Diversions of Opinion and Long Term Performance of Post Stocks Initial Public Offerings at Indonesia Stock Exchange

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Abstract:
This study examines and analyzes the effect of divergence of opinion on long-term performance of stock post IPO with initial return control variable, firm size, offering size, reputation of underwriter and return on equity. The study was conducted using 2004-2013 data, with 157 IPO companies in Indonesia capital market. The test is done by using multiple linear regression. The results of this study found that the divergence of opinion has a positive effect on the long-term performance of post-IPO shares. This occurs in the long-term performance period of post-IPO shares with an abnormal cumulative measurement of return 12 months, 24 months. The result of opinion divergence regression and variable of all control with long term performance of stock post IPO revealed significant result at period of 12 months and 36 months. By measuring the buy and hold of abnormal returns, the opinion regression divergence with the long-term performance of post-IPO shares is significant in the 12-month period. The regression result of opinion divergence and all control variables with long-term performance of post-IPO shares is significant in the period of 12 months and 24 months. Variable characteristics of companies that are considered by investors in IPO stock transaction are firm size, initial return, offer size and reputation of underwriter. The implication of this study shows that risk factors play an important role in long-term performance of post-IPO shares.

Keywords: diversions of opinion, company characteristics, long term performance of post IPO shares

I. INTRODUCTION

Many studies investigate IPO phenomenon on the basis of the long-term underperformance performance of IPO shares. Ritter (1991) conducted a study of the long-term performance of IPO stocks and showed a declining long-term performance when compared to non-IPO shares of companies of the same size and industry. Research on underperformance is commonly conducted within a period of performance measurement between 1 to 5 years. Ritter (1991) argues that long-term underperformed IPO shares activity is due to investors who are very optimistic that investors want to buy IPO shares at high prices. In the long period, the stock price will be corrected to the actual value so the price becomes low. This causes the IPO's stock performance undergoes in the long period as well. Some of the measurement methods implemented in recent studies yield inconsistency results of performance between one and another. There are several methods of calculating abnormal return. One of them is by implementing cumulative abnormal return (CAR) as well as by using buy and hold abnormal return (BHAR). Ritter (1991) found that the average return over the three years after the IPO was significantly lower than the market average. Using the CAR measurement method, Ritter (1991) found that the performance of one, two and three consecutive years after IPO underperformance was 10.23%, 16.89% and 29.13%. Several other studies show a decline in stock performance after IPO, including Jain and Kini (1994), with the size of operating performance used is return on assets. Seitibraimov (2012), conducted a research on the long-term performance of post-IPO stocks in Russia, Ukraine and Kazakhstan with the results of the research shows an underperformance activity.

Many studies claim on the occurrence of underperformance over the long-term performance of shares at initial public offering. This phenomenon occurs in many countries, both in developed and developing capital markets including in Indonesia. Long-term performance of post-IPO stocks both underperformance and overperformance occurred in some countries. The highest underperformance occurred in Indonesia, (Emasari, 2010) of 139%, followed by Brazil (Anggarwal, 1993) of 47.0% and Australia at 46.5% (Lee, 1996). Meanwhile, the lowest underperformance took place in the America with around 4.5% (Gompers, 2003). All underperformances are within the range of 9.8% to 139% (Pujiharto, 2003; Martani, 2004; Suroso, 2005; Manurung, 2006; and Emasari, 2010) commonly took place. Overperformance occurred in Malaysia of 52.63% (Corhay, et al, 2002) and 41.7% (Ahmad, 2002). The Swedish capital market experienced the lowest overperformance of 1.2% (Loughran, 1994).

So far, the study of long-term performance of post-IPO shares is much related to information about the characteristics of the company. Information on company characteristics include initial return, offering size, firm size, industry type, company age, underwriter reputation, sales and profitability (Brav and Gompers, 1997; Ritter, 1991; Carter, Dark and Sigh, 1998; Jain and Now, 1994; Darmetko, 2009; Miller, 2000; Seitibraimov, 2012). According to Ritter (1991, 1994) long-term performance of post-IPO stocks declined is still an interesting discussion. The study of
long-term performance of post-IPO stocks that declined so far seen from the company's information about the characteristics of the company. Subsequently, many studies have developed incorporating the viewpoint of financial behavior. This approach tries to see the irrational behavior associated with the decisions and actions of a person in conducting financial transactions. The actions of a person in performing financial transactions are seen from the point of view of the investor and from the point of view of the underwriter who is the intermediary between the company that conducts the IPO with the investor.

From the investor's point of view, Miller (1977, 2000) uses the divergence of opinion theory to explain the long-term performance of post-IPO stocks declining. According to Miller, when new shares are traded, the divergence of opinion among investors occurs because there is no information about the company in the market. The IPO offer price may be the same as the fair value but investors are optimistic to push the first trading price on the first day above the fair value of the IPO. In the long run if there is more public information available in the market, the divergence of inter-investor opinion becomes lower, the price integrates with the fair value and long-term performance of the declining stock emerges as a correction to the initial overvaluation of the trade.

