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SOME EVIDENCE OF ENVIRONMENTAL REPORTING BY *SHARĪᶜAH* COMPLIANT COMPANIES IN MALAYSIA

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ABSTRACT

Our study examines environmental disclosure practices of *Sharīᶜah* approved companies. The study investigates the extent *Sharīᶜah* approved companies report on the environment and compares this with non-*Sharīᶜah* approved companies. We also examine four variables that may influence the level of environmental disclosure in *Sharīᶜah* approved companies: size, number of Muslim directors, impact the activities of the company has on the environment (environmental sensitivity) and profitability of the company. Results provide some evidence that *Sharīᶜah* approved companies have a higher level of environmental disclosure. Further, size and environmental sensitivity, unlike profitability, do not affect the level of environmental disclosure of *Sharīᶜah* approved companies. These findings are inconsistent with the results of prior studies (Berthelot et al., 2003; Deegan and Gordon, 1996). The study makes an important contribution to the literature as there is a paucity of research which examines the influence of religion, in general, and Islam, in particular, on the extent of environmental disclosure.

JEL Classification: M14, M41, Q56

Key words: Environmental reporting, *Sharīᶜah*-approved companies, Environmental sensitivity

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1. INTRODUCTION

There has been a mounting religious commitment sweeping the Muslim world for more than two decades. At the heart of this resurgence is an increased emphasis on the Islamic *Sharīᶜah* as the basic source from which a Muslim's religious identity and practice in individual and corporate life are derived (Esposito, 1991). In line with this, Muslim countries are gradually realigning their economic activities to accord with the tenets of Islam. In Malaysia, for example, recognizing the need for Muslims to invest in companies which conduct their activities in strict accordance with Islamic principles, the *Sharīᶜah* Advisory Council (SAC) of the Securities Commission categorizes listed companies into *Sharīᶜah* compliant and non-*Sharīᶜah* compliant companies. Specifically, companies whose activities do not contravene the *Sharīᶜah* principles (discussed later) are classified as *Sharīᶜah* compliant companies. With *Sharīᶜah* compliant companies conducting their business in accordance with Islamic principles, one would thus expect their disclosure practices to be similarly aligned. This is particularly so since various authors have argued that culture and religion may influence the manner accounting is practised (Gambling and Karim, 1991; Hamid,Craig and Clarke, 1993; Baydoun and Willett, 2000). Further, Sulaiman and Willett (2003) have also suggested that companies operating in an Islamic community would advocate a more transparent disclosure policy, thus providing a greater amount of disclosure, particularly on social and environmental matters. Given this, the present study has two objectives. First, to assess, whether the environmental disclosure practices of the *Sharīᶜah* compliant companies differ from those of the non-*Sharīᶜah* compliant companies. Secondly, whether certain company characteristics (namely size, number of Muslim directors, environmental sensitivity and profitability influence the level of environmental disclosures of *Sharīᶜah* compliant companies.

Our study is pertinent for two main reasons. Firstly, prior studies have made no attempt to examine the influence of religion, in particular Islam, on environmental disclosure. Studies by Haniffa (2002) and Sulaiman and Willett (2003) did make this link but their papers merely proposed a conceptual framework for Islamic social reporting. Further, what is desirable in corporate reporting from the perspective of Islam may not be what is currently being practised by *Sharīᶜah* compliant companies. Thus, the results of our study may enable us to determine if there exists a gap between the "desirable" and the "actual" practices of such companies. More importantly, what should Malaysian policy makers do if, indeed, a gap exists. Secondly, prior studies on companies' disclosure practices have examined various factors that may explain the extent of disclosure in annual reports. For example, Botosan (1997) examined the relationship between disclosure quality and cost of equity capital. Sengupta (1998) and Abdul Rashid (2000) investigated the relationship between disclosure and cost of debt. Peasnell, Pope and Young (2000) examined the relationship between disclosure and earnings management. Other studies (e.g. Cooke 1989; Andrew et al., 1989; Belkaoui and Karpik, 1989; Hackston and Milne, 1996; Roberts, 1992) have linked conventional firm characteristics, for example firm size, profitability and industry type with the level of disclosure. Our study, examining the influence of Islam on environmental disclosure practices of *Sharīᶜah* compliant companies, provides a new perspective on established theories that have underpinned management incentives for voluntary corporate environmental disclosure.

Specifically, there are two parts to the study. The first investigates the extent *Sharīᶜah* compliant companies report on the environment and subsequently compares the results with those of the non-*Sharīᶜah* compliant companies. The second part of the study focuses only on the *Sharīᶜah* compliant companies. We examined four variables that may influence the level of environmental disclosure in such companies: the size, the number of Muslim directors, the impact the activities of the company has on the environment (environmental sensitivity) and the profitability of the company. The remainder of the paper is structured as follows. The next section provides a brief review of the literature on corporate social and environmental reporting, the Islamic worldview, the concept of accountability in Islam and how this leads to an emphasis on environmental reporting. The hypotheses are developed in Section 3. Section 4 presents the research methodology. This is followed by a discussion of the results in Section 5. Section 6 states the conclusions.

2. LITERATURE REVIEW

2.1 PRIOR STUDIES ON ENVIRONMENTAL REPORTING

A number of studies have documented the nature and level of environmental disclosures through a content analysis of annual reports (Gray, Kouhy and Lavers, 1995; Harte, Lewis and Owen,1991; Moneva and Llena,2000; Niskala and Pretes,1995; and Freedman and Jaggi, 2005). Harte, Lewis and Owen (1991), in their analysis of the 1990 annual reports of 30 U.K. companies, noted that, though it appears that there was an increase in the level of social and environmental disclosures made over time, there was still very little detailed information provided. The authors also note that most companies tend to engage only in ‘good news’ reporting and often neglect to report ‘bad news’. Subsequently, they conclude that most companies use environmental disclosures to improve their corporate image.

