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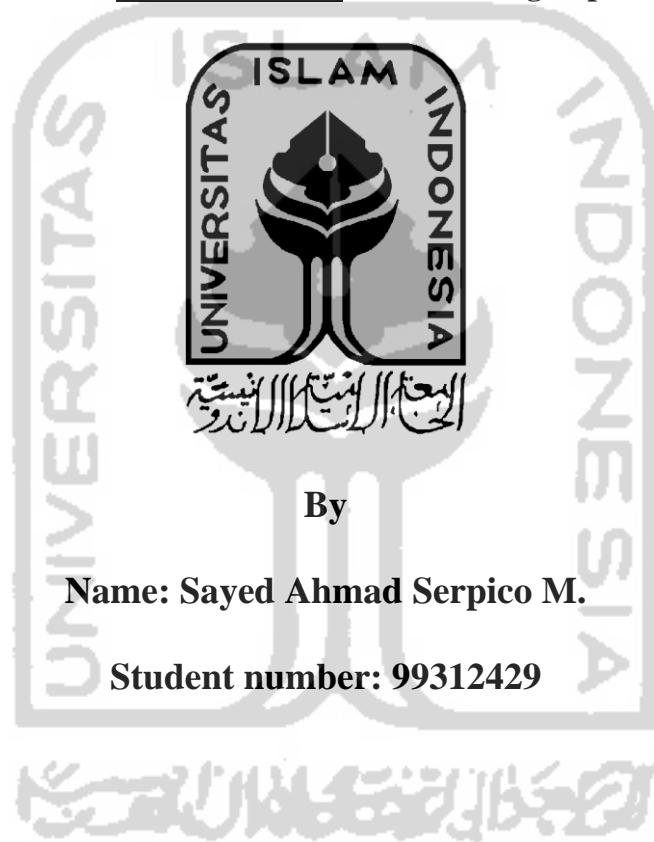
A THESIS

Presented as Partial Fulfillment of the Requirements

to obtain the <u>Bachelor Degree</u> in Accounting Department
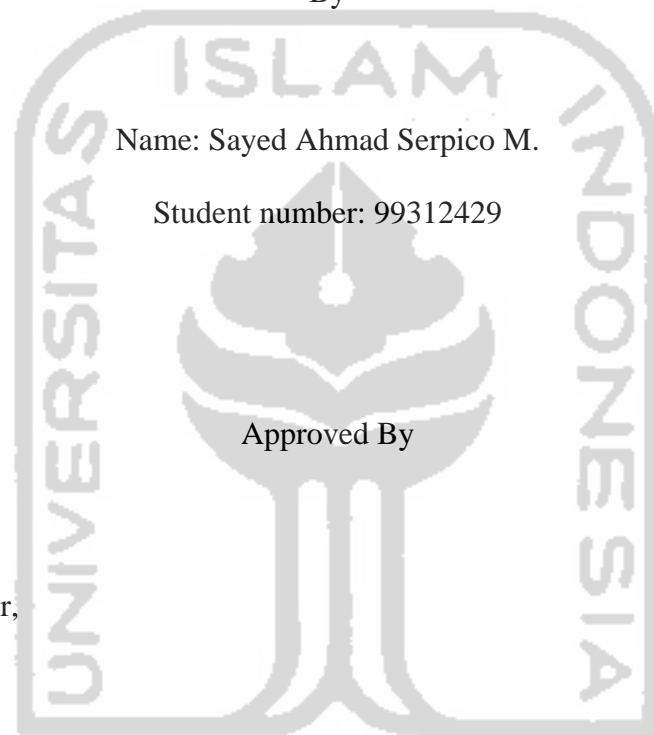
By

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Accounting Department

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Jogjakarta

2007

The Analysis of Influence of Stock Split on market reaction in Jakarta Stock
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The Analysis of Influence of Stock Split on market reaction in Jakarta Stock Exchange within 1998-2004

A <u>BACHELOR DEGREE</u> THESIS

By

SAYED AHMAD SERPICO

Student Number : 99312429

Defended before and the Board of Examiners

On August 29th, 2007

And Declared Acceptable

Board of Examiners

Examiner 1

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TO MY BELOVED MOM AND DAD

►*MY SISTERS AND BROTHER*
►*MY GRANDMOTHER, GRANDFATHER*
►*AND KIKI "MY LITTLE KITTY"*

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Despite the help from many people mentioned above, mistakes may remain and they are the writer's responsibility.
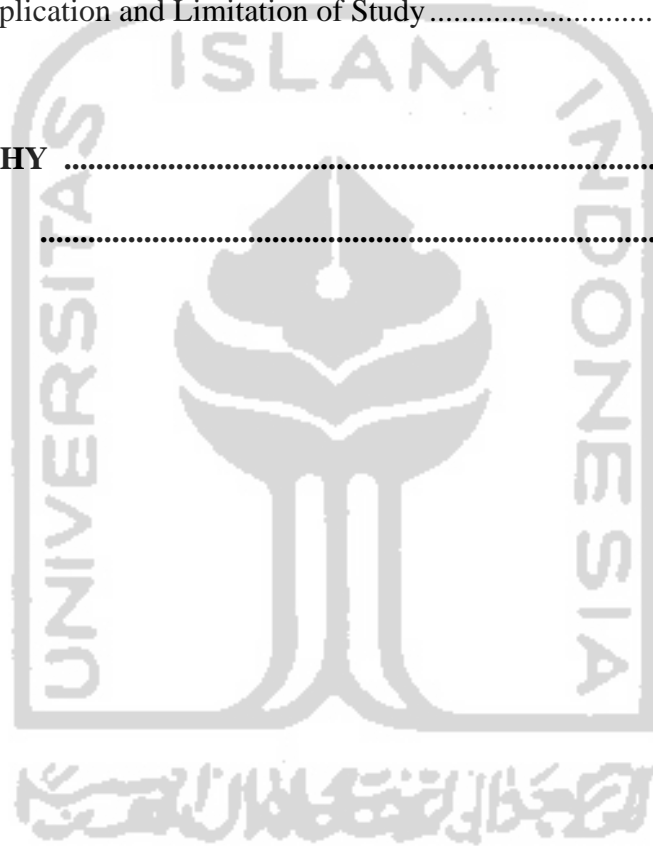
Sin Cera,..without candle

Sayed Ahmad Serpico M.

TABLE OF CONTENTS

LIST OF APPENDICES

ABSTRACT

Serpico, S. Ahmad (2007). The analysis of Influence of Stock Split on market reaction in Jakarta Stock Exchange within 1998-2004. Jogjakarta, Accounting Department, Faculty of economics, Islamic University of Indonesia.

In fundamental analysis, Investors have to analze macroconomics factors and capital market as the step, then followed by industrial analysis and finnaly determine the prospect companies.

All information, which can be influence stock price, will be respond by investors. Capital market provides many information, which are obtained by investor as a base in decision making. One of these information is the announcement of stock split. Theoritically, stock split has no economical value on it, it only implies management's optimism. This study is conducted to investigate whether the information of stock split have a significant effect on the market reaction in Indonesia or not.

The research used all listing companies in Jakarta Stock Exchange which announced stock split. There are 112 companies that announce stock split within the observation period of year 1998 until year 2004. There are only 8 splitting companies, which are appropriate to the research requirement, that is actively traded their stocks during the period of observation.

The hypothesis is then tested with t-test: paired two samples for means. This result shows that market does not give any reactions to the stock split announcement. This result supports the research conducted by Baker and Powell, 1993, which concludes that stock split will not give any effect to company's cash flow and investor equity proportion.

Therefore, stock split announcement does not give any signals to investors, and hopefully this result could be used as a consideration in investment decision making.

Keywords; stock split, market raction.

ABSTRAK

Serpico, S. Ahmad (2007). Analisis pengaruh informasi pengumuman pemecahan saham (stock split) terhadap reaksi pasar modal di Bursa Efek Jakarta pada periode 1998-2004. Jogjakarta, Jurusan Akuntasi, Fakultas Ekonomi, Universitas Islam Indonesia.

Langkah awal analisis fundamental yang dilakukan para investor adalah menganalisa kondisi makroekonomi dan pasar modal suatu negara. Kemudian dilanjutkan dengan analisis industri dan pemilihan perusahaan berprospek baik.

Adanya informasi yang mempengaruhi harga saham akan menimbulkan reaksi dari para investor. Pasar modal menyediakan banyak informasi, salah satunya adalah informasi tentang pemecahan saham. Secara teori, pemecahan saham tidak mempunyai nilai ekonomi, hanya menggambarkan optimisme manajemen. Riset ini dilakukan untuk menguji apakah informasi yang terkandung pada pengumuman stok split mempengaruhi reaksi pasar modal di Indonesia.

