



Usefulness of Environmental Information to Bank Officers in Malaysia

RIDZWANA MOHD SAID^{a*}, MALIAH SULAIMAN^b AND
NIK NAZLI NIK AHMAD^c

*^a Department of Accounting and Finance,
Faculty of Economics and Management,
Universiti Putra Malaysia, 43400 UPM Serdang, Selangor*
^{b,c} International Islamic University Malaysia

ABSTRACT

Corporate social and environmental disclosure practices reflect corporate transparency and accountability towards wider stakeholders. Since information disclosure imposes huge costs upon companies, the usefulness of information to stakeholders is worth examining. Drawing from the notion of normative pressure of institutional theory, this study examined the usefulness of environmental information to bank officers in Malaysia. Several aspects of environmental information disclosure were examined, namely, companies' environmental attributes, types of environmental information disclosed and forms of disclosure. The results revealed that bank officers perceived environmental information to be important in their lending decisions. We also tested the actual use of environmental information in the lending decisions of bank officers for which it was found that bank officers do not incorporate environmental information in their lending decisions. Accordingly, the notion of normative pressure of institutional theory

* Corresponding Author: E-mail: ridzwana@upm.edu.my; ridzwana.ms@gmail.com
Any remaining errors or omissions rest solely with the author(s) of this paper.

is partly supported. The present study has important implications for corporate environmental reporting practices in Malaysia.

Key words: Perception, actual use, environmental information, bank officers, institutional theory

Classification code: M140

INTRODUCTION

In developed countries, such as the US, the UK and other European countries, an increasing number of national and international banks have started to incorporate environmental aspects in their operations. This ranges from the adoption of environmental principles in bank operations to the development of socially responsible banks, such as the Co-operative Bank in the UK. Established in 1992, the Co-operative Bank has an Ethical Policy, which forms the basic principles determining with whom the Bank will and will not do business. For example, the Bank will not supply financial services to companies like tobacco product manufacturers and will do business with companies that do not harm the environment. Indeed, the Bank has incorporated its Ethical Policy in its Mission Statement and Ecological Mission Statement (Thompson and Cowton, 2004).

A notable example concerning the commitment of the banking industry to the environment is the establishment of the United Nations Environment Programme (UNEP). UNEP plays a significant role in the increasing involvement of banks in environmental issues as it provides principles for banks to follow when they want to include environmental aspects in their businesses. UNEP also provides guidelines on environmental management within financial institutions and includes a model for corporate environmental performance assessment within the lending process (Coulson and Monks, 1999). By 2002, about 200 banks had subscribed to the “Statement by Banks on the Environment and Sustainable Development” published by UNEP. The statement requires signees to integrate environmental criteria into their banks’ risk assessment process (Fenchel et al., 2003).

A survey carried out by Fenchel et al. (2003) in 2002, with a sample of fifty banks from eight European countries, found that UNEP-banks (signees of the UNEP statement) that run a thorough screening during the pre-work out* phases experience a reduced workload in this phase due to a lower number of default credits. Furthermore, they also discovered that the costs incurred in the development,

* A credit risk assessment process consists of five phases; rating, costing, pricing, monitoring and work out. The process aims to identify the borrower’s default risk before granting them a loan.

maintenance and running of management systems for environmental risk in the pre-work out phases were lower than the economic benefits generated from the reduction of credit losses. The results of the study indicate that the incorporation of environmental aspects in the credit risk assessment process provides benefits to lenders.

Mulder (2008), in his 2007 interview with financial institutions, private sector companies and NGOs, found that the respondents believe that they are exposed to several types of environmental risk, such as liability risk, social and legal licence to operate risk and reputational risk. The results revealed that 19 out of 26 respondents believe that financial institutions are exposed to reputational risk. This indicates that the financial institutions are aware that they are actually exposed to the risks associated with environmental issues in their business operations. Meanwhile, Ali Basah and Md Yusuf (2013) believed that Malaysia banking sectors also exposed to natural environmental risks for two reasons. First, most bank financing relates to investment with potential for adverse environmental and social impacts and second, each project is often large and can has significant impact on the environment. Their study on credit evaluation process of bank managers revealed that the respondents incorporate environmental issues in the loan granting process. Additionally, several factors such as racial groups, religions, bank profiles, bank type and bank nationalities also affect the managers' credit granting decisions.

Accordingly, banks in developed and developing countries have started to take environmental aspects into account in their business decisions, thus suggesting that banks need environmental information from potential borrowers to ensure they are not exposed to any future environmental risks. To study the usefulness of environmental information in the lending decisions of bank officers will not just add to the current accounting literature but also contribute useful insights into the use of environmental information in decision-making, particularly in the context of a developing country such as Malaysia.

The following section presents the literature review on social and environmental information usefulness. Then, the theory used in the study is discussed followed by the methodology adopted. The results are presented in the next section and the paper then concludes.