Miller (1977) also explains the divergence of opinion among investors regarding the assessment of IPOs leading to overvaluation in the short term and long-term performance of stocks will decline. If there is a lot of uncertainty about IPO assessment, investors are optimistic that it will be much higher than pessimistic investors. As time passes and information grows, the divergence of opinion between optimistic and pessimistic investors will narrow, and as a result the stock market prices will fall.

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Wang (2010) points out that the divergence of opinion among investors is negatively related to the long-term performance of the post-IPO. In the secondary market, the most optimistic investors will actively buy new shares and push the price of trading in the secondary market above the intrinsic value of the IPO. Higher levels of investor interdependence will reduce the long-term performance of post-IPO shares. The results of Wang (2010) show that for investors who buy shares when the IPO with the offer price will produce abnormal return cumulative three years is 79.77%. For investors who buy shares at IPOs with low underpricing rates produce abnormal returns to 32.38% after three years.

Related to the declining of long-term performance of post-IPO stocks, various studies explain a number of factors causing initial return, firm size, age of company, offering size, reputation of underwriter, firm profitability (Brav and Gompers, 1997; Ritter 1991; Carter, Dark and Singh 1998, Nanda, Yi and Yun, 1995; Jain and Now, 1994; Darmetko, 2009; Miller, 2000; Seitibrainov, 2012).

Ritter (1991) found that firms with the highest core returns (more than 23.7%) had long-term performance of the worst stocks. By using multiple regression model, Ritter (1991) conducted a study of negative initial return related to long-term post-IPO performance. How (2000) conducted a study of the relationship between initial return and long-term post-IPO performance in Australia. This research was conducted in 1979-1990 with a sample of 130 companies with a period of 1 year, 2 years and 3 years. By measuring the long-term performance of post IPO using CAR and BHR. How (2000) found an underpricing average of 107.13% and has a significant relationship in explaining the long term post-IPO performance.

This research is intended to reveal financial behavior point of view that is irrational behavior related to decision and action of financial transaction actors. The actions of financial transactions actors, among others, from the point of view of investors who want to buy shares. Financial behavior in this case is obtained from divergence of opinion view, with the control variables are initial return, firm size, age of company, offering size, reputation of underwriter and profitability and its effect on long-term performance of post-IPO shares. Based on the aforementioned background and limited research focus on the issues of divergence opinion to determine the effect on the long-term performance of post-IPO shares, as the basis of this research. The results of this study significantly contribute towards the findings about the phenomenon of long-run underperformance of IPO shares in developing countries. Based on the existing research
background then the problem in this study is formulated, whether the divergence of opinion affect the long-term performance of post-IPO shares in the Indonesian Stock Exchange or not.

II. REVIEW OF LITERATURE AND HYPOTHESIS

Long-term performance IPO shares companies of the same size and industry firms showed lower performance (Ritter, 1991). The company's operating performance decreased significantly after conducting IPO (Jain and Kini, 1994). The measure of operational performance used is the operating return on assets. When operational performance can not be maintained then the stock price will fall. Ibbotson (1975) states that IPO stock performance is generally positive for the first year period but it turns into negative for the next three years, and positive after the fifth year. Chahine’s (2002) showed that IPO shares provide negative benefits in the period of one year to five years after trading on the secondary market.

The explanation of why the long-term performance of post stock IPO obtained underperformance result quite diverse. Suroso (2005) explains the theory of investor optimism in early trading in the secondary market, which negatively impacts the long-term performance of post-IPO shares. Findings on investor optimism impacted long-term performance post IPOs only found a significant impact for the 6-month save period. Manurung (2006) explains the declining long-term performance using theories that explain the phenomenon of overpricing of initial stocks known as the overreaction market hypothesis developed by De Bont and Thaler (1985), poor long-term stock performance due to excess market reaction to new shares marked by the amount of initial return. The amount of initial return is in the long run the market to make corrections and resulted in stock prices post IPO down. The decline in long-term performance of post-IPO shares occurred within three years after the IPO.

According to Miller (1977, 2000), by using the theory of divergence of opinion among IPO investors, it can lead to long-term performance of underperformance shares. Shiller (1990) explained that the long-term performance of the declining stock is due to the banker's invasion of deliberately determining the low public offering price of the company's shares, in the hope that the investor is interested in buying in the primary market, resulting in excess demand. High excess demand in the secondary market will lead to high initial returns in early trading on the secondary market. Initial returns high in early trading in the secondary market will cause long-run underperformance.

2.1 The Hypothesis of Divergence of Opinions.

Houge et al. (2001) found that greater investor interference divergence led to greater longrun underperformance. Miller (1977) argues in the IPO market that restricted short selling, the price is determined by the optimistic investor. While pessimistic investors will wait until there are no restrictions on short selling, prices in early trading in the secondary market may exceed the predicted value of all potential investors. Thus the divergence of opinion among investors IPO optimistic and pessimistic directs the pattern of stock prices post IPO. According to Ritter (1991), in addressing IPO investors can be classified as an optimistic investor and a pessimistic investor. The optimistic investor will act as a buyer at the time of the IPO. If there is a lot of uncertainty about the IPO assessment then investors are optimistic that it is much higher than the pessimistic investor. With the passage of time and increasing information, the divergence of opinion between optimistic and pessimistic investors narrow and consequently the market price will drop.