Riset dilakukan terhadap semua perusahaan di Bursa Efek Jakarta, yang mengumumkan stok split. Terdapat 112 perusahaan yang mengumumkan pemecahan saham selama periode penelitian antar tahun 1998 sampai dengan 2004. Dan hanya 8 perusahaan yang memenuhi kriteria, yaitu aktif melakukan perdagangan selama periode penelitian.

Hipotesisnya kemudian dites menggunakan uji beda 2 rata-rata. Hasilnya menunjukan behwa pasar modal tidak memberikan reaksi yang signifikan terhadap pengumuman pemecahan saham. Penelitian ini sejalan dengan penelitain yang dilakuka oleh Baker dan Powell (1993), yang menyimpulakan bahwa pemecahan saham tidak akan memberikan perubahan pada kas flow perusahaan dan proporsi kepemilikan investor.

Maka dari itu pemecahan saham split tidak akan memberikan sinyal apapun bagi investor, sehingga hal ini bisa dijadikan pertimbangan dalam pengambilan keputusan investasi.

Kata kunci : pemecahan saham, reaksi pasar.

CHAPTER I

INTRODUCTION

1.1   Background of the study

Information is a very basic requirement to investors in decision making related to election of most profitable invesment portofolio with certain level of risk. Information required by investors are information that has the informative character that is information contained characteristics of completeness, relevances and timeliness so that it can decrease the level of uncertainty.

Capital market provides many information, which are obtained by investor as a base in decision making. One of these information is the announcement of stock split. This information can have good value if it makes investor trade their stocks in capital market which is described by the change of stock price, trading volume and other characteristic. According to Brighan and Gapenski (1994) stock split is one of the information form given by the company to increase the amount of out standings stock.

Stock split is the change of value per sheet stock and adding the amount of out standings stock according to split factor. Theoretically, it has no direct effect to economical value for them since there is no changing in the market value and stock holder's equity. If the net effect to current shareholders is zero, then why do companies choose to split their stock? Typically, a firm's board of directors decides to split its stock in an effort to reduce its share price. After all, high prices can act as a deterrent to prospective buyers -- particularly smaller

ones. A stock split will reduce a company's share price to a level that is hopefully seen as more affordable to a broader range of investors.

Spliting stock is usually conducted by managers of the firm at the time of stock price overrated, so it will increase the ability of investors to buy stocks. Certainly, most companies prefer to keep their share prices at a much more affordable level. The goal is to make their stock accessible to as many investors as possible. Of course, the companies do not want their shares at the other extreme either.

However, it is important to remember that stock splits have zero impact on a firm's actual value. Of course, that does not mean stock splits are completely useless, because the fact showed that many firms split their stocks. After all, it is important for a firm to keep its stock price in an optimal range to make it affordable for as many investors as possible. (The larger a firm's potential investor base, the greater value it is likely to attain in the market).

In addition, although a stock split itself does not add value, it often serves as a positive signal from company management (firms only tend to split their shares when they believe their fundamental corporate prospects are strong). Previous studies have shown that the stocks tend to outperform the market immediately after a split.

Most of splitting firms that believe that the effect of stock split will return stock price at optimal trading, considering that think it can attrack investors to buy more stocks so that it make the share more liquid. This matter will alter *odd lot investors* (investor who buy the stocks less than 500 sheets or less than

one lot) becoming round lot investor (investor who buy the stocks more than 500 sheets or more than one lot) (Mcgough,1993). In other words, the more amount of outstanding stocks will decrease the stock price, the more positive the market will respond.

There is ample evidence, that stock splits in the U.S. and other markets are associated with significant positive excess returns around the announcement as well as the ex-date for the split [e.g., Grinblatt, Masulis and Titman (1984), Lamoureux and Poon (1987), Ikenberry, Rankine and Stice (1996)]. Several explanations have been advanced to explain the excess market reaction around the stock split days. For example, Lakonishok and Lev (1987) and Mc Nichols and Dravid (1990), among others, find evidence that firms split their stock in order to adjust the stock price back to an "optimal" trading range.

Grinblatt, Masulis and Titman (1984), Brennan and Copeland (1988), and Mc Nichols and Dravid (1990) show that stock splits are used to signal firm optimism about future prospects. Finally, the hypothesis of increased liquidity following stock splits has been met mostly with contrary evidence [see, for example, Copeland (1979), Lakonishok and Lev (1987), Conroy, Harris and Benet (1990) and Easly, O'Hara and Saar (2001)].

Theoretically, motivation of firm which split their stocks and the effect derived from it is decanted in two hypothesis, they are signaling hypothesis and liquidity hypothesis (Baker and Powell, 1993). Signaling Hypothesis (asymmetry information) explains that stock split gives a signal to investor concerning company's prospect in the future. Hypothesis of Liquidity explains that stock split

will improve the liquidity of stocks. This explanation is supported by the existence of view that company which splits their stocks will add investor interest so that will decrease the stock price. This condition causes the increasing amount of commercialized stocks and amount of stockholders. And it also causes trade volume increase and which is followed by the increasing of stock liquidity.

Baker (1956), Lamoureux and Poon (1987)'s research, prove the validity of liquidity theory together with the increasing of the amount of stock holders after stock split announcement. The increasing amount of stock holder caused by the decrease of stock price makes the volatility of stocks also raise so that makes more buyers. As the consequences, the stocks will be easier to be comercialized and this makes the increasing of the stock liquidity.

However, Copeland (1979), Conroy, Hanis and Bennet (1990) disagree with this result, because in their research, they find the contradictory evidence that is the decreasing of stock liquidity after stock split announcement, by using trade volume variable and bid-ask spread approach.

Stock split, basically consists of two kinds; stock of split up and stock of split down. Stock of split up is degradation of nominal value per sheet stocks that causes the increasing the amount of out standing stocks, for example; stock split with split factor: 2:1, 3:1, 4:1…n:1. Stock of split down is the increase of value per sheet stocks resulting from the decrease of amount of out standings stock.

Though the reduced price may appear more attractive, a stock's price by itself is a poor measurement of value. In the end, share prices are actually

pretty meaningless, as they can be easily manipulated up or down by stock splits. The more important consideration for investors should always be a firm's total market capitalization.

The process of stock split will cost much money, so that only a company which has good prospect that is capable to split their stocks (Copeland, 1979). As a company action, stock split contains information that is assumed to have influence to investor's decision to do selling and buying. Nevertheless, it gives indication for management's optimistism about the future.

According to above desciption, then writer is interested to do a research with title "The analysis of Influence of Stock Split to market reaction in Jakarta Stock Exchange from 1998-2004". The chosen sample are those companies whose split their shares during 1998-2004.

1.2 Problem Statement

This study refers to the liquidity hypothesis that proves that there is an increase in the amount of stock holders after stock split announcement. The raising of the amount of stock holder caused by the decreasing of stock price makes volatility of stocks also rises, so that hopefully it will also raise the stock liquidity by attracting more buyers. The effect of that is; stock will be easier to be commercialized and this will make the raises of stock liquidity.

Many empirical researchers have also proved that hypothesis such as; Baker (1956), Lamoureux and Poon (1987) therefore this study is trying to obtain

possible answer for the following question: Does the information of stock split have a significant effect on the market reaction?

1.3 Research Objectives

The overall objective of the research is to investigate how the information policy of stock split will influence the market around the date of split announcement.

1.4 Research benefit

This research is expected to give contributions for:

a. Companies, as a base of thought in decision making to make policy, in this case for go public companies that is related with stock split.

b. Investors:

1) The result of this research can be used as an additional reference to be considered in decision of invesment.

2) The result of this research can describe the effect of market reaction to the firms that split their stock listed in Jakarta Stock Exchange.

c. Researchers, to conduct better research and more complete result of the research.

d. For academician;

1) As an additional source about policy of capital market especially stock split.

2) As empirical information about the effect of market reaction toward the announcement of stock split in Jakarta Stock Exchange.

1.5 Systematically report

This research is presented in five chapters, which can be described as follows:

CHAPTER I: Introduction:

This chapter will elaborate problem background, problem formulation, problem definition, target and research benefit, research method, and systematic way writing.

CHAPTER II: Review of Related Literature

This chapter will explain the theory that will be used in research, which consist of the theory related to the effect of stock split to the market reaction.

