

The Effect of Changes in Aggregate Earnings and Discount Rate to Stock Returns: Indonesian Evidence**Bernardus Yulianto Nugroho**

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ABSTRACT

This study aims to analyze the effect of changes in the aggregate earnings and discount rate to stock returns quarterly. The sample in this study is financial and non-financial public company that listed on the Indonesia Stock Exchange from 2010-2016. This study uses panel data and time series regression model. Minor studies of this research also wanted to examine if there are anomalies in post-earnings announcement drift at the aggregate level. The results of this study indicate that there is a significant positive influence between earnings and stock returns on both exchanges at the level of individual companies and the aggregate. This study also shows that there are positive effects similar to earnings from the discount rate on stock returns in both the individual and aggregate level.

Keyword: capital markets, aggregate earnings, discount rate, stock returns

1.Introduction

Kothari, Lewellen, and Warner (2006) show that there is a drift in the sample of individual companies but find substantially different results on aggregate data that are not as described in the anomaly of post-earnings drift on company returns. Stock returns used in this study are divided into individual companies and aggregate data. Because post-earnings drift anomalies are always examined at the level of individual companies even though this bias should also affect returns at the aggregate level. Furthermore, in their research, Kothari, and Lewellen (2006) conducted a regression analysis of stock returns in quarterly earnings seasonally and got two main results, namely aggregate earnings and returns of shares that occurred at the same time having a negative relationship, and earnings surprise had little regarding future returns. Cready and Gurun (2010) also conduct research on earnings and returns and get results namely earnings news and market returns during daily intervals compared to quarters, and confirm that the relationship was negative before.

This paper aims to contribute to the existing literature on the impact of aggregate earnings and the discount rate to quarterly stock return using the case of Indonesia. Campbell (1991) shows that unexpected returns can describe, mechanically, the news of cash flows, and expected returns or disco-level news. Furthermore, Kothari, Lewellen, and Warner (2006) also

provide evidence of the relationship between prices, earnings, levels discount, and business conditions. There is a strong negative reaction on aggregate earnings news which gives the impression that the discount rate increases when earnings or unexpectedly high income, which gives a dominating effect on cash flow news on a quarterly or annual basis. These results are not consistent with the theoretical model which predicts that discount rates and cash flows must move in the opposite direction (Campbell and Cochrane, 1999; Chan and Kogan; 2002). Both Kothari, Lewellen, and Warner (2006) and Cready and Gurun (2010) explain that relations at the aggregate level must be negative because aggregate earnings news provides information to market participants about discount rates.

This seems to be the only possible explanation for the negative relationship between aggregate earnings and discount rates, but that does not explain the exact mechanism by which aggregate profits provide information on discount rates. This finding highlights the lack of understanding of earnings information and its relationship with macroeconomics and the market in aggregate. Based on several results of research on earnings information on stock prices, and the relationship between earnings and returns plus the influence of macroeconomic variables that have been done previously, and in order to supplement the literature on earnings and returns, this paper is to extend the empirical studies on the effect of aggregate earnings

and discount rate to quarterly stock returns using non-financial companies in Indonesia.

2.Theoretical Framework

Earnings

Revenue is a term used to indicate the amount of money received (profit) by a company. This amount is the gross amount, or often known as sales turnover. Net Income and Earnings show a profit after deducting company expenses. In earnings, there are those who sometimes refer to the terms EBIT, EBITDA, and NOPAT. EBIT is an extension of earnings before interest and taxes or profits before interest and taxes. EBITDA shows earnings before interest, taxes, depreciation, and amortization or profit before deducted interest expense, tax, depreciation, and amortization. NOPAT shows net operating profit after tax or net income after tax.

