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The Economic Consequences of Voluntary Environmental Reporting on Shareholder Wealth

Ruslaina Yusoff
Shariful Amran Abd Rahman
Wan Nazihah Wan Mohamed
Universiti Teknologi MARA (UiTM), Malaysia
Email: ruslaina@kelantan.uitm.edu.my

ABSTRACT

This study was carried out to examine the economic consequences of voluntary environmental reporting on shareholders' wealth among Malaysian Listed Companies that voluntarily disclosed environmental information in their financial report. One hundred and fifty two (152) companies of Bursa Malaysia (MSE) had been identified as a sample in the current study. Seventy six (76) companies were classified as environmental reporting companies while the remaining companies were classified as non-environmental reporting companies. The classification was done in order to determine the differences between share price, profitability and market equity for both types of companies. The study hypothesizes that voluntary environmental reporting leads to an improvement in the shareholders wealth. However, the results show that there is no significant difference between cumulative abnormal return for environmental and non-environmental reporting companies. Based on the results obtained, it can also be concluded that profitability and size of the companies do not have any significant roles in deciding whether or not to produce environmental reporting companies.

Keywords: *environmental reporting, shareholders' wealth, profitability, size and market equity*

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Introduction

In today's corporate world, environmental reporting is considered a subject of increasing importance and concern especially in North America and Europe. However, it has yet to become a major issue in much of Asia or in Malaysia in particular (Zinkin & Thompson, 2003). Since environmental reporting is top-priority in the business world, more companies are now anxious to demonstrate that they care about the social and environmental impacts of their business, and are doing something about them.

With an increasing importance of environmental issues, companies have started to provide information regarding the environmental implications of their operations and thus increasing the trend for environmental reporting. However, in many parts of the world, including Malaysia, environmental reporting is still a voluntary initiative. In Malaysia, there is no statutory requirement for public listed companies to disclose environmental information to the public. Since this is a new trend for companies in Malaysia, they are still uncertain about the benefits of environmental reporting. The use of environmental information for performance benchmarking and business decision-making has not been widely recognized by companies or by the financial community (ACCA Malaysia, 2002).

The relationship between a firm's social and ethical policies or actions and its financial performance is an important topic. Various arguments have been made regarding the relationship between firm's social responsibility and their financial performance. Despite to these arguments, business leaders are starting to acknowledge some of the market benefits and competitive advantages for companies that disclose their environmental reports. Marcel Ospel, Chairman of UBS said, "A company through good corporate governance will find its stock more attractive to investors. An asset manager who takes into account environmental criteria will attract additional assets. And a financial institution that has a strong stance in corporate responsibility will attract top talents" (Ogrizek, 2002).

Previous studies on the relationship between environmental disclosure and economic performance did not show consistent results. Researchers have reached no real consensus on the relationship between these variables. The study of relationship between environmental disclosure and financial performance has a long history and has been reviewed regularly (Aupperle, Carroll & Hatfield, 1985; Alexander & Buchholz, 1978; McGuire, Sundgen & Schneeweis, 1988; Cochran & Wood, 1984; Shane & Spicer, 1983; Stanwick & Stanwick, 2000; Gozali, How & Verhoeven, 2001). In a more recent study done by Haslinda Yusoff, Normahiran Yatim & Noraini Mohd Nasir (2002) in Malaysia, they found that only two out of the 19 types of environmental information showed a positive correlation with the profitability of the reporting companies.

Thus, due to the inconclusive results and views on the relationship of environmental reporting and financial performance of a reporting company, this

study aims to further examine the importance of environmental disclosure to the value of the company by investigating whether there is a relationship between the environmental information disclosed in the annual report and the company's share price, particularly focusing on the companies in Malaysia.

