

# The Information Content of Environmental Performance of the Companies Listed on Indonesia Stock Exchange Period 2010-2011

Bambang Bemby S, Mukhtaruddin, Abukosim, Sinta Atizah  
Sriwijaya University, Palembang, Indonesia

Information content is a meaningful information for users to make decision. If the information is effecting to users' decision. One of the information is the announcement of the environmental performance. This information is effecting to investor reaction. Indonesia experience many problems of environmental damage. Program Penilaian Peringkat Kinerja Perusahaan (PROPER) or Company Performance Rank Program as an environmental control tool released by Kementerian Lingkungan Hidup (KLH) or Environmental Ministry and government received good response from several parties. However, some research studied about the relationship of environmental performance and economic performance found unexpected result. This research attempts to analyze the effect of environmental performance to abnormal return by event study analysis technique before and after PROPER announcement. The observation period is 2010 and 2011. The sample used in 2010 is 30 companies; while in 2011 are 41 companies. Hypothesis used Wilcoxon Rank test with selected window is five days before and five days after the announcement. The result shows that, without rank categorization, there is no significant difference of abnormal return before and after PROPER announcement in 2010, while there is a significant difference of abnormal return before and after PROPER announcement in 2011. By the rank categorization, in both of observation period, there is a significant different of abnormal return before and after the company received good rank, while there is no significant difference of abnormal return before and after the company received bad rank. Hence, it is recommended to KLH and government to announce louder the PROPER result, mainly for the companies which received bad rank and make this program to be mandatory due to its urgencies.

*Keywords:* environmental performance, information content, PROPER, abnormal return

## Introduction

The increasing of industrialization in large-scale is not harmonized with the concept of sustainable business. To produce massive of products, as an effort to meet the human needs which are diverse increasingly, companies require a lot of resources taken from the environment. In fact, issues of environmental damage were increased as a widespread discussion. Reports stated by the Food and Agricultural Organization (FAO) put

---

Bambang Bemby S, M.A., Ph.D, Economics Faculty, Sriwijaya University.  
Mukhtaruddin, SE., M.Si., Ak., CA, Economics Faculty, Sriwijaya University.  
Abukosim, SE., MM., Ak., CA, Economics Faculty, Sriwijaya University.  
Sinta Atizah, SE., Economics Faculty, Sriwijaya University.

Correspondence concerning this article should be addressed to Mukhtaruddin, Jl Kebun Bunga km 9 Kompleks Citra Kencana I Blok A No. 4 Sukarami Palembang 30152 South Sumatera, Indonesia. E-mail: yuditiz@yahoo.com.

Indonesia in the fifth place out of 10 countries with the largest forest area in the world. From this large of area, Indonesia's deforestation rate has reached 1.87 million hectares in the period of 2000-2005. It resulted in Indonesia to be ranked second out of 10 countries with the highest of degradation rate in the world (detikNews, 2010). In addition, according to the data served by the Research Department of Forestry in 2004, Indonesia suffered financial loss up to 83 billion rupiah per day due to illegal logging. Several attempts have been made to address these environmental problems. In Indonesia, the government's seriousness in responding these problems can be seen with the adoption of the Law of the Republic of Indonesia Number 23 Year 1997 on Environmental Management. In addition, the Ministry of Environment (MoE) cooperated with the government, through the Environmental Impact Control Agency (Bapedal), also evaluated the performance of the company by a Program Penilaian Peringkat Kinerja Perusahaan later known as PROPER (Desfita, 2009). As an alternative compliance instrument, PROPER received good response from various parties including the World Bank. PROPER even become one of the case studies at the Harvard Institute for International Development (HIID). Since their development in Indonesia began in 1995, PROPER has been a model in many countries in Asia, Latin America, and Africa as an alternative compliance instrument. In 1996, Zero Emission awarded PROPER an Award of the United Nations University in Tokyo (Retrieved from <http://www.kmnlh.go.id>). In fact, the implementation of PROPER still considered as not running well. The result shows that the numbers of company received good rank on PROPER are continue to decline since 2006. Management and stakeholder also seems like only give a little concern to this program. It is shown by only 14% of companies listed on IDX in 2011 involve in this program.

Several studies have been conducted to draw conclusions about the relationship of environmental performance with financial performance. Sudaryanto (2011), Rakhiemah and Agustria (2009), Suratno, Darsono, and dan Mutmainah (2006), Pflieger, Fischer, Kupfer, and dan Eyerer (2005), Amalia and Dwi (2007), Teoh and Pin (1998), and Freedman and Jaggi (1992) stated in their conclusion that environmental performance significantly influences the economic performance. In fact, some companies experiencing things that are not consistent with these results. PT. Bakrie Sumatra Plantation (UNSP), PT. Surabaya Agung Paper (SAIP), and PT. International Nickel Indonesia (INCO) got black rank in 2004, 2005, and 2006. But these companies receive positive economic performance and stock return in those periods. On the other hand, PT. Timah (TINS), PT. Sumalindo Lestari Jaya (SULI), Indah Kiat Pulp & Paper (INKP), and PT. Medco Energy International (MEDC), which are got blue rank on PROPER, experienced negative economic performance and stock return.

