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The Assessment of Investment and Financing Impact on Shareholder Welfare

(Comparative Study between Sharia and Non-Sharia Compliant Company Groups in Indonesian Capital Market)

Fiesty Utami*, Ruhadi Ruhadi
Accounting Department
Bandung State Polytechnic
Bandung, Indonesia
*fiesty042@gmail.com

***Abstract*—The studies of financial performance have frequently conducted, but the comparison is rarely studied. The objective of this study is to identify the factors that influent shareholder's wealth. At least, two categories that affect shareholder's wealth; those are the investment and financing aspects. This study employs the data from the Indonesia Stock Exchange (ISX), especially for sharia and non-sharia manufacturing companies, which is compiled by ISX. The multiple regression is applied to solve the issue in this research. The result of the study has found that in the non-sharia group, the shareholders' wealth is influenced by investment and financing aspects, whereas in the sharia group the financing aspect is the only aspect that affects the shareholders' wealth.**

Keywords—shareholders wealth, investment, financing, sharia-compliant

I. INTRODUCTION

Previous studies shows that sharia companies are less risky than non-sharia [1], and sharia industry can minimize the effect of financial crisis [2]. This is a fascinating fact to continue to be explored related to other financial performance. Mohammed and Kim-Soon argue that bankruptcy or financial failure occurs when the amount of liabilities exceeds the asset's fair value or when the current liabilities exceed the current assets [3]. The bankruptcy or financial collapse experienced by most companies can adversely affect the world economy [4].

The purpose of financial management is to improve shareholder wealth. This objective is concerned with two essential elements that must be managed by the financial section that is related to investment and funding policies. Mohammed and Kim-Soon opinion above provides information that regarding funding, companies should pay attention to capital structure [3]. It means that the comparison between internal funding of stocks plus profits held on debt can have an impact on the efficiency and effectiveness of the company in the process of achieving the shareholders' welfare. Increased funding derived from debt will highly risk the business, which will have an impact on the efficiency of the company. Theoretically, in a conventional financial perspective, an increase in debt could increase the cost of interest, thereby increasing the overall cost for the company. On the other hand, the hard work of the company in achieving profit then will only provide welfare for the lender than to improve the welfare of shareholders themselves.

The review of financial performance on the share of returns (the ROE of sharia and non-sharia manufacturing companies) shows that ROE of the sharia group is much more stable than the non-sharia, as can be shown below.

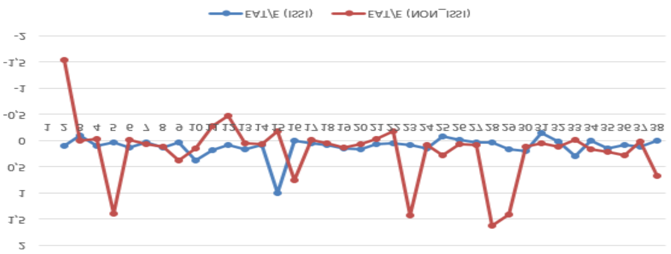
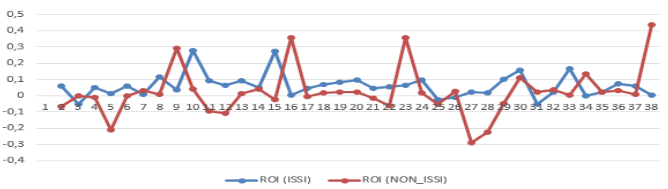


Fig. 1. Graph of ROE comparison (Companies sharia and non-sharia in 2014).

Similarly, the assets productivity in generating profit or Return on Investment (ROI) for sharia manufacturing group companies is much more productive than the non-sharia. The average ROI of the sharia group is almost three times that of non-sharia, while the standard deviation of ROI for non-sharia groups is twice as large as that of sharia, as can be seen in Figure 2.



Notes: The average ROI of Sharia is 0.06 while the Non-Sharia is 0.02, and the std dev ROI of Sharia is 0.07, while the Non-Sharia is 0.15.

Fig. 2. Graph of ROI comparison (Group of sharia and non-sharia companies in 2014).