Literature Review

Environmental reporting refers to the preparation of information, by management, for the use of multiple stakeholder groups (internal and external), on the environmental status and performance of their companies or organizations (ACCA Malaysia, 2002). However, according to a report published in 2002 by the Association of Chartered Certified Accountants (ACCA) entitled 'The State of Corporate Environmental Reporting in Singapore', environmental reporting is defined as the process of communicating externally the environmental effects of an organization's economic actions through the corporate annual report or a separate stand-alone publicly available environmental report. This form of reporting encompasses disclosures relating to environmental policies, impacts, processes and audits. It can also include environment-related expenditures, the environmental benefits of products, and details regarding sustainable operations.

Since environmental reporting is a mechanism whereby a company communicates information concerning its environmental performance, the process can be mandatory or voluntary, and the information disclosed may be intended for internal or external stakeholders. The most practical method to communicate companies' commitment to environmental activities is to report them in the annual reports that often contain the same common elements: introduction from the Chief Executive, background information about the organization, the organization's Environmental Policy, the organization's overall position with regard to the environment (frequently broken-down into smaller business sections for large organizations), progress made towards specific targets established in previous reports, and setting of new targets or actions to improve the organizations environmental performance in the future. (http://cei.sund.ac.uk/envrep/reports.htm).

From the point of view in the advantages of disclosing environmental reports, Solomon & Lewis (2001) has suggested four theoretical perspectives presenting incentives or benefits for voluntarily corporate environmental disclosure, namely those of market, social, political and accountability incentives. Taking the market perspective, there is a suggestion that environmental disclosure increases stock market efficiency, as the information contained in it can be rapidly incorporated in share prices. Investors find such information is useful in an economic sense. In other words, one of the incentives for environmental reporting is to attract investment to a company. In accordance to

accountability incentives, it views that corporations are accountable to three inclusive groups; shareholders, stakeholders and society, with environmental disclosure as the result of managers' attempts to maximize shareholders wealth, by enhancing the public image of the entity. Therefore, a company voluntarily reporting on its environmental management practices and performance can help to secure creditors', investors' and shareholders' confidence. In response to this, companies have started to publicize their environmental reporting voluntarily to demonstrate and assure these groups that they operate in a socially and environmentally responsible manner and such initiatives can also help to secure a license to operate in their business operations.

Environmental Reporting in Malaysia

Environmental reporting in Malaysia is still a voluntary initiative. Until now, there is no statutory requirement requiring public listed companies to disclose environmental information to the public. As a result, only 8% of the thousand-plus companies listed on the KLSE produce environmental reports, which are incorporated into their annual financial reports or issued on a separate basis. However, MASB has incorporated a new standard to encourage greater disclosure of environment-related financial information stated in paragraph 10 of MASB Standard 1, which makes explicit reference to environmental reports and value added statements encouraging companies to present additional information if management believes they will assist users in making economic decisions. In addition, paragraph 15 stated that a company is required to provide additional disclosure when the requirements in MASB Standards are insufficient to enable users to understand the impact of particular transactions or events on the enterprise's financial position and performance (ACCA Malaysia, 2002).

According to the survey conducted by ACCA Malaysia (2002), the number of KLSE main board listed companies engaged in environmental reporting is increasing even though it is still a voluntary activity. In 1999, the number of companies reporting environmental information was 25, which represents 5.3%; it grew to 35 companies by 2000 (7.0%), and reached 40 companies by 2001 (7.7%). A research conducted by Romlah Jaffar et al. (2002) reported that 74 out of 362 companies (20.44%) listed on the First Board of KLSE has reported environmental information in their annual reports. Nevertheless, these figures suggest that environmental disclosure is still low on quantity but appear to be improving.

Several possible reasons have been identified as to why companies are reluctant to adopt environmental reporting. Thompson (2002) categorized the reasons into two: (1) unwilling to report due to a lack of government pressure; a lack of perceived benefit; and a perception that their organization does not have any environmental impact and (2) unwilling to be environmentally

responsible as there is little or nothing to report. The low reporting practice among Malaysian companies might also indicate the low environmental awareness among Malaysian public. In addition, unlike financial reporting, which is governed by a set of standards issued by accountancy bodies, environmental reporting lacks such a framework. The cost of reporting and fear of how readers will react towards the report are also the reasons why environmental reporting is apparently low in Malaysia.