Niskala and Pretes (1995) examined environmental disclosures in Finland and report similar results. They found that the number of companies disclosing environmental information in the annual reports has increased over the period from 1987 to 1992. However, most of the disclosures were, very general in nature with a minimal of bad news reporting. Also, companies tend to report only qualitative rather than quantitative environmental information Gamble et al. (1995) did a similar study in the U.S. to investigate if the environmental disclosures in annual reports and 10-K reports satisfy the information needs of stakeholders. The sample comprised 234 companies from 12 industries, for 1986 to 1991. The authors conclude that overall, the quality of environmental disclosures was low. However, the quality of environmental disclosures of certain segments of the industry, i.e., petroleum refining, hazardous waste management and steel works and blast furnaces was better than that of the disclosures made by firms in other industries in the sample. The authors concluded that environmental sensitivity does influence the quality of environmental disclosures.

Meanwhile, Deegan and Gordon (1996) analysed the environmental disclosure practices of Australian companies. The authors reviewed a sample of 197 annual reports, for the year 1991. They found that the environmental disclosures were generally limited to qualitative information, with a majority of companies reporting positive, compared to negative information.

Moneva and Llena (2000) examined the environmental reporting practices in the annual reports of seventy large companies in environmentally sensitive industries in Spain over a three-year period. The authors analysed the type of environmental reporting provided, sections of the annual report which contain environmental disclosures, corporate environmental policies and projects, natural environmental protection activities and achievements and disclosure of environmental data in the financial statements. The results show that the environmental disclosures were largely narrative in nature. Nevertheless, the authors found that there was an increase in the number of reporting companies, as well as an increase in the reporting of quantitative and financial environmental information.

Meanwhile, Freedman and Jaggi (2005), focused on pollution and greenhouse-gases related disclosures. The study examined annual reports, environmental reports, and websites of 120 of the largest public-listed companies in the chemical, oil and gas, energy and motor vehicles and casualty insurance sectors. The results reveal that such disclosures have a positive relationship with firm size. However, two other firm-specific factors (return on assets and debt-equity structure) were not associated with the level of environmental disclosure.

In Malaysia, studies that have looked at environmental disclosures are very limited. The earlier studies, notably those by Teoh and Thong (1984) and Andrew et al. (1989) examined social disclosures as a whole, as opposed to environmental disclosures, specifically. Moreover, these studies did not involve a content analysis of annual reports. A recent study by Nik Ahmad and Sulaiman (2004) examined the annual reports of a sample of companies in the construction and industrial products sectors. The results were broadly in line with those done in other countries, with a majority of the disclosures being descriptive and self-laudatory in nature. The level of environmental disclosures in these companies is, however, lower than that found in the more developed countries. Both monetary as well as bad news disclosures were minimal. The findings of another study by Jaffar, Mohd. Iskandar, and Muhamad (2002) were similar. The authors conclude that environmental information is not well reported in Malaysian annual reports.

Whilst these two studies examined the extent of environmental reporting of Malaysian companies, they did not specifically focus on *Sharīᶜah* compliant companies. Accordingly, our study is an attempt to specifically address this issue. To understand why there may be a difference in the level of environmental disclosure between *Sharīᶜah* compliant and non-*Sharīᶜah* compliant companies, one needs, in the first instance, to understand the Islamic worldview. This is discussed next.

2.2 THE ISLAMIC WORLDVIEW

The Islamic worldview is based on three fundamental principles: *tawḥīd* (unity), *khilāfah* (vicegerency) and ᶜ*adālah* (justice) (Chapra, 1992). *Tawḥīd*, said to be the foundation of the Islamic faith, governs a Muslim's outlook on life. Muslims believe that there is only one God and man's accountability is to Him.

Khilāfah (vicegerency) prescribes the Islamic social order. The Islamic social order is formed on the basis of the principles of justice, equality and brotherhood. *Khilāfah* lays a personal responsibility upon all Muslims for what is done with the resources entrusted to them. Chapra (1992) suggests that there are four implications of *khilafah*. The first is universal brotherhood. Consequently, mutual sacrifice and cooperation form the social fabric of an ideal Islamic community. The second implication of *khilāfah* is to regard man as a trustee of God's resources. Thus, although private ownership is recognized in Islam, ownership is not absolute. The property owner recognizes his responsibility of using his resources in a manner that will provide benefits not only to himself, but more importantly, to society. The third implication of *khilāfah* is the emphasis on a humble lifestyle. A lifestyle of extravagance may result in unnecessary pressure on resources which, in turn may lead to the inability to satisfy the basic needs of society. Finally, khilafah also implies the concept of human freedom in Islam. An individual's freedom to act is not curtailed by any other individual but is constrained by the bonds of social responsibility. Hence, there is a qualification as to what individual freedom entails in Islam. In Islam, individual freedom is constrained by its ethical limits. Thus, an individual's freedom of action must be combined with a sense of responsibility towards others.

[C]*Adālah* (justice) demands that all God-given resources should be at the disposal of every individual. According to Chapra (1992), the concept of universal brotherhood will be a hollow concept if there is no social justice and responsibility. The Islamic worldview explicated above may be expected to exercise a significant influence on the roles of Islamic business organizations, how accounting should be practised in Islamic societies and the types of information disclosed. As indicated earlier, Islam puts great emphasis on the need for Muslims to be accountable to God and that accountability encompasses man's accountability to his fellow men.