CHAPTER III: Research Methodology:

This chapter explains the method used in conducting the research, including the method of collecting data and analyzing tool.

CHAPTER IV: Analysis:

This chapter explains the finding of the research based on the analysis of the data and the research method.

CHAPTER V: Conclusion and Suggestion:

This chapter describes the conclusion of the analysis and some suggestions for future research.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Market Reaction to Stock Split Announcement

2.1.1 Understanding of Stock Split

Stock split remains one of the most popular and least understood phenomena in equity markets. The effects of stock splits are puzzling. In theory a stock split is merely an accounting change, which leaves investors no better or worse off than they were before the split. Yet stock splits are relatively common occurrences. This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock.

Stock split is an increase in the number of shares outstanding by reducing the par value of the stock (Wachowicz, 1995). It issues new shares in number proportionate to those already outstanding. The split does not result in any change in shareholders equity because they have the same proportion of previous outstanding shares. A split can be made in any proportion such as two-for-one or 1.5-for-one. It implies that shareholders will get one new share for every two they already owned. It is used to place a stock in the appropriate price, more popular trading range, thereby attracting more buyers, especially individual holdings.

A stock split is a procedure that increases or decreases a corporation's total number of shares outstanding without altering the firm's market value or the proportionate ownership interest of existing shareholders. Again, stock splits do not affect the equity of the company.

The stock split is intended to increase the liquidity of shares of the company, and to increase the number of investors through lowering the minimum investment amount for the company's common shares.

Survey evidence indicates that managers split their stock to get the stock's price into some optimal trading range (Baker and Gallagher 1980). Managers believe this will attract small investors, which implies that managers believe that splitting their firm's stock has implications for the firm's ownership structure.

Splitting the stock also gives existing shareholders the feeling that they suddenly have more shares than they did before, and of course, if the price rises, they have more stock to trade.

Theoretically, stock splits should be cosmetic corporate events as they merely involve the break up of one share into a certain number of shares and a reduction of a higher to a lower per-share trading price without changing shareholders' wealth and relative shareholdings. However, although early empirical studies find no abnormal performance after stock splits (Fama, Fisher, Jensen and Roll, 1969), most recent studies find a positively significant market reaction to stock split announcements. Stock splits do not appear to be as cosmetic as they should be. In the finance literature, the role of stock splits remains an enigma (Leung, Rui and Wang, 2005)

Small investors have a preference for low-price stocks in order to trade in round lots and, thus, minimize their trading costs. Large investors prefer high-price stocks since the trading cost per dollar falls as the price moves higher. In

addition, firms may use a split to attract the "right" balance of investor clienteles in order to obtain the preferred ownership structure and best valuation of their stock. Several studies (e.g., Lakonishok and Lev (1987), Ikenberry, Rankine and Stice (1996), Byun and Rozeff (2003)) find that stock prices increase faster for firms that later split their stock than their matches and the price gap disappears after the split (Lakonishok and Lev 1987).

Firms can also split their stock to attract market attention (the attention-getting hypothesis of Grinblatt, Masulis and Titman (1984) and Brennan and Hughes, 1991).

Ultimately, stock splits are merely a tool used by management to maintain some semblance of control over share prices. In the end, splits accomplish little more than simply slicing a pie into thinner pieces. Though an investor may acquire more of those slices, or shares, after a split, neither the company's value nor his/her ownership interest will materially change.

All stock splits are not created equally. More specifically, stock splits can vary depending upon what type of impact a firm wants to have on its underlying share price. For example, if a firm wants to cut its share price in half, then it will complete a 2-for-1 stock split. If it wants to lower its share price even further, then it may complete a 3-for-1 stock split. Before announcing a stock split, a firm's board of directors must first decide on a distribution rate. Typically expressed as a ratio (such as 2-for-1, 3-for-1, etc...), this distribution rate will determine exactly how many shares of stock the firm hands over to its existing shareholders (Ikenberry, Rankine and Stice, 1996).

2.1.2 Effect of Stock Split

Studies of U.S. stock splits, including Grinblatt, Masulis and Titman (1984), Lamoureux and Poon (1987), McNichols and Dravid (1990), Maloney and Mulherin (1992) and Ikenberry, Rankine and Stice (1996) report evidence of significant positive abnormal returns around the split announcement day. The positive announcement day reaction follows a significant positive price run-up in the months preceding the stock split decision (Grinblatt, Masulis and Titman (1984).

Significant positive abnormal returns around the announcement and ex-split day have been also reported from markets outside the U.S. Some examples include: Kryzanowski and Hao (1991) for Canadian stocks; Biger and Page (1992) for stock splits on the Johannesburg Stock Exchange; Wu and Chan (1997) for Hong Kong stocks; and. Niini (2000) for Finnish and Swedish stocks.

Stock splits can be also informative to the market in two ways. First, they can be used to signal a firm's private information about future prospects. Second, they can help attract the interest of more analysts and investors and thus lead to a positive revaluation of the firm's stock. Stock splits can have signaling value because they have costly consequences, including execution costs, higher listing fees and greater trading costs as price falls (Brennan and Copeland, 1988). Therefore, only firms with positive private information can afford to signal through a stock split.

Firms can also split their stock to attract market attention (the attention-getting hypothesis of Grinblatt, Masulis and Titman (1984) and Brennan and Hughes (1991)). Both these information-based theories have received supportive evidence in the U.S.

There are some effects happened after the announcement of stock split, those are:

a. Spliting stock is usually conducted by managers of the firm at the time of stock price overrated, so it will increase the amount of stocks, then the ability of investors to buy stocks also rises, then it can attrack investors to have stocks so that it makes share more liquid to be commercialized. Together with the decreasing of stock price, it will improve the ability of small investors, in other saying liquidity of stocks will be increased. So, the impact of this, the company and stock holders will get more return.

b. Together with the existence of stock split policy, the amount of stockholders will increase. This matter is caused by the decreasing of stock price, and volatility of stock price become larger so that it will attract investors to multiply the amount of stocks they have. Existence of improvement of amount stockholders will improve stock liquidity, because trading volume of stock will change. This will cause brokerage expense after existence of stock of split will become higher. The expense of stocks letters will also rise up because the previous ownership that is represented by stock letter sheet will become more stock letter, based on split factor (n). They also have costly consequences, including execution costs, higher

listing fees such as; Back office expense, clearing expense and custodian expense that will be influenced by the physical amount of controlled letter of stocks, and then greater trading costs as price falls, (Brennan and Copeland, 1988)

Hypothesis: Market reaction to stock split announcements

o H_0: There is no significant change of stock return after the split.

o H_A : There is a significant change of stock return after the split.

2.1.3 Previous Study in Other Countries

Patrick Dennis and Deon Strickland (2002) examine the impact of firm ownership composition on both the abnormal returns at the announcement of a stock split and liquidity changes following a stock split. They find three results. First, the largest post-split increase in institutional ownership occurs for firms that has low institutional ownership prior to the split. Second, changes in liquidity are negatively related to the level of institutional ownership prior to the split. Last, the abnormal return following a split is negatively related to the level of institutional ownership prior to the split. These findings are important as they shed new light on the source of stock split announcement returns.

Christian Wulff (2002) investigates the market reaction to stock splits, using a set of German firms. Similar to the findings in the U.S., he finds significant positive abnormal returns around both the announcement and the execution day of German stock splits. He also observes an increase in return variance and in liquidity after the ex-day. Apparently, legal restrictions strongly

limit the ability of German companies to use a stock split for signaling. He finds that abnormal returns around the announcement day are consistently much lower in Germany than in the U.S. Further, he found that abnormal returns around the announcement day are not related to changes in liquidity, but (negatively) to firm size, thus lending support to the neglected firm hypothesis.