A report published in 2002 by the ACCA entitled 'The State of Corporate Environmental Reporting in Malaysia' has identified a number of driving force for environmental reporting in Malaysia. As a result of the introduction of Malaysian Code on Corporate Governance in KLSE listing requirements, the companies are required to show greater transparency in all areas of their business activity and this will drive more companies to disclose their environmental activities. Several awards have also been introduced in order to encourage the practice of environmental reporting which includes the National Corporate Reporting Awards (NACRA) and Malaysian Environmental Reporting Awards (MERA).

Research interest in environmental reporting in Malaysia has increased simultaneously with the increase in environmental disclosures. Among the studies conducted, most have found the amount of environmental disclosure by Malaysian companies to be limited and is still in its infancy stage but has the tendency to increase in the future (Williams, 1999; Thompson, 2002; ACCA Malaysia, 2002). Studies were also done to investigate the level of environmental reporting practices in these companies with the findings that environmental information was not well published in the companies' annual reports (Nik Nazli Nik Ahmad & Maliah Sulaiman, 2002; Romlah Jaffar, Takiah Mohd. Iskandar & Jusoh Muhamad, 2002). This means that the reports are very general and ad-hoc in nature have no specific format and tends to have a public-relations bias.

In addition to these studies, a research done by Junaini Mohamad and Zauwiyah Ahmad (2002) found that the decision to disclose environmental information is negatively correlated with companies' financial leverage and audit firm. They concluded that positive accounting perspective might not be entirely applicable for voluntary disclosures in Malaysia. Other studies were also done to investigate the relationship between environmental disclosure and financial performance (Haslinda Yusoff, Normahiran Yatim & Noraini Mohd Nasir, 2002; Nik Nazli Nik Ahmad & Maliah Sulaiman, 2002). The authors concluded that there was no significant relationship between the two variables. Consequently, this present study is also conducted to provide a base for further work in this area.

The Relationship Between Environmental Reporting and Financial Performance

Over the past several years, there has been a series of research on environmental reporting that indicates an increasing amount in the disclosure of environmental reporting. With the increasing importance of environmental issues internationally, there is also an increasing trend for organizations to provide information regarding the environmental implications of their operations (Gozali, How & Verhoeven, 2001). Among these studies, some researchers examine the various determinants of environmental reports (Lang & Lundholm, 1993; Williams, 1999; Cormier & Magnan, 1999; Junaini Mohamad & Zauwiyah Ahmad, 2002) while others investigated the quality of environmental reporting (Stagliano & Walden, 1998; Thomas & Kenny, 1996; Nik Nazli Nik Ahmad & Maliah Sulaiman, 2002). However, for the purpose of this study, literature review focuses on the studies done to investigate the relationship between environmental disclosure and financial performance.

Cohen, Fenn and Naimon (1995) used two different types of firm performance, which were accounting returns and stock market returns in investigating the relationship between environmental disclosure and financial performance of the companies in United States (US). Accounting returns were measured using return on assets (ROA) and return on equity (ROE). On the other hand, stock market performance was measured utilizing the total return to a common shareholder, both before and after adjustments for risk. As a result, they found evidence that shows there was no relationship between environmental disclosure and financial performance.

Similar to Cohen, Fenn and Naimon (1995), Stanwick and Stanwick (2000) examined the relationship between environmental disclosure and financial performance in the US firms by using the value of net income/total assets as a financial performance. It was found that financial performance has a varying impact on the different components of environmental responsiveness. High performance firms had higher incidences of environmental policies and/or descriptions of environmental commitment as compared to low performing firms. However, medium-performing firms had the highest level of environmental policies and/or descriptions of environmental commitment. This means that environmental reporting does have an impact on the financial performance of the various companies tested.