2.2 Divergence of Opinion and Price

The theory of explaining the long-term performance that is less than the initial public offering is the divergence of opinion about the value of an initial public offering that usually declines over time and causes the stock price to decline. The divergence effect of this opinion will be stronger in IPO stock so that it will tend to raise the price. Empirical evidence suggests that investors have different views on stock valuations. This is not surprising given the difficulty of investors assessing securities. While it is generally said that assessing securities is identical to calculating the present value of all future cash flows for investors (Elton and Gruber, 1995; Really and Brown, 1994). The divergence of opinion occurs around the relevant discount rates and dividend estimates for each particular period. Thus, according to efficient market theory, the assumption of homogeneous investor expectations is unrealistic according to Fama (1965), to the expectation of heterogeneous investors.

The price is not only influenced by the present value of the cash flow factor received by stock investors and risk but also by the level of divergence of opinion. This factor is not in the capital asset pricing model. Capital asset pricing model is a balance model linking risk and expected return for an asset in a condition when the market is in equilibrium condition. Assumptions in the CAPM are, for example, that all investors have an identical probability return distribution in the future, as investors have almost identical expectations or expectations (Sharpe, 1964).

The stock price in the market is determined by the demand curve and the offer curve in this case is the number of shares issued. Investors are optimistic about one of the new shares will set prices and often optimistic investor opinion will be different from the average opinion. The greater the divergence of opinion among investors is optimistic and pessimistic, the higher the stock price. That is, the greater the divergence of opinion the higher the stock price. The higher stock price in early trading in the secondary market will result in lower post stock returns.

2.3 Divergence of opinion and long term performance

According to Miller (1977), the first day's trading price is driven by an upbeat investor. In the long run the price is convergent with intrinsic value and will result in less post-IPO performance. The small divergence of opinion leads to lower stock prices, as time goes by and the amount of information in the divergence market of opinion declines in the years following the initial public offering.
When a new company emerges, there is uncertainty about the future. Some investors will be much more optimistic than others. An optimistic investor will set the price. As a result, the divergence of opinion will be greater for IPO shares than the old stock. The impact of a large divergence of opinion is to increase stock prices and lower long-term returns.

In the financial of prices, the volatility of return is often used as a measure of risk and uncertainty as well as divergence of opinion. The greater the divergence of opinion, the greater the sensitivity to the buying and selling of shares will be. Thus price and volatility return can serve as a measure of divergence of opinion. According to Ritter (1984), volatility is measured by the standard deviation of daily returns in the first 20 days after the initial public offering.

2.4 Divergence of Opinion Measures

Miller and Reilly (1987), Harris and Raviv (1993) and Lee and Swaminathan (2000), measured differences of opinion with trading volume. Diether, Malloy and Scherbina (2002) use dispersion of analyst estimates of future earnings. Boehme, Danielsen and Sorescu (2006) also use trading volume, stock return volatility and dispersion of analysts' estimates together to measure dissent. Wang (2010), uses analysts' estimates of the first day's price dispersion to measure differences of opinion. This is a direct description of the different opinions among investors. The analysts' approximate price forecast is a measure of heterogeneous confidence among investors because such information can be available before trading from an IPO company.

The dispersion of the estimated price of the shares of the IPO company is:

\[
\text{Dispersion} = \frac{\text{st. dev}(P_{ij}^M)}{P_{ij}^M}
\]

Where: st. dev(P_{ij}^M) Referring to the standard deviation of stock price i from a number of analysts (j) company's stock price expectations IPO. P_{ij}^M is the price expectation from analysts. A high spread of price estimates from analysts suggests that analysts have a greater divergence of opinion about IPO valuations.

Meanwhile, Miller (1977) points out that most trades occur only because pessimistic investors sell their shares to optimistic investors. Thus, the transaction turnover rate on the first day of trading (TR) can be a measure of divergence of opinion. If the transaction turnover rate is higher, the divergence of investors' opinions is greater. Wang (2010) also uses the abnormal volatility of the IPO to measure the divergence of opinion.

Volatility abnormal return = Vol_{ipo} - Vol_{mar}

Where: Vol_{ipo} = standard deviation from return 25 days after listing, including initial return, Vol_{mar} = Standard deviation from daily market index returns over the same period.

Houge (2001) uses proxy disagreements about the IPO are: bid ask spread percentage, first trading time and flipping ratio. This illustrates the uncertainties faced by IPO-related parties such as market participants, underwriters and institutional investors. Ratio flipping is defined as an approved selling proportion, large volumes (trading blocks of 10,000 shares or more) are proxies for disagreements about the IPO, calculated by dividing the total block of approved sales volume by total stock volume.