2.3 ACCOUNTABILITY IN ISLAM

In an accountability-based framework, the objective of accounting is to provide a fair information flow between the accountor and the accountee. Using such a framework, the recipients of information are assumed to be the society at large and groups within society. Accordingly, corporate reporting is assumed to be responsibility driven (Gray, Owen and Maunders, 1991).

From an accountant's perspective, accountability refers to the onus, requirement or responsibility to provide an account (by no means necessarily a financial account) or the reckoning of the actions for which one is responsible (Gray, Owen and Maunders, 1987, 2). Social accountability thus, is the responsibility to account for actions for which one has, under an established contract (Gray, Owen and Maunders, 1987). In Islam, man has a covenant with God (Ishaque, 1978). Accordingly, this covenant requires that the individual discharges his accountability in accordance with the responsibilities laid down in the *Sharīᶜah*. This is similar to the contract existing between the principal and the agent as espoused by Gray, Owen and Maunders, (1987) in the principal-agent accountability framework. In that framework, the principal gives instructions to the agent as to what actions are expected of him.

In Islam, there are two levels of accountability. The first is an individual's accountability to God (primary accountability) and the second is the individual's accountability to other individuals. As such, man acknowledges the rights of his fellow men because this is a duty imposed on him by God (Ishaque, 1978). Accordingly, in the context of our study, one would expect disclosure policies of Islamic compliant businesses not to be dependent on self-interest. Rather, it should be guided by what is best for society, thus suggesting a greater emphasis on social and environmental accounting issues (e.g. Sulaiman, 1997; Mirza and Baydoun, 2000; Haniffa, 2002; Sulaiman and Willett, 2003). The emphasis on *maslaḥah* (the well-being of the community) is implicit. More specifically, we argue that since *Sharīᶜah* compliant companies conduct their activities to align themselves with Islamic principles, such companies would report on the environment to a greater extent than non-*Sharīᶜah* compliant companies. The importance of environmental protection and, thus, environmental reporting in Islam is discussed next.

2.4 ENVIRONMENTAL REPORTING AND ISLAM

There are about five hundred verses in the *Qur'ān* that relate to environmental issues and the manner such issues are to be addressed (Masri, 1992). The following verses from the *Qur'ān* specifically emphasize the need to care for, and protect the environment.

> "Do not work corruption on the earth after it has been set right." (*Qur'ān*, 7:85)

> "Do not corrupt the land." (*Qur'ān*, 11:85)

> "Corruption has overtaken in land and sea for what the hands of the people have earned, that He may let them taste some of what they have done." (*Qur'ān*, 30:41)

Additionally, Nasr (1990) argues that from the perspective of Islam, planting trees and preventing pollution are as good as feeding the poor and attending to the sick. In fact, one is indirectly harming others if one harms the environment. Further, the principle of *maslaḥah* (well-being of the masses) specifically provides that the community's interest is of primary importance (Chapra, 1992). Thus, protecting the environment is implicit. Chapra (1992) argues that no one is authorized to destroy or waste God-given resources. Such an act, according to him, can be equated with fasad (mischief, viciousness and corruption) which Islam clearly forbids (*Qur'ān*, 2:205). The prohibition for Muslims not to destroy God-given resources (thus the environment) is further supported by the story of Yazid ibn Abi Sufyan when he was sent by Caliph Abū Bakr on a war assignment. It was reported that the Caliph left strict instructions for Yazid not to kill indiscriminately or to destroy vegetation or animals (Chapra, 1992). As Chapra (1992) rightly said, "If this is not allowed even in war and enemy territory, there is no question of it being allowed in peacetime and home territory" (p. 207).

Given this and in the context of corporate reporting, one would expect that environmental matters would be an important component of disclosure in annual reports. However, environmental reporting in an Islamic context should not be used by companies as an attempt to appear legitimate to society, as is often suggested by evidence from prior studies on environmental disclosure (Campbell, 2004; Deegan and Gordon, 1996; Frost and Wilmshurst, 2000; Patten, 1992). In Islam, reporting on the environment is a conscious effort on the part of organizations to be more transparent in their disclosure practices. This, to some extent, would fulfil the social accountability and full disclosure precepts of Islamic corporate reporting (Baydoun and Willett, 2000; Sulaiman and Willett, 2003). As indicated elsewhere in the paper, while there have been suggestions that Islamic corporate reports should include reporting on the environment (Sulaiman, 1997; Mirza and Baydoun, 2000, Haniffa, 2002; Sulaiman and Willett, 2003), no empirical work has been done to examine if, indeed, Islamic compliant businesses are actually engaging in environmental reporting. Our study extends prior research on this issue. What constitutes *Sharīᶜah* compliant companies is discussed, next.

2.5 *SHARĪᶜAH* COMPLIANT COMPANIES

The *Sharīᶜah* Advisory Council (SAC) of the Securities Commission of Malaysia groups listed companies into two categories: *Sharīᶜah* compliant and non-*Sharīᶜah* compliant companies. The SAC applies standard criteria to assess the core activities of companies listed on the Bursa Malaysia (formerly known as the Kuala Lumpur Stock Exchange, KLSE) and the Malaysian Exchange of Securities Dealing and Automated Quotation (MESDAQ). Companies whose activities do not contravene the *Sharīᶜah* principles are classified as *Sharīᶜah* compliant (Securities Commission, 2002 & 2005). Generally, companies whose activities fall under the four following categories will be excluded from the list of approved securities. These are:

(a) Companies whose operations are based on *ribā* (interest) such as activities of financial institutions, examples of which include commercial and merchant banks and finance companies;
(b) Companies whose operations involve gambling;
(c) Companies whose activities involve the manufacture and/or sale of haram (forbidden) products such as liquor, pork, and meat not slaughtered according to Islamic rites; and
(d) Companies whose operations contain elements of *gharar* (uncertainty) such as the conventional insurance business.

