due to the existence of fixed financing costs in particular, interest on debt. Both of them may inflict the level and variability of the firm's earnings and firm's risk. A firm with high leverage means large fixed payments for external financing, which can substitute for the dividend payment. Thus, high leverage can increase the risk of the firm. Due to direct relationship with capital structure, dividends have a basic place in finance companies. It means, the larger dividends are paid, the lesser amounts will be available to be retained for the entity to pay out the debt, so that if financial leverage increases, the net present value can decrease. This suggests that these decisions must be performed adequately and well planned, since may influence share value. Therefore from the conception demonstrated there should be influence between leverage and share price volatility. Gupta & Banga (2010) suggested that firms would like to pay high dividend if that are less utilizing availability of cash to external financing.

In addition, Schwert (1990) used the parable about leverage and share volatility. He assumed that firm issues debt to buy back half its share, then the volatility of share return will increase since shareholders still endure the most of risk of their asset, while the value of their investment is only half as large. From his explanation, he stated that by increasing financial leverage, the firm also has increased the volatility of share returns. Moreover, investors often are obsessed to borrow to invest in securities with high-expected returns. Nonetheless, if the real returns do not conform to the expectation of investors, then the actual share return will be more or less. At the time when the share return lower from the expected return, hence it will be perceived to be risky. Ultimately, the risk demonstrates as volatility.

2. 1.7.4 Asset's Growth

Growth of assets is investments made with the objective of achieving an investment return such as capital growth and income. These investments can provide much better returns than cash or fixed interest over the longer term. However, they involve more risk and may fluctuate in value quite significantly over periods of time. Gupta & Banga (2010) suggested that firms with high growth rate distribute high dividend in order to please shareholders. It shows that growth opportunities play important role, which is higher growth in profits of firm, higher dividend payments by firm

will be. The company with a more resource economic value that expected can provide future benefit is better than less one, since it can generate more cash flow from firm's operation and increase in the value of the company. This because when buying an asset as an investment, it is important to understand how that asset can be expected to behave in the future. A high or stable growth rate is the noticeable desired outcome. It represented by change of total assets in the ending year to the beginning year that means the percentage allows investors to put their gains in the context of how much money they had to invest to achieve that growth. Moreover, since the lesser of rate of increase in asset's value, it can make to the lesser payment of dividend. Therefore, with the low growth can induce high volatility.

2.2 Review of Previous Study

The issue of dividend policy and share price becomes the intense debate among researchers for several years. Many researchers have documented their work, and provided empirical evidence that support or reject the idea regarding dividend policy and share price. Miller & Modigliani (1961) introduced their argument regarding irrelevant dividend theory. They assumed that dividend policy is irrelevant to shareholders since value of the firm is determined by solely by the earning power of firm's asset and investment decision. According to M & M (1961) with their assumption of perfect market (no taxes, no transaction costs, no floatation costs) noted that shareholders can manufacture their dividend or

homemade shareholders can use the amounts to buy or sell shares up to them without incurring taxes, or other costs, so that the corporate dividend policy would be irrelevant. The irrelevant dividend theory was supported by Black & Scholes (1974) who reported there is no relationship between dividend policy and share price. They found that dividend policy will not influence share price. Another study was done by Uddin & Chowdburry (2005) by selecting 137 companies in Dhaka Stock Exchange; they explained dividend announcement does not provide value gain to shareholders. Their result revealed that shareholders suffering loss of 20 % during thirty days before the announcement and suggested that dividend payment just reimburse the diminished value for several extents. Therefore, they support the theory of irrelevant dividend. Denis & Osobov (2008) empirically examined the trends of company in designing dividend policy. Their findings stated many companies having higher profitability lower profitability do not either to pay dividend or pay at low rate, but it depends on manager and behavior environment of countries to decide whether want to pay dividends or not.

However, some empirical result also performed by numerous researchers to against their irrelevant dividend theory. The earlier study concerned with dividend policy and share price volatility was conducted by Baskin (1989), Allen & Rachim (1996). Baskin found inverse relationship between dividend yield, dividend payout and share price volatility. According to Allen & Rachim (1996) who studied the same topic with Baskin (1989) in Australian market, they argued that paying large amount dividend will reduce the risk, and will influence share price. Allen & Rachim found the negative relationship between dividend payout

and share price volatility. On the other, their result contrary with Baskin (1989), they stated that dividend yield has positive relationship with share price volatility although the relationship is insignificant. Furthermore, Murhadi (2008) study on dividend policy antecedent and its impact on share price in Indonesia. His result reported that dividend policy has positive influence of share price that support of signaling dividend theory. This study in line with the result of Baker & Powel (2009) who conducted mail survey to many companies in Indonesia as primary means for gathering data. They asserted that the effect of dividend policy on share price is important determinants. They also showed that managers of Indonesian company perceive that dividend policy will affect firm value.

Another study related to the relationship dividend policy and share price volatility was executed by Rashid & Rahman (2008), Hussaniey, et al (2011) in the UK stock market. They found that higher dividend yield can lead to the volatility, although the result is insignificant. Then, they revealed that dividend payout has inverse relationship with share price volatility. It can be interpreted that higher dividend payout refers to the stability of firm and reduce the fluctuation in share price. These arguments are supported Asghar, et al (2011), Ilaboya & Aggreth (2013), Habib, et al (2013) who provided the same argument, but contrast with Profilet & Bacon (2013) who found anomalous result that dividend payout can lead the increasing of volatility.

Different researcher can produce the possibility different result. According to Irfan & Nishat (2004), Nazir, et al (2010), Hashemijoo, et al (2012) also conducted study to examine the impact of dividend policy on share price

volatility. Their results showed that higher dividend yield and dividend payout the less share price volatility. They argued that firm with high payment of dividends have less share price variations or in other words tend to be less risky in terms of share price. Their empirical studies are consistent with Baskin (1989) and supported by Kenyoru, et al (2013) from Kenya proved that both of dividend yield and dividend payout inversely associate to share price volatility.

In relation to some control variables included in this study. There are several arguments about the influence of some control variables (size, earnings volatility, debt, and growth) that can affect both dividend policy and share price volatility. From the study was conducted by Hussainey, et al (2011), they found that earnings volatility have inverse influence toward dividend yield and dividend payout, but earnings volatility have positive influence toward share price volatility. It indicates that firm with high volatile of earnings are perceive to be more risky, so that management tend to pay lower dividends. They also suggested that size has significant negative with share price volatility. It means, the larger of the firm, the less volatile of the share prices. On the other hand, they discovered that debt has significant influence with share price volatility. It shows that higher debt of the firm tend to be more volatile the share price will be. Similarly, Hashemijoo, et al (2012) found that firms that have more volatility in their earnings have more volatility in their share since high earnings volatility indicate high risk of firm. Regarding with growth, Ilaboya & Aggreth (2013) attempted to explain about the influence of growth on share price volatility. Their finding suggested that high growth firm will have their share behavior more volatile.

Overall from the result of empirical study done by Irfan & Nishat (2004), Rashid & Rahman (2008), Nazir, et al (2010), Hussaniey, et al (2011), Asghar, et al (2011), Hashemijoo, et al (2012), Profilet & Bacon (2013), Ilaboya & Aggreth (2013), Kenyuru, et al (2013) and Habib, et al (2013) in relation to dividend policy and volatility of share price. In general, based on the empirical study in each country that they are observed, they provided argument that dividend policy effect share price volatility and become the major determinants of share price volatility.

2.3 Theoretical Framework

To provide overview about the study will conducted by researchers. It would be better if researcher gives description in form of theoretical framework to facilitate some ideas that consist of many variables that are employed. In the explanation in form of series of ideas that resembles into conceptual framework. The researcher intends to elaborate and connect the ground, relationship, and impact of independent variables comprised of dividend yield, and dividend payout ratio as well as control variables involve firm's size, earning volatility, leverage, and growth toward dependent variable.

As discussed earlier, some researchers stated that dividend policy is useful to forecast future share price, since the information from dividend policy give a signal for investors about the performance of company. Bhattacharya (1979) argued that the announcement of dividend changes have information content that resulted in the share price reaction. This explains that the information will be used by

investors to assess a signal about the company's prospects in the future. This is due to the presence of asymmetric information between managers and investors, so that investors use dividend policy as an indicator of the company's prospects. In addition, the tendency to distribute the dividend each year, either fixed proportions, or change, will be the information that has a value of its own, which will have an impact on share prices. Most of investors view that higher dividend paid indicates management of the company show their effort in order to maximize shareholder's wealth, since they could set aside part of company's profit to be distributed to shareholders as dividend payment. Meanwhile, lower dividend paid to shareholders, even no dividend payment made, demonstrates that the performance of company is less prospective. Therefore, it suggests a bad signal for investors, and will cause a negative reaction to the drop of share price. Furthermore, many investors expect stable dividend payment because it reflects the boosting of investor confidence in the company, hence reducing the uncertainty of investors to invest their money in the company. In other word, a stable or high dividend payment can mitigate the risk.

The risk that can emerge because of fewer dividends paid is the risk of fluctuation in share price. Several researchers try to investigate the link between dividend policy and share price risk as well as the effect on share price. Share price risk is referred by volatility, and it is usually describe the changing in share price dramatically by the movement without any clear direction in period of time. Hashemijo, et al (2012) affirmed that dividend policy may affect to share price volatility. Their works with dividend yield and dividend payout ratio as proxy for

dividend policy reported that have negative influence on volatility. Based on their empirical findings, it can be defined that higher dividend yield and payout ratio, less volatility in share price. In addition, their works also use some control variables to ensure the possibility influence on share price volatility, namely firm's size, earning volatility, leverage, and growth of assets.

In accordance with prior researchers who attempted to investigate the impact of dividend policy on share price volatility. It can be deduced that a company's dividend policy will affect the share price. In this empirical study, dividend policy will be measured by dividend yield and dividend payout ratio. In addition, for further explanation about the relation both of dividend yield and dividend payout ratio to share price volatility will be deciphered in the formulation of hypothesis.

2.4 Hypothesis Formulation

2.4.1 Dividend Yield and Share Price Volatility

Baskin (1989) in Hashemijo, et al (2012) explained negative impact of dividend yield on share price volatility based on the duration effect, the rate of return effect, the arbitrage effect, and the information effect. Duration effect is share price of company with a high dividend yield will have a slower response to fluctuations on the discount rate as high dividend yield implies a short-term cash flow. Meanwhile, the rate of return is decided if company that has a small proportion of the cash dividend will be assessed as a company that is growing by investors. It

suggests that firm is predicted to gain a profit in the future, but it has over value from expectation. Then, the company will have a change in share price frequently because of the effects of speculation, so that it leads to the greater volatility. Arbitrage is kind of trading strategy designed to take advantage of profit from price differences of identical or similar financial instruments on different markets. This trading emerges from market inefficiency, since it can create discrepancy in value of assets and the opportunity for traders to instantaneously buy low and sell high. Higher dividend yield supposed will lead to higher arbitrage profit because the excess return is subordinated of dividend yield. Lastly, the information itself is a high proportion of cash dividends to can be interpreted about the stability performance of the company.

Similarly, share of firms with high dividend yield are less sensitive to fluctuation in discount rate and would be expected to have lower price volatility. With high dividends yield provides more near term cash flow. It is expected that share price volatility is being affected negatively by dividend yield. Based on the explanation above, the hypotheses formulations are:

H1: Dividend Yield has significantly negative influence on Share Price Volatility

2.4.2 Dividend Payout Ratio and Share Price Volatility

According to Baskin (1989), Irfan & Nishat (2004), Nazir, et al (2010), Hashemijoo, et al (2012) who explained negative impact of dividend payout on share price volatility based on the rate of return and the

information effect. They argued that dividend payout can be used as a proxy for predicted growth and investment opportunities so that firms with higher dividend payout have less volatility in their share price. Rozeff (1982) suggested that beta or index number describing volatility or systematic risk of security has relationship with dividend payout. He argued that higher beta coefficients are related to lower dividends pay out showing that there is a negative association between firm's risk and dividend payout. Furthermore from his work, he stated that since firms with high beta may have higher external financing cost, they are more likely to choose lower dividend payout policy. This argument is also supported by (Hashemijoo, et al, 2012) who explained that high dividend payout can interpret stability of firm and can mitigate the fluctuation of share price. The increase in dividends paid is considered as a favorable signal, giving good signal to the share price reaction. Conversely, a decrease in dividends paid is considered as a signal that the company's prospects are less favorable, giving rise to a negative share price reaction. Based on the explanation above, the hypotheses formulations are:

H2: Dividend Payout Ratio has significantly negative influence on Share Price Volatility

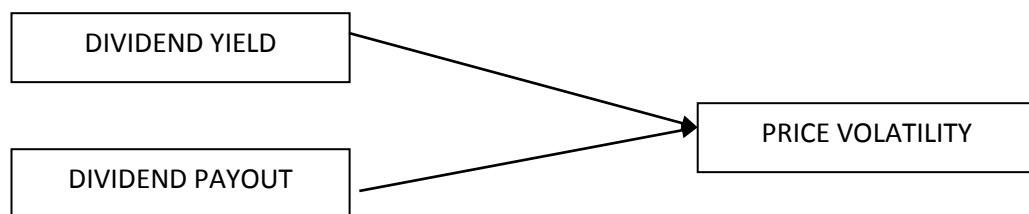
2.5 Research Model

Based on the hypothesis and analysis earlier, this study will be used two independent variable consists of dividend yield and dividend payout ratio, and some control variable encompasses firm's size, earning volatility, leverage, and

asset's growth. Hence, there are two models of research will be used in this study. First model depicts about independent variable (dividend yield, and dividend payout ratio) to dependent variable (share price volatility). Then second model, will depict independent variable (dividend yield, and dividend payout ratio) to dependent variable (share price volatility) with some control variable (firm's size, earnings volatility, leverage, and asset's growth) that can affect dependent variable. Graphically, the model can be drawn as follows.

Figure 2.1
Research Model

First Model



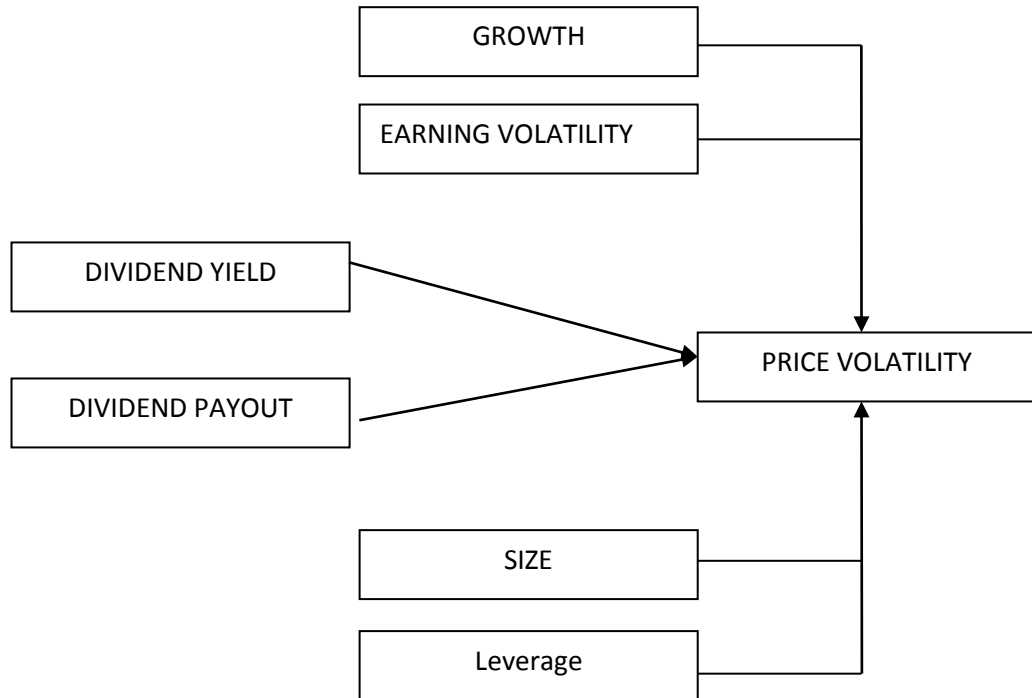
Where:

Dependent Variable : Share Price Volatility

Independent Variable : Dividend Yield, Dividend Payout Ratio

Figure 2.2
Research Model

Second Model



Where:

Dependent Variable : Share Price Volatility

Independent Variable : Dividend Yield, Dividend Payout Ratio

Control Variable : Size, Earning Volatility, Leverage, Growth

CHAPTER III

RESEARCH METHOD

This chapter will present about how this research will be conducted and it will describe about the method that will be used. This chapter covers series of steps that will explain more about research method, population and sample, data resources and collection method, research variables, research model, data analysis method, and hypothesis testing.

3.1 Research Method

A research needs accurate data and proper data collection method. The type of data used is secondary data, which are obtained by the researcher indirectly from intermediary source.

3.2 Population and Sample

The population that will be used for this research contained all manufacturing companies listed in Indonesian Stock Exchange for the year 2007-2012 that submitted financial reports and published them in Indonesian Capital Market Directory (ICMD). This research will use purposive sampling technique in data collection to provide sufficient information. A sample of 77 companies from 149 manufacturing will taken from Indonesian Stock Exchange (IDX) for the period of 2007-2012. These companies are selected which fulfill following criteria:

1. Companies have at least one cash dividend payment during 2007-2012

2. Companies have daily closing share price during 2007- 2012
3. Companies have issued and published audited financial statement consecutively and had data needed during the research from 2007-2012. Data used in this research are company's daily share price, and company's financial statement.

Table 3.1

Sample Selection Procedure

Manufacturing companies listed in IDX in the period 2007-2012	149
Manufacturing companies do not have dividend payment during 2007-2012	(53)
Firms not reported financial statement in IDX in the period 2007-2012	(14)
Firms with missing data or incomplete data	(3)
Does not express in rupiah	(2)
Total Sample	77

Source taken from: Indonesian Stock Exchange

From the criteria above, researcher found 77 manufacturing companies that can be used as research sample. List of sample data is presented in the appendices.

3.3 Data Resources and Collection Method

Data collection was used by seeking available secondary data by collecting data from annual reports of manufacturing companies in IDX corner in the Faculty of Economics, Universitas Islam Indonesia. A literature study methods

also will use to get several literatures related to this study and quoting properly from data sources through some journals, as well as any related sources was published in internet, and library.

3.4 Research Variable

Variable will be used in this study are dependent variable, independent variables, and control variables. Price volatility will be the dependent variable, meanwhile for independent variables comprised of dividend yield and dividend payout. Hereafter, for control variables that will be used are size, earnings volatility, debt, and growth.

3.4.1 Dependent Variable

Dependent variable represents the output or effect that wants to be tested. In this study, dependent variable that will be applied as follows:

1. Price Volatility

Price volatility is the dependent variable in this research. It measures for variation of price of shares over time and for the price volatility itself is derived from Parkinson (1980) extreme value estimation of variability of return. For calculating share price volatility, for each year, the annual range of share price is divided by average of highest and lowest prices obtained in the year and then squared. These average measures of variance for all available years are transformed to a standard deviation by using a square root

transformation. The formula for computing share price volatility is as follows:

$$\sqrt{\frac{\sum_{i=1}^6 (Hi - Li) / \left(\frac{Hi+Li}{2}\right)^2}{6}}$$

Where:

Hi : Highest share price for year I (from 1 to 6)

Li : Lowest share price for year i (from 1 to 6)

3.4.2 Independent Variable

Independent variable is the variable that will affect the dependent variable. It represents the inputs or causes. This study will use following independent variable:

1. Dividend Yield

The dividend yield shows how much a company pays out in dividends each year relative to its share price. It is computed by taking the sum of cash dividends paid to shareholders and then divided by market value of common share of each company in the year. It can also be calculated by dividing dividend per share to the price of share. The formula for computing dividend yield is as follows:

$$\sum_{i=1}^6 \left(\frac{Di/MV}{6} \right) \text{ or } \sum_{i=1}^6 \left(\frac{DPS/SP}{6} \right)$$

Where:

Di : Cash dividend paid to common
shareholders in year I

MV : Market value of firm at the end of year I
(from 1 to 6)

DPS : Dividend per share

SP : Share Price

2. Dividend Payout

The dividend payout represents the percentage of earnings paid to shareholders in dividends. It is computed by dividing the total cash dividend paid to shareholders to net income after tax for each year. It can also be calculated by dividing dividend per share to earnings per share: It is computed based on the following formula:

$$\sum_{i=1}^6 \frac{Di/Ei}{6} \text{ or } \sum_{i=1}^6 \left(\frac{DPS/EPS}{6} \right)$$

Where:

D_i : Cash dividend paid to common
shareholders in year I

E_i : Net income after tax for year I (1 from 6)

DPS : Dividend per share

EPS : Earnings Per Share

3.4.3 Control Variable

Control variable represents the element that is held constantly in order to assess or clarify the relationship between two other variables will be tested. It is the variable that controls both the relationship of independent variables and the dependent variable, and certainly affects the dependent variable. There are four control variables in this study that is comprised of:

1. Size

Size is calculated by taking the average market value of shareholders for available years. Then a transformation of natural logarithm is applied. Size is calculated based on the following formula:

$$\ln(\sum_{i=1}^6 MV_i / 6)$$

Where:

MV_i : The market value of firm at the end
of year I

2. Earning Volatility

Earning Volatility is calculated by dividing operating income or earnings before interest and tax to total asset. Then the results are average of the squared for available years and the average of second power deviation from overall average is computed , a square root transformation is applied to the mean squared deviation to obtain estimates of standard deviation. The formula for calculating earnings volatility is as follows:

$$\sqrt{\frac{\sum_{i=1}^6 (R_i - \bar{R})^2}{6}}$$

Where:

R_i : The ratio of operating income to total asset
for year I

$\bar{R}$: $R_i / 6$ (i from year 1 to 6)

3. Debt

Long-term debt is computed by dividing the sum of all the long-term debt more than one year to total assets for each year. The average of results is used. This variable can be computed based on this following formula:

$$\sum_{i=1}^6 \frac{LDi/ASSETi}{6}$$

Where:

LDi : Long term debt at year-end of year I

(from 1 to 10)

$ASSETi$: Total asset at the end of year I (from 1 to 6)

4. Growth

Growth is computed by dividing the sum the change in total asset at the end of year to total asset at the beginning of year. Then the average of results is used. It can be computed based on this following formula:

$$\frac{\sum_{i=1}^6 \left(\frac{\Delta ASSETi}{ASSETi} \right)}{6}$$

Where:

$\Delta ASSETi$: Change of total asset in year I

(from 1 to 6)

$ASSET_i$: Total asset at beginning of year i

(from 1 to 6)

3.5 Data Analysis Method

Data analysis method is to present about how this research will be conducted and it will elaborate more about the method that will be used. This section will explain more about research method, research subject, research instrument, research variables, research model, research procedures, and technique of data analysis. Furthermore, after all data are computed, the researcher will use IBM SPSS version 21 for statistical data processing because the hypothesis testing is done by the statistical method.

3.5.1 Descriptive Statistics

Descriptive statistics provide a picture or a description of each variable as seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (Ghozali,2011). Standard deviation, variance, maximum, and minimum shows the results of an analysis of the dispersion variables. While the skewness and kurtosis show how the variables are distributed. Variance and standard deviation show the deviation of the average value of variables.

3.5.2 Classical Assumption Test

Multiple regressions can be called as the good model if it is free from classical assumption statistics. Therefore, the classical assumption test is required before performing regression analysis. Classical assumption tests in this research consist of normality, heteroscedasticity test, multicollinearity test, and autocorrelation test.

3.5.2.1 Normality Test

Normality test is used to test whether within the regression model the independent and dependent variable have normality of distribution or not. The good model is having normal distribution or close to normal. A good regression model is to have a residual value, which is normally distributed. Therefore, the normality test was not performed on each variable but the residual value. To prove whether the data distribution is normal the researcher uses normal probability plot and Kolmogorov-Smirnov. Detecting normality can be done by seeing the spread of plots on the diagonal axis of the graph. The basic analyses are as follows:

1. If the data is spread around the diagonal line and follow the direction of the diagonal line, then the regression model has fulfilled the normality assumption.
2. If the data is spread far around the diagonal line and not follow the direction of the diagonal line, then the regression model has not fulfilled the normality assumption.

Further, the statistical test that can be used to test the normality is non-parametric statistical test Kolmogorov-Smirnov (KS). This test is believed to be more accurate than the test for normality with the graph, because the normality test graph can be misleading, if not careful will visually look normal (Ghozali, 2011). K-S test can be done by making hypotheses:

H0: data are not normally distributed

H1: data are normally distributed

Kolmogorov-Smirnov test used a significance level of 0.05. If the asymptotic significance is greater than 0.05, then the variable is normally distributed (Ghozali, 2011).

3.5.2.2 Heteroscedasticity Test

Heteroscedasticity test has the purpose to test whether in regression model has inequality variance from one observation residual to other observation residual. Detecting heteroscedasticity can be done by seeing the plot graphic between prediction values of dependent variable with its residual and see whether any certain pattern on scatter plot graphic or not. The basic analyses are as follows:

1. If there is any certain pattern, like drops and form regular pattern (waving, wide, narrow) then it indicates that there is any heteroscedasticity.

