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The Effects of Asset Management and Profitability on Stock Returns: A Comparative Study between Conventional and Islamic Stock Markets in Indonesia

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Abstract *This study aims at empirically examining whether there are differences in stock returns between conventional and Islamic stock returns in Indonesia for the period 2010-2013. This study also attempts to explore the effect of asset management and profitability both stock returns in Indonesia. Annual pooled data gathered from the annual financial reports of 100 conventional and Islamic stock returns, which were published by the Indonesian Stock Exchange from 2010 to 2013 were used and analyzed by using the independent t-test and panel multivariate regression analysis. The result shows that there was no difference in stock returns between the conventional and Islamic stock markets. Additionally, the study documents that only profitability, which is measured by market ratio, was found to have an influence on the conventional stock markets. Meanwhile, as for Islamic stock market, only management of assets was found to have a significant effect on the stock return. These findings imply that investors who are investing in both Islamic and conventional markets would gain similar returns. However, in predicting and stabilizing the stock markets, both investors and policy makers should focus on the profitability for the conventional and management of assets for the Islamic stock market.*

Key words Asset management, profitability, stock return, Islamic Stock Market

JEL Codes: D53

1. Introduction

Investment in stock market has become a trend among all groups of people within the society, not only among those who understand investment in stock markets, but also among the layman who do not have knowledge on capital markets. Many people are still hesitating in their selection of investment instruments. Their doubt is not only resulted from the level of risk and returns trade-off issue, but it is also from the issues of *Shari'ah* compliancy of investment, including issues of permissibility (*halal*) and *haram* (prohibition) concerns (Jurnalis, 1999; Metwally, 1997; Karim *et al.*, 2010). As dominated by Muslim investors in Indonesia, these concerns have prevented many laymen from investing in the conventional stock markets. Thus, to

provide a *halal* investment instruments and as part of market expansion efforts, the Indonesian Stock Exchange in collaboration with Danareksa Investment Management have launched the Islamic capital market, in which the issued stocks are based on the Islamic principles, including the prohibition of *riba* (usury), prohibition of transacting and investing in *haram* products, and emphasis on the moral values in its operation, etc. In Indonesia, all Islamic stocks are listed in the group of Indonesian *Shari'ah* Stock Index (ISSI). Every six-month the *Shari'ah* Supervisory Council of *Majelis Ulama of Indonesia* regularly evaluates the *Shari'ah* compliancy of the stock and if the operation of those listed stocks are no longer in harmony with the Islamic principles, then they will be excluded from the ISSI list.

Investors who purchase conventional and Islamic stocks have the same expectation to gain highest returns. However, there are differences in the activities and operation of each market. Investors are allowed to speculate in the conventional stock market. For the stock issuers, the investment may be dominated by loan from financial institutions. Rules imposed by the conventional stock market are not based on the Islamic principles. In conventional market, the sustainability of issuers and returns for all parties are the main purpose. On the other hand, although it is oriented to provide higher capital gains and dividend for the stockholders, Islamic stock market should be free from *riba* (interest), *gharar* (uncertainties) and *maysir* (gambling) elements, including the source of fund and production process should be in line with the tenets of Islam (Khan, 2005; Rahman *et al.*, 2010).

Apart from its permissibility, Muslim investors also seek to gain diversification benefits by investing in Islamic stocks. Thus, predicting price changes of the stock is highly important. Stock prices keep changes due firms' characteristics and macroeconomic factors. Stock prices reflect the performance and operation of the stock's issuers. High (low) stock price indicates good (bad) performance of the companies, and it relates to the potential returns the investors might earn.

In investing their money in stocks, investors made it based on their rational considerations using a range of necessary information affecting the fluctuation of stock prices. These wide ranges of useful information would be used as their prediction instruments on their investment returns in the stock market either based on the technical and fundamental analyses. Since this study is concerned with stock returns predictability based on the firms' characteristics, thus fundamental analysis is adopted to empirically examine the effects of firms' activity, profitability, and market ratios on their stock returns.

