Effect of Environmental Performance and Financial Performance on Firm Value

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Abstract

The purpose of this study was to determine the assessment of environmental performance, and financial performance on the value of the company. Secondary data was collected from the Indonesia Stock Exchange listed on the Indonesia Stock Exchange for the period 2015-2017. This study used a purposive sampling method with the criteria as (1) listed on the Indonesia Stock Exchange in 2015 - 2017. (2) Publish the audited financial statements for the period 2015-2017 in Rupiah. (3) always has an advantage. (4) entered in the PROPER list. The data needed to be taken from the 2015-2017 Indonesian Capital Market Directory (ICMD). Statistical tests were carried out by t test and multiple linear regression analysis, before this test the classical assumption test was carried out first. The results of the study show that: 1) Environmental performance proxied by ISO 14001 and PROPER has a positive and insignificant effect on the value of the company proxied by Tobins'Q. 2) Based on the results of the study, it can be seen that financial performance proxied by Total Asset Turn Over (TATO) and Net Profit Margin (NPM) has a positive and significant effect on positive and non-significant proxies with Tobins'Q. with Total Asset Turn Over (TATO).

Key words

ISO 14001, PROPER; total assets turn over; Net profit margin; Firm Value

1. Introduction

Firm value is the performance of the company which is reflected by the stock price formed by demand and supply in the capital market that reflects the community's assessment of the company's performance (Santoso, 2016). The value of the company is used as the main focus in making decisions by investors to invest in a company. To be able to attract investors, the company expects financial managers to take the best actions for the company by maximizing the value of the company so that shareholder prosperity can be achieved. With the good value of the company, the company will be considered good by prospective investors (Analisa, 2011).

In this study there are various kinds of indicators used to measure company value. The use of indicators as a measure of a variable is very necessary, this is related to providing convenience in understanding the meaning. The variable used for this study is Tobin's Q. The value of the company is the price that the prospective buyer (investor) is willing to pay if the company is sold. The company's normative goal is to maximize shareholder wealth (Sudana in Prasetyorini, 2013). High stock prices make the value of the company also high, and increase market confidence not only in the company's current performance but also in the company's prospects in the future. The value of the company in this study has an element of

stock prices in the proxy Tobin's Q. For companies that issue shares in the capital market, the stock price traded on the stock is an indicator of company value.

In Indonesia, environmental sustainability has become a government policy in each period. Therefore the government must also begin to think about macroeconomic policies related to environmental management and conservation of nature. The government, through the Ministry of Environment (KLH), has established a Program for Rating the Company's Performance in Environmental Management (PROPER) since 2002 in the field of environmental impact control to enhance the company's role in environmental conservation programs. Through PROPER, the environmental performance of a company will be assessed by the government by using color as its tool, from the best colors, namely gold, green, blue, red, to the worst color, black. The PROPER results are always announced regularly by the government to the community so that the public can find out how the level of environmental management that has been carried out by the company just by looking at the color. Based on research conducted by Sarumpaet (2005) which states that environmental performance that does not have a significant impact on the company's financial performance, this is not in accordance with the results of the study of El Ibrami *et. al.* (2015).

One of the analytical tools used to measure company performance is the profitability ratio analysis in which is the calculation of Total Asset Turnover (TATO) and Net Profit Margin (NPM). According to Sudana (2011): Profitability ratio measures the ability of a company to generate profits by using resources owned by the company such as assets, capital or sales of the company. In a study conducted by Liliyana (2017) stated that Net profit margin (NPM) and Total Asset Turn Over (TATO) have a significant positive effect on company value.

Based on the background description above, the authors are interested in raising this issue as material for scientific writing with the title: "The Effect Of Environmental Performance And Financial Performance On Firm Value".

Based on the background that has been described above, the author determines the formulation of the problem as follows:
1. Does environmental performance affect Firm Value?
2. Does financial performance affect Firm value?

2. Literature review

2.1. Agency Theory

Agency relationships occur when one or more individuals, referred to as principals, hire other individuals or organizations, referred to as agents, to do a number of services and delegate authority to make decisions to these agents (Brigham and Houston, 2006). According to Darmawati *et al.* (2004), the core of agency relations is the separation between ownership (principal/investor) and control (agent/manager). Ownership is represented by investors delegating authority to agents in this case managers to manage investor wealth. Investors have the hope that by delegating management authority will benefit by increasing investor wealth and prosperity.

