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The Effect of Accounting Information on Stock Price Predictions Through Fluctuation of Stock Price, Evidence From Indonesia

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Abstract

This article describes the results of research on the effect of accounting information on the accuracy of analyst predictions, using stock price fluctuations as a mediation variable. Accounting information uses three measurements, i.e. changes in revenue, changes in net income before extraordinary (NIBE), and changes in debt. This accounting information is combined with market information such as stock price information. A sample of 54 issuers listed on the Indonesia Stock Exchange. The sample is selected using the purposive sampling method. The analytical method uses the ordinary least square estimation method with the data panel structure, to test for direct influence. For indirect effect test, used two least square methods with panel data structure. The tool that used in this analysis was Stata. The results show that changes in revenue have a significant impact on stock price fluctuations. Then, stock price fluctuations may mediate the effect of information on revenue changes on the precise prediction of analysts. This means that changes in revenue will be stronger influence on the accuracy of analyst predictions, if there is an increase in stock prices. For indirect influence, this study proves that changes in revenue affect the accuracy of analyst predictions, through fluctuations in stock prices.

1. Introduction

Every investor wants a high return on every investment made. It needs a critical and accurate analysis before the investment decision is made. Investors need information for decision making, including accounting information that can be seen from the financial statements and reports of capital market analysts, who predict fluctuations in stock prices in the future. Accounting information required by investors includes information on revenue and comparison with previous periods. Similarly, the previous period earnings information and achievements in the current period very needed. In addition, investors also see the condition of corporate debt. The amount of debt is always compared with the achievement of the company's earnings, and it is important to note whether the profit can still cover the interest payments and the repayment of the debt. Information from analysts is needed by investors, because analysts always observe stock price fluctuations and examine the factors that affect the stock price. Company analyst firms also always predict stock prices at the close of stock trading at the end of next year. The accuracy of predictions by analysts largely determines the reputation of the analysts. Many analyst firms are trying to make stock prices predictions, but not all are well documented, so Bloomberg makes a consensus of stock price predictions by gathering all analysts' predictions data, then taking the average. Not all issuers in Indonesia Stock Exchange predicted stock price. Only companies with high trading liquidity or stock buying intensity often occur. This study looks at the company companies whose predictions are in the consensus of Bloomberg.

Predicted stock prices are generally based on fundamental analysis and technical analysis. Fundamental analysis uses historical data of financial statements to see the possibility of stock prices that will occur in the future. While technical analysis see trend tendency that happened at certain moment. Especially for fundamental analysis, the source used is the financial statements published by the company. Researchers have previously shown that there is a relationship and influence between accounting information and stock price fluctuations, such as Ball & Brown (2014), Lev & Ohlson (1982) Watts (1992), Naimah (2012), Becker et al. (2010), Fama & French (1995), Begley & Feltham (2002), Vishwanath (2009), and Ana & Rizal (2016). For research looking at the relationship and influence of stock price fluctuations and accounting information on the accuracy of analyst predictions is still small, including Bhattacharya et al. (2003), Hussainey (2009), Dechow et al. Watts (1998), Latif et al. (2017), and Doğan, (2013). Indirectly, the effect of accounting information on the accuracy of analyst predictions through stock price fluctuations, has not been discovered.is one of the motivations of this study, namely to fill the existing research gap. This is a theoretical phenomenon that the author's attention in this study.

Furthermore it is very interesting to observe situational phenomena related to the accuracy of stock price prediction. According to preliminary research conducted by researchers, the level of accuracy of predictions from analysts is still low. Throughout 2011-2016, the average prediction accuracy is only 9%, meaning that 91% of predictions are missed. Prediction is considered appropriate if the stock price prediction only slip by no more than 5%. For example, if the actual stock price is 100, then the stock price prediction in the stock price range 95 to 105 is still considered appropriate. While the investment climate and stock trading activities on the Indonesian Stock Exchange are still highly sought after by investors.