On the methodological side the effect of thin trading on event study results is examined. Using trade-to-trade returns increases the significance of abnormal returns, but the difference between alternative return measurement methods is relatively small in short event periods. Thus, the observed market reaction cannot be attributed to measurement problems caused by thin trading.
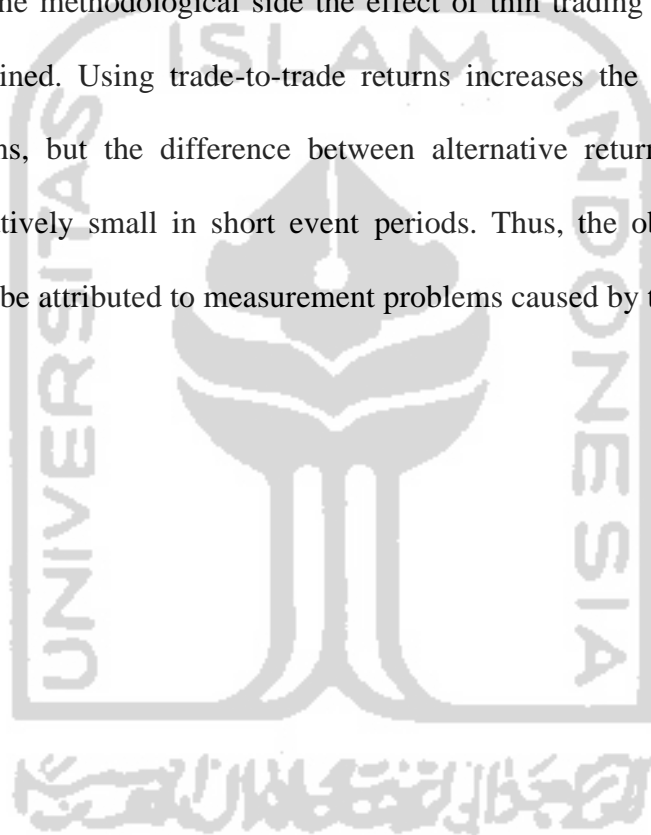
CHAPTER III

RESEARCH METHOD

3.1   Research Description

Stock split is an increase in the number of shares outstanding by reducing the par value of the stock (Machowicz, 1995). This research employs firm's stock return after and before split to know how the market reaction after stock split announcement, in which it is derived from stock price.

In this research, the writer used both quantitative data and statistical method. The researcher wants to test how market reaction was after the split announcement. The statistical method used to test the hypotheses was t-test on significant level at 5%.

3.2. Research Variables

The splitting decision done by management is used to control the stock to be commercialized in optimum trade level. This will attract investors to buy it, so it will multiply the amount they have to increase its liquidity of stocks. Then stock split will affect the market in giving the advantages to the stockholders.

This study aims to investigate whether the information of stock split is giving a positive signal to investors that will affect the liquidity of company's stocks together with the increasing of stock price.

This study was using 2 (two) variables. They were stock split and the changes of stock price. Here are the explanations of those variables:

3.2.1 Stock split

The objective of this study is to investigate whether information of stock split is significantly related to market reaction. This study used the data of date of stock splits announcement that happened in Indonesia.

3.2.2 Stock return

Information which exists in capital market is valuable to the market users and institution that related with Jakarta Stock Exchange (JSX), BAPEPAM, and IAI (Ikatan Akuntan Indonesia).

Those users of market information, especially investor, concern to the moving of company's stock price and all of information that makes stock price moving. The changes of stock price will affect the chances obtained in the future. In general, stock price will affect the investor's consumption behavior changes.

Based on the above explanation, the writer argues that changes of stock price is an important variable and can describe much more information that happened in capital market.

3.3. Population

This study used secondary data that was compiled from data sources available at the library and JSX Corner of Faculty of Economics UII. Then sources of data are described below:

In this research, the researcher used secondary data, which are splitting company daily stock price. Those data was taken from Jakarta Stock Exchange file through JSX Corner at FE UII. JSX was chosen because it easy and facilitates data collection.

This research population was all splitting companies that were listed in Jakarta Stock Exchange (JSX) from year 1998 until year 2004 and it was reported in Indonesia Capital Market Directory (ICMD). There were 112 stock split announcements in all industries.

And then the writer selected the data that were applicable in this research, they were the companies that completing the criteria as follow:

a. The companies were listed at Jakarta Stock Exchange at least 20 days before split announcement.

b. Companies that published the announcement of stock split.

c. Those companies whose stocks were actively traded in Jakarta Stock Exchange at least 20 days before the date of split announcement.

Unfortunately, there were only 8 splitting companies, which were appropriate to this research requirement. Table 3.1 shows that in total there were eight companies that were active in trading their stocks in 20 days before and 20 days after split announcement, for the period of 1998 to 2006.

Table 1.1. The population

No	Stock Code	Company	Industry
1	IDVS	Bank Indovest	Banking
2	MYRX	PT Hanson Industri Utama Tbk. (Mayertex Indonesia)	Apparel and Other Textile Products
3	MTDL	PT Metrodata Electronics Tbk.	Electronic and Office Equipment
4	TRIM	PT Trimegah Securities Tbk.	Securities
5	MREI	PT Maskapai Reasuransi Indonesia (Marein) Tbk.	Insurance
6	VOKS	PT Voksel Electric Tbk.	Cable
7	BBIA	PT Bank Buana Tbk.	Banking
8	PNIN	PT Panin Insurance Tbk.	Insurance

The date of publication actually consists of two (2) occurrences, they are: announcement of stock split and the date of recording in Jakarta Stock Exchange. In this research, the writer refers to the announcement of stock split in Jakarta Stock Exchange, because at the date of split announcement, stockholders and market analyzers have obtained stock split information, so the writer can analyze the market reaction.

3.4 The Period of Observation

The time of observation for this thesis research was twenty days before and twenty days after announcement day. Period of observation in this research used event window that is period or range of time from an event or announcement containing information or economic value.

3.5   Research Method

        Some steps of research methodologies used in this research include:

a. Identifying the date of events of stock split announcement in JSX.

b. Determining period of observation that is 20 days before and after the date of stock split announcement.

c. Getting daily data of stock price, 20 day before and after the date of stock split announcement and also get the announcement data.

3.6   Data Processing

        Data which has been obtained will be analyzed by using application program Microsoft excel with t-test: paired two samples for means. Excel software can also be used for statistical analysis. The advantage of the software is it is friendly to use, easy to get, and provide a tremendous data analysis facilities including for financial statistics. The writer uses the software because it is convenience to use in analyzing t-test.

        The aim of t-test paired two samples is a means to know how the market reaction after stock split announcement.

        Before the writer tests the hypothesis, the first step that must be calculated is the calculation of daily return of stock for 20 days before and 20 days after split announcement, by using formula:

$$R_{jt} = \frac{p_{jt} - p_{j.t-1}}{p_{j.t-1}}$$

3.7   Limitation of Research

In order to provide a clear description and to be able to impart useful information, the limitations of the study are indicated below:

a.   This thesis research uses active traded stocks. The criterion for them is based on Jakarta Stock Exchange circular No.SE-03/BEJ II-I/1994 is 75 times or more trading for 3 months. Therefore, according to Winarso (1994), stocks that are traded for less than 30 days in a year (250 days trading for a year) are classified into non-active traded or non-liquid stocks.

b.   This research is conducted by comparing the stock return between 19 days before and after stock split announcement policy.

c.   The stocks that are used in this study are common stocks that are announced as stock splits.

d.   Data are observed from period of January 1998 until December 2004 to reflect the condition of the nearest capital market.

3.8   Hypothesis Testing

3.8.1. Hypothesis testing of market reaction to stock split announcement at 20 days before and after it.

The hypothesis was writen based on Copeland (1997) opinion that stock split is usually conducted by managers of the firm at the time of stock price overrated, so it will decrease the ability of investors to buy stocks. Most of splitting firm believe that the effect of stock split will return stock price at optimal

trading, then it can attrack investors to have the stocks so that it make share more liquid to be commercialized. In another words, this hypothesis is aimed to know how the market reaction after stock split announcement.

3.9 Research Procedures

In order to answer the research problem, it is better to construct research procedures. The procedures are arranged as follows:

a. Determine Ho (hypothesis null) and Ha (hypothesis alternative)

    Hypothesis: Market reaction to stock split announcements

    H_{01} : There is no significant changes of stock return after the split.

    H_{A1} : There is a significant changes of stock return after the split

b. Conducting the statistic test (t-test: paired two samples for means) between two compared period (20 days before and after announcement with 5% significant level) to find out whether there is a significant effect on how the market reaction after stock split announcement.

c. Analyzing and interpreting the data.

    To determine whether Ho or Ha will be rejected, we can use the rules:

    1. If T-value is more than 2, Ho is rejected and Ha is accepted.

    2. If T-value probability is lower than α, then Ho is rejected and Ha is accepted.

d. Deriving conclusion and any other findings.

CHAPTER IV

RESEARCH FINDINGS, DISCUSSIONS AND IMPLICATIONS

This chapter explains about the process of data analysis. The first part describes the hypothesis testing. In this research, it will use t-test: paired two samples for means, by using application program in Microsoft Excel 2003 for windows.