Many previous studies have investigated the effects of financial ratios on conventional stock returns in Indonesia. For example, Thrisye and Nicodemus (2013) empirically explored the total asset turnover, which represents the activity ratio of the state-owned mining companies on stock returns, and found that the

activity ratio have insignificant effect on stock returns. This finding contradicted to earlier study by Nuryana (2013), who documented that the total assets of LQ45 group companies had affected significantly the companies' stock returns. In their studies, Herlambang and Rachmad (2003), Hermi and Ary (2011), Farkhan and Ika (2012) and Yuliantari (2014) documented that the market ratio has positively and significantly affected stock returns. This finding implied that the fundamental analysis could help investors to predict the future stock returns. However, the finding's of Kristina and Untung (2012) was not in parallel to the above-reviewed studies, where the market ratio of earning per share did not have any influence on the stock returns. This finding further confirms that in predicting stock returns, the investors cannot simply rely on fundamental analysis, but it also should rely on the technical analysis as the movements of stock returns follow the random walk hypothesis.

Comparing to the previous empirical studies investigating the financial ratios of conventional stock market, similar studies on Islamic stock returns in the country have been scarce. Considering the fast growing of the Islamic stock market in Indonesia, it is interesting to know whether the Islamic stocks is better at managing their capital to generate sales and returns, thus providing the highest profits to their investors. Thus, this study is indeed timely to empirically compare the returns of conventional stocks with the Islamic counterparts. This study also attempts at comparatively investigating the effects of selected financial ratios, i.e., ratios of activity, profitability, and market on each conventional and Islamic stock market, respectively. Unlike previous studies that focused only on stocks in the selected sectors, this study explores the entire stocks listed in the composite stock price index. The findings of the study are hoped to shed some lights for the investors to gain diversification benefits by investing the money in the markets. The findings of the study would also contribute to the policy makers in designing proper policies to regulate and promote the markets.

2. Data and empirical framework

This study examines the effects of activity ratio, profitability ratio and market ratio on the both conventional and Islamic stock return in Indonesia. The unit of analysis in this study was 100 conventional stock and 100 Islamic stock companies. A balanced panel data from 2010 to 2013 were analyzed. Data was gathered from the companies' published financial reports and Bursa Efek Indonesia. (2010). Table 1 presents the detailed definitions of each variable as well as their measurements.

Table 1. Definition of Variables and their Measurements

Variable	Indicator	Definition	Measurements	Measurements Scale
Stock Returns (Y)	Stock Prices' changes	Stock returns is the returns obtained and calculated based on historical data, used as a measure of corporate performance (Thrisye and Nicodemus, 2013)	$\frac{P_t - P_{t-1}}{P_{t-1}}$	Ratio
Activity Ratio (X ₁)	Total Asset Turnover	The ratio measures efficiency of the entire assets to support sales activities (Thrisye and Nicodemus, 2013)	$\frac{\text{Sales}}{\text{Total Assets}}$	Ratio
Profitability Ratio (X ₂)	Returns on Equity	The ratio indicates the effectiveness of management use asset to make a profit (Thrisye and Nicodemus, 2013)	$\frac{\text{Net Profit}}{\text{Equity}}$	Ratio
Market Ratio (X ₃)	Earnings per Share	The ratio shows how much profit or returns obtained by shareholders or investors per share (Arifin, 2007)	$\frac{\text{Profit after Tax}}{\text{Number of Shares Outstanding}}$	Ratio

In this study, the data was then analyzed using two methods, heterogeneity test and panel data regression techniques which is a combination of time series data and cross section data of both conventional and Islamic stocks for the study period of 2010-2013. The first objective of the study, which is to compare between the returns of conventional and Islamic stocks, the independent sample t-test of mean deference, was utilized, analyzed using SPSS software. Meanwhile, the second objective of the study, which is to empirically examine the influences of the ratios of activity, profitability and market on both stock returns, the panel regression method, was adopted, analyzed using the Eviews software. In analyzing the panel data, three models of regression have been commonly used, namely (Juanda, 2012):