2. If there is no clear pattern and drops spread above and below the 0 number on Y-axis, then there is no heteroscedasticity (Ghozali, 2011).

In addition, detecting heteroscedasticity can be done by using Glejser test. Detection of presence or absence of heteroscedasticity using Glejser Test can be achieved by regressing the independent variables toward absolute residual value (Gujarati, 2004). The equation of this method is:

$$|U_t| = \alpha + \beta X_t + v_t$$

From the equation above, it can be explained that if the independent variable is statistically significant affect the dependent variable, then this suggests that the empirical model of the data contained heteroscedasticity, and vice versa.

3.5.2.3 Multicollinearity Test

The purpose of this test is to see whether on the regression model, there is a high correlation or perfect correlation between independent variables (Ghozali, 2011). A good regression model should not have correlation between independent variable.

Multicollinearity test can be measured using by Variance Inflation Factor (VIF). If $VIF < 10$, the multicollinearity problem does not exist, it means that there is no significant correlation between independent variables in regression model or vice versa (Ghozali, 2011).

3.5.2.4 Autocorrelation Test

Autocorrelation is used to test whether on a regression model there is a correlation between residual errors in the t period and the residual error in $t-1$ period. If there is a correlation then it is called as autocorrelation problem. The autocorrelation problem often occurs the time series data. Autocorrelation test is conducted by using Durbin-Watson test (Ghozali, 211). The detection of autocorrelation using DW test can be seen from following table:

Table 3.2

Durbin-Watson Analysis

Conclusion	Criteria
Positive autocorrelation	$DW < dL$
No conclusion	$dL < DW < dU$
No autocorrelation	$dU < DW < (4 - dU)$
No conclusion	$(4 - dU) < DW < (4 - dL)$
Negative autocorrelation	$DW > (4 - dL)$

3.5.3 Multiple Regression Analysis

The research will use multiple linear regression method to analyze the effect of the independent variables on the dependent variable. Firstly, the share price volatility will be regressed on two key independent

variables. The equation model at the multiple linear regressions can be expressed as follows:

$$P \text{ Vol} = \alpha + \beta_1 DY + \beta_2 DPO + \varepsilon$$

Where:

P Vol : Price Volatility

α : constant coefficient

β_{1-2} : Regression coefficient of independent variable

DY : Dividend Yield

DPO : Dividend Pay Out

ε : Standard error

Furthermore, since firm's size, earning volatility, leverage, and growth can have influence on share price volatility. Then, dependent variable will be regressed on two independent variables and control variables. The equation model at multiple linear regressions can be expressed as follows:

$$P \text{ Vol} = \alpha + \beta_1 DY + \beta_2 DPO + \beta_3 \text{Size} + \beta_4 \text{E Vol} + \beta_5 \text{Lev} + \beta_6 \text{Growth} + \varepsilon$$

Where:

P Vol : Price Volatility

α constant coefficient

β_{1-6} : Regression coefficient of independent variable

DY : Dividend Yield

DPO : Dividend Pay Out

Size : Firm's Size

E Vol : Earnings Volatility

Lev : Leverage / Long Term Debt

Growth : Growth in total asset

ε : Standard error

3.5.4 Hypothesis Testing

To prove whether independent variables affect on the dependent variable, hypothesis testing is conducted. The hypothesis testing can be done by using three statistical tests that are determination coefficient, F-test and T-test.

3.5.2.3 Determination Coefficient (R^2)

Determination coefficient (R^2) is used to measure how good a model can explain variance in the dependent variable. Ghazali (2011) suggested that in analyzing a model, it is better to use the value of adjusted R^2 instead of R^2 because if there is additional

variable, the value of adjusted R^2 will not change. The smaller the value of adjusted R^2 is the lower ability of independent variables to explain variety in the dependent variable.

3.5.2.3 F Test

F test is aimed to show whether all the independent variables used can be fit in the regression model simultaneously or together have an influence towards dependent variable. The F test or ANOVA is performed by comparing the F table value with F count value. In this research, the researcher uses the significant level of 5% ($\alpha=5\%$). Determine the F count value and F table value with the significant level 5%. If F count $>$ F table, then H_0 are rejected, and the independent variables used can be fit in the regression model simultaneously. It can be performed also by seeing significance level. If the probability value (β) is less than α (0.05), then H_0 is rejected and H_1 is accepted.

3.5.2.3 Partially Test

Partially test or t test is a statistical test that establishes a significant mean difference in a variable between two groups (Sekaran, 2003). It is used to determine the significant effect of independent variables (dividend yield, and dividend payout ratio) as well as control variable (size, debt, earnings volatility, and growth) partially affect to the dependent variable (share price

volatility). The partially test or t test is performed by comparing the t table value with t count value. If t count $> t$ table or $-t$ count $< t$ table, then H_0 are rejected. Significance of independent variables to dependent variable shows the probability value (β) from the t test of each independent variable at the significant level of 5% ($\alpha=0.05$). If the probability value (β) is less than α (0.05), then H_0 is rejected and H_1 is accepted.

CHAPTER IV

RESEARCH FINDINGS AND RESULT DISCUSSION

This chapter will explain more about the data selection, data analysis, variables measuring, and interpretation of hypothesis testing. This chapter also comprises of research description, findings, and discussion.

4.1 Research Description

4.1.1 Data Identification and Variable Measurement

Data used in this research were collected from ICMD (Indonesian Capital Market Directory) and company's financial statements at IDX corner in the Faculty of Economics Universitas Islam Indonesia. The researcher used net income after tax, total asset, long debt, operating profit, outstanding shares, cash dividend, highest and lowest share price, and closing share price. The data were taken from the year 2007-2012

As stated earlier, this research involved one dependent variable, two independent variables, and four control variables. The dependent variable is share price volatility while independent variables are dividend yield, dividend payout. This research also used some control variables, which consisted of size, earnings volatility, debt or leverage, and growth.

4.2 Research Findings

4.2.1 Descriptive Statistics

Descriptive statistics is used to observe the characteristics of samples used in a research. Details of samples are shown in the table 4.1. In

this study; the researcher obtained the sample amount, minimum, maximum, mean, and the standard deviation of each variable used. The results of data processed by using SPSS version 21 is as follows:

Table 4.1
Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SPV	77	.3528	1.2334	.785105	.1607213
DY	77	.0014880952381 952	3.73619643768 91100	.0924832254 03722	.429914194160 619
DPR	77	.0129182672642 479	1.35507777777 78700	.2885118353 66272	.246039079071 512
SIZE	77	22.4577	35.1627	28.107822	2.0636779
EVOL	77	.0096	.1310	.036074	.0238746
LEV	77	.0017	.5475	.139371	.1218701
GROWTH	77	-.0414	.3068	.120453	.0666468
Valid N (listwise)	77				

*Source: Data Processed

Based on the descriptive statistics in the table 4.1, the total samples of manufacturing companies used of this study are 77, which are shown by N value. The minimum data shows the smallest value, the maximum data shows the highest value, and mean shows the average value for each variable. Standard deviation is a measure of the dispersion of a set of data from its mean. The broader the data spread, the higher the deviation.

The table 4.1 presented descriptive statistic , which contains 77 manufacturing companies during 2007 until 2012. The depiction and explanation of data obtained are as follows:

1. Share Price Volatility (SPV)

SPV as the dependent variable has a minimum value of 0.3528, a maximum value of 1.2334. It indicates that the lowest frequency fluctuation in share market is 0.3528 and the highest volatility happened in companies is 1.2334. These results reveal that PT Fast Food Indonesia Tbk (FAST) has the lowest volatile among other companies. Seemingly, PT Fast Food Indonesia possesses small frequency of fluctuation in the share price or slight difference between the highest share price and the lowest share price during 2007 until 2012. Subsequently, other companies that have less volatility in their share price after PT Fast Food Indonesia Tbk are PT Unggul Indah Cahaya Tbk (UNIC), PT Sierrad Produce Tbk (SIPD), PT Mandom Indonesia Tbk (TCID), and PT Merck Tbk (MERK). On the other hand, the highest volatility is owned by PT Indospring Tbk (INDS), where the frequency of fluctuation in share price is high. The difference between highest and lowest share price is quite significant that makes this company more volatile. In the next line after PT Indospring, other companies that have prime volatility are PT JAPFA Comfeed Indonesia Tbk (JAPFA), PT FKS Multi Agro Tbk (FISH), and PT Champion Pacific Indonesia Tbk (IGAR).

In addition, the table 4.1 above showed that the average volatility has a mean value of 0.7851 that is almost similar to the result of Ramadhan (2012) 0.7188. This number is relatively close to 1, which implies securities are considered to have chance to be volatile. This because a beta

as historical measure of the risk investors with value of 1 is apprehended as volatile. However, the result reported that it is less than 1, but close to 1, so that shares are presumed to have opportunity to be volatile. Therefore, the risk attaches to change in security's value in investment market is quite moderate. In any case, most companies are sensitive toward change in share price. Besides that, the standard deviation of SPV is 0.16072, which shows that the dispersion of a set of data for SPV is relatively small. In other words, most of companies that used as sample in this study have potentially to sustain volatility in their share price.

2. Dividend Yield (DY)

From the table 4.1 above, it can be seen that companies pay dividend each year relative to its share price at the minimum value of 0.001488, and maximum value of 3.7361. The lowest dividend yield possessed by PT Ricky Putra Globalindo Tbk (RICY). The following companies that have small percentage of dividend yield also possessed by PT Pabrik Kertas Tjiwi Kimia Tbk (TKIM), PT Multisrada Arah Sarana Tbk (MASA), and PT Tiga Pilar Sejahtera Food Tbk. Conversely, the highest dividend yield is held by PT Sepatu Bata Tbk (BATA).

The mean of DY is 0.0924 or (9.24%). This means, most of companies have low dividend yield that can bring to the long-term cash flow. In other word, companies have a small proportion of the cash dividend. The standard deviation is 0.42991. It shows the dispersion of a set of data for DY is high, since the highest dividend yield is 3.7361, while the lowest is

0.001488. It indicates that data have variation among other, or certain companies may have superior dividend yield and other companies have small dividend yield.

3. Dividend Payout Ratio (DPR)

Table 4.1 reported that companies have minimum payout ratio value of 0.01291 and maximum payout ratio value of 1.3550. The lowest value is owned by PT Ricky Putra Globalindo Tbk (RICY). Professedly, this company does not have positive earnings to support dividend payment. It can be noticed from the dividend yield as discuss earlier exhibit that this company also has lowest dividend yield. Certainly, the company pays less cash flow to be distributed to shareholders, as dividend payment or investors seem get few money as return on their investment. At the same time, the highest percentage earnings paid to shareholders held by PT Selamat Sempurna Tbk (SMSM). The second place is occupied by PT Tunas Baru Lampung Tbk (TBLA).

The mean of DPR is 0.2900, it means that most of companies prefer to retain their earnings rather than to distribute to shareholders. In other word, the greater amount of current earnings in the firm means that less money will be available for dividend payments .The standard deviation is 0.2473, which means that the dispersion of DPR is high. It can be seen from the minimum percentage of a company's earnings that is paid out to shareholders in cash is 1.29%, and the maximum is 135 %. It can be

implied that some companies have low dividend payout ratio, while other have high dividend payout ratio.

4. Firm's Size (SIZE)

The average of firm's size is 28.1078, which mean that most of companies are big companies and tend to be highly diversified in their operations. Meanwhile, the standard deviation is 2.0636, which reflect that there is a high dispersion in firm's size data set. It can be seen that the size has highest value among other variables. SIZE has minimum value of 22.4577 which held by PT Sepatu Batu Tbk (BATA) ,and maximum value of 35.1627 which possessed by PT Astra International Indonesia Tbk (ASII). Thus, there are some companies which are big size and some others are small size.

5. Earnings Volatility (EVOL)

The firms take the average risk of their predictability of their earnings at the value of 0.036074 or (3.6%). Earnings with low volatility have remarkably high persistence while earnings with high volatility view as risky. Therefore, overall firms have less volatility in their earnings. The standard deviation of EVOL is 0.23874, which reflect that there is a small dispersion in company's earnings volatility. It can be seen from the result shows that the earnings volatility in the firm at the minimum value of 0.096 or (9.6%) which possessed by PT Pabrik Kertas Tjiwi Kimia Tbk (TKIM) , while the maximum value of 0.1310 or (13.10%) which possessed by PT Multi Bintang Indonesia Tbk (MLBI).

6. Leverage (LEV)

The mean of leverage is 0.139371 or (13.93%). This means that most companies give more portions of debt in equity rather than debt in their financing portfolio. The standard deviation of LEV is 0.12187 or (12.187%) which means that the dispersion of leverage is high. It can be seen from the minimum value of 0.0017 which owned by PT Tembaga Mulia Semanan Tbk (TBMS) and the maximum value of 0.5475 which dominated by PT Pabrik Kertas Tjiwi Kimia Tbk (TKIM). Therefore, company's leverage is not spread evenly where there are some companies, which almost did not use debt to finance their operation while some other companies which almost use debt as their main resource to finance their operation.

7. Asset's Growth (GROWTH)

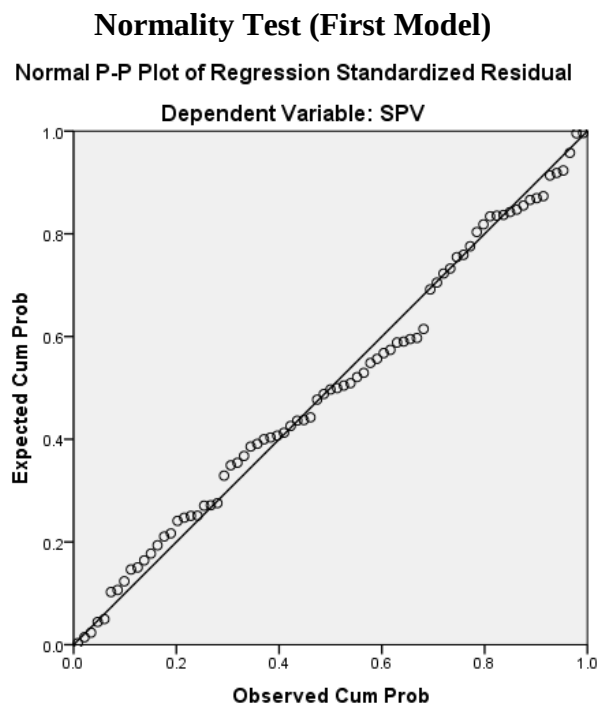
The average growth of firms is 0.12045 or (12.045%) which means most of companies have lower growth in profits. Meanwhile the standard deviation is 0.06664 that the dispersion of GROWTH is quite high. It can be seen from the minimum value which is with minimum liquid of assets that can generated for cash as -.0414 or (-4.14%) held by PT Tunas Ridean Tbk (TURI) and the maximum is 0.3068 which or (30.68 %) held by PT Tiga Sejahtera Food Tbk (AISA). Therefore, the distribution of growth is not spread evenly where some companies generates high profit from their assets, while other gain small probability future benefits or illiquidity from their assets.

4.2.2 Classical Assumption Test

4.2.2.1 Normality Test

Normality test in this research used normal probability plot and Kolmogorov-Sminov test. This test was used in order to know whether the residual of this research data are normally distributed. Based on Ghozali (2011), normality test are aims to test whether in the regression model or residual confounding variables have normal distribution. Here are the results of tests of normality using the normal probability plot, as follows:

Figure 4.1

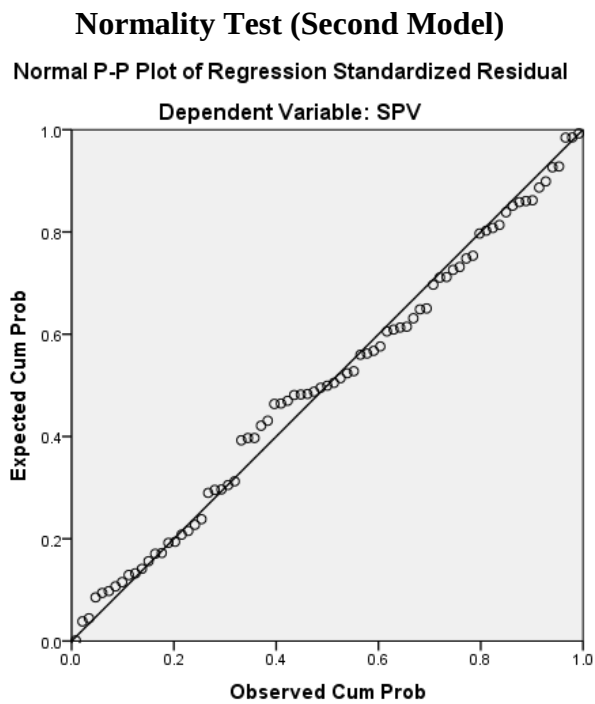


* Source: data processed

From the graph of normal probability plot first model in figure 4.1, it can be seen that the data is spread around the diagonal

line and follow the direction of the diagonal line. Therefore, the regression model is normally distributed.

Figure 4.2



*Source: data processed

From the graph of normal probability plot second model in figure 4.2, it can be seen that the data is spread around the diagonal line and follow the direction of the diagonal line. Thus, the regression model is normally distributed.

In order to prove the consistency result from normal probability plot's graph. The researcher also conducted Kolmogorov-Sminov test. The results of Kolmogorov-Sminov test are as follows:

Table 4.2
Normality Test (First Model)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		77
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.15353826
Most Extreme Differences	Absolute	.077
	Positive	.077
	Negative	-.049
Kolmogorov-Smirnov Z		.675
Asymp. Sig. (2-tailed)		.752

a. Test distribution is Normal.

b. Calculated from data.

*Source: data processed

Table 4.3
Normality Test (Second Model)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		77
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.13974940
Most Extreme Differences	Absolute	.073
	Positive	.045
	Negative	-.073
Kolmogorov-Smirnov Z		.637
Asymp. Sig. (2-tailed)		.812

a. Test distribution is Normal.

b. Calculated from data.

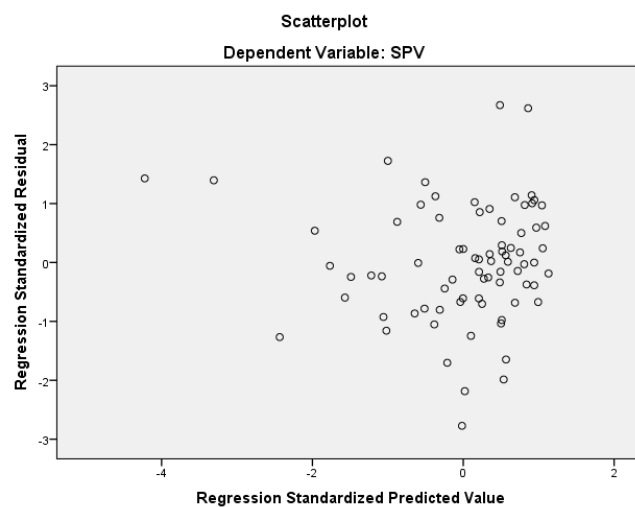
*Source: data processed

From the output generated in the table 4.3 and the table 4.4, it can be interpreted that the result of asymptotic significance in the table is 0.752 which means greater than 0.05. Thus, the data are normally distributed. The same with previously, in the table 4.5 also has asymptotic significance value at 0.812, which means more greater than 0.05. Hence, the data are also normally distributed. The results from Kolmogrov-Smirnov test are in line with normal probability plot.

4.2.2.2 Heteroscedasticity Test

Heteroscedasticity test shows the error or residual model that has no constant variance from one observation to another. The result of the Heteroscedasticity by using scatterplot test can be seen as follows:

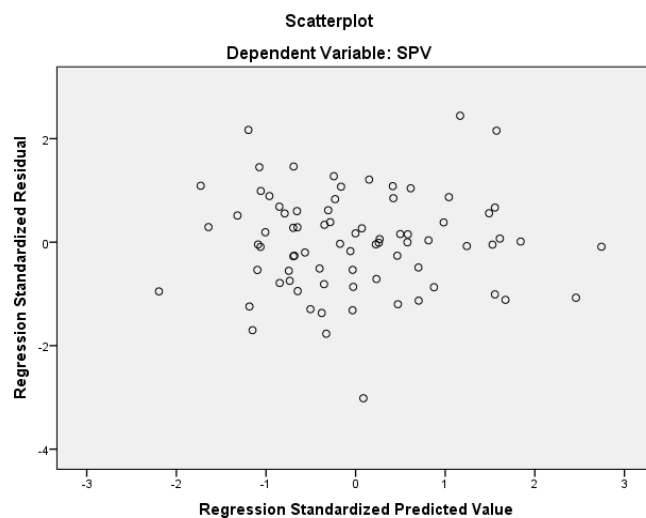
Figure 4.3
Heteroscedasticity Test (First Model)



*Source: Data Processed

From the scatter plot in the figure 4.3 it showed that the plots are spread randomly, either above or under the zero of the vertical axis or Y-axis. Therefore, it can be stated that there is no heteroscedasticity in the regression.

Figure 4.4
Heteroscedasticity Test (Second Model)



*Source: Data Processed

From the scatter plot in the figure 4.4, it showed that the plots are spread randomly, either above or under the zero of the vertical axis or Y-axis. Therefore, it can be stated that there is no heteroscedasticity in the regression.

The other method used in this study to examine presence or absence of heteroscedasticity is Glejser Test. The following are the results of heteroscedasticity test using Glejser Test.

Table 4.4

Result of Glejser Test (First Model)

Variable	Significant Coefficient (Probability Value)	Explanation
DY	0.201	No Heteroscedasticity
DPR	0.132	No Heteroscedasticity

*Source: Data Processed

The information in table 4.4 for first model is about the results of heteroscedasticity test using Glejser test. It shows that probability value for Dividend Yield (DY) is 0.201, and Dividend Payout Ratio (DPR) is 0.132. It indicates that all of the probability value for all independent variables used are more than $\alpha=0.05$, then it can be concluded that there is no heteroscedasticity in the data.

Table 4.5

Result of Glejser Test (First Model)

Variable	Significant Coefficient (Probability Value)	Explanation
DY	0.265	No Heteroscedasticity
DPR	0.105	No Heteroscedasticity
SIZE	0.986	No Heteroscedasticity
EVOL	0.964	No Heteroscedasticity
LEV	0.588	No Heteroscedasticity
GROWTH	0.872	No Heteroscedasticity

*Source: Data Processed

Meanwhile, the information in table 4.5 for second model produces the result where Dividend Yield is 0.265, Dividend Payout Ratio is 0.105, Firm's Size (SIZE) is 0.986, Earnings Volatility (EVOL) is 0.964, Leverage (LEV) is 0.588, and Asset's Growth (GROWTH) is 0.872 . All of the probability value for all independent variables used are more than $\alpha=0.05$, then it can be concluded that there is no heteroscedasticity in the data.

4.2.2.3 Multicollinearity Test

Multicollinearity test aims to see whether on the regression model, the high correlation or perfect correlation between independent variables is found or not. Ghazali (211) mentioned that if the value of Tolerance is more than 0.1 and VIF is less than 10, it indicates that there is no multicollinearity between independent variable. However, when the value of Tolerance is less than 0.1 and VIF is more than 10, it indicates that there is multicollinearity between independent variable.

Table 4.6
Multicollinearity Test (First Model)

Coefficients		
		Collinearity Statistics
Model		Tolerance VIF
1	DY	.998 1.002
	DPR	.998 1.002

*Source: Data Processed

Table 4.6 above showed that all independent variables have Tolerance more than 0.1 and VIF less than 10 (<10). Therefore, it

can be concluded that there is no multicollinearity in the regression model.

Table 4.7
Multicollinearity Test (Second Model)

Coefficients		Collinearity Statistics	
Model		Tolerance	VIF
1	DY	.874	1.145
	DPR	.838	1.194
	SIZE	.770	1.299
	EVOL	.909	1.100
	LEV	.900	1.112
	GROWTH	.859	1.164

*Source: Data Processed

Table 4.7 above showed that all independent variables and control variables have Tolerance more than 0.1 and VIF less than 10 (<10). Therefore, it can be concluded that there is no multicollinearity in the regression model.