A current research conducted by Haslinda Yusoff, Normahiran Yatim and Noraini Mohd Nasir (2002) found that there was a relationship between environmental disclosure and profitability of the companies involved. The samples of their study comprised of 40 companies from 8 different industries listed on KLSE. However, the result was still considered inconclusive since only 2 out of the 19 items of environmental information examined showed a positive correlation with profitability of the reporting companies. They also

concluded that there was no significant relationship between environmental disclosure and the type of industry.

Hai et al. (1998) conducted another study to investigate the relationship between environmental disclosures and financial performance using a sample of potentially polluting publicly listed companies in Singapore. Accounting-based variables of ROA and ROE were chosen to measure the relationship of the variables and when environmental disclosures and corresponding financial performance were correlated on a yearly basis, the results were significant and positively correlated. They then concluded that there was a significant and positive relationship between the extent of environmental disclosure and financial performance. In addition, they found that firms that make environmental disclosures show better financial performance than those that do not.

There was also a study conducted by Gozali, How and Verhoven (2002) to examine the wealth effect of shareholders as a consequence of environmental information disclosures in Australian companies' annual reports. Using several calculations in the actual change in return for each security and market index, the researchers found that companies with positive environmental disclosures performed significantly better in the market than companies that disclosed negative environmental information. This result suggested that shareholders interpreted such disclosures as a positive sign to invest in a company and thus affected the financial performance of the company.

Another research was conducted by Murray et al. (2001) who presented a study that explores whether stock market participants exhibit any reaction to environmental disclosures made by the largest 100 companies in the United Kingdom (UK). Using the selected companies' financial statements that covered a 10-year period between 1988 and 1997, the researchers conducted four different tests to investigate whether there was a statistical relationship between the variables and share returns. They finally concluded that no linear association existed between share price returns and environmental disclosures being examined. One of the possibilities that lead to this conclusion is that the disclosures were not sufficiently detailed or precise as to properly inform investors in the terms required to influence investment behaviour.

In examining the relationship between the reporting of social responsibilities and stock market performance, Alexander and Buchholz (1978) conducted a research to investigate the relationship of these variables among the corporations in the US for the period of 1970-1974. They used two security parameters, which were return and risk, to evaluate the security performance of the companies. The results of the study indicated that the degree of social responsibility bore no significant relationship to stock market performance.

Cochran and Wood (1984) also investigated the relationship between corporate social responsibilities and financial performance. In this study, the sample was divided into two time periods (1970-1974, 1975-1979) to control for unusual accounting entries that might distort test results. Three accounting

returns measures were employed: (1) the ratio of operating earnings to assets, (2) the ratio of operating earnings to sales, and (3) excess market valuation. In order to explore further influences, two additional variables were introduced; asset turnover (the ratio of sales to assets) and the ratio of net fixed assets to gross fixed assets. Another statistical technique, logic analysis, was also applied to provide an appropriate test procedure by which the underlying assumptions of the model are met by the data. After controlling for asset age, using a large sample, and industry-specific control groups, the findings of the study found that there still was weak support for the link between corporate social responsibility and financial performance.

Further investigation was done by Aupperle, Carroll and Hatfield (1985) to ascertain the relationship between corporate social responsibility and profitability. They used an elaborate forced-choice instrument pertaining to both variables and sent the questionnaires to 818 chief executive officers (CEOs) listed in Forbes 1981 Annual Directory. The analysis of the study showed no significant relationship between a strong orientation toward social responsibility, or concern for society, and financial performance. They also suggested that it is neither beneficial nor harmful for a firm to be socially motivated to fulfil its social contract.

Research Objectives

The main objective of this study is to examine the economic consequences of voluntary environmental reporting on shareholders' wealth among Malaysian Listed Companies that voluntarily disclosed environmental information in their financial report within the period of 1st January 2003 to 31st December 2003. The Specific objectives of the study are:

a. To identify the number of voluntary environmental reporting companies listed on the first board of Bursa Malaysia as at 31st December 2003.
b. To examine whether there is any significant difference in profitability of environmental reporting and non-environmental reporting companies.
c. To examine whether there is any significant difference in market equity of environmental reporting and non-environmental reporting companies.
d. To determine whether there is any relationship between environmental reporting and share price of the company.