4.1   The Test of Hypothesis

The writer's using t-test to determine whether the independent variable gives significant impact partially to the dependent variable in order to test the effect of split announcement to market reaction. The hypothesis of the test is formulated in the following:

Hypothesis: Market reaction to stock split announcements

a. $H_{01:}$ There is no significant changes of stock return after the split.

b. H_{A1}: There is a significant changes of stock return after the split

To determine whether Ho or Ha will be rejected, we can use the rules:

a.   If T-value is more than 2, Ho is rejected and Ha is accepted.

b.   If T-value probability is lower than α, then Ho is rejected and Ha is accepted.

The model is tested by Microsoft Excel program. Excel software can also be used for statistical analysis. The advantage of the software is friendly to use, easy to get, and it provides a tremendous data analysis facilities including for

financial statistics. The writer uses the software because it is convenient to use in analyzing t-test. Thus, the writer performs t-test result displayed in table 4.4, in appendix.

Before the writer tests the hypothesis, the first step that must be calculated is the calculation of daily return of stock for 20 days before and 20 days after split announcement, by using formula:

$$R_{jt} = \frac{p_{jt} - p_{j.t-1}}{p_{j.t-1}}$$

4.1.1   Stock return

Stock return (Ri_t) is calculated by equation 4.1 as follow:

$$R_{jt} = \frac{p_{jt} - p_{j.t-1}}{p_{j.t-1}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (4.1)$$

Where:

R_{jt} = Daily return for company j during day t

p_{jt} = the closing price for company j during day t

$p_{j.t-1}$ = the closing price for company j during day t-1

Using equation 4.1 above with the data in Appendix, the values of R_{jt} (twenty days before and after the financial report are listed in the newspaper) are described in detail at table 4.3.

Following is the example of stock return calculation of MREI (PT Firm Reinsure Indonesia of Tbk. / MAREIN) in 5 days before and 5 days after split announcement:

Table 3.2 performs the calculation of MREI stock return calculation in 5 days before and after split announcement.

Closing price	Stock return	days
1600		-6
1575	0,01563	-5
1600	-0,01587	-4
1600	0,00000	-3
1800	-0,12500	-2
2200	-0,22222	-1
1090		0
895	0,17890	1
680	0,24022	2
680	0,00000	3
620	0,08824	4
605	0,02419	5

Calculation of stock return for the duration of 5 days (- 5) before date of stock split announcement:

$$\frac{1600 - 1575}{1600} = 0,01563$$

Calculation of stock return for the duration of 4 days (- 4) before date of stock split announcement:

$$\frac{1575 - 1600}{1575} = -0,01587 \quad \text{And so on.}$$

Equation 4.1 shows that stock return mathematically depends on prior day of the stock price. By practice, in the market (Jakarta Stock Exchange) stock price depends on the supply and demand law (Bodie, et al; 2002). The higher the demand, the higher the stock price. However this condition does not always work.

In case of abnormal return and market anomaly for reason, the lower of the demand keep the price of the stock high (Jones, 1998).

Theoretically, the stock return is valued by the dividend and the gain of the stock (Husnan, 1995). It highly depends on the market condition and the company's health and prospects. Therefore, the positive stock return may be caused by the positive prospect of the company. In investor's point of view, they believe that the stock having the positive growth tends to gain the positive stock return and vice-versa.

After the calculation of daily stock returns around the observed period, then t-test: paired two samples for means can be conducted. This test is used to know whether there is a significant different or not.

4.2   Research Findings and Discussions

After the calculation of daily stock return around the observed period, then *t-test: paired two samples for means* can be conducted for each sample.

The writer performs t-test result displayed in table 3.3

t-Test: Paired Two Sample for Means	T Stat	P(T<=t) two-tail
MYRX	1,957426785	0.065987
MTDL	-2,232839030	0.038498
TRIM	1,768493258	0.093922
MREI	1,971795371	0.064201
VOKS	1,927176945	0.069892
BBIA	2,129531806	0.047268
PNIN	2,132935908	0.046952
Total		*0.203952*

In 5% of α, based of the software results, it appears that T-value of α that lower than 2 are 1.957426785; 1,768493258; 1,971795371; 1,927176945 for MYRX, TRIM, MREI, and VOKS respectively. And the probability of T-value (P (T<=t) two tail) that is higher than 0,05 are 0.065986972; 0.093922; 0.064201 0.069892 respectively.

To determine whether Ho or Ha will be rejected, we can use the rules:

a. If T-value is more than 2, Ho is rejected and Ha is accepted.

b. If T-value probability is lower than α, then Ho is rejected and Ha is accepted.

Based on the rule of t-test, it can be concluded that Ho, is accepted and Ha is rejected. It means α does not partially and significantly influences the Ri. In

other words t-test result in hypothesis 01 we can be concluded that in stocks of MYRX (PT Hanson Industri Utama Tbk/Mayertex Indonesia), TRIM (PT Trimegah Securities Tbk.), MREI (PT Maskapai Reasuransi Indonesia Tbk./Marein), and VOKS (PT Voksel Electric Tbk.) do not show the relationship between the market reactions with stock split.

The test result that shows that there is no significant differences in daily stock return explain that market does not give any reactions to the stock split announcement.

This result support the research conducted by Baker and Powell (in Sears and Trennepohl, 1993) which conclude that stock split will not give any effect to company's cash flow and investor equity proportion.

These are probably caused several factors, such as:

a. Investors are not too interested to the firms that announce split, because the firms do not give good prospect in earning and dividend growth in near future.

b. Stock split is an effort to form positive opinion regarding company's prospect to be used in the future. Unfortunately, Stock information of Splitting Company is less enthuses by all investors

c. The increasing of transaction expense per sheet share which is caused by smaller transaction value and investors has to pay for the expense of the same transaction so that will decrease share liquidity that causing degradation of share price.

d. Many stockholders (old investor) hold the ownership of their stocks. In other words, stockholders do not sell their stocks, so that new investor is able to do transaction hence there is not any a stocks sale or transaction that may cause fluctuant price. There no stocks sales or no transaction, that causing the fluctuating of stock price.

In 5% of α, based of the software results, it appears that T-value of α that is higher than 2 are 2,232839030; 2,129531806; 2,132935908 for **MTDL, BBIA** and **PNIN** respectively. And the probability of T-value (P (T<=t) two tail) that is lower than 0,05 are 0.065986972; 0.093922; 0.064201 0.069892 respectively.

To determine whether Ho or Ha will be rejected, we can use the rules:

a. If T-value is more than 2, Ho is rejected and Ha is accepted.

b. If T-value probability is lower than α, then Ho is rejected and Ha is accepted.

Based on the rule of t-test, it can be concluded that Ho, is rejected and Ha is accepted. It means α partially and significantly influences the Ri. In other words t-test result in hypothesis 01 can be concluded that in stocks of **MTDL** (PT Metrodata Electronics Tbk.), **BBIA** (PT Bank Buana Tbk.), **PNIN** (PT Panin Insurance Tbk.) show the relationship between the market reactions with stock split.

The test result that shows that there is significant differences in daily stock return explain that market gives a (or some) reaction(s) to the stock split announcement.

Result of this test is closely related with a research conducted by Baker and Gallangher (also in Sears and Trennepohl, 1993) that are expressing that split will return price per sheet share at optimal trade level and will improve liquidity. According to them, splitting company will attract investor progressively. So that it will decrease the stock price and then will cause the increasing of stockholders amount after announcement of split.

These are probably caused several factors, such as:

a. Investors are interested to the firms that announce split, because probably the firms give good prospect in earning and dividend growth in near future.

b. Stock information of splitting company is more enthuse by investors.

From the table 4.2 we can conclude that the T-test result in hypothesis 01 of stocks MTDL, BBIA, PNIN show the relationship between the market reactions with stock split and for stocks of MYRX, TRIM, MREI, VOKS do not show the relationship between the market reactions with stock split.

In overall test of sample, In 5% of α, based of the software results, the probability of T-value (P(T<=t) two tail) is 0.20395 (higher than 0,05). Based on the rule of t-test, it can be concluded that Ho is accepted and Ha is rejected. It means α does not partially and significantly influences the Ri.

Based on the t-test result in hypothesis 01, we can conclude that in stocks of all sample does not show the relationship between the market reactions with stock split. This means that between dependent variable, market reaction and independent variable, stock split does not have relationship significantly around

stock split announcement. Therefore, this research does not support previous research that shows the opposite.

The test result that shows that there is no significant differences in daily stock return explain that market does not give any reactions to the stock split announcement.