Stock Return

Stock return is interpreted as a form of results obtained in making a stock investment. The return on investment can be divided into two different parts (Jogiyanto,2010). Return can be in the form of a realized return that has already occurred or an expected return that has not yet occurred but is expected to occur in the future. Return realization is calculated based on historical data. This return is important because it is used as one measure of company performance and is also useful as a basis for determining expected return and risk in the future

Macroeconomics

Macroeconomics is the study of the economy as a whole. Macroeconomics is used to explain economic changes that affect many societies, companies, and markets. Macroeconomics can be used to analyze the best ways to influence policy objectives such as economic growth, price stability, labor and the achievement of a sustainable balance sheet. Although macroeconomics is a broad field of learning or learning, there are two research fields that characterize this discipline, activities to study causes and effects of short-term fluctuations in state revenues (business cycle), and activities to study the determinants of long-term economic growth (increasing national profits). Existing and predictable macroeconomic models are commonly used by governments and large corporations to assist in the development and evaluation of economic policies and business strategies.

In this study, macroeconomics is used more on short-term fluctuations in state revenues or business cycles and their effect on the relationship between

returns and earnings. The variables used are 1. The growth rate of Gross Domestic Product (GDP) is an economic indicator to measure the total value of products produced by all people and companies (both local and foreign) within a country, 2. Industrial Production (IPROD) is a number that shows the percentage increase/decrease in the value of manufacturing industrial production in the period/period concerned to the value of manufacturing industrial production in the previous period, 3. The consumption level (CONS) is a number that shows the average number of consumption of everyone in a country.

Discount Rate

Discount rates are used for short-term financial products such as treasury bills (T/B), certificate of deposits, promissory notes, and commercial paper (CP). These money market products usually mature in 30 days to 90 days and a maximum of 270 days. These products are usually sold at discounted prices so-called securities are sold at a discount or discount securities. For proxies discount rates are included, namely: 1. One-year T-bill rate, the yield spread between ten-year and one-year T-bonds (TERM), and 2. The yield spread between low-grade and high-grade corporate debt or bonds corporate bond (DEF).

Market Anomalies

Market anomalies are empirical results that are not by the conditions described by efficient market theory. Some testing of market efficiency shows that the market is not fully efficient and there are certain conditions where stock price movements can be predicted. Fama (1998) explains that there are at least two persistent anomalies in the capital market, namely the anomaly of price momentum and post-earnings announcement drift.

Post-Earnings Announcement Drift

Post-earnings announcement drift is known through the research of Ball and Brown (1968) which found a tendency that stock prices will move in the direction of an earnings surprise for several periods after reporting earnings. Earnings surprise is actual earnings information that is different from expected profits. This shows that by utilizing unexpected information from corporate earnings strategy earnings announcements will provide positive abnormal returns. However, in general, the information contained in the financial statements has been anticipated so that the actual earnings information does not cause instant movement in the month the financial statements are announced.

Bernard and Thomas (1989) say that there are at least two explanations regarding this anomaly. First, investors fail to assimilate available information, or there are certain costs that negate the benefits of exploiting the information. Second, the asset pricing model used to calculate abnormal returns is not perfect by not including other risk factors. This means that the abnormal return given from the implementation of the investment strategy is only a fair compensation from risk management that is not included in the asset pricing model.

3. Research Methods

This study uses data that is cross-section and time series. The cross-section data in this study is data derived from each individual sample, while the time series data is in the form of annual data from each individual (www.idx.co.id). Simultaneous testing of the dependent variable is done by F-test and partially done by T-test. The selected period is the last 7 (seven) years, namely 2010-2016, this study uses independent variables that require lag 1 data, which is useful to investigate the changes that have occurred in the company's capital structure in the past with the present. All data used in this study are secondary data, namely data that is already available, without the need to obtain directly from the object of research.

The sample used in this study is both non-financial and financial companies listed on the IDX (Indonesia Stock Exchange) for the period 2010-2016. Sampling in this study is using purposive sampling technique. The criteria for selecting samples in this study are:

1. It is all companies listed on the Indonesia Stock Exchange
2. Already registered on the Indonesia Stock Exchange as of January 1, 2009
3. Not doing delisting, both forced and voluntary at least as of 31 December 2016
4. There are complete financial statement data in the study period
5. Does not include top and bottom companies of 0.5% of the company's rankings based on dE/p every quarter.