2.5 Conceptual Framework and Hypothesis

According to Miller (1997, 2000), the theory offered to explain the declining long-term performance of an initial public offering is the divergence of opinion about the value of an initial public offering that usually declines over time. This causes the stock price to decline relative to the fair price. This divergence of opinion is due to the difficulties investors estimate the value of their shares, although generally speaking the value of shares equals the present value of all future cash flows (Elton and Gruber, 1995; Really and Brown 1994). The divergence of opinion occurs on the amount of relevant discounts and the expected dividends earned on those shares. The greater the difference of opinion the higher the stock price, and the higher the stock price the lower the rate of return. Disagreements declined in the years following the public offering.

Ritter (1991) describes the long-term performance that decreased post-IPO. Houge et al. (2001) uses bid ask spread percentage to explain long term performance of the company, first trading time and flipping ratio as a proxy of dissent. His research resulted in the finding of a significant relationship between the divergence of opinion and the long-term performance of post-IPO stocks, Gao (2006), using the volatility of return 25 days, 50 days, 75 days and the first 100 days after the IPO as a proxy of the divergence of opinion. The result is a stronger divergence of opinion in the IPO market than in the non-IPO market. Wang (2010) explains that differences of opinion influence investors' trading behavior and trading prices on the first day on the secondary market. Wang (2010) used the volatility of abnormal return IPO for 25 days to measure investors' divergence of opinion. The first trading price on the secondary market reflects investors' valuation of available information. The results of his research stated that the difference of opinion has a negative relationship with the long-term performance of post-IPO shares. Based on the above it can be formulated hypothesis as follows:

H₁: The level of opinion divergence negatively affects the long-term performance of post-IPO shares

3.1 Research Design

This research uses explanatory research design. According to Anshori and Iswati (2009: 12), explanatory research is a research that seeks to explain the influence of variables under study through hypothesis testing. This study examines and analyzes the effect of divergence of opinion on long-term performance of post-IPO shares.
3.2 Research Sample
The sample is determined by purposive sampling, the samples taken must meet certain criteria. The criteria used are, a). Companies conduct an IPO from January 1, 2004 - December 31, 2013. b). IPO companies that do not do stock splits, are not delisted from BEI within 3 years, this is because the term of long-term performance measurement is 3 years. C). It has information and data availability used in research.

3.3 Types and Data Source
The type of data of this research is secondary data, in the form of company data of IPO year 2004-2013. These data include: company name, company prospectus, stock offering price, closing price of stock first day on the secondary market, closing price of stock second day to 25 days after listing, monthly stock price up to 12 months, 24 months and 36 months, index The composite stock price of the first day up to the 25th day after listing, the monthly share price index of up to 12 months, 24 months and 36 months. The data in this study were obtained from the Indonesian Stock Exchange Gallery at University of Muhammadiah Gresik, PT Indonesian Capital Market Electronic Library (ICaMEL), Financial Services Authority (OJK), Bank Indonesia and other supporting publications.

3.4 Research Variable
3.4.1. Variable Classification
Research Variables consist of independent variable, dependent variable and control variable. Independent variable in this research is divergensi opinion. Dependent variable in this research is long term performance of post IPO stock while control variable is initial return, company size, company age, offering size, reputation of underwriter and profitability.

3.4.2. Operational Definition
Based on the classification of the above variables, the operational definition of the variable is elaborated as follows:

1. Independent Variable :
Divergence Opinion
The divergence of opinion is the difference of opinion among IPO investors as measured by the abnormal volatility of return initial public offering (Wang, 2010).
Volatility_i = Vol IPO – Volmar
With,
Volatility_i = volatility abnormal return IPO shares i
Vol IPO = standard deviation from return 25 days after listing
Volmar = The standard deviation of the market index returns 25 working days after the stock i listing on the exchange.

2. Dependent Variable:
Long Term Performance of Post-IPO Shares
The long-term performance of post-IPO shares is the result obtained by investors that reflect the company's market performance. The benchmark of long-term stock performance post IPO used two measurements namely:

a. Cumulative Abnormal Return (CAR)
Ritter (1991) used a cumulative abnormal return to measure long-term performance of stocks with average stock returns corrected with market returns.
CAR_i = \sum_{t=1}^{T} AR_{it}
With,
CAR_i = Cumulative stock returns corrected with market returns from month 1 to T.
AR_{it} = R_{it} – E(R_{it})
AR_{it} = abnormal return with market adjusted return shares i month t
R_{it} = return shares i on month t
E(R_{it}) = Expectation of stock return i in month t by using market return in this case using IHSG.

b. Buy and Hold Abnormal Return (BHAR).
Buy and hold abnormal return is the advantage of buying and holding shares for a certain period of time, Jain and Kini (1994), Loughrun and Ritter (1995), Brav and Gompers (1997), Jakobsen and Sorensen (1994), Chahine (2002) and Barber and Lyon (1997). This study establishes the advantage of buying IPO shares in early trading and reselling within 12 months, 24 months and 36 months later. Buy and hold return abnormal return, this variable is formulated in accordance with the formula:
BHAR_{it} = \prod_{t=1}^{T} \left[ 1 + R_{it} \right] - \prod_{t=1}^{T} \left[ 1 + E(R_{it}) \right]
With,
BHAR_{it} = Buy and hold abnormal return Securities i t period, shares purchased at closing price on the first day of listing and held for 12 months, 24 months and 36 months.
R_{it} = Return securities i on period t
T = Period (12, 24 and 36)
E(R_{it}) = Expected return securities i period T by using market adjusted IHSG model.