The graph indicates that the productivity of sharia management system is superior to the non-sharia management system. It might happen because of the characteristic of the Sharia funding management system; Sharia firms emphasis more on equity than debt because the debt containing interest is not allowed. Thus the format of the Islamic group fulfilment funds is more concern in equity (as can be seen in Figure 3). The figure shows the higher the equity used, the smaller the equity multiplier or, the higher the debt or leverage.

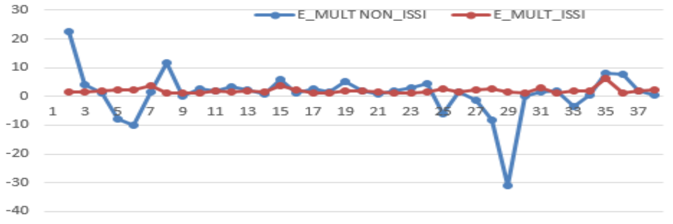


Fig. 3. Comparison of equity multiplier (TA/E) (Sharia and non-sharia group companies in 2014).

The comparison of equity multiplier for both groups shows that the capital structure of sharia companies group is more well-managed. The sharia companies equity multiplier is relatively constant, while for non-sharia enterprise group, the capital structure is a problem that should be managed carefully on a daily basis (see Figure 3). As a result, the goal of achieving shareholder welfare for the sharia group becomes more simple, because to achieve a good financial performance the sharia companies are more focus on investment management issues. On the contrary, business management in non-sharia group becomes a bit complex because it must deal with two matters; management issues investment and funding.

Theoretically, the purpose of increasing shareholders welfare is reflected by the increasing equity productivity in generating profit for shareholders or Return On Equity (ROE). A higher ROE means that the company, in the long run, could improve the shareholders' welfare. It is the goal of financial management. The studies about the factors underlying the increasing ROE, through an analysis of two financial performances: investment and finance, seems being relevant. Conceptually, investment aspect comes from net profit margin (PM) and asset turnover (ATO), while funding and capital structure aspect come from equity multiplier (EM) or leverage. Then, this study will focus on the question: which investment and funding factor is the most dominant in giving impact to shareholder welfare in sharia and non-sharia groups. This study aims to reveal which aspects of investment and leverage are carried out by sharia and non-sharia manufacturing companies in Indonesia that have the greatest impact in increasing shareholder wealth. The results obtained from this study is expected to determine the most appropriate strategy that can be executed each by both types of companies to achieve the shareholders welfare.

II. Literature Study

Financial performance evaluation is the important thing that should be did by the management. The result of the evaluation will provide an overview, whether the management so far have achieved goals or not. As most people know, the purpose of establishing a company is to keep the business continuity. To expand and maintain the sustainability of the business, the company need business activities that can generate profit.

Financial performance is the result of management activity and hard work in managing the business. The management success could be measured by how far the objectives have been achieved, as the objectives already decided in the beginning of company establishment. In general, a company is built to maintain business continuity and to improve the business owners welfare. Productivity has two dimensions; effectiveness (doing things right) and efficiency (working right) [5]. Understanding these two dimensions of productivity shows that business must meet the rules that it works on target and efficiently. In the financial theory, effectiveness can be measured by how far the management can take advantage of every dollar of assets owned to generate sales as optimal as possible, whereas the efficiency is how much sales have been achieved to generate net income. Based on these two dimensions, the company is expected to achieve its goals because the increase of effectiveness and efficiency are predicted to produce profit optimally.

The efforts in maximizing profit cannot be separated from the goal to increase the shareholders' welfare. In fact, to expand its funding, the company often searches another external sources. This funding process then raises the choice of how much the business will use the funds from the outside and how much from the internal. How much assets owned by the company either funded by debt or equity, is called the capital structure.

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A. *Return on Equity (ROE)*

Return on equity is an essential measurement of corporate earnings performance. ROE reveals how effective and efficient the owners money are being used. Thus, this study estimate whether the company is a profit producer or otherwise. The calculation of ROE is as follows:

$$ROE = \frac{Earning\ After\ Tax}{Net\ Sales} \quad (1)$$

A high ROE shows a better management in using equity to generate profits. Investors rate ROEs for companies individually and compare them with industries as benchmarks. Increased ROE is a signal that a company can increase its profits without additional new equity into the business intended for existing capital owners.