Variable Calculation

Return

Stock return is income received from investments in shares consisting of capital gains (lose) plus dividends for companies that share them

(Jogiyanto: 1995). Systematically can be formulated as follows:

$$R_{it} = \frac{(P_{it} - P_{i,t-1}) + D_{it}}{P_{i,t-1}}$$

where, $R_{i,t}$ is stock return i in year t , $P_{i,t}$ is stock price i in year t , while $P_{i,t-1}$ is stock price i in year $t-1$, and $D_{i,t}$ is cash dividend.

Earnings

According to Horngren (1997), profit is an excess of total income compared to the total burden. Profit is also called net income. Earnings in research are obtained from income before extraordinary items in each quarter. The earnings or profits (Kasmir: 2011) are calculated by:

$$E = TR - TE - I - T$$

where, E is the company's Earnings obtained from Total revenue (Total income) minus the amount of Total expense (Interest total), Interest (Interest expense), and Taxes (Tax expense).

Profit samples are made into research variables, namely seasonally differenced earnings (dE) and divided into several groups, namely aggregate, value-weighted, and equal-weighted. Furthermore, the variable (dE) is divided by Market Value, which is the estimated amount of money at the valuation date, which can be obtained from buying and selling transactions or the exchange of assets, between buyers who are interested in buying with sellers who are interested in selling. Or divided by Book Value is the historical cost which is reduced by the amount of depreciation that has been charged that arises during the age of use of the asset.

Research Model

This study employs two research models that are also used by Khotari, Lewellen, and Warner (2006). The first model is used to determine the effect of seasonally differenced earnings (dE) on returns or yields for both corporate and aggregate data. This second model is used to find out the effect of discretionary levels on returns or existing returns for both corporate and aggregate data. Where this is a second stage regression that is carried out to make it easier to see the effect of the discount rate on returns. The first step is to express the proxy from the discount

rate to the dE variable and then use the fitted and residual results. Here is the mathematical model:

Model 1

$$R_{t+k} = \alpha + \beta \text{dE}/S_t + e_{t+k} \quad (1)$$

Model 2

$$R_{t+k} = \alpha + \beta \text{Fitted} * \text{dE}/S_t + \gamma \text{Residual} * \text{dE}/S_t + e_{t+k} \quad (2)$$

* (First Stage Regression Model: $\frac{\text{dE}}{S_t} =$

$$\alpha + \beta \Delta \text{TBILL}_t + \gamma \Delta \text{TERM}_t + \lambda \Delta \text{DEF}_t + \rho \text{dE}/S_{t-1} + \varepsilon_t$$

Classic assumption test

According to Gujarati (2009) to fulfill the form of a regression model that can be accounted for, there are several assumptions that must be fulfilled so that the model is a BLUE (Best Linear Unbiased Estimator), namely:

1. There is a linear relationship between the dependent variable and the independent variable
2. It is homoscedasticity or has a constant error variance for each independent variable
3. Free from autocorrelation interference (error variance of a model, does not depend on other error variances)
4. Have a normal distribution
5. Free from multicollinearity (there is no high correlation between independent)

Research Hypothesis

Research by Kothari, Lewellen, and Warner (2006) and Cready and Gurun (2010) found that the relationship between aggregate earnings and stock return is significantly negative. Based on this research, we propose the first hypothesis as follows:

H1: There is a negative relationship between changes in aggregate earnings to quarterly stock returns

According to Kothari, Lewellen, and Warner (2006) and Cready and Gurun (2010), the relationship between the discount rate and quarterly stock return is negative. Based on previous research, the propose of the second hypothesis that can be built is:

H2: There is a negative correlation between changes in the discount rate to quarterly stock returns

4. Results and Discussion

In this section the researcher will explain the data processing process which aims to explain the results of descriptive analysis, regression and conformity with theories related to the variables used in this chapter as well as the researcher will test the hypotheses described in the previous chapter

Descriptive Analysis

This study uses a sample of 205 companies listed on the Indonesia Stock Exchange with an observation period of 7 years, namely 2010 to 2016 with a quarterly period. The data in this study are panel data which forms 5740 overall observations. The data used also includes data from 2009 because the variable used is Differenced Quarterly Earnings (dE), which is the difference from current earnings minus the previous quarter and each company's return (R). However, this panel data is only used as a reference and comparison for individual data companies only. Whereas the main data used is aggregate data from (dE) and return (R) every quarter for each sample company, which is made into time series data with 28 observations. Likewise with other variables namely yield spread from government bonds (G.bond), yield spread from corporate bonds (C.bond), Bank Indonesia rates (SBI), gross domestic product (GDP), and industrial production (IProd) which also amounted to 28 observations.