USEFULNESS OF SOCIAL AND ENVIRONMENTAL INFORMATION TO STAKEHOLDERS

Studies on the usefulness of social and environmental information in stakeholders' decision-making can be categorized into two groups: perception studies and decision impact studies (stakeholders' decision experiments and market reaction

studies). Early studies on the perceptions of stakeholders concerning social and environmental information revealed that such information appeared to have a lower degree of importance compared to financial information in investment decision-making during the 1970s (for example, Buzby and Falk, 1978; 1979; Filios, 1985; Rockness and Williams, 1988). This was perhaps due to the capitalist orientation of many business managers during that period, which led to less emphasis on social issues. The phenomenon continued until the early 1990s where environmental information remained as part of social information disclosure research (Teoh and Shiu, 1990). However, later, Tilt (1994) found that various stakeholder groups in her study perceived corporate social disclosure as being of low credibility and demanded standards or legislation to ensure that companies disclose such information. They also recommended that the information be disclosed in other media and reported in both narrative and quantitative forms. The findings were supported when Epstein and Freedman (1994) revealed that the respondents perceived it to be more important to use corporate funds to control pollution and improve product safety than to pay higher dividends.

After 1997, several studies focused on the disclosure of environmental issues. For example, Deegan and Rankin (1997) found that the majority of respondents (i.e. shareholders, stockbrokers and research analysts, accounting academics, representatives of financial institutions and review organizations) perceived environmental information as material information. However, they also identified financial information as more important than environmental information. Additionally, a study by Fayers et al. (2000) revealed that a number of investment analysts and fund managers used environmental information in their investment decisions and claimed that environmental information about liabilities and compliance were frequently required criteria to assess companies' management and environmental performance. The study also showed that the absence of environmental reporting standards and an appropriate framework were barriers for incorporating environmental performance information in investment decision-making.

The results of interviews carried out by Solomon and Solomon (2006) with twenty-one fund managers and specialists in social responsibility investment also claimed that although improving, the level of social, ethical and environmental (SEE) disclosure in the annual reports was inadequate for their portfolio investment decisions. In addition, the interviewees asserted that the current SEE disclosure lacks comparability, and, thus, urged for standardization in terms of guidelines. While they preferred qualitative disclosure with explanations rather than quantitative disclosure, mandatory SEE reporting was rejected to avoid SEE disclosure becoming a "box ticking" exercise.

In Malaysia, Mustafa et al. (2006) examined the information gaps between corporate preparers and a user group (i.e. financial analysts). The results indicated that human resource information is important to both groups. Additionally, the authors also found that financial analysts expect more information on products and the environment to be disclosed by companies in Malaysia. They also claimed that they incorporate social information in their decisions, particularly information pertaining to human resources. The authors concluded that the absence of communication between corporate report preparers and users leads to miscommunication of social information required by the stakeholders. This also highlights the importance of the present study. A recent study specifically concerning the importance of environmental information was carried out by Mohd Said et al. (2013). The authors found that fund managers in Malaysia perceived environmental information as important in their investment decisions. Additionally, the information is viewed as important when it affects the future financial performance of the companies and urged for mandatory environmental disclosure practices by companies in Malaysia.

The importance of environmental information was also examined by Thompson and Cowton (2004), specifically on loan granting decisions. Fifty-seven usable questionnaires were returned from financial institutions in the UK. Generally, the results revealed that banks did incorporate environmental information in lending decisions. However, the prime concern on the issue was risk management rather than the exploitation of lending opportunities or social responsibilities. In addition, although moderately important, the incorporation of environmental information in lending decisions was also due to the need to comply with legislation. Additionally, the respondents felt that a company should meet all known and likely future environmental control standards. Other environmental attributes seemed to be unimportant.

The usefulness of social information has also been studied using the decision-impact approach. However, there have been very few such studies. This is probably due to the difficulty in obtaining a large number of responses because the approach requires a lot of time on the part of the respondents (to answer the questionnaire). An early study was that of Belkaoui (1980), who conducted a field experiment to determine whether the abatement costs of pollution affect stakeholders' investment decision-making. Seventy-five individuals from each stakeholder group (accountants, bank officers and students) participated in the experiment. The results revealed that various accounting treatments for pollution control information had different effects on the investment decisions of the three groups. Environmental information had a significant impact on investment decisions made by bank officers under short-term and long-term investment strategies. However, such information

only significantly influenced the decisions made by accountants under the long-term investment strategies, and there was no effect on investment made by students under either investment strategy.

In 1999, Milne and Chan examined whether narrative social disclosure has an impact on different investment strategies of investment analysts and accountants. The experimental results exhibited that narrative social information seems to have little impact on the investment decisions of both stakeholder groups. Similar to the results found in Belkaoui (1980), accountants disregarded such information for short-term investment strategy but not for the long-term investment strategy. They then further tested the impact of positive and negative environmental information on both investment strategies with similar stakeholder groups. It showed that investment analysts avoided investing (long-term and short-term investment strategies) in the company with negative environmental information, while accountants decided to only invest in the company for a short-term investment strategy. Although the stakeholders did incorporate narrative as well as financial information in their investment decision-making, the authors claimed that the degree of reaction to different forms of environmental information was unclear.

