EFFECT OF ACCOUNTING INFORMATION TOWARDS ABNORMAL RETURN USING THE SINGLE INDEX MODEL IN TESTING CAPITAL MARKET REACTION AFTER DIVIDEND ANNOUNCEMENT

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Abstract- This research aims to examine the effects of accounting information towards the abnormal return of syariah and conventional capital using the single index model, as well as examining the capital market reaction due to dividend announcement. The dependent variable in this research is the Average Abnormal Return (AAR). Independent variables include the earning per share (EPS), Debt to Equity ratio (DER), Return on Assets (ROA), and Return on Equity (ROE). Test results and data analysis resulted in 4 stock portfolios. On all stock portfolios, evident value change in the AAR and CAAR variables, which resulted in an increase in profit around the announcement date. It can be concluded that changes in the variables have a significantly quicker reaction and movement. This means the announcement of earnings brought information and content to the stock market, which is an indicator that the Indonesian stock market is developing towards a semi-strong form.

Keyword- Single Index Model, Abnormal Return, Earning Per Share, Debt to Equity Ratio, Return on Assets, Return on Equity, and Market Efficiency

I. INTRODUCTION

The Indonesian capital market is heading towards a maturing market player economy, in which there is a growing tendency for potential investors to take into consideration accounting information before making crucial investment choices. Accounting information for registered companies listed in the capital market have a detrimental role in shaping an efficient capital market (Puspitaningtyas, 2012). Pagalung (1993) showed that a majority of investors only use fundamental analysis techniques as a basis in determining investment choices. Fundamental analysis or financial statement analysis aim to provide data relating to the companies needed in the investment decision making process. Investment decisions in question is the decision to buy, sell, or retain ownership of stock. A decision to make an investment as mentioned above is influenced by internal decision, one of which is dividend distributions (Wibowo and Melati Adorini, 2006).

According to Signalling Theory, there exists information asymmetry between manager and investor. Managers know the prospect of the company in the future, while investors do not (Gelb, 1999). In essence, Signalling Theory dictates that every action contains information, which causes the existence of asymmetric information. Asymmetric information is the condition in which one side possesses more information than the opposing side (Spence, 1973).

Events of studies have two categories; the first category is used to examine the information content of an event. If an event contains information then the market will respond indicated by the abnormal return. The second category of the study is to examine the events of the efficient market, which is a continuation of the testing of information content. If the testing of the information content only testing abnormal return as the reaction of the market, hence the efficient market testing will be followed by testing the speed of the market reaction (Jogiyanto, 2015) information content can be either good news or bad news (Tandelilin, 2010). Efficient capital markets are defined as capital market having securities prices reflecting all relevant information (Husnan and Pudjiastuti, 2012). To enable the efficient capital market, it is important to conduct voluntary corporate disclosure of information by management (Healy and Palepu, 2001). Despite the fact, voluntary corporate disclosure of profit information is rare (Skinner, 1994).

II. LITERATURE REVIEW

Several studies in the application of the asset pricing model using beta and fundamental factors as risk indicators has been done, including studies by: Markowitz (1952) was the first in introducing stock portfolios. Portfolios formed with average and standard deviation stock return based on the correlation between stock and forming portfolio. Portfolio is then more commonly known as Markowitz model portfolio. The Markowitz model portfolio is an efficient portfolio system formed with the specific aim to form a minimum standard of deviation as a measure of risk in portfolio.

Sharpe (1963) developed the Single Index Model. This model can be used to simplify calculation and measurements on the Markowitz model by providing

input parameters needed in calculating using the Markowitz model. In addition, the Single Index Model is also useful in calculating expected return and portfolio risks. Single Index Model is based on the observation that the the price of securities tend to fluctuate accordingly with market price index. In particular, it can be concluded that most stocks experience a rise in price if the stock price index rose. The same can be said the other way, when stock price index fell, most stocks would experience a fall in price. This suggests that returns from securities may be correlated, due to a common response to changes in value.

Wardani (2009) explains that the Single Index Model is used to simplify input of analysis, seeing how portfolio analysis is essentially seeking two parameters, namely expected level of profit and deviation standard of portfolio. Niranjam (2013) stated that through the discussion and analysis so far, it's clear that the development of optimal investment portfolio using the Single Index Model by Sharpe is far easier and simpler compared to using the Markowitz Mean Variance Model. In contribution, Sharpe argued that there is a clear similarity between efficient portfolio produced by the Single Index Model and Markowitz Model. This model can show how risks can be made safe through diversification process in forming portfolio. Ball and Brown (1968) has proven that accounting information is useful for investors in estimating expected value of the level of return as well as determining risk levels of securities. If accounting information does not have the needed content of information, the revision of trust will not occur after receiving said information, which will result in no decision to buy or sell. Absence of decision to buy or sell will mean no changes in volume of trade or changes in price of stock. Essentially, information will be useful if it causes investors to change their beliefs or their actions.