## **Literature Review**

### **Signaling Theory**

The principle of signaling theory stated that every action will contain information because the existence of asymmetric information. For example, the management of a company has more information compared with investors in the capital market. Information received may respond differently by investors. The announcement of the ranking of the company's environmental performance is an example of the delivery of information through signaling. According to the signaling theory, KLH and Bapedal, PROPER release the results to get back the appropriate signal from investors and prospective investors. Interpret a positive signal that companies with good environmental performance also have good prospects in the sustainability of its business so as to improve the welfare of investors. In contrary, companies with poor environmental performance will not get the optimistic public on sustainability efforts and its ability to investor welfare.

### **Stakeholder Theory**

Stakeholder theory says that the company does not operate only to meet their own needs, but also to its stakeholders. Basically, these stakeholders have the powers to control or influence the use of the resources or input used in operations. This will cause the company tried to produce a harmonious relationship with its stakeholders (Ghozali & Chariri, 2007). To build a harmonious relationship, the company needs to gain the trust of stakeholders. This trust obtained by some efforts relate to the increase of a company's performance. Received good rank on PROPER means the company has a good environmental performance, which further affect the sustainability aspect of their operation. This act expected to gain positive respond from their stakeholder.

### **Environmental Performance**

Environmental performance is the relationship between the company and the environment, includes environmental effects of resources consumed, impacts of the organizational process, implications of its products and services, recovery and processing of products and meeting the requirement of law (<http://www.epaw.co.uk>). One method used to measure and calculate the value of environmental performance based on a policy which was run by a state is through the environmental performance index (EPI). This index was introduced in 2002, and was originally developed to support the achievement of the millennium development goals particularly in the environmental aspects (Wikipedia, 2012). Indonesia get EPI's rank 74 from the 132 countries participate in 2012, which this rank classified as modest performance (Yale Center for Environmental Law and Policy, 2008).

PROPER is not a substitution for the conventional arrangement of existing instruments such as the enforcement of civil and criminal environmental law. This program is complementary synergy with the arrangement of the existing instrument. Thus, efforts to improve the quality of the environment can be done more efficiently and effectively. PROPER's scope covers four main activities. This activity is an integrated step in implementing the Environment Law No. 23 of 1997 on Environmental Management became the legal basis. As an alternative compliance instrument, PROPER received good response from various parties including the World Bank. PROPER even become one of the case studies at the HIID. In 1996, Zero Emission PROPER awarded Award of the United Nations University in Tokyo. The successful implementation of PROPER will provide many value added. The value added of the most prominent is the efficiency of time and cost needed for structuring the arrangement of the company compared to other instruments, such as environmental enforcement. In addition, the success of PROPER will provide benefits to several parties, including government, company, investors, consultants, suppliers, and society.

To become more informative to users, PROPER performance ratings are grouped in five-color rating. Expected to rank in colors form will be more easily understood and remembered by the public, while providing an incentive and disincentive effects of reputation for each company. Here is the explanation of the color ranking is used:

- Gold: Given to companies that has consistently demonstrated excellence in the environmental performance of production processes and/or services, conduct business ethically and responsibly in the community;
- Green: Given to companies that have made environmental management more than required under the regulations through the efforts of the 4Rs (Reduce, Reuse, Recycle, and Recovery) and social responsibility efforts;

- Blue: Given to companies that have attempted environment process that has been required in accordance with the provisions and regulations;
- Red: Given to companies that perform environmental management efforts that do not match those required by the rules and regulations;
- Black: Given to companies that intentionally commit any act or omission that resulted in contamination and/or environmental damage and violations of laws or implement administrative sanctions.

### Abnormal Return

Abnormal return or excess return is the excess of actual return to normal returns. Normal return is the return expectations (return expected by investors). Thus, the abnormal return is the difference between the actual return and the expected return (Jogiyanto, 2000). If the market average performs (after adjusting for beta) better than the individual stock then the abnormal return will be negative (Wikipedia, 2012). Abnormal returns are sometimes triggered by events. Events can include mergers, dividend announcements, company earnings announcements, company's performance announcement, interest rate increases, lawsuits, and other related which can contribute to an abnormal return.

### Theoretical Framework

Environmental conservation efforts undertaken by the company will bring a number of benefits, including avoiding the cost of legal cases and government claims, streamline operating costs, and support the concept of sustainability. These efforts will be assessed through PROPER organized by the Ministry of Environment. Companies that have good environmental performance will have a good ranking in PROPER, and vice versa. Investors and prospective investors are one of the stakeholders in the procurement arrangement PROPER. They will give an active response to this result. The response of investors and potential investors is reflected through the company's stock price fluctuations. If investors and potential investors respond positively, then the company's stock price will be high, and vice versa. Here is the theoretical framework of this research:

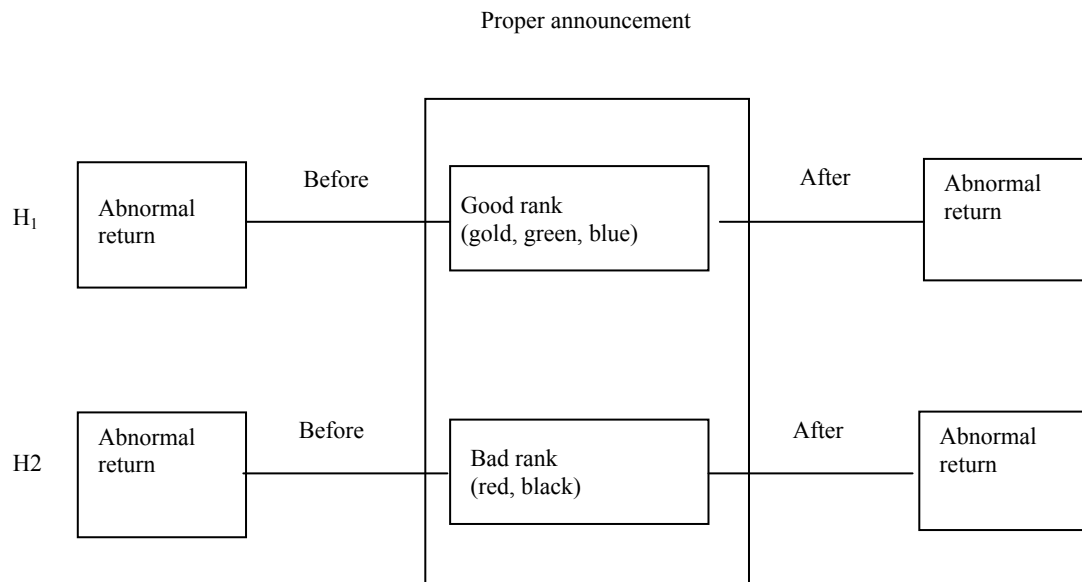


Figure 1. Theoretical framework.

### Hypothesis

Fundamental theory, literature review, several previous researches explain that the environmental performance which peroxide by PROPER announcement has a significant effect to the stock prices. The hypotheses formulated for this research were (see Figure 1):

Ha<sub>1</sub>: There is a significant difference of abnormal return before and after the company receives good rank on PROPER announcement.

Ha<sub>2</sub>: There is a significant difference of abnormal before and after the company receives bad rank on PROPER announcement.

## The Methodology and Model

### Population and Sample

The population of this research is all of the companies involved in PROPER 2010 and PROPER 2011. Sampling method used is purposive sampling in order to obtain a representative sample in accordance with specified criteria. Criteria used for selection of these samples are as follows:

(1) Criterion I: Has only one type of rank, weather from only one head office, or one branch, or several branches with the same type of PROPER rank.

The objective of this selection is to avoid the bias rank used in the analysis.

(2) Criterion II: Companies listed on IDX and provided daily stock prices.

The objective of this selection relates to the calculation of abnormal return variables.

(3) Criterion III: There is no important event that can influence the stakeholder decision along the research period (November 16th 2010-December 2nd 2010 for the observation on 2010 and November 22nd 2011-December 7th 2011 for the observation on 2011).

The objective of this selection is in order to avoid the confounded effect from another important event.

The sampling process results in 71 final sample that used as data for this research. It consists of 41 companies for 2011 observation and 30 companies for 2010 observation.

### Data Collecting Method

Data collection method used in this study is the documentary method which is the kind of secondary data. The nature of the data used in this research is a time series, which means that it is observed during certain period. Data obtained from Ministry of Environment site, IDX Statistics on 2010 and 2011. It consists of:

- Company's rank on PROPER 2010 and 2011;
- Daily closing stock prices of the company that involve in PROPER 2010 on five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) November 25th, 2010, and five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) November 30th, 2011;
- Daily IHSG of the company that involve in PROPER 2010 on five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) November 25th, 2010, and five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) November 30th, 2011.

### Variables and Measurement

This research consisted of one independent variable with two categories and one dependent variable. The independent variable is the abnormal return of the company before and after PROPER announcement, while the dependent variable is the event of PROPER announcement.

### Independent Variables

This research uses abnormal return as independent variable. Abnormal returns to be chose because it is the most suitable variable use in event study analysis to examine the trend of company's stock prices. Expected return reflects the normal return of the stock. The amount is equal the investor's return expectation for a stock. But this amount was sometimes not equal to the actual return. This results in abnormal return for the stock, the occurrence of abnormal return triggered by an event. Thus, for an event study analysis, abnormal return can reflect the effect of an event to the stockholder's response.

In addition, it is prefer to use narrow window, using abnormal return is more suitable than average abnormal return (AAR), cumulative abnormal return (CAR), or cumulative average abnormal return (CAAR) in order to avoid bias on daily abnormal return (Strong, 1992). The data can be examined in IDX statistics. This independent variable then classified into two categories, named abnormal return before the announcement of PROPER and after the announcement of PROPER.

The calculation of abnormal return can be formulated as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where:

$AR_{it}$ : abnormal return of stock  $i$  on day  $t$ ;

$R_{it}$ : actual return of stock  $i$  on day  $t - 1$ ;

$R_{mt}$ : market return on day  $t$ ;

Actual return is the difference between the daily closing stock prices of a day with the stock price of the day before. The calculation of actual return can be formulated as follows:

$$R_{it} = P_{it} - P_{it-1}$$

where:

$R_{it}$ : stock return on day  $t$ ;

$P_{it}$ : stock price of  $i$  on day  $t$ ;

$P_{it-1}$ : stock price of  $i$  on day  $t - 1$ .