4.2.2.4 Autocorrelation Test

Autocorrelation test shows interconnected successive observation one to another. Good regression model indicates that there is no autocorrelation problem. This research used Durbin-Watson test to detect the existence of autocorrelation. In the first model, this research used 77 of total samples in manufacturing company with 2 independent variables. Then, the calculation of the Durbin-Watson tables can be formulated as follows:

Figure 4.5

(First Model)

The boundaries of Autocorrelation with Durbin-Watson Test

Autocorrelation (+)	Unclear Result	No Autocorrelation	Unclear Result	Autocorrelation (-)
0	dL	dU	4-dU	4-dL
	1.6561	1.6036	2.3964	2.3439

*Source: Data Processed

Secondly, in the next model, this research used 77 of total samples in manufacturing company with 2 independent variables and 4 control variables. Then, the calculation of the Durbin-Watson tables can be formulated as follows:

Figure 4.6

The boundaries of Autocorrelation with Durbin-Watson Test

(Second Model)

Autocorrelation (+)	Unclear Result	No Autocorrelation	Unclear Result	Autocorrelation (-)
0	dL	dU	4-dU	4-dL
	1.4950	1.7704	2.2296	2.5050

*Source: Data Processed

The result from Durbin-Watson test can be seen in the following table, which computes by using IBM SPSS 21 version, and generates DW value as follows:

Table 4.8
Autocorrelation Test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.296	.087	.063	.1555993	1.988
2	.494	.244	.179	.1456155	1.841

*Source: Data Processed

Based on the auto correlation test result (in table 4.8), it is found that the first model has the value of Durbin-Watson is equal to 1.988. This value is in between 1.6036-2.3964 (see figure 4.5) which can be concluded that there is no autocorrelation problem in this regression model. Then, the second model shows (Table 4.8) the value of Durbin-Watson is equal to 1.841. This value is also in between 1.7704-2.2296 (see figure 4.6). Thus, it can be concluded that there is no autocorrelation problem in this regression model

4.2.3 Multiple Regression Analysis

Multiple regression analysis is used to test the ability of independent variable (dividend yield, and dividend payout ratio), and control variable (size, debt, earnings volatility, and growth) to

influence dependent variable (share price volatility). The researcher used two types of regression model as follows:

First regression model is the share price volatility will be regressed on two key independent variables with the following equation:

$$P \text{ Vol} = \alpha + \beta_1 DY + \beta_2 DPO + \varepsilon$$

Where:

P Vol : Price Volatility

α : constant coefficient

β_{1-2} : Regression coefficient of independent variable

DY : Dividend Yield

DPO : Dividend Pay Out

ε : Standard error

The calculation of multiple regressions is done by using IBM SPSS version 21. The result of the multiple regressions is shown in the table as follows:

Table 4.9

Summary of Regression Estimation (First Model)

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.841	.028		30.502	.000
DY	-.021	.042	-.055	-.495	.622
DPR	-.188	.073	-.288	-2.589	.012

*Source: Data Processed

The first multiple regression models and the result of analysis show in Table 4.9 then the regression equation based on the results can be stated in the following equation:

$$SPV = 0.841 - 0.021DY - 0.188DPR + \varepsilon$$

The equation shows that share price volatility is influenced by dividend yield, and dividend payout ratio. Based on the multiple regression equation above, it can be interpreted as follows:

- a. The intercept $\alpha = 0.841$; it means if independent variables in this research have zero value, or there are no dividend payment through percentage of dividend yield, and dividend yield, then the value of share price volatility is 0.84.
- b. The coefficient of $\beta_1 = -0.021$; it means that if dividend yield increases by 1 point, then share price volatility will decrease by 0.021, with the assumption that the other independent variables from the regression model remains constant.

- c. The coefficient of $\beta_3 = -0.188$; it means that if dividend payout ratio increases by 1 point, then share price volatility will decrease by 0.188, with the assumption that the other independent variables from the regression model remains constant.

Second regression model is the share price volatility will be regressed against on the two independent variables and four control variables with the following equation:

$$P \text{ Vol} = \alpha + \beta_1 \text{ DY} + \beta_2 \text{ DPO} + \beta_3 \text{ Size} + \beta_4 \text{ E Vol} + \beta_5 \text{ Lev} + \beta_6 \text{ Growth} + \varepsilon$$

Where:

P Vol : Price Volatility

α : constant coefficient

β_{1-6} : Regression coefficient of independent variable

DY : Dividend Yield

DPO : Dividend Pay Out

Size : Firm's Size

E Vol : Earnings Volatility

Lev : Leverage / Long Term Debt

Growth : Growth in total asset

ε : Standard error

The calculation of multiple regressions is done by using IBM SPSS version 21. The result of the multiple regressions is shown in the table as follows:

Table 4.10
Summary of Regression Estimation (Second Model)

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.706	.248		2.846	.006
DY	-.002	.042	-.005	-.046	.963
DPR	-.163	.074	-.250	-2.204	.031
SIZE	-.001	.009	-.019	-.162	.871
EVOL	1.816	.734	.270	2.475	.016
LEV	.394	.145	.299	2.749	.008
GROWTH	.401	.270	.166	1.484	.142

*Source: Data Processed

The second multiple regression models and the result of analysis show in Table 4.10, then the regression equation based on the results can be in the following:

$$SPV = 0.706 - 0.002DY - 0.163DPR - 0.001SIZE + 1.816EVOL + 0.394LEV + 0.401GROWTH + \varepsilon$$

The equation shows that share price volatility is not only influenced by dividend yield, and dividend payout ratio, but also there is possibility influence from others. Therefore, some control

variables such as size, earnings volatility, leverage, and growth were included this study. Based on the multiple regression equation above, it can be interpreted as follows:

- a. The intercept $\alpha = 0.706$, it shows that if independent variables and control in this research have zero value, or there are no activity from dividend payment which measured by dividend yield, and dividend payout, as well as there are no large companies, no potential changes on the net income, no risk associated financial leverage no operational growth then the value of share price volatility is 0.706.
- b. The coefficient of $\beta_1 = -0.002$; it shows that if dividend yield increases by 1 point, then share price volatility will decrease by 0.002, with the assumption that the other independent variables from the regression model remains constant.
- c. The coefficient of $\beta_2 = -0.163$, it shows that if dividend payout ratio increases by 1 point, then share price volatility will decrease by 0.163, with the assumption that the other independent variables from the regression model remains constant.
- d. The coefficient of $\beta_3 = -0.001$, it shows that if firm's size increases by 1 point, then share price volatility will decrease

by 0.001, with the assumption that the other independent variables from the regression model remains constant.

- e. The coefficient of $\beta_4 = 1.816$; it shows that if earnings volatility increases by 1 point, then share price volatility will increase by 1.816, with the assumption that the other independent variables from the regression model remains constant.
- f. The coefficient of $\beta_5 = 0.394$; it shows that if leverage increases by 1 point, then share price volatility will decrease by 0.394, with the assumption that the other independent variables from the regression model remains constant.
- g. The coefficient of $\beta_6 = 0.401$; it shows that if growth in assets increases by 1 point, then share price volatility will increase by 0.401, with the assumption that the other independent variables from the regression model remains constant.

4.2.4 Hypothesis Testing

4.2.4.1 Determination Coefficient (R^2)

Based on the calculation of multiple regression analysis by using IBM SPSS 21 version, the result of the determination coefficient (R^2) can be seen on the table 4.6 as follows:

Table 4.11
Determination Coefficient (R^2) (First Model)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.296	.087	.063	.1555993

*Source: Data Processed

It can be seen from the table 4.11 above that the value of adjusted square of the first model is 0.063 or 6.3%. It means that this model can explain 6.3% variance in dependent variable. In other words, share price volatility affected by dividend yield, and dividend payout ratio is only 6.3%. Meanwhile 93.7% is influenced by other variables, which are not observed or included in this research.

Table 4.12
Determination Coefficient (R^2) (Second Model)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494	.244	.179	.1456155

*Source: Data Processed

Further, it can be seen from the table 4.12 above that the second model has value of adjusted square 0.179 or 17.9%. It means that this model can explain 17.9% variance in dependent variable. In other words, share price volatility is affected by independent variable (dividend yield, and dividend payout ratio) and control variable (size, debt, earnings volatility, and growth) is

only 17.9%. Meanwhile, 82.1 is influenced by other variables, which are not observed or included in this research. The reason why the researcher used adjusted R square value is because if there is an additional variable, the value of adjusted R^2 will not change.

4.2.4.2 F-Test

F test has a purpose to test whether all independent variables can fit in the regression model simultaneously or together have an influence towards dependent variable. Based on the calculation of multiple regression analysis by using IBM SPSS 21 version, the result of the F-test can be seen on the table as follows:

Table 4.13

F-Test (First Model)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.172	2	.086	3.543	.034
Residual	1.792	74	.024		
Total	1.962	76			

*Source: Data Processed

It can be seen from the table 4.13 above that F count value is 3.540. F count value can be compared with F table ($\alpha=5\%$). If F count is greater than F table, then it can be concluded that the first model is good to be used to describe variables that may affect the dependent. From the information in the table 4.13, the value of F count is 3.543, while F table is 3.1203. It means that the value of F count is greater than F table. Another decision can be made by

looking at the significant value. The significant value is 0.034, which means less than 0.05. It can be concluded that dividend yield, and dividend payout affect the share price volatility.

Table 4.14
F-Test (Second Model)

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.479	6	.080	3.764	.003
Residual	1.484	70	.021		
Total	1.963	76			

*Source: Data Processed

Subsequently, the second mode is by adding some control variables. It can be seen from the table 4.14 above that F count value is 3.764, which can be compared with F table ($\alpha=5\%$). By comparing F count with F table, the conclusion can drawn whether both independent variable and control variable influence the dependent variable. From the information in the table 4.14, the value of F count is 3.764, while F table is 2.231. It means that the value of F count is greater than F table. Another decision can be made by looking the significant value. The significant value is 0.03, which means less than 0.05. It can be concluded that dividend yield, dividend payout as independent variable, and size, earnings volatility, leverage, and growth as control variable affect to the share price volatility.

4.2.4.3 Partially Test

The researcher used partially test or *t* test to verify the research hypotheses. This test is aimed to determine the significant influence of independent variables (dividend yield, dividend payout), and control variable (size, earnings volatility, leverage, growth) toward the dependent variable (share price volatility) partially. Based on the calculation of multiple regression analysis by using IBM SPSS 21 version, the result of the T-test can be seen on the table as follows:

Table 4.15

Partially Test (First Model)

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.841	.028		30.502	.000
DY	-.021	.042	-.055	-.495	.622
DPR	-.188	.073	-.288	-2.589	.012

*Source: Data Processed

a. H_1 : Dividend Yield has significantly negative influence on Share Price Volatility.

Based on the information in the table 4.15, dividend yield (DY) has significance level of 0.622, which means more than significance level of 0.05 with the coefficient value of -0.021. Moreover, the *t* count also shows the value of -0.495, while *t* table has the value of -1.992. It means that – *t* count has greater value than – *t* table. The decision-

making can be made is H01 failed to reject, while Ha1 rejected. The result shows that there is negative insignificant influence between dividend yield and share price volatility. In other words, from the statistical result, dividend yield does not influence share price volatility.

b. H₂ : Dividend Payout Ratio has significantly negative influence on Share Price Volatility.

Based on the information in the table 4.15, dividend payout ratio (DPR) has significance level of 0.012, which means less than significance level of 0.05 with the coefficient value of -0.188. Moreover, the *t* count also shows the value of -2.588, while *t* table has the value of -1.992. It means that – *t* count has smaller value than – *t* table. Therefore the decision is H02 rejected, while Ha1 accepted. The result shows there is negative significant influence between dividend payout ratio and share price volatility. In other words, from the statistical result, it is proved that when dividend payout ratio increases, share price volatility will decrease.

Below here are the results of hypothesis testing for the first model, where, dependent variable (share price volatility) was regressed against the two primary independent variables (dividend yield, and dividend payout) :

Table 4.16**The Results of Hypothesis Testing (First Model)**

	Hypothesis	Results
H1	Dividend Yield has significantly negative influence on Share Price Volatility	Not Proven
H2	Dividend Payout Ratio has significantly negative influence on Share Price Volatility	Proven

Table 4.17**Partially Test (Second Model)**

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.706	.248		2.846	.006
DY	-.002	.042	-.005	-.046	.963
DPR	-.163	.074	-.250	-2.204	.031
SIZE	-.001	.009	-.019	-.162	.871
EVOL	1.816	.734	.270	2.475	.016
LEV	.394	.145	.299	2.749	.008
GROWTH	.401	.270	.166	1.484	.142

*Source: Data Processed

- a. H₁ : Dividend Yield has significantly negative influence on Share Price Volatility.**

Based on the information in the table 4.17, dividend yield (DY) has significance level of 0.963, which means that it is more than significance level of 0.05. The result still remains insignificant with

previous result, although the researcher has put some control variables. Even, the coefficient value dropped to -0.002. Moreover, the t count also shows that the value of -0.046, while t table has the value of -1.994. It means that $-t$ count has greater value than $-t$ table. Therefore, H_{01} failed to reject, while H_{a1} is rejected. The result shows there is negative insignificant influence between dividend yield and share price volatility. In other words, from the statistical result, dividend yield does not significantly influence share price volatility.

b. H_2 : Dividend Payout Ratio has significantly negative influence on Share Price Volatility.

Based on the information in the table 4.17, dividend payout ratio (DPR) has significance level of 0.031, which means less than significance level of 0.05 with the coefficient value of -0.163. Moreover, the t count also shows the value of -2.204, while t table has the value of -1.994. It means that $-t$ count has smaller value than $-t$ table. Therefore the decision is H_{02} rejected, while H_{a1} accepted. The result shows there is negative significant influence between dividend payout ratio and share price volatility. In other words, from the statistical result, when dividend payout ratio increases, share price volatility will decrease.

c. Partially Test of Control Variable

The researcher used some control variables such as size, earnings volatility, leverage, and growth to examine the possibility of them to

influence share price volatility. According to the table 4.18, only earnings volatility and leverage that have significant influence on share price volatility. The result shows that earnings volatility has significance level of 0.16 in which less than 0.05 with coefficient 1.816. Afterwards, leverage also has significance level of 0.08 in which less than 0.05 with coefficient 0.394. It can emphasized that both of them have significant influence on share price volatility. When earnings volatility and leverage increase, then share price volatility will also increase.

Other control variables do not show the significant influence on share price volatility. Size shows insignificant negative influence on share price volatility, while growth has insignificant positive influence. Both of them have significance level 0.871 , and 0.142 with coefficient -0.01 , and 0.401 respectively. The results show that the significance value either size or growth are less than 0.05. It means that size and growth do not have significant influence on share price volatility.

Below are the results of hypothesis testing for the second model after putting control variable, where dependent variable (share price volatility) was regressed against the two primary independent variables (dividend yield, and dividend payout) and four control variables (size, earnings volatility, leverage, and growth):

Table 4.18

The Results of Hypothesis Testing

1	Size has not significantly negative influence on share price volatility
2	Earnings Volatility has significantly positive influence on share price volatility
3	Leverage has significantly positive influence on share price volatility
4	Growth has not significantly positive influence on share price volatility

4.3 Research Discussion

In this section will discuss about the result that the researcher found. Moreover, the researcher will explain and highlight the findings related to the previous research. Beforehand, the researcher will give a brief explanation about how to determine significance level in order to ensure whether independent variable affect dependent variable or not, and to prove the hypothesis testing.

First of all, the significance influence of the independent variables to the dependent variable can be determined by using the probability approach (ρ -value approach) and compared t count with t table. The ρ -value approach compares the ρ -value of each coefficient of independent variables from t test statistic with the significant level (α). In this research, the researcher used $\alpha = 5\%$. If the ρ -value of

each coefficient of independent variable from the t-test statistics is equal to or lower than 5% and the value of t count is greater than t table or $-t$ count is smaller than $-t$ table, then the result stated that H_0 is rejected and H_a is accepted. In other words the independent variable has a significant influence to the dependent variable. Conversely, if the p -value of independent variable from the t-test statistic is greater than α value of t count is smaller than t table or $-t$ count is greater than $-t$ table, then the result stated that H_0 is accepted and H_a is rejected. In other words, the independent variable does not have a significant influence on dependent variable.

Secondly, from the data testing and explanation earlier, the result can be interpreted as follows :

4. .3.1 Dividend Yield and Share Price Volatility

Based on the findings, it shows that dividend yield has negative impact on share price at significance level of 0.622. It means that this value indicates that dividend yield does not have significant influence towards volatility of share. Previous research found by Baskin (1989), Nishat & Irfan (2004), Hashemijoo, et al (2012), that dividend yield has strong association with price volatility. Next, the control variables were added to see if there would be any change in the significance level of dividend yield, but the result remain the same which is insignificant. From the empirical study conducted by Rashid & Rahman (2008), Hussainey, et al (2011), Kenyuru, et al (2013) found that dividend yield has positive impact on share price volatility at significance level of 0,523, 0.412, and

0.124 respectively. However, the results show that the influence is insignificant or stipulate that dividend yield has no significant effect. Dividend yield itself is the percentage of dividend per share as numerator divided share price as denominator. Theoretically, if the percentage dividend yield getting higher, the share price goes down then dividend goes up, so that typically companies try to maintain same dividend yield year over year to face this situation. Further, if the share price is high, company can distribute high amount of dividend in order to maintain dividend yield.

As shown in the table 4.15 and table 4.17, it can be seen that the decrease in volatility is just 0.021 for the first model, and 0.002 for the second model, when dividend yield increased one value. It implies that dividend yield does not guarantee for the sensitivity change in share price. This result support the argument of (Black & Scholes, 1974) who denoted that there is no significant association between dividend yield and expected return. It infers that from their findings report there is no proof that vary dividend yield will lead to change in share price.

From the empirical result, it can be sized up that most of manufacturing companies in Indonesia may not change volatility of their share price by dividend yield. Although the result is in contrary with expectation and prior research, it can be implied that most of companies have stable dividend yield percentage in order to hold the change in share price. Then, both of managers and shareholders will not concern too much

about risk in investment market, since there is another parameter that must be considered as a device to control volatility.

4. .3.2 Dividend Payout Ratio and Share Price Volatility

From previous discussion stated there is another parameter that can be used to control volatility of share price. According to Hussainey, et al (2011) who suggested that dividend payout ratio is the main determinant of the volatility, since the higher payout ratio, the less volatile a share price. This finding is also in line with Rashid & Rahman (2008), Nazir, et al (2010), Hashemijoo, et al (2012) who found that dividend payout ratio has significant impact on the share price volatility. The information in the table 4.15 and 4.17 showed that dividend payout can influence volatility at the significance level of 0.12 and 0.38, as well as dividend payout will influence -0.189, and -0.151 toward share price volatility. The result confirmed the expectation where the company with higher dividend payout, will have small risk of volatile. In other words, the finding suggested that managers of the company may employ dividend payout ratio as parameter to mitigate the fluctuation of share as a result from volatility. Moreover, according to Kenyuru, et al (2013), payout ratio will reduce price volatility due to high confined of the managers of the firm in both the stability and increase in the firms' future earnings.

4. .3.3 Related Factors (Size, Earnings Volatility, Leverage, Growth) and Share Price Volatility

4. 3.3.1 Firm's Size

The regression analysis result for firm's size showed that there was negatively (-0.010) insignificant (p value = 0.242) influence on share price volatility. This finding support the previous researches by Rashid & Rahman (2008) Ilaboya & Aggreth (2013) which found that firm's size has negative influence toward share price volatility at an insignificant value. Although the result is in contrary with Hashemijoo, et al (2012) who found that firm's size has inverse significant influence on volatility, it can be indicated that neither small companies nor big companies may not concern about volatility. In other word, it does not guarantee that the market capitalization of companies increase and the volatility of their share price will significantly decrease.

4. 3.3.1 Earnings Volatility

Based on the findings, it shows that earnings volatility has a positive (1.789) and significant (p value = 0.16) influence toward share price volatility. This result confirms the expectation that companies whose higher volatility in their earnings or earnings fluctuate dramatically from huge profits to great losses, creating high variance in earnings, so that it can lead to the higher volatility in their share. It suggests that reduction of predictability earnings or large variations in earning of firms can lead to risk in the market price. In other words, shares with more stable earnings are less risky and generate less volatile returns for shareholders. This finding is

consistent with prior research conducted by Hussainey, et al (2011), and Hashemijoo, et al (2012) which stated firms with volatile earnings perceive to be more risky. To alleviate the affliction from earnings volatility, firms may make strategy by diversifying their businesses into multiple businesses. It allows that higher income in some businesses will compensate for lower income in others.

4. 3.3.1 Leverage

Based on the regression analysis result, leverage has a positive (0.465) significant (p value = 0.08) influence toward share price volatility. This finding is still consistent with the result of Hussainey, et al (2011), and Hashemijoo, et al (2012) suggesting that the more leverage in a firm, the more volatile the share will be. In addition, this finding is also supported by Nishat & Rahman (2004), and Ilaboya & Aggreth (2013) who found that leverage has positive and significant impact on volatility. Apparently, when firms have balance retain earnings and dividend payment, it can be the ideal things. Otherwise when firms have larger amount to retain in order to settle debt, the lesser amount will be available for dividend to be paid. Hence it could be signal of a financial risk that can influence on share value and result in fluctuation of share price. In other words, it can be implied that companies with high leverage means have large fixed payments for external financing. Therefore, it can induce the increasing of volatility in their share price. To avoid share

price risk increase managers should control their firm financing by means of debt.

4. 3.3.1 Asset's Growth

In accordance with the regression analysis result, it can be seen that asset's growth has a positive (0.470) insignificant (p value = 0.74) influence on share price volatility. Several previous researchers such as Nishat & Rahman (2004), Hussainey, et al (2011), Hashemijoo, et al (2012) obtained the result from their empirical study proving that high growth in company asset did not reduce the volatility in the company's share price. This finding is beyond the expectation that high asset's growth will have potential to generate more return in investment so that company can distribute high amount of dividend. Therefore, it can minimize the volatility. Conversely, the result implies that most companies with higher growth in asset can be potentially struck by volatility. It can happen since managers presumably careless in maintaining asset, so that it can arise less value of investment from asset and the company can be perceived to be more risky in volatility.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

In this chapter, the researcher will summarize the conclusions of the research, elaborate the implication, limitations of the research, and also give some recommendations for any related following and future research.

5.1 Conclusions

The research result was analyzed by using multiple regression analysis, determination coefficient, F-test, and partially test or t-test regarding the influence of dividend yield, and dividend payout ratio on share price volatility, as well as the possibility influence from some control variables such as firm's size earnings volatility, leverage, and asset's growth on share price volatility in 77 manufacturing companies for the period of 2007-2012. It can be concluded that only dividend payout ratio has negative influence on share price volatility as well as earnings volatility and leverage show positive and significant influence on share price volatility. The followings are the conclusion for each variable.

1. Dividend yield showed negative influence on share price volatility, and statistic point of view the result report that dividend yield does not have significant impact on share price volatility. The probable reason may arise because company try to maintain how much a dividend paid each year based on its share price or if it is paying relatively stable dividend yields.

2. Dividend payout ratio has negative and significant influence on share price volatility, which means that the increasing of payout ratio will lead to the decreasing volatility. It implies how well earnings from company support the dividend payments tend to have a higher payout ratio, and what can cause to have lower volatility.
3. In addition, some control variables were added in regression equation. Earnings volatility and leverage confirmed that both of them have positive and significant influence on share price volatility. It indicates that higher leverage and earnings volatility cause higher volatility of share price. On the other hand, the rest of control variables such as size, and asset's growth also show insignificant result toward volatility.

5.2 Implications

The findings about the impact of dividend policy on share price volatility were measured by dividend yield and dividend payout ratio as a proxy for dividend policy, and by putting some control variables comprised of firm's size, earnings volatility, leverage, and growth of assets that may provide certain contributions and implications. Essentially, investors should not worry about and focus on the amount of risk in share price but rather on how risky it is relative to the market portfolio. Based on the research findings and result of hypothesis testing, only dividend payout ratio has negatively influence on share price volatility. Besides that, earnings volatility and leverage also reported that both of them have positive impact on volatility. It means that they may affect volatility of

share price. Therefore, investor may use dividend payout ratio as a device to mitigate volatility or risk in the investment as a result from uncertainty fluctuation share market. In addition, investors also must consider about the impact of earnings volatility and leverage that may have possibility influence on volatility as higher earnings volatility and leverage might generate higher volatility too.

5.3 Limitations

This research has some limitations, such as:

1. The sample of this research is only manufacturing companies, so that the result findings of the study are limited only to manufacturing companies.
2. The length of time for observation period is relatively short since it only examined the data for four years (2007-2012). Therefore, the research results have not really reflected the real phenomenon.
3. Most of manufacturing companies during 2012 did not undertake dividend payment. This would suggest that this study is lacking of evidence about the impact of dividend policy on share price volatility since several companies do not declare dividend at that time. In addition, the use of some control variables including firm's size, earnings volatility, leverage, and growth of asset are still considered insufficient to elucidate the possible impact of them toward volatility. It arises since the endowment for both independent variable and control variables on share price volatility were just reported at 17.9%, while others are still influenced by unobservable factors.

4. As criticized earlier, there are external factor such as economic recession, inflation, monetary policy, ownership structure and other financial factors, which are not examined by the researcher, which sometimes may give significant influence to the findings results.

5.4 Recommendations

Based on the conclusions and limitations above, then the recommendations for future research are as follows:

1. The future research should also use sectors other than manufacturing so that the researcher may get wide knowledge on how dividend policy may affect share price volatility. Moreover, the future researcher might use other control variables to ensure the likelihood of influence on the risk fluctuation of share price and to determine the factors that can motivate volatility.
2. The observation period should be extended in the forthcoming research so that the result of the research will really reflect the real phenomenon and the result of the research will be better.
3. Future research may add other variables in order to describe about what factors that may influence volatility or as a determinant of the risk of change in share price. In addition, future research might apply different statistical testing method such as using panel data or add other regression equation model in order to examine the impact of dividend policy on share price volatility and to get more accurate result.