III. METHODOLOGY

This part consist of explanation about hypothesis, research design, research site, population and sample, type and source of data, data collection methods, research variables and instrument of research in this study.

3.1 Hypothesis

H_1 : Earning Per Share (EPS) positively affects stock returns of companies listed in the Indonesian Stock Exchange

H_2 : Debt to Equity Ratio (DER) negatively affects stock returns of companies listed in the Indonesian Stock Exchange

H_3: Return on Assets (ROA) positively affects stock returns for companies listed in the Indonesian Stock Exchange.

H_4: Return on Equity (ROE) positively affects stock return of companies listed in the Indonesian Stock Exchange

H_5 : ROA, EPS, DER and ROE together positi-vely affects stock return of companies listed in the Indonesian Stock Exchange

H_6 : There was a difference of return before and after the announcement of positive cash dividend on conventional stock within period of 2015 in the Indonesia Stock Exchange

H_7 : There was a difference of return before and after the announcement of negative cash dividend on conventional stock within period of 2015 in the Indonesia Stock Exchange

H_8 : There was a difference of return before and after the announcement of positive cash dividend on syariah stock within period of 2015 in the Indonesia Stock Exchange

H_9 : There was a difference of return before and after the announcement of negative cash dividend on syariah stock within period of 2015 in the Indonesia Stock Exchange

3.2 Research Design

Research design for Asset Pricing Model using Single Index Model, can be seen in Figure 1.

3.3 Research Site

The research site of this study is conducted on all companies listed on the Indonesian Stock Exchange in 2015 that has made dividend announcement.

3.4 Population, Sample and Method of Sampling

Population of research in this study include all shares of companies listed on the Indonesian Stock Exchange in 2015, and has made dividend announcement. Characteristics of research object is the return measured through abnormal return during the 111 days observation period, with 11 days of window period, and 100 days estimation period. Sampling was done through purposive sampling during the 2015 period. Number of samples fulfill the sampling criteria, with a total of 106 companies that has made the cash dividend announcement, which consists of 70 syariah-based companies, and 36 conventional companies. These objects of research represent all industrial sectors in the Indonesian Stock Exchange. Classification of samples based on industrial sector can be seen in Table.1. The method of sampling in this study uses non-probability sampling method, using purposive sampling, that conducts data selection using specific criterias or judgement sampling. This is a method of sampling done with specific conditions and criterias, such as known character of samples. In addition, even study was conducted to test content information of an announcement, with aims to see the reactions towards an announcement.

3.5 Type and Source of Data

This research uses cross sectional data. While the type of data used in this study is secondary data, obtained from the data of:

i. Companies listed on the Indonesian Stock Exchange in 2015 with complete financial data and are reliable sources.

ii. Companies with shares actively traded on the Indonesian Stock Exchange in 2015.
iii. Companies that has announced cash dividends with date of announcement in 2015.

3.6 Data Collection Methods

Data used in this research is secondary data and including financial data and ratios (EPS, DER, ROA and ROE) announcement of dividends raised with date of announcement, daily data in the form of shares of companies listed on the Indonesia Stock Exchange sampled, Indonesia Composite Index (IHSG), Syariah Stock index Indonesia (ISSI), Bank Indonesia Certificates (SBI) and Bank Indonesia Syariah Certificates (SBIS).

3.7 Research Variables

Hypothesis testing of relationship between variables earning per share (EPS), debt to equity ratio (DER), return on assets (ROA), and return on equity (ROE) towards stock returns in this study, multiple regression is made as follows:

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Y : abnormal return SIM
α : constant
$\beta_1,\beta_2,\beta_3,\beta_4$: regression coefficients
X_1 : EPS
X_2 : DER
X_3 : ROA
X_4 : ROE
ε : residual

Single index model (SIM) is defined as:

$E(R_i) = \alpha_i + \beta_i.R_m + e_i$

$E(R_i)$: expectations on the return of securities of-i
R_m : rate of return of a market index
α_i : value of expected security to market returns
β_i : beta
e_i : residual

3.8 Instrument of Research

Instrument of research conducted in this study, with documentation techniques such as note-taking copying data of company stocks, earning per share (EPS), debt to equity (DER), return on assets (ROA), return on equity (ROE), Stock prices before and after announcement, composite stock price index, Syariah Stock Index of Indonesia and data such as Bank of Indonesia certificates, Syariah Bank of Indonesia Certificates as listed in Bank of Indonesia.