Expected return is calculated using adjusted market model. In this model, the expected return is the stock return measured using Index Harga Saham Gabungan (IHSG). The calculations can be formulated as follows:

$$R_{mt} = \frac{CPI_t - CPI_{t-1}}{CPI_{t-1}}$$

where:

$R_{mt}$ : market return;

$CPI_t$ : IHSG on day  $t$ ;

$CPI_{t-1}$ : IHSG on day  $t - 1$ .

### Dependent Variable

The dependent variables used in this research is PROPER announcement. The result of PROPER then classified to be the announcement of good rank (gold, green, and blue rank), which is will be tested as  $Ha_1$ , and bad rank (red and black rank), which is will be tested as  $Ha_2$ . This variable is non-metrical.

### Technique Analysis

Data analysis used in this research is the event study analysis. The objective is to examine the difference of stock prices before and after PROPER announcement. The window used for this research is five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) of the event. This window is the kind of narrow

window, which is decided in order to show the occurrence of gain signals in short term caused by PROPER announcement.

### Normality Test

Data normality test aims to test whether the regression model, independent variables both have a normal distribution or not. A normality test used in this study is Kolmogorov-Smirnov. The test will be seen from the probability. By knowing the normality of a data then will be able to know what the best statistical tools are used. The normality of the distribution of decision-making guidelines is:

- (1) If the significance or probability  $< 0.05$ , then the distribution is not normal;
- (2) If the significance or probability  $> 0.05$ , then the normal distribution.

In order to make data normally distributed, it can be used square root and log natural. The urgencies of this test are to determine the kind of test needed then. If the data are normally distributed then tested the hypothesis testing using parametric statistical tests are paired  $t$  test (paired sample  $t$  test) whereas if the data being tested has a distribution that is not normal then the testing of hypotheses using non-parametric statistical tests are marked with Wilcoxon rank test (Wilcoxon signed ranks test).

### Hypothesis Test

Hypothesis test the difference of stock prices before and after PROPER announcement. According to Ghazali (2011), if there is one dependent variable consist of one metrical scale and one independent variable consist of non-metrical scale with two categorizes, the suitable statistic test used is a different  $t$  test. In addition, the variable of this research is the differences of related two sample average, so the suitable test used is paired sample  $t$  test. In addition, if data are not distributed normally, the test can be selected is Wilcoxon Rank Test.

To estimate the abnormal return, the model used is the market adjusted model. Consideration of the selection model is:

- The model does not require an estimation period as the other models;
- The capital market in Indonesia is still in the emerging markets. At this stage, most of the stocks traded in the capital market transactions that are not liquid so the stocks are rarely traded. As a result, there are shares that yield return zero for no transaction.

Referring to the model mentioned, hypothesis test can be done by these following steps:

- Determine the period of observation or event window. The window used for this research is five days before ( $T - 5$  until  $T - 1$ ) and five days after ( $T + 1$  until  $T + 5$ ) the event. This window decided in order to show the occurrence of gain signals in short term caused by PROPER announcement. If the selected window is more than 11 days, the potency of confounding effect occurrence will be higher. In contrary, less than 11 days of observation period, the potency of market failed to absorb the information will also increase. Thus, 11 days (five days before the announcement, the announcement day, five days after the announcement) is an ideal window for an event analysis (Kurniawati, 2006);

- Calculate the average of abnormal return of the companies for whole rank in each observation period: (1) Do normality test by Kolmogorov Smirnov test; (2) Do paired sample  $t$  test (in the level of significance as  $\alpha = 0.05$ ) if the data are normally distributed, or Wilcoxon rank test if the data are not normally distributed; and (3) Interpret the result;

- $H_{a1}$  Test: There is a significant difference of stock prices before and after the company receives good rank on PROPER announcement.  $H_{a1}$  can be tested by this following steps: (1) Calculate the average of abnormal

return of the company receive good rank for five days before and five days after in each observation period; (2) Do normality test by Kolmogorov Smirnov test; (3) Do paired sample  $t$  test (in the level of significance as  $\alpha = 0.05$ ) if the data are normally distributed, or Wilcoxon Rank test if the data are not normally distributed; and (3) Make decision:

Accepted  $H_0$  if sig.  $> \alpha$  significance (0.05);

Rejected  $H_0$ /Accepted  $H_a$  if sig.  $< \alpha$  significance (0.05).

- $H_{a2}$  Test: There is a significant difference of stock prices before and after the company receives bad rank on PROPER announcement.  $H_{a2}$  can be tested by this following steps: (1) Calculate the average of abnormal return of the company receive bad rank for five days before and five days after its announcement; (2) Do normality test by Kolmogorov Smirnov test; (3) Do paired sample  $t$  test (in the level of significance as  $\alpha = 0.05$ ) if the data are normally distributed, or Wilcoxon Rank test if the data are not normally distributed; and (4) Make decision:

Accepted  $H_0$  if sig.  $> \alpha$  significance (0.05);

Rejected  $H_0$ / Accepted  $H_a$  if sig.  $< \alpha$  significance (0.05).