This result supports the research conducted by Baker and Powell (in Sears and Trennepohl, 1993) which concludes that stock split will not give any effect to company's cash flow and investor equity proportion.
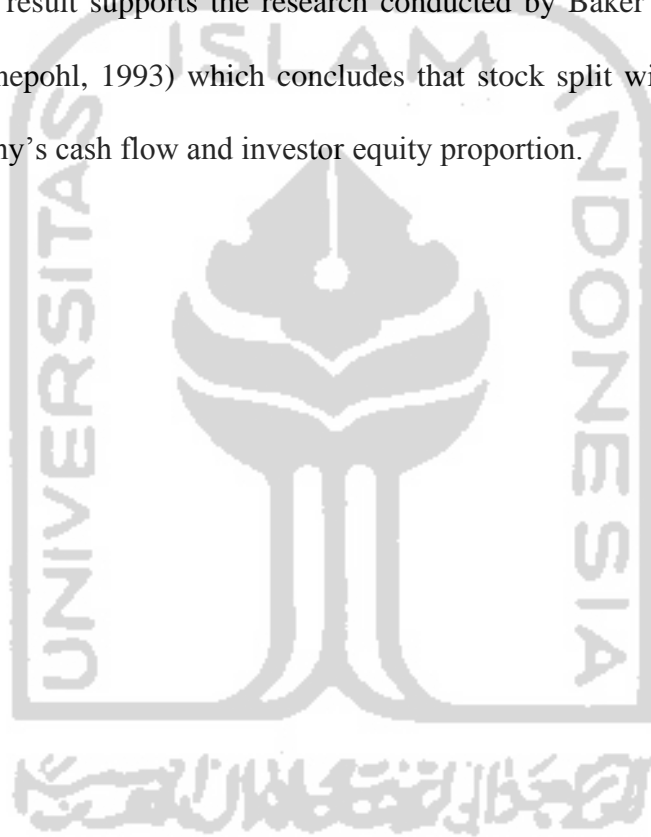
CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusions

This research analyzes the market reaction to stock split announcement. The research uses all listing companies in Jakarta Stock Exchange which fulfilling three considerations. First, the companies must have policy splitting stock and announced in Jakarta Stock Exchange during the period from January 1998 until December 2004. Second, the companies provide data availability to be analyzed. Third, the company common stock is traded actively in period time of observations.

Based on hypothesis in chapter two and analysis in chapter four, that research proves that market do not give any reactions to the stock split announcement. This means that between dependent variable, market reaction and independent variable, stock split does not have relationship significantly around the stock split announcement.

In Indonesia, if there is no effect to investor or current shareholders, then why do companies still choose to split their stock? The main reason can be psychological factor. As the price of a stock gets higher and higher, some investors may feel the price is too high for them to afford, or small investors may feel it is unaffordable. Splitting the stock brings the share price down to a more "attractive" level. The effect here is purely psychological. The actual value of the

stock does not change one bit, but lower stock price may affect the way the stock is perceived and therefore entice new investors.

5.2   Implication and Limitation of Study

This result gives potential contribution to investor, especially about the beneficial information of stock split announcement.

This result also has several limitations. First, data that are used in this study is limited to only active traded stocks and also arranged in 19 days before stock split announcement and 19 days after it. Therefore, the data that should be resulted to be analyzed are too small. So, it is possible to say that the data that will be analyzed can not be used as a base of generalization. Second, this study did not make a test of assumption in using return method.

The next research is recommended to consider the limitation in this study before conducting the research. The next research is also need to consider the better criteria in choosing the sample that will be used. In analyzing the data, it is better to use longer period of observation to get a better result. When the next researcher chooses the specification of model that will be used, he/she needs to add the sensitivity analysis and reconsider the benefit and weakness of the model. So he/she will know when the model is fit to the assumption.

BIBLIOGRAPHY

Baker, C.A. "Effective Stock Splits." *Harvard Business Review*, 34 (1956), 101-106.

Baker, H. Kent/Powell, Gary E. (1993) , Further evidence on managerial motives for stock splits, in: *Quarterly Journal of Business and Economics*, Vol.32, No.3, pp. 20-31.

Baker, K. and P. Gallagher, 1980, Manangement's view of stock splits, Financial management 9, 73-77.

Biger, N. And M. Page, 1992, The market reaction to stock splits and capitalization issues: Recent JSE experience, *Journal of Studies in Economics and Econometrics* 16, 1-15.

Bodie, Z., Kane. A, Marcus. J, (BKM), Investments, 3th ed., Boston. Irwin McGraw-Hill, 2002.

Brighan, Eugene, and Gapenski, Louis. C., Intermediate Financial Management, Dryden Press, 1994.

Brennan, M. J. And T. E. Copeland, 1988, Stock splits, stock prices and transaction costs, *Journal of Financial Economics* 22, 83-101.

Brennan, M. J.. and P. J. Hughes, 1991, Stock prices and the suply of information, Journal of Finance 46, 1665-1691.

Byun J. and M.S. Rozeff, 2003, long-run performance after stock splits: 1927 to 1996, *Journal of Finance* 58,1063-1085.

Conroy, R., R. Harris and B. Benet, 1990, The effect of stock splits on bid ask spreads, *Journal of Finance* 45, 1285-1295.

Copeland, T., 1979, Liquidity changes following stocks splits, *Journal of Finance* 34, 115-141.

Dennis, Patrick., and Strickland, Deon, 2002, The Effect of stock splits on liquidity and excess returns: Evidence from shareholder ownership composition, *Journal of Finance* 54, 567-572.

Easly, D., M. O'Hara, and G. Saar, 2001, How stock splits affect trading: A microstrucutre approach, *Journal of Financial and Quantitative Analysis* 36, 25-51.

Fama, E, L. Fisher, M. Jensen and R. Roll, 1969, The adjustment of stock prices to new information, *International Economic Review* 10, 1-21.

Grinblatt, M. S., R. W. Masulis, and Titman, 1984, The valuation effect of stock splits and stock dividends, *Journal of Financial Economics* 13, 461-490.

Husnan, Suad. *Dasar-dasar Teori Portofolio dan Analisis Sekuritas*, 3rd ed., PT Raja Grafindo Persada, 2003.

Ikenberry, D., G.Rankine, and E. Stice, 1996, What do stock splits reeally signal? *Journal Financial and Quantitative Analysis* 31, 357-375.

Jones. J. 1998. "Earning management during import relief investigation". *Journal of Accounting Research* 29:193-228.

Kryzanowski, L. And H. Zhang, 1993, Market behavior around Canadian stock-split ex-dates, *Journal of Empirical Finance* 1, 57-81.

Lakonishok, J. and Lev Bgaruch, 1987, Stock Splits and stock dividends: Why, whho and when, *Journal of Finance* 42, 913-932.

Lamoureux, C.G., and P. Poon. "The Market Reaction to Stock Splits." *Journal of Finance*, 42 (1987), 1347-70.

Leung, T. Yan, Rui, O. Meng, and Wang, Steven, 2005, Do Stock Splits Really Signal?, Journal of Aplied Science 10, 653-668.

Maloney, M. And J. Mulherin, 1992, The effects of splitting on the ex: A microsrtucture reconciliation, Financial Management 21, 44-59.

McGough, Eugene. F., "Analysis of Stock split." *Journal of Finance*, 52 (1993), 1358-61.

Mc Nichols, M., and Dravid, 1990, Stock dividends, stock splits and signaling, *Journal of Finance* 45, 857-879.

Niini, Antii, 2000, Shareholder wealth and volatility effects of stock splits: Some result on data for the Helsinki and Stockholm stock exchanges, Liiketaloudenllinen Aikauskirja 49, 37-70.

Wachowicz, James C. Van Home, John M. Fundamentals of Financial Management, 9th ed., UK; Prentice-Hall Internatioanl, 1995.

Winarso. *Pasar Modal Indonesia*, 4th ed., Pt. Citra Aditya Bakti, 1994.

Wu, Lifan and B. Chan, 1997, On existence of an "optimal stock price": Evidence from stock splits and reverse stock splits in Hongkong, International journal of Business 2, 45-67.