Accountants from twelve different US-based firms participated in a study by Milne and Patten (2002) to examine the effects of hazardous waste remediation disclosure on investment decision-making. Environmental information was found to have a significant impact in respect of long-term rather than short-term investment scenarios. The results also revealed that the disclosure of positive environmental information can offset the negative effects of a company's environmental liabilities. However, this only happens with the long-term investment strategy. In contrast, under a short-term investment strategy, the additional positive environmental information appears to impair the negative environmental liability position of the company.

In order to test the effect of quantitative and qualitative environmental information on stakeholders' investment decision-making, Rikhardsson and Holm (2008) used graduate business students as a proxy for investors. The experimental survey results indicated that the qualitative environmental information included in the experiment did make a difference in the amount invested in the short-term investment scenario but not in the long-term scenario. However, quantitative environmental information did not make any difference in the amount invested in either investment strategy. Thus, it appears that the inclusion of quantitative information does not have any added value to the investment decision-making of stakeholders.

The literature discussed above revealed that some stakeholder groups in society do perceive social and environmental information as useful in their decision-making, albeit the extent of usefulness may vary from one group to another. Additionally, in those studies, the focus was on social information with environmental information included as a part thereof. Thus, focusing only on environmental information, this study provides richer data and in-depth insights concerning environmental disclosure. Meanwhile, the main findings from studies examining the actual use of social and environmental information indicate that stakeholders reacted to the supplementary social and environmental information (be it qualitative or quantitative forms), which implies that the information has value. However, the above studies mainly focus on investment decision-making. While there are diverse groups of stakeholders of a company, other important decisions, such as loan granting decision, are also worth examining. Indeed, Milne and Chan (1999) asserted that decision experiment should not be limited to the assessment of investment impacts but should also be carried out in alternative decision contexts. One important decision is the lending decisions made by bank officers. Accordingly, the present study intends to examine the use of environmental information in lending decisions made by bank officers. It is evident in the literature that environmental information is indeed important to bank officers in the lending process (Fenchel et al., 2003; Thompson and Cowton, 2004).

NORMATIVE PRESSURE OF INSTITUTIONAL THEORY

Many theories have been used to analyse the companies' efforts for such disclosure practice including legitimacy theory, stakeholder theory and political economy theory. However, many of these studies examined social and environmental reporting from the perspective of corporate preparers. In contrast, the present study examines the usefulness of environmental information that has been reported by companies from the perspective of users of information. The theory that will be adopted is institutional theory.

This theory explains that in order to secure legitimacy, an organisation justifies its actions, in respect of the comparability thereof to other institutions within its environment and with societal needs. The similarity to organizations within its environment is called the process of 'isomorphism' (DiMaggio and Powell, 1983). There are three mechanisms of institutional isomorphism: coercive, mimetic and normative. Coercive isomorphism arises from the formal and informal pressures exerted on the organisations upon which they are dependent according to the cultural

expectations in society. Meanwhile, mimetic isomorphism explains the behaviour of organisations in mimicking or modelling after an organisation that they perceive to be successful. Normative isomorphism derives from professionalization. This study employs normative isomorphism. The normative isomorphism of institutional theory has two sources – education and professional networks (Siegal et al., 1997). Formal education at the tertiary level shapes the cognitive perspective of an individual. Further, an individual's perception is also developed from his or her communication and socialization through professional networks.

In the application of the normative isomorphism of the institutional theory to the present study, the professionalization of the bank officers in Malaysia is derived from many factors, such as tertiary education, professional examinations, on-the-job training, workshops, seminar series and professional memberships. This process of socialization of bank officers causes similarities in the orientation and character of individuals, which then shapes the similarities in attitudes and behaviours. Business education, such as accounting and other related courses (e.g. finance, portfolio management and financial statement analysis), has been asserted as focusing more on technical orientation. Mayper et al. (2005) claimed that accounting education emphasizes the technical aspects by focusing on pecuniary profits. Accordingly, this may not enhance students' development abilities on such issues as the sources of profit and the social impact of profit maximization. Additionally, Merino (2006) explained that although in the past there was a consensus that technical knowledge alone is not adequate for accounting education, the accounting curriculum continues to be technically orientated. This technical aspect of business education serves to diminish the ethical concerns among students, which will further limit the ethical sensibilities of students (Mayper et al., 2005). It is only recently that ethical issues have been highlighted in courses at the tertiary level. However, social and environmental issues are an integrated topic in other courses such as current issues in accounting.

In this study, these sources of professionalization are tested based on their influence upon the attitudes and behaviours of bank officers concerning the usefulness of environmental information in their decisions. It can be argued that the technical aspects emphasized during their learning at universities and obtained through professional training may lead them to perceive that environmental information is less important and less useful to incorporate in their decisions. For example, Thompson and Cowton (2004) found that bank officers perceived many environmental attributes of a company as not important in their lending decisions. However, they may perceive that environmental information that has a financial impact is important compared to other types of environmental information.