Before testing the proposed hypothesis, the data characteristics of each variable were carried out using descriptive statistics. The variables in this study are divided into two types, namely individual company data and aggregate data. Individual company data consists of variables R and dE / P which are percentage values. Meanwhile, the aggregate variable is R, dE / B-Agg, dE / E-Agg, dE / P-Agg, dE / P-Ew, dE / P-Vw, C. Bond Yield, G. Bond Yield, GDP, IPROD, and SBI is the percentage value of each variable requirement. Descriptive statistics include mean, median, maximum, minimum, standard deviation, skewness, kurtosis, jarque-bera value and probability, and sum square deviation of each variable for individual firms (Table 1) and aggregate data (Table 2).

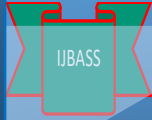


Table 1
Descriptive Statistic Individual Firms

	R	DEP
Mean	0.074457	0.004243
Median	0.000000	0.001850
Maximum	12.45533	7.629750
Minimum	-0.894000	-6.481650
Std. Dev.	0.393238	0.181642
Skewness	12.73387	4.316733
Kurtosis	350.6370	847.3477
Jarque-Bera	29058773	1.71E+08
Probability	0.000000	0.000000
Sum	427.3815	24.35405
Sum Sq. Dev.	887.4556	189.3514
Observations	5740	5740

Source: Output using Eviews 9 (processed)

Table 2
Descriptive Statistic Aggregate Data

	R	DE_B_Agg	DE_E_Agg	DE_P_Agg	DE_P_Ew	DE_P_V
						W
Mean	0.221219	0.003307	0.024911	5.34E-05	0.334349	0.689831
Median	0.157879	0.004487	0.103150	3.63E-05	0.256108	0.776602
Maximum	1.020429	0.042475	0.576326	0.007962	0.879460	1.037461
Minimum	-0.427806	-0.018994	-0.480151	-0.007132	-0.425951	0.140886
Std. Dev.	0.331368	0.013206	0.274084	0.002059	0.500159	0.225525
Skewness	0.700786	0.655933	-0.220478	0.534342	-0.036576	-0.847680
Kurtosis	3.331517	4.011614	2.329862	14.04610	1.295178	2.866193
Jarque-Bera	2.420022	3.201747	0.750782	143.6848	3.397063	3.374178
Probability	0.298194	0.201720	0.687021	0.000000	0.182952	0.185057
Sum	6.194133	0.092598	0.697515	0.001495	9.361774	19.31525
Sum Sq. Dev.	2.964731	0.004709	2.028293	0.000115	6.754283	1.373262
Observations	28	28	28	28	28	28
	C_BOND	G_BOND	GDP	IPROD	SBI	
Mean	0.026097	0.017598	0.055750	0.011101	0.064099	
Median	0.024194	0.017455	0.057650	0.011350	0.066800	
Maximum	0.060014	0.030960	0.068100	0.076500	0.088167	
Minimum	-0.005507	-0.005000	0.043100	-0.041300	0.038300	
Std. Dev.	0.017229	0.008409	0.007801	0.023032	0.010949	
Skewness	0.050807	-0.353862	-0.140460	0.279804	-0.603506	
Kurtosis	2.864002	3.257689	1.563406	4.130608	3.158399	
Jarque-Bera	0.033624	0.661823	2.499838	1.856675	1.728963	
Probability	0.983328	0.718269	0.286528	0.395210	0.421270	
Sum	0.730726	0.492730	1.561000	0.310839	1.794783	
Sum Sq. Dev.	0.008014	0.001909	0.001643	0.014323	0.003237	
Observations	28	28	28	28	28	

Source : Output using Eviews 9 (processed)

Classic assumption test

The classic assumption test used in this study is multicollinearity test, heteroscedasticity test, and normality test. All the tests have been carried out and all the

variables and models used in this study are all in accordance with the assumptions that must be fulfilled so that the model is BLUE (Best Linear Unbiased Estimator).