Agency relations can cause problems when the parties concerned have different objectives. Owners of capital want to increase the wealth and prosperity of the owners of capital, while managers also want increased welfare for managers, so that conflicts of interest arise between owners (investors) and managers (agents). Owners are more interested in maximizing the return and price of securities from their investments, while managers have broad psychological and economic needs, including maximizing compensation (Darwis, 2009).

2.2. Firm Value

The company's main goal is to achieve maximum profits or maximum profits. The second objective of the company is to prosper the company owner or shareholders while the third objective of the company is to maximize the value of the company as reflected in its stock price (Husnan, 2002).

The value of the company is very important because the high value of the company will be followed by the high prosperity of shareholders (Brigham and Gapenski, 1996). The higher the stock price the higher the value of the company. High corporate value is the desire of the owners of the company, because with high value shows the prosperity of shareholders is also high. The wealth of shareholders and companies is

presented by the market price of shares which is a reflection of investment decisions, funding (financing), and asset management. Dependent variable in this study is the value of the company measured using Tobin's Q. According to Smithers and Wright (2007) Tobin's Q is calculated by comparing the ratio of market value of company shares with the book value of company equity.

2.3. Environmental Performance

According to Blazovich *et. al.* (2013) Green concept or environmental friendly is important for all types of businesses both retail companies, manufacturing and services. The measurement of environmental performance used in each study usually varies depending on the indicators used. Types of environmental performance indicators such as PROPER, ISO (ISO 14001 for Environmental Management Systems and ISO 17025 for Environmental Test Certification from independent institutions), AMDAL (BOD and COD wastewater tests), and GRI (Global Reporting Initiative) which pioneered the development of the framework continuous reporting work (Lindrianasari, 2007). The company's environmental performance in this study was measured through ISO 14001. Given the results of the PROPER rating assessment will be publicly published to the public and other stakeholders, the performance of the company structuring is grouped into color ratings. Through this color ranking, it is expected that the public can more easily understand the performance of each company. So far, it can be said that PROPER is a rating system that first uses color.

2.4. Financial performance

1. The Net Profit Margin ratio is also called the income to sales ratio. According to Joel G. Siegel and Jae K. Shim said that the first one; Net profit margin is equal to net income divided by net sales. This shows the stability of the unit to produce income at a special sales level. Second; Gross profit margin equals gross profit divided by net income. High profit margin is preferred because it shows that the company gets good results that exceed the cost of goods sold, with the following formula:

$$NPM = \frac{Net\ Income}{Sales} \tag{1}$$

2. Total Assets Turnover is also referred to as total asset turnover. This ratio sees the extent to which the assets owned by the company occur in circulation effectively. This ratio shows the total ability of assets to spin for one year to generate sales, with the following formula:

$$TATO = \frac{Salet}{Total\ Asset} \tag{2}$$

3 Methodology of research

3.1. Research Model

Environmental performance consisting of ISO 140001 and PROPER has a positive influence on Corporate Values and Financial Performance consisting of Total Asset Turn Over and Net Profit Margin having a positive influence on Corporate Value so that the empirical model in this study can be described as follows:
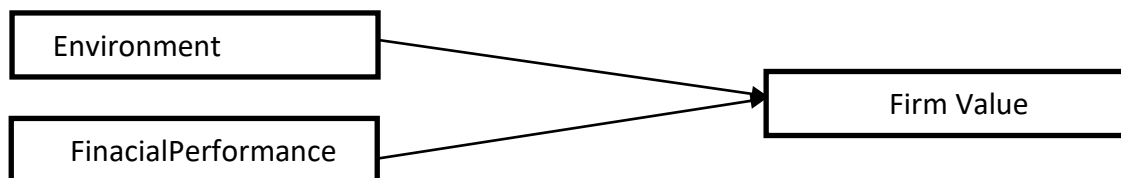

Figure 1. Research Model

Source: the results of the author's processing

3.2. Hypothesis

Based on the existing problems and objectives to be achieved, the authors draw three hypotheses, namely:

H_1 = Effect of Environmental Performance on Firm Values

H_2 = Effect of Financial Performance on Firm Values

3.3. Methodology

The research used in this research is casual associative research. According to Sanusi (2011), associative-causal research is the search for the relationship between two or more variables. The purpose of associative research is to find relationships between one variable and another variable.