Additionally, banks managers in the study by Filios (1985) indicated that they preferred to have a non-monetary form of social information disclosure. Then, Teoh and Shiu (1990) found that financial analysts and bank officers in their study were in favour of quantitative and financial forms of social information disclosure. Finally, stakeholders in Qatar, which included bank officers, were found to perceive that social information disclosed in a comprehensive form is more important, that is, monetary, quantitative and narrative (Al-Khater and Naser, 2003). It seems that gradually, stakeholders are now aware of the importance of having complete forms of social information. Given that environmental information is a subset of social information, one would expect the same for environmental information before making decisions. Accordingly, the following propositions are addressed:

Proposition 1 : A company's environmental attributes influence the perceived usefulness of environmental information in the decision-making of bank officers.

Proposition 2 : The various types of environmental information influence the perceived usefulness of environmental information in the decision-making of bank officers.

Proposition 3 : Forms of environmental disclosure influence the perceived usefulness of environmental information in the decision-making of bank officers.

Decision impact studies revealed that qualitative social and environmental information have an impact on long-term investment (Milne and Chan, 1999) and short-term investment (Rikhardsson and Holm, 2008) decisions by stakeholders. Further analysis of positive and negative narrative environmental information was also examined by Chan and Milne (1999), and Milne and Patten (2002). The authors found that investment analysts and accountants react to narrative environmental information, be it positive or negative information. Though these studies indicate social and environmental information is relevant in stakeholders' decisions, the normative isomorphism of institutional theory may reveal otherwise. Bank officers' educational background emphasize the importance of companies' financial performance. Accordingly, environmental information may not be relevant

in their decision-making process. In order to identify the use of environmental information in bank officers' decisions, the differences in the amount of loans granted within long-term and short-term lending strategies are examined. Thus, the following hypotheses are developed:

- H1 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative environmental information (G2).*
- H2 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative environmental information (G2).*
- H3 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative and quantitative environmental information (G3).*
- H4 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative and quantitative environmental information (G3).*
- H5 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the group qualitative (G2) and the group with qualitative and quantitative environmental information (G3).*
- H6 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the group qualitative (G2) and the group with qualitative and quantitative environmental information (G3).*

RESEARCH METHODOLOGY

Given that the aim of the present study was to examine the usefulness of environmental information in the decision-making of bank officers, a mixed methods approach was adopted. Accordingly, the study applied the survey method and

laboratory experiment. While the survey method aimed to examine the perceived usefulness of environmental information, a laboratory experiment was used to investigate the actual use of information.

The list of financial institutions on the Central Bank of Malaysia website, as at August 2007, acted as the source of reference in determining the sampling strategy. A non-probability sampling design was used to choose the sample for bank officers. A total of 134 survey questionnaires were mailed to bank officers and 40 per cent responded (54 responses) between July and October 2008. It is normal to achieve a modest response rate of 20 – 40 per cent within social sciences research (Cetindamar and Husoy, 2007). Meanwhile, in an attempt to investigate the actual use of environmental information, a laboratory experiment was used. The experiment was conducted throughout the months of January until April 2008 with seven universities located in Selangor (a state in Malaysia) and Kuala Lumpur (the capital city of Malaysia). The experiments were administered with Master of Business (MBA) students taking investment analysis or finance related courses. MBA students were chosen because the majority of the students are mature and have several years of work experience. This is to ensure the external validity of experimental subjects as surrogates for real practitioners. According to Liyanarachchi (2007), students are adequate surrogates for professional practitioners in many decision-making experiments. A total of 69 volunteers were obtained and participated in the experiment with an average of 23 subjects being assigned to each of the three experimental groups.

Tests for the normality of the data were carried out and the results indicated that the data were not normally distributed. Although several normalizing transformations were attempted, it still revealed the non-normality of the data. Accordingly, the non-parametric test, specifically, the Mann-Whitney U test, was used to examine the difference in the mean between the two experimental groups of bank officers.

FINDINGS

Demographic Results

From the 54 respondents, 32 were male and 22 were female bank officers. Nineteen of them were below 30 years old (35.2 per cent) and the only very relative difference concerning the bank officers belonged to the age groups 31-40 and 41-50 years old (29.6 per cent and 25.9 per cent, respectively). There were also 5 bank officers aged above 50 years old. In addition, more than half of the respondents held a Bachelor's degree (55.6 per cent). The bank officers who held a diploma constituted

25.9 per cent and 18.5 per cent held a Master degree. Bank officers who graduated in accounting and finance related fields dominated the number of respondents, which represented 81.4 per cent. While one respondent did not indicate his area of specialization, the rest graduated in the field of business management, biology, agronomy and information technology. More than 90 per cent of respondents had work experience of more than one year with 24.1 per cent with 1-5 years' experience, 14.8 per cent with 6-10 years' experience and 51.9 per cent with more than 10 years' work experience. The duration of work experience is significant in evaluating the credibility of respondents and the reliability of the results in the study.