Table-1. Statistical Highlight, Indonesia Stock Exchange

Information / Year	2011	2012	2013	2014	2015	2016
Trading Days	247	246	244	242	244	246
Trading Volume (mn s)	1,203,550	1,053,762	1,342,657	1,327,016	1,446,314	1,925,420
Trading Value (IDR bn)	1,223,441	1,116,113	1,522,122	1,453,392	1,406,362	1,844,588
Trading Frequency (000)	28,023	29,941	37,499	51,458	54,066	64,975
Listed Company	440	459	483	506	521	537
Listed Shares (mn s)	2,198,133	2,438,408	2,827,795	3,084,060	3,342,584	3,913,661
Market Capitalization (IDR bn)	3,537,294	4,126,995	4,219,020	5,228,043	4,872,702	5,753,613
New Issuers Company	25	23	31	24	18	16
New Shares Offered (mn s)	32,114	27,117	30,398	20,054	17,244	30,034

Source: idx fact book, 2017

The data in table 1 shows that the climate of investment in Indonesia is higher. This is evidenced by trading volumes in millions of sheets, trading value in billion rupiahs, and trading frequency in thousands of transactions, which are constantly increasing. Likewise, the shares outstanding in 2011 were 2,198.133 million shares, but by the year 2016 had been 3, 913.661 million shares. The increase in number of listed companies also occurred from 440 issuers in 2011 to 537 issuers in 2016. Increased market capitalization also occurred in 2016 amounted to 3,537,294 billion rupiahs to 5,753,613 billion rupiahs in 2016. All these datas indicate that the capital market in Indonesia is still continue to show large amounts of transactions and high stock investment values. However, it should be noted, although the frequency of trade continues to increase, market capitalization is still experiencing fluctuations. This illustrates that investors are still very cautious and reckless in deciding their investment. This situation became one of the motivations so that this research is done, so it can contribute, about factors that can affect the accuracy of analyst predictions. Based on the phenomenon and research gap that has been described previously, this research is conducted to examine the accuracy of analyst predictions, using accounting information as independent variables, and fluctuations in stock prices into mediation variables. This study entitled the influence of accounting information to the accuracy of analyst predictions through stock price fluctuations, evidence from Indonesia.

2. Literature Review and Hypothesis

The theory of valuation is one theory that analysts use before recommendations are given to investors. This theory discusses the valuation of assets invested, either in the form of assets and financial assets. The initiators of the valuation method are Graham and Dodd in 1934 (Damodaran, 1995). Further development of this theory is developed by many researchers; one of them is Damodaran (2002). According to Damodaran (2002), there are generally three approaches used in valuation:

1. Relative valuation is a valuation model that assesses an asset by comparison with the price of the other assets of the same. Calculation methods that are usually used to make comparisons are PER and PBV.
2. Contingent claim valuation is a valuation method using the option pricing model approach to assess an asset that has properties such as options.
3. Valuation of discounted cash flow is the worth of an asset representing the PV of future cash flows that expected from a property discounted by using a certain discounted rate.

The valuation theory is used as a grand theory because it is highly relevant to the prediction accuracy variable. The valuation theory explains the value of an asset in the future by using the data available today. This valuation theory is generally used by analysts if you want to predict the value of each asset in the future. The valuation theory will be relevant to be used when supported by quality accounting information. Good information about revenue, income, and about payable account. This accounting information is combined with market information such as stock price information. Analysts generally analyze both types of information before making recommendations to investors and potential investors. Stock price fluctuations in the previous period would be very important for analysts. Information on stock price fluctuations combined with accounting information, to then be used as a basis for predicting stock prices.

2.1. Research Hypothesis

2.1.1. The Effect of Accounting Information on Fluctuations of Stock Price

Accounting information is information contained in the financial statements issued by the issuer. The basic components of the financial statements generally consist of comprehensive income statements, debt and equity position statements, cash flow statements, and equity reports. The analysts and investors certainly need a full picture of financial condition, and it can be illustrated from the above financial statement information. Conceptually, the better the performance of the company stated through the financial statements, and then it should be followed by a rise in stock prices. If an enhancement in revenue occurs, followed by an enhancement in profits, and good debt management, it should be information that supports an enhancement in stock prices. The first time Ball and Brown ini 1968 (Ball & Brown, 2014) has examined that gain information as part of accounting information has been used for predicting stock prices. Subsequently, various research results proved that there is relationship of accounting information and stock prices, such as Lev & Ohlson (1982) and Watts (1992). Even Naimah, (2012) examines fluctuations in stock prices correlated with profitability and equity values. To find out the relationship between stock market value and accounting information. Begley & Feltham (2002) researchers developed an alternative study and model Feltham - Ohlson in 1995 (Vishwanath, 2009). The results found a significant positive market coefficient of stock market with accounting information. Their research results show that accounting information contains fundamental information that is not reflected in stock prices. Fama & French (1995) research proves that size relates to profitability. Small-company stocks have a lower earnings trend than big-company stocks. Research Becker et al. (2010) explains that companies with large assets will have an impact on profitability and return on investment. Ana & Rizal (2016) study confirmed that financial report information has a positive impact on stock returns. Based on the evidence of previous research results as well as explanation of the relationship between accounting information with stock price fluctuations, so then set three hypotheses as follows:

- H1: There is a significant effect of revenue changes on stock price fluctuations.
- H2: There is a significant effect of net income before extraordinary changes on stock price fluctuations.
- H3: There is a significant effect of payable account changes on stock price fluctuations

2.1.2. The Effect of Stock Price Fluctuations and Accounting Information on Stock Price Predictions

According to Dechow et al. (1998) indicates that the earnings of the current period, is the best forecasting of future cash flows. Bhattacharya et al. (2003) stated that high earnings performance in accord with generally accepted accounting principles will give benefit to the analysts as users of financial statements. Research conducted by Hussainey (2009) stated that research proves that companies which report positive earnings have the ability to predict earnings up to two years into the future. Research conducted by Dogan, (2013) proved that firm size measured by total assets or total turnover has a positive effect on various profitability indicators and on firm value. Research Latif et al. (2017) stated that earnings quality has contributed positively to firm value. Based on evidence of previous research results and explanation of the relationship between accounting information with stock price fluctuations, so then set four hypotheses as follows:

- H4: There is a significant effect of stock price fluctuations on the precise prediction of analysts.
- H5: There is a significant effect of revenue changes on the precision of analyst predictions.
- H6: There is a significant effect of the net income before extraordinary change on the precision of analyst predictions.
- H7: There is a significant effect of payable account changes on analyst precision accuracy.

2.1.3. The Effect of Accounting Information on Stock Price Predictions through Stock Price Fluctuations

Stock prices are formed on the market as an agreement between the buyer and the seller. Management cannot alone affect the market price. Market prices are more independent than accounting information, including profit information, sales turnover information, and debt information. This more independent stock price is expected to mediate the impact of accounting information on precise prediction of the analysts. According to Brown (1983) certain accounting methods (as part of establishing accounting information) are

able to increase predictability (i.e., reduce analyst's miscalculation). Research Brown (1983) examine the benefits of financial statement analysis in predicting stock returns. Taking into account this description, the stock price or stock return earned, plays a role in the prediction of future stock prices. The current stock price is likely to bridge future stock price predictions. Based on the evidence of previous research results as well as explanation of the relationship of accounting information and stock price fluctuations, then set three hypotheses as follows:

- H8: There is a significant effect of revenue changes on the accuracy of analyst predictions through stock price fluctuations.
- H9: There is a significant effect of net income before extraordinary changes on the accuracy of analyst predictions through stock price fluctuations.
- H10: There is a significant effect of payable account changes on the precise prediction of analysts through stock price fluctuations.

3. Methodology

The analytical method uses the ordinary least square estimation method with the data panel structure, for models that test direct effect. For indirect effect test, used two least square methods with panel data structure. For data processing using software stata. The samples are selected by using the purposive sampling method. The purposive sampling criteria are predictive data during the study period. Another criterion is that the company has high liquidity in stock trading. There are five variables in this study, which are used as dependent variables, mediation variables, and independent variables. Dependent variable in this research is precision prediction of analyst (predict), that is comparison between stock price prediction with actual stock price. The precision of analyst predictions is calculated by the log formula ((stock price prediction - actual stock price) / actual stock price)). Stock price fluctuations are used as a mediation variable. Stock price fluctuations are calculated by the formula calculated by the formula ((stock price $_{\text{Period t}}$ - stock price $_{\text{Period t-1}}$) / stock price $_{\text{Period t-1}}$)). Variable mediation Independent variables in this study are three, i.e. changes in revenue, changes in NIBE, and changes in debt. The revenue change is calculated by the formula ((total revenue $_{\text{Period t}}$ - total revenue $_{\text{Period t-1}}$) / total revenue $_{\text{Period t-1}}$)). The change in NIBE is calculated by the formula ((net income before extraordinary $_{\text{Period t}}$ - net income before extraordinary $_{\text{Period t-1}}$) / net income before extraordinary $_{\text{Period t-1}}$). Changes in debt are calculated by the formula ((total debt $_{\text{Period t}}$ - total debt $_{\text{Period t-1}}$) / total debt $_{\text{Period t-1}}$)). The equation model in this study consists of three equations. The first equation model consists of three hypotheses. The second equation model consists of four hypotheses. The third equation model consists of three hypotheses. The three models of equations are as follows:

1. The Equation 1: $\Delta price = \alpha + \beta_1 \Delta rev + \beta_2 \Delta nibe + \beta_3 \Delta ap + \varepsilon$, or $dprice = \alpha + \beta_1 drev + \beta_2 dnibe + \beta_3 dap + \varepsilon$.
2. The Equation 2: $Predict = \alpha + \beta_1 \Delta price + \beta_2 \Delta rev + \beta_3 \Delta nibe + \beta_4 \Delta ap + \varepsilon$, or $Predict = \alpha + \beta_1 dprice + \beta_2 drev + \beta_3 dnibe + \beta_4 dap + \varepsilon$.
3. The Equation 3: $\Delta price = \alpha + \beta_1 \Delta rev + \beta_2 \Delta nibe + \beta_3 \Delta ap + \varepsilon$, and $Predict = \alpha + \beta_4 \Delta price + \beta_5 \Delta rev + \beta_6 \Delta nibe + \beta_7 \Delta ap + \varepsilon$, or $dprice = \alpha + \beta_1 drev + \beta_2 dnibe + \beta_3 dap + \varepsilon$, and $Predict = \alpha + \beta_4 dprice + \beta_5 drev + \beta_6 dnibe + \beta_7 dap + \varepsilon$.

Where predict is the precision of analyst predictions of future stock prices, dprice is the fluctuation of stock prices, drev is the change of revenue, and dap is the debt change.

4. Result

Actual number of research samples that can be obtained by researchers is 54 issuers, during the period of 2013-2016. Selection of samples based on purposive sampling with criteria of companies actively trading stocks and analyst companies make predictions on shares of the company during the period 2013-2016. In addition to stock price prediction data, researchers also obtain data from financial reports or from annual reports of companies, that were published on the website of Indonesian Stock Exchange. Description of data from research variables can be seen in table 2.

Table-2. Descriptive Statistics

Research Variable	Minimum	Maximum	Mean	Std. Dev.
Predict (Y_2)	-0,1739	1,9631	0,7939	0,2079
Dprice (Y_1)	-0,7908	2,0829	0,1108	0,5104
Drev (X_1)	-0,9922	14,9840	0,2527	1,3283
Dnibe (X_2)	-14,5727	731,4686	3,5222	49,8095
Dap (X_3)	-0,9333	11, 0408	0,3669	1,2662
N = 216				

Explanation: **Predict** is calculated by log ((stock price prediction - actual stock price) / actual stock price)). **Dprice** is calculated by the formula ((stock price $_{\text{Period t}}$ - stock price $_{\text{Period t-1}}$) / stock price $_{\text{Period t-1}}$)). **Drev** is calculated by the formula ((total revenue $_{\text{Period t}}$ - total revenue $_{\text{Period t-1}}$) / total revenue $_{\text{Period t-1}}$)). **Dnibe** is calculated by the formula ((net income before extraordinary $_{\text{Period t}}$ - net income before extraordinary $_{\text{Period t-1}}$) / net income before extraordinary $_{\text{Period t-1}}$). **Dap** is calculated by the formula ((total debt $_{\text{Period t}}$ - total debt $_{\text{Period t-1}}$) / total debt $_{\text{Period t-1}}$)).

Source: Run Results Using Stata

Taking into account the descriptions of the research data above, it is interesting and worth noting that high deviation standards on variable changes in NIBE, variables change in revenues and changes in debt. Descriptive data above is the actual data that calculated the minimum value, maximum, mean and standard deviation. Not that research data is not normal, because the research data is calculated is the value of the change, so that all data becomes normal and evenly distributed.