4. The next research should be more aware and mindful about external factor existence such as economic recession, inflation, ownership structure and monetary policy as the external factor that may cause significant effects on research findings.

REFERENCES

- Afza, Talat. , Mirza, Hasan. H. (2010), "Ownership Structure and Cash Flows As Determinants of Corporate Dividend Policy in Pakistan", *International Business Research*, Vol. 3, No. 3.
- Ahmed, H. & Javid, A. (2009), "Dynamics and Determinants of Dividend Policy in Pakistan", *International Journal of Finance and Economics*, Vol. 25, pp. 148-171.
- Al-Malkawi, H. A. N. (2007), "Determinants of Dividend Policy in Jordan: An Application of the Tobit Model", *Journal of Economic & Administrative Science*, Vol. 23, No. 2.
- Al-Malkawi, H. N., Rafferty, M. and Pillai, R. (2010), "Dividend Policy: A Review of Theories and Empirical Evidence", *International Bulletin Business and Administration*, ISSN: 1451-243X Issue 9.
- Allen, D.E. and Rachim, V.S. (1996), "Dividend policy and stock price volatility: Australian evidence", *Applied Financial Economics*. Vol. 6, No. 2, pp. 175-188
- Ambrosio, Frank. J. and Kinniry, Francis. M. (2008), "Stock Market Volatility Measures in Perspective", *Vanguard Investment Counseling & Research*.
- Arnold, G. (2008). *Corporate financial management*. London : Financial Times Pitman Publishing.
- Asghar, Muhammad, Syed. Z. Ali. S, Khasif. H. and Suleman, M. T. (2011), "Impact of Dividend Policy on Stock Price Risk: Empirical Evidence From Equity Market of Pakistan", *Far East Journal of Psychology and Business*, Vol. 4, No. 1.
- Azhagaiah, R. and Priya, S. (2008), "The Impact of Dividend Policy on Shareholder's Wealth", *International Research Journal of Finance and Economics*, ISSN 1450-2887 Issue 20.
- Baker, H. K. and Powel, Gary. E. (1999), "How corporate managers view dividend policy", *Quarterly Journal of Economics and Business*, Vol 38. pp. 17-35.
- Baker, H. K. and Powell, Gary. E. (2009), "Dividend policy in Indonesia: survey evidence from executives", *Journal Of Asia Business Studies*, Vol. 6, No. 1, pp. 79-92.
- Baskin, Jonathan. (1989), "Dividend policy and the volatility of common stock", *Journal of Portfolio Management*, Vol. 15, Issue 3.

- Bhattacharya, Sudipto. (1979), "Imperfect Information, Dividend Policy, and The Bird-in-the-Hand Fallacy", *The Bell Journal of Economics*, Vol. 10, No.1, pp. 259-270.
- Black, Fischer. , Scholes, Myron. (1974), "The Effect of Dividend Yield and Dividend Policy on Common Stock Prices and Returns", *Journal of Financial Economics*, Vol. 1, No. 1, pp. 22.
- Brigham, Eugene. F., Michael. C. E. (2002). *Financial Management Theory and Practice*. 10th ed. Orlando, Florida. Harcourt College Publisher.
- Denis, D. J., and Ososbov, I. (2008), "Why Do Firms Pay Dividends? International Evidence on The Determinants of Dividend Policy", *Journal of Financial Economics*, Vol. 89, No. 1, pp. 62-82.
- Dhanani, A. (2005), "Corporate Dividend Policy: The Views of British Financial Managers", *Journal of Business Finance & Accounting*, Vol. 37, No. 8, pp. 1625-1672.
- Dichev, Illia. D. and Tang, Wei. V. (2008), *Earnings volatility and earnings predictability*, Vol. 67, No.1, pp. 81-160.
- Easterbrook, F. H. (1984), "Two agency cost explanations of dividends", *The American Economic Review*, Vol. 74, pp. 650-659.
- Fama, Eugene. F. and French, Kenneth. R. (1988), "Dividend Yields and Expected Stock Returns", *Journal of Financial Economics*, Vol. 22, pp. 3-25.
- Ghozali, I. (2011). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 19*. 5th Edition. Semarang: Badan Penerbit Universitas Diponegoro.
- Goel, M. A. and Thakor. A. V. (2003), "Why Do Firms Smooth Earnings?", *Journal of Business*, Vol.76, No. 1, pp. 151-192.
- Gordon, M. J. (1962), *The Investment , Financing, and Valuation of the Corporation*. Homewood, Illinois: Irwin Publishers.
- Grouard, M. H., Levy. S. and Lubochinsky. C. (2013), "Stock market volatility: from empirical data to their interpretation", *Banque de France. FSR*.
- Gujarati, D. (2004). *Basic Econometric*. New York. Mc-Graw Hill.
- Gupta, Amitabh. , Banga, Charu. (2010), "The Determinants of Corporate Dividend Policy", *Decision*, Vol. 37, No. 2
- Habib, Yasir, Kiani, Z. I., Khan, M. A. (2012), "Dividend Policy and Share Price Volatility : Evidence from Pakistan", *Global Journal of Management and Business Research*, Vol. 12, No. 5.

- Hashemijoo, Mohammad, Ardekani, Aref. M. and Younesi, Nejat. (2012), "The Impact of Dividend Policy on Share Price Volatility in the Malaysian Stock Market", *Journal of Business Studies Quarterly*, Vol. 4, No. 1, pp. 111-129.
- Hussaney, Khaled, Chijoke. O. M. and Chijoke-Mgbame, Aruoriwo, M. (2011), "Dividend policy and share price volatility: UK evidence", *The Journal of Risk Finance*, Vol. 12, No. 1, pp. 57-68.
- Ilaboya, O. J. and Aggreth, M. (2013), "Dividend Policy and Share Price Volatility", *J. Asian Dev. Stud*, Vol. 2, Issue 2.
- Jensen, M. C. , Meckling, W. H. (1986), "Agency Cost of Free Cash Flow, Corporation Finance, and Takeovers", *American Economic Review*. Vol. 76, pp. 323-329.
- Kapoor, S, Misra, Anil. , Anil, K. (2010), "Dividend Policy Determinants of Indian Service Sector: A Factorial Analysis, *Paradigm*, Vol. 16, No. 1.
- Kenyoru, N. D, Simiyu A. K, Kibiwott, L. P. (2013), "Dividend Policy and Share Price Volatility", *Research Journal of Finance and Accounting*, Vol. 4, No. 6.
- Khan, A. Z. (2011), *Dividend Policy and Stocks Prices*.
- Kieso, D.E., Weygandt. , J.J., Warfield, T.D. (2010). *Intermediate Accounting: IFRS Edition*. United States: John Wiley and Sons.
- Kinder, C. (2002), *Estimating Stock Volatility*.
- Ling, F. S, Muntalip, M. L, Shahrin, A. R, Othman, M. S. (2008), "Dividend Policy: Evidence From Public Listed Companies in Malaysia", *International Review of Business Research Papers*, Vol. 4, No. 4, pp. 208-222.
- Linter. J. (1956), "Distributions of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes", *American Journal Review*, Vol. 46, pp. 97-113
- Miller, M. H. and Modigliani, F. (1961), "Dividend Policy, growth, and the valuation of shares", *The Journal of Business*, Vol. 34, pp. 411-433
- Miller, M. H. and Rock, K. (1985), "Dividend Policy Under Asymmetric Information", *The Journal of Finance*, Vol. 9, No. 4.
- Murekefu, Timothy. M .and Ouma, Ochouda. P. (2013), "The Relationship between Dividend Payout and Firm Performance: A Study of Listed Companies in Kenya", *European Scientific Journal*, Vol. 8, No. 9.

- Murhadi, Werner R. (2008), *Study On Dividend Policy: Antecedent and Its Impact On Share Price*.
- Nazir, Sajid.M, Nawaz, Muwarat.M, Anwar, Wanseen. and Ahmed, Irfan. (2010). "Determinants of Stock Price Volatility in Karachi Stock Exchange: The Mediating Role of Corporation Dividend Policy", *International Research Journal of Finance and Economics*. Issue. 55, pp. 101-107.
- Nishat, Mohammed. Dr. and Irfan, C.M. (2004), *Dividend Policy And Stock Price Volatility In Pakistan*.
- Parkinson, M. (1980), "The extreme value method for estimating the variance of the rate of return", *Journal of Business*, Vol. 53, No. 1, pp. 61-65.
- Proffitt, Kyle. A. and Bacon, Frank. W. (2013), "Dividend Policy And Stock Price Volatility In The U.S Equity Capital Market", *ASSBBS Annual Conference*, Vol. 20, No. 1.
- Ramadan, I. Z. (2013). "Dividend Policy and Price Volatility: Empirical Evidence from Jordan", *International Journal of Academic Research in Accounting, Finance, and Management Sciences*, Vol. 3, No. 2, pp. 15-22.
- Rashid, Afzalur. , Rahman, A.Z.M.A. (2008), "Dividend Policy and Stock Price Volatility: Evidence from Bangladesh, *Journal of Applied Business and Economics*.
- Rozeff, M. (1982), "Growth , beta and agency cost as determinants of dividend payout ratios", *Journal of Financial Research*, Vol. 5, No. 3, pp. 249-259.
- Schwert, W.G. (1990), "Stock Market Volatility", *Financial Analysts Journal*, pp. 23- 34.
- Sekaran, U. (2003). *Research Methods for Business*. 4th ed. New York. John Wiley & Sons, inc.
- Uddin, M. H, Chowdhury, G. M. (2005), "Effects of Dividend Announcement on Shareholders' Value : Evidence from Dhaka Stock Exchange", *Journal of Business Research*, Vol. 7, pp. 61-72.
- Umar, H. (2013). *Metode Penelitian untuk Skripsi dan Tesis Bisnis*. Edisi Kedua Jakarta. Rajawali Pers.
- Van Horne, James. C. and Wachowicz, John. M. Jr. (2008). *Fundamental Financial Management*. 13th ed. England. Prentice Hall.

APPENDICES

Appendix 1: List of Samples

NO	CODE	COMPANY
1	ALMI	PT Alumindo Light Metal Industry Tbk
2	ASGR	PT Astra Graphia Tbk
3	AMFG	PT Asahimas Flat Glass Tbk
4	BUDI	PT Budi Jaya Acid Tbk
5	CLPI	PT Colopark Indonesia Tbk
6	DLTA	PT Delta Djakarta Tbk
7	FASW	PT Fajar Surya Wisesa Tbk
8	FAST	PT Fast Food Indonesia Tbk
9	FISH	PT FKS Multi Agro Tbk
10	GJTL	PT Gajah Tunggal Tbk
11	GDYR	PT Goodyear Indonesia Tbk
12	GGRM	PT Gudang Garam Tbk
13	HMSP	PT HM Sampoerna Tbk
14	BRAM	PT Indo Kordsa Tbk
15	INTP	PT Indocement Tunggul Prakarsa Tbk
16	INDF	PT Indofood Sukses Makmur Tbk
17	INDR	PT Indorama Synthetics Tbk
18	JPFA	PT JAPFA Comfeed Indonesia Tbk
19	IGAR	PT Tbk
20	KAEF	PT Kimia Farma (Persero) Tbk
21	LTLS	PT Lautan Luas Tbk
22	SQBB	PT Taisho Pharmaceutical Indonesia Tbk
23	LION	PT Lion Metal Works Tbk
24	LMSH	PT Lionmesh Prima Tbk
25	TCID	PT Mandom Indonesia Tbk
26	MYOR	PT Mayora Indah Tbk
27	MERK	PT Merck Tbk
28	MTDL	PT Metrodata Electronics Tbk
29	MAPI	PT Mitra Adiperkasa Tbk
30	MLBI	PT Multi Bintang Indonesia Tbk
31	MASA	PT Multisrada Arah Sarana Tbk
32	MLPL	PT Multipolar Tbk
33	MRAT	PT Mustika Ratu Tbk
34	TKIM	PT Pabrik Kertas Tjiwi Kimia Tbk
35	RICY	PT Ricky Putra GlobalindoTbk
36	BATA	PT Sepatu Bata Tbk
37	SCCO	PT Supreme Cable Manufacturing & Commerce Tbk
38	IKBI	PT Sumi Indo Kabel Tbk
39	TRST	PT Trias Sentosa Tbk

40	TBLA	PT Tunas Baru Lampung Tbk
41	UNTR	PT United Tractors Tbk
42	UNIC	PT Unggul Indah Cahaya Tbk
43	SMCB	PT Holcim Indonesia Tbk
44	BRNA	PT Berlina Tbk
45	TBMS	PT Tembaga Mulia Semanan Tbk
46	TOTO	PT Surya Toto Indonesia Tbk
47	KBLM	PT Kabelindo Murni Tbk
48	ULTJ	PT Ultrajaya Milk Industry & Trading Tbk
49	ESTI	PT Ever Shine Textile Industry Tbk
50	SIPD	PT Sierad Produce Tbk
51	RMBA	PT Bentoel Internasional Investama Tbk
52	SKLT	PT Sekar Laut Tbk
53	AISA	PT Tiga Pilar Sejahtera Tbk
54	BTON	PT Betonjaya Manunggal Tbk
55	SMDR	PT Samudera Indonesia Tbk
56	SPMA	PT Suparma Tbk
57	AKRA	PT AKR Corporindo Tbk
58	HEXA	PT Hexindo Adiperkasa Tbk
59	SMGR	PT Semen Indonesia Tbk
60	ASII	PT Astra International Tbk
61	AUTO	PT Astra Otoparts Tbk
62	CPIN	PT Charoen Pokphand Indonesia Tbk
63	DVLA	PT Darya-Varia Laboratoria Tbk
64	EPMT	PT Enseval Putra Metragading Tbk
65	EKAD	PT Ekadharma International Tbk
66	INDS	PT Indospring Tbk
67	PJAA	PT Pembangunan Jaya Ancol Tbk
68	KLBF	PT Kalbe Farma Tbk
69	MAIN	PT Malindo Feedmill Tbk
70	SMSM	PT Selamat Sempurna Tbk
71	SMAR	PT SMART Tbk
72	TSPC	PT Tempo Scan Pacific Tbk
73	TGKA	PT Tigaraksa Satria Tbk
74	UNVR	PT Unilever Indonesia Tbk
75	TURI	PT Tunas Ridean Tbk
76	VOKS	PT Voksel Electric
77	ARNA	PT Arwarna Citramulia Tbk

Appendix 2: LIST OF VARIABLE VALUE

1. TABULATION OF DATA

	SPV	DY	DPR	EVOL	SIZE	LEV	GROWTH
ALMI	0.7701	0.0326	0.2424	0.0265	26.2406	0.0765	0.0616
ASGR	0.7555	0.0563	0.4435	0.0171	27.5932	0.0331	0.1110
AMFG	0.7969	0.0121	0.1150	0.0460	28.2970	0.0876	0.1007
BUDI	0.8507	0.0394	0.5158	0.0204	27.5866	0.2333	0.1289
CLPI	0.9515	0.0228	0.2580	0.0323	26.7338	0.0440	0.1653
DLTA	0.7754	0.1003	0.7852	0.0915	28.0757	0.0405	0.0407
FASW	0.6479	0.0064	0.1713	0.0135	29.4345	0.4047	0.0120
FAST	0.3528	0.0186	0.3009	0.0290	28.7842	0.1214	0.1944
FISH	1.0059	0.0052	0.0690	0.0750	27.1108	0.0046	0.2907
GJTL	0.9230	0.0090	0.0532	0.0254	29.2389	0.4502	0.0897
GDYR	0.6928	0.0149	0.6052	0.0283	26.7714	0.1499	0.1336
GGRM	0.8174	0.0300	0.3083	0.0316	31.7700	0.0313	0.1000
HMSP	0.6178	0.0479	0.6898	0.0676	32.3832	0.0410	0.1082
BRAM	0.6199	0.0984	0.4506	0.0311	27.5824	0.0790	0.0496
INTP	0.7551	0.0146	0.2280	0.0397	31.5486	0.0861	0.1327
INDF	0.8040	0.0265	0.2559	0.0141	31.0116	0.2289	0.1803
INDR	0.8189	0.0067	0.0937	0.0133	27.3321	0.2006	0.0246
JPFA	1.2238	0.0232	0.1734	0.0477	28.8326	0.3126	0.1641
IGAR	1.0060	0.0632	0.5444	0.0528	26.9462	0.0373	0.0082
KAEF	0.9431	0.0197	0.2084	0.0292	28.1117	0.0402	0.0792
LTLS	0.6999	0.0494	0.2409	0.0379	26.9920	0.1648	0.1094
SQBI	0.8308	0.1351	0.1419	0.0737	27.5625	0.0405	0.1002
LION	0.8062	0.0455	0.2004	0.0285	26.1687	0.0506	0.1296
LMSH	0.8548	0.0139	0.1680	0.0611	26.6582	0.0934	0.1583
TCID	0.5100	0.0316	0.3488	0.0157	28.0866	0.0419	0.0982
MYOR	0.8995	0.0126	0.1030	0.0285	29.5322	0.2895	0.2387
MERK	0.5565	0.0463	0.5511	0.0635	28.3487	0.0368	0.1051
MTDL	0.8150	0.0177	0.1472	0.0475	26.3030	0.0931	0.1025
MAPI	0.8474	0.0091	0.1074	0.0177	29.1283	0.2318	0.1409
MLBI	0.6763	0.0825	0.6658	0.1310	29.3912	0.0352	0.0909
MASA	0.7695	0.0028	0.0608	0.0279	28.3761	0.1352	0.2080
MLPL	0.9856	0.0083	0.0341	0.0204	27.7112	0.2531	0.0957
MRAT	0.6876	0.0351	0.2318	0.0185	25.9001	0.0246	0.0712
TKIM	0.9847	0.0085	0.0670	0.0096	28.4565	0.5475	0.0445
RICY	0.8097	0.0015	0.0129	0.0303	25.8268	0.0903	0.0732

BATA	0.6922	3.7362	0.3364	0.0161	22.4577	0.0333	0.1156
SCCO	0.5961	0.0275	0.2700	0.0388	26.8478	0.0089	0.0959
IKBI	0.9732	0.0702	0.4185	0.0865	26.5646	0.0670	0.0404
TRST	0.6903	0.0348	0.2959	0.0292	27.0566	0.1411	0.0113
TBLA	0.8450	0.1326	1.1199	0.0190	28.3150	0.3300	0.1406
UNTR	0.8879	0.0300	0.3756	0.0195	31.6920	0.1314	0.2065
UNIC	0.4461	0.0153	0.2918	0.0182	27.5054	0.1415	-0.0296
SMCB	0.9187	0.0101	0.1691	0.0383	30.2965	0.3295	0.0771
BRNA	0.7046	0.0957	0.3504	0.0225	25.2612	0.2345	0.0964
TBMS	0.8386	0.0434	0.1637	0.0154	25.4088	0.0017	0.0979
TOTO	0.6573	0.0794	0.1609	0.0261	26.5243	0.1622	0.0799
KBLM	0.5557	0.0118	0.1541	0.0266	25.6157	0.0407	0.1210
ULTJ	0.7278	0.0015	0.0475	0.0636	28.6316	0.1088	0.1023
ESTI	0.7113	0.0027	0.1253	0.0279	26.0308	0.0500	0.0588
SIPD	0.5014	0.0088	0.1624	0.0107	27.0061	0.0986	0.1545
RMBA	0.7614	0.0099	0.2139	0.0525	29.1510	0.2851	0.1835
SKLT	0.7668	0.0048	0.0862	0.0182	25.1961	0.1645	0.0485
AISA	0.9331	0.0044	0.0242	0.0208	27.6366	0.2790	0.3068
BTON	0.8726	0.0100	0.0314	0.0713	24.8923	0.0190	0.2077
SMDR	0.5908	0.0275	0.5631	0.0242	27.2695	0.3204	0.0980
SPMA	0.9945	0.0056	0.0602	0.0202	26.5186	0.4210	0.0221
AKRA	0.7840	0.7654	0.0902	0.0244	29.6223	0.1263	0.2061
HEXA	0.9756	0.0645	0.0857	0.0429	30.5091	0.0418	0.1936
SMGR	0.6388	0.0301	0.4252	0.0360	31.6071	0.0670	0.1907
ASII	0.9284	0.0261	0.2407	0.0124	35.1627	0.1701	0.1718
CPIN	0.9899	0.0236	0.1231	0.1126	30.4255	0.2087	0.1897
EPMT	0.8032	0.0471	0.2410	0.0212	28.4535	0.0133	0.1367
EKAD	0.8533	0.0201	0.1372	0.0496	25.5202	0.0511	0.1896
INDS	1.2334	0.0548	0.0756	0.0499	26.6659	0.1907	0.1459
PJAA	0.6452	0.0517	0.3718	0.0184	27.8408	0.1403	0.0847
KLBF	0.8206	0.0259	0.2958	0.0294	30.7876	0.0280	0.1433
MAIN	0.8238	0.0250	0.2077	0.0750	27.7277	0.3110	0.2274
SMSM	0.8065	0.0968	1.3551	0.0677	28.0763	0.1029	0.1056
SMAR	0.9424	0.0329	0.3885	0.0375	30.8227	0.2252	0.1636
TSPC	0.6972	0.0594	0.5651	0.0172	29.6271	0.0423	0.0945
TGKA	0.9109	0.0810	0.4323	0.0118	27.2290	0.1062	0.1055
UNVR	0.4723	0.0293	0.9104	0.0147	32.2795	0.0375	0.1516
TURI	0.6031	0.0615	0.3890	0.0395	28.3970	0.1604	-0.0414
VOKS	0.8296	0.0098	0.0601	0.0311	26.9972	0.0161	0.1803
DVLA	0.7331	0.0280	0.3317	0.0195	27.5657	0.0474	0.1018
AUTO	0.6789	0.0511	0.3030	0.0269	29.2666	0.0670	0.1635

ARNA	0.7555	0.0278	0.1731	0.0305	28.0134	0.379	0.1933
------	--------	--------	--------	--------	---------	-------	--------

2. SHARE PRICE VOLATILITY (SPV) CALCULATION

		$((Hi-Li)/((Hi+Li)/2))^2$					
		2007	2008	2009	2010	2011	2012
1	ALMI	0.7533	0.4677	0.7456	0.4800	0.6673	0.4444
2	ASGR	0.0003	1.4818	0.3552	0.8382	0.5046	0.2443
3	AMFG	0.2070	1.1744	0.2040	1.5169	0.4639	0.2445
4	BUDI	0.9897	1.0615	0.6615	0.4803	0.3765	0.7723
5	CLPI	0.3713	0.0554	0.1506	1.8669	2.6393	0.3482
6	DLTA	0.6029	0.3936	1.4638	0.4645	0.0433	0.6391
7	FASW	0.4444	0.1048	0.0428	0.8573	0.4198	0.6496
8	FAST	0.0871	0.0549	0.2561	0.3086	0.0069	0.0331
9	FISH	2.9149	1.4400	0.3615	0.3853	0.8414	0.1285
10	GJTL	0.2407	1.4562	0.8697	2.1072	0.2903	0.1479
11	GDYR	0.7901	0.8059	0.7174	0.2808	0.1060	0.1795
12	GGRM	0.1462	0.5853	1.9719	0.7583	0.4409	0.1065
13	HMSP	0.3259	0.4605	0.1506	0.9534	0.2091	0.1906
14	BRAM	0.5429	0.1619	0.1406	1.0000	0.0763	0.3837
15	INTP	0.3371	1.1402	1.2318	0.3133	0.2535	0.1456
16	INDF	0.5780	1.0878	1.5929	0.3019	0.2029	0.1153
17	INDR	0.3347	0.2500	0.4630	1.8340	0.8038	0.3381
18	JPFA	0.4600	1.1942	1.7778	1.7778	2.2861	1.4903
19	IGAR	0.5216	0.8870	0.9415	0.3765	2.9168	0.4286
20	KAEF	0.7620	1.7074	0.7980	0.8031	0.8791	0.3874
21	LTLS	0.3403	1.4612	0.5155	0.1041	0.3684	0.1496
22	SQBI	1.9172	0.3705	1.2803	0.0034	0.0271	0.5433
23	LION	0.4652	0.6513	0.6449	1.1929	0.3298	0.6159
24	LMSH	0.5917	1.0975	0.5755	1.2933	0.1861	0.6400
25	TCID	0.1304	0.4733	0.7091	0.0375	0.0857	0.1246
26	MYOR	0.2168	0.3092	2.1655	1.3890	0.3682	0.4056
27	MERK	0.2159	0.3705	0.8545	0.2407	0.1487	0.0276
28	MTDL	1.4945	1.4026	0.4630	0.3310	0.0677	0.2268
29	MAPI	0.3159	0.4275	0.7561	1.7273	0.8793	0.2022
30	MLBI	0.1600	0.2831	1.4477	0.3480	0.1498	0.3558
31	MASA	0.2730	0.9346	0.5840	0.5917	0.6513	0.5184
32	MLPL	1.3941	0.4918	0.4089	1.9963	0.8668	0.6710
33	MRAT	0.1437	0.3060	1.6581	0.2500	0.2770	0.2016

