

**FACTORS INFLUENCE UNDERPRICED LEVEL
AND THE AFTERMARKET STOCK PRICE BEHAVIOR
IN JAKARTA STOCK EXCHANGE IN YEAR 1999-2003**

A THESIS

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



By

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**DEPARTMENT OF ACCOUNTING
INTERNATIONAL PROGRAM
FACULTY OF ECONOMICS
ISLAMIC UNIVERSITY OF INDONESIA
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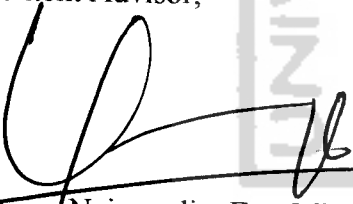
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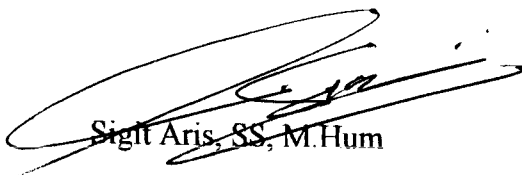
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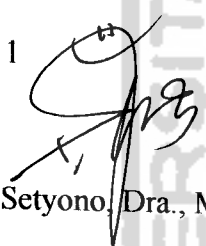
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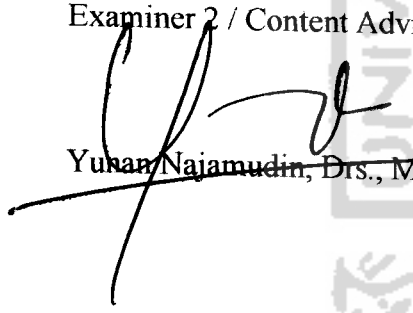
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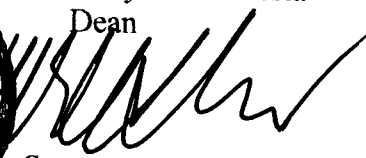
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STATEMENT OF FREE PLAGIARISM

Herein I declare the originality of this thesis; there is no other work which has never presented to obtain any university degree, and in my concern there is neither one else's opinion nor published written work, except acknowledgement quotation relevant to the topic of this thesis which have been stated or listed on the thesis bibliography.

If in the future this statement is not proven as it supposed to be, I am willing to accept any sanction complying to the determinated regulation for its consequence.

Yogyakarta, June 2005

Dian Sarsmistha



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

*"If your success is not on your own terms, if it looks good on the world
but does not feel good in your heart, it is not success at all."*

(Anna Quindén)

*"You may be disappointed if you fail;
trust you are doomed if you do not try."*

(Beverly Sills)

And never say of anything "I shall do such and such thing tomorrow."

(Al-Kalifi, 23)

The future is what you want it to be.

(ILP)

I dedicate this thesis to my families

my Mom (Sri Subekti), Dad (Sutarto), and my Big Bro (N. Adhitya)

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Yogyakarta, June 2005

Dian Sarsmistha

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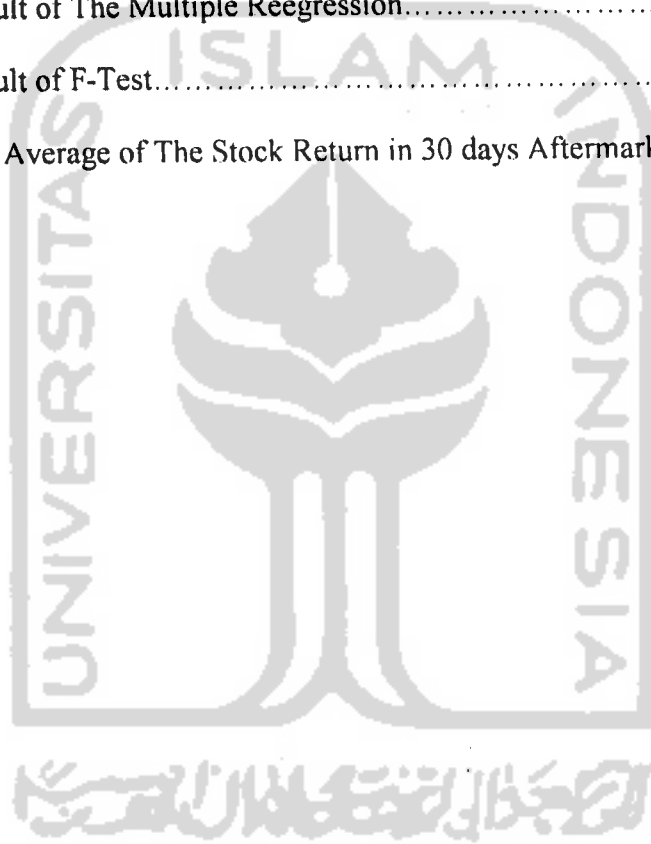
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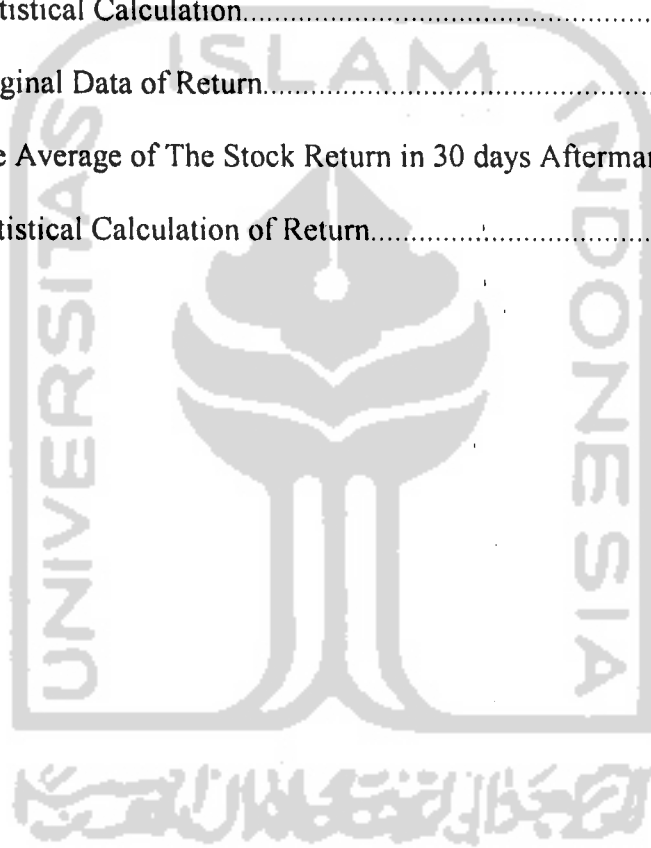
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ABSTRACT

Sarsmista, Dian (2005). Factors Influence Underpriced level and the Aftermarket Stock Price Behavior in Jakarta Stock Exchange in year 1999-2003. Yogyakarta. Faculty of Economics. Islamic University of Indonesia.

This research is aimed to show how the factors influence the underpriced level and aftermarket price behavior of the initial stock. The factors are underwriter reputation, firm age, firm size, Price Earning Ratio (PER), Earning Per Share (EPS) of the Indonesian firms that conducted the Initial Public Offering in Jakarta Stock Exchange for the period of 1999-2003. This research will reflect the company's performance as a result to decide the investment choice by the investor.

This research applies linear regression model of the underwriter reputation, firm age, firm size, PER, EPS as the independent variables and underpriced as the dependent variable. The result of this research shows that those five variables do not have significant influence to the underpriced level in year 1999-2003. It seems that the investors do not consider about the fundamental aspects of the firms when they decide to invest their money. Meanwhile, the aftermarket stock price behavior is conducted with the correlation between day and market-adjusted return. This research finds that there is no significant alteration to the stock price in 30 days after the Initial Public Offering. The underwriter and the issuer keep the price in stable condition in 30 days following the initial offerings. Moreover, The investors still get the positive and negative market adjusted return in first day aftermarket, which means that the stock price aftermarket has not reflected the semi strong efficient market.

Key Words: Initial Public Offering, Underpriced, Aftermarket, Stock Price Behavior

ABSTRAK

Sarsmista, Dian (2005). Faktor-faktor yang Mempengaruhi tingkat underpriced dan perilaku harga saham setelah Penawaran Saham Perdana di Bursa Efek Jakarta pada tahun 1999-2003. Yogyakarta. Fakultas Ekonomi. Universitas Islam Indonesia.

Penelitian ini bertujuan untuk menunjukkan bagaimana faktor reputasi penjamin emisi, umur perusahaan, skala perusahaan, Price Earning Ratio (PER), Earning Per Share (EPS) dari perusahaan-perusahaan yang melakukan penawaran saham perdana di Bursa Efek Jakarta pada tahun 1999-2003 dalam mempengaruhi tingkat underpriced dan perilaku harga saham setelah melakukan penawaran saham perdana yang mengalami underprice, yang nantinya akan merefleksikan kinerja perusahaan, dan dapat digunakan sebagai bahan acuan bagi investor untuk mengambil keputusan dalam investasi.

Penelitian ini dilakukan memakai model regresi linier dengan reputasi penjamin emisi, umur perusahaan, skala perusahaan, PER, EPS sebagai variabel independennya dan underpriced sebagai variabel dependennya. Hasil penelitian menunjukkan bahwa kelima variabel tidak berpengaruh secara signifikan terhadap tingkat underpriced pada tahun 1999-2003. Sepertinya investor tidak memperhatikan faktor-faktor dasar sebuah perusahaan untuk berinvestasi saat penawaran perdana pada tahun tersebut. Sedangkan untuk perilaku harga saham setelah penawaran perdana dilakukan dengan korelasi antara hari dengan return yang disesuaikan pasar. Peneliti menemukan bahwa tidak ada perubahan yang signifikan terhadap harga saham setelah 30 hari penawaran perdana. Para penjamin emisi dan emiten menjaga harga saham supaya stabil dalam 30 hari setelah penawaran perdana. Investor masih mendapat positif dan negatif return yang telah disesuaikan pasar di hari pertama, berarti harga saham setelah pasar perdana tidak mencerminkan pasar efisiensi setengah kuat.

Kata kunci: Penawaran Saham Perdana, Underpriced, Perilaku harga saham.

CHAPTER I

INTRODUCTION

1.1. Study Background

All firms need to raise the capital to finance the new project or their operation. If firms need additional capital, they may decide to sell new stock. Before the stock is traded in the stock market (secondary market) it should be offered to the public first through Initial Public Offerings (IPO) in the primary market. In IPOs, the firm wants to receive a high value of the new issues, because they can achieve their goal in a short time. Meanwhile, the underwriters as guarantor of the issue try to minimize the risk. There are four kinds of underwriter in giving guarantee which are full commitment, best effort, stand by commitment and all or none commitment. There is only one type of underwriter in Indonesia which is full commitment underwriter. It has the highest risk than the others, because underwriter should buy all of unsold stocks in the initial market (Ghozali, Mansur, 2002). Therefore, the underwriter and the issuer have negotiated to get the price of the stock. Since the underwriter is interested to sell all the stock in order not to lose money, they will prefer a low issue price to keep risk as low as possible.

The stock price in the primary market has been already fixed and characterized by asymmetric information. While in the secondary market, the

price of stock is based on the auction supply and demand and also available information for the participants. It is possible if there is a different price in the same stock between primary and secondary market. If the closing price in the first trading day in secondary market is higher than the offering price in the primary market, the stock is considered to be underpriced (Slameta, 2003). Underprice is a phenomenon in stock market especially in the initial public offering (IPO).

An investor usually finds out the information about a firm which offers it to the public before purchasing initial stocks. This step is conducted to make right decision. In making decision, an investor needs a lot of information which lead into their consideration to buy stock or not. If there are a lot of uncertainty factors happen in secondary market, the underpriced level will be higher in the initial public offering (IPO). That is the expectation of the investor. Thus, the uncertainty stock price in secondary market will be influenced by the initial offerings (IPO). Carter and Manaster (1990) explained that underpriced level is the result of the uncertainty stock price in secondary market. In this case, the underwriter will set the price according to the information about the investors demand (in Ghozali, Mansur, 2002). Peter Klein (1995) has implicitly assumed that grossly underpriced IPOs are allocated to the underwriter's favoured clients (in P.J. Lee et al, 1996).

A lot of researches have been conducted related to the underpriced phenomenon. Previous researches related to initial public offerings (IPOs) documented the tendency of IPOs to provide abnormal returns to investors who

purchased them at initial offering (Aggarwal; Rivoli, 1991). Several researchers have tried to explain why the initial stock price is lower than the price in the first day in secondary market (in Ghozali, Mansur, 2002),

This research examines on the subject of initial public offering. This research explains more about the factors that influence underpriced level and the aftermarket price behavior. This research takes sample of the firms that conduct the IPO from year 1999 to 2003 and 30 days following to examine the price aftermarket behavior. According to Ghozali and Mansur (2002) there are several factors that are predicted to influence the IPO, which are:

1. Underwriter Reputation

Underwriter reputation shows the function, as an underwriter can be acceptable or un-acceptable by the society. If an underwriter is acceptable by the society, and the service of the underwriter is used by many firms. It means this underwriter has a good reputation. Otherwise, the underwriter cannot have a good reputation if the society does not trust it. Underwriter is a profession to support the capital market where the function guarantees the stocks in initial public offerings (IPOs) and bonds between the interest of the investors and the issuers.

2. Firm Age

Firm age is defined as the number of issuing firm's years of existence. It is calculated since the firms exist based on the official document to the firm that has already done the stocks offering. It is

calculated from the difference between its incorporation date and its offering date to the public and it has been done per year. If the firm has been operating longer than the other firm, better information will be served to the investor in decreasing uncertainty level of the firm.

3. Firm size

The size of the firm shows the total asset owned by the firm. A larger asset indicates the larger size of a firm. A larger size of firm has less risk in capital market. The data of the total asset is taken from the Indonesia Capital Market Directory.

4. Price Earning Ratio (PER)

Price Earning Ratio (PER) is an important part in making investment decision. The PER reflects investor's expectations concerning the company's future performance. The more optimistic these expectations, the higher the PER is likely to be. This ratio is computed by dividing the current market price per share of the company's stock by annual earnings per share.

5. Earning Price per Share (EPS)

Earning price per share (EPS) is perhaps the most widely used in all accounting ratio. The trend in EPS and the expected earnings in the future periods are major factors affecting the market value of a company's shares. To compute EPS, the average number of common shares

outstanding divides the annual net income applicable to the common stockholders.

1.2. Problem Identification

There is an opportunity to continue research for disclosure the underpriced phenomenon in the initial offering in Jakarta Stock Exchange. So this research intends to conduct a research about the factors that are expected to influence the underpriced level in Jakarta Stock Exchange. This research takes sample the IPO firms from year 1999 until 2003. This period is taken because the economic was starting to have a stable condition after the financial crises.

This research monitors the price behavior after the firms have conducted the IPO, whether the initial stock price tends to be stable, increased, or decreased movement after experiences the underpricing. So, the writer is also going to observe the aftermarket price behavior to see if there is an alteration of the stock price in 30 days after the IPO.

Hopefully, this research can complete the previous researchers in disclosure the underpriced phenomenon, especially in the factors that influence the underpriced level and the 30 days aftermarket price behavior of the IPOs firms.

1.3. Problem Formulation

The problems of how those factors can significantly influence towards the underpriced level in Indonesian firms and the aftermarket price behavior

alteration are the reason of how investor and issuer ability predict their investment choices in the initial offerings. This research, furthermore, attempts to answer the following questions:

1. Is there a significant influence of the independent variables in partial to the underpriced level in initial public offering (IPO) in Jakarta Stock Exchange (JSX)?
2. Is there a significant influence of the independent variables in simultaneously to the underpriced level in initial public offering (IPO) in Jakarta Stock Exchange (JSX)?
3. Is there any alteration stock price behavior in 30 days aftermarket following the underpricing of the initial stocks?

1.4. Limitation of Research Area

This research examines factors that influence underpriced level in the initial offerings in Jakarta Stock Exchange and the aftermarket price behavior of the firm. The samples are taken from the firms that have done IPOs listed in Jakarta Stock Exchange from year 1999-2003. The data taken is stock price in the initial offerings, stock price in the first trading in secondary market and stock price in 30 days following the closing price in the initial public offerings.

1.5. Research Objectives

This research is conducted to analyze whether the underwriter reputation,

firm age, firm size , PER and EPS influence the underpriced level. This research objectives are based on the problem formulation above which can be stated as follows:

1. To identify whether there is a significant influence of the independent variables in partial to the underpriced level in initial public offerings in the Jakarta Stock Exchange.
2. To identify whether there is a significant influence of the independent variables in simultaneously to the underpriced level in initial public offerings in the Jakarta Stock Exchange.
3. To identify whether there is an alteration stock price in 30 days aftermarket following the under price of the initial stock.

1.6. Research Contribution

This research is expected to give many contributions to:

1. The writer: This research can add the knowledge and information about some of the symptom in initial public offerings in Indonesia capital market.
2. The issuer: Investor and underwriter: This research can add the empiric knowledge about the initial stock behavior in 30 days following the IPOs and the factors that influence underpriced level can recognizeable. This research is also expected to provide the information for the investors as a consideration to invest in the new stocks.

3. The academic: This research can be used as a reference for the next research who analyze a same topic.

1.7. Definition of Terms

The key words of this research are Initial Public Offering, Underpriced, Aftermarket, Stock Price Behavior. This research will elaborate more about these terms.

1. **Initial Public Offering (IPO)** = IPO is an activity in offering stock from the firms to the public at the first time (Askew, 2003).
2. **Underpricing** = Underpricing means the offer price of the stock (or the price of the stock that is set by the company) is lower than the price of stock sold in the secondary market (Askew, 2003).
3. **Secondary market** = Secondary market is the market in which stocks are traded after being issued in primary market and where investors can buy shares of stock from other investors rather than directly from the company that issued the stock (Askew, 2003). **Aftermarket** = Aftermarket is the secondary market for stocks after completion of an IPO (Teweles et al,1992).
4. **Stock price behavior** = The movement of stock price in capital market because of market reaction.