IV. CONCLUSIONS & RECOMMENDATIONS

4.1 Conclusion

Conclusion of research based on the analysis of data, it results in 4 stock portfolios namely:
(1) Dividend increase of conventional stocks in 2015 using the Single Index Model. In this stock portfolio, based on Figure 2-(1) it can be clearly seen the value of variable AAR and CAAR with profits rising around the announcement date. Thus it can be concluded that movement of variable AAR and CAAR has a quick reaction, which means announcement of profits also brings with it content information to the stock market, and can also be said that the condition of the Indonesian Stock Exchange is heading towards a semi strong form. In Figure 2-(1) it can be clearly seen that the graphic rose on day t-1 or a day before the announcement date, which indicates a leak of profit information before submitted to Otoritas Jasa Keuangan (Financial Securities Authority of Indonesia).
(2) Dividend non-increase of conventional stocks in 2015 using the Single Index model. In this stock portfolio, based on Figure 2-(2) it can be clearly seen the value of variable AAR and CAAR with profits rising around the announcement date. Thus it can be concluded that movement of variable AAR and CAAR has a quick reaction, which indicates that the announcement of profits also brings with it content information to the stock market, and can also become an indicator of the Indonesian Stock Exchange heading towards a semi strong form. In figure 2-(2) it can also be seen that the graphic rose on day t-1 or a day before announcement date, which also become an indication of leak of profit information before submitted to Otoritas Jasa Keuangan (Financial Securities Authority of Indonesia).
(3) Dividend rise of Syariah stocks in 2015 using the Single Index Model. In this stock portfolio, based on Figure 2-(3) it can be seen that variable AAR and CAAR experienced an increase in profit around the announcement date. Thus it can be concluded that the movement of variable AAR and CAAR has a quick reaction, which means profit information brings with it content information to the stock market, and can also become an indicator the condition of the Indonesian Stock Exchange is heading towards a semi strong form. Figure 2-(3) also shows no indication of a monotonous rise before the announcement date, which is also an indication that no leak of profit information occurred before submitted to Otoritas Jasa Keuangan (Financial Securities Authority of Indonesia).
(4) Dividend non increase of syariah stocks in 2015 using the Single Index Model. In this stock portfolio, based on Figure 2-(4) it can be seen that the variable AAR and CAAR has a quick reaction, which means that the announcement of profit brings with it content information to the stock market, which indicates the condition of the Indonesian Stock Exchange heading towards a semi strong form. Figure 2-(4) also shows no monotonous rise before the announcement date, which indicates no leak of information before submitted to Otoritas Jasa Keuangan (Financial Securities Authority of Indonesia).
Conclusion based on the analysis of variance and the conclusion based on the t tests suggests that:
1. Hypotheses H_1 until H_5 were all accepted. From the calculation in table, by comparing the value of t calculation with t table at the 0.05 two tail significance level valued as 1,984, then compared with the t value for EPS variable which is equal to 4,317 at 0.05 significance level was 0.000. The value

of T calculation was 4,317 located outside the area of T table between -1,984 and +1,984, therefore it can be concluded that EPS partial coefficient significantly affect the dependent variable of AER. Similarly to the variables of DER, ROA, and ROE having t calculation located outside the area of the t Table, thus it can be concluded that the variables of DER, ROA and ROE also significantly affect the dependent variable AER. From the calculation in table, concluded that the ROA, EPS, DER and ROE collectively gave positive and significant impact on stock returns in companies listed on the Indonesia Stock Exchange.

2. Hyphoteses H_6 until H_9 were all rejected (see Table). So it can be concluded that there was no difference of return before and after the announcement of cash dividends on all types of conventional and syariah stock portofolios during 2015.

4.2 Limitations and Recommendations

The limitations in this research is in the use of the SIngle Index Model, as well as the limitation in the year period of 2015. Using only one method Asset Pricing Model and using samples in only one time period, don't necessarily represent the public at large. Therefore, the use of a longer time period and the use of more Asset Pricing Model methods is recommended.