34	TKIM	0.5856	2.1591	0.9247	1.0189	0.8517	0.2772
35	RICY	0.4444	1.0102	0.8622	0.6615	0.6992	0.2557
36	BATA	0.4938	0.3492	0.9165	1.0216	0.0447	0.0494
37	SCCO	0.3136	0.3265	0.0397	0.1542	0.3618	0.9365
38	IKBI	0.4867	1.2474	1.5376	0.7916	0.8633	0.7561
39	TRST	0.5829	0.2975	0.2865	0.3136	1.1862	0.1922
40	TBLA	1.0207	1.7957	0.5289	0.2975	0.5244	0.1172
41	UNTR	0.3600	2.0987	1.3726	0.2951	0.1518	0.4516
42	UNIC	0.1800	0.1146	0.4289	0.3340	0.0443	0.0920
43	SMCB	1.1901	1.8971	1.2707	0.2592	0.0871	0.3600
44	BRNA	0.0194	0.5665	0.3705	1.2152	0.2005	0.6065
45	TBMS	1.0702	0.1432	0.7034	1.3922	0.4210	0.4900
46	TOTO	0.0302	0.0091	0.0621	1.6492	0.3535	0.4878
47	KBLM	0.3421	0.5702	0.3705	0.2918	0.0630	0.2151
48	ULTJ	0.0269	0.7817	0.2130	1.5602	0.4584	0.1376
49	ESTI	0.8476	0.8444	0.3265	0.7347	0.2599	0.0223
50	SIPD	0.7091	0.0931	0.0529	0.2575	0.3499	0.0459
51	RMBA	0.3564	0.6574	0.6504	1.3021	0.1963	0.3159
52	SKLT	1.9684	0.8975	0.3086	0.2130	0.0000	0.1406
53	AISA	2.2117	0.5917	0.1910	0.9572	0.3772	0.8951
54	BTON	0.0063	2.0843	0.4686	0.6352	0.1914	1.1831
55	SMDR	0.1506	0.9061	0.3689	0.1382	0.3758	0.1544
56	SPMA	0.7347	2.2526	1.6123	0.3630	0.4011	0.5709
57	AKRA	0.3989	1.1976	0.7292	0.4848	0.6824	0.1950
58	HEXA	0.3363	2.3485	1.8856	0.6708	0.2130	0.2569
59	SMGR	0.1585	1.0871	0.6472	0.1241	0.2018	0.2294
60	ASII	0.2975	0.7840	1.1413	0.1972	0.0956	2.6560
61	AUTO	0.1574	0.5200	0.5687	1.1325	0.3106	0.0760
62	CPIN	0.1674	1.3040	2.0061	1.8142	0.4505	0.1367
63	DVLA	0.3318	0.9855	1.0533	0.5429	0.1292	0.1817
64	EPMT	0.2468	1.3650	0.9041	0.3103	0.3489	0.6956
65	EKAD	0.3558	0.5197	0.4444	1.1017	1.3847	0.5625
66	INDS	2.1360	0.8120	0.6730	3.2647	1.7260	0.5154
67	PJAA	0.1742	1.1357	0.4062	0.2722	0.3200	0.1890
68	KLBF	0.0033	1.0736	1.1235	0.7347	0.0020	1.1033
69	MAIN	0.3689	0.4018	0.2227	1.2588	1.1283	0.6915
70	SMSM	0.5008	1.2346	1.0975	0.4528	0.1705	0.4466
71	SMAR	0.3906	2.5421	1.1714	0.7944	0.2945	0.1354
72	TSPC	0.1493	0.5289	0.5255	0.9162	0.5732	0.2238
73	TGKA	1.7013	0.4187	0.4748	1.2979	0.4938	0.5917
74	UNVR	0.1317	0.1006	0.2203	0.5562	0.1005	0.2287

75	TURI	0.2955	0.2425	0.6315	0.5679	0.2109	0.2339
76	VOKS	0.9510	1.0381	0.6944	0.3492	0.5166	0.5805
77	ARNA	0.0003	1.4818	0.3552	0.8382	0.5046	0.2443

		AVERAGE	SPV
1	ALMI	0.5931	0.7701
2	ASGR	0.5707	0.7555
3	AMFG	0.6351	0.7969
4	BUDI	0.7236	0.8507
5	CLPI	0.9053	0.9515
6	DLTA	0.6012	0.7754
7	FASW	0.4198	0.6479
8	FAST	0.1244	0.3528
9	FISH	1.0119	1.0059
10	GJTL	0.8520	0.9230
11	GDYR	0.4800	0.6928
12	GGRM	0.6682	0.8174
13	HMSP	0.3817	0.6178
14	BRAM	0.3843	0.6199
15	INTP	0.5703	0.7551
16	INDF	0.6465	0.8040
17	INDR	0.6706	0.8189
18	JPFA	1.4977	1.2238
19	IGAR	1.0120	1.0060
20	KAEF	0.8895	0.9431
21	LTLS	0.4898	0.6999
22	SQBI	0.6903	0.8308
23	LION	0.6500	0.8062
24	LMSH	0.7307	0.8548
25	TCID	0.2601	0.5100
26	MYOR	0.8090	0.8995
27	MERK	0.3096	0.5565
28	MTDL	0.6643	0.8150
29	MAPI	0.7181	0.8474
30	MLBI	0.4574	0.6763
31	MASA	0.5922	0.7695
32	MLPL	0.9715	0.9856
33	MRAT	0.4727	0.6876
34	TKIM	0.9695	0.9847
35	RICY	0.6555	0.8097

36	BATA	0.4792	0.6922
37	SCCO	0.3554	0.5961
38	IKBI	0.9471	0.9732
39	TRST	0.4765	0.6903
40	TBLA	0.7141	0.8450
41	UNTR	0.7883	0.8879
42	UNIC	0.1990	0.4461
43	SMCB	0.8440	0.9187
44	BRNA	0.4964	0.7046
45	TBMS	0.7033	0.8386
46	TOTO	0.4320	0.6573
47	KBLM	0.3088	0.5557
48	ULTJ	0.5296	0.7278
49	ESTI	0.5059	0.7113
50	SIPD	0.2514	0.5014
51	RMBA	0.5798	0.7614
52	SKLT	0.5880	0.7668
53	AISA	0.8707	0.9331
54	BTON	0.7615	0.8726
55	SMDR	0.3490	0.5908
56	SPMA	0.9891	0.9945
57	AKRA	0.6146	0.7840
58	HEXA	0.9518	0.9756
59	SMGR	0.4080	0.6388
60	ASII	0.8619	0.9284
61	AUTO	0.4608	0.6789
62	CPIN	0.9798	0.9899
63	DVLA	0.5374	0.7331
64	EPMT	0.6451	0.8032
65	EKAD	0.7281	0.8533
66	INDS	1.5212	1.2334
67	PJAA	0.4162	0.6452
68	KLBF	0.6734	0.8206
69	MAIN	0.6787	0.8238
70	SMSM	0.6505	0.8065
71	SMAR	0.8881	0.9424
72	TSPC	0.4861	0.6972
73	TGKA	0.8297	0.9109
74	UNVR	0.2230	0.4723
75	TURI	0.3637	0.6031
76	VOKS	0.6883	0.8296

77	ARNA	0.5707	0.7555
----	------	--------	--------

3. DIVIDEND YIELD (DY) CALCULATION

		Di/MV or DPS/SP					
		2007	2008	2009	2010	2011	2012
1	ALMI	0.0526	0.0000	0.0000	0.0833	0.0595	0.0000
2	ASGR	0.0678	0.0900	0.0635	0.0507	0.0544	0.0111
3	AMFG	0.0250	0.0000	0.0216	0.0138	0.0122	0.0000
4	BUDI	0.0259	0.0388	0.0352	0.0000	0.0667	0.0000
5	CLPI	0.0063	0.0119	0.0181	0.0806	0.0202	0.0000
6	DLTA	0.0875	0.1750	0.1532	0.0875	0.0987	0.0000
7	FASW	0.0056	0.0000	0.0144	0.0157	0.0027	0.0000
8	FAST	0.0184	0.0184	0.0160	0.0487	0.0101	0.0000
9	FISH	0.0083	0.0000	0.0069	0.0110	0.0050	0.0000
10	GJTL	0.0102	0.0000	0.0353	0.0052	0.0033	0.0000
11	GDYR	0.0068	0.0120	0.0234	0.0200	0.0272	0.0000
12	GGRM	0.0294	0.0824	0.0265	0.0220	0.1773	0.0000
13	HMSP	0.0888	0.0136	0.0736	0.0583	0.0449	0.0083
14	BRAM	0.0332	0.0694	0.0862	0.0521	0.0698	0.0333
15	INTP	0.0049	0.0326	0.0164	0.0165	0.0172	0.0000
16	INDF	0.0167	0.0505	0.0262	0.0273	0.0380	0.0000
17	INDR	0.0233	0.0000	0.0000	0.0000	0.0167	0.0000
18	JPFA	0.0000	0.0000	0.0036	0.1159	0.0195	0.0000
19	IGAR	0.0420	0.0517	0.0216	0.0000	0.0505	0.0533
20	KAEF	0.0092	0.0328	0.0266	0.0314	0.0182	0.0000
21	LTLS	0.0636	0.1075	0.0453	0.0425	0.0375	0.0000
22	SQBI	0.0000	0.0000	0.0000	0.0616	0.0001	0.0000
23	LION	0.0595	0.0439	0.0595	0.0526	0.0571	0.0000
24	LMSH	0.0238	0.0167	0.0125	0.0104	0.0200	0.0000
25	TCID	0.0000	0.0545	0.0395	0.0472	0.0481	0.0000
26	MYOR	0.0229	0.0439	0.0000	0.0000	0.0091	0.0000
27	MERK	0.0438	0.1507	0.0000	0.0833	0.0001	0.0000
28	MTDL	0.0152	0.0141	0.0115	0.0317	0.0339	0.0000
29	MAPI	0.0164	0.0000	0.0242	0.0075	0.0068	0.0000
30	MLBI	0.0909	0.3030	0.0912	0.0001	0.0001	0.0094
31	MASA	0.0047	0.0000	0.0049	0.0030	0.0040	0.0000
32	MLPL	0.0098	0.0000	0.0000	0.0333	0.0066	0.0000
33	MRAT	0.0176	0.0851	0.0249	0.0176	0.0652	0.0000
34	TKIM	0.0000	0.0286	0.0056	0.0050	0.0118	0.0000
35	RICY	0.0089	0.0000	0.0000	0.0000	0.0000	0.0230

36	BATA	5.6739	3.9805	5.9944	1.9403	2.2382	2.6083
37	SCCO	0.0207	0.0207	0.0229	0.0462	0.0544	0.0000
38	IKBI	0.0870	0.2500	0.0198	0.0083	0.0560	0.0000
39	TRST	0.0287	0.0606	0.0682	0.0000	0.0513	0.0000
40	TBLA	0.0079	0.0914	0.5735	0.0000	0.0788	0.0245
41	UNTR	0.0193	0.0727	0.0213	0.0248	0.0311	0.0107
42	UNIC	0.0129	0.0141	0.0200	0.0000	0.0450	0.0000
43	SMCB	0.0000	0.0000	0.0000	0.0102	0.0395	0.0110
44	BRNA	0.0505	0.2719	0.1450	0.0563	0.2571	0.0000
45	TBMS	0.0000	0.0000	0.2154	0.0111	0.0339	0.0000
46	TOTO	0.0438	0.0000	0.0000	0.1799	0.4000	0.0150
47	KBLM	0.0000	0.0000	0.0000	0.0182	0.0526	0.0222
48	ULTJ	0.0000	0.0000	0.0000	0.0000	0.0093	0.0000
49	ESTI	0.0000	0.0000	0.0000	0.0100	0.0063	0.0000
50	SIPD	0.0000	0.0000	0.0000	0.0000	0.0185	0.0200
51	RMBA	0.0268	0.0144	0.0000	0.0000	0.0329	0.0000
52	SKLT	0.0000	0.0000	0.0000	0.0143	0.0143	0.0000
53	AISA	0.0000	0.0000	0.0000	0.0000	0.0263	0.0000
54	BTON	0.0000	0.0000	0.0000	0.0000	0.0597	0.0000
55	SMDR	0.0290	0.0882	0.0000	0.0000	0.0485	0.0000
56	SPMA	0.0000	0.0000	0.0000	0.0000	0.0333	0.0000
57	AKRA	0.0138	0.3125	0.2856	2.0373	1.6822	0.2608
58	HEXA	0.0284	0.3584	0.0000	0.0000	0.0000	0.0000
59	SMGR	0.0267	0.0515	0.0409	0.0324	0.0289	0.0000
60	ASII	0.0059	0.0825	0.0239	0.0086	0.0268	0.0087
61	AUTO	0.0451	0.0840	0.1040	0.0424	0.0309	0.0000
62	CPIN	0.0000	0.0000	0.0871	0.0352	0.0195	0.0000
63	DVLA	0.0281	0.0469	0.0294	0.0256	0.0274	0.0107
64	EPMT	0.0325	0.0846	0.0344	0.0043	0.1267	0.0000
65	EKAD	0.0163	0.0000	0.0480	0.0314	0.0250	0.0000
66	INDS	0.0412	0.0417	0.2000	0.0000	0.0457	0.0000
67	PJAA	0.0320	0.1052	0.0784	0.0494	0.0450	0.0000
68	KLBF	0.0556	0.0313	0.0192	0.0215	0.0279	0.0000
69	MAIN	0.0284	0.0050	0.0622	0.0291	0.0255	0.0000
70	SMSM	0.0930	0.1538	0.1200	0.0514	0.1103	0.0520
71	SMAR	0.0008	0.1059	0.0294	0.0300	0.0313	0.0000
72	TSPC	0.0333	0.1875	0.0479	0.0585	0.0294	0.0000
73	TGKA	0.0875	0.1509	0.1147	0.0750	0.0577	0.0000
74	UNVR	0.0319	0.0404	0.0361	0.0269	0.0290	0.0115
75	TURI	0.0444	0.2240	0.0506	0.0172	0.0233	0.0097
76	VOKS	0.0000	0.0000	0.0000	0.0000	0.0585	0.0000

77	ARNA	0.0085	0.0000	0.0470	0.0517	0.0548	0.0000
----	------	--------	--------	--------	--------	--------	--------

		AVERAGE DY
1	ALMI	0.0326
2	ASGR	0.0563
3	AMFG	0.0121
4	BUDI	0.0278
5	CLPI	0.0228
6	DLTA	0.1003
7	FASW	0.0064
8	FAST	0.0186
9	FISH	0.0052
10	GJTL	0.0090
11	GDYR	0.0149
12	GGRM	0.0563
13	HMSP	0.0479
14	BRAM	0.0573
15	INTP	0.0146
16	INDF	0.0265
17	INDR	0.0067
18	JPFA	0.0232
19	IGAR	0.0365
20	KAEF	0.0197
21	LTLS	0.0494
22	SQBI	0.0103
23	LION	0.0455
24	LMSH	0.0139
25	TCID	0.0316
26	MYOR	0.0126
27	MERK	0.0463
28	MTDL	0.0177
29	MAPI	0.0091
30	MLBI	0.0825
31	MASA	0.0028
32	MLPL	0.0083
33	MRAT	0.0351
34	TKIM	0.0085
35	RICY	0.0053
36	BATA	3.7393
37	SCCO	0.0275

38	IKBI	0.0702
39	TRST	0.0348
40	TBLA	0.1294
41	UNTR	0.0300
42	UNIC	0.0153
43	SMCB	0.0101
44	BRNA	0.1301
45	TBMS	0.0434
46	TOTO	0.1064
47	KBLM	0.0155
48	ULTJ	0.0015
49	ESTI	0.0027
50	SIPD	0.0064
51	RMBA	0.0124
52	SKLT	0.0048
53	AISA	0.0044
54	BTON	0.0100
55	SMDR	0.0276
56	SPMA	0.0056
57	AKRA	0.7654
58	HEXA	0.0645
59	SMGR	0.0301
60	ASII	0.0261
61	AUTO	0.0511
62	CPIN	0.0236
63	DVLA	0.0280
64	EPMT	0.0471
65	EKAD	0.0201
66	INDS	0.0548
67	PJAA	0.0517
68	KLBF	0.0259
69	MAIN	0.0250
70	SMSM	0.0968
71	SMAR	0.0329
72	TSPC	0.0594
73	TGKA	0.0810
74	UNVR	0.0293
75	TURI	0.0615
76	VOKS	0.0098
77	ARNA	0.0270

3. DIVIDEND PAYOUT RATIO (DPR) CALCULATION

		Di/Ei or DPS/EPS					
		2007	2008	2009	2010	2011	2012
1	ALMI	0.4854	0.0000	0.0000	0.4931	0.4757	0.0000
2	ASGR	0.7483	0.3884	0.4028	0.3985	0.5994	0.1232
3	AMFG	0.2240	0.0000	0.2580	0.1049	0.1030	0.0000
4	BUDI	0.3840	1.5139	0.2538	0.0000	0.9430	0.0000
5	CLPI	0.2982	0.3520	0.2993	0.2994	0.2992	0.0000
6	DLTA	0.4737	0.6692	1.2025	1.1511	1.1610	0.0000
7	FASW	0.2032	0.0000	0.2059	0.3940	0.2247	0.0000
8	FAST	0.1958	0.2031	0.2035	1.0018	0.2010	0.0000
9	FISH	0.0964	0.0000	0.0958	0.0864	0.1352	0.0000
10	GJTL	0.1744	0.0000	0.0577	0.0503	0.0368	0.0000
11	GDYR	0.0851	3.0296	0.0762	0.1537	0.5451	0.0000
12	GGRM	0.3332	0.3581	0.3619	0.4017	4.2688	0.0000
13	HMSP	0.9810	0.1271	0.6767	1.1463	0.9781	0.2295
14	BRAM	0.7242	0.5935	0.7801	0.4193	1.2277	0.1897
15	INTP	0.1502	0.3163	0.3016	0.3002	0.2995	0.0000
16	INDF	0.0414	0.3990	0.3934	0.2907	0.3062	0.0000
17	INDR	0.5111	0.0000	0.0000	0.0000	0.1985	0.0000
18	JPFA	0.0000	0.0000	0.0127	0.6999	0.2390	0.0000
19	IGAR	0.3403	0.4287	0.1273	0.0000	1.8980	0.4718
20	KAEF	0.3001	0.2497	0.3003	0.2002	0.2002	0.0000
21	LTLS	0.3047	0.3048	0.3086	0.2566	0.2224	0.0000
22	SQBI	0.0000	0.0000	0.0000	0.7314	0.0007	0.0000
23	LION	0.2570	0.1856	0.1934	0.2693	0.2970	0.0000
24	LMSH	0.6720	0.5188	0.9979	0.5432	0.7329	0.0000
25	TCID	0.0000	0.5252	0.5163	0.5201	0.5312	0.0000
26	MYOR	0.2166	0.1953	0.0000	0.0000	0.2060	0.0000
27	MERK	0.5757	1.2152	0.0000	1.5149	0.0008	0.0000
28	MTDL	0.2008	0.0682	0.2029	0.0906	0.1274	0.0000
29	MAPI	0.1654	0.0000	0.1518	0.1651	0.1612	0.0000
30	MLBI	1.2484	1.4217	0.9995	0.0010	0.0010	0.3230
31	MASA	0.2095	0.0000	0.0350	0.0348	0.0858	0.0000
32	MLPL	0.1107	0.0000	0.0000	0.0135	0.0805	0.0000
33	MRAT	0.2000	0.2500	0.2000	0.1930	0.5410	0.0000
34	TKIM	0.0000	0.0472	0.0449	0.0478	0.0520	0.0000
35	RICY	0.0775	0.0000	0.0000	0.0000	0.0000	0.1512
36	BATA	0.4906	0.0673	0.5295	0.2772	0.2828	0.3711
37	SCCO	0.1138	0.5497	0.3340	0.3045	0.3182	0.0000

38	IKBI	0.3950	0.3916	0.3410	-0.6080	0.4019	0.0000
39	TRST	0.6086	0.3723	0.2252	0.0000	6.6207	0.0000
40	TBLA	0.2141	1.1430	5.8833	0.0000	0.5450	0.2433
41	UNTR	0.4010	0.4001	0.2875	0.5001	0.5216	0.1361
42	UNIC	0.4156	0.3700	0.4699	0.0000	0.6128	0.0000
43	SMCB	0.0000	0.0000	0.0000	0.2078	0.6247	0.1815
44	BRNA	0.3324	0.6185	0.5926	0.3373	0.2617	0.0000
45	TBMS	0.0000	0.0000	0.2388	0.5688	0.1746	0.0000
46	TOTO	0.3075	0.0000	0.0000	0.1788	0.4530	0.0210
47	KBLM	0.0000	0.0000	0.0000	0.5764	0.3536	0.1410
48	ULTJ	0.0000	0.0000	0.0000	0.0000	0.2851	0.0000
49	ESTI	0.0000	0.0000	0.0000	0.1515	0.1350	0.0000
50	SIPD	0.0000	0.0000	0.0000	0.0000	0.4255	0.4202
51	RMBA	0.4223	0.1923	0.0000	0.0000	0.6152	0.0000
52	SKLT	0.0000	0.0000	0.0000	0.2858	0.2311	0.0000
53	AISA	0.0000	0.0000	0.0000	0.0000	0.1450	0.0000
54	BTON	0.0000	0.0000	0.0000	0.0000	0.1884	0.0000
55	SMDR	2.9078	2.9960	0.0000	0.0000	2.4340	0.0000
56	SPMA	0.0000	0.0000	0.0000	0.0000	0.0655	0.0000
57	AKRA	0.3101	0.0292	0.0214	0.0965	0.0744	0.0094
58	HEXA	0.3559	0.1580	0.0000	0.0000	0.0000	0.0000
59	SMGR	0.5000	0.5058	0.5500	0.5000	0.4956	0.0000
60	ASII	0.0994	0.3832	0.3347	0.1324	0.3755	0.1190
61	AUTO	0.0508	0.4005	0.6003	0.4000	0.3662	0.0000
62	CPIN	0.0000	0.0000	0.3992	0.0481	0.2915	0.0000
63	DVLA	0.5056	0.3558	0.3487	0.3030	0.2918	0.1853
64	EPMT	0.2451	0.2349	0.1905	0.0443	0.7310	0.0000
65	EKAD	0.2642	0.0000	0.2040	0.1826	0.1723	0.0000
66	INDS	0.1894	0.0589	0.1595	0.0000	0.0457	0.0000
67	PJAA	0.4000	0.4519	0.4658	0.4684	0.4446	0.0000
68	KLBF	0.1429	0.1796	0.2733	0.5527	0.6266	0.0000
69	MAIN	0.3012	0.3221	0.2409	0.1752	0.2067	0.0000
70	SMSM	0.4167	1.5739	0.9753	0.5264	0.9849	3.6533
71	SMAR	0.0145	0.4941	0.2878	0.3418	1.1927	0.0000
72	TSPC	0.4032	1.0526	0.4375	0.9205	0.5766	0.0000
73	TGKA	0.5450	0.3318	0.7223	0.4570	0.5376	0.0000
74	UNVR	0.8366	0.9984	1.0001	1.0002	1.0004	0.6265
75	TURI	0.4044	0.9563	0.3955	0.2074	0.2416	0.1288
76	VOKS	0.0000	0.0000	0.0000	0.0000	0.3606	0.0000
77	ARNA	0.1064	0.0000	0.2011	0.3483	0.3826	0.0000

		AVERAGE DPR
1	ALMI	0.2424
2	ASGR	0.4434
3	AMFG	0.1150
4	BUDI	0.5158
5	CLPI	0.2580
6	DLTA	0.7762
7	FASW	0.1713
8	FAST	0.3009
9	FISH	0.0690
10	GJTL	0.0532
11	GDYR	0.6483
12	GGRM	0.9540
13	HMSP	0.6898
14	BRAM	0.6558
15	INTP	0.2280
16	INDF	0.2385
17	INDR	0.1183
18	JPFA	0.1586
19	IGAR	0.5444
20	KAEF	0.2084
21	LTLS	0.2329
22	SQBI	0.1220
23	LION	0.2004
24	LMSH	0.5775
25	TCID	0.3488
26	MYOR	0.1030
27	MERK	0.5511
28	MTDL	0.1150
29	MAPI	0.1073
30	MLBI	0.6658
31	MASA	0.0608
32	MLPL	0.0341
33	MRAT	0.2307
34	TKIM	0.0320
35	RICY	0.0381
36	BATA	0.3364
37	SCCO	0.2700
38	IKBI	0.1536
39	TRST	1.3044
40	TBLA	1.3381

41	UNTR	0.3744
42	UNIC	0.3114
43	SMCB	0.1690
44	BRNA	0.3571
45	TBMS	0.1637
46	TOTO	0.1600
47	KBLM	0.1785
48	ULTJ	0.0475
49	ESTI	0.0477
50	SIPD	0.1409
51	RMBA	0.2050
52	SKLT	0.0862
53	AISA	0.0242
54	BTON	0.0314
55	SMDR	1.3896
56	SPMA	0.0109
57	AKRA	0.0902
58	HEXA	0.0857
59	SMGR	0.4252
60	ASII	0.2407
61	AUTO	0.3030
62	CPIN	0.1231
63	DVLA	0.3317
64	EPMT	0.2410
65	EKAD	0.1372
66	INDS	0.0756
67	PJAA	0.3718
68	KLBF	0.2958
69	MAIN	0.2077
70	SMSM	1.3551
71	SMAR	0.3885
72	TSPC	0.5651
73	TGKA	0.4323
74	UNVR	0.9104
75	TURI	0.3890
76	VOKS	0.0601
77	ARNA	0.1731