Perceived Usefulness of Environmental Information

Company's environmental attributes

The environmental attributes of all companies were rated as important and very important (rated at 3 and 4) by the respondents, according to the mean results depicted in Table 1. This is contradictory to the results found by Thompson and

Table 1 Bank officers' perceptions concerning the importance of a company's environmental attributes when making decisions

The company:	Mean	Std. dev.	Rank
• exhibits a high standard of environmental awareness (e.g. in terms of the use of natural resources and/or pollution control)	4.11	0.984	1
• holds ISO 14001 certification	4.09	1.014	2
• uses clean technology	4.07	0.988	3
• has environmental liability insurance	4.07	1.007	4
• meets all known and likely future environmental control standards	4.07	1.096	5
• has a formal environmental control unit	4.06	1.036	6
• seeks to minimize the use of materials that harm the environment	4.00	1.149	7
• conducts an environmental audit	3.98	1.090	8
• registers its products with an eco-label scheme	3.91	1.086	9
• seeks to minimize energy consumption	3.70	0.964	10
• involved in environmental consultancy	3.67	1.099	11
• promotes the recycling of its products, by-products and waste	3.57	0.944	12
• manufactures environmentally friendly products	3.56	1.093	13

1=not important, 2=quite important, 3=important, 4=very important, 5=extremely important

Cowton (2004), in which the bank officers in their study perceived all except one of the environmental attributes as less important (i.e. company meets all known and likely future environmental control standards). In this study, more than half of the attributes were perceived as being very important (rated at 4) in their lending decisions. Additionally, according to the mean rankings in Table 1, companies that exhibit a high standard of environmental awareness were ranked first followed by those that hold ISO14001 certification. Nevertheless, they perceived that companies that manufacture environmentally friendly products and those that promote the recycling of their products, by-products and waste were ranked the lowest compared to other company's environmental attributes. Generally, the argument that environmental information is not important to bank officers due to their educational background and professional training, which emphasizes technical

Table 2 Bank officers' perceptions concerning the importance of various types of environmental information when making decisions

	Mean	Std. dev.	Rank
• Potential litigation	4.13	0.991	1
• Financial information on future estimates of environmental expenditure	4.07	0.988	2
• Financial information on financing for environmental equipment	4.06	0.988	3
• Regulations and requirements	4.02	0.961	4
• Financial information on past and current environmental expenditure	4.02	1.141	5
• Past and present litigation	3.98	1.037	6
• Policies or company concern	3.93	0.968	7
• Environmental management system	3.85	0.998	8
• Control, installations, facilities or processes described	3.81	1.117	9
• Environmental end products/services	3.78	1.003	10
• Goals and targets	3.76	1.008	11
• Conservation of natural resources	3.74	1.031	12
• Environmental audit	3.67	1.082	13
• Departments or offices for pollution control	3.65	1.067	14
• Awards	3.46	0.966	15
• Environmental data on pollution abatement	3.39	0.899	16
• Land rehabilitation and remediation	3.37	0.831	17

1=not important, 2=quite important, 3=important, 4=very important, 5=extremely important

matters, is not supported. All company’s environmental attributes were perceived as important in this study.

Proposition 1 : A company’s environmental attributes influence the perceived usefulness of environmental information in the decision-making of bank officers.

Type of environmental information

Table 2 shows the importance of the environmental information disclosed by companies from the views of bank officers. The six highest ranking elements of environmental information (rated as “very important”, except for past and present litigation, which was rated as “important”) were mainly financial in nature. This implies that they perceive that environmental information that has a financial impact on a company is very important and useful for their lending decisions. The results support the evidence revealed in the studies of Thompson and Cowton (2004), and Mohd Said et al. (2013) in which the bank officers and fund managers emphasized financial environmental risk information as pertinent in their decision-making. Information about land rehabilitation and remediation was the least important.

Proposition 2 : The various types of environmental information influence the perceived usefulness of environmental information in the decision-making of bank officers.

Table 3 Bank officers’ perceptions concerning the forms of environmental information disclosure by companies

	Mean	Std. dev.	Rank
• Descriptive/narrative, quantitative and monetary	3.87	0.802	1
• Descriptive/narrative and quantitative	3.78	0.769	2
• Quantitative and monetary	3.76	0.751	3
• Monetary	3.74	0.873	4
• Quantitative but non-monetary (e.g. physical quantities)	3.54	0.794	5
• Descriptive/narrative	3.52	0.841	6

1=not important, 2=quite important, 3=important, 4=very important, 5=extremely important

Form of environmental disclosure

The bank officers were also asked about the importance of various forms of environmental information disclosure practice of the companies. Generally, all forms of environmental disclosure in Table 3 were perceived as being important by bank officers (rated at 3). In particular, they ranked “environmental information disclosure should be disclosed in descriptive, quantitative and monetary forms” as the highest priority. In contrast, the least important form of disclosure is descriptive. The results explained the respondents’ interest and awareness of having a comprehensive form of environmental information in order to ensure the transparency of information disclosure practice. A number of prior studies provided similar results, for example, Teoh and Shiu (1990), Tilt (1994) and Al-Khater and Naser (2003). However, the opinions of the bank officers appears to contradict the results found by Filios (1985). The respondents in the study by Filios claimed that social information does not necessarily have to be in monetary form as long as such information is disclosed objectively and accurately. However, the study was carried out in the 1980s when social and environmental issues were still new. Thus, to have narrative social information would have been good enough at that time.

