



## The Influence of Earnings Quality on Long-Run Stock Performance of IPO

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**ABSTRACT:-** This study aims to test whether poor long-run stock price performance is directly and indirectly explained by the innate and discretionary earnings quality. This research shows that long-run stock price performance is directly explained by discretionary earnings quality. This result proves the existence of earnings management practices to increase the initial price. Poor long-run stock performance is indirectly explained by innate earnings quality through divergence of investors' opinion and initial return. This means that innate earnings quality is one of sources of information uncertainty.

**Keywords:-** Earnings quality, Divergence of investors' opinion, Initial return, Long-run Stock Performance

### I. INTRODUCTION

Empirical studies generally discover that companies have poor long-run stock performance<sup>1</sup> of Initial Public Offering (IPO) [1,2,3] This poor stock performance is also discovered up to three years after IPO [2]. Earnings management hypothesis proposes that poor stock performance is caused by increasing earnings management to maximize the price of initial stock [3, 4]. High price initial stock might influence poor long-run stock performance of IPO.

Increasing earnings management is the characteristic of bad earnings quality [5]. Earnings quality can be divided into two components, which are innate and discretionary components [6]. The innate earnings quality comes from business model, business environment, and business risks, while components of discretionary earnings quality come from company's reporting policy.

[3] hasn't explained the phenomenon of initial return which generally happens on the first day of stock exchange. Previous studies showed that poor stock performance happens after initial return<sup>2</sup>, such as [7, 8, 9, 10, 11]. Thus, this research studies about the poor stock performance after initial return. This study predicts poor long-term stock price performance is explained by earnings quality directly and indirectly through initial return.

Consequence of earnings quality on long-run stock performance can be explained by earnings management hypothesis [3] and [12]. Earnings management hypothesis proposes that earnings management is performed to maximize the price of initial stock. The consequence of this action is poor long-run stock performance. [12] proposes that earnings quality has indirect quality on long-run stock performance through

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<sup>1</sup> Long-run stock performance is stock performance up to three years after IPO

<sup>2</sup> Initial return shows the return on the first day in secondary market

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divergence of investors' opinion<sup>3</sup> and initial return. Earnings quality is the source of information uncertainty [13]. Information uncertainty triggers divergence of investors' opinion at the first day in secondary market. Divergence of investors' opinion creates initial return because optimistic investors are more dominant in determining the price of stock. Initial return will be followed by poor of long-run stock performance.

This study has theoretical and practical contribution. Earnings quality is proven to influence investors' behaviors in secondary market after IPO, so it supports economic consequence theory [14]. Long-run stock performance is explained by the innate and discretionary quality of earnings quality. The practical contribution of this research is investors should not invest in poor discretionary earnings quality stock.

## **II. HYPOTHESIS DEVELOPMENT**

### ***2.1 The Quality of Earnings and Long-run Stock Performance***

Economic consequence theory suggests that the quality of innate and discretionary earnings has economic consequence on decision-making behavior. Earnings management hypothesis suggests that company management performs earnings management to increase profit before stock IPO. The purpose of the practice is to maximize the price of initial stock. The impact of determining high initial price is poor long-run stock performance.

Earnings management to increase profit is the characteristic of bad earnings quality. This bad earnings quality will influence long-run stock performance because investors in secondary market consider initial stock price was valued too high. The decline in investors' assessment in secondary market is seen in the decline of performance in a long period of time. Empirical studies discover that earnings quality influence long-run stock performance [1, 10, 4, 3]. Greater increasing of earnings management (lower earnings quality) will cause lower stock performance. It means earnings quality has positive influence on long-run stock performance.

Earnings quality can be divided into two components, which are innate and discretionary components. Both components are predicted to have positive impact on long-run stock performance. Based on the argument, the following research hypotheses are proposed.

H<sub>1</sub>: The innate earnings quality has positive impact on long-run stock performance

H<sub>2</sub>: The discretionary earnings quality has positive impact on long-run stock performance

### ***2.2 The Influence of Innate and Discretionary Qualities on Divergence of investors' opinion***

The impact of the earnings quality components on the divergence of investors' opinion is based on economic consequence theory [14, 12, 13]. Economic consequence theory suggests that the earnings quality components influences decision-making behavior. This is because earnings quality is a source of information uncertainty that makes it difficult for investors to assess the company value [13]. The uncertainty creates divergence of opinions regarding the value of the company [12]. The innate and discretionary earnings quality impact the divergence of investors' opinion due to the divergence of investors' opinion on earnings to assess the company value. Bad earnings quality causes uncertainty and difference in believe regarding the value of the company [15]. This argument supports anomaly of accrual mispriced [16]. Error in accrual interpretation is found in naive investors [17]. Based on the argument above, the following research hypotheses are proposed.