B. Model Du-Pont Three-Step

ROE formula shows that the increase of ROE requires one thing; either there is an increase in net income or the decline in equity (such as increased debt). This three-step model was first created by DuPont Corporation, where ROE is divided into three factors, and the indicators are: Net Profit Margin (PM), Asset Turnover (ATO) and Equity Multiplier (EM).

$$ROE = \frac{TA}{E} = PM \ X \ ATO \ X \ EM \quad (2)$$

$$PM = \frac{EAT}{NS} \quad (3)$$

$$ATO = \frac{NS}{TA} \quad (4)$$

$$EM = \frac{TA}{E} \quad (5)$$

where EAT is earnings after tax, NS is net sales, TA is the total asset, and E is equity. Thus the above formula can be reformulated by the following equation:

$$ROE = \frac{EAT}{NS} x \frac{NS}{TA} x \frac{TA}{E} \quad (6)$$

The profit margin of a company reflects a pricing management strategy that shows how much profit can be generated from the monetary unit. Asset turnover shows the effectiveness of management to generate sales. EM measures the size of the company in using its debt funds to fund its assets; the higher the EM ratio, the higher the leverage/debt. This DuPont model combines three attributes that consist of productivity, profitability, and leverage. It means that these three aspects influence ROE.

The financial strategy aims to maximize ROE in the long term. Thus if the company wants to maximize ROE, it can use a variety of actions. One or two of the three strategies are available to be chosen: volume, margin, and leverage strategy. However, it is so rarely that a company only takes one strategy because a company usually takes a combination of two or three strategies [6].

High ROE will lead the company to succeed in generating high stock prices and makes the company can easily attract new funding. ROE is an essential feature of the modern market economy both individual as well as overall [7]. Thus, theoretically, ROE can be used as an indicator to measure shareholder's welfare because ROE can increase stock price, where the stock price is an important indicator of shareholder's welfare.

C. The Relationship of ROE with PM, ATO, and EM

Profit margin is an efficiency indicator of each dollar sales revenue in generating the net profit. Thus a higher PM is expected to increase return on assets (ROA). On the other hand, the increase in PM will not rise ROA if the effectiveness of sales (ATO) has not achieved. ATO is an indicator of how much each dollar of assets can contribute to sales revenue. Therefore, high ATO will give a significant contribution to the increase of ROA when the efficiency increase.

The relationship between capital structure and financial performance of companies in Sri Lanka [8]. They use multi-regression and correlation methods to prove the relationship between debt-equity ratio, which is long-term debt with various financial performance. The result of the study demonstrates that capital structure positively correlates with company's financial performance.

Alvi and Ikram find that an increase of ROE is a positive indication [9]. Otherwise, a decrease in ROE usually causes problems. If ROE increases due to the decline in equity, then firms tend to use debt funds that can cause problems. If ROE rises due to increased EAT, then this shows a positive growth of EPS.

The relationship between ROA, ROE, and ROI [10]. They found that ROA, ROE, and ROI simultaneously address strong relationships with stock prices and market returns. Nevertheless, individually ROA and ROI have a weak impact on stock prices and ROE does not even have any effect on stock prices. Kijewska study shows that PM and TA have an impact on ROE, while EM does not affect ROE [6]. The same results also occur in comparisons for data relating to firms and time periods. The impact of PM and ATO on the volatility of future operating profits [11]. They found that both elements could explain the expected fluctuations of operating profit.

III. Methodology

The data used in this study is the data of a group of sharia and a group of non-sharia manufacturing companies, listed by Indonesia Stock Exchange in 2014. The population of this research is all manufacturing companies listed on Indonesia Stock Exchange. The population is divided into two, namely the sharia and non-sharia category. The period of observation is 2014, and this study uses purposive sampling. The company sample criteria used are companies with these categories: (1) publish its financial report as of December 31 of 2014; (2) identified to meet the categories of sharia or non-sharia; (3) profit after tax, net sales, total assets, and total equity data are available.

The type of data used in this study is quantitative data, i.e., data in numbers that indicate the magnitude of the variable value. Meanwhile, the data source used in this study is secondary data obtained from; (1) Indonesian Capital Market Directory (ICMD), published in 2014; (2) Annual report for all companies selected as sample members, published in 2014; and (3) JSX Monthly Statistic (2014).