The population of this study is the companies included in the list of PROPER listed on the Indonesia Stock Exchange in 2015-2017.

From the population there are taken a number of certain samples using the Purposive random sampling technique, namely the technique of determining the sample with certain considerations (Suliyanto, 2005).

The sample used in this study was chosen based on the following criteria:

1. The company is listed on the IDX in 2015-2017
2. The company is included in the PROPER list
3. Data owned by the company complete and in accordance with the variables under study

4. Results and discussions

Descriptive statistics include minimum, maximum, mean and standard deviation. The research variable data includes the dependent variable namely Financial Report Integrity and the independent variables include Institutional Ownership, Quality of Public Accountants and Company Size. The results of the descriptive statistical analysis are shown in table 1:

1. Company value has an average value of 1.9962. While the standard deviation value is 1.60439. This indicates that the variable value of the company is normally distributed, because the value of the standard deviation is smaller than the value of the average variable.

2. ISO 14001 has an average value of 0.6173. While the standard deviation value is 0.48908. This indicates that the ISO 14001 variable is normally distributed, because the standard deviation value is smaller than the variable average value

3. PROPER has an average value of 0.6812. While the standard deviation value is 0.11231. This indicates that the PROPER variable is normally distributed, because the standard deviation value is smaller than the variable average value.

4. Total Sales Turn Over (TATO) has an average value of 0.9775. While the standard deviation value is 0.409302. This indicates that the Total Sales Turn Over (TATO) variable is normally distributed, because the standard deviation value is smaller than the variable average value

5. Net Profit Margin has an average value of 0.1022. While the standard deviation value is 0.08445. This indicates that the Net Profit Margin variable is normally distributed, because the standard deviation value is smaller than the variable average value.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ISO	81	,00	1,00	,6173	,48908
PROPER	81	,38	1,00	,6812	,11231
TATO	81	,12	2,34	,9775	,40930
NPM	81	,00	,43	,1022	,08445
TOBINSQ	81	,28	8,86	1,9962	1,60439
Valid N (listwise)	81				

4.1. Classic assumption test

A model is declared good for predictors if it has the best liner unbiased estimator properties (Gujarati, 1997). Besides that, a regression model is said to be quite good and can be used to predict if it passes a series of econometric assumptions that underlie it.

The classic assumption test is carried out to determine the condition of existing data in order to determine the most appropriate analysis model to use. The classic assumption test used in this study consisted of autocorrelation tests using Durbin-Watson statistics, multicollinearity test using Variance Inflation Factors (VIF) and heteroscedasticity test using the Glejser test.

4.2. Multicollinearity Test

This test aims to test whether the regression model found a correlation between independent variables. A good regression model should not have a correlation between the independent variables. This test is done by using correlations between the independent variables used in the regression equation. If some or all of the independent variables are strongly correlated, multicollinearity occurs.

Table 2. Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
	(Constant)		
	ISO	0,976	1,024
	PROPER	0,939	1,065
	TATO	0,830	1,206
1	NPM	0,831	1,204

a. Dependent Variable: TOBINSQ

The method that can be used to test the presence of multicollinearity is by testing the tolerance value or Variance Inflation Factor (VIF) value. The tolerance value limit is 0.10 and Variant Inflation Factor (VIF) is 10 (Hair *et al*., 1998). The results of the multicollinearity test show that there are no variables that have a tolerance value of less than 0.10 and there are no variables that have a VIF value of less than 10. So it can be concluded that there is no multicollinearity in the regression model.

4.3. Autocorrelation Test

The autocorrelation test aims to test whether in the regression model there is a correlation between the confounding errors in period t and the interfering errors in the t-1 period (before). The consequence of autocorrelation in a regression model is that the sample variant does not describe the population variant. Furthermore, the resulting regression model cannot be used to estimate the value of the dependent variable on the value of certain independent variables.

Table 3. Autocorelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,460[a]	,212	,170	238,03804	2,308

a. Predictors: (Constant), ISO, PROPER, TATO, NPM
b. Dependent Variable: TOBINS'Q

From the table above, the value of Durbin-Watson is 2,308, so it can be concluded that there is no autocorrelation in this regression model.