H<sub>3</sub>: The innate earnings quality has negative influence on divergence of investors' opinion

H<sub>4</sub>: The discretionary earnings quality has negative influence on divergence of investors' opinion

### ***2.3 Quality of Earnings and Initial Return***

[13] Predict that poor information quality increase information uncertainty. High information uncertainty cause divergence valuation of investors. [12] predict divergence valuation of investor resulting initial return. Earnings are important information for investor valuation. Poor innate and discretionary earnings quality should increases the information uncertainty, so that investors have a different valuation on the stock price. Optimistic investors assess the stock is higher than the initial price. This resulted in the increase in stock

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<sup>3</sup> Divergence of investors' opinion happens if there's disagreement between investors on stock price. Investors have different judgments on stock fundamental value.

prices in the secondary market in early trade. Based on the argument, it can be stated research hypotheses:

H<sub>5</sub>: Innate earnings quality has negative influence on initial return

H<sub>6</sub>: Discretionary earnings quality has negative influence on initial return

#### ***2.4 The Influence of Divergence of investors' opinion on Initial Return***

Negative influence of divergence opinion on initial return was based on [12]. High uncertainty on the value of the company at secondary market causes divergence of investors' opinion. Optimistic investors dominate determination of stock price on the first day in secondary market. This makes the stock price higher than fundamental value. Miller's model assumes that the price of initial stock is equal to fundamental value. The price of secondary stock market on the first day is usually higher than the initial offering stock price because of investors' overreaction. Empirical studies that found positive influence of divergence of investors' opinion on initial return, including [18, 19, 20, 21]. Based on the above argument, the following research hypotheses are formulated.

H<sub>7</sub>: The divergence of investors' opinion has positive influence on initial return

#### ***2.5 The Influence of Divergence of Investors' Opinion on Long-run Stock Performance***

Negatif influence of divergence investors' opinion on long-run stock performance was based on [12]. The uncertainty in early trade causes divergence of investors' opinion. Investors are optimistic more dominant in determining the share price at early trade in the secondary market, resulting in initial returns. Stock prices that are higher in early trade will be followed by a decline in stock prices in the long run. Then optimistic investor will decrease their assessment of the stocks. This results in a decrease in the share price over the longer term. The negative influence of divergence of investors' opinion on the long-term stock price performance was supported by [20, 22, 23, 21, 24]. Based on the Miller's model [12] and the results of empirical researches, a hypothesis can be formulated as follows.

H<sub>8</sub>: The divergence of investors' opinion has negatif influence on long-run stock performance

#### ***2.6 The Influence of Initial Return on Long-run Stock Performance***

Miller's model assumes initial return is caused by overestimation by optimistic investors. Fads Hypothesis assumes initial return is caused by investors' overreaction on the first day trade in secondary market. Investors' overreaction is short because optimistic investors decrease their assessment on stocks. Financial statements published by the company will reduce the assessment of optimistic to near fundamental stock value. Empirical studies on Miller's model proved negative influence of initial return on long-run stock performance, such as done by [7, 9, 10, 21, 25, 11, 26]. Based on the argument, the following research hypotheses can be made.

H<sub>9</sub>: Initial return has negative influence on long-run stock performance.

### **III. RESEARCH METHOD**

#### ***3.1 Research Sample***

Research sample consists of all companies that made initial public offering in Indonesia Stock Exchange (BEI) during 1998 to 2009 period and are still operating in 2012. Total samples are 170 companies.

#### ***3.2 Research Variables***

This study involves three research variables which are independent, dependent, and mediator variables. Independent variables are the innate earnings quality and the discretionary earnings quality. Divergence of investors' opinions and initial return are mediator variables, while long-run stock performance is the dependent variable.

