



TESTING A MODEL OF ISLAMIC CORPORATE FINANCIAL REPORTS: SOME EXPERIMENTAL EVIDENCE

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ABSTRACT

Given the fact that religion stands at the core of some cultures, and that Islam is a significant force influencing the manner in which Muslims conduct their public and private lives, the influence of Islam on accounting may be significant. In line with this, Baydoun and Willett (1994 and 2000) suggested that the current value balance sheet and the value added statement would meet Islam's objectives of socio-economic justice and accountability, thus satisfying the needs of Muslim users to a greater extent than would the traditional historical cost balance sheet and the profit and loss statement. Baydoun and Willett's model of Islamic corporate financial reports was initially tested through a questionnaire survey by Sulaiman (1998) which, surprisingly, found no differences in the perceptions of usefulness between Muslim and non-Muslim respondents. Before dismissing such an important conceptual model for lack of empirical support, an alternative empirical test should be conducted in which greater control for internal validity of data is achieved. To this end, the researcher examined the same issue using a laboratory experiment. The results of the experiment proved to be consistent with Sulaiman (1998). No significant differences in the perception of usefulness of the current value balance sheet and the value-added statement between Muslim and non-Muslim subjects were evident.

JEL classification: M41, Z12

Key words: Islam, Current value balance sheet, Value-added statement.

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1. INTRODUCTION

Religion, particularly Islam, can exert a profound influence on individuals and societies. Throughout the Muslim world, there has been a growing religious commitment during the past two decades which has led to more Muslim countries seeking to manage their economies in line with the precepts of Islam (Hassan, 1998). This phenomenon has generated considerable interest in the literature in examining the influence of Islam on accounting and financial reporting.

One central issue in Islamic accounting is whether the external financial reporting systems currently adopted by Muslim countries serve the needs of Muslims. Baydoun and Willett (1994 and 2000) argued that the influence of Islam on accounting is more likely to be in the disclosure aspect of accounting and proposed a model of Islamic Corporate Financial Reports. Their model, based on what Muslims *ought* to desire, called for empirical research to investigate if such a model is aligned with what Muslims actually regard as useful information. There has been one test undertaken of the model by Sulaiman (1998) through a survey of accounting information users in Malaysia. Surprisingly, the results from that survey were all non-significant, indicating no support for Baydoun and Willett's (1994 and 2000) conceptual model. However, the internal validity of the data from questionnaire surveys that measure respondents' perceptions and opinions is weak due to leniency, acquiescence, halo and partitioning errors (Brownell, 1995). Sulaiman's (1998) study prompted us to further test the model using a laboratory experiment. We use final year accounting students (acting as surrogates for investors) in four universities – three in Malaysia and one in New Zealand, in order to achieve high internal validity in the collection of data. This method provides a trade-off for weaker external validity – the opposite of the effects on data validity of Sulaiman's survey method. Our study proceeds to explicate Baydoun and Willett's (1994 and 2000) model of Islamic corporate financial reporting, discuss the strengths of the experimental method of research, describe the research design, present the findings and draw conclusions about whether a case remains for the adoption of the model for Islamic countries.

2. ISLAMIC CORPORATE REPORTING: THE MODEL

The thrust of Baydoun and Willett's (1994 and 2000) model is that the Western accounting system and the capitalist ethics upon which it is

based, is inconsistent with the teachings of Islam. Capital accumulation in the capitalistic system gives pre-eminence to the profit and loss statement. In contrast, the consistent and central focus of an Islamic economy is that growth should lead to social justice and a more equitable distribution of power and wealth. More specifically, the concepts of ownership and private property in Islam have different connotations from those prevalent in the West. For Muslims, ownership of wealth is not absolute; individuals are only trustees. Ultimate ownership belongs to Allah.¹ As such, the framework within which Islamic accounting systems should be developed is one based on personal accountability to Allah. Such a framework naturally tends to be broader and more subjective than is the case in the West, with accountability in Islam taking on a more social character. The Islamic social order is based on the principles of equality, justice and brotherhood and the concepts of freedom and responsibility (al-Buraey, 1990). Given that accountability in Islam is all-encompassing, the scope of Islamic corporate reporting needs to be wider than that which is currently practised in the West. Although ultimate accountability is to Allah, an individual is also accountable to society.