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3. Control Variable:
   a. Initial Return
   Initial Return is return on the first day on the secondary market measured by the difference between the closing stock price on the first day on the secondary market with the initial offer price divided by the initial offer price. The equation used for initial return according to Kunz and Anggarwal (1994) formula:
   \[
   IR_i = \frac{P_{i1} - P_{0i}}{P_{0i}} \times 100\%
   \]
   with,
   \[IR_i = \text{Initial Return shares } i\]
   \[P_{0i} = \text{Stocks quotes } i\]
   \[P_{i1} = \text{closing price on the first day on the secondary stock market } i\]
   b. Firms Size
   The size of a company is the size of the company as measured by the total number of sales in a year, taken from the IPO's profit and loss for the period ended 31 December of the year before the IPO is executed, thus the size of the company is calculated as follows:
   \[UK_i = \text{Ln } (\text{Company sales IPO}_i)\]
   dengan,
   \[UK_i = \text{firms size } i\]
   Company sale IPO = Company sales for i stock in one year
   c. Age of Company
   The age of the Company is the age calculated from the establishment of the company based on the deed of establishment until the time the company makes an initial public offering. The age of a company is measured by the number of years.
   \[AGE_i = \text{Year of company's establishment } - \text{Year of IPO}_i\]
   d. Offering Size
   Offering size is the number of stock quotes at the IPO. Offering size is measured by the offer price of shares at the IPO multiplied by the number of shares issued compared to the market capitalization.
   \[\text{Offering Size}_i = \frac{\text{HP}_i + \text{JLS}_i}{\text{TKP}}\]
   dengan,
   \[\text{Offering Size}_i = \text{Number of Offering of Shares } i \text{ at the IPO}\]
   \[\text{HP}_i = \text{Share Offer Price } i\]
   \[\text{JLS}_i = \text{Number of Shares } i \text{ issued}\]
   \[\text{TKP} = \text{Total Market Capitalization}\]
   e. Emision Reputation of Underwriter
   The underwriter's reputation is the rating of underwriters whose measurements are with dummy variables. For high-reputed underwriters, scale 1 is employed. Meanwhile, for the underutilized underwriters 0 scale is implemented. The stratification of reputation of underwriters is based on the frequency of the underwriters when the company conducts an IPO within a year. Highly reputable underwriters are underwriters above the average frequency of underwriters in a year where frequencies below the average frequency are categorized as underutilized underwriters. Average is calculated by:
   \[
   \text{Average of frequency } = \frac{\sum \text{frequency} \text{ of emisi}}{\sum \text{underwriter } \text{ who make a guarantee within a year}}
   \]
   dengan,
   \[\sum \text{frequency } = \text{he number of underwriting frequencies guarantees a year}\]
   \[\sum \text{underwriter } = \text{Number of underwriters who make a guarantee within a year}\]
   f. Profitability
   Profitability is the ability of a company to generate profits in the future akandatang or company's ability to generate profits that can be obtained shareholders. Measurement of company profitability is used return on equity (ROE), the equation is:
   \[
   \text{ROE}_{i,t} = \frac{\text{EAT}_{i,t} - 1}{\text{TE}_{i,t} - 1}
   \]
   with,
   \[\text{ROE}_{i,t} = \text{Return on equity } i \text{ at IPO-1}\]
   \[\text{EAT}_{i,t} = \text{Earning After Tax } i \text{ at IPO-1}\]
   \[\text{TE}_{i,t} = \text{Total equity } i \text{ at IPO-1}\]

3.4.3 Analysis Model
To test the hypothesis, multiple linear regression models are implemented in this study. The model used to answer hypotheses 1, 2, is used in models 1 and 2 as follows:
1. CAR, = \[\alpha_i + \beta_1 \text{DIV OP}_i + \beta_2 \text{IR}_i + \beta_3 \text{UK}_i + \beta_4 \text{AGE}_i + \beta_5 \text{OFFSIZE}_i + \beta_6 \text{REP}_i + \beta_7 \text{ROE}_i + \epsilon_i\]
2. BHAR, = \[\alpha_i + \beta_1 \text{DIV OP}_i + \beta_2 \text{IR}_i + \beta_3 \text{UK}_i + \beta_4 \text{AGE}_i + \beta_5 \text{OFFSIZE}_i + \beta_6 \text{REP}_i + \beta_7 \text{ROE}_i + \epsilon_i\]
   With:
   \[\text{CAR}, = \text{Cumulative Abnormal Return } i \text{ stocks } i\]
   \[\text{BHAR}_i = \text{Buy and Hold Abnormal Return } i \text{ stocks } i\]
   \[\text{DIV OP}_i = \text{Divergence Opinion of stocks } i\]
3.4.4 Data Analysis Technique