The current study should be able to answer the following research question:

Does environmental reporting affect the share price of Malaysian companies listed in the first board?

Research Methodology

Hypotheses

The followings hypotheses have been constructed for the purpose of this study:

The second objective of this study is to examine whether the environmental reporting companies have a significant relationship with profitability[1]. The companies that produce environmental information to the public show better financial performance (Hai et. al., 1998). However, a study in Malaysia proved that there is no significant relationship found between them (Junaidi Mohamed and Zauwiyah Ahmad, 2000). Therefore, the first hypothesis is as follows:-

H_1: Voluntary environmental reporting is related to companies' profitability.

Similar to Michelson et al. (2000), the size of the companies is determined by its market equity[2]. Studies by Leftwich, Watts and Zimmerman (1981) and Trotman and Bradley (1981) have found positive association between size and voluntary social responsibility disclosure. Therefore, the hypothesis to be tested is:-

H_2: Voluntary environmental reporting depends on the size of the companies.

The current study also determines whether the environmental disclosure will improve shareholders wealth. Generally, the shareholders interpreted such disclosure as a positive sign to invest in a company and thus effect the financial performance of the company (Gozli, How and Verhoven, 2002). In contrast, Murray et al. (2001) concluded that no linear association existed between share price returns and environmental disclosure. Thus, based on various results, the current study hypothesised that:-

H_3: There is a significant relationship between voluntary environmental reporting and the share price of the companies.

Sample Selection

In this study, a list of companies that disclosed the environmental information in their annual report for the year ended 2003 was obtained from Bursa Malaysia website (www.bursamalaysia.com.my). The non- environmental reporting companies (NERC) were also selected as a control to the environmental reporting companies (ERC). The selection process was based on the industrial sector and the size of the company (total assets). There are 598 companies listed on the first board of Bursa Malaysia as at 31st December 2003. Eventually 76 environmental reporting companies have been identified and another 76

companies have been selected as control companies. The company is only included in the sample if it satisfies the following conditions:-

i. Traded in the market for the whole year of 2003.
ii. Financial data needed is available and can be obtained from Bursa Malaysia

Data Analysis

The t-statistic for the difference of means is performed to test whether there is any significant difference between environmental reporting companies and non environmental companies in terms of cumulative abnormal return, companies' profitability and size.

Methodology

Profitability

In order to examine whether there is any significant difference in profitability of environmental reporting and non-environmental reporting companies, the profitability for both environmental reporting and non-environmental reporting companies were measured based on profit before tax. Both categories of companies were further analyzed by dividing them according to their level of profit. Any company with a profit after tax more than the average figure is being classified as high profitability company and any company with a figure below the average is being classified as a low profitability company.

Size

The study also examines whether there is any significant difference in size of environmental reporting and non-environmental reporting companies. The value of market equity for each company is used as a proxy for size. It is calculated by multiplying the number of shares outstanding by the market price at the end of the study period that is December 2003. Further analysis was conducted by classifying both categories of companies as big size and small size companies. This can be achieved by dividing both categories of companies according to average market equity. Companies with market equity more than average is classified as big sized companies and likewise.