Wulff, Christian., 2002, The Market Reaction To Stock Splits-Evidence From Germany, *Schmalenbach Business Review* 54, 270-297.
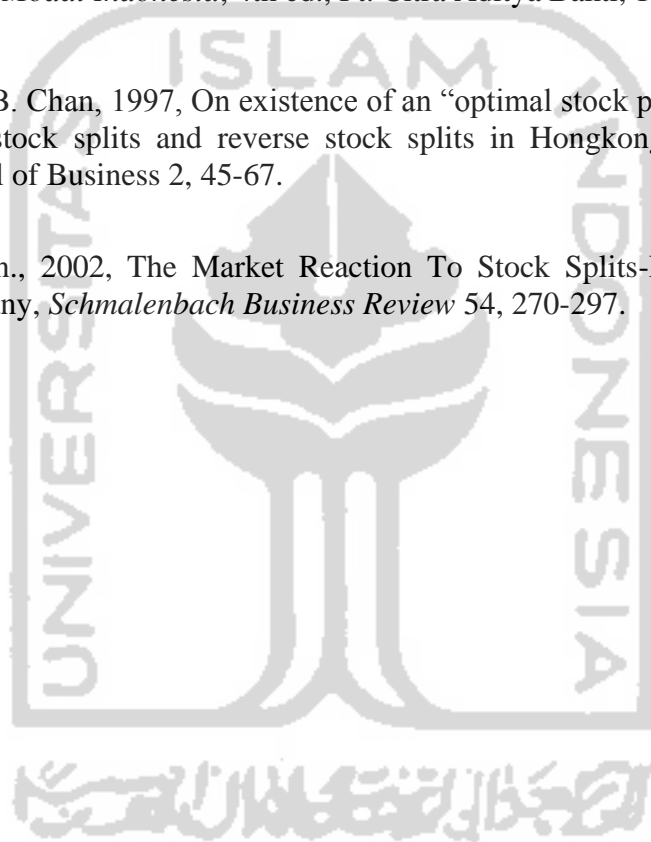
APPENDICES

APPENDIX 1

List of all Splitting Company from 1998-2004

index	date	index	date	Index	date
SDPC	02/03/98	LTLS	11/08/99	TBLA	10/29/01
UGAR	02/12/98	MTDL	12/09/99	STTP	12/20/01
TKGA	03/30/98	BHIT	02/08/00	ACAP	01/07/02
INSA	07/13/98	TMPI	02/18/00	BLTA	02/16/02
PWSI	07/24/98	ASGR	03/07/00	VOKS	03/19/02
BNPS	08/03/98	SONA	04/07/00	JAKA	05/16/02
MTDL	08/10/98	TRIM	04/24/00	ASDM	05/29/02
RAMA	08/10/98	RMBA	04/25/00	FMII	07/02/02
BRNA	08/18/98	TIRT	05/15/00	HEXA	07/29/02
MEDC	08/18/98	MEDC	06/02/00	MRAT	08/02/02
IDVS	09/14/98	MREI	08/08/00	SMRA	08/12/02
HPSB	09/21/98	MIRA	08/14/00	PANS	09/18/02
INCI	09/28/98	APLI	08/23/00	BBIA	12/18/02
ASRM	10/05/98	UNTR	09/05/00	PBRX	01/10/03
ASTR	10/05/98	INDF	09/29/00	BDMN	01/22/03
DPNS	10/12/98	AHAP	10/06/00	NISP	02/10/03
CFIN	10/19/98	MITI	10/09/00	CITA	02/21/03
MYRX	11/02/98	TRST	10/09/00	SMMA	03/04/03
BCIC	04/01/99	BASS	10/13/00	MTFN	03/06/03
NISP	04/11/99	TRST	10/13/00	PNIN	06/03/03
SHID	06/04/99	INTA	11/06/00	CFIN	07/02/03
SUBA	06/09/99	UNVR	11/06/00	SMSM	07/08/03
BGIN	08/16/99	FAST	12/05/00	PNLF	07/28/03
IGAR	08/16/99	ESTI	12/11/00	UNVR	09/03/03
EKAD	09/06/99	ASIA	12/22/00	AHAP	09/15/03
BHIT	09/08/99	SUBA	01/12/01	SUBA	10/01/03
EPMT	09/13/99	CPIN	01/15/01	CNKO	11/19/03
DNKS	09/20/99	ULTJ	01/16/01	POOL	12/05/03
FASW	09/20/99	DSFI	01/22/01	EPMT	12/11/03
KLBF	09/27/99	RALS	02/15/01	BNII	12/23/03
SSTM	09/27/99	BBCA	05/15/01	KLBF	01/02/04
BUDI	09/28/99	TURI	07/06/01	TLKM	09/28/04
KKGI	09/29/99	SMPL	07/31/01	RALS	10/22/04
PNBN	10/04/99	SRSN	08/06/01	UNSP	11/03/04
DSUC	10/18/99	SIMM	08/30/01	BLTA	11/09/04
SUDI	10/21/99	SDPC	09/03/01	DAVO	12/17/04
NISP	11/04/99	HMSP	09/24/01		

APPENDIX 2

List of all Splitting Company from 1998-2004 which are fulfilling the research criteria

No	Stock Code	Company	Industry
1	IDVS	Bank Indovest	Banking
2	MYRX	PT Hanson Industri Utama Tbk. (Mayertex Indonesia)	Apparel and Other Textile Products
3	MTDL	PT Metrodata Electronics Tbk.	Electronic and Office Equipment
4	TRIM	PT Trimegah Securities Tbk.	Securities
5	MREI	PT Maskapai Reasuransi Indonesia (Marein) Tbk.	Insurance
6	VOKS	PT Voksel Electric Tbk.	Cable
7	BBIA	PT Bank Buana Tbk.	Banking
8	PNIN	PT Panin Insurance Tbk.	Insurance

APPENDIX 3

STOCK PRICE OF SPLITING COMPANIES

days	code	IDVS	MYRX	MTDL	TRIM	MREI	VOKS	BBIA	PNIN
-20		700	5450	6000	8800	1600	200	950	225
-19		625	5650	5925	8825	1600	200	950	230
-18		625	6050	5975	8750	1600	200	950	225
-17		350	6275	6200	8750	1500	200	950	225
-16		200	6400	6200	8800	1600	200	950	225
-15		200	6400	6275	8775	1600	200	950	225
-14		200	6500	6250	9150	1600	200	950	230
-13		200	6375	6400	9050	1600	200	950	235
-12		200	6500	6500	9100	1600	210	1100	250
-11		200	6350	6525	9025	1600	210	1225	275
-10		200	6500	6400	9000	1600	225	1250	265
-9		150	6500	6200	8775	1575	225	1275	270
-8		150	6500	6300	8800	1600	235	1300	270
-7		150	6500	6400	8800	1575	250	1400	270
-6		150	5700	6800	8825	1600	250	1325	280
-5		150	6000	7250	9050	1575	250	1300	300
-4		150	6000	7550	8825	1600	285	1300	300
-3		150	6000	7550	8975	1600	300	1300	300
-2		150	6000	7550	9225	1800	360	1400	295
-1		150	6000	7550	9425	2200	390	1400	305
0		75	3525	825	1000	1090	195	700	165
1		75	3300	825	975	895	175	700	165
2		75	3475	800	1000	680	170	700	165
3		75	3200	825	1000	680	165	700	165
4		75	3200	800	1000	620	150	700	175
5		75	3200	800	1000	605	150	700	165
6		75	3200	800	1000	610	125	700	165
7		75	3400	800	1000	610	160	675	160
8		75	3200	1150	1000	635	150	675	165
9		75	3200	1300	1000	650	150	675	160
10		75	1375	1325	1000	655	135	675	150
11		75	1275	1675	1000	625	140	675	155
12		75	1200	1650	1000	645	150	675	155
13		75	1025	1725	1000	630	140	675	150
14		75	950	1775	1000	610	150	675	145
15		75	900	2350	975	615	135	675	135
16		75	875	2650	900	600	135	675	140
17		75	1075	3150	900	600	140	650	135
18		75	825	3275	900	670	135	675	140
19		75	675	3150	800	685	140	675	135
20		75	625	2550	400	605	135	650	135