1. *Common Effects Model*

In this model, it is assumed that each individual unit (company) has a constant (intercept) and the same regression coefficient (slope) in different periods. In other words, the panel regression data generated would be applicable to each individual. Regression model is as follows:

$$y_{it} = \alpha + \beta'x_{it} + \varepsilon_{it} \quad (1)$$

2. *Fixed Effects Model*

If the constant common models assumes that the constant (intercept) and regression coefficient (slope) are equal both over time and between individuals (companies), then the model is only constant (intercept) which is different for each individual. In this model, the constants in the regression can be distinguished among individuals because each individual is considered to have its own characteristics. Regression model is as follows:

$$y_{it} = \alpha_i + \beta'x_{it} + \varepsilon_{it} \quad (2)$$

3. *Random Effects Model*

When the fixed effect model differences in the individual characteristics are accommodated in the intercept, the intercept changed between individuals, then the random effects model differences in the individual characteristics are accommodated in the error of the model. Regression model is as follows:

$$y_{it} = \alpha + \beta'x_{it} + u_i + \varepsilon_{it} \quad (3)$$

Where y is the dependent variable, α is a constant term, β is the regression coefficients, i is an individual company, t is the time period, x is the independent variables, u_i is the cross section error terms, and ε_{it} is the error terms of time series

and cross section data. In order to select which model is the best to be adopted in analyzing the data in the study, three tests were performed, i.e., the Chow Test, Hausman Test and Lagrange Multiplier Test. The Chow Test is used to determine whether to use *common effect model* or *fixed effect model*. While the decision to use either *fixed effect model* or *random effect model* is determined by the Hausman Test. Finally, the decision to use either *common effect model* or *random effect model* is determined by the Lagrange Multiplier Test.

3. Empirical findings and discussions

3.1. Finding from the Independent Sample t-Test

Before heterogeneity test (t-test) was performed, the homogeneity of variants was tested using F-test (Levene's Test). If the variances of the conventional and Islamic stocks are the same, the t-test using *Equal Variance* is assumed, while if those variances are different, then the t-test using *Equal Variance* is not assumed (assuming different variants). The finding shows that the probability value (significance) with equal variance not assumed (assuming two different variants) is 0.008, which is lesser than 0.05, thus it can be concluded that the two different variances of conventional and Islamic stocks were different. Thus, the use of the t-test using equal variance was not assumed.

Table 2. Independent Sample t-Test for Stock Returns

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	7.18	0.01	-1.51	738	0.13	-0.09	0.06
Equal variances not assumed			-1.51	567.68	0.13	-0.09	0.06

Table 2 shows that the results of t-test with equal variance variances assumed was insignificant (p-value of $0.13 > 0.05$). This implies that was no significant differences in the average returns between conventional and Islamic stocks. The results support the previous study by Sufianti (2003) and Syafrida (2014), who found that the Islamic mutual funds have no statistically different with their conventional counterparts. This further implies that the Islamic-based instruments are not less favorable when compared to the conventional-based instruments. Even if it is observed more carefully during the observation period, Islamic stocks performed slightly better than the performance of conventional stocks. Accordingly, investors might invest their money in both conventional and Islamic stocks since both investments provide similar returns. However, Muslim investors should not only aim

at gaining the highest returns as possible in their investments, but they should also consider investing in the stocks, which are offered based on the Islamic principles.

3.2. Findings from Panel Data Regression

Table 3 provides the findings of the three panel data models, i.e., common effect, fixed effect, and random effects for both conventional and Islamic stock markets.