Abnormal Returns

To test the relationship between environmental reporting and shareholders wealth, it involves a comparison of the cross-sectional mean abnormal return between the environmental reporting and non-environmental reporting

companies. Similar to Gozali, How and Verhoeven (2001), this residual or abnormal return (AR) for each firm (j) and for each time period (t) is the difference between the actual return and the expected return, written as:

AR_{jt} = $R_{jt} - E(R_{jt})$ where;

AR_{jt} = abnormal return on security j for period t = actual return
R_{jt}
$E(R_{jt})$ = expected return

The actual daily returns (Rjt) over the time period of 1st January 2003 – 31st December 2003 as to capture the market effect of the measures is the observed return on the share and was calculated as follow:

$\frac{R_{jt}}{P_j} = \frac{P_{jt} - P_{jt-1}}{P_{jt-1}}$ where;

R_{jt} = Return for security j at day t
P_{jt} = closing price for security j at day t
P_{jt-1} = closing price for security j at day t-1

The expected return is a measure of the return on the share one would have expected to take place. Similar to Gozali, How and Verhoeven (2001), market model is used in the current study to compute expected abnormal returns over the period where the KLSE's Composite Index is used as the proxy for market returns.

$E(R_{jt}) = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}$ where;

$E(R_{jt})$ = Expected return
R_{mt} = Return of a market index on day t
β_j = a parameter that measures the sensitivity of E (Rj t) to the market index,
ε_{jt} = a random variable that must have an expected value of zero.

From the calculation of abnormal return, the cumulative abnormal return is then calculated to examine the shareholders wealth between environmental reporting and non-environmental companies over one year period. The cumulative abnormal return (CAR) over the interval of trading days beginning with T1 and ending with days T2 is calculated as:

$CART1,T2 = \Sigma AR_{jt}$

Results

Descriptive Analysis

Table 1 presents the number of reporting companies listed on Bursa Malaysia first board as at 31st December 2003 based on industry. It shows that the highest number of companies is from Industrial Product with 18 companies followed by Plantation and Trading & Services with 15 companies respectively. This result is similar to Junaidi Mohamed and Zauwiyah Ahmad (2000).

Table 1: Number of Environmental Reporting Companies Listed on Bursa Malaysia based on Industry as at 31st December 2003

Industry	Number of Companies	Percentage (%)
Construction	7	9.2
Consumer Product	13	17.1
Finance	3	3.9
Infrastructure	1	1.3
Industrial Product	18	23.7
Plantation	15	19.7
Properties	4	5.3
Trading & Services	15	19.7
Total	76	100

Inferential Statistics

Many studies such as Hai et al. (1998) have concluded that there was a significant and positive relationship between the extent of environmental disclosure and financial performances. They found that the firms that produce environmental disclosures show better financial performance than those that do not. Haslinda Yusoff, Normahiran Yatim and Noraini Mohd Nasir (2002) found that there was a relationship between environmental disclosure and profitability of the companies. However the result was still considered inconclusive since only 2 out of the 19 items of environmental information examined shared a positive correlation with profitability of representing companies.

Thus the second objective of this study is to identify whether there is any significant difference in profitability of environmental reporting and non-environmental reporting companies. This study uses profit before tax as a measurement for the profitability of a company.

Table 2 shows that the mean of profitability for environmental reporting companies is higher compared to non-environmental reporting companies.

Based on the t-test result, it shows that the difference of mean is significant at 5% significant level. It indicates that generally companies that disclose the environmental information have a higher mean of profit before tax.

Table 2: Environmental Reporting and Non - Environmental Reporting Companies listed on Bursa Malaysia based on Profitability as at 31st December 2003

Classification	Number of Companies	Mean of Profitability (in million)	T-Statistics (P-value)
Reporting	76	192.59	2.204
Non Reporting	76	88.53	(0.029)

Note: *Significant level of 5%

Further analysis was conducted in order to determine whether there is any significant differences in the mean of profitability for both categories of companies' profitability as in high and low profit companies. Part A of Table 3 indicates that the mean of profitability for high profit environmental reporting companies is higher than the high profit non-environmental reporting companies. However, the difference is not significant at significant level of 5%.

A different result was obtained for low profit companies. Part B of the Table 3 shows that the mean profitability for low profit environmental reporting companies is higher than the low profit non-environmental reporting companies. The t-test result confirms the difference of mean which is significant (0.010) at 5% level.