For companies having activities that are both permissible and non-permissible, the SAC applies several additional criteria as follows:

(e) the core activities of the company must be activities which are not against the principles of the *Sharīᶜah* as outlined in the four criteria above,
(f) the image of the company must be good;
(g) the core activities of the company are important and benefit the Muslim Ummah and the country (the concept of *maslaḥah*), and
(h) the *ḥaram* (forbidden) element must constitute a small proportion as compared to its core activities and involve matters such as *ᶜumūm al-balwā* (common plight), *urf* (custom) and the rights of the non-Muslim community which are accepted by Islam.

In addition, the level of interest income received from conventional fixed deposits or other interest bearing financial instruments by a company will also be taken into account in deciding whether or not a company can be considered a *Sharīʿah* compliant company.

There have been a limited number of studies which have used the *Sharīʿah* status of companies as the background of the study. Three studies, derived from the same dichotomous groupings but moulded from different perspectives, will be discussed. The first is a study by Abdullah and Bacha (2001). They examined the impact on the returns and trading volumes of stocks that have either been added or deleted from the list of halal stocks (the list of approved companies). Their findings suggest that inclusions in the list resulted in a positive impact while a negative impact follows deletions. The second is Yahya, Rahman and Nasir (2004) study which made a comparison between the stock screening filter used by the KLSE with that used by the Dow Jones Islamic Market. The criteria used by both are substantially different.[1] This is reflected in the fact that of the 565 companies declared *Sharīʿah* compliant by the KLSE (now Bursa Malaysia), only 198 passed the Dow Jones' filter. Finally, Hassan and Courtis (2001) compared the readability levels of the Chairman's address of *Sharīʿah* and non-*Sharīʿah* compliant companies in Malaysia. They found that *Sharīʿah* compliant companies not only wrote at a level classified as 'difficult' but were also writing with lower reading ease than the non-*Sharīʿah* compliant companies. Our study, comparing the extent of environmental disclosure of *Sharīʿah* and non-*Sharīʿah* compliant companies in Malaysia follows this similar thread. It is expected that studies using this dichotomous grouping of *Sharīʿah* and non-*Sharīʿah* compliant will increase in the future. This is because as Malaysia strives to be the centre of Islamic finance, the importance of attracting Muslim funds from around the world will intensify.

Consequently, the list of *Sharīʿah* compliant companies would be of immense importance to potential investors. Thus, our study will add new knowledge to the discourse on religion, culture and environmental disclosure. The results of our study may perhaps aid the SAC of the Securities Commission to seriously consider environmental disclosure as a criterion to be included when designating a particular counter as '*ḥalāl*'.

3. DEVELOPMENT OF HYPOTHESES

Since one of the criteria of the SAC in classifying whether or not a company is approved is the need to ensure that the benefit of the masses prevails (*maslaḥah*) and given that environmental issues do have the potential to affect *maslaḥah*, we argue that environmental disclosure would figure prominently amongst *Sharīᶜah* compliant companies. On the basis of this, the following hypothesis is developed:

H_1: There is a higher level of environmental disclosure in *Sharīᶜah* compliant compared to non-*Sharīᶜah* compliant companies.

The second part of our study focuses on just the *Sharīᶜah* compliant companies. In conventional environmental disclosure studies, size is a significant factor in the level of environmental disclosure (Andrew et al., 1989; Belkaoui and Karpik, 1989; Berthelot, Cormier and Magnan, 2003; Cowen, Ferreri and Parker, 1987; Deegan and Gordon, 1996; Patten, 1991, 1992). However, we argue that since conserving and protecting the environment is a public duty in Islam, there should be no difference in the level of disclosure between small and large *Sharīᶜah* compliant companies. Accordingly, the following hypothesis is formulated:

H_2: The size of a company does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.

We also propose that the number of Muslim directors on the board of *Sharīᶜah* compliant companies is a significant factor influencing the level of environmental disclosure. This proposition is based on the fact that Muslim directors' continued and lifelong exposure to the teachings of Islam affects their business ethics and orientation. Given this, Muslim directors would advocate a more transparent disclosure policy. Accordingly, the level of environmental disclosure of companies whose composition of Muslim directors is large is expected to be high.[2] The following hypothesis is thus formulated:

H_3: The number of Muslim directors positively affects the level of environmental disclosure of *Sharīᶜah* compliant companies.

Conventional studies on environmental disclosure have found company profitability to be a significant explanatory variable (Bowman and Haire, 1976; Hackston and Milne, 1996; Roberts, 1992). Given that Islamic teachings strongly emphasize conservation of the environment and the concept of *maslaḥah* (the well-being of the masses), we argue that irrespective of the level of profits, *Sharīᶜah* compliant businesses (and thus, *Sharīᶜah* compliant companies) would not exhibit any difference in the level of environmental disclosure. Accordingly, the following hypothesis is developed:

H_4: The level of profits does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.