4.4. Heteroscedasticity Test

Heteroscedasticity can be seen by looking at the scatterplot graph where the plot graph is the dependent variable namely SRESID with the residual ZPRED. The results of heteroscedasticity testing can be seen in the following graph:
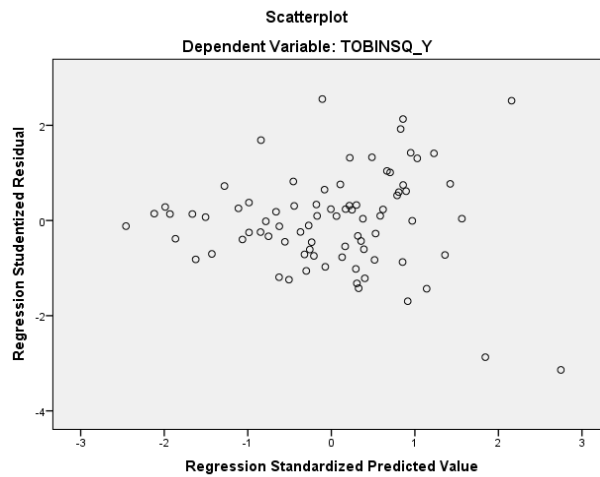
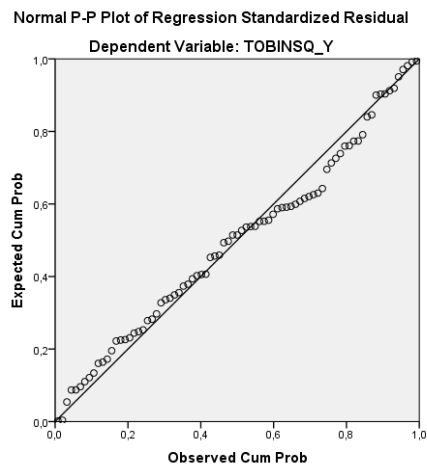*Figure 2*. Heteroscedasticity Test Results

4.5. Normality test

Figure 3. Normality Test Results

By looking at the normal p-plot graph, dots spread around the diagonal line, and the spread follows the direction of the diagonal line. Thus it can be concluded that data from all variables are normally distributed.

4.6. Determination Coefficient Test (R^2)

This test shows the percentage of the ability of independent variables to explain the variation of the dependent variable. The magnitude of the coefficient of determination from 0 to 1. The closer to zero the magnitude of the coefficient of determination the smaller the influence of the independent variable, on the contrary the closer to a magnitude of the coefficient of determination the greater the influence of independent variables. The test results are seen in the table.

Table 4. Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,460[a]	0,212	0,170	238,038

a. Predictors: (Constant), ISO, PROPER, TATO, NPM
b. Dependent Variable: TOBINS'Q

Based on the table it can be seen that the determination coefficient of Adjusted R Square has a value of 0.170, so it can be stated that the ability of independent variables (ISO, PROPER, TATO and NPM) in explaining the dependent variable variation (Company Value) is very limited, because it approaches 0.

The value of R Square (R^2) is changed to the form of percent, meaning the percentage contribution of the independent variable to the dependent variable. Value R^2 The first hypothesis is 0.212, which means the percentage contribution of environmental performance variables to financial performance variables is 21.2% while the rest (100% -21.2% = 78.8%) is influenced by other variables outside the model.

4.7. Simultaneous Significance Test (Test Statistic F)

Simultaneous significance test (F test) is used to show whether all the independent variables included in the model have a joint influence on the dependent variable (Ghozali, 2009). If the analysis using the F test shows that all independent variables simultaneously are explanations of the significance of the dependent variable.

Table 5. Simultaneous Significance Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	43,354	4	10,839	5,067	,001[b]
1	Residual	162,571	76	2,139		
	Total	205,925	80			

a. Dependent Variable: TOBINSQ
b. Predictors: (Constant), NPM, ISO, PROPER, TATO

4.8. Multiple Liner Regression

In accordance with the results of the research hypothesis which states that between variables have a significant relationship to the dependent variable, multiple linear regression is needed to model the analysis.