Earnings quality is estimated using McNichols's model [27] which modifies [28] model. Earnings quality shows accrual ability in explaining operational cash flow in the past, present, and future. Model of earnings quality estimation is as follows.

$$\frac{TCA_{i,t}}{Asset_{i,t}} = \beta_0 + \beta_1 \frac{OCF_{i,t-1}}{Assets_{i,t}} + \beta_2 \frac{OCF_{i,t}}{Assets_{i,t}} + \beta_3 \frac{OCF_{i,t+1}}{Assets_{i,t}} + \beta_4 \frac{\Delta Sales_{i,t}}{Assets_{i,t}} + \beta_5 \frac{PPE_{i,t}}{Assets_{i,t}} + \varepsilon_i \quad (1)$$

Where  $TCA_{i,t}$  = Total current accrual of company i in period t,  $OCF_{i,t-1}$  = Operational cash flow of company i before period t,  $OCF_{i,t}$  = Operational cash flow of company i in period t,  $OCF_{i,t+1}$  = Operational cash flow of company i after period t,  $\Delta Sales_{i,t}$  = Change of annual sale of company I in period t,  $PPE_{i,t}$  = Fixed asset of company i in period t,  $\varepsilon_i$  = Residual which illustrates estimation error.

Total earnings quality of each company is determined by absolute residual ( $\varepsilon$ ) of regression equation 1. Innate earnings quality is estimated from total earnings quality using the model of [29]. The quality innate earnings is estimated using the following equation.

$$TotalEQ_i = \beta_0 + \beta_1 Size_i + \beta_2 \sigma OCA_i + \beta_3 \sigma Sales_i + \beta_4 OperCycle_i + \beta_5 NegEarn_i + \varepsilon_i \quad (2)$$

Where  $TotalEQ_i$  = Quality of total earnings of company i,  $Size_i$  = Size of company i,  $\sigma OCA_i$  = Standard deviation of cash flow of company i,  $\sigma Sales_i$  = Standard deviation of sales of company i,  $OperCycle_i$  = Operation cycle of company i,  $NegEarn_i$  = Negative earnings during three years before stock IPO,  $\varepsilon_i$  = Estimation error.

Innate earnings quality was the result of quality estimation from equation 2. Discretionary earnings quality was estimation error of equation 2.

Divergence of investors' opinion shows disagreement among investors. This disagreement is related to unexpected volume on the first day of exchange in secondary market. Unexpected volume is the difference between volume of stock exchange on the first day of exchange in secondary market and average exchange volume for 20 days. Early approach is used because it is considered the best to measure the divergence of investors' opinion [30]. Unexplained volume used by [30, 24, 22] is calculated as shown below.

$$UV_{i,t} = \left\{ \left[ \left( \frac{Vol_{i,t}}{Shs_{i,t}} \right)_{Prhs} \right] - \sum_{t=20}^{t=1} \left[ \left( \frac{Vol_{i,t}}{Shs_{i,t}} \right)_{Prhs} \right] / 20 \right\} \quad (3)$$

Where  $UV_{i,t}$  = unexplained volume of company i on exchange day t,  $Vol_{i,t}$  = volume of stock exchange of company i on exchange day i,  $Shs_{i,t}$  = total stock published by company i on day t.

Initial return of the first day of exchange in secondary market was measured using market-adjusted return. Market-adjusted return is the difference between return of company stocks and market return on the first day of exchange in secondary market.

$$R_{i,t} = \frac{(P_{1,t} - P_{i,t0})}{P_{i,t0}} \quad (4)$$

Where  $R_{i,t}$  = return of company i on first day,  $P_{i,t}$  = closing market price on first day,  $P_{i,t0}$  = initial stock price.

Long-run stock performance is stock performance in thirty six months after IPO measured by buy and hold abnormal return (BHAR). This approach is better than cumulative return and abnormal return approach in measuring long-run stock performance. BHAR is measured using the following equation.

$$BHAR_{i,t} = \prod_{t=1}^T (1 + R_{it}) - \prod_{t=1}^T (1 + R_{IHSGt}) \quad (5)$$

Where  $BHAR_{i,t}$  = buy and hold abnormal return,  $R_{i,t}$  = stock return of company i on a certain month,  $R_{IHSG,t}$  = Market return on a certain month.

### 3.3 Data Analysis Technique

Data analysis technique used is path analysis to analyze complex relations which can not be solved by linear regression. This study involves independent, dependents, and mediator variables and complex relations. It can be solved by path analysis.