Finally, we examined if companies in environmentally-sensitive industry sectors have a higher level of environmental disclosure as compared to those in less-environmentally sensitive industries. Some prior studies within the conventional literature have found evidence that the level of environmental disclosure may vary, depending on whether the industry sector has a high or low impact on the natural environment. (e.g. Berthelot, Cormier and Magnan, 2003; Cowen, Ferreri and Parker,1987; Deegan and Gordon, 1996; Niskala and Pretes, 1995; Patten, 1991, 1992). However, as far as *Sharīᶜah* compliant companies are concerned, we posit that environmental sensitivity will not affect the extent of environmental disclosure. The following hypothesis is thus tested:

H_5: The environmental sensitivity of a company does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.

4. METHODOLOGY

4.1 SAMPLE SELECTION AND DATA COLLECTION

Letters, requesting a copy of the companies' year 2000 annual reports were sent to the top 200 companies (by market capitalization) listed on the KLSE. The market capitalization ranking was at December 31, 2000 (published in the January 2001 issue of Investors' Digest). We have limited our study to the largest 200 companies because some prior studies (Andrew et al., 1989; Belkaoui and Karpik, 1989; Berthelot, Cormier and Magnan, 2003; Cowen, Ferreri and Parker, 1987) have reported some association between the size of a company and the level of environmental disclosure. Such studies have found that larger companies are more inclined to report on the environment. Further, given that environmental reporting is still at its infancy in Malaysia, we suspect that environmental disclosure will not be widely practised by smaller companies.

Ninety-six companies responded and sent their 2000 annual reports. The annual reports of another 103 companies were obtained from the

KLSE website. The annual report for one remaining company, Hock Hua Bank was unavailable as the bank had merged with another financial institution, the Public Bank in mid 2000. Hence, the final sample comprised a total of 199 companies. The sample companies came from eight different industrial sectors of the Bursa Malaysia's Main Board, namely, consumer products, industrial products, construction, trading/services, finance, infrastructure project companies, properties and plantations. Only the hotel, mining and trust fund sectors were un-represented. We then referred to the updated list of approved securities released by the Securities Commission's *Sharīʿah* Advisory Council (SAC) in April and October, 2000. This list is derived by applying the stock screening process for approved securities, developed by the SAC. Based on the list, we proceeded to divide the sample into two groups; *Sharīʿah* compliant and non-*Sharīʿah* compliant companies. This was achieved by categorizing companies which appeared on the list of approved securities in both April and October, 2000 as '*Sharīʿah* compliant', whilst companies which did not appear on either list were categorized as being 'Non-*Sharīʿah* compliant. Among the 199 companies in the sample, a total of 87 companies appeared on both lists (*Sharīʿah* compliant companies), 85 companies did not appear on either list (Non-*Sharīʿah* compliant companies) and 27 companies (which were excluded from the analysis) appeared in only one of the lists (either April only or October only). We excluded the 27 companies because the objective of this study is to examine environmental disclosure of companies which were categorized as *Sharīʿah* compliant and non-*Sharīʿah* compliant for that whole year (and not just part of the year).

4.2 CONTENT ANALYSIS OF ANNUAL REPORTS

Consistent with prior studies on social and environmental disclosures, a content analysis method was adopted for the present study (Abbot and Monsen, 1979; Buhr, 1998; Ernst and Ernst, 1978; Freedman and Jaggi, 2005; Guthrie and Mathews, 1985; Guthrie and Parker, 1990; Hackston and Milne, 1996; Nik Ahmad and Sulaiman, 2004; Perry and Teng, 1999; Tsang, 1998, Wilmshurst and Frost, 2000; Zeghal and Ahmed, 1990). Environmental disclosures are identified based on the definition used by Wilmshurst and Frost (2000, 16): ". . . those disclosures that relate to the impact company activities have on the physical or natural environment in which they operate." A similar definition is used by Gray, Owen and Adams (1996) which defines environmental reporting as communicating information pertaining to the impact of an entity and its activities on the physical environment. Thus, it is deemed that using the Wilmshurst and Frost (2000) definition is appropriate for the purposes of the present study.

We selected the annual report as the sole document for analysis for several reasons. First, there is a need to be consistent with previous environmental disclosure studies. Second, the annual report is more accessible to researchers and it is also the only form of corporate disclosure that is provided on a regular basis (Buhr, 1998; Unerman, 2000). Third, a number of studies have shown that the annual report is considered by various user groups to be a major source of information about an organization's environmental performance (Deegan and Rankin, 1997; Epstein and Freedman, 1994; Harte, Lewis and Owen, 1991; Hughes, Andersen and Golden, 2001; Tilt, 1994). Fourth, it is widely recognized that the information reported in annual reports possesses a high degree of credibility (Tilt, 1994; Neu, Wasame and Pedwell, 1998; Unerman, 2000). Thus, annual reports were examined. Finally, an earlier study of corporate environmental disclosures in Malaysia (Nik Ahmad and Sulaiman, 2004) indicates that very few companies publish stand-alone environmental reports. Hence it is not possible to analyse these.

Content analysis studies often utilize three different units of analysis; words (Deegan and Gordon, 1996; Wilmshurst and Frost, 2000; Zeghal and Ahmed, 1990), sentences (Hackston and Milne, 1996; Ingram and Frazier, 1980; Milne and Adler, 1999; Tsang, 1998; Unerman, 2000) and/or proportions of a page (Gray, Kouhy and Lavers, 1995; Jaffar, Mohd. Iskandar and Muhamad, 2002). We selected sentences for several reasons. First, as argued by Hackston and Milne (1996), a sentence can be counted with more accuracy, as compared to words. Second, fewer counting errors are involved with sentences, compared to the number of words (Milne and Adler, 1999). Finally, Unerman (2000) justifies the use of sentences by pointing out that measuring the number of sentences involves less judgment compared to the number of words.