Proposition 3 : Forms of environmental disclosure influence the perceived usefulness of environmental information in the decision-making of bank officers.

Actual Use of Environmental Information

The aim of the present experiment was to test whether the decisions of bank officers are different with the availability of environmental information in different forms. The information variations and decision types are as tabulated in Table 4:

Table 4 Information variation and decision type

	Experimental group 1 (G1)	Experimental group 2 (G2)	Experimental group 3 (G3)
Information variation	Brief narrative environmental information	Qualitative environmental information	Qualitative and quantitative environmental information
Decision type	Long-term / short-term lending decision	Long-term / short-term lending decision	Long-term / short-term lending decision

Use of qualitative environmental information

The usefulness of environmental information was also tested on the actual use of the information in decisions made by bank officers. The difference in the amount of loan granted in companies under long-term and short-term lending strategies was tested. First, the difference in the mean amount of loan granted between G1 and G2 was examined. The following hypotheses were tested:

H1 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative environmental information (G2).

H2 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative environmental information (G2).

The Mann-Whitney U test of between group difference on the usefulness of qualitative environmental information is reported in Table 5. No significant difference was found for lending decisions under long-term or short-term lending strategies. Concerning the mean amount of loan granted, shown in Table 6, the amount of loan granted to the company with qualitative environmental information increased under long-term lending strategy (RM6,365,217 → RM6,436,959) and reduced under short-term lending strategy (RM7,728,261 → RM6,854,348). The difference in the mean amount is larger under the short-term (RM873,913) than the long-term (RM71,740) lending strategies (see Table 5).

Use of qualitative and quantitative environmental information

The difference in the mean amount of loan granted was further analysed when quantitative environmental information was included in the chairman's statement. The difference in the mean amount of loan granted between G1 and G3 was investigated. The information constituted an addition to the qualitative environmental information above. The following hypotheses were addressed:

H3 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative and quantitative environmental information (G3).

Table 5 Between group difference on the amount of loan granted

Lending strategy	Hyp.	Group	Mann-Whitney (signif. test)	Diff. in loan (in RM)
Long-term	H1	Control (G1) vs Qualitative (G2)	0.930	↑71,740
	H3	Control (G1) vs Qualitative and quantitative (G3)	0.912	↑117,392
	H6	Qualitative (G2) vs Qualitative and quantitative (G3)	0.956	↑45,652
Short-term	H2	Control (G1) vs Qualitative (G2)	0.320	↓873,913
	H4	Control (G1) vs Qualitative and quantitative (G3)	0.186	↓1,336,957
	H5	Qualitative (G2) vs Qualitative and quantitative (G3)	0.507	↓463,044

Table 6 Descriptive results

Lending strategy	Group	N	Mean (in RM)
Long-term	Control (G1)	23	6,365,217
	Qualitative (G2)	23	6,436,957
	Qualitative and quantitative (G3)	23	6,482,609
Short-term	Control (G1)	23	7,728,261
	Qualitative (G2)	23	6,854,348
	Qualitative and quantitative (G3)	23	6,391,304

H4 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the control group (G1) and the group with qualitative and quantitative environmental information (G3).

The Mann-Whitney U test results in Table 5 show that there is not enough evidence to reject the null hypotheses above. This implies that there is no difference in the amount of loan granted by bank officers under either lending strategy. However, the mean amount of loan granted as depicted in Table 6 slightly increased from RM6,365,217 to RM6,482,609 under the long-term loan and reduced from

RM7,728,261 to RM6,391,304 under the short-term loan, when the bank officers were provided with qualitative and quantitative environmental information.

The usefulness of environmental information was further examined by looking at the difference in the amount of loan granted between the groups of bank officers that had qualitative environmental information (G2) and the group that had qualitative and quantitative environmental information (G3) (refer Table 4). The following hypotheses were examined:

H5 : Under a long-term lending strategy, there is no difference between the amount of loan granted by the group qualitative (G2) and the group with qualitative and quantitative environmental information (G3).

H6 : Under a short-term lending strategy, there is no difference between the amount of loan granted by the group qualitative (G2) and the group with qualitative and quantitative environmental information (G3).