## IV. RESULTS AND DISCUSSION

### 4.1 Variables Descriptions

Descriptions of research variables are shown in Table 1. Mean of innate and discretionary earnings quality were 0,64 each. It means that average company estimated accurate accrual is 0,64. Mean of divergence of investors' opinion is 0,16 which means that average volume on the first day trade in secondary market was

16% above the volume of average trade for 20 days. Mean of initial return is 32%. The lowest initial return is -24% and the highest is 94%. Average long-run stock performance was -72%. It means that average company experiences long-run stock performance 72% below market return. The lowest long-run stock performance is -183% and the highest is 43%.

#### **4.2 Hypotesis Testing**

The results of path analysis are presented in Figure 1. Direct influence of the innate earnings quality on long-run stock performance was 0,003 with sig. value 0,964. The innate earnings quality was not considered to influence long-run stock performance because sig. value  $0,964 > 0,05$ , so  $H_1$  is rejected.  $H_2$  and  $H_3$  are supported, but  $H_4$  is not. The result of  $H_5$  testing is that the innate earnings quality has negative influence on initial return, showing path coefficient of -0,116 and sig. value 0,038.  $H_5$  is accepted because sig. value is  $< 0,05$ . Conversely, the result of path analysis rejects  $H_6$ , because it shows sig. value of  $0,322 > 0,05$ . The result of path analysis accepts  $H_7$ , so the influence divergence of investors' opinion on initial return is supported empirically. The results of  $H_8$  and  $H_9$  testing are also accepted, so it could be concluded that initial return and difference investors' opinions influence long-run stock performance.

The test mediation effect shows that the innate earnings quality indirectly influences long-run stock performance by mediating divergence of investors' opinion and initial return. Divergence of investors' opinion and initial return are proven to fully mediate the influence of the innate earnings quality on long-run stock performance. Divergence of investors' opinion and initial return are not supported for mediating the influence of discretionary earnings quality on long-run stock performance because the discretionary earnings quality does not influence divergence of investors' opinion.

#### **4.3 Discussion**

This study does not show direct influence of the innate earnings quality on long-run stock performance, but it supports indirect influence of the innate earnings quality on long-run stock performance through the mediation of divergence of investors' opinion and initial return. The result of this study supports economic consequence theory [14] stating that the innate earnings quality influences decision-making behavior. The innate earnings quality is discovered to be a source of information uncertainty which causes divergence of investors' opinion. The higher (lower) the innate earnings quality, the lower (higher) the divergence of investors' opinion. Divergence of investors' opinion influences initial return. Low (high) divergence of investors' opinion causes low (high) initial return. Low (high) initial return would be followed by high (low) long-run stock performance. This result supports Miller's model [12]

This study shows a direct influence of the discretionary earnings quality on long-run stock performance, but does not prove indirect influence of discretionary earnings quality on long-run stock performance. It supports earnings management hypothesis [3]. Bad discretionary earnings quality is due to increasing earnings management in the period before stock IPO. Increasing earnings management is performed to set high initial price. High initial price would be followed by poor of long-run stock performance. This study fail to support indirect influence of the discretionary earnings quality on long-run stock performance through divergence of investors' opinion and initial return. This is because the discretionary earnings quality does not influence divergence of investors' opinion and initial return. It shows that investors in secondary market have anticipated high initial price due to bad discretionary earnings quality since the first day of trade in secondary market. Investors agree that bad discretionary earnings quality is related to high initial price.

## **V. CONCLUSION AND IMPLICATION**

### **5.1 Conclusion**

This study discovers that the quality of innate and discretionary earnings influence long-run stock performance. Innate earnings quality indirectly influences long-run stock performance through divergence of investors' opinion and initial return, while discretionary earnings quality directly influences long-run stock performance. The result of this study shows that only innate earnings quality, as a source of information uncertainty, influences divergence of investors' opinion at the start of trade in secondary market. Low (high) divergence of investors' opinions creates low (high) initial return. Low (high) initial return would be followed by high (low) long-run stock performance. Discretionary earnings quality is not proven as a source of information uncertainty, so it does not influence divergence of investors' opinion. Investors have anticipated bad discretionary earnings quality as a company's effort to maximize the price of initial stock.