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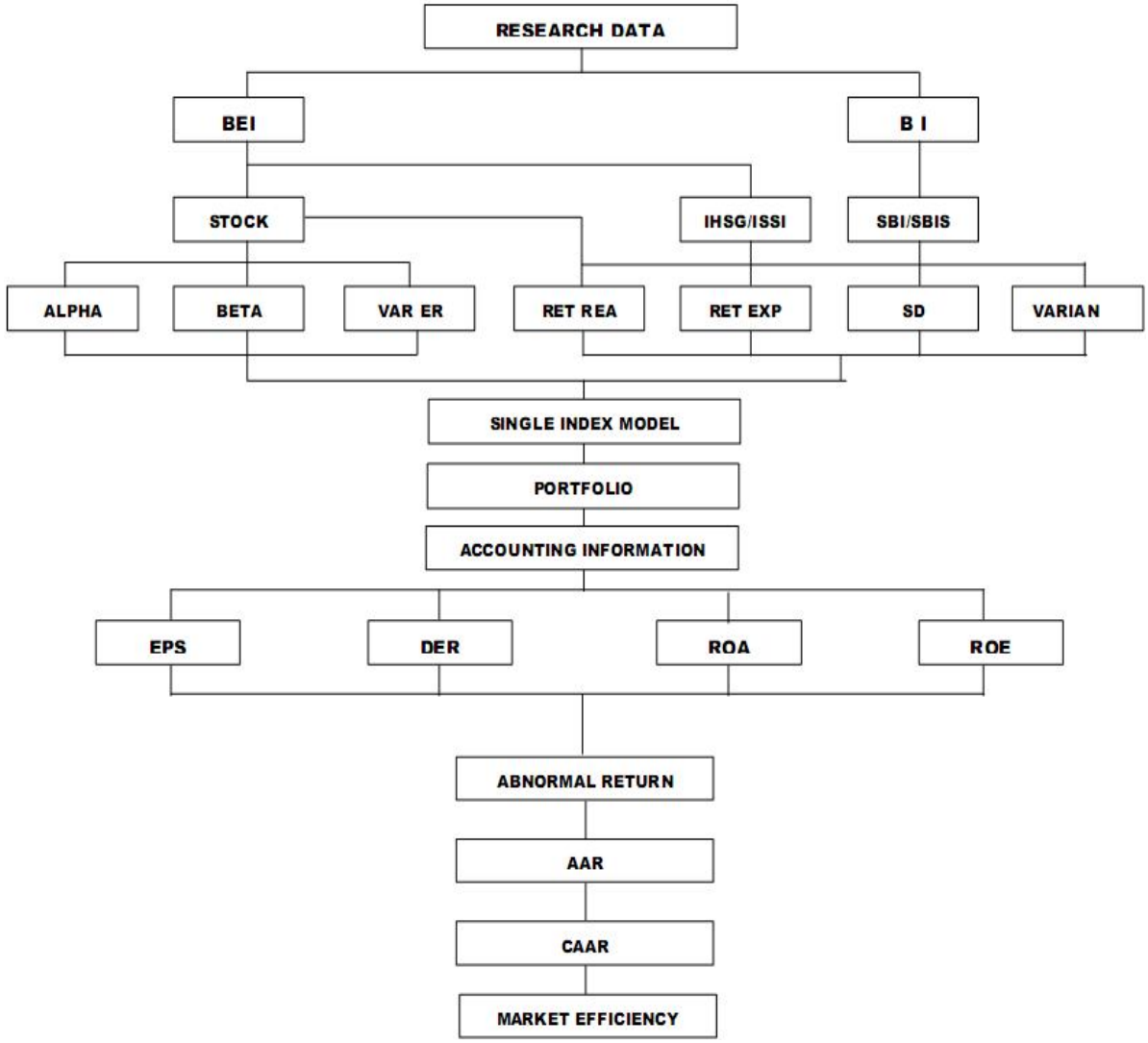
Appendix : Table and Figure

Table 1 : Sample Research by Industry Classification

Industrial Sub Sector	Number of Companies	Percentage
Adhesive	1	0.94
Advertising, Printing and Media	1	0.94
Agriculture,Forestry and Fishing	4	3.77
Animal Feed and Husbandry	1	0.94ctor
Automotive and Allied Products	6	5.66
Banking	10	9.43
Cable	1	0.94
Building Contruction	3	2.83
Cement	3	2.83
Coal Mining	3	2.83
Construction	4	3.77
Consumer Goods	1	0.94
Credit Agencies Other Than Banks	1	0.94
Electronic and Office Equipment	2	1.89
Financial Institution	3	2.83
Food and Beverages	2	1.89
Holding and Other Investment Companies	2	1.89
Hotel and Travel Service	2	1.89
Insurance	4	3.77
Metal and Allied Products	1	0.94
Mining and Mining Service	6	5.66
Others	4	3.77
Paper and Allied Product	1	0.94
Pharmaceuticals	4	3.77
Plantation	2	1.89
Plastics and Glass Products	1	0.94
Property and Real Estate	3	2.83
Real Estate and Property	9	8.49
Retail Trade	2	1.89
Securities	3	2.83
Stone,Clay,Glass and Concreate Products	2	1.89
Textile, Garment	1	0.94
Toll Road, Airport, Harbor and Allied	1	0.94
Tobacco Manufactures	1	0.94
Tourism, Restaurant and Hotel	2	1.89
Transportation Servives	4	3.77
Wholesale and Retail Trade	5	4.72
Total	**106**	**100**