The results of the Mann-Whitney U test in Table 5 indicate insufficient evidence to reject the above null hypotheses. This means that the additional quantitative environmental information disclosed by companies did not make any difference in the amount of loans granted by bank officers with the group of officers who only received the qualitative environmental information package for both long-term and short-term lending strategies. Looking at the tabulated descriptive results (Table 6), the mean amount of loan granted was slightly higher in the group that received qualitative and quantitative environmental information compared to the group that only received qualitative environmental information under the long-term lending strategy (RM6,436,959 → RM6,482,609). In contrast, this did not occur under the short-term lending strategy. Indeed, the amount of loan granted to the company reduced when the bank lending officers were given quantitative environmental information (RM6,854,348 → RM6,391,304). The results contrast with those of Belkaoui (1980) who found that bankers reacted positively to pollution control information under a short-term investment strategy.

The results for H1-H6 generally suggest that the environmental information did not influence the lending decisions made by bank officers. Although there was a difference in the mean amount of loan granted, this may be due to circumstances. In addition, the low number of responses could also lead to the insignificant statistical results.

DISCUSSION AND CONCLUSION

The present study investigated the usefulness of the environmental information to bank officers in Malaysia. The usefulness of information was tested on two aspects, its perceived use and actual use in the lending decisions of bank officers. The results revealed that bank officers perceived several aspects of environmental information disclosure as important in their decision making process. However, the degree of importance differed from one item to another. This is contradictory to the argument on normative pressure in relation to the training and educational background of bank officers discussed earlier. Thus, it is possible that the normative pressure that exists due to the educational background and professional training of the bank officers leads them to place very little importance on non-financial information, including environmental information. Environmental information is usually disclosed narratively and qualitatively with a lack of monetary information. Accordingly, it is expected that they would perceive such information as less important.

Meanwhile, when the actual use of environmental information was tested on the decisions made by bank officers, the availability of qualitative and quantitative environmental information had no statistical impact upon their decisions. Although they perceived environmental information as important, it did not affect their decisions. The possible explanation for this result is that bank officers may not be prepared or trained in incorporating environmental information in their decision-making process. This indicates the need for training in incorporating environmental information in the decision-making process. In addition, the environmental information provided to the subjects merely contained qualitative and quantitative (physical) forms. A monetary form of environmental information was not provided in the experiment. If it had been included in the experiment, statistically significant results for the difference may have been revealed. Furthermore, the current state of environmental information disclosure by companies in Malaysia is far behind other countries such as the US, the UK and other European countries. Environmental reporting practice is still developing with no generally accepted guidelines to which to refer. The CSR framework issued by Bursa Malaysia (Malaysian Stock Exchange) is also rather brief.

The statistical results for the difference in lending decisions did not present enough evidence to reject all the hypotheses. It can be inferred that qualitative and quantitative environmental information did not influence the decisions made by bank officers under short-term and long-term lending strategies. However, the average amount of loans granted increased under the long-term lending strategies and decreased under the short-term. Additionally, the difference in the amounts of loans was larger under the short-term lending strategy compared to the long-term

lending strategy. More importantly, it was also clearly stated by subjects in the qualitative findings of the experiments that they refer to conventional financial information rather than social and environmental information. Further, a number of subjects also indicated that detailed environmental information is needed that can precisely show the direct impact on their decisions. They also agreed that disclosure of social and environmental information may add value to the company's image.

The results appear to partly support the normative isomorphism of institutional theory. Although it was expected that bank officers would not perceive environmental information as important due to their educational background, the results are contradictory. Nevertheless, this is not reflected in the actual use of environmental information. The difference in the mean amount of loans suggests that qualitative and quantitative environmental information is not useful to bank officers in their lending decisions. Exposure to the importance of appreciating the environment at the tertiary level and technical training provided to professionals on how to incorporate environmental aspects in lending decisions, as well as social and environmental information, may be useful to users of corporate information in the future.

The study brings new contributions to the area of social and environmental reporting by adding support to the perceived importance of environmental information in decisions of wider stakeholders. This further strengthens the need for companies to be transparent in social and environmental disclosure. The study also extends the scope of usefulness of information by examining the actual use of environmental information by bank officers in their loan granting decisions. The application of normative isomorphism of institutional theory offers a new dimension in examining the usefulness of accounting information in stakeholders' decisions. The findings are also alarming for the higher education and professional bodies in respect of the need to equip graduates and practitioners with skills in evaluating and incorporating environmental information in lending decision-making process.

The results of the present study, however, need to be interpreted with caution. Other aspects of environmental information disclosure should be further examined in future studies. Notwithstanding the use of students to surrogate practitioners or the small sample size, this exploratory study has provided valuable insights into the use of environmental information in an important, yet under-researched decision context – that of bank lending decisions.