1.8. Research Outline

CHAPTER I : INTRODUCTION

This chapter consist of; Study background which gives the basic explanation related to this research, Problem identification and formulation identify and elaborate the problems of this research, Limitation of research area, Research objectives, Research contribution mention the benefit for the user, Definition of terms and Research outline guide through this research.

CHAPTER II : REVIEW OF RELATED LITERATURE

Review of related literature gives many explanations about the relevant theories toward this research and to reconsider about the previous studies. Parts of this chapter elaborate more about the capital market, Initial Public Offering (IPO), underprice, definition of underwriter reputation, definition of firm age and size, definition of PER and EPS. Previous studies and hypothesis will also be explained in this chapter.

CHAPTER III : RESEARCH METHOD

This chapter describes the research methods, which maunly emphasizes on research outlines the procedures used to gather and analyze the data. In this part, this research translates the conceptual scope and methodology into application. It covers the research subject,

type and source of the data, research variables, research instruments, data analysis and the hypotheses test related to this research.

CHAPTER IV : RESEARCH FINDINGS, DISCUSSION AND IMPLICATION

This chapter explains the early process of gathering the data, the measurement of variables used in this research, the data analysis and the interpretation of hypothesis testing which includes the explanations about the research findings, discussions and research implications.

CHAPTER V : CONCLUSIONS AND RECOMMENDATIONS

This chapter derive some conclusions and recommendations, based on the research purpose, the statistical test and analysis that have been described in the earlier chapters. This chapter also highlight several recommendation that maybe useful for the next research.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1. The Capital Market

Capital market refers to the market for long term financial assets having actual maturities of more than one year (Rose, Kolari, 1995). Based on Law Number 8 Year 1995, capital market defines that public offering is an activity in offering stock from the firms to the public based on the Law method and rules implementation (Ronni, 2003). This market is used for trading the securities, whether in the form of stocks or bonds which is issued by government or private sectors. The capital market is closely connected to the savings and investments that are vital for the growth of the economy, this market contributes to economic stability by matching savings and investment (Rose, Kolari, 1995).

Capital market has a big role for the issuer and the investor. According to Rose and Kolari (1995), the role of capital market for the issuer is the issuer can collect the funds to finance the asset of project. The issuer can find the trust from the public and evaluate the company's performance through the level of the expected return. The investors can have a chance to own the firms if they have a lot proportion for stock investment, beside acquires an income from dividends or interest.

2.2. Initial Public Offering (IPO)

IPO is one of the alternative source in funding the firm's equity with offer the

stock to the public. Going public means selling some of company's stock to outside investors and then letting the stock trade in public market (Askew, 2003). One of requirements for a firm to go public is to get the pronouncement from BAPEPAM. The whole information about the firm has to be reported to BAPEPAM and various documents will be checked. Beside that, the firm should fulfill the requirements of the stock exchange.

There are several results gained by the firms after they have conducted IPO as follows:

- a. The firm will get the additional fund that can be used to pay debt, funding fixed asset and broader the working capital.
- b. The firm will become a public firm where the stock is traded in capital market and the company can offer the stocks again if it is needed.
- c. The public firm is easier to be noticed and evaluated their potential synergies by another firms. If there is an established market price, this helps when a firm is either being acquired or seeking to acquire another firm where it will pay for the acquisition stock (Welch, 2000).
- d. Public firms tend to have higher profiles than private firms. Many firms report that it is easier to sell their products and services to potential customers after they become publicly traded firms (Welch, 2000).

The initial stock price in IPO is very difficult to determine. It is because there is not previous stock price from the last market price observed in determining the offering stock price. Beside that, a lot of firms that go public have no experience to

determine the stock price. It makes the issuer has a relationship with the underwriter to determine the stock price. The underwriters have a function to give an advice to the issuer about the offering stock and the exact time to do the offering. Both investor and issuer should stay away from best-efforts offering, where the underwriter is only an agent on behalf of the firm. It is not because the contract is intrinsically bad, instead, it is because no other reputable firms and underwriter seem to use it especially in USA (Welch, 2000). It is similar in Indonesia where there is only a full commitment underwriter type which guarantees all the stock will be sold (Ghozali, Mansur, 2002).

These are disadvantages of going public based on Ivo Welch (2000), which are:

- a. Profit-sharing; the profit of the firm has to be shared with outsiders. But if the price is right, this is worth for it.
- b. Loss of Confidentiality; a major reason why firms may not receive the right price is that firms are unable to convince investors that the firms have a “gold in the mine”.
- c. Reporting and Fiduciary Responsibilities; public firms must continuously file reports with SEC and the exchange they list on. They must comply with certain state securities laws and exchange guidelines. It costs money and discloses information to competitors.
- d. Loss of control; because of possible tender offers and proxy fights, the managers of publicly firms who do not have voting control must be concerned about

maintaining control. They can be fired and replaced. The investors pay a high price and do not want the poor management manages their investment.

- e. IPO-Expenses; an IPO is a costly undertaking. A typical firm may spend about 15-25% of the money raised on direct expenses.
- f. Immediate Cash-out Usually Not Permitted; typically, IPO entrepreneurs face various restrictions that do not permit them to cash out for several months after IPO.

Therefore, the decision of going public should be considered carefully. Public offering means the management of the issuer should increase their professionalism because the disclosure of the firm.

2.3. Underpriced

Initial stock price in IPO tends underpriced. Underpriced means that initial stock price is lower than the closing price at the end of the initial market ([http://www.e-bursa.com/IPO/kinerja saham/](http://www.e-bursa.com/IPO/kinerja_saham/)). Almost all of theoretical models are developed in the literature to explain the underpricing phenomenon in IPO.

These are several theories which support the underpriced according to Ronni's research (2003):

2.3.1. Asymmetric Information

Several theories of underpriced in IPO have explained that there is a different information between the participants about the initial stocks.

Baron (1982) developed a model assuming that the underwriter has more information about the capital market than the issuer. Further, he argued that the reputation of the underwriter indicates the quality of an IPO and can therefore generate more demand for new stocks. In using the underwriter service (pricing, selling effort) is better than bringing the new issue to the market itself, although the issuer can not monitor it completely (in Kunz, Aggrawal, 1994). The underwriter can get the profit from its advantages by setting too low issue price (Kunz, Aggrawal, 1994).

Because of underwriter has more information, the underwriter is able to convince the issue that lower price is better if there is uncertainty of the stock value. The underwriter comprehends more the market price because the underwriter does the survey, investigation, has information from the issuer and more experience in new stock, while the issuer focuses on their business characteristics (in Ronni, 2003; in ibbotson, Sindelar, Ritter, 1988).

2.3.2.Winner's Curse

One of scholar, Rock (1986) also investigated the issue of underpricing, which is then known as "winner curse" (in P.J. Lee et all, 1996).

Rock argued that the majority of IPOs investors (i.e the uninformed) face an information disadvantage relative to those acquiring costly information about the market value of the offering (in P.J. Lee et all, 1996). It indicated uninformed investors face a winner's curse.

Underwriter and issuer make a random error in determining the stock price. Several of the stocks are determined overvalued and the others are undervalued. Informed investors will buy the undervalued stock and avoid the overvalued stock because the return is smaller. The issuer should attract the uninformed investor, thereby the price of the new stock should be underpriced in order that uninformed investor receive the equal return.

A consequence of this model is that the size of underpricing depends on the uncertainty of the future market price; the higher it is, the higher are the information costs that have to be compensated by the underpricing. The advantage of the informed investors is large, if the described uncertainty is particularly high (Kunz, Aggrawal, 1994).

2.3.3.Traditional

There are traditional explanations about the underpricing from Ibbotson (1975) in Sautma Ronni, which are:

- 1) Law makes underwriter determine initial price lower than the expectation price (although there are not all countries implemented it).
- 2) There is an agreement among the underwriters in determining the underpriced condition. This should not happen because it seems underwriter has exploited the unexperience issuer and given the benefit for the investors.
- 3) Underpriced stocks have a good impression to the investors, so the price of the next new stock can be sold more attractive.

- 4) Firm commitment has made underwriter try to decrease their risk with underpricing the initial stock price. In this situation, investor can get profit in buying the stocks.
- 5) Underwriting process usually implements the underprice method in doing IPO. The custom and agreement between the issuer and underwriter influence that method.
- 6) The issuer and underwriter consider that underprice is a guarantee toward the claim of Law SEC Act of 1993 prevail Civil Liability Act in the mis-information case where it is done between the issuer and the underwriter. In the US the securities Act of 1993 requires disclosure of information to protect investors in the new issue market. Ibbotson (1975) viewed a possible explanation for the underpricing that the issuer and the underwriter agree to protect themselves against legal pursuits by setting the issue price low enough to avoid losses to investors (in Kunz, Aggrawal, 1994).

2.3.4. Signaling Equilibrium Phenomenon

In this model, investors cannot distinguish between high-quality and low-quality firms. High-quality firms might have better managers, business plans or specific business outlooks that make them more valuable than low-quality firms (Askew, 2003). It is assumed that low-quality firms can invest money like high-quality firms (Welch, 1989 in Askew, 2003). These imitations are costly and not always effective since the truth may be revealed resulting in the loss of part of the investment in imitation. Telling the truth would result in a lower priced IPO and

lower returns on later stock offerings (Askew, 2003). High-quality firms are able to have smaller initial offerings because their quality will be detected between the IPO and later offerings such that they can charge more during later offerings and make up the difference (Welch, 1989 in Askew, 2003).

Allen and Faulhaber (1989), Grimblass and Hwang (1989) have suggested that issuers use underpricing as a mechanism to signal their quality to the market. These models posit that high-quality firms underprice their stocks at the IPO and subsequently conduct a seasoned offering when market prices are established and there has been an opportunity for information revelation (in Jain, Kini____). The cost of underpricing and a positive probability of their type being revealed between the two offerings prevent the low quality firms from following suit. Thus, signaling models of underpricing predict the firms should exhibit superior operating performance in comparison to those that do not. The absence of a positive relation between the change in operating performance and underpricing is consistent with the signaling explanation for underpricing.

2.4. Theoretical Framework and Formulation Hypothesis

2.4.1. Underwriter Reputation

The underwriter as an outside party facilitates investor and the issuer. As a full commitment underwriter, they have responsibility to guarantee all the unsold initial stock (Ghozali, Mansur, 2002). So, they have an agreement to determine the

stock price with the issuer, they tend to make underpriced the initial stock in order to avoid loss. A good underwriter will set the proper price to avoid the decreasing stock price in the secondary market because of high price (Majalah Uang dan Efek, Desember 1997:43). The asymmetry condition can cause the higher underpriced level, because the underwriter has more information than the issuer, they take an advantage from that condition to decrease their risk (Husnan 1991; Cheung et al 1994; in Ghazali, Mansur, 2002). A good reputation of the underwriter can decrease the uncertainty of the information which are not stated in the firms prospectus (in Ria Nurmalia, 2004). If a good underwriter guarantees the initial stock, the investor will be confident to invest their money on it and the prospectus of the firm is not mislead the investor. Ghazali and Mansur (2002) mentioned that the role of underwriter is very important in giving guarantee of the initial stock, because they have more experience in capital market than the issuer. Hence, the underwriter is assumed that they influence the underpriced level. The hypothesis can be formulated as follows:

H1 = Underwriter reputation has a significant influence to the underpriced level.

2.4.2. Firm Age

Firm age exhibits the information that can be achieved by the investors. It can be a main consideration to the investor to have an investment. In the normal condition, the firm that has existed for a long time has more publication than the new firm. Therefore, the investor is not necessary to spend more expense to get the information from the IPOs firms. It indicates that the long-standing firms have a

lower underpriced level than the new-standing firms (Nur Indriantoro and Nurhidayati, 1997 in Nurmalia, 2004). The hypothesis can be formulated as follows:

H2 = Firm Age has a significant influence to the underpriced level.

2.4.2. Firm Size

Firm size shows the level of the firm in operating with their asset. If there is a bigger asset of the firm, it indicates that the firm has a big size. It becomes proxy uncertainty level because a big scale firm is more popular in the society than a small scale firm. Because of the increase of its popularity, there is a lot of information about the firm that can be known by the investor. Thus, the uncertainty level of the firm in the future will be detected. Therefore, the big scale firms have an underpriced level lower than the small scale firm. There is a small number of information about the small scale firm to distribute the outsider firm because of the expense. So the small scale firms have higher underpriced level (Nur Indriantoro and Nurhidayati, 1997 in Nurmalia, 2004). The hypothesis can be formulated as follows:

H3 = Firm size has a significant influence to the underpriced level.

2.4.4. PER (Price Earning Ratio)

PER is computed on the basis of earning which after deducting operating expenses, depreciation, taxes, and interest from net revenue. It is a ratio to calculate how much the investment of the investor to get an earning income. From that calculation, the investor can use the relationship between the market price with the EPS in detect the underpriced or overpriced stock price.

The lower PER exhibits that the stock price is cheaper than the others. When stock price increases, the investors expect the capital gain from their investment. Because of that, the investor prefers to choose the lower PER. The larger the current PER indicates the larger is the stock's initial expected rate of growth and the smaller is the stock's expected rate of return. PER is an important part to make investment decision. The PER reflects investor's expectations concerning the company's future performance. The more optimistic these expectations, the higher the PER is likely to be. Therefore, the hypothesis can be formulated as follows:

H4 = Price Earning Ratio (PER) has a significant influence to the underpriced level

2.4.5. EPS (Earnings Per Share)

The investors need to know the annual earnings per share in buying or selling the stock in order to decide whether the price is reasonable. It is because EPS shows the overall operating results of the current year. If EPS grows in stable condition, it means that the company is in the stable condition. In reverse, the unstable company will show fluctuate of EPS growths.

EPS can reflect the high earnings growth in the future. IPO companies are initially priced at high price earnings multiples, implying that investors have expectations of high earning growth in the future (Jain, Kini). If the firms have EPS in high level, it means that the investors tend to have expectations of high earnings growth in the future. On the contrary, if there is small amount of EPS, the investor

has less expectation of high earning and it makes the higher the underpriced level.

The hypothesis of EPS can be formulated as follows:

H5 = Earning Per Share (EPS) has a significant influence to the underpriced level.

2.5. Aftermarket Stock Price Behavior

Aftermarket stock price is decided by its market and influenced by the information in the market. When the stock price fully reflects all available information, thus condition shows that the market is efficient. The alteration of the stock price follows the alteration of the information happens in the market. According to Elton and Gruber (1991), the efficient market hypothesis has been subdivided into three categories, each dealing with a different type of information. In weak form tests of the efficient market hypothesis, the information tested is the past sequence of security movements. Thus, weak form tests are tests of whether all information contained in historical prices is fully reflected in current prices. Semi strong form tests of the efficient market hypothesis are tests of whether publicly available information is fully reflected in current stock prices. Finally, Strong form tests of the efficient market hypothesis are tests of whether all information (public or private) is fully reflected in security prices and whether any investor can make an excess return. Tests of the efficient market hypothesis deal with how fast information is incorporated, but do not deal with whether it is correctly incorporated in prices.

The short-term International aftermarket performance shows the short excess return, it indicates that the long run performance is not as good as short-term performance (Kunz, Aggarwal, 1994). The prices decline between 5 months and 1 year following the IPO, meanwhile in day 1, 2, 20 until day 100 exhibits the positive abnormal return (Aggarwal, Rivoli, 1990). Thirty days aftermarket is expected that the stock price tends to decline because of long run bad performance. Welch (2000) confirmed that underwriter supports the aftermarket for 30 days after the offering, a good underwriter provides price stabilization. He mentioned that a good underwriter does a future services. The underwriter often provides post-IPO analyst coverage and market-making services. Based on that, this research examines the aftermarket price behavior in 30 days.

Rodani (2002) had done a short term performance research, he had 233 sample of IPO firm in JSX in year 1990-1998 and used the t-test to examine it. He found that the highest gain happened on the third day and the lowest gain happened on the sixth day aftermarket (Rodani, 2002). The gain is determined by the changes of the percentage stock price from day t-1 closing price until day t in the trading. It is based on the closing price (daily closing return).

It can be concluded that there is an alteration of the stock price in 30 days aftermarket following the under price of the initial stock. The hypothesis can be formulated as follows:

H6 = There is an alteration of the stock price in 30 days aftermarket following the under price of the initial stock.

2.6. Previous Studies

A lot of researches have been conducted regarding on the underpriced phenomenon. Kunz and Aggrawal (1994) had done a research about “why initial public offerings are underpriced: Evidence from Switzerland”. They took 42 stocks of the sample issued in the market between 1983-1989. A 35.8% was obtained average initial return between the offering price and the closing price on the first trading day. They found that the high average underpricing in Switzerland compared to other countries might possibly be explained by the reserved disclosure policy of Swiss companies. They also concluded that the uncertainty about the future market price of the new stocks is an important explanation for underpricing. The issuer’s argument that they intentionally underprice their stocks in order to invest into their reputation by getting “free” publicity is another reason for underpricing (Kunz, Aggrawal; 1994).