Table 6. Statistical Test Result t

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-2,286	1,200		-1,906	,060
	ISO	0,083	,338	,025	,246	,806
1	PROPER	2,866	1,503	,201	1,907	,060
	TATO	1,772	,439	,452	4,040	,000
	NPM	5,339	2,124	,281	2,513	,014

a. Dependent Variable: TOBINSQ

The regression equation can be written as follows:

Y = -2,286 + 0,083 *ISO* + 2,866 *PROPER* + 1,772 *TATO* + 5,339*NPM* + e

From the regression equation above can be concluded as follows:
1. The constant of -2,286 explains that if the company has ISO 14001, PROPER, Total Sales Turn over (TATO) and Net Profit Margin, the Company Value proxied by TOBINS'Q is -2,286.
2. ISO 14001 regression coefficient of 0.083 states that every increase in ISO 14001 is 1%, it will be followed by an increase in company value of 0.083%
3. PROPER regression coefficient of 2.866 states that every increase in PROPER is 1%, then it will be followed by an increase in firm value of 2.866%.

4. Regression coefficient Total Sales Turn Over (TATO) of 1.772 states that every increase in Total Sales Turn Over (TATO) of 1% will be followed by an increase in company value of 1.772%.

5. Net Profit Margin (NPM) regression coefficient of 5.339 states that every increase in Net Profit Margin (NPM) of 1% will be followed by an increase in the firm's value of 5.339% .

4.9. Effect of Environmental Performance on Company Value

The regression coefficient in table 7 shows that ISO 14001 has a positive t count of 0.083 with a probability of 0.806. This shows that p value (0.806)> significance level (0.05), so H1 cannot be accepted, meaning that ISO 14001 does not have a significant effect on sales value, whereas PROPER has a positive t count of 2.866 with a probability of 0.060 . This shows that p value (0.060)> significance level (0.05), so H1 cannot be accepted, meaning that PROPER does not have a significant effect on Total Sales.

These results indicate that ISO 14001 and PROPER owned by the company have a positive and insignificant effect on Firm Value. This condition is consistent with the results of the Sarumpaet (2005) study which states that environmental performance that does not have a significant impact on the company's financial performance, so it is not in accordance with the results of El Ibrami *et al.* (2015). The results of this study indicate that ISO 14001 and PROPER performance cannot add value to the company.

4.10. Effect of Financial Performance on Company Values

The regression coefficient in table 7 shows that Total Sales Turn Over (TATO) has a positive t count of 1,772 with a probability of 0,000. This shows that p value (0,000) <significance level (0.05), so H1 can be accepted, meaning that Total Sales Turn Over (TATO) has a significant effect on company value, while Net Profit Margin (NPM) has a t count marked positive is 5.339 with a probability of 0.014. This shows that p value (0.014) <significance level (0.05), so H1 can be accepted, meaning that Net Profit Margin (NPM) has a significant effect on Company Value

These results indicate that the Total Sales Turn Over (TATO) and Net Profit Margin (NPM) owned by the company have a significant positive effect on Company Value. This condition is consistent with the results of the Sarumpa *et al*. (2005) study which states that environmental performance that does not have a significant impact on the company's financial performance, so it is not in accordance with the results of El Ibrami *et al.* (2015). The results of this study indicate that ISO improvement in financial performance can add value to the company.

5. Conclusions

Based on the results of the analysis and discussion that has been conducted, the following conclusions can be given:

1. Environmental performance has a positive and not significant effect on company value.
2. Financial performance owned by the company has a significant positive effect on Company Value.

Acknowlegement

For further researchers, further researchers are advised to use more other samples with more diverse characteristics from various industrial sectors and extend the research period.

Other studies should also add independent variables that also influence company returns.

References

1. Analisa, Y. (2011). Effect of company size, leverage, profitability, and dividend policy on company value. Skripsi, Semarang: UNDIP.

2. Bintara, R. (2018). Effect of Profitability, Growth Opportunity, and Capital Structure on Corporate Values with Good Corporate Governance as Moderating Variables (Empirical Study on Manufacturing Companies Listed on the Indonesia Stock Exchange in 2012-2015). Jurnal Profita Mercu Buana University. Vol. 11 No. 2.

3. Blazovich, J. L., & Smith, M. L. (2011). Ethical corporate citizenship : does it pay? Research on Professional Responsibility and Ethics in Accounting , 15 (1), 127-163.