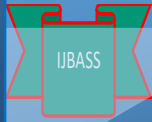
Result of Regression**Model 1**

Table 3
Quarterly Returns and Earnings, 2010-2016

<i>Earnings Measures</i>	k	<i>Earnings Change</i>			<i>Earnings Surprise 1</i>		
		Slope	t-stat	Adj. R²	Slope	t-stat	Adj. R²
Panel A. Individual Firms dE/P	0	0.04	1.52	-	1.48	2.76	-
	1	0.07	2.37	-	1.78	3.30	-
	2	0.09	3.07	-	0.68	1.26	-
	3	0.03	1.22	-	0.70	1.28	-
	4	0.04	1.42	-	-0.08	-0.17	-
Panel B. Agregat dE/B-Agg	0	5.84	1.22	0.01	236.47	2.50	0.16
	1	10.64	2.50	0.16	170.86*	1.73	0.07
	2	7.68*	1.73	0.07	102.83	0.98	-0.00
	3	4.62	0.98	-0.00	30.52	0.27	-0.04
	4	1.37	0.27	-0.04	1.4	0.18	-0.04
dE/P-Ew	0	-0.31	-2.70	0.18	-2.04	-3.15	0.25
	1	-0.33	-3.15	0.25	-1.07	-1.45	0.04
	2	-0.17	-1.45	0.04	-0.31	-0.39	-0.03
	3	-0.05	-0.39	-0.03	0.32	0.40	-0.03
	4	0.05	0.40	-0.03	0.08	0.12	-0.04
dE/P-Vw	0	0.49*	1.83	0.08	8.90	2.97	0.23
	1	0.73	2.97	0.23	6.76	2.11	0.12
	2	0.55	2.11	0.12	4.37	1.27	0.02
	3	0.35	1.27	0.02	0.32	0.07	-0.04
	4	0.02	0.07	-0.04	0.19	0.05	-0.04

"Earnings Change" is the real of dE/S, "Earning Surprise" is forecast error from model AR1, "Adj. R²" is mengukur kekuatan penjelas kedua variabel bersama. Bold number is significant at 5% and * is significant at 10%. Bold is significant at 5% and *significant at 10%

Source: Output using Eviews 9



Panel A reports panel data regression for individual companies. As in previous studies, it was found that returns in quarter 0 to 3 had a strong positive relationship with earnings and had two significant values. The slope for quarter measurements and announcements is 0.04 and 0.07 respectively. The market also reacted quite strongly in quarter k=2-3, with a slope of 0.09 (significant) and 0.03 (t-stat 1.22) respectively. Thus, investors seem to be a little underreact for earnings news, which leads to post-announcement drift. The decrease in slope for 2-4 lags is the same as the decrease in earnings autocorrelation. As observed by Bernard and Thomas (1990), this shows that investors do not understand earnings persistence.

Panel B shows the results for aggregate returns. Report estimates when returns are regressed both on dE / B-agg, dE / P-ew, or dE / P-vw, using simple earnings changes, and forecast errors from the AR1 model (Surprise). The panel shows two big results, namely: (1.) The contemporary relationship between return and profit is significantly positive; and (2.) Past earnings have little power to predict future returns, the predicted slope results are a positive majority, in accordance with predictions from the behavioral model. Different results from previous studies are interesting to understand further. Regardless of the size of profits used, market returns in the announcement quarter, k=1, are positively correlated with aggregate earnings. For simple earnings changes, the slope ranges from -0.33 to 7.68, the significance of the two averages for each variable. This estimate may be conservative because error measurements in earnings surprise can weaken the slope. If we take the component of changes in earnings forecast by the

AR1 model, the slope for dE / B-agg and dE / P-vw jump is much greater but with a significance that falls to an average of 1 per variable. The positive effect of earnings announcements in this study is quite similar to evidence at the company level. Economically, the estimated slope for k = 1 is quite large. Profit explains 16-25% of quarterly returns.