The research about the underpriced phenomenon in Indonesia firstly had been done by Husnan (1991). He took the sample from the year 1987-1990 in Jakarta Stock Exchange and found that the initial stock price was setting in underpriced in generally (in Ghazali, Mansur, 2002). Ghazali and Mansur (2002) also conducted a research to analyze the factors that influence the underpriced level in Jakarta Stock Exchange. They took sample from year 1997-2000 and had the reputation underwriter, retained stock, firm size, firm age, ROA, and financial leverage of the

firm as the factors that are expected to influence the underpriced level. They found the multiple regression equation as follow:

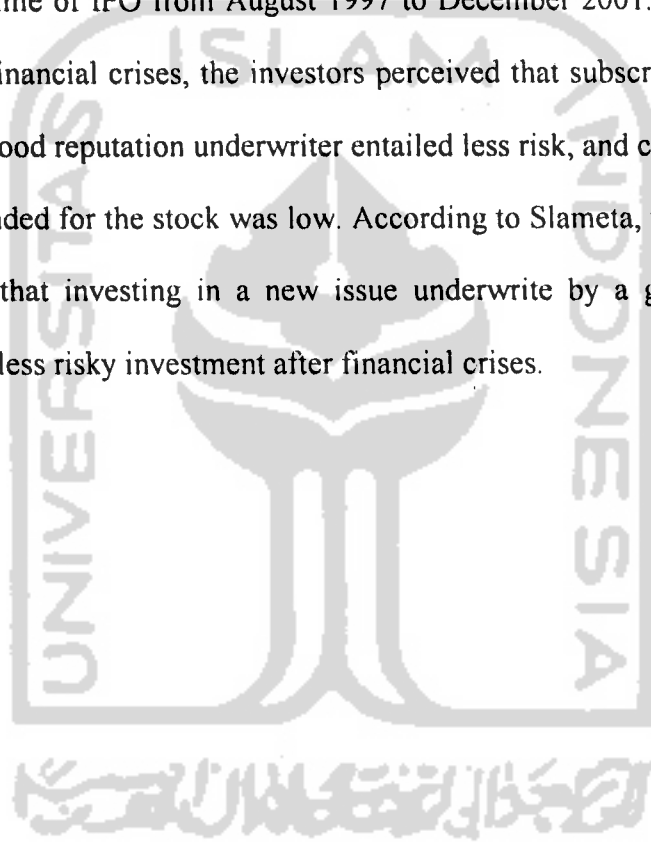
$$UPI = 85.443 - 22.690 \text{ Under} + 0.335 \text{ Kepem} - 0.00000141 \text{ Skala} - 0.0696 \text{ Umur} - 62.105 \text{ Fin lev} - 4.686 \text{ ROA}$$

Those independent variables have influenced to the dependent variable which is underpriced level with p value 0.064 and level of significance 10%, but only 31.2% of those variables that can explain the underpriced level in IPO for year 1997-2000. Ghozali and Mansur (2002) stated that ROA has a negative significant influence to the underpriced level in level of significance 5%, whereas the underwriter reputation and financial leverage variables have the negative significant influence to the underpriced level in level of significance 10%. Moreover, firm size and firm age have no significant influence to the underpriced level. But it is similar with their expectation, it has negative relationship with the underpriced level. It means that the increasing amount of firm size and the old of the firm indicate the lower level of the underpriced. The investors tend to invest their money to the firms that have bigger asset and the long standing company.

Slameta (2003) examined twelve variables that are expected to influence the underpriced level after financial crises from August 1997 to December 2001. Those variables are, market (return adjusted the market), firm age, firm size, profit margin, number, proceeds, the risk of issuing stock, underwriter and auditor reputation, market value, retain and SEO. He found that the size of the issuing firm have significantly influenced the level of IPO underpricing and had a negative relationship

with the underpriced. On the other hand, the age of the firm and the underwriter reputation had not significant influenced in level of significance 5% to the level of the underpricing (Slameta, 2003).

Slameta (2003) supported his findings by mentioning that the investors in Indonesia did not perceive the longer firm's years of existence as less risky investment at the time of IPO from August 1997 to December 2001. In addition, he stated that before financial crises, the investors perceived that subscribing to an IPO underwritten by a good reputation underwriter entailed less risk, and consequently the initial return demanded for the stock was low. According to Slameta, the investors do no longer believe that investing in a new issue underwrite by a good reputation underwriter entails less risky investment after financial crises.



CHAPTER III RESEARCH METHOD

3.1. Research Method

The method used in this research is purposive sampling method. In this method, the sample is taken based on the core variable representing this research. This research emphasizes the relationship between underpriced level with its' affecting factors, the factors are underwriter reputation, firm age, firm size, PER and EPS. This research, furthermore, is also intended to observe what kinds of factors which have dominant influences to underpriced level. The result of this research will be a beneficial information for investors to make right investment decision.

3.2. Population and Sample

The population of the data in this research is several firms that have done the IPOs and are listed in Jakarta Stock Exchange from year 1999 to 2003. The sample of this research is all the underpriced firms in that period. The underpriced firm means the firms that have lower offering stock price significantly than the closing price in secondary market at the first day. Based on the data provided by PT Limas Stokhomindo, there are 47 underpriced firms ([http://www.e-bursa.com/IPO/kinerja saham/](http://www.e-bursa.com/IPO/kinerja_saham/)). There are only 35 firms that have fulfilled the prerequisites for this research. The firms taken as a sample are several firms that have data as follows:

- a) Firms which are listed at the JSX in the period of 1999-2003 which have

single underwriter to guarantee their initial stock. This criteria is to avoid the double measurement of the underwriter reputation.

- b) Firms which have completed financial statement data in order to fulfill the variables.

3.3. Type and Source of the data

This research is conducted by using all relevant secondary data which could be collected from the various reliable sources, such as ICMD (Indonesia Capital Market Directory), the JSX data base at JSX corner FE UII Jogjakarta and http://www.e-bursa.com/IPO/kinerja_saham/. Data collection and the sources of data are taken from the company listed at JSX with the considerations that JSX is the biggest stock market in Indonesia, accessible for gathering the data and provide the complete data. There are several data taken in this research such as:

1. The stock price from the firms that have done the IPO from year 1999-2003, at the offering price and the closing price until 30 days followed. This data is used to get the initial return to determine the underpriced and analyze 30 days aftermarket price behavior.
2. The value of the offering stock price that is guaranteed by the underwriter in IPO of the firm to determine the rank of the underwriter reputation.
3. The financial statement of the go public firms in year 1999-2003 to determine the independent variables which are underwriter reputation, firm age, firm size, EPS, PER.

3.4. Research Variables

3.4.1. The dependent variable

The dependent variable in this research is underprice in the first day closing. It is determined as a comparison between the differences of the price in the initial opening day (P_1) with the offering price (P_0) in the closing price for sell in secondary market and divided with the offering price (P_0). Underpriced is determined in percentage and calculated as follows:

$$UP = \frac{(P_1 - P_0)}{P_0} \times 100$$

3.4.2. The independent variables

3.4.2.1. Underwriter Reputation

The underwriter reputation is an independent variable that shows the reputation level of the underwriter. This variable is measured with the dummy variable. The dummy variable is applied because there are two different underwriter reputation, which are point (1) for high underwriter reputation and point (0) is for low underwriter reputation. According to Ghazali Imam and Mudrik Al Mansur (2002), the underwriter reputation is determined in the amount of the IPO stock that is guaranteed by the underwriter. Rank of underwriter reputation is achieved from the percentage of total value of the offering stocks in IPO that is guaranteed by the underwriter, the good underwriter reputation (point 1) comes from the big ten of the rank (Majalah Uang dan Efek, Desember 1997:43).

3.4.2.2. Firm Age

Firm age is an independent variable that shows the firm performance based on how long the activities have persisted in the firm. This variable is defined as the number of issuing firm's years of existence. It is calculated since the firm is existed based on the official document to the firm do the stocks offering. It is calculated from the different between its incorporated date (A_i) and its offering date (A_o) to the public, stated annually (Imam Ghozali, Mudrik Al Mansur, 2002).

$$Firm\ age = A_i - A_o$$

3.4.2.3. Firm size

The size of the firm is measured in total asset of the IPOs firm (Imam Ghozali, Mudrik Al Mansur, 2002). A larger asset indicates the larger size of a firm. Firm size is an independent variable that shows how far is the firm operates with the asset.

$$Firm\ size = Asset / Equity$$

3.4.2.4. PER

PER is an independent variable that shows the expectations of the investors concerning the company's future performance. It can be used to calculate the earning of their investment. This ratio is computed by dividing the current market price per share of the company's stock by annual earnings per share.

$$PER = market\ price / EPS$$

3.4.2.5. EPS

EPS is an independent variable that shows the company performance in real value. To compute EPS, the annual net income applicable to the common stockholders is divided by the average number of common shares outstanding.

$$EPS = \text{Net Earning} / \text{Number of outstanding share}$$

3.5. The Aftermarket Price Behavior in 30 days following the IPO

The behavior of stock price is shown by the stock return calculation of 30 trading days aftermarket in secondary market. The declining of stock performance will be shown by negative return. On the other hand, the increasing stock performance will be shown with positive return (MG Kentris Indarti, Andi Katika, yohanes, 2004).

According to Kunz and Aggarwal (1993), in order to evaluate return in days following IPO is calculated:

$$IR = \left(\frac{P_t - P_1}{P_1} - \frac{I_t - I_1}{I_1} \right) \times 100$$

Where P_1 = the closing price of the stock on the first trading days in secondary market

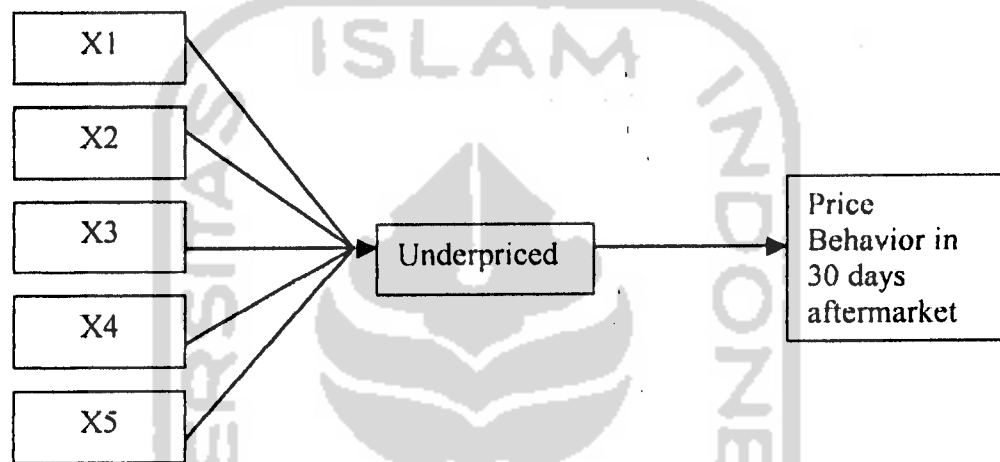
P_t = the closing price of the stock on the t trading days in secondary market

I_1 = the value of IHSG on the first day in secondary market

I_t = the value of IHSG on day t in secondary market

The aftermarket behavior in 30 days will be examined with the Pearson Correlation between the stock return and the day. This Pearson correlation is used to examine the correlation between ratio and interval (Santoso, 2004).

3.6. Research Model



X1 represents underwriter reputation variable.

X2 represents Firm age variable.

X3 represents Firm size variable.

X4 represents Price Earning Ratio (PER) variable.

X5 represents Earning Per Share (EPS) variable.

3.7. Formulated Hypothesis

- 1) H_a = Underwriter reputation has a significant influence to the underpriced level.

Ho = Underwriter reputation has no a significant influence to the underpriced level.

- 2) Ha = Firm Age has a significant influence to the underpriced level.

Ho = Firm Age has no a significant influence to the underpriced level.

- 3) Ha = Firm size has a significant influence to the underpriced level.

Ho = Firm size has no a significant influence to the underpriced level

- 4) Ha = Price Earning Ratio has a significant influence to the underpriced level.

Ho = = Price Earning Ratio has no a significant influence to the underpriced level.

- 5) Ha = Earning Per Share has a significant influence to the underpriced level.

Ho = Earning Per Share has no a significant influence to the underpriced level.

- 6) Ha = All variables have a significant influence to the underpriced level or there is simultaneously significant influences to the underpriced level

Ho = All independent variable partially do not influence dependent variable significantly.

- 7) Ha = There is an alteration of the stock behavior in 30 days aftermarket following the under price of the initial stock.

Ho = There is no an alteration of the stock behavior in 30 days aftermarket following the under price of the initial stock.

3.8. Assumption Classical analysis

3.8.1. Auto Correlation

The Durbin-Watson test statistic is used to identify the auto correlation. Durbin and Watson have suggested a test which is applicable to small samples. As a rule of thumb, values close to 0 indicate extreme positive auto correlation; close to 4 indicates extreme negative auto correlation; and close to 2 indicates no serial auto correlation.

3.8.2. Heteroscedasticity

The explanatory variables are not all normally distributed and they have different population. Possibly, the error terms associated with small going publics have greater variances than those associated with large firms. If it is so, it can contribute to heteroscedasticity problem where the variance of error terms are not constant. The detection of presence of heteroscedasticity can be conducted by analyzing Scatterplot graphic from the regression analysis. If the dots spread randomly and do not form any clear pattern. It can be concluded that heteroscedasticity does not exist. Moreover, it will prove that the data is valid and it is free from the bias.

3.8.3. Normality

This test is used to know whether the data has normal distribution or not. Normality test is shown by a normality graph in an output test. This test can be conducted by analyzing Scatterplot graphic from the regression analysis. If the dots spread is close or to the normal axis, so the data has normal distribution.

3.8.4. Multicollinearity

In order to analyze the independent variables power in explaining the dependent variable, it is possible that two or more of the independent variables correlate each other. It causes the problem of multicollinearity when they are included together in the regression equation. The multicollinearity test is conducted with Variance Inflation Factor (VIF), the tolerance value is 0.9 and VIF boundaries is 10. If the analysis result shows VIF value is under 10 and the tolerance value is upper 0.9, it means that there is no multicollinearity. So the model reliable to be based in doing analysis.

3.9.Data Analysis

Multiple Regression

The Method employed to examine the explanatory power of different hypothesis is ordinary least square regression. The initial return for IPO is regressed on variable that is proxy for different hypotheses suggested in the literature

$$UP = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Note: UP represents undeprice variable

X1 represents underwriter reputation variable.

X2 represents Firm age variable.

X3 represents Firm size variable.

X4 represents PER variable.

X5 represents EPS variable.

3.10. Hypotheses Test

3.10.1. F – Test

It is necessary to test all independent variables simultaneously to prove statistically that all independent variables influence significantly or not in determining dependent variable value. The F- Test of significant for all independent variables is used with confidence coefficient or level of significance (α) of 5%.

The hypotheses would be tested:

- a) Null hypothesis: $H_0: X_1 = X_2 = \dots X_n = 0$

This hypothesis states that all independent variables simultaneously do not influence dependent variable significantly.

- b) Alternative hypothesis: $H_0: X_1 \neq X_2 \neq \dots X_n \neq 0$

Alternative hypothesis states that all independent variable simultaneous influence dependent variable significantly

Since the test statistic F is more than the critical value ($\alpha=5\%$) or $F_{stat} > F_{0,05}$, the inference rejects H_0 . It means all independent variables do not influence against dependent variable significantly. On the other hand, if the test statistic F is less than the critical value ($\alpha=5\%$), the decision is accepted. It means all independent variables simultaneously have influenced dependent variable significantly.

3.10.2. T-Test

The purpose of T-Test is to prove whether the independent variables partially have an influence against underpricing of IPOs in Indonesia. Statistically,

the test will prove whether a regression coefficient of linear multiple regression model is significant or not.

The relationship of each independent variable against the dependent variable can be seen from the partial regression coefficient value of each independent variable.

The Hypothesis is tested:

- a) Null hypothesis: $H_0: X_1=0; X_2=0; \dots X_n=0$

Null hypothesis states that all independent variable partially do not influence dependent variable significantly

- b) Alternative hypothesis: $H_a: X_1 \neq 0; X_2 \neq 0; \dots X_n \neq 0$

Alternative hypothesis states that all independent variable partially influence dependent variable significantly

Test of significance for independence variable partially uses the level of significant (α) of 5%. If the t_{stat} is less than the critical value (α) of 5%, it means that a certain independent variable influence the underpriced level. On the other hand, if t_{stat} is more than the critical value, H_0 is accepted and the independent variable does not influence the underpriced level.

CHAPTER IV

RESEARCH FINDINGS, DISCUSSIONS AND IMPLICATIONS

4.1. Research Descriptions

4.1.1. Research Preparation

The data in this research is collected from the Capital Market Data Base and the Capital Market Directory books and other relevant sources. This several criteria:

- a . Firms selected as samples of this research are obtained 35 firms over the period 1999-2003. These samples of firms are shorted to fulfill the requirements as a sample in this research with the complete data based on the research variables and single underwriter.
- b . The data used in this research includes, the underwriter reputation, firm age, firm size, PER and EPS of each company over the period of 1999-2003.

4.1.2. Research Process

The data used in this research is quantitative data which is gathered from the Capital Market Data Base and the Capital Market Directory books and other relevant sources. The objects of this research are 35 firms that have conducted IPO for the period of 1999-2003 in JSX. The firms are selected because they can fulfill the requirements of this research. The requirements are the firm has complete data and a single underwriter to measure the underwriter reputation rank.

The hypothesis testing is done by statistical testing method, for the measurement of variable. Microsoft Excel is used to calculate the market adjusted

return for 30 days aftermarket. The data is processed by using SPSS 12.0 for the statistical calculation.

4.2. Research Findings and Discussions

4.2.1. Descriptive Statistics

Descriptive statistics is applied to observe the sample characteristics that are used in this research. In detail, the sample characteristics are shown in table 4.1. Based on the table 4.1, it can be seen that the sample amount of mean and the standard deviation of each variable used.

TABLE 4.1
Descriptive Statistics

	Mean	Std. Deviation	N
UP	-22.4944	29.0325281	35
X1	.63	.490	35
X2	12.14	7.566	35
X3	321166.66	521390.917	35
X4	30.9511	47.35811	35
X5	31.66	65.643	35

4.2.2. Classical Assumption Test for Regression

The result of the classical assumption will describe the validity of the data used in this research.