Table-3. Correlation

Variables	Predict (Y_2)	Dprice (Y_1)	Drev (X_1)	Dnibe (X_2)	Dap (X_3)
Predict (Y_2)	1.0000				
Dprice (Y_1)	0,381***	1.0000			
Drev (X_1)	0,456***	0,308***	1.0000		
Dnibe (X_2)	0,058	–0,037	0,010	1.0000	
Dap (X_3)	0,332***	0,265***	0,781***	-0,002	1.0000

Explanation: *Significant at $\alpha = 10\%$, ** Significant at $\alpha = 5\%$, *** Significant at $\alpha = 1\%$. **Predict** is calculated by log ((stock price prediction - actual stock price) / actual stock price)). **Dprice** is calculated by the formula ((stock price $_{Period\ t}$ - stock price $_{Period\ t-1}$) / stock price $_{Period\ t-1}$)). **Drev** is calculated by the formula ((total revenue $_{Period\ t}$ - total revenue $_{Period\ t-1}$) / total revenue $_{Period\ t-1}$)). **Dnibe** is calculated by the formula ((net income before extraordinary $_{Period\ t}$ - net income before extraordinary $_{Period\ t-1}$) / net income before extraordinary $_{Period\ t-1}$). **Dap** is calculated by the formula ((total debt $_{Period\ t}$ - total debt $_{Period\ t-1}$) / total debt $_{Period\ t-1}$)).

Source: Run Results Using Stata

In table 3 can be seen correlation between research variables. Seen from the above results that there is a very close correlation between predict variables with dprice, drev, and dap. Similarly, the correlation between dprice with drev and dap very close correlation. This correlation has results as follow: there is a relationship between independent variables and the dependent variable significantly. Includes a close relationship between the mediation variables and their independent variables. If the correlation between research variables exists, then the potential influence in the regression test also has the potential to exist.

4.1. Hypothesis Testing In Research Model 1

The analytical method uses the ordinary least square estimation method with the data panel structure, for models that test direct effect. Before this test is done, it has been ensured that this model passes the classical assumption test and has selected the best model from this equation. The most suitable model test is done with Chow Test, LM Test, Hausman Test, and the best model is comment effect. Here are the run results using the stata software.

Table-4. Influence of Accounting Information on Stock Price Fluctuations

Equation 1: Dprice = $\alpha + \beta_1$ drev + β_2 dnibe + β_3 dap + ε.

- H_1: There is a significant effect of revenue changes on stock price fluctuations.
- H_2: There is a significant effect of net income before extraordinary changes on stock price fluctuations.
- H_3: There is a significant effect of payable account changes on stock price fluctuations

```
   Source |       SS       df       MS              Number of obs =     216
----------+------------------------------          F(  3,  212) =    7.66
    Model | 5.47948065     3   1.82649355          Prob > F      =  0.0001
 Residual | 50.5352563   212    .23837385          R-squared     =  0.0978
----------+------------------------------          Adj R-squared =  0.0851
    Total | 56.0147369   215    .26053366          Root MSE      =  .48824

----------+----------------------------------------------------------------
   dprice |    Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]
----------+----------------------------------------------------------------
     drev |   .099415   .0401532    2.48   0.014    .0202644    .1785657
    dnibe | -.0004053   .0006686   -0.61   0.545   -.0017233    .0009127
      dap |  .0254547   .0421184    0.60   0.546   -.0575698    .1084791
    _cons |   .077743   .0347298    2.24   0.026    .0092831    .1462029
----------+----------------------------------------------------------------
```

Explanation: Significant if $t_{Score} > 1{,}96$ and $P_{Value} < 0{,}05$. **Predict** is calculated by log ((stock price prediction - actual stock price) / actual stock price)). **Dprice** is calculated by the formula ((stock price $_{Period\ t}$ - stock price $_{Period\ t-1}$) / stock price $_{Period\ t-1}$)). **Drev** is calculated by the formula ((total revenue $_{Period\ t}$ - total revenue $_{Period\ t-1}$) / total revenue $_{Period\ t-1}$)). **Dnibe** is calculated by the formula ((net income before extraordinary $_{Period\ t}$ - net income before extraordinary $_{Period\ t-1}$) / net income before extraordinary $_{Period\ t-1}$). **Dap** is calculated by the formula ((total debt $_{Period\ t}$ - total debt $_{Period\ t-1}$) / total debt $_{Period\ t-1}$)).