Table 3: Environmental Reporting and Non - Environmental Reporting Companies listed on Bursa Malaysia based on Profitability (High and Low) as at 31st December 2003

Classification	Number of Companies	Mean of Profitability (in million)	T-Statistics (P-value)
Part A - High Companies			
Reporting	19	32.94	0.147
Non Reporting	20	31.73	(0.884)
Part B - Low Companies			
Reporting	57	33.36	2.607
Non Reporting	56	22.54	(0.010)

Note: *Significant level of 5%
*High companies if its profitability is greater than the mean of total profitability for all companies *Low companies if its profitability is smaller than the mean of total profitability for all companies.

A study conducted by Haslinda Yusoff, Normahiran Yatim and Noraini Mohd Nasir (2002) reported that 99.5% of the environmental reporting companies are large companies. However, no statistical test was conducted by them to determine the relationship between size and environmental reporting companies. In addition, Junaidi Mohamed and Zauwiyah Ahmad (2000) hypothesized that there is a positive relationship between voluntary disclosure of environmental information and the size of the companies. The result indicates that there is a negative relationship between them.

In order to fulfil the third objective of the study, market equity was used as proxy to determine the size of the companies. It is calculated by multiplying the number of shares outstanding with the market price of the stock as at 31st December 2003.

Table 4 presents the result of the relationship. It shows that the mean of market equity for environmental reporting companies is higher compared to non-environmental reporting companies. However, based on t-test, the difference of value is not significant at 5% level of significant. Thus, it indicates that there is no significant relationship between the size of the companies and environmental reporting companies.

Table 4: Reporting and Non - Environmental Reporting Companies listed on Bursa Malaysia based on Size as at 31st December 2003

Classification	Number of Companies	Mean of Market Equity (in million)	T-Statistics (P-value)
Reporting	76	2,118.19	1.820
Non Reporting	76	848.42	(0.071)

Note: *Significant level of 5%
Size of the company is measured by the Market Equity which is from the calculation of numbers of shares outstanding X Market Price as at 31st December 2003.

Table 5 is used to further discuss this relationship. The results show that the mean of market equity for both environmental reporting companies (large and small) is higher than non-environmental reporting companies. However, only small environmental reporting companies show a significant relationship.

A study done by Gozali, How and Verhoven (2002) in Australia investigated the wealth effect of shareholders as a consequence of environmental information disclosure using the actual change in return for each security and market index. They then concluded that shareholders interpreted environmental disclosure as a positive sign to invest in a company.

Based on Table 6, even though the mean of cumulative abnormal return (CAR) for both environmental reporting and non-environmental reporting companies are different (0.2073 and –0.0537 respectively), it was found that

Table 5: Environmental Reporting and Non - Environmental Reporting Companies listed on Bursa Malaysia based on Size (Large and Small) as at 31st December 2003

Classification	Number of Companies	Mean of Market Equity (in million)	T-Statistics (P-value)
Part A - Large Companies			
Reporting	13	9,623.85	1.862
Non Reporting	14	3,564.29	(0.076)
Part B - Small Companies			
Reporting	63	568.19	4.640
Non Reporting	62	234.95	(0.000)

Note: *Significant level of 5%
*Size of the company is measured by the Market Equity which is from the calculation of numbers of shares outstanding X Market Price as at 31st December 2003.
*Large companies if its market equity is greater than the mean of total market equity for all companies.
*Small companies if its market equity is smaller than the mean of total market equity for all companies.

there is no significant relationship between share price and environmental reporting. This is based on the t-test value which is 0.316 at significant level of 5%. This result is consistent with Murray et al. (2001) in which they concluded that there is no linear association between share price returns and environmental disclosure.