4.2.2.1. Auto Correlation Testing

TABLE 4.2
THE RESULT OF AUTO CORRELATION TESTING

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.346 ^a	.120	-.032	29.4905487	1.203

a. Predictors: (Constant), X5, X3, X4, X2, X1

b. Dependent Variable: UP

To test the existence of a first order error auto correlation, the Durbin-Watson test is used. Durbin and Watson have suggested a test which is applicable to small samples. A rule of thumb is used to test the auto correlation testing in DW value. Based on the rule, if the DW value is close to 0, it indicates the extreme positive auto correlation. If the DW value is close to 4, it indicates the extreme negative auto correlation. If the DW value is close to 2, it indicates no serial auto correlation. The value of Durbin-Watson in this research is 1.203, the value is close to 2 and it indicates no serial auto correlation. Therefore, the data is free error in auto correlation.

4.2.2.2. Heteroscedasticity Testing

The detection of the presence of heteroscedasticity in this research is conducted by analyzing Scatterplot graphic from the regression analysis. As it can be seen in Scatter plot graphic in figure 1, the dots spread randomly and do not form any clear patterns. It can be concluded that the result of this test shows that heteroscedasticity does not exist. This result proves that the data is valid and it will give a reliable estimated model parameter.

4.2.2.3. Normality Testing

The detection of the presence of normality in this research is conducted by analyzing Scatterplot graphic from the regression analysis. As it can be seen in Scatter plot graphic in figure 2, the dots spread is close or not far from the normal axis, it means that the data has normal distribution.

4.2.2.4. Multicollinearity Testing

The regression equation in this research has five independent variables in order to analyze their power in explaining the dependent variable. Multicollinearity testing among independent variables can be done with VIF tests. This test is based on VIF test which is provided in the table 4.3. The purpose of this test is to identify whether the independent variables are significantly correlated. The tolerance value is 0.9 and VIF boundaries is 10. If the analysis result shows VIF value is under 10 and the tolerance value is upper 0.9, it means that there is no multicollinearity.

TABLE 4.3
THE RESULT OF MULTICOLLINEARITY TESTING

Variables	Collinearity Statistics	
	Tolerance	VIF
X1	.856	1.169
X2	.928	1.077
X3	.945	1.059
X4	.947	1.056
X5	.836	1.197

Table 4.3 shows that all of VIF are lower than 10, which means that the Multicollinearity among independent variables does not exist.

4.2.3. The Hypothesis Testing which Focused on The Significance Level of

Linear Multiple Regression

To observe the significance level of the regression coefficient, this research applies the probability value approach (p -value approach). The determination of accepting and rejecting H_0 is based on the p -value result. If p -value of the independent variables are greater than the significant level ($\alpha = 0.05$), so that the Null Hypothesis (H_0) is failed to reject, it means the independent variable is not significant to the dependent variable. Meanwhile, if p -value is smaller than the significant level that is chosen ($\alpha = 0.05$), so that the Null Hypothesis (H_0) is rejected, it means the independent variable is significant to the dependent variables.

The results of the linear multiple regression for each independent variable are described in table 4.4 below.

TABLE 4.4
RESULT OF THE MULTIPLE REGRESSION

Independent Variables	β_i	t-Statistics	p-value of t	Significance level
(Constant)	-29.387	-2.290	0.029	
X1	7.354	0.659	0.515	Not Significant
X2	0.639	0.920	0.365	Not Significant
X3	0.000	0.30	0.976	Not Significant
X4	-0.016	-0.143	0.887	Not Significant
X5	-0.161	-1.910	0.066	Not Significant

Table 4.4 shows that all of the independent variables are not significant to the underpriced level in Jakarta Stock Exchange in year 2000-2003.

$$UP = -29.387 + 7.354X1 + 0.639X2 + 0.00X3 - 0.016X4 - 0.161X5$$

Note: UP represents undeprice variable

X1 represents underwriter reputation variable.

X2 represents Firm age variable.

X3 represents Firm size variable.

X4 represents PER variable.

X5 represents EPS variable.

The coefficient value of the regression is shown with the positive sign in underwriter reputation, firm age and firm size variables. It means that those variables have a line relationship with the dependent variable. The increasing reputation of the underwriters, the age and size of the firm, indicate the increasing of the undepriced level of the firm when they have the IPO in year 1999-2003. There are negative signs in PER and EPS variables. It means that those variables have an opposite line with the dependent variable. The increasing of PER and EPS indicate the decreasing of the undepriced level of the firm when they have the IPO in year 1999-2003.

The testing of **first hypothesis** is to analyze the independent variable which is underwriter reputation (X1). The table 4.4 shows that the amount of p-value of t is 0.155. It means that underwriter reputation has not a significant influence to the underpriced level. The findings is not consistent with the Ghozali and Mansur's

research finding, but it is consistent with Slameta's findings. It is probably caused of the differences of the underwriter rank measurements.

The testing of **second hypothesis** is to analyze the independent variable, firm age (X2). Table 4.4 shows that the amount of p-value of t is 0.658. It means that the firm age has not significant influence to the underpriced level. This finding is consistent with Ghozali and Mansur's research stating that firm age has not a significant influence with the underpricing, in 1997-2000.

The testing of **third hypothesis** is to analyze the independent variable, firm size (X3). Table 4.4 shows that the amount of p-value of t is 0.264. It means that the firm age has not significant influence to the underpriced level. This finding is consistent with Ghozali and Mansur's research stating that firm size has not a significant influence with the underpricing, in 1997-2000.

The testing of **fourth hypothesis** is to analyze the independent variable, Price Earning Ratio, PER, (X4). Table 4.4 shows that the amount of p-value of t is 0.657. It means that the Price Earning Ratio of the firm has not significant influence to the underpriced level.

The testing of **fifth hypothesis** is to analyze the independent variable, Earning PerShare, EPS, (X5). Table 4.4 shows that the amount of p-value of t is 0.760. It means that the Price Earning Ratio of the firm has not significant influence to the underpriced level.

TABLE 4.5
RESULT OF F-TEST

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3437.100	5	687.420	.790	.565 ^a
	Residual	25221.081	29	869.692		
	Total	28658.181	34			

a. Predictors: (Constant), X5, X3, X4, X2, X1

b. Dependent Variable: UP

The testing of **sixth hypothesis** is to analyze all of the independent variables, whether they have a significant influence or not to the underpriced level. It can be seen from the table 4.5 that the amount of p-value of f is 0.565. It means that all independent variables simultaneously do not influence dependent variable significantly to the underpriced level.

Table 4.2 shows that the amount of adjusted R is in negative sign. It means that the five variables cannot explain the Initial Public Offering that experienced the underpricing level in Jakarta Stock Exchange in year 1999-2003. This is because those variables have not significant influence to the underpriced level.

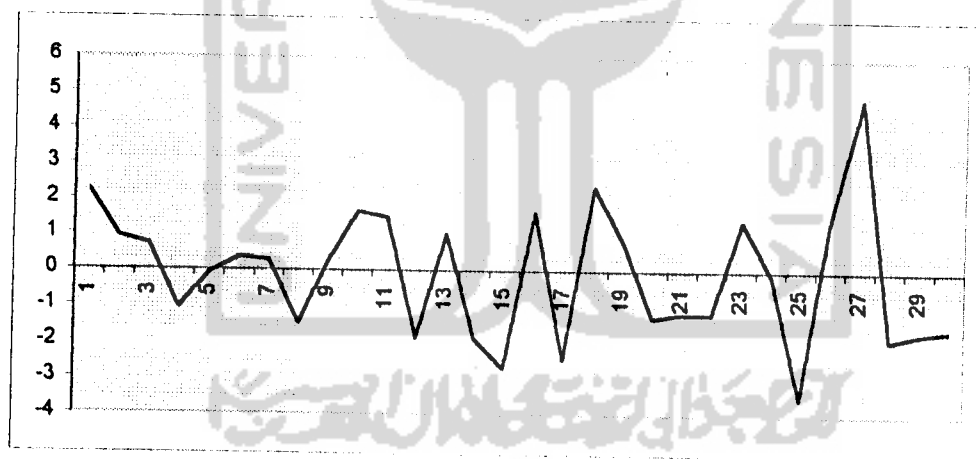
4.2.4. Analysis the aftermarket price behavior in 30 days after the Initial Public Offering

The result of the correlation between the days and the market-adjusted stock return in 30 days aftermarket based on the Pearson Correlation is -0.170 with p value

of $t = 0.370$ (appendix 6). The number of the correlation which is -0.170 is under the 0.5 which means that the correlation between day and return is weak.

The testing of **seventh hypothesis** is to analyze the alteration of the stock behavior in 30 days aftermarket following the under price of the initial stock. The p value of t is 0.370 and the test is used the level of significance 5% . It means that there is no alteration of the stock behavior in 30 days aftermarket following the underpricing of the initial stock. This finding is consistent with the Ivo Welch theory which stated good underwriter will support the new issuer with stabilize the initial stock price in 30 days.

GRAPH 4.1
THE AVERAGE OF THE STOCK RETURN IN 30 DAYS AFTERMARKET



Based on the data sample in graph 4.1, the stock return has calculated in the average return of the market adjusted. In three days after the firm conducted IPO, the return shows positive sign but after that day the return is negative and starts to have a fluctuation in the following day. The fluctuation return is still in average until day

25, the return decreases significantly, and it increases directly in day 27, the intervention of the issuer is involved to support the stock price. But, the intervention cannot support for long time, it only takes a day and the stock price drops in the next day. The return becomes negative in day 28 until day 30. The economic, social politic condition in Indonesia also have influenced the fluctuation return in that year, because the return is based on IHSG index.

4.3. Research Implication

The analysis result shows that underwriter reputation, firm age, firm size, PER and EPS variables are not significant to the IPO underpriced level. This can be seen through the significant p-value result when all variables are regressed by underpriced. This research implies that underpriced level in Indonesian firms over period 1999-2003 is not significantly affected by those independent variables. This evidence implies that the firm factor cannot be the reference to predict the amount of underpriced level in IPO. There are other firm factors that could be predicted to influence the underpriced level in JSX in year 1999-2003, for example ROA, financial leverage, solvability ratio, auditor reputation. The findings of this research is not in conformity with the previous research, some independent variables are not consistent with the previous research.

Underwriter reputation does not influence the underpriced level and it is not consistent with the Ghozali and Mansur's findings. After the financial crises, the investor does no longer believe that investing in a new issue underwrite by a good

reputation underwriter entails less risky investment (Slameta, 2003). The issuers tend to choose the underwriter without consider their reputation as long as the underwriter set the initial stock price in a proper price. The coefficient value of the regression is shown with the positive sign in underwriter reputation which means that the high reputation of the underwriter causes the increasing of the underpriced level. This condition is not appropriate with the expectation, where the good underwriter should decrease the underpriced level. It is caused the high underwriters that still consider the full commitment guarantee of the stocks, they underprice the initial stock intentionally in order to avoid losses. There is a monopoly power has been done by the underwriter which gives them a strong position to negotiate with the issuer who depend on them (Kunz, Aggrawal, 1994). The issuer as a new comer only can follow the underwriter that has more experience.

Firm age does not influence the underpriced level and is consistent with the previous findings. It seems that the issuer is not concerned with the relationship between the firm's year existence and the underpriced level from year 1997-2003. The coefficient value of the regression is shown with the positive sign in firm age which means that the long standing firm causes the increasing of the underpriced level and the new standing firms indicate the lower underpriced level. The investor in Indonesia does not perceive the longer firm's years of existence as less risky investment at the time of IPO (Slameta, 2003). The long standing firm can not guarantee to produce a qualified disclosure of financial information and has better performance than the new standing firm for decreasing the underpriced level.

Firm size does not influence the underpriced level. Moreover, the coefficient value of the regression indicates the positive sign. It means that the bigger size of the firm causes the increasing of the underpriced level and the lower size of the firms indicates the lower underpriced level. This finding is inconsistent with the previous findings. It seems the investors tend to such a kind of high-risk taker, so they invest to the small size firm and it causes the big size firm has a higher underpricing to attract the investor. Beside that, a small size firm does not want to underprice their initial stock because of avoiding loss. If they underprice the initial stock, they should have an effort to keep the performance of the firm in the secondary market

Price Earning Ratio (PER) does not influence the underpriced level. The coefficient value of the regression is negative which means that the more PER of the firm causes the decreasing of the underpriced level and the lower PER of the firms indicate the bigger underpriced level. It is consistent with the expectation of this research where PER is an indicator considered followed by the investors. The investor can calculate the earning income by this ratio. Moreover, PER can be the performance assessment of the firm.

Earning Per Share (EPS) does not influence the underpriced level. The coefficient value of the regression is negative which means that the more earning per share of the firm causes the decreasing of the underpriced level and the lower earning per share of the firms indicate the bigger underpriced level. This findings is consistent with the expectation of this reseasrch and Jain ,Kini's research. EPS can reflect the high earnings growth in the future. The investors have a high expectation if there is a

high EPS. The underpriced level will decrease if there is a lot of investors want to invest their money in the firms which have high PER and EPS.

The 30 days aftermarket stock price behavior is shown with the average of the market-adjusted return. It indicates that the capital gain can be received in first three days aftermarket. The behavior of the stock price aftermarket has not reflected the semi strong efficiency of capital market yet, because the investors still get the positive and negative market adjusted return in first day aftermarket. The semi strong efficiency market usually proves with the event study for example stock split, dividend announcements, initial public offering, and a reaction to the news from the government and the firm (Jones, 2000; in Ria Nurmalia, 2004). It can be concluded that the aftermarket stock price behavior tends to decline. This finding is consistent with the Aggarwal and Rivoli's research stating that the long term aftermarket will have a bad performance. Aggarwal and Rivoli (1990) stated that the stock prices decline between 5 months and 1 year following the IPO.

CHAPTER V CONCLUSIONS AND RECOMMENDATIONS

5.1. Research Conclusions

Based on the research purpose, the statistical test and analysis have been described in the previous chapters. There are several conclusions are mentioned as follows:

- a. Based on the result of the analysis, it can be concluded that there are not sufficient evidence to prove the hypotheses. Underwriter reputation, firm age, firm size, PER and EPS do not influence the underpriced level in level of significance of 5%. There are many factors that can influence the underpriced level, like ROA, financial leverage, auditor reputation, etc.
- b. The multiple regression used in this research has value of F_{stat} is 0.565, it means that all independent variables simultaneously do not influence dependent variable significantly to the underpriced level. The independent variables do not give their explanation in underpricing phenomenon in Jakarta Stock Exchange year 2000-2003. This can be seen through the negative sign in adjusted R square, which means that the investor in having their investment does not consider about the fundamental aspects of the firms. They only act irrational and speculative to invest their money. This finding is consistent with Ghozali and Mansur's finding.

- c. The aftermarket stock price behavior shown with the average of the market-adjusted return indicates that there is no significant alteration of the stock price because the underwriter and the issuer keep the price in stable condition in 30 days following the initial offerings. The behavior of the stock price aftermarket has not reflected the semi strong efficiency of capital market yet, because the investors still get the positive and negative market adjusted return in first day aftermarket.

5.1. Research Recommendations

This following recommendations are provided to give a reference for next academic research which are stated as follow:

1. For further researches, it is suggested to observe the other fundamental and additional variables which are predicted to influence the underpriced level in Indonesian firms.
2. The measurements of the underwriter can be conducted in many ways, which are underwriter's fees, underwriter's asset, neither number of client that have been handled. It would be better for the next research to use more reliable consideration to represent underwriter reputation.
3. The period of research consideration for future research may have over a longer period, to get a larger sample, such as 233 samples as what Rodani (2002) had done. It is important to identify the accurate symptoms of the initial public offering.

REFERENCES

- Aggarwal, Reena and Rivoli, Pietra (1990). Fads in the Initial Public Offering Market? Financial Management. pp.45-57.
- Askew, Diana (2003). Could IPOs Be Lemons?, New Institutional Economics.
- Body, Kane, Marcus (2002). Investment 5th Edition. Mc Graw Hill.
- Elton, Edwin J. and Gruber, Martin J. (1991). Modern Portfolio Theory and Investment Analysis 5th Edition. John Wiley & Sons. Inc.
- Ghozali, Imam and Mansur, Al Mudrik (2002). Analisis faktor-faktor yang mempengaruhi tingkat underpriced di Bursa Efek Jakarta. Jurnal Bisnis dan Akuntansi. April Vol 4, pp.74-88.
- Indarti, MG Kentris; Kartika, Andi; and Yohanes (2004). Analisis Perbedaan Kinerja Saham Jangka Pendek dan Jangka Panjang pada perusahaan yang melakukan Initial Public Offering (IPO) di Pasar Modal Indonesia. Jurnal Bisnis dan Ekonomi. Vol 11, pp. 80-94.
- Jain, Bharat A. and Kini, Omesh (). The post-Issue Operating Performance of IPO firms. Journal of Finance. pp.1699-1726.
- Kunz, Roger M. and Aggarwal, Reena (1994). Why initial public offerings are underpriced: Evidence from Switzerland. Journal of Banking and Finance. Pp. 705-723.
- Lee, Philip J; Taylor, Stephen L; Walfer, Tery S. (1995). Australian IPO Pricing in the Short and Long Run. Journal of Banking & Finance. pp.1189-1210.
- Meigs & Meigs. (1970). Financial Accounting 8th Edition. Mc Graw Hill.
- Mc Gregor BFA, 2002, Aftermarket price performance of initial public offerings on the JSE , the Investment Analysts Journal, Moneymax.
- Nurmalia, Ria (2004). Analisis faktor-faktor yang berpengaruh terhadap tingkat undepriced pada IPO di BEJ. Yogyakarta. UMY.

PT. Limas Stokhomindo. Kinerja Saham IPO. Januari 2005. (<http://www.e-bursa.com/IPO/kinerjasaham/>)

Rodani, Ahmad (2002). Penawaran Saham Perdana: Pengalaman di Bursa Efek Jakarta 1990-1998. Jurnal Ekonomi dan Bisnis Indonesia. Oktober Vol 17, pp.398-419.