Source: Run Results Using Stata

The results prove that accounting information that has a significant positive effect on stock price fluctuations is a change in revenue. While accounting information i.e. changes in NIBE and changes in debt have no significant effect on stock price fluctuations. Evidence of variables in revenue changes has a significant positive effect on stock price fluctuations, supporting previous research that has been done by Ball & Brown in 1968 (2014), Lev & Ohlson (1982), Watts (1992), Naimah (2012) as well as other research. While the variable changes in NIBE and debt changes have no effect on stock price fluctuations have corroborated the results of research from Begley & Feltham (2002). Noting the difference in significant and insignificant results in influencing stock price fluctuations, particularly changes in revenues and NIBE changes are interesting to discuss. Revenue growth should move in tandem with the profit growth described in NIBE. But the fact that its effect on stock price fluctuations is different. According to research, revenue growth does represent a very positive performance in the eyes of investors and analysts. However, corporate earnings are not always directly proportional to revenue growth due to other factors that may affect the presentation of earnings in financial statements. There are many factors and interests that effect the presentation of earnings in financial statements. This is where the potential of earnings management can occur as well as the emergence of information asymmetry, so that analysts and investors cannot use change NIBE as an indicator of stock price fluctuations.

4.2. Hypothesis Testing Research in Model 2

The same method of analysis, also done for this research model, is using ordinary least square estimation method with panel data structure, for model that test direct influence. Before this test is done, it has been ensured that this model passes the classical assumption test and has selected the best model from this equation.

Table-5. Influence Stock Price Fluctuations and Accounting Information on Precision Analyst Prediction

Equation 2: $Predict = \alpha + \beta_1\,dprice + \beta_2\,drev + \beta_3\,dnibe + \beta_4\,dap + \varepsilon$.

- H_4: There is a significant effect of stock price fluctuations on the precise prediction of analysts.
- H_5: There is a significant effect of revenue changes on the precision of analyst predictions.
- H_6: There is a significant effect of the NIBE change on the precision of analyst predictions.
- H_7: There is a significant effect of payable account changes on analyst precision accuracy.

Source	SS	df	MS			
				Number of obs =		216
				$F(4, 211)$ =		20.37
Model	2.58866441	4	.647166103	Prob > F	=	0.0000
Residual	6.70413504	211	.031773152	R-squared	=	0.2786
				Adj R-squared =		0.2649
Total	9.29279945	215	.043222323	Root MSE	=	.17825

predict	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
dprice	.1102669	.0250745	4.40	0.000	.0608382	.1596956
drev	.0677797	.01487	4.56	0.000	.0384669	.0970925
dnibe	.0002643	.0002443	1.08	0.281	-.0002174	.0007459
dap	-.0127542	.0153903	-0.83	0.408	-.0430926	.0175842
_cons	.7682806	.0128285	59.89	0.000	.7429921	.793569

Explanation: Significant if $t_{Score} > 1{,}96$ and $P_{Value} < 0{,}05$. **Predict** is calculated by log ((stock price prediction - actual stock price) / actual stock price)). **Dprice** is calculated by the formula ((stock price $_{Period\ t}$ - stock price $_{Period\ t-1}$) / stock price $_{Period\ t-1}$)). **Drev** is calculated by the formula ((total revenue $_{Period\ t}$ - total revenue $_{Period\ t-1}$) / total revenue $_{Period\ t-1}$)). **Dnibe** is calculated by the formula ((net income before extraordinary $_{Period\ t}$ - net income before extraordinary $_{Period\ t-1}$) / net income before extraordinary $_{Period\ t-1}$). **Dap** is calculated by the formula ((total debt $_{Period\ t}$ - total debt $_{Period\ t-1}$) / total debt $_{Period\ t-1}$)).
Source: Run Results Using Stata

The results prove that fluctuations in stock prices have a significant effect on the accuracy of stock price predictions. These results corroborate research that has been done previously by Brown, (1983) and Stowe et al. (2009). Evidence of the effect of stock price fluctuations on the precise prediction of these analysts into information that is very important for analysts and investors. Stock price fluctuations can be used as an indicator to predict stock prices in the period to come. Information fluctuations in stock prices can be combined with information changes in revenue, if you want to predict stock prices in the future. The function

of analytical prediction accuracy equations can see the strong beta influence of stock price fluctuations and information changes in revenue.