Campbell (1991) shows that unexpected results can be elaborated, mechanical, become cash flow and expected-returns news, or discount rate news. Thus, the impact of the price of profit is determined by covariance with each component. If good earnings performance is accompanied by an increase in the discount rate, and if the last is the amount of news on cash flow in earnings, then the overall correlation between income and returns can be negative. A positive correlation between earnings and discount rates is possible but contrary to standard intuition about variations in the business cycle of risk premiums or risk premiums. Standard intuition is where the discount rate decreases when the economy improves (Fama & French, 1989; Campbell & Cochrane, 1999; Chan & Kogan, 2002). An argument that earnings might be positively related to inflation and interest rates: earnings might convey information about inflation, which causes interest rates to be higher, or inflation can result in higher profits in the short term if income responds faster than inflation accounting costs (Ball et al., 1993). If so, the slope on earnings absorbs a strong negative reaction for inflation as indicated by (Fama & Schwert; 1977 and Fama; 1981)

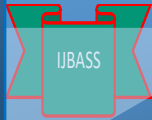
Model 2

Table 4

Quarterly Returns and Earnings, Controlling for Discount-rate, 2010-2016

$$R_{t+k} = \alpha + \beta \text{ Fitted } dE/S_t + \gamma \text{ Residual } dE/S_t + e_{t+k}$$

Earnings Measures	k	Fitted dE/S		Residual dE/S		Adj.R ²
		Slope	t-stat	Slope	t-stat	
dE/B-Agg	0	-0.21	-0.02	7.78	1.42	0.00
	1	11.78	1.44	10.25	2.08	0.13
	2	19.74	2.50	3.24	0.66	0.15



	3	17.52	2.12	-0.21	-0.04	0.09
	4	11.32	1.23	-1.72	-0.31	-0.01
dE/P-Ew	0	-0.52	-2.03	-0.25	-2.00	0.18
	1	-0.04	-1.69	-0.31	-2.65	0.22
	2	-0.28	-1.07	-0.14	-1.09	0.01
	3	-0.04	-0.14	-0.05	-0.36	-0.08
	4	0.24	0.90	0.00	0.04	-0.05
dE/P-Vw	0	0.37	0.66	0.52	1.74	0.04
	1	0.82	1.67	0.70	2.54	0.20
	2	1.11	2.24	0.38	1.30	0.14
	3	1.02	1.96	0.14	0.45	0.07
	4	0.48	0.81	-0.09	-0.26	-0.05

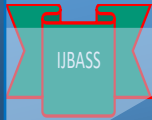
*Bold is significant at 5%

Source: Processed by the author using Eviews 9

Previous research is known that aggregate news earnings may be related to market returns because it provides information about macroeconomics, but little is known about macroeconomic contents of these profits. Shivakumar (2007) provides preliminary evidence of this problem by documenting that seasonally adjusted aggregate earnings changes mainly contain information about inflation. However, more evidence is needed about this problem, especially about the relationship between the components of aggregate income news and macroeconomics. Literature in accounting has studied how decisions are influenced by the company's reported earnings rate, but the same effect can improve the relationship with the role of aggregate earnings news in macroeconomic decisions. More specifically, aggregate profit has the potential to act as an indicator as done by macroeconomics, and investor reaction to aggregate earnings announcements can signal the collective view of market participants on the expected persistence of corporate earnings and market sentiment on earnings surprises. This information, especially related to market expectations and sentiment, is very important for economic policy setters because even though their decisions are often based on economic expectations, reliable data on economic expectations is difficult to obtain. Therefore,

it seems useful to investigate whether the findings of aggregate earnings news influence monetary policy.