### **5.2 Implication**

The influence of the quality of innate and discretionary earnings on long-run stock performance provides empirical support for economic consequence theory. Earnings quality is proven to influence investment decision-making behavior in stock market. The innate earnings quality indirectly influences long-run stock performance through divergence of investors' opinion and initial return. These results show that the innate earnings quality as a source of information uncertainty and Miller's model [12] is proven empirically. The discretionary earnings quality directly influences long-run stock performance. The higher (lower) the discretionary earnings quality, the higher (lower) the long-run stock performance. This result shows that the discretionary earnings quality is not a source of information uncertainty.

The results of this study could be used for investor' references in making investment decisions in primary and secondary markets. Investors should not buy initial stock of companies with low discretionary earnings quality in primary market to avoid loss due to buying expensive initial stock. Investors should buy initial stocks with high discretionary earnings quality because these stocks will be followed by high long-run stock performance.

Investor should sell stocks with low innate earnings quality at the start of exchange in secondary market. Stocks with low quality of secondary market will be followed by high initial return. Investors will gain maximum profit if they sell stocks on the first day of exchange in secondary market. Investors can hold stocks in long term in companies with high innate earnings quality.

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Table 1. Descriptive Statistics

Variables	Minimum	Maximum	mean	Standard Deviation
Innate Earnings Quality	0,40	0,90	0,64	0,10
Discretionary Earnings Quality	0,20	0,90	0,64	0,15
Divergence of investors' opinion	0,00	0,47	0,16	0,11
Initial Return	-24%	94%	32%	25%
Long-run Stock Performance	-183%	43%	-72%	43%

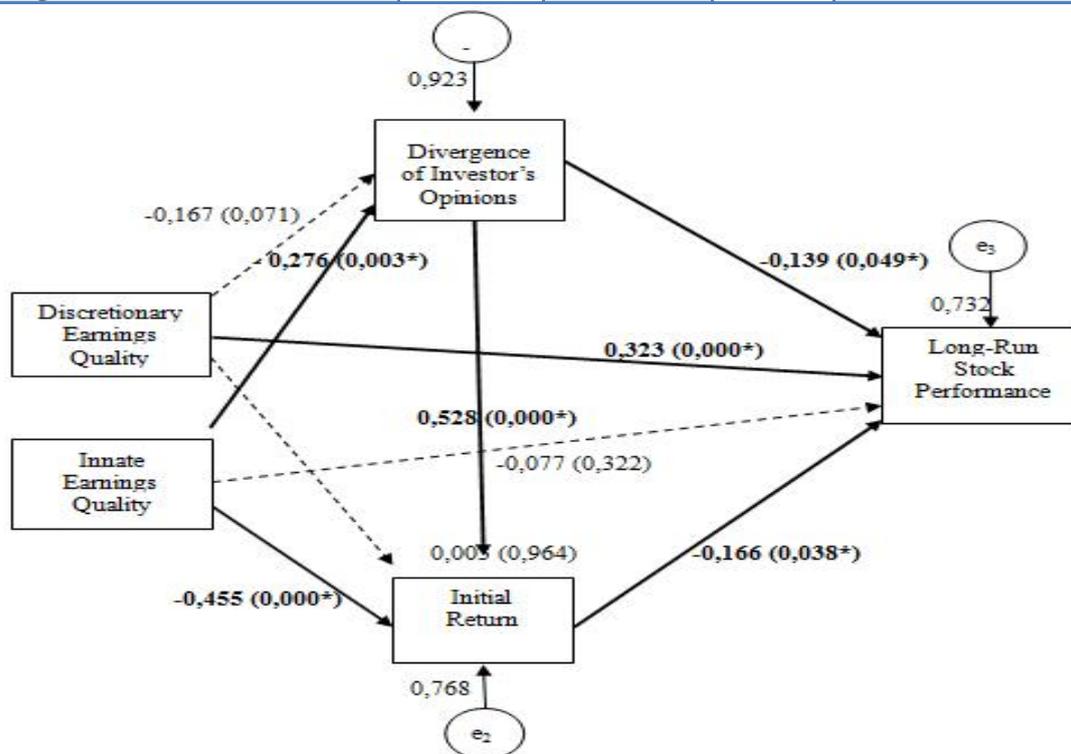


Figure 5.2. Path Diagram of Results of Hypothesis Testing

Note:

\*Significant at  $\alpha = 0,05$

-----> = Significant Path

————> = Insignificant Path