4.3 PROCEDURE

Content analysis studies have been subjected to criticism of their reliability due to their qualitative nature (Carney, 1972). As a result, certain precautionary measures were adopted in the present study to improve reliability. First, multiple coders were used. Two undergraduate university students worked as a pair, and a Masters student acted as the second independent coder. The authors briefed the coders thoroughly on the content analysis methodology before the coders commenced with the analysis of the annual reports. To further reduce the ambiguity of the process, the coders were instructed to use a coding sheet, which was adapted from the interrogation instrument used by Hackston and Milne (1996). Second, the coders were asked to refer to the definitions of what constituted environmental disclosures. This was based on the works of Williams and Ho (1999) and Hackston and Milne (1996) and comprised the two categories for 'environment' and 'energy'. Finally, the authors met regularly with the coders to review the coding process and to discuss and resolve any problems that the coders faced. Any discrepancies in the two rounds of coding were compared, re-analysed and resolved by the authors.

The content analysis of the annual reports focused on three matters. First, the coders identified environmental disclosures from the main sections of the annual report, excluding the financial statements. This was done based on the definition of environmental disclosures as used by Wilmshurst and Frost (2000). Next, the coders categorized the disclosures into one of the content categories. Finally, the coders counted the number of sentences for each environmental disclosure item.

5. DISCUSSION OF RESULTS

5.1 BETWEEN GROUPS (*SHARĪᶜAH* AND NON-*SHARĪᶜAH* COMPLIANT)

Of the 172 annual reports examined, 87 were for *Sharīᶜah* compliant companies and the balance (85) were for non-*Sharīᶜah* compliant. Only 56 companies or 33% of the total sample disclosed at least one sentence on environmental issues in their annual reports. The results compare favourably with those of Hossain, Tan and Adams (1994) and Cooke (1991). Both studies only had 24% of the sampled companies reporting on the environment. Table 1 reveals that 38 companies (44%) of the *Sharīᶜah* compliant companies as compared to 18 (21%) companies of the non-*Sharīᶜah* compliant companies had some form of environmental disclosure. In terms of sentences disclosed, the former had 412 sentences while the latter only had 89. It appears that *Sharīᶜah* compliant companies are disclosing more on environmental matters than the non-*Sharīᶜah* compliant companies.

TABLE 1
Distribution of Environmental Disclosure by Industry

Industry	Disclosing Companies	Disclosing Companies as % of Total Sample (incidence)	No. of Disclosed Sentence	Disclosed Sentences as % of Total Sentence
Panel A: Within the S*harīᶜah* Compliant Sample				
Construction	4	5	39	9
Consumer Product	4	5	31	8
Finance	0	0	0	0
Industrial Product	8	9	113	27
Plantation	10	11	181	44
Property	6	7	17	4
Technology	1	1	10	2
Trading	4	5	20	5
Hotel	0	0	0	0
Infrastructure	1	1	1	0
Mining	0	0	0	0
Total	38		412	100
Panel B: Within the Non-*Sharīᶜah* Compliant Sample				
Construction	2	2	18	20
Consumer Product	1	1	4	4
Finance	4	5	25	28
Industrial Product	2	2	3	3
Plantation	0	0	0	0
Property	1	1	4	4
Technology	0	0	0	0
Trading	8	9	35	39
Hotel	0	0	0	0
Infrastructure	0	0	0	0
Mining	0	0	0	0
Total	18		89	100

A Mann-Whitney U test was undertaken to examine if there were any significant differences between the two groups. The results in Table 2 indicate that there is a significant difference in the extent of environmental disclosure between the two groups. Accordingly, we fail to reject Hypothesis 1 (there is a difference in the extent of disclosure between *Sharīcah* compliant and non-*Sharīcah* compliant companies). The results appear promising. It would seem that what is advocated in Islam is actually being practised by *Sharīcah* compliant companies. Prior studies examining what is desirable from the perspective of Islam and comparing this with actual practice usually point to the existence of a "gap" (see e.g. Sulaiman, 1998; Sulaiman and Latiff, 2003). Such is not the case here.

5.2 WITHIN GROUPS (*SHARĪCAH* COMPLIANT COMPANIES)

The second stage of our analysis focuses on *Sharīcah* compliant companies. This is to be consistent with our second objective. Specifically, we examined if the percentage of Muslim directors (as a proxy for Muslim managed companies), the profit, the size and the level of impact of the activities (environmental sensitivity) of *Sharīcah* compliant companies have any influence on the extent of environmental disclosure. We argue that since accountability in Islam includes being accountable to the ummah, profitability, size and environmental sensitivity would not significantly influence the environmental disclosures of *Sharīcah* compliant companies. However, we posit that the number of Muslim directors sitting on the boards of *Sharīcah* compliant companies may affect the level of environmental disclosure.

Appendix A presents the descriptive statistics for the dependent and the independent variables. Market capitalization is the proxy for size while the Return on Assets (ROA) is the proxy for profit. All the variables, with the exception of the number of Muslim board members, were found to be not normally distributed.