Three independent variables will be analyzed in this research. The first independent variable is profit margin (PM) that is profit after tax or earnings after tax (EAT) divided by net sales (NS). The second one is asset turnover (ATO), it is net sales divided by total assets (TA). Lastly, Equity Multiplier (EM) is the total assets divided by equity (E). The dependent variable of this study is Return on Equity (ROE). The formula is below:

$$PM = \frac{EAT}{NS} \quad (7)$$

$$ATO = \frac{NS}{TA} \quad (8)$$

$$EM = TA/E \quad (9)$$

$$ROE = \frac{Total\ EAT}{Total\ Equity} \quad (10)$$

This study uses regression analysis model, as follows:

$$ROE = a + b1PM + b2ATO + b3EM + € \quad (11)$$

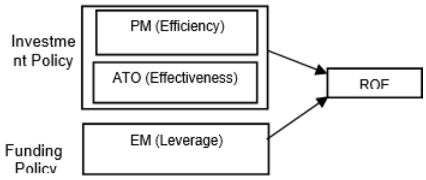

Fig. 4. Relationship model of PM, ATO, and EM to ROE.

IV. Result and Discussion

A. Result

As mentioned before, the objective of this research is to measure financial performance which can be seen from investment aspect which consist of effectiveness (ATO) and efficiency (PM). This study also wants to measure financial performance on funding aspect (EM), which gives influence to the company value for sharia and non-sharia manufacturing companies (welfare of shareholder analyzed by using ROE as the proxy). Below is the descriptive analysis of the two groups of companies.

1) Descriptive analysis: Based on the results of the analysis in Table 1, it can be described that the financial performance of non-sharia companies shows that: ROE is 19.60%, and PM is -3.03%. Therefore, ATO is 0.97 times, ROI is 2.37%, and EM is 1.99 times. Viewed from the investment aspect, it appears that the non-sharia group produces ROI with average 2.37%, while the sharia group is 5.78%. Non-sharia companies have sales effectiveness with average 0.97 times, while its efficiency is -3.03%. Then, sharia group companies have sales effectiveness 0.995 times, and the efficiency is 76.96%. These are why the overall investment performance of non-sharia group companies is lower than that of sharia companies.

TABLE I. Analysis Result Comparison of Financial Performance of Sharia and Non-Sharia Manufacturing Companies in 2014

No	Performance Var.	Non-Sharia (N=37)		Sharia (N=98)	
		Avg.	**Std. Dev.**	**Avg.**	**Std. Dev.**
1	ROE	0.1960	0.56604	0.1049	0.20132
2	PM	-0.0303	0.28338	0.7696	6.93490
3	ATO	0.9687	0.76316	0.9950	0.66996
4	ROI	0.0237	0.14570	0.0578	0.08420
5	EM	1.9944	7.70885	1.8535	0.80412

Viewed from the EM, it appears that the non-sharia group is almost two times while the sharia group is 1.85 times. It means that the average funding derived from debt for the non-sharia group is higher than that of sharia companies. Therefore, the interest charge to be paid by this group of companies must be bigger than the sharia group. Hence it would erode the performance of the overall profit rate.

B. Regression Analysis Result

In general, the level of shareholder welfare, approached with Return on Equity, is significantly influenced by sales effectiveness (ATO) and funding or leverage (EM) aspect (see Table 2).

TABLE II. Regression Analysis Result for Non-Sharia Group Companies with ROE as Dependent Variable

Model	Unstandardized Coefficients		Stand. Coef.	T	Sig.
	B	***Std. Error***	***Beta***		
Non-Sharia Group Companies					
(Constant)	0.105	0.107		0.980	0.334
PM	0.448	0.248	0.224	1.802	0.081
ATO	0.199	0.088	0.269	2.254	0.031
EM	- 0.044	0.009	-0.605	-5.012	0.000
Sharia Group Companies					
(Constant)	0.010	0.055		0.189	0.850
PM	0.003	0.003	0.120	1.180	0.241
ATO	- 0.003	0.032	-0.011	-0.104	0.917
EM	0.051	0.026	-0.205	1.949	0.054

In the group of sharia companies, the welfare of shareholders is significantly influenced only by the funding/leverage (EM). Meanwhile, the results of the analysis reveal that the effectiveness of the sale positively and significantly affects the welfare of stakeholders in non-sharia enterprise group. It could be said that the increase of shareholder's welfare in this group is due to the increase of sales effectiveness. On the other hand, the funding aspect or leverage shows a negative and significant impact of shareholder welfare. It indicates that the increase of shareholder's welfare in non-sharia group occurs when the use of debt is lowered or vice versa.