Table 3. Comparison Results of Panel Regression Models (Common Effect, Fixed Effect, and Random Effect)

	Conventional Stocks			Islamic Stocks		
	Common Effect	Fixed Effect	Random Effect	Common Effect	Fixed Effect	Random Effect
Probability (F-statistic)	0.04**	0.39	0.04**	0.10*	0.31	0.10*
Probability (t-statistic) – TATO	0.43	0.14	0.44	0.04**	0.64	0.04**
Probability (t-statistic) – ROE	0.59	0.44	0.59	0.19	0.69	0.18
Probability (t-statistic) – EPS	0.01***	0.12	0.01	0.40	0.01***	0.40
R ²	0.02	0.26	0.02	0.02	0.27	0.02
Adj-R ²	0.01	0.01	0.01	0.01	0.02	0.01
Durbin Watson	1.97	2.58	1.97	2.10	2.82	2.10

Note: *, **, *** indicate the significance levels of 10%, 5%, and 1%, respectively.

To determine which model is properly to be adopted in this study, the Chow Test, Hausman Test, and Lagrange Multiplier Test were conducted, and the findings of these tests were reported in Table 4.3. Based on these tests, the random effect model was identified to be the most appropriate model to empirically examine the effect of activity ratios, profitability, and market on the stock returns of conventional and Islamic.

Table 4. Findings of the Chow Test, Hausman Test, and Lagrange Multiplier Test

Types of Test	Probability Value	
	Conventional Stocks	Islamic Stocks
Chow Test	0.157	0.079
Hausman Test	0.359	0.055
Lagrange Multiplier Test	0.001	0.019

Having identified the random effect model to estimate the effects of ratios of activity, profitability, and market, thus Table 5 presents the findings of the model.

Table 5. Panel Regression Results Based on the Random Effect Model

Dependent Variables	Conventional Stock Returns				Islamic Stock Returns			
Independent Variables	Constants	TATO	ROE	EPS	Constants	TATO	ROE	EPS
Coefficients	0.18	0.06	0.02	0.01	0.41	-0.19	0.49	0.01
Prob. Value	0.01***	0.43	0.59	0.01***	0.01***	0.04**	0.18	0.39
R-Square	0.02				0.02			
Adj. R-Square	0.01				0.01			
Prob F-statistic	0.04				0.10			

Note: *, **, and *** indicate the significance levels of 10%, 5%, and 1%, respectively.

Referring to Table 5, the study documented that the activity ratio, profitability ratio and market ratio have simultaneous significant effects on the returns of both conventional and Islamic stock; showing by significance of F-statistics. R-adjusted of 0.02 for both stocks indicated that only 1 per cent variability in both conventional and Islamic stock returns could be explained by the investigated financial ratios. This indicates that the changes in returns of both stocks were explained 99 per cent by many other variables, both companies' specific characteristics and macroeconomic determinants. In other words, it is not easy to predict the variability of stocks' movements. This further implies that to predict the stock returns movements both technical analysis and fundamental analysis should be paralelly used. Furthermore, the study found that the probability values of the TATO for conventional and Islamic stock were 0.435 and 0.037, respectively. However, the activity ratio (TATO) was found to have no significant effect on the conventional stock returns, but it was found to be significant for Islamic stocks in an indirect manner in Indonesia. Specifically, the result showed that every 1% increases in TATO, resulted in a decrease of the Islamic stock returns by 19 per cent. The finding of conventional stocks supported the previous study by Thrisye and Nicodemus (2013).

The probability values of the ROE for the conventional and Islamic stocks were 0.596 and 0.182 respectively, which means that the ratio of profitability (ROE) had no significant effect on both stocks in Indonesia. Our finding was in harmony with the finding of previous study by Nuryana (2013). Finally, the probability values of the EPS for the conventional and Islamic stocks were 0.011 and 0.399, respectively. This indicated that the ratio of the market (EPS) has a significant effect on the conventional stocks, but not on the Islamic stocks in the country. The EPS for the conventional stock returns has an n estimated regression coefficient of 0.01. This finding indicated that every 100 per cent an increase in EPS would raise the conventional stock returns by 1 percent. This finding supported the previous research by Nuryana (2013).