REFERENCES

- Ali Basah, M. Y., and Md Yusuf, M. (2013). Natural environmental risk management: Credit evaluation perspective of Malaysian banking industry. Paper presented at The International Conference on Social Science Research, 4-5 June 2013, Penang, Malaysia.
- Al-Khater, K. and Kamal, N. (2003). Users' perceptions of corporate social responsibility and accountability: Evidence from an emerging economy. *Managerial Auditing Journal* 18(6/7), 538-548.
- Belkaoui, A. R. (1980). The impact of socio-economic accounting statements on the investment decision: An empirical study. *Accounting, Organizations and Society* 5, 263-283.
- Buzby, S. L. and Falk, H. (1978). A survey of the interest in social responsibility information by mutual funds. *Accounting, Organizations and Society* 3(3/4), 191-201.
- Buzby, S. L. and Falk, H. (1979). Demand for social responsibility information by university investors. *The Accounting Review* 54(1), 23-37.
- Chan, C. C. C., and Milne, M. J. (1999). Investors reactions to corporate environmental saints and sinners: An experimental analysis. *Accounting and Business Research*, 29(4), 265-279.
- Coulson, A. B. and Monks, V. (1999). Corporate environmental performance considerations within bank lending decisions. *Eco-Management and Auditing* 6, 1-10.
- Deegan, C. and Rankin, M. (1997). The materiality of environmental information to users of annual reports. *Accounting, Auditing and Accountability Journal* 10(4), 562-583.
- DiMaggio, P. J. and Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality on organizational fields. *American Sociological Review*. 48, 147-160.
- Epstein, M. J. and Freedman, M. (1994). Social disclosure and the individual investor. *Accounting, Auditing and Accountability Journal* 7(4), 94-109.
- Fayers, C., Cocklin, C. and Holmes, D. (2000). Environmental considerations in the decisions of Australian investment professionals. *Journal of Environmental Assessment Policy and Management* 2(2), 173-201.
- Fenchel, M., Scholz, R. W. and Weber, O. (2003). Does good environmental performance reduce credit risk? Empirical evidence from Europe's banking sector, http://e-collection.ethbib.ethz.ch/ecol-pool/incoll/incoll_926.pdf. Retrieved November 10, 2006.
- Filios, V. P. (1985). Assessment of attitudes toward corporate social accountability in Britain. *Journal of Business Ethics* 4, 155-173.
- Liyanarachchi, G. A. (2007). Feasibility of using student subjects in accounting experiments: A review. *Pacific Accounting Review* 19, 47-67.
- Mayper, A. G., Pavur, R. J., Merino, B. D. and Hoops, W. (2005). The impact of accounting education on ethical values: An institutional perspective. *Accounting and the Public Interest* 5, 32-55.

- Merino, B. D. (2006). Financial scandals: Another clarion call for educational reform - a historical perspective. *Issues in Accounting Education* 21(4), 363-381.
- Milne, M. J. and Chan, C. C. C. (1999). Narrative corporate social disclosures: How much of a difference do they make to investment decision-making? *British Accounting Review* 31, 439-457.
- Milne, M. J. and Patten, D. M. (2002). Securing organizational legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing and Accountability Journal* 15(3), 372-405.
- Mohd Said, R., Sulaiman, M. and Nik Ahmad, N. N. (2013). Do Fund Managers Perceive Environmental Information Useful? An Empirical Study in Malaysia. *Journal of Cleaner Production* 52, 281-288.
- Mulder, I. (2008). Assessing exposure of financial institutions to biodiversity business risks and identifying options for business opportunities, <http://www.anzsee.org/anzsee2007papers/Abstracts/Mulder.Ivo.pdf>. Retrieved September 26, 2008.
- Mustaffa, M. Z., Rashidah, M. and Mohd R. A. (2006). Malaysian corporate responsibility disclosure: Miscommunication between providers and users of information?. *Social Responsibility Journal* 2 (2), 2006.
- Rikhardsson, P. and Holm, C. (2008). The effect of environmental information on investment allocation decisions - An experimental study. *Business Strategy and the Environment* 17, 382-397.
- Rockness, J. and Williams, P. F. (1988). A descriptive study of social responsibility mutual funds. *Accounting, Organizations & Society* 13 (4), 397-411.
- Siegal, P. H., Agrawal, S. and Rigsby, J. T. (1997). Organizational and professional socialization: Institutional isomorphism in an accounting context. *The Mid-Atlantic Journal of Business* 33 (1), 49-68.
- Solomon, J. F. and Solomon, A. (2006). Private social, ethical and environmental disclosure. *Accounting, Auditing & Accountability Journal* 19(4), 564-591.
- Teoh, H. Y. and Shiu, G. Y. (1990). Attitudes towards corporate social responsibility and perceived importance of social responsibility information characteristics in a decision context. *Journal of Business Ethics* 9, 71-77.
- Thompson, P. and Cowton, C. J. (2004). Bringing the environment into bank lending: Implications for environmental reporting. *The British Accounting Review* 36, 197-218.
- Tilt, C. A. (1994). The influence of external pressure groups on corporate social disclosure: Some empirical evidence. *Accounting, Auditing and Accountability Journal* 7 (4), 47-72.