APPENDIX 4

STOCK RETURN OF SPLITING COMPANIES

days	code	IDVS	MYRX	MTDL	TRIM	MREI	VOKS	BBIA	PNIN
-20									
-19		0,11	-0,04	0,01	0,00	0,00	0,00	0,00	-0,02
-18		0,00	-0,07	-0,01	0,01	0,00	0,00	0,00	0,02
-17		0,44	-0,04	-0,04	0,00	0,06	0,00	0,00	0,00
-16		0,43	-0,02	0,00	-0,01	-0,07	0,00	0,00	0,00
-15		0,00	0,00	-0,01	0,00	0,00	0,00	0,00	0,00
-14		0,00	-0,02	0,00	-0,04	0,00	0,00	0,00	-0,02
-13		0,00	0,02	-0,02	0,01	0,00	0,00	0,00	-0,02
-12		0,00	-0,02	-0,02	-0,01	0,00	-0,05	-0,16	-0,06
-11		0,00	0,02	0,00	0,01	0,00	0,00	-0,11	-0,10
-10		0,00	-0,02	0,02	0,00	0,00	-0,07	-0,02	0,04
-9		0,25	0,00	0,03	0,03	0,02	0,00	-0,02	-0,02
-8		0,00	0,00	-0,02	0,00	-0,02	-0,04	-0,02	0,00
-7		0,00	0,00	-0,02	0,00	0,02	-0,06	-0,08	0,00
-6		0,00	0,12	-0,06	0,00	-0,02	0,00	0,05	-0,04
-5		0,00	-0,05	-0,07	-0,03	0,02	0,00	0,02	-0,07
-4		0,00	0,00	-0,04	0,02	-0,02	-0,14	0,00	0,00
-3		0,00	0,00	0,00	-0,02	0,00	-0,05	0,00	0,00
-2		0,00	0,00	0,00	-0,03	-0,13	-0,20	-0,08	0,02
-1		0,00	0,00	0,00	-0,02	-0,22	-0,08	0,00	-0,03
1		0,00	0,06	0,00	0,03	0,18	0,10	0,00	0,00
2		0,00	-0,05	0,03	-0,03	0,24	0,03	0,00	0,00
3		0,00	0,08	-0,03	0,00	0,00	0,03	0,00	0,00
4		0,00	0,00	0,03	0,00	0,09	0,09	0,00	-0,06
5		0,00	0,00	0,00	0,00	0,02	0,00	0,00	0,06
6		0,00	0,00	0,00	0,00	-0,01	0,17	0,00	0,00
7		0,00	-0,06	0,00	0,00	0,00	-0,28	0,04	0,03
8		0,00	0,06	-0,44	0,00	-0,04	0,06	0,00	-0,03
9		0,00	0,00	-0,13	0,00	-0,02	0,00	0,00	0,03
10		0,00	0,57	-0,02	0,00	-0,01	0,10	0,00	0,06
11		0,00	0,07	-0,26	0,00	0,05	-0,04	0,00	-0,03
12		0,00	0,06	0,01	0,00	-0,03	-0,07	0,00	0,00
13		0,00	0,15	-0,05	0,00	0,02	0,07	0,00	0,03
14		0,00	0,07	-0,03	0,00	0,03	-0,07	0,00	0,03
15		0,00	0,05	-0,32	0,03	-0,01	0,10	0,00	0,07
16		0,00	0,03	-0,13	0,08	0,02	0,00	0,00	-0,04
17		0,00	-0,23	-0,19	0,00	0,00	-0,04	0,04	0,04
18		0,00	0,23	-0,04	0,00	-0,12	0,04	-0,04	-0,04
19		0,00	0,18	0,04	0,11	-0,02	-0,04	0,00	0,04

APPENDIX 5

t-test table of PT Hanson Industri Utama Tbk. (Mayertex Indonesia) and PT Metrodata Electronics Tbk.

t-test table of PT Hanson Industri Utama Tbk

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	0.067017964	-0.00582663
Variance	0.024374091	0.001527816
Observations	19	19
Pearson Correlation	-0.033716863	
Hypothesized Mean Difference	0	
Df	18	
T Stat	1.957426785	
P(T<=t) one-tail	0.032993486	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.065986972	
T Critical two-tail	2.100922037	

t-test table of PT Metrodata Electronics Tbk.

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	-0.080172221	-0.012464754
Variance	0.017902827	0.000641338
Observations	19	19
Pearson Correlation	0.158389906	
Hypothesized Mean Difference	0	
Df	18	
T Stat	-2.23283903	
P(T<=t) one-tail	0.019248947	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.038497894	
T Critical two-tail	2.100922037	

APPENDIX 6

t-test table of PT Trimegah Securities Tbk. And PT Maskapai Reasuransi Indonesia Tbk.

t-test table of PT Trimegah Securities Tbk

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	0.011178587	-0.003757428
Variance	0.000988669	0.000297156
Observations	19	19
Pearson Correlation	-0.064033569	
Hypothesized Mean Difference	0	
Df	18	
T Stat	1.768493258	
P(T<=t) one-tail	0.046961063	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.093922126	
T Critical two-tail	2.100922037	

t-test table of PT Maskapai Reasuransi Indonesia (Marein) Tbk.

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	0.020891112	-0.018533312
Variance	0.006200034	0.003795583
Observations	19	19
Pearson Correlation	0.247373218	
Hypothesized Mean Difference	0	
Df	18	
T Stat	1.971795371	
P(T<=t) one-tail	0.032100646	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.064201292	
T Critical two-tail	2.100922037	

APPENDIX 7

t-test table of PT Voksel Electric Tbk. And PT Bank Buana Tbk.

t-test table of PT Voksel Electric Tbk.

t-Test: Paired Two Sample for Means
7

	Variable 1	Variable 2
Mean	0.013107145	-0.037140406
Variance	0.009295799	0.003153185
Observations	19	19
Pearson Correlation	-0.043163869	
Hypothesized Mean Difference	0	
Df	18	
T Stat	1.927176945	
P(T<=t) one-tail	0.034946006	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.069892012	
T Critical two-tail	2.100922037	

t-test table of PT Bank Buana Tbk.

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	0.001804725	-0.021734416
Variance	0.000225814	0.002507213
Observations	19	19
Pearson Correlation	0.273469741	
Hypothesized Mean Difference	0	
Df	18	
T Stat	2.129531806	
P(T<=t) one-tail	0.02363376	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.04726752	
T Critical two-tail	2.100922037	

APPENDIX 8

t-test table of PT Panin Insurance Tbk.

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	0.009840576	-0.016656619
Variance	0.00139619	0.00112859
Observations	19	19
Pearson Correlation	-0.162293935	
Hypothesized Mean Difference	0	
Df	18	
T Stat	2.132935908	
P(T<=t) one-tail	0.023475811	
T Critical one-tail	1.734063592	
P(T<=t) two-tail	0.046951623	
T Critical two-tail	2.100922037	
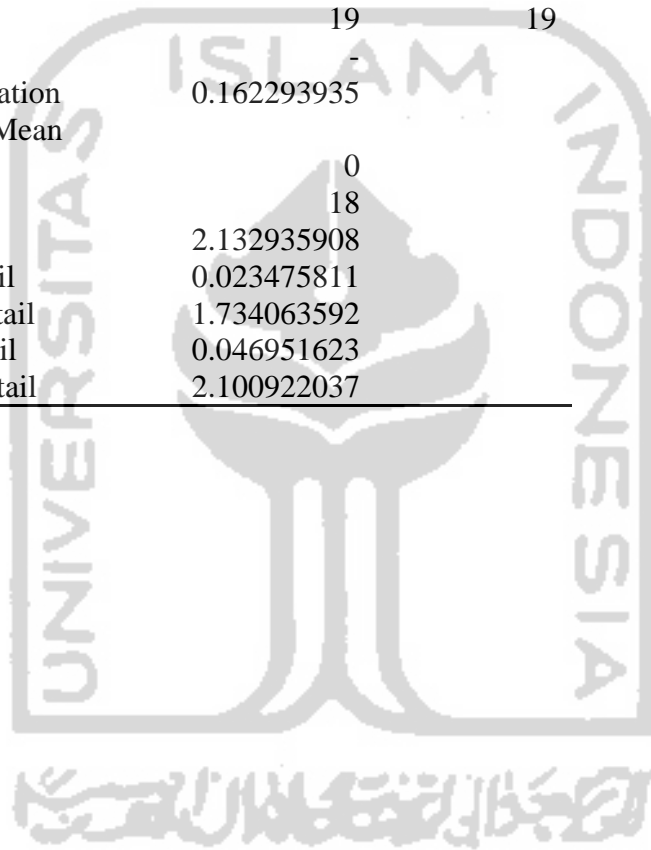
APPENDIX 9

T-test table of all Samples and the total result.

t-Test: Paired Two Sample for Means	T Stat	P(T<=t) two-tail
MYRX	1,957426785	0.065987
MTDL	-2,232839030	0.038498
TRIM	1,768493258	0.093922
MREI	1,971795371	0.064201
VOKS	1,927176945	0.069892
BBIA	2,129531806	0.047268
PNIN	2,132935908	0.046952
Total		*0.203952*