## The Finding

### Statistic Descriptive of Observation on 2010

Description of abnormal return related to data of observation on 2010 statically. It presented in two groups named, abnormal return of the company samples before the announcement of PROPER in 2010 which shown by before 2010, and abnormal return of the company samples after the announcement of PROPER in 2010 which shown by after 2010. Refers test result for part of before 2010, the mean of data is -0.000483, which is indicated the value of actual return is less than expected return for about 0.0483%. The standard deviation is 0.075282, which is indicated that the deviation of data span from -0.075282 to 0.075282. The minimum value of abnormal return before the announcement of PROPER is -0.0124, which is means that the expected return is more than actual return for about 1.24%. This value is owned by PT. Asahimas Flat Glass, Tbk (AMFG). While, the maximum value of abnormal return of the observation on 2010 before the announcement of PROPER is 0.0222, which is means that the actual return is more than the expected return for about 2.22%. This value is owned by PT. Suparma, Tbk (SPMA). In the part after 2010, the mean of data is 0.002890, which is indicated the value of actual return is more than expected return for about 0.2890%. The standard deviation is 0.0100208, which is indicated that the deviation of data span from -0.0100208 to 0.0100208. The minimum value of abnormal return of the observation on 2010 after the announcement of PROPER is -0.0075, which is means that the expected return is more than actual return for about 0.75%. This value is owned by PT. Suparma, Tbk (SPMA). While, the maximum value of abnormal return of the observation in 2010 after the announcement of PROPER is 0.0489, which is means the actual return is more than the expected return for about 4.89%. This value is owned by PT. Tifico Fiber Indonesia, Tbk (TFCO).

### Statistic Descriptive of Observation on 2011

Description of abnormal return related to data of observation on 2011 statically. It presented in two groups named, abnormal return of the company samples before the announcement of PROPER in 2011 which shown by before 2011 and abnormal return of the company samples after the announcement of PROPER in 2011 which shown by after 2011. Refers to test results for the part of before 2011, the mean of the data is -0.004485, which indicated that the value of actual return is less than expected returns for about 0.4485%. The standard



deviation is 0.008259, which is indicated that the deviation of data span from -0.008259 to 0.008259. The minimum value of abnormal return before the announcement of PROPER is -0.0227, which means that the expected return is more than actual return for about 2.27%. This value is owned by PT. PT. Charoen Pokhpand Indonesia, Tbk (CPIN). While, the maximum value of abnormal return of the observation on 2011 before the announcement of PROPER is 0.0251, which is means that the actual return is more than expected return for about 2.51%. This value is owned by PT. LIPPO Cikarang (LPCK). In the part after 2011, the mean of data is -0.000068, which indicated that the value of actual return is less than expected return for about 0.0068%. The standard deviation is 0.0120908, which indicated that that the deviation of data span from -0.0120908 to 0.0120908. The minimum value of abnormal return of the observation on 2011 after the announcement of PROPER is -0.0315, which indicated that that the expected return is more than actual return for about 3.15%. This value is owned by PT. Surabaya Agung Paper, Tbk (SAIP). While, the maximum value of abnormal return of the observation on 2010 after the announcement of PROPER is 0.0484, which indicated that the actual return is more than expected return for about 4.84%. This value is owned by PT. Benakat Barat Petroleum (BIPI).

#### **Normality Test of Observation on 2010**

The objective of normality test is to examine the nature of data distribution. Further, it will be used to determine the type of hypothesis tests. If the data are normally distributed, the hypothesis test used is Paired Sample  $t$  test. Instead the data are not normally distributed, the hypothesis test used is Wilcoxon rank test. Normality test will be done by Kolmogorov-Smirnov test, which the result can be seen that the significant value before 2010 is 0.002 which is less than 0.05, while value after 2010 is 0.001 which is also less than 0.05. It is indicated that data observation on 2010 are not normally distributed. By this result, the appropriate hypothesis test used is Wilcoxon rank test. This condition is quiet reasonable. According to Manurung (2012), data served by the Indonesia capital market are not reflected normally distributed data. It is because that the Indonesia capital market is still developing, whereas only there is a few number of the company's share that actively traded. The rest of other share, which is not actively traded, will have no actual return. This none of actual return still should be reduced by market expectation of return. In the end, there will be many of companies' shares having negative abnormal return. Negative data often evaluated as not normally distributed. Although it can convert into the positive one in order to make the data normally distributed, it is still debatable. It is considered as the practice of designing data.

#### **Normality Test of Observation on 2011**

Using the same objective and assumption as the previous test, the result of normality test of observation on 2011 can be seen the significant value of before 2011, which refers to the condition before the announcement of PROPER 2010, is more than 0.05, while the significant value after the announcement of PROPER 2010 is less than 0.05. It means that the abnormal return data before the announcement of PROPER on 2010 is normally distributed, while the data after the announcement of PROPER on 2010 is not normally distributed. This condition is quiet reasonable refers to the assumption of Indonesia's developing capital market which had been explained previously. Although data observation before the announcement of PROPER 2011 distributed normally, in order to harmonize it with the other one, hypothesis test used will be Wilcoxon rank test. This test not required data should be normally distributed or not to be operated.