These findings suggest that the increase of debt would give impact on the increase of shareholder wealth. Theoretically, it demonstrates that debt could rise risks such as an increase of interest costs and the eroded revenue or decreased efficiency that appears to be ineffective from the efficiency aspect of the PM. This condition is in line with findings from a study conducted by Kabajeh et al., which finds that ROA and ROI have a weak impact on stock prices and ROE does not have any impact on the stock price [10].

The results of the analysis in the group of sharia companies show that the welfare of its shareholders is influenced positively and significantly by funding or leverage. It reflects that the increasing of the shareholder's welfare in that group is significantly affected only because of the increase in the equity multiplier. The increased funding aspect from outside is the largest contributor to the increase of shareholder's welfare, while the effectiveness of sales and efficiency has not had a significant impact to the profit for shareholders in this group of companies. In sharia context, total assets are debt plus equity. The debt in the sharia companies is like capital participation which shareholders will get part of profit if company gain profit (it is not the profit decided in the beginning). The increase of welfare is contributed significantly from relatively cheap funding. However, this group of companies has not been able to utilize the investment aspect through its sales strategy and business efficiency.

C. Discussion

Based on the analysis result, this study identifies that in the group of non-sharia companies, the dominant factor that has a positive and significant impact on the welfare of shareholders (with ROE as the proxy) is the sales effectiveness (with ATO as the proxy). It is also influenced negatively and significantly by funding or leverage (with EM as the proxy). This condition indicates that ROE increases due to the increase in funding from equities. This situation illustrates that increased net income followed by increased funding which comes from the equity or the debt plunge. It will give implications to positive earnings per share growth (similar with Alvi and Ikram [9] study). Increasing ROE is a positive indication. Otherwise, a drop in ROE usually creates a problem. If ROE increases due to the decline in equity, then firms tend to use debt funds that can cause problems, if ROE rises due to increased EAT then this shows positive growth for EPS [9]. The results of the analysis on non-sharia group companies show that changes in turnover assets (ATO) and Equity Multiplier (EM) can explain the change of ROE which is equal to 57.3% and the rest is explained by other variables (see Table 3).

TABLE III. RESULTS OF REGRESSION ANALYSIS FOR SHARIA AND NON-SHARIA CORPORATE GROUPS

R*	R square	Adjusted R- square	Std. Error of the Estimate
Non-Sharia Group Companies			
0.757	0.573	0.535	0.38618
Sharia Group Companies			
0.225	0.050	0.020	0.19929

*Predictors: (Constant), EM, ATO, PM

It seems that a suitable strategy to increase profit for shareholders in the non-sharia group companies is likely through investment strategy by sales effectiveness and leverage strategy by increased internal funding. In a group of sharia companies, the shareholder welfare is only influenced positively and significantly by funding (EM as the proxy). It illustrates that generally in this group of companies, the increase in profits available to shareholders or the welfare of shareholders occurs as debt financing increases. In the context of sharia, debt or leverage is a capital investment, meaning that an increase in debt will not incur costs on the operations of the company, but only on the distribution of profits earned. Thereby, it will still contribute to the net benefits available to shareholders over the long term.

This condition is in line with the research conducted by Kabajeh et al., which finds that the investment aspect (ROA and ROI as the proxies) has a weak impact on shareholder's welfare (share price as the proxy) [10]. However, this study contrasts with findings conducted by Kijewska, that the investment aspect projected by PM and TA has an impact on ROE, while EM does not affect ROE [6]. The same results also occur in comparisons for data relating to firms and time periods. This study reveals that the funding or leverage aspect could only explain 5% or relatively small shareholder welfare (ROE) change and the rest is explained by other aspects (see Table 3). In particular, these findings imply that funding or leverage strategies in sharia group companies should be an excellent option for achieving the goal of maximizing the profitability. This option should be available to shareholders or investors, but the investment aspect should also be a strategy to improve financial performance especially investment strategy through sales effectiveness strategy and marketing efficiency forward in achieving that goal.