4. Implications of the findings

Based on the Independent Sample t-Test, the study found that was insignificant difference between the conventional and Islamic stock returns in Indonesia. This implies that though the Islamic stocks operates on the basis of Islamic principles such as not allowing usury, speculation, gambling, trade in illicit goods and so on in their business activities, but the returns offered by the market is as much as the returns gained by investing in the conventional stocks. Although investing in the Islamic stocks provides similar returns as compared to the conventional stocks, but the Muslim investors should opt to invest in Islamic stocks. Islam does not prohibit the investors to gain as much as possible the returns, but their benefits should be coming from the permissible investments activities, which are *riba*-, *gharar*- and *maysir*-free.

The activity ratio which represented by the TATO has no significant effect on the conventional stock returns. Previous study conducted by Farkhan and Ika (2012) showed that the TATO has a negative effect on the stock returns. Since the activities of companies are sometimes low on a certain sales level, it might lead to the increase of the amount of surplus funds that are embedded in the non-productive assets. When the economy condition is bad, it subsequently lowers TATO and affects the stock returns. Unlike the companies offered the conventional stocks, the TATO affected the Islamic stock returns. Nuryana (2013) documented that the TATO has a significant effect on the Islamic stock returns. TATO is one of measurement used to assess the efficiency of a company's operation. A high value of TATO indicates that the company management may use its entire assets to bring in sales (revenue) for the company and to provide benefits for the company. A high value of the TATO also indicates that the company is more efficient in utilizing its assets, particularly to generate greater sales; and subsequently brings a positive impact on the stock prices. Accordingly, investors would be attracted to continue investing in those companies.

Profitability ratio, which represented by the ROE was found to have no effect on both conventional and Islamic stock returns. In their study, Kristiana and Untung (2012) provided an indication that when the rate of investment returns received by investors was low, investors were not interested in buying those stocks. This would lead the stock market prices to decrease and it eventually influenced the stock returns. Therefore, to improve the ROE, the company must improve the capital utilization so that the profit would increase and the ROE would be higher.

Finally, the market ratio, which measured by the EPS was found to influenced the conventional stock returns. Hermi and Ary (2011), in their study, showed that the EPS has influenced the stock returns. If the EPS increases, the returns would also increase and it ultimately might increase the prosperity of investors. Accordingly, the

EPS affected the stock returns as well as the investment decisions made by investors. However, in the case of Islamic stocks, the EPS did not affect the returns. Kristina and Untung (2012) documented that the EPS has no effect on the stock returns. This indicates that investors have been no longer assuming that the EPS could be used as a predictor for the stock prices' movements.

5. Conclusions

This study aims at empirically examining whether there are differences in stock returns between conventional and Islamic stock returns in Indonesia for the period 2010-2013. This study also attempts to explore the effect of asset management and profitability both stock returns in Indonesia. Annual pooled data gathered from the annual financial reports of 100 conventional and 100 Islamic stocks, which were published by the Indonesian Stock Exchange from 2010 to 2013 were used and analyzed by using the independent t-test and panel multivariate regression analysis. Using the independent sample t-test, the study documented that there was no difference in stock returns between the conventional and Islamic stock markets. Additionally, using the random effect model of multivariate panel regression, the study documented that only profitability, which is measured by market ratio, was found to have an influence on the conventional stock markets. Meanwhile, as for Islamic stock market, only management of assets was found to have a significant effect on the stock return. These findings imply that investors who are investing in both Islamic and conventional markets would gain similar returns. However, in predicting and stabilizing the stock markets in Indonesia, both investors and policy makers should focus on the profitability for the conventional and management of assets for the Islamic stock market.

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