## Hypothesis Test

### Hypothesis Test of Observation on 2010

Hypothesis test used to examine the significant differences of abnormal return before and after the PROPER announcement. The general effect of PROPER announcement can be examined without categorized into good rank and bad rank. The result can be seen significant value is 0.136, which is bigger than 0.05. It means that, without rank categorization, there is no significant difference of abnormal return before and after the PROPER announcement in 2010.

Ha<sub>1</sub>: There is a significant difference of abnormal return before and after the company receives good rank.

By the result of normality tests previously served, test selected for Ha<sub>1</sub> is Wilcoxon rank test. Rank resulted from this observation can be seen that there are 18 companies received positive rank and six companies receive a negative rank. In other words, it means that there are 18 companies have bigger abnormal return after the PROPER announcement compare than before, while there are six companies have abnormal return before the PROPER announcement which bigger than after the PROPER announcement. Refers to the rank received on PROPER, there are six companies received unexpected result. PT. LIPPO Cikarang, Tbk (LPCK), PT. Kalbe Farma (KLBF), PT. Fajar Surya Wisesa, Tbk (FASW), PT. Citra Turbindo, Tbk (CTBN), LapindoBrantas, Inc (LAPD), and PT. International Nickel Indonesia (INCO) are the six companies who had good rank on PROPER but received negative abnormal return. The factors affect this unexpected result was caused by the failure of market to absorb this information. According to Strong (1992), it needs at least three days for market to absorb information in capital market, but will perfectly absorb on 11 days. It means, in the determined window as five days after the announcement, still there is a possibility that the investor of the related companies do not get this news yet, which at the end result unexpected decision.

The significant differences of abnormal return before and after the companies receive good rank can be tested by Wilcoxon rank test. The result can be seen as the significant value is 0.028, which is less than 0.05. It means that there is a significant difference of abnormal return before and after the companies received Good Rank on PROPER 2010. This result indicates that the announcement of Good Rank on PROPER accepted by the investor as good news. In the end there is a gap between actual and expected return, whereas most of the companies received good rank get the actual return more than the expected.

Ha<sub>2</sub>: There is a significant difference of abnormal return before and after the company receives bad rank.

By the result of normality tests previously served, test selected for Ha<sub>2</sub> is Wilcoxon rank test. Rank resulted from this observation can be seen that there are two companies received positive rank and four companies receive a negative rank. In other words, it means that there are two companies have bigger abnormal return after the receive bad rank on PROPER announcement, while there are four companies which received bad rank have smaller abnormal return after the PROPER announcement. Refers to the rank received on PROPER, there are two companies received unexpected result. PT. Surabaya Agung Paper, Tbk (SAIP) and PT. Gajah Tunggal, Tbk (GJTL) are the two companies who had bad rank on PROPER but received positive abnormal return. The factors affect this unexpected result was caused by the failure of the market to absorb this information. As mentioned before, it needs at least three days for market to absorb information in capital market, but will perfectly absorb on 11 days. It means, in the determined window as five days after the announcement, still there is a possibility that the investor of the related companies do not get this news yet, which at the end result unexpected decision.

The significant difference of abnormal returns before and after the companies receive bad rank can be tested by Wilcoxon rank test. The result can be the significant value is 0.136, which is more than 0.05. It means that there is no significant difference of abnormal return before and after the companies received bad rank on PROPER 2010. This result indicated that the announcement of bad rank on PROPER cannot be well accepted by the investor as bad news. By the same factors mentioned in unexpected rank of some companies, this unaccepted may cause by the failure of investor in absorbing information served in capital market, because of limited observation period.

### **Hypothesis Test of Observation on 2011**

Hypothesis test used to examine the significant differences of abnormal return before and after the PROPER announcement. The general effect of PROPER announcement can be examined without categorized into good rank and bad rank. The result can be seen as significant value is 0.042, which is smaller than 0.05. It means that, without rank categorization, there is a significant difference of abnormal return before and after the PROPER announcement in 2011.

$H_{a1}$ : There is a significant difference of abnormal return before and after the company receives good rank.

By the result of normality test previously served, test selected for  $H_{a1}$  is Wilcoxon rank test. Rank resulted from this observation can be seen that there are 26 companies received positive rank and seven companies received negative rank. In other words, it means that there are 26 companies which have bigger abnormal return after the PROPER announcement compare than before, while there are seven companies have abnormal return before the PROPER announcement bigger than after the PROPER announcement. Refers to the rank received on PROPER, there are seven companies received unexpected result. PT. Kalbe Farma (KLBF), PT. Suparma, Tbk (SPMA), PT. Gajah Tunggal, Tbk (GJTL), PT. PelatTimah Nusantara (NIKL), PT. Gunawan Dian Jaya Steel, Tbk, PT. Unitex, Tbk (UNTX), and LapindoBrantas, Inc (LAPD) are the seven companies which had good rank on PROPER but received negative abnormal return. The factors affect this unexpected result is caused by the failure of market to absorb this information. According to Strong (1992), it needs at least three days for market to absorb information in capital market, but will perfectly absorb on 11 days. It means, in the determined window as five days after the announcement, still there is a possibility that the investor of the related companies do not get this news yet, which at the end result unexpected decision. In addition, three from those seven companies which received unexpected result, got bad rank in previous PROPER announcement. Logically studied, this situation may disturb investor's confident to the related companies. As the effect, investor's response would not be so flexible in facing company's increased performance.