Rose and Kolari (1995). Financial Institution 5th Edition. Irwin.

Ronni B, Sautma(2003). Problema Anomali Dalam Initial Public Offering (IPO), Jurnal Ekonomi Manajemen. Fakultas Ekonomi-Universitas Kristen Petra. pp. 181-192.

Slameta, Tribowo (2003). Initial and Aftermarket Performance of new issues on the Jakarta Stock Exchange after financial crises. Yogyakarta. UGM.

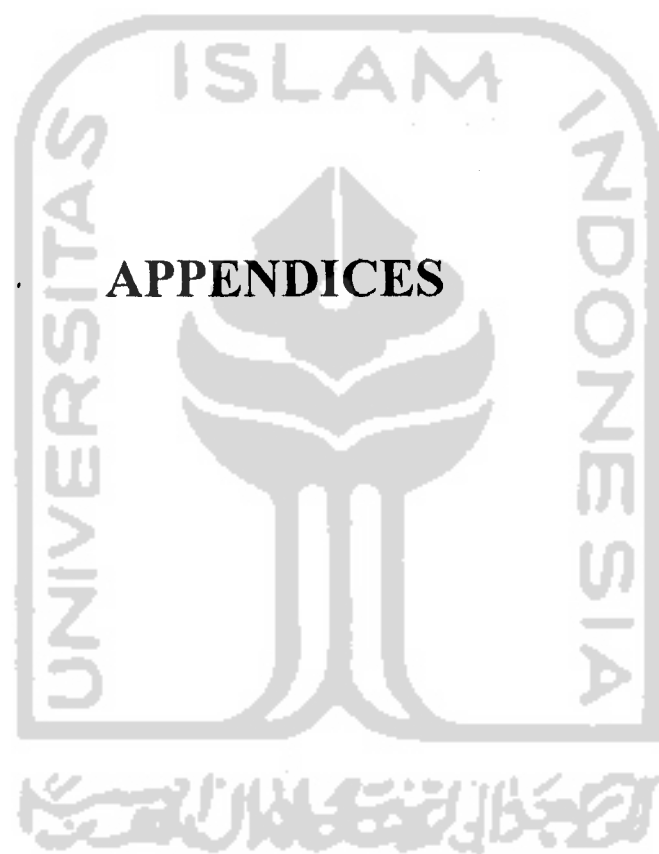
Santoso, Singgih (2004). SPSS Versi 10. Elex Media Komputindo.

Sugiyono (1999). Metode Penelitian Bisnis. Alfabeta cv.

Teweles, Richard J.; Bradley, Edward S. and Teweles, Ted M. (1992). The Stock Market 6th Edition. John Wiley & Sons, Inc.

Tim U&E (Desember 1997). Ini dia 'undewriter' agresif. Majalah Uang dan Efek, No. 43. pp. 8-15.

Welch, Ivo(2000). IPO-The Initial Public Offerings (IPO). (<http://www.ipopage.html>.)



Appendix 1

Rank of Underwriter Reputation

No	Underwriter	Number of Issuer	IPO		% from total value
			Volume	Value (Rp)	
1	PT. Danareksa Sekuritas	5	10,336,000	3,224,463,000	20.33
2	PT. CLSA Indonesia	1	1,875,000	2,062,500,000	13.00
3	PT. Trimegah Securities	8	3,664,000	2,036,706,000	12.84
4	PT Bahana Securities	3	16,488,000	1,733,968,000	10.93
5	PT. Dinamika Usaha Jaya	4	2,751,000	3,225,122,000	20.33
6	PT. Ciptadana Securities	7	2,878,000	906,030,000	5.71
7	PT. Usaha Bersama Sekuritas	3	930,000	383,135,000	2.41
8	PT. Danatama Makmur	3	666,000	268,500,000	1.69
9	PT. Makinta Securities	2	993,000	242,812,000	1.53
10	PT. Asjaya Indosurya Securities	1	2,300,000	241,500,000	1.52
11	PT. Sucoinvest Central Gani	3	602,000	182,490,000	1.15
12	PT. Ritan Financindo Sekuritas	2	1,166,000	149,337,000	0.94
13	PT. Mahanusa Capital	1	720,000	144,000,000	0.91
14	PT. Victoria Kapitalindo International	2	630,000	137,550,000	0.87
15	PT Panin Sekuritas Tbk	2	1,848,000	130,723,000	0.82
16	PT. Harita Kencana Securities	2	831,000	118,920,000	0.75
17	PT. Andalan Artha Advisindo Sekuritas	1	134,000	117,250,000	0.74
18	PT Millenium Atlantic Securities	2	855,000	107,150,000	0.68
19	PT. Krisna Graha Sekurindo Tbk	2	775,000	102,115,000	0.64
20	PT. Pridana Futura Centra Investama (PDI/FCI)	1	520,000	91,000,000	0.57
21	PT. General Capital Indonesia	1	164,000	82,000,000	0.52
22	PT Dhanawibawa Artha Cemerlang	1	365,000	78,475,000	0.49
23	PT. Artha Securities Tbk	1	320,000	72,000,000	0.45
24	PT. Agung Securities Indonesia	2	348,000	63,600,000	0.40
25	PT Bhakti Capital Indonesia Tbk	1	480,000	60,000,000	0.38
26	PT. Sinarmas Sekuritas	1	394,000	59,100,000	0.37
27	PT. Asia Kapitalindo Securities Tbk	1	550,000	55,000,000	0.35
28	PT. Jakarta Artha Visi Abadi Securities	1	470,000	47,000,000	0.29
TOTAL		64	54,053,000	15,861,196,000	100.00

APPENDIX 2 ORIGINAL DATA

No	date of IPO	Company's name	Code	underwriter's name	Dummy Variable	Firm age (year)	Firm size (in million)	EPS	PER	Open Price	Close Price	Underpriced
1999												
1	4/16/1999	Bintuni Minaraya Tbk	BMRA	PT. Dinamika Usahajaya	1	11	541.370	186	8.35	1600	1925	-168.831
2	5/19/1999	Ciptojaya Kontrindoreksa Tbk	CKRA	PT. Agung Securities Indonesia	0	10	48.853	5	66.37	300	400	-25.0000
3	6/30/1999	Bank Victoria Intl. Tbk	BVIC	PT. Panin Sekuritas	0	7	441.825	5	28.63	175	200	-12.5000
4	12/13/1999	Tirta Mahakam Plywood Inds. Tbk	TIRT	PT. Trimegah Securities	1	17	182.177	47	24.69	950	975	-2.5642
5	12/29/1999	Bintang Mitra Semesta Raya Tbk	BMSR	PT. Danatama Makmur	1	10	349.276	7	187.91	725	1100	-34.0909
2000												
1	1/18/2000	Alfa Retailindo Tbk	ALFA	PT. Ciptadana Securities	1	11	568.625	46	20.97	850	1100	-22.7273
2	1/31/2000	Trimegah Securities	TRIM	PT. Danareksa Securities	1	10	238.265	4	60.37	3050	5300	-42.4528
3	3/28/2000	Surya Intrindo Makmur Tbk	SIMM	PT. Usaha Bersama Sekuritas	1	3	208.200	159	14.29	750	975	-23.0769
4	3/30/2000	Kridaperdana Indah Graha Tbk	KPIG	PT. General Capital Indonesia	0	10	108.745	1	155.45	1250	1450	-13.7931
5	5/1/2000	Asiaplast Industries Tbk	APLI	PT. Dinamika Usaha Jaya	1	8	220.377	4	16.5	875	1100	-20.4546
6	6/30/2000	Fortune Mate Indonesia Tbk	FMII	PT. Usaha Bersama Sekuritas	1	11	250.405	67	10.45	750	825	-9.0909
7	7/3/2000	Summitplast Tbk	SMPL	PT. Ciptadana Securities	1	9	204.513	90	11.17	1000	1010	-0.9901
8	10/23/2000	Manly Utama Finance Tbk	MANY	PT. Trimegah Securities	1	6	98.412	-112	-12.07	900	1025	-12.1951
9	11/2/2000	Bank Artha Niaga Kencana Tbk	ANKB	PT. Sucoinvest Central Gani	0	31	647.956	21	34.1	525	550	-4.5455
10	12/4/2000	Andhi Candra Automotive P. Tbk	ACAP	PT. Andalan Artha Advistindo Sekuritas	0	24	126.758	87	13.5	1075	1325	-18.8679
11	12/11/2000	Gowa Makassar Dev. Tbk	GMTD	PT. Ciptadana Securities	1	9	196.672	48	10.39	700	1050	-33.3333
2001												
1	7/13/2001	Bank Eksekutif International	BEKS	PT. Ritan Financindo Sekuritas	0	9	1,499.784	-80	-1.88	160	195	-17.9487
2	7/13/2001	Asia Kapitalindo Securities Tbk	AKSI	PT. Mahanusa Capital	0	11	141.177	13	36.89	220	260	-15.3846
3	7/17/2001	Lapindo International Tbk	LAPD	PT. Danatama Makmur	1	11	32.870	4	141.95	415	450	-7.7778
4	7/18/2001	Beton Jaya Manunggal Tbk	BTON	PT. Agung Securities Indonesia	0	6	32.925	7	17.49	200	315	-36.5079
5	7/20/2001	Akhar Indo Makmur Sumec Tbk	AIMS	PT. Sucoinvest Central Gani	0	1	20.071	4	59.39	600	730	-17.8082
6	9/18/2001	Panorama Sentrawisata Tbk	PANR	PT. Dinamika Usaha Jaya	1	26	190.330	38	18.44	550	625	-12

7	10/17/2001	Ryane Adibusana Tbk	RYAN	PT. Asia Kapitalindo Securities Tbk	0	12	69,948	11	66.02	230	580	-60,3448
8	10/22/2001	Roda Paggan Harapan Tbk	RODA	PT. Harita Kencana Securities	0	17	95,123	13	30.51	240	445	-46,0674
9	11/1/2001	Centrin Online Tbk	CENT	PT. Trimegah Securities	1	14	67,672	16	38.38	300	380	-21,0526
10	11/30/2001	Colorpak Indonesia Tbk	CLPI	PT. Sucoinvest Central Gani	0	13	48,901	32	10.94	400	410	-2,4390
11	12/28/2001	Limas Stokhornindo	LMAS	PT. Makinta Securities	1	5	60,993	-11	-44.51	450	510	-11,7647

2002

1	4/3/2002	Abdi Bangsa Tbk	ABBA	PT. Rifan Financindo Sekuritas	0	10	63,531	-7	-40.02	110	175	-37,1429
2	4/16/2002	Jasindo Tiga Perkasa Tbk	JTPE	PT. Victoria Kapitalindo International	0	12	67,394	11	21.66	345	365	-5,4795
3	4/18/2002	United Capital Indonesia Tbk	UNIT	PT. Ciptadana Securities	1	4	64,112	26	8.16	300	330	-9,0909
4	5/1/2002	Bank Swadesi Tbk	BSWD	PT. Ciptadana Securities	1	34	542,97	41	7.59	270	325	-16,9231
5	7/15/2002	Bank Bumiputera Indonesia Tbk	BABP	PT. Danareksa Sekuritas	1	13	2,330,031	9	18.04	125	135	-7,4074
6	7/16/2002	Surya Citra Media Tbk	SCMA	PT. CLSA Indonesia	1	3	1,827,398	39	14.91	1125	1150	-2,1739
7	12/18/2002	Artha Pacific Securities Tbk	ARTA	PT. Victoria Kapitalindo International	0	13	69,833	17	26.76	310	345	-10,1449

2003

1	12/29/2003	Asuransi Jasa Tania Tbk	ASJT	PT. Makinta Securities	1	24	125,767	260	1.5	355	375	-5,3333
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APPENDIX 3 STATISTICAL CALCULATION

Descriptive Statistics

	Mean	Std. Deviation	N
UP	-22.494434	29.0325281	35
X1	.63	.490	35
X2	12.14	7.566	35
X3	321166.66	521390.917	35
X4	30.9511	47.35811	35
X5	31.66	65.643	35

Correlations

		UP	X1	X2	X3	X4	X5
Pearson Correlation	UP	1.000	.030	.079	.045	-.013	-.282
	X1	.030	1.000	.046	.158	-.204	.297
	X2	.079	.046	1.000	-.088	-.045	.258
	X3	.045	.158	-.088	1.000	-.104	-.086
	X4	-.013	-.204	-.045	-.104	1.000	-.125
	X5	-.282	.297	.258	-.086	-.125	1.000
Sig. (1-tailed)	UP		.432	.326	.400	.469	.051
	X1	.432		.396	.182	.120	.042
	X2	.326	.396		.307	.400	.068
	X3	.400	.182	.307		.277	.311
	X4	.469	.120	.400	.277		.238
	X5	.051	.042	.068	.311	.238	
N	UP	35	35	35	35	35	35
	X1	35	35	35	35	35	35
	X2	35	35	35	35	35	35
	X3	35	35	35	35	35	35
	X4	35	35	35	35	35	35
	X5	35	35	35	35	35	35

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	X5, X3, X4, X2, X1		Enter

a. All requested variables entered.

b. Dependent Variable: UP

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.346 ^a	.120	-.032	29.4905487	1.203

a. Predictors: (Constant), X5, X3, X4, X2, X1

b. Dependent Variable: UP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3437.100	5	687.420	.790	.565 ^a
	Residual	25221.081	29	869.692		
	Total	28658.181	34			

a. Predictors: (Constant), X5, X3, X4, X2, X1

b. Dependent Variable: UP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-29.387	12.832		-2.290	.029
	X1	7.354	11.153	.124	.659	.515
	X2	.639	.694	.166	.920	.365
	X3	.000	.000	.005	.030	.976
	X4	-.016	.110	-.026	-.143	.887
	X5	-.161	.084	-.364	-1.910	.066

a. Dependent Variable: UP

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1										
(Constant)	-29.387	12.832		-2.290	.029					
X1	7.354	11.153	.124	.659	.515	.030	.122	.115	.856	1.169
X2	.639	.694	.166	.920	.365	.079	.168	.160	.928	1.077
X3	.000	.000	.005	.030	.976	.045	.006	.005	.945	1.059
X4	-.016	.110	-.026	-.143	.887	-.013	-.026	-.025	.947	1.056
X5	-.161	.084	-.364	-1.910	.066	-.282	-.334	-.333	.836	1.197

a. Dependent Variable: UP

APPENDIX 4
ORIGINAL DATA OF RETURN

1. BMRA				2. CKRA				3. BVIC				4. TIRT			
No	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	
1	4/19/1999	2150	508.147	-1.449665202	5/20/1999	375	594.053	0.40215267	7/1/1999	200	673.043	0.372190187	12/14/1999	975	
2	4/20/1999	2025	485.97	2.334430033	5/21/1999	375	591.664	-3.714439276	7/2/1999	200	670.538	0.804428683	12/15/1999	975	
3	4/21/1999	2050	480.625	2.726774715	5/24/1999	375	613.641	-7.682896026	7/5/1999	200	665.144	10.02790373	12/16/1999	975	
4	4/22/1999	2100	479.242	-1.200963983	5/25/1999	350	619.877	2.273031585	7/6/1999	225	681.587	2.320466793	12/17/1999	975	
5	4/23/1999	2050	473.587	-0.547829907	5/26/1999	350	605.787	0.440914051	7/7/1999	225	665.771	0.828663309	12/20/1999	950	
6	4/26/1999	2025	470.406	-14.55950345	5/27/1999	350	603.116	3.227737284	7/8/1999	225	660.254	0.546759277	12/21/1999	950	
7	4/27/1999	1725	469.205	3.209959369	5/28/1999	350	583.649	-7.415795159	7/9/1999	225	656.644	-0.986836094	12/22/1999	975	
8	4/28/1999	1825	481.344	0.735346065	5/31/1999	325	585.242	-7.353131762	7/12/1999	225	663.124	-10.06500209	12/23/1999	1000	
9	4/29/1999	1875	490.991	-0.861930259	6/1/1999	300	583.257	1.532943454	7/13/1999	200	656.187	11.17492041	12/27/1999	1100	
10	4/30/1999	1875	495.223	-0.348147535	6/2/1999	300	574.316	-2.307614623	7/14/1999	225	664.882	0.652747405	12/28/1999	1150	
11	5/3/1999	1975	523.359	-0.956820766	6/3/1999	300	587.569	4.11102072	7/15/1999	225	660.542	-0.27628826	12/29/1999	1150	
12	5/4/1999	2050	548.241	-5.284305936	6/4/1999	325	612.378	-12.17695606	7/16/1999	225	662.367	-10.49272282	12/30/1999	1150	
13	5/5/1999	2000	563.84	-9.276567821	6/8/1999	325	686.947	1.161224956	7/19/1999	200	658.271	13.77758932	1/4/2000	1100	
14	5/6/1999	1875	580.905	-1.670462468	6/9/1999	325	678.97	2.121006819	7/20/1999	225	649.861	1.347057294	1/5/2000	1075	
15	5/7/1999	1825	575.118	-1.237194587	6/10/1999	325	664.569	-8.250865193	7/21/1999	225	641.107	-11.35256847	1/6/2000	1075	
16	5/10/1999	1800	574.355	0.195871891	6/11/1999	300	668.281	-1.671153302	7/22/1999	200	642.655	2.618045452	1/11/2000	1125	
17	5/11/1999	1800	573.23	-0.571149451	6/14/1999	300	679.449	1.367137195	7/23/1999	200	625.83	-7.20958567	1/12/2000	1150	
18	5/12/1999	1800	576.504	-2.624439726	6/15/1999	300	670.16	1.239703951	7/26/1999	175	592.721	3.290755684	1/13/2000	1200	
19	5/14/1999	1800	591.634	0.140963529	6/16/1999	300	661.852	-2.89898648	7/27/1999	175	573.216	9.742749679	1/14/2000	1175	
20	5/17/1999	1800	590.8	-0.591928082	6/17/1999	300	681.039	-3.941771323	7/28/1999	200	599.257	-2.865548504	1/17/2000	1150	
21	5/18/1999	1750	577.886	0.137229241	6/18/1999	300	707.884	-1.211497929	7/29/1999	200	616.429	3.01007902	1/18/2000	1075	
22	5/19/1999	1800	593.604	-0.075639652	6/21/1999	300	716.46	17.47313179	7/30/1999	200	597.874	0.227639938	1/19/2000	1075	
23	5/20/1999	1800	594.053	1.791041559	6/22/1999	350	710.682	1.408928325	8/2/1999	200	596.513	-16.26739484	1/20/2000	1075	
24	5/21/1999	1825	591.664	-5.08430229	6/23/1999	350	700.669	2.647469775	8/3/1999	175	618.986	0.741696904	1/21/2000	1075	
25	5/24/1999	1800	613.641	-3.794007137	6/24/1999	350	682.119	1.314140201	8/4/1999	175	614.395	1.322439147	1/24/2000	1075	
26	5/25/1999	1750	619.877	2.273031585	6/25/1999	350	673.155	0.152713714	8/5/1999	175	606.27	-0.258135814	1/25/2000	1075	
27	5/26/1999	1750	605.787	0.440914051	6/28/1999	350	672.127	-8.39767952	8/6/1999	175	607.835	-12.02753567	1/27/2000	1075	
28	5/27/1999	1750	603.116	4.656308713	6/29/1999	325	680.561	2.723635354	8/9/1999	150	594.109	2.990360355	1/28/2000	1050	
29	5/28/1999	1775	583.649	-3.089839424	6/30/1999	325	662.025	-1.664287602	8/10/1999	150	576.343	-12.83561467	1/31/2000	1050	
30	5/31/1999	1725	585.242	-1.110099432	7/1/1999	325	673.043	-7.320117505	8/11/1999	125	554.263	13.02350148	2/1/2000	1150	