Data analysis techniques used to answer the existing problems and hypothesis testing is analyzed using multiple linear regression model test. The steps of analysis are:

1) Calculate the divergence of opinion or level of dissent among investors.
2) Calculates the long-term performance of post-IPO shares with CAR and BHAR methods for a period of 12 months, 24 months and 36 months
3) Calculates initial return, firm size, company age, offering size, searches for the underwriter's reputation and calculates the profitability of the company
4) Regression between independent variables to the dependent variable (models 1 and 2) with two stages. The first stage between the divergence of opinion and the long-term performance of post-IPO shares (CAR and BHAR). The next stage regression the divergence of opinion, initial return, firm size, age of company, offering size, reputation of underwriter and return on equity on long-term performance of post-IPO shares (CAR and BHAR).

IV. RESULTS AND DISCUSSION

4.1 Testing of CAR and BHAR for 12 months period

The hypothesis shows that there is influence of the main variables and control variables on CAR12 and BHAR12. In table 1, the variables of opinion divergence were found to have a significant positive effect on CAR12 in model 1.1 with a 0.05 significance level in model 1.2 with a 0.05 significance level and the UK variable was found to have a significant positive effect with a significance level of 0.05. From table 2 the divergence of opinion was found to have a significant positive effect on the long-term performance of post-IPO shares (BHAR12) in model 2.1 with a significance level of 0.05. Another variable that has a positive influence is the UK with p-value of 0.05. From the above description can be concluded that the hypothesis that the divergence of opinion negatively affect the long-term performance of IPO shares (CAR12) rejected. Long-term performance using BHAR12 measurements from the results obtained hypothesis that said the divergence of opinion negatively affect the long-term performance of IPO shares rejected.

4.2 Testing of CAR and BHAR Period 24 months

In this section tested the hypothesis reveal that there is influence of the main variables and control variables on CAR24 and BHAR24. In table 1, the variables of opinion divergence were found to have an insignificant effect on CAR24 on model 1.1 and in model 1.2 the divergence of opinion was found to have an insignificant effect on CAR24 and UK variables were found to have a significant positive effect with a 0.05 level of significance. From table 2, the divergence of opinion was found to have a significant effect on the long-term performance of post-IPO shares (BHAR24) in model 2.2. Other variables that have a significant positive effect are UK, REP and OFFSIZE have a significant negative effect.

From the above description can be concluded that the hypothesis that the divergence of opinion negatively affect the long-term performance of IPO shares (CAR24) rejected. The long-term performance using the BHAR24 measurement conclusion obtained is the hypothesis rejected.

4.3. Tests on CAR and BHAR for 36 months

In this section the tested hypothesis claims that there is influence of the main variables and control variables on CAR36 and BHAR36. In table 1 found the divergence of opinion found to have a significant positive effect on CAR36 in model 1.1 and on model 1.2 the divergence of opinion was found to have a significant positive effect on CAR36 with a significance level of 0.05. Initial Return was found to have significant negative effect with p-value of 0.10. From table 2, In model 2.1, 2.2, the divergence of opinion was found to have an insignificant effect on the long-term performance of post-IPO shares (BHAR36). Other variables that have significant negative effect are UK and initial return. From the above description can be concluded that the hypothesis that the divergence of opinion negatively affect the long-term performance of IPO shares (CAR36) rejected

4.4 Discussion

4.4.1 Divergence of Opinion Influence on Long-Term Performance of Post-IPO Period of 12 Months

The findings of this study indicate that the divergence of opinion has a positive effect on the long-term performance of post-IPO shares (CAR12). The results of this study suggest that increase divergence of opinion will be followed by increase long-term performance of post-IPO shares (CAR12). The results of this study contradict the theory offered to explain the long-term performance of post-IPO stocks that decreased according to Miller (1977, 2000). The
The divergence of opinion affect the valuation of the IPO by an optimistic investor push the price on the first trading day above the intrinsic value. The higher the level of opinion divergence then the initial return is greater and decrease the long-term performance of post-IPO shares. Houge (2001) explains that the divergence of opinion affects investors' trading behavior and first-day prices in the secondary market and the divergence of opinion is negatively related to the long-term performance of post-IPO shares. Gao (2006) and Wang (2010), pricing in early trading on the secondary market reflects investors' valuation of available information, as time goes by and information increases the divergence of opinion among investors narrows, and consequently the market price will decrease.