V. CONCLUSION

This study shows that in a group of non-sharia manufacturing companies, the welfare of shareholders is significantly influenced by the investment and leverage aspect. On the investment side, the increase of shareholder's welfare of this group of companies is dominated by the increase of sales effectiveness. It means that the management in this company can manage its assets productively to produce sales that are more productive. On the other hand, funding aspects also have a significant impact on improving the welfare of shareholders when funding or leverage derived from debt is lowered.

While for sharia manufacturing group companies, the dominant aspects affecting shareholder's welfare is funding or leverage aspect. This study also finds that the funding aspect has a positive and significant impact on the shareholder's welfare. These findings provide information that increased shareholder welfare in sharia group companies is contributed predominantly when leverage increases. In the sharia context, debt financing is more likely equity participation which does not burden the company's operational costs but will only impact on the distribution of profits at the time the company gains profit (at the end of the business period) so that the business efficiency is not disturbed. However, this company does not seem to manage the abundance of funds that are relatively cheap yet, so the benefits aspect of the investment has not appeared yet.

For a group of non-sharia manufacturing companies, the business strategy that can be done in the future is to reduce risk by using internal funding sources, for example through greater profit retention. This is because, from the study, it appears that greater use of leverage can reduce the benefits available for shareholders in the long term. Therefore, it also will reduce operating expenses in the form of interest costs that may undermine operating income.

For sharia manufacturing group companies, companies should be able to increase the effectiveness of the use of relatively inexpensive funds in generating sales. These will make the productivity and efficiency of the company's operations increases, which is expected in the long term it can produce business benefits from investment aspects through increased sales productivity and the increase of marketing efficiency (as a significant contributor to the increase of revenues available for the funder. Abundance of funds that are relatively cheap yet, so the benefits aspect of the investment has not appeared yet.

VI. Recommendation

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References

[1] H. N. Husna and R. A. Rahman, “Financial Distress-Detection Model for Islamic Banks,” Int. J. Trade, Econ. Financ., vol. 3, no. 3, p. 158, 2012.

[2] A. Jan and M. Marimuthu, “Bankruptcy and Sustainability: A Conceptual Review on Islamic Banking Industry.,” Glob. Bus. Manag. Res., vol. 7, no. 1, 2015.

[3] A. A. E. Mohammed and N. Kim-Soon, “Using Altman’s model and current ratio to assess the financial status of companies quoted in the Malaysian stock exchange,” Int. J. Sci. Res. Publ., vol. 2, no. 7, pp. 1–11, 2012.

[4] J. Li, “Prediction of corporate bankruptcy from 2008 through 2011,” J. Account. Financ., vol. 12, no. 1, pp. 31–41, 2012.

[5] J. N. Sheth and R. S. Sisodia, “Marketing productivity: issues and analysis,” J. Bus. Res., vol. 55, no. 5, pp. 349–362, 2002.

[6] A. Kijewska, “Determinants of the return on equity ratio (ROE) on the example of companies from metallurgy and mining sector in Poland,” Metalurgija, vol. 55, no. 2, pp. 285–288, 2016.

[7] C. Walsh, Key management ratios: the 100+ ratios every manager needs to know. Pearson Education, 2008.

[8] A. Nirajini and K. B. Priya, “Impact of capital structure on financial performance of the listed trading companies in Sri Lanka,” Int. J. Sci. Res. Publ., vol. 3, no. 5, pp. 1–9, 2013.

[9] M. Alvi and M. Ikram, “Impact of Total Assets and Net Income on Return on Equity of Small Medium Enterprises of Pakistan,” 2015.

[10] M. A. M. Kabajeh, S. M. A. Al Nuaimat, and F. N. Dahmash, “The relationship between the ROA, ROE and ROI ratios with Jordanian insurance public companies market share prices,” Int. J. Humanit. Soc. Sci., vol. 2, no. 11, pp. 115–120, 2012.

[11] M. Li, D. Nissim, and S. H. Penman, “Profitability decomposition and operating risk.” Working Paper, 2014.