5. BMSR						1. ALFA						2. TRIM					
I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR
648.394	-0.615366583	12/30/1999	1275	676.919	-3.441918457	1/19/2000	1075	655.995	-0.167333238	2/1/2000	5775	616.856	-5.20645483				
652.384	0.90100309	1/4/2000	1275	700.218	18.84686164	1/20/2000	1100	670.153	-3.730864444	2/2/2000	5350	603.576	4.763655343				
646.506	1.18854272	1/5/2000	1475	678.087	10.32366618	1/21/2000	1050	664.694	-5.94350827	2/3/2000	5700	614.310	-2.929084321				
638.822	-3.696968996	1/6/2000	1650	688.521	6.489080481	1/24/2000	975	656.722	7.15904923	2/4/2000	5725	634.998	-0.22519736				
646.059	-1.6761622703	1/11/2000	1775	696.003	-11.83712317	1/26/2000	1025	643.385	-5.074820542	2/7/2000	5725	636.428	1.025724827				
656.888	1.997376465	1/12/2000	1550	690.164	-5.048225097	1/27/2000	975	644.651	-1.01566783	2/8/2000	5725	629.900	-0.404984918				
661.054	1.795784091	1/13/2000	1475	691.610	0.103815734	1/28/2000	950	634.669	2.363250102	2/9/2000	5725	632.451	-1.075498339				
666.133	7.71096763	1/14/2000	1475	690.892	-13.68683344	1/31/2000	975	636.372	0.50265713	2/10/2000	5725	639.253	4.146555829				
681.381	5.15641963	1/17/2000	1300	703.483	-12.85903907	2/1/2000	950	616.856	2.15285253	2/11/2000	5925	635.078	1.480442091				
677.218	0.345235951	1/18/2000	1100	685.716	4.334301664	2/2/2000	950	603.576	-1.778400732	2/14/2000	6000	633.715	1.164863806				
674.88	-0.302127786	1/19/2000	1100	655.995	-6.703702703	2/3/2000	950	614.310	4.527056029	2/15/2000	6100	636.895	2.763913268				
676.919	-7.789744544	1/20/2000	1050	670.153	-1.56636228	2/4/2000	1025	634.998	-5.10324634	2/16/2000	6125	621.902	1.861144997				
700.218	0.887859859	1/21/2000	1025	664.694	-1.239675517	2/7/2000	975	636.428	-1.538377737	2/17/2000	6025	600.174	-0.314800133				
678.087	-1.538740604	1/24/2000	1000	656.722	1.045191116	2/8/2000	950	629.900	-0.404984918	2/18/2000	6000	599.573	4.014948277				
688.521	3.564485696	1/26/2000	1000	649.858	-4.003936245	2/9/2000	950	632.451	-1.075498339	2/21/2000	6175	592.988	11.73498087				
696.003	3.061155388	1/27/2000	950	643.385	-0.196771762	2/10/2000	950	639.253	0.653106047	2/22/2000	6800	583.420	3.136049199				
690.164	4.138310667	1/28/2000	950	644.651	-11.60946	2/11/2000	950	635.078	0.214619307	2/23/2000	7025	584.428	8.633652732				
691.610	-1.979517599	1/31/2000	825	634.669	5.792277215	2/14/2000	950	633.715	-0.501802861	2/24/2000	7500	573.487	8.193335391				
690.892	-3.930086234	2/1/2000	875	636.372	-5.504668877	2/15/2000	950	636.895	-0.277501745	2/25/2000	8050	568.555	8.533098864				
703.483	-3.996162819	2/2/2000	800	616.856	-0.97214747	2/16/2000	925	621.902	-1.911607347	2/28/2000	8850	576.542	3.613942836				
685.716	4.334301664	2/3/2000	775	603.576	-1.778400732	2/17/2000	875	600.174	-2.75700523	3/1/2000	9000	565.478	1.128924949				
655.995	-2.158248157	2/4/2000	775	614.310	-0.141874361	2/18/2000	850	599.573	1.09828161	3/2/2000	8800	546.528	-3.211429906				
670.153	0.814590101	2/7/2000	800	634.998	2.89980244	2/21/2000	850	592.988	1.613523377	3/3/2000	8550	548.533	-0.9707997				
664.694	1.199348873	2/8/2000	825	636.428	-8.065184264	2/22/2000	850	583.420	-0.172774331	3/6/2000	8750	566.710	1.268610552				
656.722	2.030844101	2/9/2000	750	629.900	-3.738318252	2/23/2000	850	584.428	1.872086895	3/7/2000	8800	562.759	-2.432300263				
643.385	-0.196771762	2/10/2000	725	632.451	5.821053385	2/24/2000	850	573.487	-5.022350884	3/8/2000	8700	570.052	-0.354942413				
644.651	-0.777146661	2/11/2000	775	639.253	-5.798506856	2/25/2000	800	568.555	7.970210666	3/9/2000	8900	585.180	-0.756509761				
634.669	-0.368328845	2/14/2000	725	635.078	-3.233656555	2/28/2000	875	576.542	1.919027582	3/10/2000	9000	596.182	-1.056481075				
636.372	12.59056922	2/15/2000	700	633.715	-0.501802861	3/1/2000	875	565.478	-2.363138543	3/13/2000	8775	587.576	1.136366546				
616.856	18.02350148	2/16/2000	700	636.895	-2.194973557	3/2/2000	825	546.528	2.659782215	3/14/2000	8850	585.921	-0.161796556				

3. SIMM				4. KPIG				5. APLI				6. FMII			
Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	
3/29/2000	975	591.679	-6.272111944	4/3/2000	1675	570.901	-27.18129737	5/2/2000	1350	531.254	21.45855738	7/3/2000	715	503.856	
3/30/2000	900	583.276	2.121637098	4/5/2000	1200	564.182	27.99098222	5/3/2000	1650	535.311	15.983886	7/4/2000	680	509.264	
4/3/2000	900	570.901	-1.600866194	4/7/2000	1550	570.815	27.62923019	5/4/2000	1925	538.966	-1.232730822	7/5/2000	655	512.466	
4/5/2000	875	564.182	1.681458415	4/10/2000	1975	569.617	-27.86969472	5/5/2000	1925	545.610	17.31691468	7/6/2000	665	513.431	
4/7/2000	900	570.815	-2.567902424	4/11/2000	1425	569.740	-27.19205559	5/8/2000	2275	550.329	16.96631859	7/7/2000	645	508.108	
4/10/2000	875	569.617	2.8355494	4/12/2000	1025	564.737	-12.26063917	5/9/2000	2650	547.672	13.10383546	7/10/2000	635	508.468	
4/11/2000	900	569.740	0.878119844	4/13/2000	900	565.107	-1.305667186	5/10/2000	3000	548.240	-14.02725084	7/11/2000	625	512.617	
4/12/2000	900	564.737	2.712260555	4/14/2000	875	556.788	-0.770752448	5/11/2000	2475	529.201	-0.570948401	7/12/2000	630	510.986	
4/13/2000	925	565.107	-1.230592111	4/17/2000	825	529.263	3.22000078	5/12/2000	2450	526.877	-17.40493938	7/13/2000	630	505.921	
4/14/2000	900	556.788	2.165755488	4/18/2000	850	528.259	3.312017289	5/15/2000	1975	516.430	30.18605828	7/14/2000	630	504.114	
4/17/2000	875	529.263	3.046840607	4/19/2000	875	526.300	-5.732526262	5/16/2000	2500	497.819	23.57867619	7/17/2000	630	506.802	
4/18/2000	900	528.259	-7.962492515	4/20/2000	825	526.396	-3.876244109	5/17/2000	3175	514.851	18.38061641	7/18/2000	640	507.045	
4/19/2000	825	526.300	9.072668544	4/24/2000	800	530.849	-10.2760154	5/19/2000	3725	509.405	-2.806171617	7/19/2000	660	513.778	
4/20/2000	900	526.396	-0.845941079	4/25/2000	700	519.043	-29.54148308	5/22/2000	3550	499.768	-25.2043427	7/20/2000	660	513.393	
4/24/2000	900	530.849	-0.55379318	4/26/2000	500	524.078	-24.53098585	5/23/2000	2625	495.510	-3.344144705	7/21/2000	645	508.794	
4/25/2000	875	519.043	-0.970054504	4/27/2000	375	521.620	-27.64764899	5/24/2000	2525	493.204	0.511350273	7/24/2000	650	506.940	
4/26/2000	875	524.078	0.469014154	4/28/2000	275	526.737	0.403996681	5/25/2000	2525	490.682	10.66538789	7/25/2000	630	499.677	
4/27/2000	875	521.620	4.733303339	5/1/2000	275	524.609	7.824251447	5/26/2000	2750	482.073	7.927000117	7/26/2000	640	496.691	
4/28/2000	925	526.737	-2.298706021	5/2/2000	300	531.254	15.90300183	5/29/2000	2850	461.389	-12.9898058	7/27/2000	640	499.179	
5/1/2000	900	524.609	-1.266657644	5/3/2000	350	535.311	-0.682780664	5/30/2000	2525	468.708	3.068221579	7/28/2000	645	498.804	
5/2/2000	900	531.254	-0.763664838	5/4/2000	350	538.966	-1.232730822	5/31/2000	2525	454.327	1.184326019	7/31/2000	640	492.193	
5/3/2000	900	535.311	2.094997114	5/5/2000	350	545.610	-8.007760645	6/2/2000	2500	444.448	-2.136807906	8/1/2000	635	489.677	
5/4/2000	925	538.966	-1.232730822	5/8/2000	325	550.329	0.482802106	6/5/2000	2500	453.945	4.260604258	8/2/2000	630	490.437	
5/5/2000	925	545.610	1.8377992	5/9/2000	325	547.672	7.588595982	6/6/2000	2600	452.762	-6.287277609	8/3/2000	625	491.992	
5/8/2000	950	550.329	0.482802106	5/10/2000	350	548.240	-10.81296512	6/7/2000	2475	459.461	-3.070332367	8/4/2000	645	494.160	
5/9/2000	950	547.672	-0.103711711	5/11/2000	300	529.201	8.772485943	6/8/2000	2500	478.209	0.058760918	8/7/2000	630	490.544	
5/10/2000	950	548.240	16.6306439	5/12/2000	325	526.877	1.982815724	6/9/2000	2500	477.928	0.396503239	8/8/2000	625	485.080	
5/11/2000	1075	529.201	2.764734005	5/15/2000	325	516.430	-4.088527896	6/12/2000	2500	476.033	-4.388557096	8/9/2000	620	483.350	
5/12/2000	1100	526.877	-2.562638822	5/16/2000	300	497.819	4.912009519	6/13/2000	2350	468.362	-1.616484685	8/10/2000	625	488.619	
5/15/2000	1050	516.430	3.603779796	5/17/2000	325	514.851	1.057781766	6/14/2000	2350	475.933	-8.082377588	8/11/2000	625	505.791	

7. SMPL					8. MANY					9. ANKB				
IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	IR
-5.968427432	7/4/2000	1020	509.264	-1.609142667	10/24/2000	1325	418.641	29.37223496	11/7/2000	525	409.834	-1.325658681		
-4.305221099	7/5/2000	1010	512.466	7.237437399	10/26/2000	1700	414.160	6.441798566	11/6/2000	525	415.267	3.373400498		
1.338412382	7/6/2000	1085	513.431	2.419239279	10/27/2000	1800	411.843	-20.34577901	11/7/2000	550	421.033	-1.197768346		
-1.970767997	7/7/2000	1100	508.108	1.292785285	10/30/2000	1400	404.115	10.409422	11/8/2000	550	426.076	1.080558398		
-1.621238676	7/10/2000	1115	508.468	2.771463393	10/31/2000	1550	405.347	10.29981321	11/9/2000	550	421.472	-1.304475742		
-2.390783703	7/11/2000	1155	512.617	2.482673431	11/1/2000	1725	409.362	-18.49833983	11/10/2000	550	426.970	0.774293276		
1.118171266	7/12/2000	1180	510.986	2.262407335	11/2/2000	1400	407.961	15.61231606	11/13/2000	550	423.664	-0.459326259		
0.991220895	7/13/2000	1195	505.921	0.357170388	11/3/2000	1625	409.834	-24.40258176	11/14/2000	550	425.610	6.164542443		
0.357170388	7/14/2000	1195	504.114	-0.533212726	11/6/2000	1250	415.267	-21.38850426	11/15/2000	575	418.719	-3.932750583		
-0.533212726	7/17/2000	1195	506.802	-0.047947719	11/7/2000	1000	421.033	1.302231654	11/16/2000	550	416.981	-0.998127013		
1.539353868	7/18/2000	1195	507.045	-0.909479988	11/8/2000	1025	426.076	-3.797490382	11/17/2000	550	421.143	3.322592002		
1.797109971	7/19/2000	1200	513.778	-0.758398245	11/9/2000	975	421.472	-1.304475742	11/20/2000	575	426.293	0.182269003		
0.074935089	7/20/2000	1190	513.393	-1.205035368	11/10/2000	975	426.970	0.774293276	11/21/2000	575	425.516	-1.453764371		
-1.376922305	7/21/2000	1165	508.794	-3.498269855	11/13/2000	975	423.664	-0.459326259	11/22/2000	575	431.702	-0.427609786		
1.139584888	7/24/2000	1120	506.940	1.432713931	11/14/2000	975	425.610	1.619087897	11/23/2000	575	433.548	-0.152924244		
-1.644209146	7/25/2000	1120	499.677	0.151157469	11/15/2000	975	418.719	2.979178068	11/24/2000	575	434.211	0.684229557		
2.184887628	7/26/2000	1115	496.691	5.777111851	11/16/2000	1000	416.981	-3.498127013	11/27/2000	575	431.240	0.996428903		
-0.500915056	7/27/2000	1185	499.179	-2.878463145	11/17/2000	975	421.143	1.341240021	11/28/2000	575	426.943	0.384360442		
0.856373353	7/28/2000	1150	498.804	8.281892025	11/20/2000	1000	426.293	22.682269	11/29/2000	575	425.302	-0.919816977		
0.550176487	7/31/2000	1230	492.193	0.511181589	11/21/2000	1225	425.516	-1.453764371	11/30/2000	575	429.214	4.735045516		
-0.270068411	8/1/2000	1230	489.677	-0.155204349	11/22/2000	1225	431.702	-2.468426113	12/1/2000	600	427.552	-0.550108525		
-0.942605924	8/2/2000	1230	490.437	0.495943961	11/23/2000	1200	433.548	-14.73625758	12/4/2000	600	429.904	-0.356126019		
-1.110714963	8/3/2000	1240	491.992	-1.247109185	11/24/2000	1025	434.211	0.684229557	12/5/2000	600	431.435	3.636575228		
2.759342428	8/4/2000	1230	494.160	3.170771193	11/27/2000	1025	431.240	-1.442595488	12/6/2000	625	433.722	-0.442679873		
-1.593834593	8/7/2000	1260	490.544	1.113865423	11/28/2000	1000	426.943	2.884360442	12/7/2000	625	435.642	0.880080433		
0.320214629	8/8/2000	1260	485.080	0.356642203	11/29/2000	1025	425.302	18.59237814	12/8/2000	625	431.808	2.393424855		
-0.443357797	8/9/2000	1260	483.350	0.894026643	11/30/2000	1225	429.214	24.87701535	12/11/2000	625	421.473	5.493808619		
-0.283648728	8/10/2000	1285	488.619	-0.012449126	12/1/2000	1525	427.552	10.92530131	12/12/2000	650	415.177	2.578983459		
-3.514394651	8/11/2000	1330	505.791	4.476190595	12/4/2000	1700	429.904	-1.826714254	12/13/2000	675	420.438	0.295406219		
1.140852249	8/14/2000	1385	504.067	1.937628499	12/5/2000	1675	431.435	-0.530091439	12/14/2000	675	419.196	-1.070620903		