The positive influence of divergence of opinion with the long-term performance of post-IPO shares (CAR12) divergence of opinion is a fundamental risk to the company. The level of opinion divergence means future uncertainty. As Merton (1987), Lee and Swaminathan (2000) argue that the divergence of opinion capture the risk of the company, investors need a higher rate of return as compensation for future uncertainty. Regression results of the main variables and control variables with long-term stock performance of post-IPO (BHAR12) divergences of opinion and firm size have an influence on long-term performance of post-IPO shares using BHAR12. The results of long-term post-IPO stock performance studies using BHAR12 measurements are consistent with the results of long-term post-IPO stock performance studies using CAR12.

4.4.2 Divergence of Opinion Influence on Long Term Performance of Post-IPO Stock Period 24 months

The findings of the study in towards the first and second regression result found that the divergence of opinion did not affect the long-term performance of post-IPO shares (CAR24). This means that there is no divergence of opinion among investors in period 24 with measurement of CAR24. IPO stock investors in buying stocks pay attention to company size. Company size is a proxy of the difficulty of assessing the company (Ritter, 1984, Miller, 2000). The small size of the company has the long-term performance of post-IPO stocks declining. The result of regression with measurement (BHAR24) has significant influence on model 2.2. The divergence of opinion means the uncertainty that will occur in the future. As Merton (1987), Lee and Swaminathan (2000) argue that the divergence of opinion will capture the risk of the company, investors need a higher rate of return as compensation for future uncertainty. The divergence of opinion is a reflection of the uncertainty facing IPO market participants. Because the divergence of opinion is measured by the volatility of abnormal return initial public offering or the price variability adjusted to the market and the condition of the current study of capital market affect the price and certainly has an impact on stock return. Thus the standard deviation also predicts the long-term performance of post-IPO shares in the next two years this is in accordance with the theory of yield risk. In addition, the reputation of underwriters and offering size are also considered by investors in making decisions to buy IPO shares.

4.4.2 Divergence of Opinion Influence on Long Term Performance of Post-IPO Stock Period 36 months.

The findings of the study toward the first and second regression result the divergence of opinion, the control variables with the long-term performance of post-IPO shares (CAR36), found that the variables of opinion divergence had a significant positive effect on model 1.1, model 1.2 and initial return negatively affect the term performance Long post-IPO shares. The result of research for 36 month period of variable of opinion divergence consistent with result of previous period, that is having divergence of opinion have positive influence to long term performance of stock post IPO. The initial return variable has a significant negative effect to the long-term performance of post-IPO shares. The results of this study support the results of research Yu (2006), Darnetko (2009), Miller (2000). This means that the higher initial return then the long-term performance of companies post IPO decline. In addition, investors also pay attention to the size of the company in the purchase of new shares.

V. CONCLUSION

Divergences of opinion have a positive effect on long-term performance of post-IPO shares. This means that the greater the divergence of opinion the greater the long-term performance of post-IPO shares or the smaller the smaller the divergence of opinion is also the long-term performance of post-IPO shares. This occurs on the long-term performance of post-IPO shares on the cumulative measurements of abnormal return12 months, 36 months of major variable regression results with long-term performance. The result of regression of all variables with long-term performance of post-IPO stock with cumulative measurement of abnormal returns in period12 months and 36 months. The result of regression of divergence of opinion with long-term performance of post-IPO 12 bulandengan shares of buy and hold abnormal return is found to have a significant positive effect. Next regression results are the main variables, control variables with long-term performance of post-IPO stocks with measurements of buy and hold abnormal return have a significant positive effect on the 12 month and 24 month period. The positive influence of divergence of opinion with long-term post-IPO performance is due to the investor's opinion, the divergence of opinion is a reflection of the company's risk. The level of opinion divergence means reflecting future uncertainty and investors need a higher rate of return as compensation for future uncertainty.

Company characteristics control the divergence of opinion in two measurements. This implies that the long-term performance of post-IPO shares in addition to influenced by the divergence factor of IPO stock investors' opinion on the characteristics of the company. Variable characteristics of companies that are considered by investors in IPO stock transaction are firm size, initial return, reputation of underwriter and stock offering size on long-term performance of post-IPO shares.
REFERENCES


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[34] How, JC, 2000, Initial and Long Run Performance of Mining IPOs in Australia, Australia Journal of Management, Vol 25, No 1, 95-118


[41] Johnson, Malena, Lindblom dan Platan 2002, Behavioral Finance and the Change of Investor Behavior during and After the Speculative Bubble At the End of the 1990s, Tesis, Finance Faculty of Bussines Administration FEK 591