Source: Processed by Author

Figure 1 : Research design for Asset Pricing Model using Single Index Model



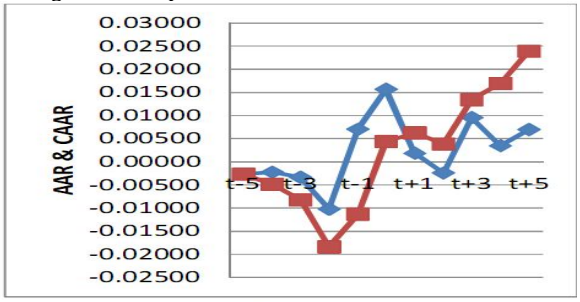
Where :

BI	: Bank of Indonesia
BEI	: Indonesia Stock Exchange
IHSG	: Composite stock price index
ISSI	: Indonesia Shari'ah Stock Index
SBI	: Bank Indonesia Certificates
SBIS	: Bank Indonesia Shari'ah

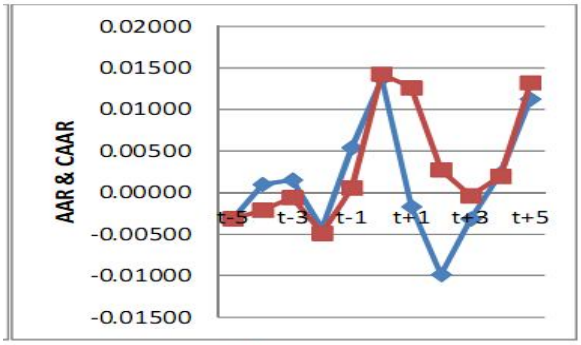
Certificates

ALPHA	: Alpha
BETA	: Beta
VAR ER	: Varian Error
RET REA	: Return Realitation
RET EXP	: Return Expectation
SD	: Standart Deviation
VARIAN	: Varian
EPS	: Earning Per Share
DER	: Debt to Equity Ratio
ROA	: Return on Asset
ROE	: Return on Equity
AAR	: Average Abnormal Return
CAAR	: Cummulative Average Abnormal Return

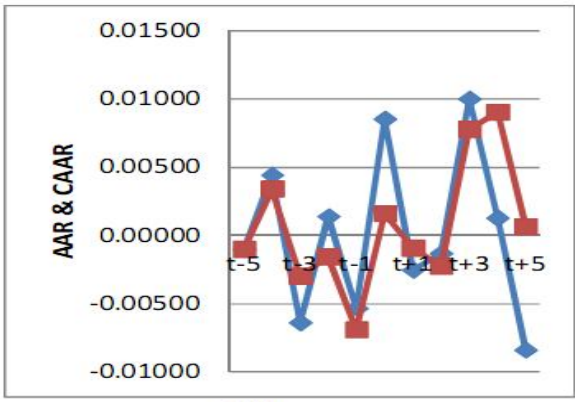
Figure 2 : Graph of Movement Value AAR and CAAR



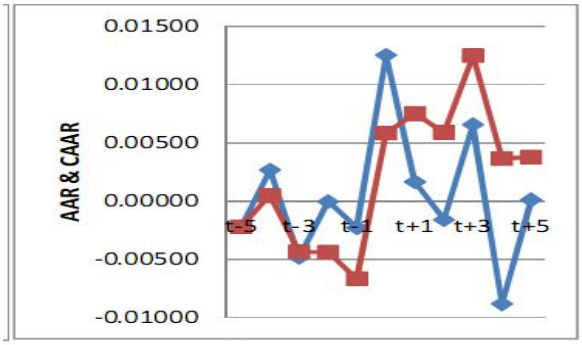
(1)



(2)



(3)



(4)

Note: AAR: Average abnormal returns; CAAR: Cummulative average abnormal returns

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