The mean for the market capitalization was computed and companies whose market capitalization was above the computed mean were considered "large" companies. To test $H_{3,}$ we examined the number of Muslim directors on the board. Those having more Muslim directors, we labelled "Muslim-managed" companies. We labelled "high" and "low" profit companies according to whether their profits fall above or below the average profit. As for environmental sensitivity, we grouped

TABLE 2
Comparative Environmental Disclosure Between S*harīᶜah* Compliant and Non-S*harīᶜah* Compliant Groups

	Total	*Sharīᶜah*	%	Non-*Sharīᶜah*	%	Mann-Whitney *Z*-value	*P*-value
Number of companies	172	87	51	85	49		
Number disclosing environmental matters	56	38	68	18	32		
Number of sentences	501	412	82	89	18	-1.385	0.0838

companies in the industrial products, consumer products, construction, infrastructure project companies, technology, plantation, properties and mining sectors as "high" impact companies and others as "low impact" companies (Campbell, 2004; Department of Environment, 2002; Frost and Wilmshurst, 2000; Wilmshurst and Frost, 2000).

The results in Table 3 indicate that with regards to size there were no significant differences in the level of environmental disclosure between large and small *Sharīᶜah* compliant companies. Accordingly, we fail to reject hypothesis H_2. Contrary to prior studies, our results indicate that size is not a significant factor influencing the level of environmental disclosure of *Sharīᶜah* compliant companies. Meanwhile hypothesis H_3 is rejected. The results reveal that there is no significant difference between companies dominated by Muslim directors and those dominated by non-Muslim directors in the *Sharīᶜah* compliant sub-sample.[3] We can thus conclude that while a company's *Sharīᶜah* status may have a significant influence on the level of environmental disclosure (see H_1 above), whether *Sharīᶜah* compliant companies are managed by Muslims or non-Muslims does not affect the level of environmental disclosure. This perhaps suggests that, ultimately commercial intent drives the level of voluntary disclosure. It also suggests that perhaps, there is in practice, on average, a secularization between an individual's religious values and his or her behavior at the workplace.[4] However, on whether there is a significant difference in the level of environmental disclosure between "high" and "low" profit companies, we found this to be significant at the 95% confidence level. Thus, Hypothesis H_4 is rejected. Accordingly, our results appear to support conventional studies on environmental disclosure; the higher the profits of a company, the greater the environmental disclosure (Bowman and Haire, 1976; Hackston and Milne, 1996; Roberts, 1992). However, we argue that this should not be the case for *Sharīᶜah* compliant companies because such companies, whether or not they have high profits, should disclose environmental issues in their annual reports. This stems from the fact that a shareholder has a right to know how a company's activities affect the environment irrespective of the level of the profits a company makes. Finally, our results provide no evidence to show that the impact a company's activities has on the environment affects the extent of environmental reporting of *Sharīᶜah* compliant companies. Accordingly, hypothesis H_5 is accepted. Thus, it appears that the results support our contention that there is no difference in the level of reporting between the more and less environmentally sensitive *Sharīᶜah* compliant

TABLE 3

Comparing Environmental Disclosure Practices of *Sharīʿah* Compliant Companies

	Total	High Profit	%	Low Profit	%	Mann-Whitney *Z*-value	*P*- value
Panel A: Between Muslim BOD and Non-Muslim BOD							
Number disclosing environmental matters	35	20	57	15	43		
Number of sentences	404	238	59	166	41	-1.27	0.10
Panel B: Between High Profit and Low Profit Companies							
Number disclosing environmental matters	38	20	53	18	47		
Number of sentences	412	300	73	112	27	-2.09	0.02
Panel C: Between Large and Small Companies							
Number disclosing environmental matters	38	8	21	30	79		
Number of sentences	412	41	10	371	90	-0.93	0.18
Panel D: Between High Impact and Low Impact Industries							
Number disclosing environmental matters	38	30	79	8	21		
Number of sentences	412	361	88	51	12	-0.53	0.30

companies. This is contrary to prior studies examining the issue of environmental sensitivity and disclosure (Berthelot, Cormier and Magnan, 2003). The summary of the results of the hypotheses tested is given in Table 4.

6. CONCLUSION

Overall, the results provide some evidence that *Sharīᶜah* compliant companies have a higher level of environmental disclosure compared to non-*Sharīᶜah* compliant companies. Further, size and environmental sensitivity do not affect the level of environmental disclosure of *Sharīᶜah* compliant companies. The findings in this study, therefore, suggest that the greater extent of environmental disclosure amongst *Sharīᶜah* compliant companies may reflect an attempt by such companies to practise a corporate reporting which embodies the Islamic principles of full disclosure and social accountability. Hence, the emphasis on environmental-related matters. More importantly, irrespective of whether the *Sharīᶜah* compliant company is large or otherwise, there appears to be no differences in the extent of environmental reporting. Similarly, whether the *Sharīᶜah* compliant companies' activities have a high or low impact on the environment, both did not exhibit significantly different levels of environmental disclosure. These findings are inconsistent with the results of prior studies (Berthelot, Cormier and Magnan, 2003; Deegan and Gordon, 1996).