4.3. Research Hypothesis Testing, In Model 3

For indirect effect test, used two least square methods with panel data structure. Test results of this data can be viewed in table 6.

Table-6. Influence of Accounting Information to Accurate Analyst Prediction Through Stock Price Fluctuations

Equation 3: $Dprice = \alpha + \beta_1\,drev + \beta_2\,dnibe + \beta_3\,dap + \varepsilon$.
$Predict = \alpha + \beta_4\,dprice + \beta_5\,drev + \beta_6\,dnibe + \beta_7\,dap + \varepsilon$.

- H_8: There is a significant effect of revenue changes on the accuracy of analyst predictions through stock price fluctuations.
- H_9: There is a significant effect of NIBE changes on the accuracy of analyst predictions through stock price fluctuations.
- H_{10}: There is a significant effect of payable account changes on the precise prediction of analysts through stock price fluctuations.

```
Structural equation model                    Number of obs      =       216
Estimation method  = ml
Log likelihood     = -1853.7577

Indirect effects
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	OIM					
	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
predict <-						
dprice	0	(no path)				
drev	.0109622	.005031	2.18	0.029	.0011017	.0208227
dnibe	-.0000447	.0000737	-0.61	0.544	-.0001892	.0000998
dap	.0028068	.0046441	0.60	0.546	-.0062955	.0119091

Explanation: Significant if $t_{Score} > 1{,}96$ and $P_{Value} < 0{,}05$. **Predict** is calculated by log ((stock price prediction – actual stock price) / actual stock price)). **Dprice** is calculated by the formula ((stock price $_{Period\ t}$ – stock price $_{Period\ t-1}$) / stock price $_{Period\ t-1}$)). **Drev** is calculated by the formula ((total revenue $_{Period\ t}$ – total revenue $_{Period\ t-1}$) / total revenue $_{Period\ t-1}$)). **Dnibe** is calculated by the formula ((net income before extraordinary $_{Period\ t}$ – net income before extraordinary $_{Period\ t-1}$) / net income before extraordinary $_{Period\ t-1}$). **Dap** is calculated by the formula ((total debt $_{Period\ t}$ – total debt $_{Period\ t-1}$) / total debt $_{Period\ t-1}$)).
Source: Run Results Using Stata

The results of this study prove that fluctuations in stock prices, able to mediate the effect of changes in revenue information to the accuracy of stock price predictions. This means that the effect of changes in revenue to the accuracy of analyst predictions through stock price fluctuations is significant. Stock price fluctuations can reinforce the effect of information on revenue changes on the precise prediction of analysts. These results are new evidence in the research and at the same time can be useful for analysts and academics.

5. Conclusion

The result of research has proved that accounting information, especially the change of revenue of company have a significant effect on stock price fluctuation. Investors and analysts can use revenue change information as an indicator of stock price fluctuations. The implications can be observed, when the company's semester report in the middle of the year has indicated an increase in total revenues by the end of the year, it is likely that stock prices will also increase by the end of the year. Furthermore, information on stock price fluctuations and changes in revenues, both independently and collectively, have been shown to contribute greatly to the accuracy of analyst predictions. The implication can be applied, when the fluctuation of stock price moves up, and the increase of company's revenue, then this will be a positive signal to increase stock price in the future. Thus, analysts must be confident that stock prices will rise. This is also supported by the proof that stock price fluctuations may mediate the effect of information on revenue changes on the precise prediction of analysts. This means that changes in revenue will be stronger influence on the accuracy of analyst predictions, if there is an increase in stock prices. The evidence of this research has supported the theory of valuation, the importance of viewing and assessing current accounting information, and then taking the information as the basic for investment decision making. Suggestions to the further research, it is important to test the effect of earnings management and information asymmetry on stock price fluctuations. The next recommendation is to conduct research to see the effect of earnings management and information

asymmetry on the precise prediction of analysts, because according to our analysis, its potential is to be proven significantly.

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