The significant differences of abnormal return before and after the companies receive good rank can be tested by Wilcoxon rank test. The result shows that the significant value is 0.002, which is less than 0.05. It means that there is a significant difference of abnormal return before and after the companies received good rank on PROPER 2011. This result indicate that the announcement of good rank on PROPER accepted by the investor as good news. In the end there is a gap between actual and expected return, whereas most of the companies received good rank get the actual return more than the expected.

$H_{a2}$ : There is a significant difference of abnormal return before and after the company receives bad rank.

By the result of normality test previously served, test selected for  $H_{a2}$  is Wilcoxon rank test. Rank resulted for this observation can be seen that there are two companies received positive rank and six companies receive negative rank. In other words, it means that there are two companies which have bigger abnormal return after

the receive bad rank on PROPER announcement, while there are six companies which received bad rank have smaller abnormal return after the PROPER announcement. Refers to the rank received on PROPER, there are two companies received unexpected result. PT. International Nickel Indonesia, Tbk (INCO) and PT. GudangGaram, Tbk (GGRM) are the two companies which had bad rank on PROPER but received positive abnormal return. The factors affect this unexpected result was caused by the failure of market to absorb this information. As mentioned before, it needs at least three days for market to absorb information in capital market, but will perfectly absorb on 11 days. It means that in the determined window as five days after the announcement, still there is a possibility that the investor of the related companies do not get this news yet, which at the end result unexpected decision.

The significant difference of abnormal returns before and after the companies receive bad rank can be tested by Wilcoxon rank test. The result can be seen that the significant value is 0.161, which is more than 0.05. It means that there is no significant difference between abnormal return before and after the companies received bad rank on PROPER 2011. This result indicated that the announcement of bad rank on PROPER cannot be well accepted by the investor as bad news. By the same factors mentioned in unexpected rank of some companies, this unaccepted may cause by the failure of investor in absorbing information served in capital market, because of limited observation period.

### Summary and Conclusion

The increase of industrialization affects the increase of environmental damage. Indonesia faces many problems related to the high rate of forest degradation, illegal logging, and types of pollution. PROPER is an environmental control tool released by Kementrian Lingkungan Hidup (KLH) and Indonesia's government. This program received several good responses by World Bank, Harvard Institution International Development, and Tokyo University. In fact, there still occurred some problems in the implementation related to the small number of participate company and decrease number of the participation which received good rank.

Some studies had been conducted to examine the effect of environmental performance to economic performance, which the result is still inconsistent. This research had been examined the effect of environmental performance to abnormal return of the company and the result had been discussed in the previous chapter. Based on the analysis and discussion, the conclusion can be drawn as follows:

- Hypothesis test done by Wilcoxon rank test for all of the sample companies on PROPER 2010, which consist of 30 companies. The result found that the significant value is 0.136, which is bigger than 0.05. It means that there is no significant difference of abnormal return before and after the announcement of PROPER 2010;
- Hypothesis test done by Wilcoxon rank test for sample companies which received good rank on PROPER 2010, which consist of 24 companies. The result found that the significant value is 0.028. It means that there is a significant difference of abnormal return before and after the companies receives good rank on PROPER 2010. Compared to the rank received on PROPER, there are six companies experience unexpected result;
- Hypothesis test done by Wilcoxon rank test for sample companies which received bad rank on PROPER 2010, which is consist of six companies. The result found that the significant value is 0.136. It means that there is no significant difference between abnormal return before and after the companies receives bad rank on PROPER 2010. Compared to the rank received on PROPER, there are two companies experience unexpected result;

- Hypothesis test done by Wilcoxon rank test for all of the sample companies on PROPER 2011, which consist of 41 companies. The result found that the significant value is 0.042. It means that there is a significant difference of abnormal return before and after the announcement of PROPER 2011;

- Hypothesis test done by Wilcoxon rank test for sample companies which received good rank on PROPER 2011, which consist 33 companies. The result found that the significant value is 0.002. It means that there is a significance different of abnormal return before and after the companies receive good rank on PROPER 2011. Compared to the rank received on PROPER, there are seven companies experience unexpected result;

- Hypothesis test done by Wilcoxon rank test for sample companies which received good rank on PROPER 2011, which consist of eight companies. The result found that the significant value is 0.161. It means that there is no significant difference of abnormal return before and after the companies receives good rank on PROPER 2011. Compared to the rank received on PROPER, there are two companies experience unexpected result.