4. FIRM'S SIZE (SIZE) CALCULATION

		MV	
		2007	2008
1	ALMI	292600000000.0000	301840000000.0000
2	ASGR	795510275000.0000	269664500000.0000
3	AMFG	1388800000000.0000	525140000000.0000
4	BUDI	683,482,500,000.0000	1,286,614,344,055.0000
5	CLPI	465,634,520,000.0000	505,458,525,000.0000
6	DLTA	256,210,896,000.0000	320,263,620,000.0000
7	FASW	4,410,642,040,860.0000	3,766,390,956,240.0000
8	FAST	1,093,312,500,000.0000	1,383,375,000,000.0000
9	FISH	288,000,000,000.0000	374,400,000,000.0000
10	GJTL	1,552,320,000,000.0000	696,960,000,000.0000
11	GDYR	533,000,000,000.0000	205,000,000,000.0000
12	GGRM	16,354,748,000,000.0000	8,177,374,000,000.0000
13	HMSP	40,050,000,000,000.0000	36,450,000,000,000.0000
14	BRAM	855,000,000,000.0000	810,000,000,000.0000
15	INTP	30,186,099,931,800.0000	16,933,665,815,400.0000
16	INDF	2,431,286,675,000.0000	8,165,796,645,000.0000
17	INDR	477,676,746,110.0000	327,175,853,500.0000
18	JPFA	1,146,849,288,200.0000	781,942,696,500.0000
19	IGAR	124,950,000,000.0000	60,900,000,000.0000
20	KAEF	1,693,970,000,305.0000	422,104,000,076.0000
21	LTLS	343,200,000,000.0000	413,400,000,000.0000
22	SQBI	83,706,000,000.0000	414,544,000,000.0000
23	LION	109,233,600,000.0000	159,949,200,000.0000
24	LSMH	167,716,615,500.0000	287,514,198,000.0000
25	TCID	1,520,064,000,000.0000	1,105,866,668,500.0000
26	MYOR	1,341,522,000,000.0000	873,905,760,000.0000
27	MERK	1,176,000,000,000.0000	795,200,000,000.0000
28	MTDL	375,714,369,832.0000	144,976,740,533.0000
29	MAPI	1,162,000,000,000.0000	597,600,000,000.0000
30	MLBI	1,158,850,000,000.0000	1,042,965,000,000.0000
31	MASA	1,315,558,125,000.0000	856,642,535,000.0000
32	MLPL	692,086,218,000.0000	339,257,950,000.0000
33	MRAT	126,260,000,000.0000	65,484,000,000.0000
34	TKIM	868,206,456,000.0000	934,991,568,000.0000
35	RICY	359,361,805,600.0000	157,220,789,950.0000
36	BATA	2,990,000,000.0000	2,665,000,000.0000
37	SCCO	298,095,930,000.0000	298,095,930,000.0000

38	IKBI	351,900,000,000.0000	153,000,000,000.0000
39	TRST	375,840,000,000.0000	356,400,000,000.0000
40	TBLA	2,622,855,350,430.0000	792,354,807,590.0000
41	UNTR	31,078,051,660,000.0000	14,636,448,565,200.0000
42	UNIC	1,073,327,816,400.0000	1,063,744,532,325.0000
43	SMCB	13,410,075,000,000.0000	4,827,627,000,000.0000
44	BRNA	68,310,000,000.0000	44,160,000,000.0000
45	TBMS	101,018,500,000.0000	91,835,000,000.0000
46	TOTO	396,288,000,000.0000	396,288,000,000.0000
47	KBLM	134,400,000,000.0000	134,400,000,000.0000
48	ULTJ	1,877,448,300,000.0000	2,310,705,600,000.0000
49	ESTI	161,216,697,600.0000	100,760,436,000.0000
50	SIPD	629,204,269,031.0000	469,555,424,650.0000
51	RMBA	3,770,550,000,000.0000	3,501,225,000,000.0000
52	SKLT	42,135,140,000.0000	62,166,600,000.0000
53	AISA	783,750,000,000.0000	710,600,000,000.0000
54	BTON	33,300,000,000.0000	59,400,000,000.0000
55	SMDR	1,129,916,400,000.0000	417,577,800,000.0000
56	SPMA	402,852,597,660.0000	129,808,059,246.0000
57	AKRA	4,305,600,000,000.0000	2,250,000,000,000.0000
58	HEXA	2,308,800,000,000.0000	2,156,250,000,000.0000
59	SMGR	33,216,512,000,000.0000	24,764,096,000,000.0000
60	ASII	1,105,213,200,000,000.0000	427,106,200,000,000.0000
61	AUTO	512,734,161,016.9490	539,805,858,310.6270
62	CPIN	696,327,018,496.0000	285,773,396,275.2200
63	DVLA	448,692,134,831.4610	263,205,203,226.3170
64	EPMT	1,726,019,607,843.1400	740,995,002,562.7880
65	EKAD	55,023,408,190.2246	58,133,980,582.5243
66	INDS	45,469,818,181.8182	38,587,045,350.1113
67	PJAA	1,760,837,500,000.0000	567,969,933,454.3250
68	KLBF	13,847,400,000,000.0000	3,895,766,773,162.9400
69	MAIN	298,468,433,734.9400	271,175,523,349.4360
70	SMSM	359,784,583,333.3330	935,738,117,721.1210
71	SMAR	29,010,017,441,860.5000	4,882,689,119,455.4200
72	TSPC	3,367,221,774,193.5500	1,799,876,508,560.2000
73	TGKA	293,904,242,896.0680	243,395,520,530.9000
74	UNVR	51,609,922,178,988.3000	59,513,159,429,477.0000
75	TURI	432,668,823,529.4120	261,568,263,319.6720
76	VOKS	673,236,495,898.4680	249,428,571,428.5710
77	ARNA	545,210,212,765.9580	1,834,989,858,012.1700

		MV	
		2009	2010
1	ALMI	181720000000.0000	258,720,000,000.0000
2	ASGR	424721587500.0000	930,342,525,000.0000
3	AMFG	802900000000.0000	2,517,200,000,000.0000
4	BUDI	1,056,678,241,575.0000	1,309,311,099,660.0000
5	CLPI	511,585,295,000.0000	105,686,782,500.0000
6	DLTA	992,817,222,000.0000	1,921,581,720,000.0000
7	FASW	3,964,622,059,200.0000	7,123,930,262,625.0000
8	FAST	2,320,500,000,000.0000	4,105,500,000,000.0000
9	FISH	451,200,000,000.0000	436,800,000,000.0000
10	GJTL	1,481,040,000,000.0000	8,015,040,000,000.0000
11	GDYR	393,600,000,000.0000	512,500,000,000.0000
12	GGRM	47,236,360,400,000.0000	76,963,520,000,000.0000
13	HMSP	46,800,000,000,000.0000	126,675,000,000,000.0000
14	BRAM	652,500,000,000.0000	1,080,000,000,000.0000
15	INTP	50,432,874,276,300.0000	58,715,645,599,050.0000
16	INDF	31,170,514,075,000.0000	42,804,579,187,500.0000
17	INDR	307,545,302,290.0000	1,112,397,901,900.0000
18	JPFA	2,900,425,724,000.0000	6,525,957,879,000.0000
19	IGAR	145,950,000,000.0000	220,500,000,000.0000
20	KAEF	705,358,000,127.0000	883,086,000,159.0000
21	LTLS	585,000,000,000.0000	624,000,000,000.0000
22	SQBI	1,090,569,600,000.0000	1,100,136,000,000.0000
23	LION	109,233,600,000.0000	197,660,800,000.0000
24	LMSH	191,676,132,000.0000	383,352,264,000.0000
25	TCID	1,628,640,002,700.0000	1,447,680,002,400.0000
26	MYOR	3,449,628,000,000.0000	8,240,778,000,000.0000
27	MERK	1,792,000,000,000.0000	2,161,600,000,000.0000
28	MTDL	177,647,555,301.0000	270,134,666,298.0000
29	MAPI	1,029,200,000,000.0000	4,440,500,000,000.0000
30	MLBI	3,729,390,000,000.0000	5,793,196,500,000.0000
31	MASA	1,254,369,426,250.0000	2,020,248,327,900.0000
32	MLPL	400,324,414,040.0000	2,318,262,849,000.0000
33	MRAT	169,060,000,000.0000	278,200,000,000.0000
34	TKIM	2,404,264,032,000.0000	4,007,106,720,000.0000
35	RICY	125,134,914,450.0000	116,150,869,310.0000
36	BATA	4,680,000,000.0000	8,710,000,000.0000
37	SCCO	269,314,254,000.0000	400,887,630,000.0000
38	IKBI	495,720,000,000.0000	367,200,000,000.0000
39	TRST	475,200,000,000.0000	583,200,000,000.0000

40	TBLA	1,418,133,016,740.0000	1,719,789,879,010.0000
41	UNTR	51,560,216,536,500.0000	79,169,880,875,400.0000
42	UNIC	919,995,271,200.0000	701,496,394,290.0000
43	SMCB	11,877,495,000,000.0000	17,241,525,000,000.0000
44	BRNA	82,800,000,000.0000	220,800,000,000.0000
45	TBMS	59,692,750,000.0000	165,303,000,000.0000
46	TOTO	421,056,000,000.0000	193,190,400,000.0000
47	KBLM	128,800,000,000.0000	123,200,000,000.0000
48	ULTJ	1,675,261,560,000.0000	3,494,942,220,000.0000
49	ESTI	102,775,644,720.0000	201,520,872,000.0000
50	SIPD	469,555,424,650.0000	666,768,703,003.0000
51	RMBA	4,376,531,250,000.0000	5,792,004,000,000.0000
52	SKLT	103,611,000,000.0000	96,703,600,000.0000
53	AISA	601,920,000,000.0000	1,304,160,000,000.0000
54	BTON	49,500,000,000.0000	61,200,000,000.0000
55	SMDR	622,272,800,000.0000	675,493,500,000.0000
56	SPMA	305,869,564,890.0000	343,170,731,340.0000
57	AKRA	3,671,802,225,000.0000	6,561,779,280,000.0000
58	HEXA	9,885,621,375,000.0000	27,119,492,400,000.0000
59	SMGR	44,782,976,000,000.0000	56,052,864,000,000.0000
60	ASII	1,404,794,800,000,000.0000	2,208,402,200,000,000.0000
61	AUTO	887,052,961,847.3900	2,151,276,628,378.3800
62	CPIN	1,478,043,788,187.3700	3,019,220,074,239.0500
63	DVLA	417,190,763,985.7430	1,310,411,818,181.8200
64	EPMT	1,823,975,611,445.9900	2,622,030,558,015.9400
65	EKAD	55,909,554,573.2744	114,039,726,027.3970
66	INDS	34,821,449,068.0178	281,248,516,809.4920
67	PJAA	815,982,182,368.6970	1,343,981,038,374.7200
68	KLBF	12,470,052,083,333.3000	30,520,000,000,000.0000
69	MAIN	305,100,401,606.4260	216,961,289,957.9930
70	SMSM	1,079,730,169,050.7200	1,540,480,474,732.0100
71	SMAR	7,324,106,868,764.3900	14,360,892,747,282.8000
72	TSPC	3,285,082,135,266.9100	7,695,141,660,530.1900
73	TGKA	234,232,543,063.5300	624,570,250,896.0570
74	UNVR	84,310,555,555,555.5000	125,895,483,216,941.0000
75	TURI	606,824,022,471.9100	3,236,306,160,547.6000
76	VOKS	349,052,909,231.9630	374,046,242,774.5660
77	ARNA	578,130,422,292.4450	1,266,254,933,828.6500

		MV	
		2011	2012
1	ALMI	258,720,000,000.0000	200,200,000,000.0000
2	ASGR	1,537,087,650,000.0000	1,820,235,375,000.0000
3	AMFG	2,842,700,000,000.0000	3,602,200,000,000.0000
4	BUDI	928,535,598,960.0000	474,869,753,670.0000
5	CLPI	410,493,590,000.0000	447,254,210,000.0000
6	DLTA	1,785,469,681,500.0000	4,083,361,155,000.0000
7	FASW	10,840,763,443,125.0000	6,318,616,406,850.0000
8	FAST	4,581,145,120,250.0000	5,524,999,140,000.0000
9	FISH	960,000,000,000.0000	1,056,000,000,000.0000
10	GJTL	10,454,400,000,000.0000	7,753,680,000,000.0000
11	GDYR	391,550,000,000.0000	504,300,000,000.0000
12	GGRM	119,389,660,400,000.0000	108,326,154,400,000.0000
13	HMSP	175,500,000,000,000.0000	269,550,000,000,000.0000
14	BRAM	967,500,000,000.0000	1,350,000,000,000.0000
15	INTP	62,765,000,467,950.0000	82,643,651,642,550.0000
16	INDF	40,389,961,900,000.0000	51,365,495,025,000.0000
17	INDR	1,295,616,379,860.0000	929,179,423,940.0000
18	JPFA	7,976,170,741,000.0000	621,519,798,000.0000
19	IGAR	2,079,000,000,000.0000	393,750,000,000.0000
20	KAEF	1,888,360,000,340.0000	4,109,960,000,740.0000
21	LTLS	624,000,000,000.0000	577,200,000,000.0000
22	SQBI	1,016,430,000,000.0000	1,897,336,000,000.0000
23	LION	273,084,000,000.0000	540,966,400,000.0000
24	LMSH	399,325,275,000.0000	838,583,077,500.0000
25	TCID	1,548,213,335,900.0000	2,211,733,337,000.0000
26	MYOR	10,923,822,000,000.0000	15,331,680,000,000.0000
27	MERK	2,968,000,000,000.0000	3,404,800,000,000.0000
28	MTDL	260,075,894,000.0000	361,461,412,000.0000
29	MAPI	8,549,000,000,000.0000	11,039,000,000,000.0000
30	MLBI	7,564,130,000,000.0000	15,591,800,000,000.0000
31	MASA	3,060,982,315,000.0000	4,132,326,125,250.0000
32	MLPL	1,166,858,988,168.0000	1,584,146,410,940.0000
33	MRAT	214,000,000,000.0000	209,720,000,000.0000
34	TKIM	2,838,367,260,000.0000	2,644,690,435,200.0000
35	RICY	118,076,021,840.0000	111,658,846,740.0000
36	BATA	7,150,000,000.0000	7,800,000,000.0000
37	SCCO	642,448,125,000.0000	832,612,770,000.0000
38	IKBI	229,500,000,000.0000	468,180,000,000.0000
39	TRST	842,400,000,000.0000	745,200,000,000.0000

40	TBLA	2,915,706,195,130.0000	2,421,518,704,430.0000
41	UNTR	98,278,212,538,600.0000	73,475,551,689,200.0000
42	UNIC	766,662,726,000.0000	766,662,726,000.0000
43	SMCB	16,666,807,500,000.0000	22,222,410,000,000.0000
44	BRNA	48,300,000,000.0000	96,600,000,000.0000
45	TBMS	108,365,300,000.0000	123,977,250,000.0000
46	TOTO	247,680,000,000.0000	329,414,400,000.0000
47	KBLM	127,680,000,000.0000	151,200,000,000.0000
48	ULTJ	3,119,452,560,000.0000	3,841,548,060,000.0000
49	ESTI	322,433,395,200.0000	322,433,395,200.0000
50	SIPD	507,119,858,622.0000	469,555,424,650.0000
51	RMBA	5,719,603,950,000.0000	4,271,602,950,000.0000
52	SKLT	96,703,670,000.0000	124,333,290,000.0000
53	AISA	827,640,000,000.0000	1,805,760,000,000.0000
54	BTON	60,300,000,000.0000	124,200,000,000.0000
55	SMDR	675,493,500,000.0000	659,117,900,000.0000
56	SPMA	358,091,197,920.0000	432,693,530,820.0000
57	AKRA	11,561,507,650,000.0000	15,598,346,175,000.0000
58	HEXA	34,206,774,700,000.0000	31,004,120,175,000.0000
59	SMGR	67,915,904,000,000.0000	93,124,864,000,000.0000
60	ASII	2,995,816,000,000,000.0000	3,056,542,000,000,000.0000
61	AUTO	13,110,400,000,000.0000	13,592,400,000,000.0000
62	CPIN	35,256,254,251,405.6000	57,393,134,516,922.7000
63	DVLA	1,287,997,869,581.3300	1,892,820,877,084.6200
64	EPMT	2,031,503,924,284.4000	4,712,805,750,798.7200
65	EKAD	195,654,495,089.3980	248,055,168,813.0870
66	INDS	562,497,664,337.2320	1,323,000,909,366.4700
67	PJAA	1,600,029,641,339.7900	1,311,925,034,283.1000
68	KLBF	31,922,043,010,752.7000	48,281,250,000,000.0000
69	MAIN	1,661,153,489,910.6800	3,856,080,244,954.9400
70	SMSM	1,957,935,653,315.8200	3,491,645,587,408.6600
71	SMAR	71,582,442,748,091.6000	18,812,861,587,007.3000
72	TSPC	11,474,882,371,031.0000	16,537,823,866,367.6000
73	TGKA	1,010,366,576,363.0200	1,607,429,079,926.6500
74	UNVR	143,444,089,559,896.0000	161,756,832,344,833.0000
75	TURI	3,347,904,729,030.0300	5,021,809,332,951.6200
76	VOKS	681,511,795,642.3740	856,079,124,579.1250
77	ARNA	2,092,231,446,059.6800	2,477,716,863,289.3800

		MV/6	Ln (MV/6) or SIZE
1	ALMI	248,966,666,666.6670	26.2406
2	ASGR	962,926,985,416.6670	27.5932
3	AMFG	1,946,490,000,000.0000	28.2970
4	BUDI	956,581,922,986.6670	27.5866
5	CLPI	407,685,487,083.3330	26.7338
6	DLTA	1,559,950,715,750.0000	28.0757
7	FASW	6,070,827,528,150.0000	29.4345
8	FAST	3,168,138,626,708.3300	28.7842
9	FISH	594,400,000,000.0000	27.1108
10	GJTL	4,992,240,000,000.0000	29.2389
11	GDYR	423,325,000,000.0000	26.7714
12	GGRM	62,741,302,866,666.7000	31.7700
13	HMSP	115,837,500,000,000.0000	32.3832
14	BRAM	952,500,000,000.0000	27.5824
15	INTP	50,279,489,622,175.0000	31.5486
16	INDF	29,387,938,917,916.7000	31.0116
17	INDR	741,598,601,266.6670	27.3321
18	JPFA	3,325,477,687,783.3300	28.8326
19	IGAR	504,175,000,000.0000	26.9462
20	KAEF	1,617,139,666,957.8300	28.1117
21	LTLS	527,800,000,000.0000	26.9920
22	SQBI	933,786,933,333.3330	27.5625
23	LION	231,687,933,333.3330	26.1687
24	LMSH	378,027,927,000.0000	26.6582
25	TCID	1,577,032,891,083.3300	28.0866
26	MYOR	6,693,555,960,000.0000	29.5322
27	MERK	2,049,600,000,000.0000	28.3487
28	MTDL	265,001,772,994.0000	26.3030
29	MAPI	4,469,550,000,000.0000	29.1283
30	MLBI	5,813,388,583,333.3300	29.3912
31	MASA	2,106,687,809,066.6700	28.3761
32	MLPL	1,083,489,471,691.3300	27.7112
33	MRAT	177,120,666,666.6670	25.9001
34	TKIM	2,282,937,745,200.0000	28.4565
35	RICY	164,600,541,315.0000	25.8268
36	BATA	5,665,833,333.3333	22.4577
37	SCCO	456,909,106,500.0000	26.8478
38	IKBI	344,250,000,000.0000	26.5646

39	TRST	563,040,000,000.0000	27.0566
40	TBLA	1,981,726,325,555.0000	28.3150
41	UNTR	58,033,060,310,816.7000	31.6920
42	UNIC	881,981,577,702.5000	27.5054
43	SMCB	14,374,323,250,000.0000	30.2965
44	BRNA	93,495,000,000.0000	25.2612
45	TBMS	108,365,300,000.0000	25.4088
46	TOTO	330,652,800,000.0000	26.5243
47	KBLM	133,280,000,000.0000	25.6157
48	ULTJ	2,719,893,050,000.0000	28.6316
49	ESTI	201,856,740,120.0000	26.0308
50	SIPD	535,293,184,101.0000	27.0061
51	RMBA	4,571,919,525,000.0000	29.1510
52	SKLT	87,608,883,333.3333	25.1961
53	AISA	1,005,638,333,333.3300	27.6366
54	BTON	64,650,000,000.0000	24.8923
55	SMDR	696,645,316,666.6670	27.2695
56	SPMA	328,747,613,646.0000	26.5186
57	AKRA	7,324,839,221,666.6700	29.6223
58	HEXA	17,780,176,441,666.7000	30.5091
59	SMGR	53,309,536,000,000.0000	31.6071
60	ASII	1,866,312,400,000,000.0000	35.1627
61	AUTO	5,132,278,268,258.8900	29.2666
62	CPIN	16,354,792,174,254.3000	30.4255
63	DVLA	936,719,777,815.2140	27.5657
64	EPMT	2,276,221,742,491.8300	28.4535
65	EKAD	121,136,055,545.9840	25.5202
66	INDS	380,937,567,185.5240	26.6659
67	PJAA	1,233,454,221,636.7700	27.8408
68	KLBF	23,489,418,644,541.5000	30.7876
69	MAIN	1,101,489,897,252.4000	27.7277
70	SMSM	1,560,885,764,260.2800	28.0763
71	SMAR	24,328,835,085,410.3000	30.8227
72	TSPC	7,360,004,719,324.9000	29.6271
73	TGKA	668,983,035,612.7050	27.2290
74	UNVR	104,421,673,714,282.0000	32.2795
75	TURI	2,151,180,221,975.0400	28.3970
76	VOKS	530,559,189,925.8440	26.9972
77	ARNA	1,465,755,622,708.0500	28.0134

5. EARNINGS VOLATILITY (EVOL) CALCULATION

		Ri					
		2007	2008	2009	2010	2011	2012
1	ALMI	0.0513	0.0703	0.0045	0.0665	0.0709	0.0171
2	ASGR	0.1522	0.1259	0.1457	0.1604	0.1500	0.1831
3	AMFG	0.1383	0.1732	0.0467	0.1791	0.1608	0.1067
4	BUDI	0.0988	0.0798	0.0962	0.0685	0.0845	0.0380
5	CLPI	0.1094	0.1376	0.2079	0.1427	0.1191	0.1238
6	DLTA	0.1023	0.1433	0.2112	0.2527	0.2893	0.3785
7	FASW	0.1098	0.1047	0.1156	0.1139	0.0874	0.0798
8	FAST	0.2124	0.1793	0.2124	0.1647	0.1860	0.1282
9	FISH	0.0671	0.2269	-0.0219	0.0524	0.0488	0.0669
10	GJTL	0.0786	0.0667	0.1266	0.1241	0.0874	0.1295
11	GDYR	0.1011	0.0425	0.1027	0.0760	0.0278	0.0856
12	GGRM	0.1063	0.1315	0.1912	0.1906	0.1750	0.1447
13	HMSP	0.3562	0.3858	0.4100	0.4244	0.5480	0.5086
14	BRAM	0.0537	0.0827	0.0534	0.1104	0.0331	0.0159
15	INTP	0.1587	0.2179	0.2782	0.2646	0.2434	0.2583
16	INDF	0.0968	0.1097	0.1239	0.1423	0.1254	0.1158
17	INDR	0.0173	0.0134	0.0075	0.0477	0.0105	0.0193
18	JPFA	0.1089	0.1208	0.2267	0.2257	0.1339	0.1522
19	IGAR	0.0859	0.0481	0.1278	0.1590	0.1889	0.1917
20	KAEF	0.0559	0.0740	0.0716	0.0882	0.1237	0.1373
21	LTLS	0.0882	0.1515	0.0454	0.0468	0.0458	0.0662
22	SQBI	0.3534	0.4554	0.5967	0.4130	0.4480	0.4317
23	LION	0.1413	0.2014	0.1625	0.1547	0.1611	0.2227
24	LMSH	0.1517	0.2553	0.0525	0.1464	0.1609	0.1077
25	TCID	0.2090	0.1925	0.1859	0.1660	0.1707	0.1665
26	MYOR	0.1261	0.1182	0.1889	0.1758	0.1148	0.1393
27	MERK	0.3741	0.3737	0.4642	0.3536	0.3398	0.2481
28	MTDL	0.0955	0.1975	0.1209	0.2271	0.1248	0.1200
29	MAPI	0.0899	0.0807	0.0911	0.0751	0.1097	0.1271
30	MLBI	0.2141	0.3041	0.5168	0.5420	0.5577	0.3564
31	MASA	0.0504	0.0742	0.0910	0.0846	0.0596	0.0070
32	MLPL	0.0449	0.0458	0.0459	0.0002	0.0016	0.0158
33	MRAT	0.0583	0.0713	0.1136	0.0959	0.0983	0.0972
34	TKIM	0.0192	0.0380	0.0508	0.0339	0.0410	0.0320
35	RICY	0.1110	0.0427	0.0132	0.0323	0.0477	0.0579
36	BATA	0.1858	0.1396	0.1802	0.1799	0.1570	0.1745