Another problem in studies that focus on market reactions to aggregate earnings news is on the calculation of returns using value-weighted or equally-weighted market portfolios. Although this market portfolio reflects information on aggregate cash flows as well as on their aggregate discount rates it will not be sufficient to fully understand the discount rate because this is potentially driven by several risk factors. Research such as this can explain the relationship of aggregate earnings to proxy for other risk factors. Also, there is little reason to ignore the relationship between investor sentiment and corporate earnings. Previous research tried to explain the relationship between aggregate earnings and market returns exclusively in terms of cash flow news and discount rate news. However, recent studies provide evidence that stock prices and reported earnings are both influenced by investor sentiment (Baker and Wurgler (2007), for investor sentiment surveys in the stock market, and Rajgopal, Shivakumar and Simpson (2008) for models related to investor sentiment and profit). With these results, the second hypothesis H1 is rejected again because in this study provides different evidence from previous studies that the discount rate proxy in this study tends to have a positive relationship.



The second result in Panel B is that profits have little power to predict future market returns; that is, there is little post-earnings evidence announcement drift in aggregate data. The slope for $k = 2.3$, and 4 which is close to zero and dominated positively according to behavioral predictions of the model. Only the slope $dE / P\text{-ew}$ and $dE / P\text{-vw}$ are significantly significant at the level of 5% and 10% at $k = 0.11$ for $dE / P\text{-ew}$ and $k = 0.2$ for $dE / P\text{-vw}$. This result is consistent with underreaction to aggregate earnings news. In this study emphasize that between the company and the behavior of aggregate prices is explained by similarities like time-series profits. In Table 4.4 shows that market profits are more persistent than company profits. Thus, the aggregate results support Bernard and Thomas' (1990) hypothesis that investors ignore the structure of earnings autocorrelation. Also, the positive relationship between earnings and discount rate changes is implied by the slope $k = 1$ which should make it easier to find post-earnings announcement drift: if profit and discount rates are positively related, profit will positively correlate with future returns even in the absence of underreaction.

5. Conclusion

This research is shown to analyze whether there is an influence between changes in quarterly earnings on stock returns in the following quarter and analyze whether the discount rate also has the same regulator of stock returns. This study uses a panel and time-series data regression model. The results showed that: The market reaction to aggregate profit in this study as a whole is almost the same as the earnings reaction in individual companies. In this regard, positive reactions are found after the announcement of earnings, both at the level of the individual company and at the aggregate level. There is evidence that prices react slowly to aggregate earnings news. The behavioral finance theory that explains post-earnings announcement drift on company returns also seems to explain at aggregate

Recommendation

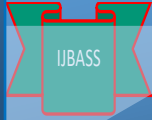
Investors can analyze the reaction of the Indonesian capital market after the announcement of quarterly earnings both individually and aggregately as well as the announcement of the discount rate, and make it a consideration in determining investment decisions. Furthermore, investors can make the earnings announcement period a momentum to make their investment decisions by knowing the market reaction both at the individual and aggregate levels. Investors can also consider the discount rate news as a reference in determining investment, and the reaction of future market prices by knowing the effect on stock returns.

prices. The results of this study also provide evidence that the Indonesian capital market at both the corporate and aggregate levels has entered into an efficient market form in a weak form. New information such as earnings announcements have a positive influence on stock prices, the market responds to new information that enters the market and reflects it on prices. Existing results can be seen as acceptance of theories or only evidence that indeed behavioral theory occurs at the level of individual companies and aggregates. At a minimum, the results of this study indicate that the announcement of quarterly aggregate earnings has a positive influence on quarterly returns on both individual and aggregate levels.

The results of this study also provide additional evidence on the relationship between price, profit, discount rate, and business conditions. Positive reactions to aggregate earnings news show that the discount rate rises if profits suddenly rise, the effect that dominates the cash flow news on quarterly earnings. No strong correlation was found between changes in some proxies for discount rates, including SBIs. However, this discount rate variable only partially explains the market's positive reaction to aggregate earnings news, which shows that discontinuation rates are not captured by existing proxies and explain a significant fraction of the results. The results are not consistent with theoretical models that predict that the discount rate and cash flow must move in the opposite direction. Provide evidence that investors do not pay attention to the value of existing premium risk and continue to invest in shares. The existence of differences in results with previous research shows that there are differences in the conditions between the place of previous research and this research, both in terms of stock markets and investors in the stock exchange. Thus opening the gap for behavioral finance to enter and explain these differences with several theories namely underreact, overconfident, and attribution bias.

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