An interesting finding and one which is contrary to our expectations, relates to the number of Muslim directors. Given Islam's emphasis on the environment, one would expect companies with a large number of Muslim directors to have significantly greater environmental disclosure. However, we find no significant difference in the extent of environmental disclosure of *Sharīᶜah* compliant companies whose boards are dominated by Muslim directors and those which are not. Finally, the relationship between profitability and environmental disclosure seems to follow other conventional studies, according to which, the higher the profitability, the greater is the environmental disclosure. Our results, however, should be interpreted in light of several limitations. First, the analysis is limited to only a content analysis of environmental disclosure within annual reports. Future research needs to examine this issue further. Examining the reasons for disclosure and the perceptions and

TABLE 4
Summary of tested hypotheses

Hypothesis	Hypothesis Description	Statistical Significance of Test	Accept/ Reject
H1	There is a higher level of environmental disclosure in *Sharīᶜah* compliant compared to non-*Sharīᶜah* compliant companies.	Statistically significant	Accept
H2	The size of a company does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.	Statistically significant	Accept
H3	The number of Muslim directors positively affects the level of environmental disclosure of *Sharīᶜah* compliant companies.	Not statistically significant	Reject
H4	The level of profits does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.	Statistically significant	Reject
H5	The environmental sensitivity of a company does not affect the level of environmental disclosure of *Sharīᶜah* compliant companies.	Not statistically significant	Accept

attitudes of company management on the need for environmental disclosure are two interesting areas to be pursued. This will provide more useful insights into the plausible reasons for the difference in the extent of disclosure between *Sharīᶜah* and non-*Sharīᶜah* compliant companies. Secondly, our study did not examine all *Sharīᶜah* compliant companies. We only focused on *Sharīᶜah* compliant companies which are in the top 200 companies (by market capitalization) listed on the Bursa Malaysia. Future studies should target a larger sample size. Thirdly, we excluded from our sample, the 27 companies, which were *Sharīᶜah* compliant only once in a year, rather than twice. We did not conduct a separate examination of these companies' annual reports. A separate investigation of these companies may reveal different findings. Fourthly, to investigate a research question about Islamic values may not necessarily be best dealt with by using secondary corporate report data. Thus, a qualitative research soliciting the views of corporate report users and policy makers in the Islamic community would provide a better insight into the issue of environmental disclosure and *Sharīᶜah* compliant organizations. Finally, the present study did not focus on the motives for environmental disclosure. We do acknowledge that the motives for disclosure could be influenced by factors other than those values espoused by religion, for example, commercial intent.

Notwithstanding the above limitations, the present study makes an important contribution to the literature as there is a paucity of research which examines the influence of religion, in general, and Islam, in particular, on the extent of environmental disclosure. Furthermore, this study provides valuable insights into how certain factors affect the extent of environmental disclosure of *Sharīᶜah* compliant companies. Much prior research has merely examined this in the context of companies in general. The present study also has important policy implications. Given the evidence suggested in the study, the *Sharīᶜah* Advisory Council of the Securities Commission may want to revisit the criteria developed to distinguish between *Sharīᶜah*-compliant and non-*Sharīᶜah* compliant securities. The present criteria appear to be restricted to an examination of the activities of the companies. In future, the criteria may be more comprehensive, to encompass the important principles of accountability and full disclosure in Islam. Thus, regulations governing the disclosure practices of *Sharīᶜah* compliant companies may need to be established to ensure that these are in line with the *Sharīᶜah*.

ENDNOTES

1. This does not mean that non-Muslim directors on the board of *Sharīʿah* compliant companies would be inclined to oppose environmental disclosure, but that Muslim directors (theoretically, at least) should advocate a higher level of concern and awareness on environmental issues.
2. Three companies were dropped from this analysis as they had an equal number of Muslim and non-Muslim directors.
3. We wish to thank one of the anonymous reviewer's for suggesting that we add these two sentences as implications of the finding.

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APPENDIX A

Descriptive Statistics for Dependent and Continuous Independent Variables

Variables	Mean	Standard Deviation	Min	Max	Skewness	Kurtosis
Sentence	2.913	8.910	0	77	5.086	32.34
Market Capitalization	8.980	0.439	8.45	10.66	5.6	34.59
Return on Asset	0.051	0.104	-0.26	0.68	2.721	14.68
Muslims Board of Directors	0.513	0.268	0	1	0.222	-1.04

APPENDIX B

List of *Sharīcah* Compliant and Non-*Sharīcah* Compliant Companies

Sharīcah compliant companies which produced some sentences regarding the environment (TOTAL 38)

Name of Companies	No. of Sentences
Shell Refining	77
GUTHRIE	46
UEM	35
H&L	32
IOI CORP	29
Guthrie Ropel Bhd	27
TH Group Bhd	26
Ta Ann	20
Golden Hope Plantations Bhd	13
Tenaga Nasional Bhd	12
UMW	10
UNISEM	10
Petronas Gas Bhd	9
TRADEWINDS (M)Bhd	9
F&N	6
Perusahaan Otomobil National Bhd (Proton)	6
JUSCO	5
SRIHART	5
FACB Resort Bhd	4
MKLAND	4
KULIM	3
United Plantation Bhd	3
Lingui Dev. Bhd	2
Malayan Cement Bhd	2
Malaysia International Shipping Bhd (MISC)	2
Road Builder (M) Holding Bhd	2
UMLAND	2
Asiatic Development Bhd	1
CCM	1
DIGI	1
ESSO	1
HL PROP	1
IJM	1
Intria Bhd	1
IOI PROP	1
JAYA TIASA Holdings Bhd	1
KLK	1
Sime Darby Bhd	1

APPENDIX B (continued)

Non-*Sharīᶜah* Compliant Companies Which Produced Some Sentences Regarding the Environment (TOTAL 18)

Name of Companies	No. of Sentences
Bernas	24
Public Bank	18
Renong Bhd	15
BAT	4
PBFIN	4
SIMEPROP	4
GENTING	3
TALIWRKS	3
YTL Corporation Bhd	3
CMSB	2
DRB- Hicom Bhd	2
MayBank Bhd	1
MRCB	1
MUIIND	1
PHARMA	1
POSIM	1
RESORTS	1
Tractor Malaysia Holdings Bhd	1