37	SCCO	0.0656	0.0578	0.0270	0.0825	0.1159	0.1454
38	IKBI	0.1964	0.2334	0.0321	-0.0046	0.0631	0.0697
39	TRST	0.0379	0.0670	0.0847	0.0045	0.0065	0.0446
40	TBLA	0.1027	0.1314	0.1010	0.0958	0.1447	0.0958
41	UNTR	0.1844	0.1820	0.2118	0.1738	0.1605	0.1504
42	UNIC	0.0454	0.0742	0.0172	0.0260	0.0473	0.0361
43	SMCB	0.0722	0.1220	0.1924	0.1277	0.1553	0.1675
44	BRNA	0.0695	0.0934	0.0971	0.1109	0.1241	0.1394
45	TBMS	0.0345	0.0635	0.0217	0.0226	0.0255	0.0180
46	TOTO	0.1568	0.1995	0.2109	0.2372	0.2238	0.2252
47	KBLM	0.0313	0.0216	0.0238	0.0300	0.0695	0.0924
48	ULTJ	0.0541	-0.0390	0.0733	0.0924	0.0835	0.1774
49	ESTI	0.0069	0.0176	0.0045	0.0228	0.0234	-0.0572
50	SIPD	0.0378	0.0538	0.0443	0.0682	0.0490	0.0367
51	RMBA	0.0890	0.0921	0.0033	0.1041	0.1000	-0.0290
52	SKLT	-0.0062	0.0353	0.0087	0.0287	0.0423	0.0433
53	AISA	0.1022	0.1111	0.0783	0.0653	0.0528	0.0664
54	BTON	0.2558	0.3528	0.2427	0.1303	0.2063	0.1654
55	SMDR	0.0705	0.0686	0.0038	0.0313	0.0287	0.0235
56	SPMA	0.0752	0.0626	0.0448	0.0736	0.0286	0.0250
57	AKRA	0.1124	0.1271	0.0891	0.0601	0.0861	0.0621
58	HEXA	0.0987	0.2191	0.1376	0.1670	0.1858	0.1057
59	SMGR	0.2815	0.3195	0.3353	0.2884	0.2488	0.2326
60	ASII	0.1298	0.1471	0.1434	0.1305	0.1162	0.1531
61	AUTO	0.1080	0.1135	0.0904	0.1026	0.0746	0.0341
62	CPIN	0.1008	0.1854	0.3845	0.4236	0.3401	0.2735
63	DVLA	0.1206	0.1226	0.1523	0.1605	0.1726	0.1334
64	EPMT	0.1467	0.1445	0.1622	0.1109	0.1059	0.1150
65	EKAD	0.0630	0.0653	0.1570	0.1813	0.1739	0.1590
66	INDS	0.0991	0.1914	0.0405	0.1552	0.1587	0.0993
67	PJAA	0.1410	0.1470	0.1218	0.1263	0.1201	0.0895
68	KLBF	0.3004	0.2003	0.2416	0.2547	0.2402	0.2536
69	MAIN	0.0634	0.0922	0.1490	0.2684	0.2339	0.2164
70	SMSM	0.1807	0.2290	0.2015	0.2135	0.2608	0.0479
71	SMAR	0.2063	0.2135	0.1087	0.1337	0.1679	0.1492
72	TSPC	0.1156	0.1225	0.1365	0.1646	0.1559	0.1381
73	TGKA	0.0608	0.0800	0.0594	0.0783	0.0932	0.0690
74	UNVR	0.5207	0.5275	0.5631	0.5221	0.5318	0.5231
75	TURI	0.0566	0.0727	0.0667	0.1241	0.1687	0.1179
76	VOKS	0.1181	0.1207	0.0666	0.0420	0.1114	0.1222
77	ARNA	0.1517	0.1557	0.1533	0.1685	0.1792	0.2393

		AVG (R)	(Ri-R)^2					
			2007	2008	2009	2010	2011	2012
1	ALMI	0.0468	0.0000	0.0006	0.0018	0.0004	0.0006	0.0009
2	ASGR	0.1529	0.0000	0.0007	0.0001	0.0001	0.0000	0.0009
3	AMFG	0.1341	0.0000	0.0015	0.0076	0.0020	0.0007	0.0008
4	BUDI	0.0776	0.0004	0.0000	0.0003	0.0001	0.0000	0.0016
5	CLPI	0.1401	0.0009	0.0000	0.0046	0.0000	0.0004	0.0003
6	DLTA	0.2296	0.0162	0.0074	0.0003	0.0005	0.0036	0.0222
7	FASW	0.1019	0.0001	0.0000	0.0002	0.0001	0.0002	0.0005
8	FAST	0.1805	0.0010	0.0000	0.0010	0.0003	0.0000	0.0027
9	FISH	0.0734	0.0000	0.0236	0.0091	0.0004	0.0006	0.0000
10	GJTL	0.1022	0.0006	0.0013	0.0006	0.0005	0.0002	0.0007
11	GDYR	0.0726	0.0008	0.0009	0.0009	0.0000	0.0020	0.0002
12	GGRM	0.1565	0.0025	0.0006	0.0012	0.0012	0.0003	0.0001
13	HMSP	0.4388	0.0068	0.0028	0.0008	0.0002	0.0119	0.0049
14	BRAM	0.0582	0.0000	0.0006	0.0000	0.0027	0.0006	0.0018
15	INTP	0.2369	0.0061	0.0004	0.0017	0.0008	0.0000	0.0005
16	INDF	0.1190	0.0005	0.0001	0.0000	0.0005	0.0000	0.0000
17	INDR	0.0193	0.0000	0.0000	0.0001	0.0008	0.0001	0.0000
18	JPFA	0.1614	0.0027	0.0016	0.0043	0.0041	0.0008	0.0001
19	IGAR	0.1336	0.0023	0.0073	0.0000	0.0006	0.0031	0.0034
20	KAEF	0.0918	0.0013	0.0003	0.0004	0.0000	0.0010	0.0021
21	LTLS	0.0740	0.0002	0.0060	0.0008	0.0007	0.0008	0.0001
22	SQBI	0.4497	0.0093	0.0000	0.0216	0.0013	0.0000	0.0003
23	LION	0.1739	0.0011	0.0008	0.0001	0.0004	0.0002	0.0024
24	LSMH	0.1458	0.0000	0.0120	0.0087	0.0000	0.0002	0.0014
25	TCID	0.1818	0.0007	0.0001	0.0000	0.0002	0.0001	0.0002
26	MYOR	0.1438	0.0003	0.0007	0.0020	0.0010	0.0008	0.0000
27	MERK	0.3589	0.0002	0.0002	0.0111	0.0000	0.0004	0.0123
28	MTDL	0.1476	0.0027	0.0025	0.0007	0.0063	0.0005	0.0008
29	MAPI	0.0956	0.0000	0.0002	0.0000	0.0004	0.0002	0.0010
30	MLBI	0.4152	0.0404	0.0123	0.0103	0.0161	0.0203	0.0035
31	MASA	0.0611	0.0001	0.0002	0.0009	0.0005	0.0000	0.0029
32	MLPL	0.0257	0.0004	0.0004	0.0004	0.0007	0.0006	0.0001
33	MRAT	0.0891	0.0009	0.0003	0.0006	0.0000	0.0001	0.0001
34	TKIM	0.0358	0.0003	0.0000	0.0002	0.0000	0.0000	0.0000
35	RICY	0.0508	0.0036	0.0001	0.0014	0.0003	0.0000	0.0001
36	BATA	0.1695	0.0003	0.0009	0.0001	0.0001	0.0002	0.0000
37	SCCO	0.0824	0.0003	0.0006	0.0031	0.0000	0.0011	0.0040

38	IKBI	0.0983	0.0096	0.0182	0.0044	0.0106	0.0012	0.0008
39	TRST	0.0409	0.0000	0.0007	0.0019	0.0013	0.0012	0.0000
40	TBLA	0.1119	0.0001	0.0004	0.0001	0.0003	0.0011	0.0003
41	UNTR	0.1772	0.0001	0.0000	0.0012	0.0000	0.0003	0.0007
42	UNIC	0.0410	0.0000	0.0011	0.0006	0.0002	0.0000	0.0000
43	SMCB	0.1395	0.0045	0.0003	0.0028	0.0001	0.0002	0.0008
44	BRNA	0.1057	0.0013	0.0002	0.0001	0.0000	0.0003	0.0011
45	TBMS	0.0310	0.0000	0.0011	0.0001	0.0001	0.0000	0.0002
46	TOTO	0.2089	0.0027	0.0001	0.0000	0.0008	0.0002	0.0003
47	KBLM	0.0448	0.0002	0.0005	0.0004	0.0002	0.0006	0.0023
48	ULTJ	0.0736	0.0004	0.0127	0.0000	0.0004	0.0001	0.0108
49	ESTI	0.0030	0.0000	0.0002	0.0000	0.0004	0.0004	0.0036
50	SIPD	0.0483	0.0001	0.0000	0.0000	0.0004	0.0000	0.0001
51	RMBA	0.0599	0.0008	0.0010	0.0032	0.0020	0.0016	0.0079
52	SKLT	0.0253	0.0010	0.0001	0.0003	0.0000	0.0003	0.0003
53	AISA	0.0793	0.0005	0.0010	0.0000	0.0002	0.0007	0.0002
54	BTON	0.2255	0.0009	0.0162	0.0003	0.0091	0.0004	0.0036
55	SMDR	0.0377	0.0011	0.0010	0.0012	0.0000	0.0001	0.0002
56	SPMA	0.0516	0.0006	0.0001	0.0000	0.0005	0.0005	0.0007
57	AKRA	0.0895	0.0005	0.0014	0.0000	0.0009	0.0000	0.0008
58	HEXA	0.1523	0.0029	0.0045	0.0002	0.0002	0.0011	0.0022
59	SMGR	0.2843	0.0000	0.0012	0.0026	0.0000	0.0013	0.0027
60	ASII	0.1367	0.0000	0.0001	0.0000	0.0000	0.0004	0.0003
61	AUTO	0.0872	0.0004	0.0007	0.0000	0.0002	0.0002	0.0028
62	CPIN	0.2846	0.0338	0.0099	0.0100	0.0193	0.0031	0.0001
63	DVLA	0.1437	0.0005	0.0004	0.0001	0.0003	0.0008	0.0001
64	EPMT	0.1308	0.0003	0.0002	0.0010	0.0004	0.0006	0.0003
65	EKAD	0.1332	0.0049	0.0046	0.0006	0.0023	0.0017	0.0007
66	INDS	0.1240	0.0006	0.0045	0.0070	0.0010	0.0012	0.0006
67	PJAA	0.1243	0.0003	0.0005	0.0000	0.0000	0.0000	0.0012
68	KLBF	0.2484	0.0027	0.0023	0.0000	0.0000	0.0001	0.0000
69	MAIN	0.1705	0.0115	0.0061	0.0005	0.0096	0.0040	0.0021
70	SMSM	0.1889	0.0001	0.0016	0.0002	0.0006	0.0052	0.0199
71	SMAR	0.1632	0.0019	0.0025	0.0030	0.0009	0.0000	0.0002
72	TSPC	0.1389	0.0005	0.0003	0.0000	0.0007	0.0003	0.0000
73	TGKA	0.0734	0.0002	0.0000	0.0002	0.0000	0.0004	0.0000
74	UNVR	0.5314	0.0001	0.0000	0.0010	0.0001	0.0000	0.0001
75	TURI	0.1011	0.0020	0.0008	0.0012	0.0005	0.0046	0.0003
76	VOKS	0.0968	0.0005	0.0006	0.0009	0.0030	0.0002	0.0006
77	ARNA	0.1746	0.0005	0.0004	0.0005	0.0000	0.0000	0.0042

		AVG	EVOLT
1	ALMI	0.0007	0.0265
2	ASGR	0.0003	0.0171
3	AMFG	0.0021	0.0460
4	BUDI	0.0004	0.0204
5	CLPI	0.0010	0.0323
6	DLTA	0.0084	0.0915
7	FASW	0.0002	0.0135
8	FAST	0.0008	0.0290
9	FISH	0.0056	0.0750
10	GJTL	0.0006	0.0254
11	GDYR	0.0008	0.0283
12	GGRM	0.0010	0.0316
13	HMSP	0.0046	0.0676
14	BRAM	0.0010	0.0311
15	INTP	0.0016	0.0397
16	INDF	0.0002	0.0141
17	INDR	0.0002	0.0133
18	JPFA	0.0023	0.0477
19	IGAR	0.0028	0.0528
20	KAEF	0.0009	0.0292
21	LTLS	0.0014	0.0379
22	SQBI	0.0054	0.0737
23	LION	0.0008	0.0285
24	LMSH	0.0037	0.0611
25	TCID	0.0002	0.0157
26	MYOR	0.0008	0.0285
27	MERK	0.0040	0.0635
28	MTDL	0.0023	0.0475
29	MAPI	0.0003	0.0177
30	MLBI	0.0172	0.1310
31	MASA	0.0008	0.0279
32	MLPL	0.0004	0.0204
33	MRAT	0.0003	0.0185
34	TKIM	0.0001	0.0096
35	RICY	0.0009	0.0303
36	BATA	0.0003	0.0161
37	SCCO	0.0015	0.0388
38	IKBI	0.0075	0.0865

39	TRST	0.0009	0.0292
40	TBLA	0.0004	0.0190
41	UNTR	0.0004	0.0195
42	UNIC	0.0003	0.0182
43	SMCB	0.0015	0.0383
44	BRNA	0.0005	0.0225
45	TBMS	0.0002	0.0154
46	TOTO	0.0007	0.0261
47	KBLM	0.0007	0.0266
48	ULTJ	0.0040	0.0636
49	ESTI	0.0008	0.0279
50	SIPD	0.0001	0.0107
51	RMBA	0.0028	0.0525
52	SKLT	0.0003	0.0182
53	AISA	0.0004	0.0208
54	BTON	0.0051	0.0713
55	SMDR	0.0006	0.0242
56	SPMA	0.0004	0.0202
57	AKRA	0.0006	0.0244
58	HEXA	0.0018	0.0429
59	SMGR	0.0013	0.0360
60	ASII	0.0002	0.0124
61	AUTO	0.0007	0.0269
62	CPIN	0.0127	0.1126
63	DVLA	0.0004	0.0195
64	EPMT	0.0004	0.0212
65	EKAD	0.0025	0.0496
66	INDS	0.0025	0.0499
67	PJAA	0.0003	0.0184
68	KLBF	0.0009	0.0294
69	MAIN	0.0056	0.0750
70	SMSM	0.0046	0.0677
71	SMAR	0.0014	0.0375
72	TSPC	0.0003	0.0172
73	TGKA	0.0001	0.0118
74	UNVR	0.0002	0.0147
75	TURI	0.0016	0.0395
76	VOKS	0.0010	0.0311
77	ARNA	0.0009	0.0305

6. LEVERAGE (LEV) CALCULATION

		LD/ASSET						
		2007	2008	2009	2010	2011	2012	AVG DEBT
1	ALMI	0.0206	0.0308	0.0486	0.0161	0.1474	0.1955	0.0765
2	ASGR	0.0184	0.0438	0.0406	0.0207	0.0230	0.0524	0.0331
3	AMFG	0.0928	0.0884	0.1054	0.0859	0.0789	0.0744	0.0876
4	BUDI	0.2752	0.2178	0.2166	0.1798	0.2764	0.2342	0.2333
5	CLPI	0.0272	0.0211	0.0318	0.0633	0.0735	0.0474	0.0440
6	DLTA	0.0471	0.0440	0.0401	0.0365	0.0389	0.0365	0.0405
7	FASW	0.5123	0.5071	0.4425	0.2766	0.4605	0.2289	0.4047
8	FAST	0.1021	0.0814	0.0783	0.0871	0.1906	0.1892	0.1214
9	FISH	0.0050	0.0081	0.0072	0.0023	0.0021	0.0032	0.0046
10	GJTL	0.5333	0.5730	0.4853	0.4047	0.3655	0.3397	0.4502
11	GDYR	0.0639	0.4169	0.2410	0.1107	0.0532	0.0139	0.1499
12	GGRM	0.0360	0.0367	0.0326	0.0306	0.0257	0.0265	0.0313
13	HMSP	0.0894	0.0274	0.0284	0.0259	0.0353	0.0397	0.0410
14	BRAM	0.1795	0.0202	0.0259	0.0691	0.0935	0.0858	0.0790
15	INTP	0.2335	0.0727	0.0597	0.0585	0.0518	0.0403	0.0861
16	INDF	0.1988	0.2569	0.3402	0.2658	0.1706	0.1408	0.2289
17	INDR	0.2868	0.2611	0.1774	0.0917	0.1860	0.2009	0.2006
18	JPFA	0.5117	0.3808	0.3132	0.2589	0.1671	0.2440	0.3126
19	IGAR	0.0509	0.0427	0.0441	0.0299	0.0255	0.0309	0.0373
20	KAEF	0.0326	0.0332	0.0382	0.0443	0.0457	0.0470	0.0402
21	LTLS	0.0380	0.1761	0.2671	0.2522	0.1690	0.0864	0.1648
22	SQBI	0.0783	0.0540	0.0301	0.0282	0.0314	0.0213	0.0405
23	LION	0.0568	0.0526	0.0509	0.0501	0.0481	0.0448	0.0506
24	LMSH	0.0962	0.0885	0.1528	0.1248	0.0945	0.0036	0.0934
25	TCID	0.0401	0.0365	0.0365	0.0397	0.0471	0.0517	0.0419
26	MYOR	0.1211	0.3001	0.2647	0.2998	0.3529	0.3987	0.2895
27	MERK	0.0246	0.0248	0.0269	0.0441	0.0424	0.0577	0.0368
28	MTDL	0.0278	0.1000	0.1272	0.1358	0.1164	0.0513	0.0931
29	MAPI	0.3481	0.3332	0.2429	0.1995	0.0778	0.1895	0.2318
30	MLBI	0.0598	0.0382	0.0362	0.0296	0.0251	0.0221	0.0352
31	MASA	0.1350	0.1704	0.0870	0.1371	0.0739	0.2079	0.1352
32	MLPL	0.4019	0.2672	0.4044	0.1292	0.1483	0.1678	0.2531
33	MRAT	0.0181	0.0216	0.0282	0.0275	0.0284	0.0240	0.0246
34	TKIM	0.6077	0.5934	0.5594	0.5305	0.4782	0.5158	0.5475
35	RICY	0.0769	0.0634	0.0588	0.0488	0.0461	0.2478	0.0903
36	BATA	0.0443	0.0457	0.0296	0.0227	0.0258	0.0320	0.0333
37	SCCO	0.0030	0.0137	0.0101	0.0084	0.0088	0.0094	0.0089

38	IKBI	0.1315	0.1535	0.0268	0.0286	0.0331	0.0284	0.0670
39	TRST	0.2265	0.1887	0.1395	0.1023	0.1018	0.0877	0.1411
40	TBLA	0.3973	0.3190	0.3259	0.2577	0.2995	0.3806	0.3300
41	UNTR	0.1521	0.1650	0.1323	0.1218	0.0844	0.1327	0.1314
42	UNIC	0.0816	0.2157	0.2028	0.1619	0.1004	0.0864	0.1415
43	SMCB	0.5345	0.5035	0.3836	0.2161	0.1588	0.1803	0.3295
44	BRNA	0.3552	0.3155	0.2334	0.1923	0.1463	0.1640	0.2345
45	TBMS	0.0017	0.0013	0.0014	0.0015	0.0021	0.0022	0.0017
46	TOTO	0.2652	0.2198	0.1742	0.0983	0.1003	0.1154	0.1622
47	KBLM	0.0549	0.0584	0.0558	0.0323	0.0200	0.0231	0.0407
48	ULTJ	0.2185	0.0920	0.0888	0.1136	0.0776	0.0626	0.1088
49	ESTI	0.0447	0.0390	0.1080	0.0681	0.0401	0.0003	0.0500
50	SIPD	0.0139	0.0159	0.0226	0.1236	0.1847	0.2307	0.0986
51	RMBA	0.3822	0.3352	0.3063	0.3170	0.0407	0.3292	0.2851
52	SKLT	0.1792	0.2055	0.1845	0.1604	0.1372	0.1201	0.1645
53	AISA	0.1564	0.2570	0.4065	0.4278	0.2410	0.1855	0.2790
54	BTON	0.0247	0.0183	0.0208	0.0199	0.0160	0.0145	0.0190
55	SMDR	0.2006	0.3029	0.3521	0.3372	0.3702	0.3595	0.3204
56	SPMA	0.4897	0.4902	0.3436	0.4574	0.3193	0.4260	0.4210
57	AKRA	0.1181	0.1489	0.1687	0.1256	0.1051	0.0916	0.1263
58	HEXA	0.0838	0.0485	0.0684	0.0239	0.0134	0.0130	0.0418
59	SMGR	0.0411	0.0318	0.0261	0.0582	0.1097	0.1350	0.0670
60	ASII	0.1552	0.1645	0.1492	0.1510	0.1909	0.2100	0.1701
61	AUTO	0.0972	0.0798	0.0607	0.0413	0.0500	0.0726	0.0670
62	CPIN	0.5288	0.2827	0.1107	0.0882	0.1224	0.1193	0.2087
63	DVLA	0.0416	0.0301	0.0386	0.0452	0.0604	0.0688	0.0474
64	EPMT	0.0192	0.0151	0.0164	0.0113	0.0090	0.0088	0.0133
65	EKAD	0.0337	0.0983	0.0711	0.0478	0.0343	0.0216	0.0511
66	INDS	0.3138	0.1896	0.2103	0.1699	0.1555	0.1048	0.1907
67	PJAA	0.2006	0.1933	0.1441	0.1183	0.0757	0.1098	0.1403
68	KLBF	0.0835	0.0190	0.0181	0.0162	0.0155	0.0156	0.0280
69	MAIN	0.1203	0.4116	0.3966	0.3662	0.2944	0.2769	0.3110
70	SMSM	0.0455	0.0386	0.0373	0.1821	0.1773	0.1365	0.1029
71	SMAR	0.2909	0.2507	0.2454	0.1919	0.2116	0.1607	0.2252
72	TSPC	0.0356	0.0403	0.0432	0.0447	0.0451	0.0448	0.0423
73	TGKA	0.0907	0.0953	0.1196	0.1084	0.1103	0.1128	0.1062
74	UNVR	0.0396	0.0472	0.0430	0.0287	0.0312	0.0355	0.0375
75	TURI	0.2925	0.3108	0.0846	0.0955	0.0861	0.0929	0.1604
76	VOKS	0.0210	0.0155	0.0148	0.0188	0.0139	0.0126	0.0161
77	ARNA	0.3251	0.2512	0.2621	0.1729	0.1098	0.0585	0.1966

7. ASSET'S GROWTH (GROWTH) CALCULATION

		Change Total Asset			
		2007	2008	2009	2010
1	ALMI	121,218	265,740	-155,057	22,543
2	ASGR	39,718	216,497	-66,197	212,041
3	AMFG	171,346	192,018	-20,636	400,260
4	BUDI	554,037	213,099	-99,926	368,809
5	CLPI	34,223	91,315	-39,699	56,192
6	DLTA	21,116	105,938	62,129	-51,842
7	FASW	347,696	-51,040	-47,313	823,787
8	FAST	145,916	155,268	256,650	194,634
9	FISH	339,640	-118,688	144,024	544,430
10	GJTL	1,178,668	258,866	330,575	1,327,433
11	GDYR	124,810	442,669	105,300	20,387
12	GGRM	2,046,917	293,008	3,158,006	3,510,714
13	HMSP	3,020,738	453,277	1,582,628	2,808,676
14	BRAM	25,959	117,903	-323,135	143,097
15	INTP	439,647	1,248,780	1,989,563	2,069,876
16	INDF	13,439,412	9,884,414	791,644	6,893,002
17	INDR	522,458	801,255	-1,552,694	-37,348
18	JPFA	421,034	1,731,347	295,293	910,970
19	IGAR	39,652	-24,014	12,026	29,664
20	KAEF	125,155	58,931	116,955	94,667
21	LTLS	304,568	1,304,926	-421,880	573,009
22	SQBI	20,286	67,303	24,209	1,089
23	LION	28,441	37,012	18,224	32,534
24	LMSH	19,224	-824	10,843	5,369
25	TCID	53,000	185,593	83,830	52,618
26	MYOR	339,798	1,029,823	323,500	1,152,693
27	MERK	48,363	44,002	58,907	797
28	MTDL	421,451	126,545	-229,742	-113,812
29	MAPI	694,494	801,055	-381,575	291,110
30	MLBI	11,398	319,554	52,076	143,617
31	MASA	365,484	579,852	157,021	502,367
32	MLPL	2,366,145	1,623,118	406,519	2,148,309
33	MRAT	24,229	38,783	10,855	20,716
34	TKIM	1,311,414	4,370,170	-2,620,770	-1,216,291
35	RICY	58,189	71,080	-46,038	13,604
36	BATA	60,619	69,821	14,099	68,253
37	SCCO	620,009	-166,895	-84,027	114,858