4. Brigham, Eugne F., Houston J.F.(2011). Fundamentals of Financial Management. Second Book. Jakarta: Salemba Empat.

5. Darmawati, D. (2004). Hubungan Corporate Governance dan Kinerja Perusahaan. Jurnal Riset Akuntansi Indonesia. Vol.8, No. 1.

6. Darwis, H. (2009). Corporate Governance Terhadap Kinerja Perusahaan, Jurnal Keuangan dan Perbankan, Vol.13, No 13, Seprember 2009, Hal 418-430.

7. El Ibrami, H., Arroyo, P.., and Hocine, M. L. (2015). Environment and Financial Performance: The Case of the Canadian Oil Industry. British Journal of Applied Science & Tehnology. Vol. 8 No. 5: 437-447.

8. Ghaesani, N. S. (2016). Effect of Corporate Social Responsiability Disclosure, Profitability, Company Size and Environmental Performance on Firm Value. Skripsi S1. Muhammadiyah Yogyakarta University.

9. Ghozali, I. (2006). Application of Multivarite Analysis with SPSS, Semarang : Diponegoro University.

10. Gujarati, D. (1997). Basic Econometrics. Erlangga : Jakarta.

11. Husnan, S. (2002). Manajemen Keuangan Teori Dan Praktek , Yayasan Badan Penerbit Gajah Mada Yogyakarta , Yogyakarta.

12. I Made, S. (2011). Corporate Financial Management Theory and Practice. Jakarta: Erlangga.

13. Kuncoro, M. (2009). Research Methods for Business & Economics. Erlangga. Jakarta.

14. Prasetyorini, B. F. (2013). Effect of Company Size, Leverage, Price Earning Ratio and Profitability on Firm Value. Jurnal Ilmu Manajemen. 1(1). 183-196.

15. Rakhiemah, N. A., & Agustia, D. (2009). Effect of Environmental Performance on Corporate Social Responsiability (CSR) Disclosure and Financial Performance of Manufacturing Companies Listed on the Indonesia Stock Exchange. National Accounting Symposium 12. Palembang.

16. Rakos, I.-S.. Antohe, A. (2014). Environmental Cost − An Environment Management Accounting Component. International Journal of Academic Research In Accounting, Finance and Management Sciences. Vol 4 No.4: 166-175.

17. Santoso, S. (2016). Complete Guide to SPSS Version 23. Jakarta : Elekmedia Computindo.

18. Sarumpaet, S. (2005). The Relationship Between Environmental Performance And Financial Performance Of Indonesian Companies. Jurnal Akuntansi dan Keuangan. Vol. 7 No. 2.

19. Satriya, B. Y., Wahyudi, S. (2017). Analysis of Factors Affecting Manufacturing Company Values with ROA as Intervening Variables (Study of Food and Beverage Manufacturing Companies Listed on the IDX in 2010-2012). Diponegoro Journal of Management. Vol. 6 No. 3.

20. Sawir, A. (2001). Financial Performance Analysis and Corporate Financial Planning, PT Gramedia Pustaka Utama, Jakarta.Smithers. Andrew dan Wright. Stephen., (2007), Valuing Wall Street, McGraw Hill.

21. Smithers, A. Wright, S. (2007). Valuing Wall Street, McGraw Hill.

22. Suliyanto, (2005). Data Analysis in Marketing Applications, Bogor: Ghalia Indonesia.

23. Suratno, D., Siti, M. (2006). Effect of Environmental Performance on Environmental Disclosure and Economic Performance: Empirical Study of Manufacturing Companies Listed on the Jakarta Stock Exchange Period 2001-2004. SNA IX Padang. 23-26 Agustus.

24. Tikawati. (2016). Effect of Corporate Governance, Growth Opportunity and Net Profit Margin (NPM) on Company Values (Empirical Study on Go Public Companies on the Indonesia Stock Exchange in 2008-2011). Al-Tijary Jurnal Ekonomi dan Bisnis Islam. Vol. 1 No. 2, 121-140.

25. Wiwik, U. (2007). Empirical Study of the Relationship of Environmental Performance, Financial Performance and Market Performance: Structural Equation Models, the 1st Accounting Conference, Mercu Buana University.