10. ACAP				11. GMTD				1. BEKS				2. AKSI			
Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	P
12/5/2000	1275	431.435	14.30692875	12/12/2000	750	415.177	-1.267170388	7/16/2001	220	443.324	-2.976727056	7/16/2001	220	443.324	290
12/6/2000	1300	433.722	-23.65756796	12/13/2000	750	420.438	-16.37126045	7/17/2001	215	446.445	-10.83801307	7/17/2001	215	446.445	335
12/7/2000	1275	435.642	8.80080433	12/14/2000	625	419.196	-5.070620903	7/18/2001	195	453.301	0.366887027	7/18/2001	195	453.301	375
12/8/2000	1275	431.808	-15.28143772	12/15/2000	600	423.684	-2.955622587	7/19/2001	200	463.261	0.507921021	7/19/2001	200	463.261	375
12/11/2000	1225	421.473	14.93808619	12/18/2000	575	418.553	-26.14190775	7/20/2001	200	460.908	15.47768752	7/20/2001	200	460.908	325
12/12/2000	1225	415.177	-12.67170388	12/19/2000	425	418.783	18.58143295	7/23/2001	235	470.229	0.490426507	7/23/2001	235	470.229	325
12/13/2000	1225	420.438	-17.45410107	12/20/2000	500	414.870	-0.056162171	7/24/2001	230	457.918	0.073869311	7/24/2001	230	457.918	320
12/14/2000	1200	419.196	-10.70620903	12/21/2000	500	415.103	-0.293421151	7/25/2001	225	447.625	-5.788476217	7/25/2001	225	447.625	285
12/15/2000	1200	423.684	12.1104408	12/22/2000	500	416.321	1.469058731	7/26/2001	210	443.694	-5.592882868	7/26/2001	210	443.694	260
12/18/2000	1200	418.553	-0.549512248	1/2/2001	500	410.205	1.066783681	7/27/2001	200	447.381	-2.90457686	7/27/2001	200	447.381	280
12/19/2000	1200	418.783	-53.15625873	1/3/2001	500	405.829	-0.985143989	7/30/2001	195	449.191	1.137600709	7/30/2001	195	449.191	270
12/20/2000	1125	414.870	-0.561621713	1/4/2001	500	409.827	-2.194340539	7/31/2001	195	444.081	-2.364364228	7/31/2001	195	444.081	270
12/21/2000	1125	415.103	41.51023294	1/5/2001	500	418.820	0.729191538	8/1/2001	190	443.194	1.519199267	8/1/2001	190	443.194	260
12/22/2000	1175	416.321	14.69058731	1/8/2001	500	415.766	0.118576315	8/2/2001	190	436.461	0.30037048	8/2/2001	190	436.461	265
1/2/2001	1175	410.205	-53.16195042	1/9/2001	500	415.273	-0.540849032	8/3/2001	190	435.150	-1.6342221714	8/3/2001	190	435.150	265
1/3/2001	1100	405.829	35.60310556	1/10/2001	500	417.519	1.709622796	8/6/2001	185	430.810	7.614619099	8/6/2001	185	430.810	270
1/4/2001	1150	409.827	-43.68253582	1/11/2001	500	410.381	-29.26507319	8/7/2001	200	432.936	-2.215108007	8/7/2001	200	432.936	265
1/5/2001	1125	418.820	29.5141376	1/12/2001	350	407.365	-1.13190873	8/8/2001	200	442.526	-2.326032821	8/8/2001	200	442.526	280
1/8/2001	1150	415.766	-42.29249772	1/15/2001	350	411.976	-0.755626541	8/9/2001	190	430.693	-1.156508232	8/9/2001	190	430.693	280
1/9/2001	1100	415.273	-28.13576305	1/16/2001	350	415.089	0.102146769	8/10/2001	190	435.674	1.367560438	8/10/2001	190	435.674	275
1/10/2001	1075	417.519	-6.159585997	1/17/2001	350	414.665	-0.405146323	8/13/2001	195	441.181	-7.854599359	8/13/2001	195	441.181	275
1/11/2001	1050	410.381	-16.46025569	1/18/2001	350	416.345	1.149767621	8/14/2001	180	441.897	1.242597257	8/14/2001	180	441.897	275
1/12/2001	1025	407.365	-11.3190873	1/19/2001	350	411.558	-1.542917402	8/15/2001	180	436.406	3.026857763	8/15/2001	180	436.406	275
1/15/2001	1025	411.976	16.83397849	1/22/2001	350	417.908	0.518056606	8/16/2001	185	435.319	-3.288480029	8/16/2001	185	435.319	300
1/16/2001	1050	415.089	-70.40710374	1/23/2001	350	415.743	-0.294412654	8/20/2001	180	437.869	0.153470559	8/20/2001	180	437.869	305
1/17/2001	975	414.665	-4.051463229	1/24/2001	350	416.967	-0.039091823	8/21/2001	180	437.197	-1.093557367	8/21/2001	180	437.197	315
1/18/2001	975	416.345	88.42075313	1/25/2001	350	417.130	0.081988828	8/22/2001	180	441.978	-2.260104952	8/22/2001	180	441.978	330
1/19/2001	1050	411.558	-15.42917402	1/26/2001	350	416.788	-23.38933531	8/23/2001	175	439.690	-0.347745002	8/23/2001	175	439.690	340
1/22/2001	1050	417.908	-42.43848156	1/29/2001	265	413.052	-0.792394178	8/24/2001	175	441.219	2.837198113	8/24/2001	175	441.219	330
1/23/2001	1000	415.743	-2.94412654	1/30/2001	265	416.325	-2.231189575	8/27/2001	180	441.307	-3.154386352	8/27/2001	180	441.307	335

3. LAPD					4. BTON					5. AIMS				
I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	
443.324	14.8132416	7/18/2001	400	453.301	14.8132416	7/19/2001	340	463.261	0.507921021	7/23/2001	925	470.229	24.2397077	
446.445	10.40461102	7/19/2001	350	463.261	10.40461102	7/20/2001	340	460.908	-13.78701836	7/24/2001	1125	457.918	8.914449021	
453.301	-2.197215537	7/20/2001	300	460.908	-2.197215537	7/23/2001	300	470.229	-0.715247252	7/25/2001	1200	447.625	30.04485712	
463.261	-12.82541231	7/23/2001	305	470.229	-12.82541231	7/24/2001	290	457.918	-11.54532109	7/26/2001	1550	443.694	-26.63742972	
460.908	-2.022312479	7/24/2001	305	457.918	-2.022312479	7/25/2001	250	447.625	-3.12180955	7/27/2001	1150	447.381	-0.40457686	
470.229	1.079624543	7/25/2001	310	447.625	1.079624543	7/26/2001	240	443.694	-4.997644773	7/30/2001	1150	449.191	22.87673114	
457.918	-8.689717646	7/26/2001	320	443.694	-8.689717646	7/27/2001	230	447.381	-9.100229033	7/31/2001	1400	444.081	14.48545262	
447.625	-7.893739375	7/27/2001	320	447.381	-7.893739375	7/30/2001	210	449.191	-3.624304053	8/1/2001	1600	443.194	1.519199267	
443.694	6.861329586	7/30/2001	285	449.191	6.861329586	7/31/2001	200	444.081	0.199738336	8/2/2001	1600	436.461	0.30037048	
447.381	-3.976005431	7/31/2001	275	444.081	-3.976005431	8/1/2001	200	443.194	1.519199267	8/3/2001	1600	435.150	0.997357233	
449.191	1.137600709	8/1/2001	205	443.194	1.137600709	8/2/2001	200	436.461	40.30037048	8/6/2001	1600	430.810	16.69401099	
444.081	-3.503965368	8/2/2001	235	436.461	-3.503965368	8/3/2001	280	435.150	6.35450009	8/7/2001	1875	432.936	15.11822553	
443.194	3.44227619	8/3/2001	265	435.150	3.44227619	8/6/2001	295	430.810	-3.883319518	8/8/2001	2200	442.526	2.673967179	
436.461	0.30037048	8/6/2001	290	430.810	0.30037048	8/7/2001	285	432.936	-32.03966941	8/9/2001	2200	430.693	-28.4292355	
435.150	2.884149686	8/7/2001	300	432.936	2.884149686	8/8/2001	200	442.526	5.173967179	8/10/2001	1600	435.674	0.298481491	
430.810	-2.345340861	8/8/2001	300	442.526	-2.345340861	8/9/2001	205	430.693	-6.034557013	8/13/2001	1625	441.181	-0.162291667	
432.936	3.445269352	8/9/2001	305	430.693	3.445269352	8/10/2001	195	435.674	-1.264018509	8/14/2001	1625	441.897	7.242597257	
442.526	2.673967179	8/10/2001	320	435.674	2.673967179	8/13/2001	195	441.181	-2.726394231	8/15/2001	1625	436.406	0.249079985	
430.693	-2.942222518	8/13/2001	325	441.181	-2.942222518	8/14/2001	190	441.897	3.874176204	8/16/2001	1625	435.319	-0.585777327	
435.674	-1.264018509	8/14/2001	335	441.897	-1.264018509	8/15/2001	195	436.406	-4.879125143	8/20/2001	1625	437.869	0.153470559	
441.181	-0.162291667	8/15/2001	330	436.406	-0.162291667	8/16/2001	185	435.319	-3.288480029	8/21/2001	1625	437.197	-1.093557367	
441.897	1.242597257	8/16/2001	335	435.319	1.242597257	8/20/2001	180	437.869	2.931248336	8/22/2001	1625	441.978	5.133057441	
436.406	9.339989076	8/20/2001	340	437.869	9.339989076	8/21/2001	185	437.197	-1.093557367	8/23/2001	1700	439.690	7.005196174	
435.319	1.08088934	8/21/2001	335	437.197	1.08088934	8/22/2001	185	441.978	-4.88773258	8/24/2001	1825	441.219	-30.15693105	
437.869	3.432159083	8/22/2001	350	441.978	3.432159083	8/23/2001	175	439.690	-0.347745002	8/27/2001	1275	441.307	-27.36781833	
437.197	3.668347395	8/23/2001	345	439.690	3.668347395	8/24/2001	175	441.219	-0.019944744	8/28/2001	925	440.940	3.405519412	
441.978	3.547975856	8/24/2001	345	441.219	3.547975856	8/27/2001	175	441.307	17.2260192	8/29/2001	950	437.841	13.96252473	
439.690	-3.288921473	8/27/2001	345	441.307	-3.288921473	8/28/2001	205	440.940	10.45891427	8/30/2001	1075	434.318	-28.19110036	
441.219	1.495206771	8/28/2001	330	440.940	1.495206771	8/29/2001	225	437.841	-10.30648112	8/31/2001	775	435.552	-5.813342387	
441.307	-16.79451902	8/29/2001	340	437.841	-16.79451902	8/30/2001	200	434.318	9.715876386	9/3/2001	725	432.772	-1.938896232	

6. PANR				7. RYAN				8. RODA				9. CENT			
Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	P
9/19/2001	725	422.450	-3.423657564	10/18/2001	650	385.165	6.994163338	10/23/2001	500	391.785	-3.513470398	11/2/2001	415		
9/20/2001	700	422.346	-5.267854183	10/19/2001	700	387.854	2.564348588	10/24/2001	475	385.961	4.103973418	11/5/2001	420		
9/21/2001	650	414.427	0.973150881	10/22/2001	725	391.760	3.441894404	10/25/2001	500	390.435	0.669253525	11/6/2001	435		
9/24/2001	650	410.394	0.318474442	10/23/2001	750	391.785	4.819862935	10/26/2001	500	387.822	0.900928777	11/7/2001	410		
9/25/2001	650	409.087	-1.873712776	10/24/2001	775	385.961	-1.159184477	10/29/2001	500	384.328	1.552319893	11/8/2001	420		
9/26/2001	625	401.018	1.489708691	10/25/2001	775	390.435	-2.556552927	10/30/2001	500	378.362	-1.420068612	11/9/2001	420		
9/27/2001	625	395.044	0.649294762	10/26/2001	750	387.822	10.90092878	10/31/2001	500	383.735	-4.547604467	11/12/2001	470		
9/28/2001	625	392.479	0.969223831	10/29/2001	825	384.328	4.582622924	11/1/2001	475	381.999	-0.700012855	11/13/2001	525		
10/1/2001	625	388.675	2.944104972	10/30/2001	850	378.362	4.46228433	11/2/2001	470	380.652	2.492431239	11/14/2001	575		
10/2/2001	625	377.232	1.522670399	10/31/2001	900	383.735	-2.323382244	11/5/2001	475	375.214	5.205857261	11/15/2001	575		
10/3/2001	625	371.488	1.37461237	11/1/2001	875	381.999	0.352618724	11/6/2001	500	375.429	-0.551901957	11/16/2001	625		
10/4/2001	650	381.241	-3.937172388	11/2/2001	875	380.652	4.285744309	11/7/2001	500	377.501	-1.148606229	11/19/2001	575		
10/5/2001	625	381.588	-4.196159208	11/5/2001	900	375.214	-0.057300634	11/8/2001	500	381.837	3.822272331	11/20/2001	525		
10/8/2001	575	367.073	-0.742086724	11/6/2001	900	375.429	-8.882335291	11/9/2001	475	377.340	1.584247628	11/21/2001	500		
10/9/2001	575	369.797	0.405627953	11/7/2001	825	377.501	4.911998932	11/12/2001	475	371.362	-1.536007284	11/22/2001	500		
10/10/2001	575	368.297	3.725502256	11/8/2001	875	381.837	4.034870526	11/13/2001	465	369.248	6.567905639	11/23/2001	475		
10/11/2001	600	370.589	-6.327820937	11/9/2001	900	377.340	-9.526863483	11/14/2001	500	372.789	-1.498971268	11/26/2001	480		
10/12/2001	575	378.598	-0.074485338	11/12/2001	800	371.362	0.569255874	11/15/2001	500	378.377	-0.077435996	11/27/2001	480		
10/16/2001	575	378.880	-0.656936233	11/13/2001	800	369.248	-0.958976081	11/16/2001	500	378.670	-6.087226345	11/28/2001	455		
10/17/2001	575	381.369	-0.995361448	11/14/2001	800	372.789	-1.498971268	11/19/2001	475	382.787	5.51107645	11/29/2001	470		
10/18/2001	575	385.165	-0.698142355	11/15/2001	800	378.377	-0.077435996	11/20/2001	500	381.838	-10.06704414	11/30/2001	490		
10/19/2001	575	387.854	-1.007079984	11/16/2001	800	378.670	-7.337226345	11/21/2001	450	382.094	-8.559127103	12/3/2001	520		
10/22/2001	575	391.760	-0.006381458	11/19/2001	750	382.787	6.914585222	11/22/2001	410	380.834	-2.930051977	12/4/2001	525		
10/23/2001	575	391.785	1.486529602	11/20/2001	800	381.838	-6.317044139	11/23/2001	400	382.704	0.333416949	12/5/2001	625		
10/24/2001	575	385.961	-1.159184477	11/21/2001	750	382.094	0.329761786	11/26/2001	400	381.428	0.11850205	12/6/2001	625		
10/25/2001	575	390.435	0.669253525	11/22/2001	750	380.834	-0.491027587	11/27/2001	400	380.976	0.744718827	12/7/2001	575		
10/26/2001	575	387.822	0.900928777	11/23/2001	750	382.704	0.333416949	11/28/2001	405	382.901	-1.761903385	12/10/2001	500		
10/29/2001	575	384.328	1.552319893	11/26/2001	750	381.428	-16.54816462	11/29/2001	395	380.193	1.235574999	12/11/2001	550		
10/30/2001	575	378.362	-1.420068612	11/27/2001	625	380.976	3.494718827	11/30/2001	400	380.308	2.370631173	12/12/2001	625		
10/31/2001	575	383.735	0.452395533	11/28/2001	650	382.901	0.707232418	12/3/2001	410	380.800	-0.367884044	12/13/2001	600		