The conclusion stated that in some period, PROPER announcement will be well-responded by investors, while in other some period, it is not. Good rank announcement in both of observation period gave the significant difference of abnormal return, in contrary, bad rank announcement in both of observation period does not give significant difference. It means that there is a problem in delivering signals to the investor about this result. Theoretically, the company will deliver good achievement to gain trust of investor and vice versa. Thus, it is recommended to government and KLH to get this program in more serious level. The result should be announced loudly in mass media. It will make investors easier to access the information that may hid by the management of the company. In the end, if bad rank announcement gave a significant difference of abnormal return, the related companies will try to fix their problem. To increase environmental performance, companies will increase their attention to environmental aspects in the operation. Regarding the number of participate companies which only 14% from the total of companies listed on IDX, this research recommend to make PROPER as mandatory. The bigger number of participate in PROPER, the bigger number of companies will force to increase their environmental performance to attract investors.

There are some limitations of this research that may affect the result. The limitations are as follows:

- This research took place in Indonesia, whereas the capital market is still developing. It resulted the data which are not normally distributed and select Wilcoxon rank test. It makes there a possibility to have different result if the data are normally distributed and used the other test.

- The window selected is 11 days, while the observation can select period from 7 to 23 days. It makes there a possibility to have different result if this research select another type of window.

From these limitations, it suggests the next researcher to take place in another country and select a different type of window. In that case, PROPER also had been implemented in some countries in Asia, Latin America, and Africa.

## References

- Amalia, L. S., & Dwi, W. (2007). Pengaruh environmental performance dan environmental disclosure terhadap economic performance. Proceeding from *the 1st Accounting Conference* (pp. 1-22). Depok.
- Desfita, M. (2009). Pengaruh Pengumuman Kinerja Lingkungan Terhadap Perubahan Harga Saham Perusahaan (Studi Pada Perusahaan Manufaktur di Bursa Efek Indonesia) (Unpublished Mini thesis, Economic Faculty of Andalas University, Padang).
- Ep@w Publishing Company Ltd. 2000. (2012). *Glossary*. Retrieved December 23, 2012, from <http://www.epaw.co.uk/EPT/glossary.html>

- Freedman, M., & Jaggi, B. (1982). Pollution disclosures, pollution performance and economic performance. *Omega*, 1, 167-176.
- Ghozali, I. (2011). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 19. Cetakan ke IV*. Semarang: Badan Penerbit UNDIP.
- Ghozali, I., & Chariri, A. (2007). *Teori Akuntansi*. Semarang: Badan Penerbit Universitas Diponegoro.
- Jogiyanto, H. (2000). *Teori Prtoliiodan Analisis Investasi*. Yogyakarta: BPFE Yogyakarta Edisi Pertama.
- Kementrian Lingkungan Hidup. (2010). *Program Penilaian Peringkat Kinerja Perusahaan Dalam Pengelolaan Lingkungan*. Retrieved from <http://www.menlh.go.id/proper>
- Kementrian Lingkungan Hidup. (2012). *Penebangan Hutandan Deforestisasi: Faktadan Angka*. Retrieved September 24th, 2012, from <http://Penebangan-Hutan-dan-Deforestasi:-Fakta-dan-Angka> and Itemid=237&lang=en
- Manurung, A. H. (2012). Struktur kapital optimal perusahaan manufaktur di bursa efek Indonesia. *Journal of Capital Market and Banking*, 1(2), 1-9.
- Pflieger, J., Fischer, M., Kupfer, T., & dan Eyerer, P. (2005). The contribution of life cycle assessment to global sustainability reporting of organization. *Management of Environmental Quality: An International Journal*, 16(2), 167-179.
- Pratama, F. (2012). *Amerika Serikat Beri Kesempatan Indonesia Tingkatkan Standar CP*. Retrieved from <http://www.Tribunnews.com>
- Rakhiemah, A. N., & Agustia, D. (2009). Pengaruh Kinerja Lingkungan Terhadap Corporate Social Responsibility (CSR) Disclosure dan Kinerja Finansial Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. Proceedings from *Simposium Nasional Akuntansi XII*. Palembang.
- Sarumpaet, S. (2005). The relationship between environmental performance and financial performance of Indonesian companies. *Jurnal Akuntansidan Keuangan*, 7(2), 89-98.
- Strong, N. (1992). Modeling abnormal return: A review articles. *Journal of Business Finance and Accounting*, 19(4), 533-553.
- Sudaryanto, D. S. R. (2011). *Pengaruh Kinerja Lingkungan Terhadap Kinerja Finansial Perusahaan Dengan Corporate Social Responsibility (CSR) Disclosure Sebagai Variabel Intervening*. Semarang: Economic Faculty Diponogoro University.
- Suratno, I., Darsono, B., & dan Mutmainah, S. (2006). Pengaruh Environmental Performance terhadap Environmental Disclosure dan Economic Performance (StudiEmpirisPada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Jakarta Periode 2001-2004). Proceedings from *Simposium Nasional Akuntansi IX*. Padang.
- Teoh, H. Y., & Pin, W. (1998). *Environmental disclosures-financial performance link: Further evidence from industrializing economy perspective*. Osaka, Japan: APIRA 98.
- Wijaya, T. (2010). *Kerusakan Hutan di Indonesia Terparah Kedua di Dunia*. Retrieved from <http://www.news.detik.com>
- Wikipedia. (2012). *Ensiklopedia Bebas: Environmental performance*. Retrieved from <http://www.wikipedia.org>
- Yale Center for Environmental Law and Policy. (2008). *2008 environmental performance index report*. Connecticut: Yale University.