**APPENDIX**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIVOP (Decimal)</td>
<td>157</td>
<td>-0.0881</td>
<td>0.1046</td>
<td>0.0305</td>
<td>0.0281</td>
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<tr>
<td>IR (%)</td>
<td>157</td>
<td>-61.4290</td>
<td>211,2000</td>
<td>23.3452</td>
<td>32.6793</td>
</tr>
<tr>
<td>UK (Ln)</td>
<td>157</td>
<td>18.4000</td>
<td>32.7620</td>
<td>26.6164</td>
<td>2.5457</td>
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<tr>
<td>AGE (year)</td>
<td>157</td>
<td>2.0000</td>
<td>90.0000</td>
<td>18.0127</td>
<td>14.3160</td>
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<tr>
<td>OFFSIZE (%)</td>
<td>157</td>
<td>0.0009</td>
<td>0.6801</td>
<td>0.0301</td>
<td>0.0640</td>
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<tr>
<td>REP (Dummy)</td>
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<td>0.0000</td>
<td>1.0000</td>
<td>0.7261</td>
<td>0.4474</td>
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<tr>
<td>ROE (%)</td>
<td>157</td>
<td>-38.7200</td>
<td>253.7700</td>
<td>19.1820</td>
<td>27.9402</td>
</tr>
<tr>
<td>CAR12 (Decimal)</td>
<td>157</td>
<td>-1.7360</td>
<td>3.9686</td>
<td>0.1073</td>
<td>0.8111</td>
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<tr>
<td>CAR24 (Decimal)</td>
<td>157</td>
<td>-7.0325</td>
<td>5.2081</td>
<td>-0.0780</td>
<td>1.1138</td>
</tr>
<tr>
<td>CAR36 (Decimal)</td>
<td>134</td>
<td>-2.2120</td>
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<td>BHAR12(Decimal)</td>
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<td>BHAR24(Decimal)</td>
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<td>7.3659</td>
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<td>BHAR36(Decimal)</td>
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<td>-2.8074</td>
<td>70.0722</td>
<td>0.6553</td>
<td>7.5189</td>
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</table>

Notes: DIV OP = Divergence Opinion, IR = Initial Return, UK = Company Size, AGE = Company Age, OFF size = Offer Size, REP = Underwriter Reputation Emissi, ROE = Return on Equity, CAR = Cumulatif Abnormal Return, BHAR = Buy and Hold Abnormal Return

![Figure 1. Conceptual Framework](image)

**Table 1 Regression Result of CAR12, CAR 24, CAR36**

<table>
<thead>
<tr>
<th>Model</th>
<th>CAR12 Beta</th>
<th>CAR24 Beta</th>
<th>CAR36 Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.066</td>
<td>-0.136</td>
<td>-0.427</td>
</tr>
<tr>
<td>Constant</td>
<td>5.692**</td>
<td>1.906</td>
<td>7.689**</td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>0.039</td>
<td>0.002</td>
<td>0.061</td>
</tr>
<tr>
<td>Adj <strong>R^2</strong></td>
<td>0.033</td>
<td>-0.004</td>
<td>0.051</td>
</tr>
<tr>
<td>2</td>
<td>-0.866</td>
<td>-2.655</td>
<td>-2.097</td>
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<tr>
<td>Constant</td>
<td>6.969**</td>
<td>4.739</td>
<td>10.327**</td>
</tr>
</tbody>
</table>
Tabel 2 Regression Result of BHAR12, BHAR 24, BHAR36

<table>
<thead>
<tr>
<th>Model</th>
<th>BHAR12</th>
<th>BHAR24</th>
<th>BHAR36</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0,150</td>
<td>0,966</td>
<td>1,258</td>
</tr>
<tr>
<td>DIV OP</td>
<td>6,687*</td>
<td>-16,136</td>
<td>-18,685</td>
</tr>
<tr>
<td>R²</td>
<td>0,047</td>
<td>0,004</td>
<td>0,005</td>
</tr>
<tr>
<td>Adj R²</td>
<td>0,039</td>
<td>-0,003</td>
<td>-0,002</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-2,744</td>
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<tr>
<td>DIV OP</td>
<td>9,502**</td>
<td>8,291**</td>
<td>-13,389</td>
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<tr>
<td>IR</td>
<td>-0,002</td>
<td>-0,001</td>
<td>-0,047**</td>
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<tr>
<td>UK</td>
<td>0,097**</td>
<td>0,122**</td>
<td>-0,656**</td>
</tr>
<tr>
<td>AGE</td>
<td>0,003</td>
<td>-0,005</td>
<td>-0,036</td>
</tr>
<tr>
<td>OFFSIZE</td>
<td>-3,320</td>
<td>-4,967*</td>
<td>-1,784</td>
</tr>
<tr>
<td>REP</td>
<td>-0,050</td>
<td>0,369**</td>
<td>-0,366</td>
</tr>
<tr>
<td>ROA</td>
<td>0,002</td>
<td>-0,001</td>
<td>-0,014</td>
</tr>
<tr>
<td>R²</td>
<td>0,142</td>
<td>0,142</td>
<td>0,092</td>
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<tr>
<td>Adj R²</td>
<td>0,092</td>
<td>0,073</td>
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</tr>
</tbody>
</table>

a. Dependent Variable: BHAR12, BHAR24, BHAR36.
b. Predictors: (Constant), DIV_OP (model 1),
c. Predictors: (Constant), DIV_OP, IR, UK, AGE, OFFSIZE, REP, ROA (model 2),
d. ** sign pada level 0,05, *sign pada level 0,10