Table 6: Cumulative Abnormal Return (CAR) from 1.1.2003 to 31.12.2003 for Environmental Reporting and Non - Environmental Reporting Companies listed on Bursa Malaysia as at 31st December 2003

Classification	Number of Companies	Mean of CAR	T-Statistics (P-value)
Reporting	76	0.2073	1.009
Non Reporting	76	-0.0537	(0.316)

Note: *Significant level of 5%

In addition to that, Table 7 shows the t-test value of cumulative abnormal return for large and small companies (both environmental reporting and non-environmental reporting). The mean of cumulative abnormal return (CAR) for both large and small companies were both found not to be significant. Even though there is a large different value for environmental reporting and non-

environmental reporting of small companies (0.3149 and 2.4662 respectively), the t-test value is still not significant (0.338) at significant level of 5%.

Table 7: Cumulative Abnormal Return (CAR) from 1.1.2003 to 31.12.2003 for Environmental Reporting and Non - Environmental Reporting Companies Listed on Bursa Malaysia as at 31st December 2003 based on Size (Large and Small)

Classification	Number of Companies	Mean of CAR	T-Statistics (P-value)
Part A - Large Companies			
Reporting	13	0.2447	0.494
Non Reporting	14	0.1733	(0.627)
Part B - Small Companies			
Reporting	63	0.3149	0.965
Non Reporting	62	2.4662	(0.338)

Note: *Significant level of 5%

Based on the results obtained, the investors in Malaysia during the study period (1 January 2003 to 31 December 2003) did not include environmental reporting as a factor in buying shares.

Conclusion

The main objective of the study is to examine whether there is any significant relationship between environmental reporting companies and shareholder wealth. Using companies selected from Bursa Malaysia, 152 companies have been identified as a sample consisting of 76 environmental reporting companies and another 76 companies classified as non-environmental reporting companies. The classification is conducted in order to seek any differences between the share prices of both types of companies. In addition, this study also analyses the profitability and the size of the companies for both types of companies.

Based on the current study, it was found that there is an increasing number of voluntary environmental reporting companies from 25 companies in 1999, 35 companies in 2000, 40 companies in 2001 (ACCA, 2002) to 76 companies as at 31st December 2003. According to ACCA report (2002), this results maybe due to several reasons such as (i) an introduction of the Malaysia Code on Corporate Governance in Bursa Malaysia listing requirement, (ii) increased demand for corporate governance and accountability as a result of privatization and (iii) to improve corporate image.

In addition, the highest percentage of the environmental reporting companies is from the Industrial Product sector as compared to other sectors. It is perceived that this can be linked to an effort to improve corporate image since most of the public will associate industrial product companies as the main environmental polluter.

The study hypothesizes that voluntary environmental reporting leads to an improvement in the shareholders wealth. However, the result shows that there is no significant difference between cumulative abnormal return for environmental and non-environmental reporting companies. The result is in contrast with a research done by Gozali, How and Verhoven (2002) which concluded that shareholders interpreted environmental disclosure as a positive sign to invest in a company.

Further analysis has been conducted in order to find out whether profitability and size of the companies play any significant role in motivating companies to produce environmental reporting. Based on the results obtained, generally it can be concluded that profitability and size of the companies do not have any significant role in deciding whether or not to produce environmental reporting. This is in line with a research carried out by Junaini Mohamad and Zauwiyah Ahmad (2002) which concluded that environmental reporting does not have a significant relationship with companies' profitability and size.

However, when the companies were categorized according to their profitability and also size, the results obtained shows that profit and size have significant impact in motivating companies to produce environmental reporting among low profitability companies and small size companies respectively.

Overall, the current study provides evidence that in the Malaysian environment, environmental reporting has no effect on the shareholders wealth. This indicates that investors in Malaysia during the study period (1st January 2003 – 31st December 2003) seem to ignore environmental reporting in making decision about the value of the share.

Based on the results obtained, several issues have been raised, which can be better explained through future researches. The current study used profit after tax as one of the variables. It is suggested that other researchers use other types of measurement such as Price Earning ratio and Return on Investment.

Endnotes

[1] Profit before tax has been used as a proxy for profitability

[2] The market equity is calculated by multiplying the number of shares outstanding with the market price of the stock as at 31 December 2003.

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