38	IKBI	-974	47,087	-74,460	5,602
39	TRST	118,513	19,875	-237,206	107,898
40	TBLA	407,957	345,377	-16,157	864,765
41	UNTR	1,754,773	9,845,102	1,557,107	5,296,086
42	UNIC	-123,542	483,781	-863,800	36,748
43	SMCB	142,404	1,000,735	-943,619	3,171,883
44	BRNA	-23,905	45,216	75,034	43,681
45	TBMS	228,376	-10,665	-177,260	242,978
46	TOTO	5,827	117,136	-20,239	80,691
47	KBLM	155,297	26,430	-104,330	48,414
48	ULTJ	113,750	356,167	13,705	273,894
49	ESTI	10,075	-10,474	-11,391	64,396
50	SIPD	181,000	89,707	256,588	414,448
51	RMBA	2,165,977	596,371	447,066	-8,163
52	SKLT	9,094	18,306	-4,817	3,189
53	AISA	428,758	224,268	330,078	589,913
54	BTON	12,795	24,040	-725	20,040
55	SMDR	489,443	1,956,198	-149,870	-104,982
56	SPMA	120,458	63,011	-132,265	57,397
57	AKRA	1,120,251	1,377,260	1,184,219	1,606,520
58	HEXA	179,736	455,106	187,024	43,510
59	SMGR	1,100,370	2,087,737	2,348,344	2,611,691
60	ASII	7,590,308	15,220,402	8,198,000	23,919,000
61	AUTO	426,094	527,062	663,623	940,913
62	CPIN	1,600,359	418,049	170,835	1,168,901
63	DVLA	3,593	76,731	145,952	70,497
64	EPMT	279,641	418,905	472,842	268,588
65	EKAD	10,280	55,838	24,359	39,347
66	INDS	108,669	318,955	-297,088	149,469
67	PJAA	322,861	54,160	198,145	39,751
68	KLBF	438,730	1,943,824	778,615	550,050
69	MAIN	313,486	203,692	25,413	80,971
70	SMSM	113,364	99,704	11,898	125,452
71	SMAR	2,751,238	1,962,748	184,679	2,265,047
72	TSPC	293,884	193,923	296,046	326,493
73	TGKA	281,636	176,995	-59,670	275,896
74	UNVR	707,000	1,171,736	980,254	1,216,272
75	TURI	487,398	238,083	-1,812,636	329,462
76	VOKS	333,134	360,054	72,830	-111,477
77	ARNA	504,974	105,505	86,595	50,467

		Change Total Asset	
		2011	2012
1	ALMI	287,369	90,046
2	ASGR	139,157	113,872
3	AMFG	317,938	424,826
4	BUDI	155,652	176,387
5	CLPI	98,578	65,232
6	DLTA	-12,417	49,140
7	FASW	441,072	-1,038,712
8	FAST	311,939	233,924
9	FISH	918,286	461,477
10	GJTL	1,182,576	1,315,650
11	GDYR	38,098	12,146
12	GGRM	8,347,026	2,420,620
13	HMSP	-1,148,780	6,871,184
14	BRAM	167,391	563,335
15	INTP	2,805,185	4,603,829
16	INDF	6,309,978	5,738,274
17	INDR	1,021,298	545,807
18	JPFA	1,285,310	2,695,047
19	IGAR	8,107	-43,237
20	KAEF	136,950	282,106
21	LTLS	449,159	14,476
22	SQBI	41,733	35,388
23	LION	61,916	67,681
24	LMSH	19,819	30,529
25	TCID	83,627	130,708
26	MYOR	2,200,655	1,702,660
27	MERK	149,621	-14,958
28	MTDL	329,043	388,096
29	MAPI	744,839	1,575,243
30	MLBI	83,731	-68,765
31	MASA	1,697,937	1,302,430
32	MLPL	298,021	-226,524
33	MRAT	36,141	32,980
34	TKIM	2,347,940	2,640,588
35	RICY	28,772	200,404
36	BATA	32,396	57,459
37	SCCO	298,008	31,300
38	IKBI	67,848	145,152
39	TRST	102,892	55,679

40	TBLA	593,513	952,934
41	UNTR	17,739,148	2,860,571
42	UNIC	264,679	-53,023
43	SMCB	513,252	1,218,016
44	BRNA	93,057	126,420
45	TBMS	225,923	439,986
46	TOTO	247,987	183,094
47	KBLM	239,760	79,986
48	ULTJ	172,586	241,611
49	ESTI	53,677	141,162
50	SIPD	585,860	440,289
51	RMBA	1,439,523	619,644
52	SKLT	14,863	21,045
53	AISA	1,572,360	311,370
54	BTON	28,892	24,994
55	SMDR	806,348	377,672
56	SPMA	61,743	41,269
57	AKRA	642,654	1,483,060
58	HEXA	1,017,771	1,597,794
59	SMGR	4,098,604	6,917,481
60	ASII	40,664,000	28,753,000
61	AUTO	1,378,375	1,917,415
62	CPIN	2,329,928	2,899,645
63	DVLA	74,181	145,062
64	EPMT	1,115,977	107,679
65	EKAD	33,122	38,766
66	INDS	369,106	505,254
67	PJAA	167,844	-62,032
68	KLBF	1,242,057	470,691
69	MAIN	361,482	478,827
70	SMSM	69,755	281,245
71	SMAR	2,246,257	1,497,150
72	TSPC	660,778	264,517
73	TGKA	276,513	114,641
74	UNVR	1,781,050	1,939,598
75	TURI	445,155	767,076
76	VOKS	446,558	205,139
77	ARNA	-41,646	105,852

		Change Total Asset/Beginning Asset			
		2007	2008	2009	2010
1	ALMI	0.0884	0.1624	-0.1047	0.0150
2	ASGR	0.0636	0.2574	-0.0854	0.2149
3	AMFG	0.0951	0.0963	-0.0105	0.1687
4	BUDI	0.3729	0.1254	-0.0625	0.1874
5	CLPI	0.2042	0.3527	-0.1811	0.2040
6	DLTA	0.0356	0.1517	0.0817	-0.0732
7	FASW	0.0922	-0.0137	-0.0129	0.1833
8	FAST	0.2318	0.1979	0.2464	0.1575
9	FISH	0.6384	-0.2871	0.2584	0.4941
10	GJTL	0.1394	0.0297	0.0366	0.1280
11	GDYR	0.2153	0.4330	0.0934	0.0178
12	GGRM	0.0861	0.0122	0.1160	0.1142
13	HMSP	0.1926	0.0281	0.0893	0.1368
14	BRAM	0.0167	0.0705	-0.2394	0.0959
15	INTP	0.0438	0.1106	0.1499	0.1349
16	INDF	0.4524	0.2497	0.0196	0.1458
17	INDR	0.0889	0.1200	-0.3031	-0.0073
18	JPFA	0.1041	0.2998	0.0486	0.1305
19	IGAR	0.1202	-0.0785	0.0378	0.0854
20	KAEF	0.0903	0.0408	0.0748	0.0571
21	LTLS	0.1426	0.3793	-0.1398	0.1596
22	SQBI	0.0892	0.2284	0.0759	0.0034
23	LION	0.1316	0.1462	0.0672	0.1071
24	LMSH	0.3061	-0.0133	0.1489	0.0687
25	TCID	0.0731	0.2038	0.0843	0.0502
26	MYOR	0.1795	0.3523	0.0996	0.2620
27	MERK	0.1461	0.1173	0.1357	0.0018
28	MTDL	0.3626	0.0982	-0.2169	-0.1204
29	MAPI	0.2346	0.2130	-0.1129	0.0793
30	MLBI	0.0183	0.3394	0.0524	0.1263
31	MASA	0.2031	0.2437	0.0619	0.1653
32	MLPL	0.2405	0.1416	0.0343	0.1533
33	MRAT	0.0767	0.1093	0.0297	0.0536
34	TKIM	0.0642	0.1763	-0.1182	-0.0581
35	RICY	0.1013	0.1101	-0.0768	0.0222
36	BATA	0.1825	0.1737	0.0339	0.1409
37	SCCO	0.4793	-0.1481	-0.0806	0.0992
38	IKBI	-0.0017	0.0740	-0.1325	0.0099
39	TRST	0.0554	0.0092	-0.1234	0.0532

40	TBLA	0.1660	0.1232	-0.0058	0.2369
41	UNTR	0.1350	0.4309	0.0638	0.1783
42	UNIC	-0.0471	0.1557	-0.3850	0.0161
43	SMCB	0.0198	0.1219	-0.1299	0.3039
44	BRNA	-0.0618	0.1046	0.1479	0.0793
45	TBMS	0.1929	-0.0091	-0.1780	0.1961
46	TOTO	0.0064	0.1136	-0.0200	0.0739
47	KBLM	0.3589	0.0576	-0.2941	0.1201
48	ULTJ	0.0835	0.2072	0.0079	0.1365
49	ESTI	0.0186	-0.0198	-0.0220	0.1104
50	SIPD	0.1398	0.0648	0.1563	0.2016
51	RMBA	0.5613	0.1338	0.0912	-0.0017
52	SKLT	0.0498	0.0911	-0.0246	0.0160
53	AISA	0.5409	0.2205	0.2450	0.3046
54	BTON	0.2753	0.3409	-0.0104	0.2231
55	SMDR	0.1232	0.3300	-0.0259	-0.0185
56	SPMA	0.0802	0.0403	-0.0923	0.0385
57	AKRA	0.3203	0.2825	0.1954	0.2096
58	HEXA	0.1299	0.2475	0.0923	0.0210
59	SMGR	0.1292	0.1969	0.1813	0.1678
60	ASII	0.1158	0.1885	0.0922	0.2119
61	AUTO	0.1234	0.1324	0.1429	0.1684
62	CPIN	0.3362	0.0807	0.0319	0.1793
63	DVLA	0.0064	0.1203	0.1863	0.0825
64	EPMT	0.1335	0.1667	0.1583	0.0825
65	EKAD	0.1210	0.3967	0.1475	0.1924
66	INDS	0.1813	0.3474	-0.4783	0.1940
67	PJAA	0.2528	0.0407	0.1296	0.0253
68	KLBF	0.1167	0.3408	0.1201	0.0782
69	MAIN	0.4777	0.2369	0.0287	0.0838
70	SMSM	0.1366	0.1072	0.0126	0.1176
71	SMAR	0.3412	0.1958	0.0181	0.1816
72	TSPC	0.1060	0.0654	0.0907	0.0910
73	TGKA	0.2088	0.1160	-0.0407	0.1584
74	UNVR	0.1326	0.1801	0.1310	0.1398
75	TURI	0.1457	0.0664	-1.0237	0.1569
76	VOKS	0.4138	0.3090	0.0588	-0.0990
77	ARNA	0.8008	0.1433	0.1053	0.0578

		Change Total Asset/Beginning Asset		
		2011	2012	AVG GROWTH
1	ALMI	0.1604	0.0479	0.0616
2	ASGR	0.1236	0.0918	0.1110
3	AMFG	0.1182	0.1364	0.1007
4	BUDI	0.0733	0.0767	0.1289
5	CLPI	0.2636	0.1485	0.1653
6	DLTA	-0.0178	0.0659	0.0407
7	FASW	0.0894	-0.2665	0.0120
8	FAST	0.2015	0.1313	0.1944
9	FISH	0.4546	0.1860	0.2907
10	GJTL	0.1024	0.1022	0.0897
11	GDYR	0.0321	0.0101	0.1336
12	GGRM	0.2135	0.0583	0.1000
13	HMSP	-0.0593	0.2618	0.1082
14	BRAM	0.1008	0.2534	0.0496
15	INTP	0.1545	0.2023	0.1327
16	INDF	0.1178	0.0967	0.1803
17	INDR	0.1672	0.0820	0.0246
18	JPFA	0.1555	0.2459	0.1641
19	IGAR	0.0228	-0.1384	0.0082
20	KAEF	0.0763	0.1359	0.0792
21	LTLS	0.1112	0.0036	0.1094
22	SQBI	0.1154	0.0891	0.1002
23	LION	0.1693	0.1561	0.1296
24	LMSH	0.2022	0.2375	0.1583
25	TCID	0.0739	0.1036	0.0982
26	MYOR	0.3334	0.2051	0.2387
27	MERK	0.2560	-0.0263	0.1051
28	MTDL	0.2582	0.2335	0.1025
29	MAPI	0.1687	0.2630	0.1409
30	MLBI	0.0686	-0.0597	0.0909
31	MASA	0.3585	0.2157	0.2080
32	MLPL	0.0208	-0.0161	0.0957
33	MRAT	0.0855	0.0724	0.0712
34	TKIM	0.1008	0.1018	0.0445
35	RICY	0.0448	0.2379	0.0732
36	BATA	0.0627	0.1001	0.1156
37	SCCO	0.2047	0.0211	0.0959
38	IKBI	0.1068	0.1860	0.0404
39	TRST	0.0483	0.0254	0.0113

40	TBLA	0.1398	0.1833	0.1406
41	UNTR	0.3739	0.0569	0.2065
42	UNIC	0.1040	-0.0213	-0.0296
43	SMCB	0.0469	0.1001	0.0771
44	BRNA	0.1445	0.1641	0.0964
45	TBMS	0.1542	0.2310	0.0979
46	TOTO	0.1851	0.1202	0.0799
47	KBLM	0.3729	0.1106	0.1210
48	ULTJ	0.0792	0.0998	0.1023
49	ESTI	0.0843	0.1814	0.0588
50	SIPD	0.2218	0.1429	0.1545
51	RMBA	0.2273	0.0891	0.1835
52	SKLT	0.0694	0.0894	0.0485
53	AISA	0.4481	0.0815	0.3068
54	BTON	0.2434	0.1739	0.2077
55	SMDR	0.1244	0.0551	0.0980
56	SPMA	0.0398	0.0259	0.0221
57	AKRA	0.0774	0.1515	0.2061
58	HEXA	0.3297	0.3410	0.1936
59	SMGR	0.2085	0.2603	0.1907
60	ASII	0.2649	0.1577	0.1718
61	AUTO	0.1979	0.2159	0.1635
62	CPIN	0.2633	0.2468	0.1897
63	DVLA	0.0799	0.1351	0.1018
64	EPMT	0.2553	0.0240	0.1367
65	EKAD	0.1394	0.1403	0.1896
66	INDS	0.3239	0.3072	0.1459
67	PJAA	0.0966	-0.0370	0.0847
68	KLBF	0.1501	0.0538	0.1433
69	MAIN	0.2722	0.2650	0.2274
70	SMSM	0.0614	0.1983	0.1056
71	SMAR	0.1526	0.0923	0.1636
72	TSPC	0.1555	0.0586	0.0945
73	TGKA	0.1370	0.0537	0.1055
74	UNVR	0.1699	0.1561	0.1516
75	TURI	0.1749	0.2316	-0.0414
76	VOKS	0.2839	0.1154	0.1803
77	ARNA	-0.0501	0.1129	0.1950

Appendix 3: Descriptive Analysis

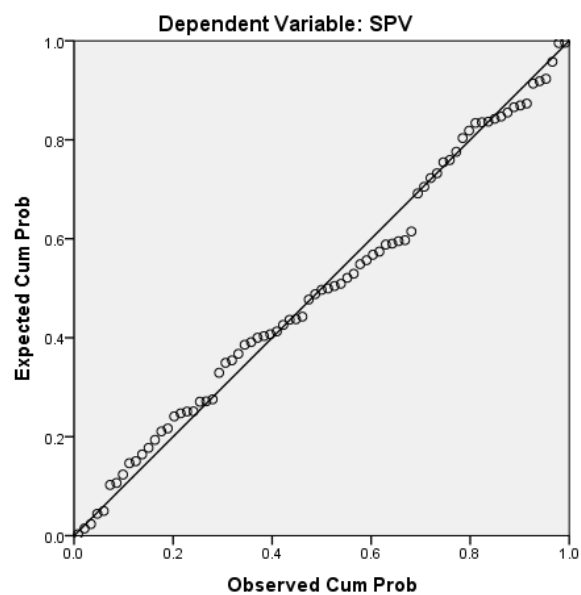
Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SPV	77	.3528	1.2334	.785105	.1607213
DY	77	.0014880952381	3.7361964376	.0924832254037	.42991419
		952	891100	22	4160619
DPR	77	.0129182672642	1.3550777777	.2885118353662	.24603907
		479	778700	72	9071512
SIZE	77	22.4577	35.1627	28.107822	2.0636779
EVOL	77	.0096	.1310	.036074	.0238746
LEV	77	.0017	.5475	.139371	.1218701
GROWTH	77	-.0414	.3068	.120453	.0666468
Valid N (listwise)	77				

Appendix 4: Classical Assumption Test

1. Normality

FIRST MODEL

Normal P-P Plot of Regression Standardized Residual



FIRST MODEL

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		77
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.15353826
	Absolute	.077
Most Extreme Differences	Positive	.077
	Negative	-.049
Kolmogorov-Smirnov Z		.675
Asymp. Sig. (2-tailed)		.752

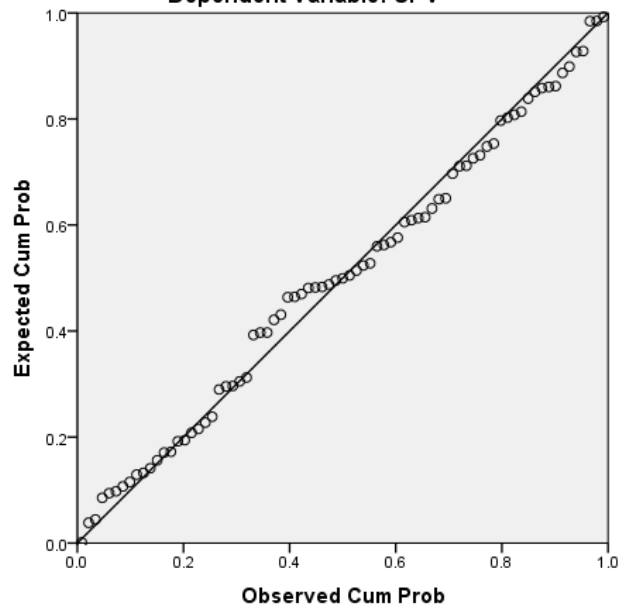
a. Test distribution is Normal.

b. Calculated from data.

SECOND MODEL

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: SPV



SECOND MODEL

One-Sample Kolmogorov-Smirnov Test

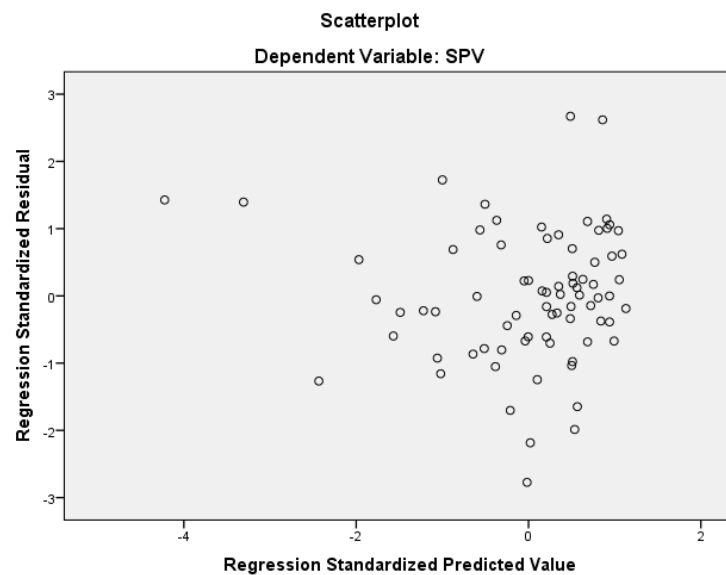
		Unstandardized Residual
N		77
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.13974940
	Absolute	.073
Most Extreme Differences	Positive	.045
	Negative	-.073
Kolmogorov-Smirnov Z		.637
Asymp. Sig. (2-tailed)		.812

a. Test distribution is Normal.

b. Calculated from data.

2. Heteroscedasticity

FIRST MODEL



GLEJSER TEST (FIRST MODEL)

Coefficients^a

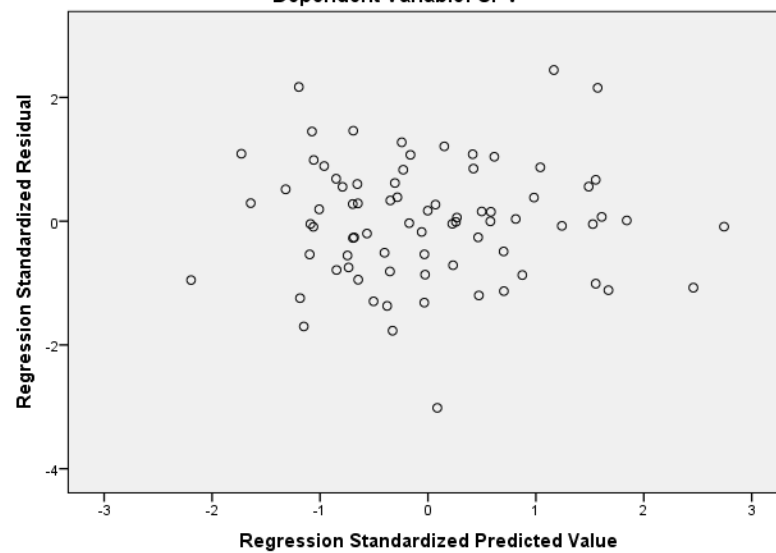
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.099	.017		5.696	.000
1 DY	-.034	.026	-.146	-1.290	.201
DPR	.070	.046	.173	1.523	.132

a. Dependent Variable: UT1

SECOND MODEL

Scatterplot

Dependent Variable: SPV



GLEJSER TEST (SECOND MODEL)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.087	.154		.567	.573
DY	-.029	.026	-.139	-1.124	.265
DPR	.076	.046	.208	1.645	.105
SIZE	-9.858E-005	.006	-.002	-.017	.986
EVOL	-.021	.456	-.005	-.045	.964
LEV	.049	.090	.066	.544	.588
GROWTH	-.027	.168	-.020	-.162	.872

a. Dependent Variable: UT

3. Multicollinearity Test

FIRST MODEL

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	DY	.998	1.002
	DPR	.998	1.002

SECOND MODEL

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	DY	.874	1.145
	DPR	.838	1.194
	SIZE	.770	1.299
	EVOL	.909	1.100
	LEV	.900	1.112
	GROWTH	.859	1.164

4. Autocorrelation Test

The boundaries of Autocorrelation with Durbin-Watson Test

(FIRST MODEL)

Autocorrelation	Unclear	No	Unclear	Autocorrelation
(+)	Result	Autocorrelation	Result	(-)
0	dL	dU	4-dU	4-dL
	1.6561	1.6036	2.3964	2.3439

FIRST MODEL

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.296 ^a	.087	.063	.1555993	1.988

The boundaries of Autocorrelation with Durbin-Watson Test

(SECOND MODEL)

Autocorrelation	Unclear	No	Unclear	Autocorrelation
(+)	Result	Autocorrelation	Result	(-)
0	dL	dU	4-dU	4-dL
	1.4950	1.7704	2.2296	2.5050

SECOND MODEL

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.494 ^a	.244	.179	.1456155	1.841

Appendix 5: Multiple Regression Analysis

1. Determination Coefficient (R^2)

FIRST MODEL

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.296 ^a	.087	.063	.1555993

a. Predictors: (Constant), DPR, DY

b. Dependent Variable: SPV

SECOND MODEL

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494 ^a	.244	.179	.1456155

a. Predictors: (Constant), GROWTH, DY, LEV, DPR, EVOL, SIZE

b. Dependent Variable: SPV

2. F-Test

FIRST MODEL

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.172	2	.086	3.543	.034 ^b
	Residual	1.792	74	.024		
	Total	1.963	76			

a. Dependent Variable: SPV

b. Predictors: (Constant), DPR, DY

SECOND MODEL

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.479	6	.080	3.764	.003 ^b
	Residual	1.484	70	.021		
	Total	1.963	76			

a. Dependent Variable: SPV

b. Predictors: (Constant), GROWTH, DY, LEV, DPR, EVOL, SIZE

3. Partially Test

FIRST MODEL

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.841	.028		30.502	.000
	DY	-.021	.042	-.055	-.495	.622
	DPR	-.188	.073	-.288	-2.589	.012

a. Dependent Variable: SPV

SECOND MODEL

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.706	.248		2.846	.006
DY	-.002	.042	-.005	-.046	.963
DPR	-.163	.074	-.250	-2.204	.031
SIZE	-.001	.009	-.019	-.162	.871
EVOL	1.816	.734	.270	2.475	.016
LEV	.394	.145	.299	2.729	.008
GROWTH	.401	.270	.166	1.484	.142

a. Dependent Variable: SPV