10. CLPI				11. LMAS				I. ABBA					
I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR
380.652	2.633420729	12/3/2001	400	380.800	-1.648371849	1/2/2002	600	383.458	-3.659179536	4/5/2002	235	508.994	-1.195691894
375.214	3.514127938	12/4/2001	390	377.557	-5.230176486	1/3/2002	575	381.512	-9.662594236	4/8/2002	235	515.080	-0.955385571
375.429	-6.299028394	12/5/2001	370	377.942	-3.076569592	1/4/2002	525	385.201	-15.20030173	4/9/2002	235	520.001	-2.655187202
377.501	1.290418161	12/6/2001	360	379.355	0.565169828	1/7/2002	450	388.724	9.153858379	4/10/2002	235	533.808	0.429929862
381.837	1.177727669	12/7/2001	360	377.211	0.887566906	1/8/2002	490	387.694	0.03922197	4/11/2002	235	531.513	-1.459418678
377.340	13.48900953	12/10/2001	360	373.863	-2.077788744	1/9/2002	495	391.498	-2.700141508	4/12/2002	235	539.270	-1.959686243
371.362	12.27138353	12/11/2001	350	371.246	-0.432866617	1/10/2002	495	402.069	0.616289515	4/15/2002	235	549.838	6.061247595
369.248	8.564833443	12/12/2001	350	372.853	-0.492687467	1/11/2002	510	411.775	-2.947245366	4/16/2002	250	551.607	1.691965475
372.789	-1.498971268	12/13/2001	350	374.690	1.326086708	1/14/2002	500	415.837	-1.302673884	4/17/2002	250	542.274	1.371262498
378.377	8.618216178	12/19/2001	355	375.074	-2.142705811	1/15/2002	500	421.254	-0.553347861	4/18/2002	250	534.838	12.38460244
378.670	-9.087226345	12/20/2001	350	377.828	-0.111955705	1/16/2002	500	423.585	4.656031257	4/19/2002	280	532.781	-0.545064482
382.787	-8.447733619	12/21/2001	350	378.251	1.503389473	1/17/2002	525	425.042	-0.322085817	4/22/2002	280	535.685	-12.09121432
381.838	-4.828948901	12/26/2001	355	377.968	-0.528880752	1/18/2002	525	426.411	0.060974037	4/23/2002	250	543.061	-0.221153793
382.094	0.329761786	12/27/2001	355	379.967	-4.584779175	1/21/2002	525	426.151	4.217262135	4/24/2002	250	544.262	-0.059713888
380.834	-5.491027587	12/28/2001	350	392.036	0.759492933	1/22/2002	550	428.472	-1.284331298	4/25/2002	250	544.587	0.849083801
382.704	1.386048528	1/2/2002	345	383.458	-0.941788232	1/23/2002	550	433.975	-2.737715306	4/26/2002	250	539.963	14.61203082
381.428	0.11850205	1/3/2002	340	381.512	3.444822644	1/24/2002	550	445.856	-6.02642598	4/29/2002	280	525.859	-12.27420957
380.976	-5.713614506	1/4/2002	355	385.201	3.310764664	1/25/2002	525	452.459	11.93109947	4/30/2002	250	534.062	11.87679333
382.901	4.003935714	1/7/2002	370	388.724	2.967672193	1/28/2002	575	441.567	-1.194156266	5/1/2002	280	534.72	32.99724288
380.193	4.225071354	1/8/2002	380	387.694	5.597761175	1/29/2002	575	446.840	-8.15496647	5/2/2002	375	539.7	-0.812117843
380.308	5.993080152	1/9/2002	405	391.498	-2.700141508	1/30/2002	525	444.424	-1.622774648	5/3/2002	375	544.083	2.119059041
380.800	1.813166613	1/10/2002	405	402.069	1.289690189	1/31/2002	525	451.636	-0.585870037	5/6/2002	380	539.808	-0.940704843
377.557	18.94564769	1/11/2002	420	411.775	-0.986461053	2/1/2002	525	454.282	5.446501554	5/7/2002	380	544.886	2.107616137
377.942	-0.37386689	1/14/2002	420	415.837	-2.493150075	2/4/2002	550	451.172	-4.394292683	5/8/2002	390	547.741	1.982382278
379.355	-7.434830172	1/15/2002	415	421.254	-2.962986416	2/5/2002	525	450.490	0.950076583	5/10/2002	395	543.905	1.243047959
377.211	-12.15591136	1/16/2002	405	423.585	0.890599158	2/6/2002	525	446.210	-2.922390803	5/13/2002	395	537.144	-1.542098793
373.863	10.69998903	1/17/2002	410	425.042	-0.322085817	2/7/2002	525	433.170	-0.879562297	5/14/2002	390	538.628	-0.048085135
371.246	13.20349702	1/18/2002	410	426.411	3.719510652	2/8/2002	525	436.980	-5.89155437	5/15/2002	390	538.887	1.696459555
372.853	-4.492687467	1/21/2002	425	426.151	0.631827962	2/11/2002	500	438.847	-0.468956151	5/16/2002	390	529.745	-0.346015536
374.690	-4.269151387	1/22/2002	430	428.472	-2.447121996	2/13/2002	500	436.789	-0.598229351	5/17/2002	390	531.578	-19.63919519

2. JTPE				3. UNIT				4. BSWD				5. BABP			
Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	
4/17/2002	365	542.274	4.110988526	4/19/2002	330	532.781	8.545844609	5/2/2002	330	539.7	-0.812117843	7/16/2002	125	481.767	
4/18/2002	375	534.838	1.717935774	4/22/2002	360	535.685	0.011960283	5/3/2002	330	544.083	-2.244577323	7/17/2002	125	479.377	
4/19/2002	380	532.781	0.770724991	4/23/2002	365	543.061	-4.330742834	5/6/2002	320	539.808	-4.065704843	7/18/2002	130	488.220	
4/22/2002	385	535.685	-0.078227307	4/24/2002	350	544.262	1.368857541	5/7/2002	310	544.886	1.088540415	7/19/2002	140	484.850	
4/23/2002	390	543.061	1.060897489	4/25/2002	355	544.587	2.257534505	5/8/2002	315	547.741	0.700330996	7/22/2002	140	475.274	
4/24/2002	395	544.262	-2.591359457	4/26/2002	360	539.963	8.16758638	5/10/2002	315	543.905	1.243047959	7/23/2002	145	477.081	
4/25/2002	385	544.587	-1.748318796	4/29/2002	380	525.859	6.334812984	5/13/2002	315	537.144	-0.276276008	7/24/2002	140	460.028	
4/26/2002	375	539.963	-0.054635842	4/30/2002	410	534.062	1.096305526	5/14/2002	315	538.628	-0.048785135	7/25/2002	140	453.155	
4/29/2002	365	525.859	5.289391211	5/1/2002	415	534.72	-3.3409671	5/15/2002	315	538.887	3.283761142	7/26/2002	140	441.875	
4/30/2002	390	534.062	1.158844613	5/2/2002	405	539.7	4.126153762	5/16/2002	320	529.745	-0.346015536	7/29/2002	135	455.086	
5/1/2002	395	534.72	6.663608163	5/3/2002	425	544.083	24.31513747	5/17/2002	320	531.578	0.873625319	7/30/2002	135	462.819	
5/2/2002	425	539.7	-5.518000196	5/6/2002	525	539.808	-5.702609605	5/20/2002	320	526.934	0.303453563	7/31/2002	135	463.669	
5/3/2002	405	544.083	0.785725707	5/7/2002	500	544.886	-0.523962811	5/21/2002	320	525.335	4.171121166	8/1/2002	135	461.283	
5/6/2002	405	539.808	0.293863058	5/8/2002	500	547.741	10.700331	5/22/2002	325	511.631	3.694661221	8/2/2002	135	456.315	
5/7/2002	410	544.886	3.134573775	5/10/2002	550	543.905	-16.93877022	5/23/2002	330	503.669	0.862738919	8/5/2002	135	449.873	
5/8/2002	425	547.741	1.876801584	5/13/2002	450	537.144	8.612612881	5/24/2002	335	506.955	-1.151778757	8/6/2002	130	440.932	
5/10/2002	430	543.905	-5.733696227	5/14/2002	490	538.628	6.074363845	5/27/2002	335	512.794	-0.154057965	8/7/2002	135	447.061	
5/13/2002	400	537.144	-2.776276008	5/15/2002	520	538.887	-6.957386599	5/28/2002	335	513.584	-1.383804791	8/8/2002	130	446.465	
5/14/2002	390	538.628	2.516017429	5/16/2002	475	529.745	-1.398647115	5/29/2002	335	520.691	-0.356833515	8/9/2002	130	450.236	
5/15/2002	400	538.887	-2.053540445	5/17/2002	470	531.578	-2.317864042	5/30/2002	335	522.549	-1.57776982	8/12/2002	135	448.518	
5/16/2002	385	529.745	-5.540820731	5/20/2002	455	526.934	0.303453563	5/31/2002	335	530.79	-0.188820213	8/13/2002	130	450.971	
5/17/2002	365	531.578	-14.19486783	5/21/2002	455	525.335	1.509720067	6/3/2002	330	523.870	0.942127602	8/14/2002	130	447.680	
5/20/2002	310	526.934	5.142163241	5/22/2002	450	511.631	0.445088572	6/4/2002	330	518.935	-0.294834613	8/15/2002	130	448.733	
5/21/2002	325	525.335	1.070159627	5/23/2002	445	503.669	9.459946954	6/5/2002	330	520.465	1.294803685	8/16/2002	130	450.985	
5/22/2002	320	511.631	-0.006300317	5/24/2002	490	506.955	10.07271104	6/6/2002	330	513.726	-1.575937716	8/19/2002	130	451.449	
5/23/2002	315	503.669	8.871396927	5/27/2002	545	512.794	23.69915304	6/7/2002	325	514.028	3.594793699	8/20/2002	130	456.751	
5/24/2002	345	506.955	0.297496605	5/28/2002	675	513.584	2.319898912	6/10/2002	335	511.366	-2.559287938	8/21/2002	130	457.224	
5/27/2002	350	512.794	1.274513464	5/29/2002	700	520.691	-14.6425478	6/11/2002	330	516.821	-1.382296772	8/22/2002	135	454.345	
5/28/2002	355	513.584	-2.792255496	5/30/2002	600	522.549	6.756256351	6/12/2002	330	523.965	-3.07558711	8/23/2002	135	458.271	
5/29/2002	350	520.691	1.071737913	5/31/2002	650	530.79	1.303717101	6/13/2002	330	540.080	-0.911716783	8/26/2002	130	456.409	

6. SCMA						7. APIC						1. ASJT					
IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	Date	P	I	IR	
0.496090434	7/17/2002	1150	479.377	-1.844685915	12/19/2002	405	420.326	7.501432016	12/30/2003	390	691.895	0.742583403					
2.155314085	7/18/2002	1150	488.220	-1.483650457	12/20/2002	440	425.120	2.15840661	1/2/2004	400	704.498	-2.977155365					
8.382570279	7/19/2002	1125	484.850	-0.247178394	12/23/2002	450	425.606	2.377530183	1/5/2004	400	725.472	0.204418641					
1.975043828	7/22/2002	1100	475.274	1.892525536	12/27/2002	460	424.945	3.72283472	1/6/2004	400	723.989	2.019643945					
3.191226835	7/23/2002	1125	477.081	1.352223207	1/2/2003	460	409.125	0.394256034	1/7/2004	400	709.367	11.97645929					
0.126169568	7/24/2002	1100	460.028	1.494039493	1/3/2003	460	407.512	2.273553681	1/8/2004	460	730.815	0.130528781					
1.494039493	7/25/2002	1100	453.155	2.489214507	1/6/2003	460	398.247	0.936102469	1/9/2004	475	753.692	2.536792218					
2.489214507	7/26/2002	1100	441.875	-2.989759547	1/7/2003	460	394.519	0.026614688	1/12/2004	480	742.506	4.080876114					
-6.561188119	7/29/2002	1100	455.086	2.846215281	1/8/2003	460	394.414	10.46009699	1/13/2004	500	743.143	-1.805843559					
-1.699239265	7/30/2002	1150	462.819	1.990255933	1/9/2003	510	396.029	-2.878898896	1/14/2004	500	756.563	4.089302543					
-0.18365711	7/31/2002	1175	463.669	-1.613068347	1/10/2003	500	399.665	5.859970225	1/15/2004	525	763.453	-10.42510928					
0.514591228	8/1/2002	1150	461.283	-3.27082997	1/13/2003	525	396.228	-7.525212756	1/16/2004	475	770.334	0.499913025					
1.076996117	8/2/2002	1100	456.315	3.684471353	1/14/2003	500	407.177	0.387792041	1/19/2004	475	766.483	-7.182344896					
1.41174408	8/5/2002	1125	449.873	1.987449791	1/15/2003	500	405.598	17.09295904	1/20/2004	445	773.125	8.577963722					
-1.716253912	8/6/2002	1125	440.932	-1.390010251	1/16/2003	575	397.109	3.204563154	1/21/2004	485	776.301	-1.233799776					
2.456143595	8/7/2002	1125	447.061	4.577759585	1/17/2003	600	401.649	11.80934722	1/23/2004	485	785.879	-12.49774384					
-3.570388563	8/8/2002	1175	446.465	-0.844635078	1/20/2003	675	404.423	3.520479703	1/26/2004	425	786.874	3.003955039					
-0.844635078	8/9/2002	1175	450.236	0.381577661	1/21/2003	700	405.164	7.01031822	1/27/2004	430	772.494	5.348514485					
4.227731508	8/12/2002	1175	448.518	-0.546912276	1/22/2003	750	405.701	-6.930161211	1/28/2004	450	767.107	9.861764902					
-4.250615979	8/13/2002	1175	450.971	-1.397990089	1/23/2003	700	406.770	0.350812498	1/29/2004	490	759.644	0.883571778					
0.729758676	8/14/2002	1150	447.680	1.938700392	1/24/2003	700	405.343	-0.664014357	1/30/2004	490	752.932	-10.26198046					
-0.235212652	8/15/2002	1175	448.733	-0.501857452	1/27/2003	675	393.558	-0.419760239	2/3/2004	425	730.319	0.006024765					
-0.501857452	8/16/2002	1175	450.985	-0.102885905	1/28/2003	675	395.210	4.634854231	2/4/2004	425	730.275	-0.848036699					
-0.102885905	8/19/2002	1175	451.449	-1.174440524	1/29/2003	700	391.530	-0.19487651	2/5/2004	425	736.468	14.59791073					
-1.174440524	8/20/2002	1175	456.751	-0.103557518	1/30/2003	700	392.293	4.552837875	2/6/2004	500	758.924	-21.09773838					
-0.103557518	8/21/2002	1175	457.224	-1.497990091	1/31/2003	725	388.443	8.772609162	2/9/2004	400	767.255	0.063082026					
4.47582333	8/22/2002	1150	454.345	-0.864101069	2/3/2003	700	409.125	3.660983807	2/10/2004	400	766.771	-0.394120278					
-0.864101069	8/23/2002	1150	458.271	-3.941516283	2/4/2003	700	394.147	0.463308629	2/11/2004	400	769.793	0.481947744					
-3.2973939	8/26/2002	1100	456.409	3.224724275	2/5/2003	700	392.313	-0.545992613	2/12/2004	400	766.083	-0.921179559					
4.798150849	8/27/2002	1125	452.064	2.011883273	2/6/2003	700	394.455	-0.044618524	2/13/2004	400	773.140	-0.269679489					

APPENDIX 5
THE AVERAGE OF THE STOCK RETURN IN 30 DAYS AFTERMARKET

Day	Market-adjusted return
1	2.230484
2	0.929242
3	0.70572
4	-1.05815
5	-0.07681
6	0.352475
7	0.283654
8	-1.48399
9	0.258262
10	1.679352
11	1.487269
12	-1.87445
13	1.025087
14	-1.89086
15	-2.70198
16	1.663718
17	-2.46075
18	2.393388
19	0.826989
20	-1.30325
21	-1.17872
22	-1.20332
23	1.413879
24	-0.11217
25	-3.51961
26	1.578147
27	4.882049
28	-1.91966
29	-1.71519
30	-1.60922

APPENDIX 6 **STATISTICAL CALCULATION OF RETURN**

Correlations

		day	return
day	Pearson	1	-.170
	Correlation		
	Sig. (2-tailed)		.370
return	N	30	30
	Pearson	-.170	1
	Correlation		
	Sig. (2-tailed)	.370	
	N	30	30



FIGURE 1
HETEROSCEDASTICITY TESTING

Scatterplot

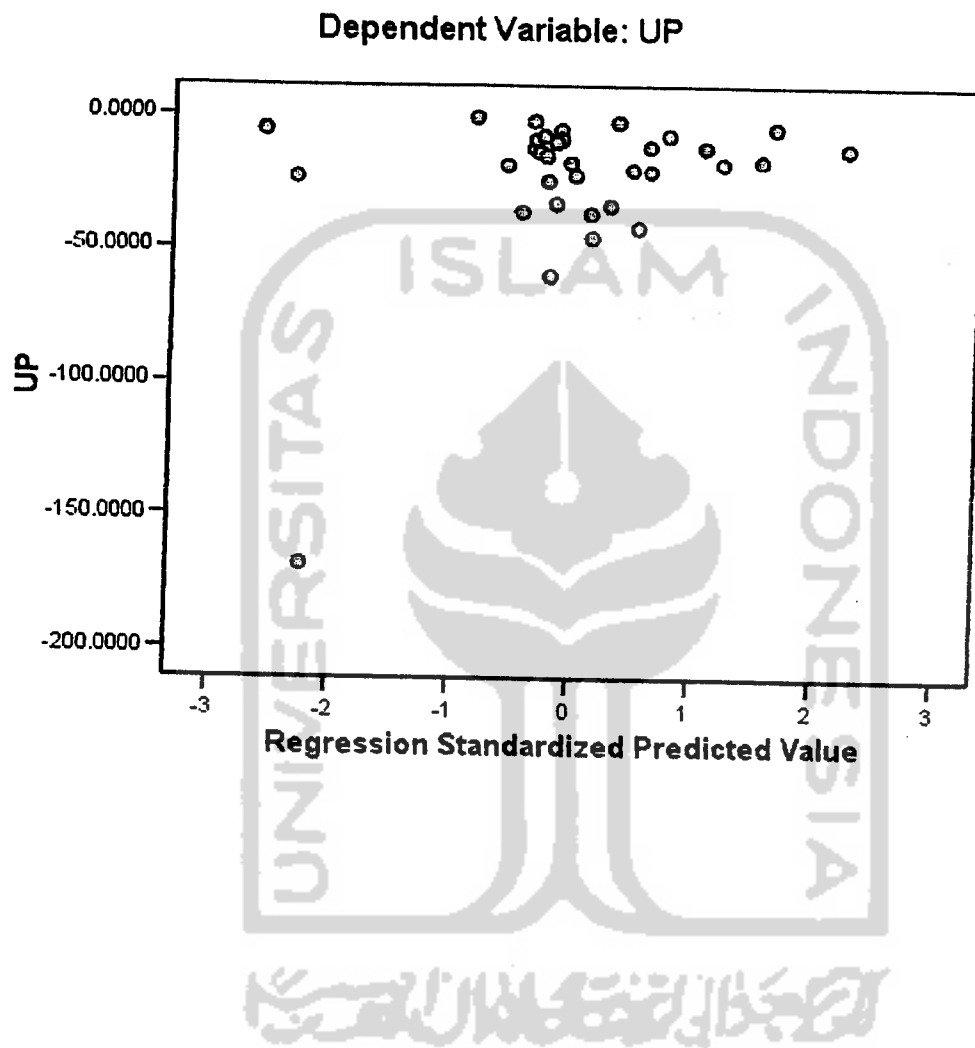


FIGURE 2
NORMALITY TESTING

Normal P-P Plot of Regression Standardized Residual