According to Most (1977), contemporary accounting practices are dominated by the information needs of shareholders, creditors, and managers. However, a society dedicated to the improvement of the welfare of its members should have an information system that satisfies the needs of all interested parties such as employees, external consumer groups, government, the general public, as well as those capitalists. In line with this, it is argued that Islamic accounting is a value-oriented activity, the development of which encompasses moral, spiritual, material and social aspects.² Specifically, accounting from an Islamic perspective emphasizes accountability.

Two essential principles underlie the concept of accountability in Islam: full disclosure and social accountability. From Islam's perspective, the emphasis on social accountability would mean that financial reports should enable Muslims to determine *zakaat* liability (i.e., the amount payable by Muslims whose wealth exceeds a certain minimum threshold) and ultimately achieve socio-economic justice.³ Given this and the emphasis on full disclosure, Baydoun and Willett (1994 and 2000) suggested that the current value balance sheet be included as part of the reporting requirements of firms operating in an Islamic economy. In addition, they suggested that the profit and loss statement (because of its corruptive influence) should be relegated to the Notes. In its place should be the value-added statement. Hence, the

inclusion of a value-added statement (VAS) and a current value balance sheet (CVBS) in Islamic corporate reporting is primarily derived from the need to discharge accountability (Baydoun and Willett, 1994 and 2000).

A financial statement that measures all activities by just a single dimension, that of the bottom-line profit, may not be appropriate in Islamic societies, at least not from an ideological perspective. The profit and loss statement emphasises the owners' private interests above anything else. It appeals to the self-interested capitalist and the materialist philosophy on which that mind-set is based. In Islam, the emphasis is on the use of one's possessions, and merit lies in extending these intelligently and distributing them with generosity. Accordingly, the need for greater awareness of the social impact of firm activities in Islam supports the VAS and also favours a CVBS.

However, Baydoun and Willett's suggestions may be regarded as providing a bare minimum towards satisfying Islam's social accountability obligations. Given Islam's emphasis on safeguarding the welfare of the community,⁴ a more complete Islamic corporate financial reporting model, it is argued, should also include the reporting of externalities. Sulaiman (1998) elaborated on the emphasis on corporate social responsibility reporting in Islamic societies. The theoretical support for the inclusion of the VAS and the CVBS in corporate financial reports to Muslims is discussed next. Corporate social responsibility reporting is not pursued in this study.

2.1 THE CURRENT VALUE BALANCE SHEET (CVBS)

There are three main theoretical arguments for the perceived usefulness of the current value balance sheet to Islamic users. First, the use of current values relates to the "justice and equity" aspects that Islam emphasises with regard to the payment of *zakāt*.⁵ *Zakāt* constitutes one aspect of social accountability in Islamic societies, and the CVBS (to determine *zakāt*) supports the Islamic principle of justice to a greater extent than the historical cost balance sheet. Second, support for the use of current values follows from practices pursued during the Prophet's time (Clarke et al., 1996). According to Clarke et al. (1996), "value-in-exchange" may be derived from the implicit common monetary denominator used in the Prophet's time to establish the *nisīb* (the minimum threshold of wealth above which *zakāt* is payable) for various assets subject to *zakāt*. Value-in-exchange is simultaneously

the selling price (exit value) for the vendor and the entry price for the purchaser. Third, current value information allows the inclusion in financial statements of market values that are based on information obtained from outside the firm's database, thus extending the accountability of firms into the social domain. Historical cost information (based mainly on a firm's own transaction costs and little else) excludes the potential relationship which accounting may have with its wider social environment (Baydoun and Willett, 1994). However, one could argue that the extension of a firm's accountability to a wider social environment would have an emphasis on the reporting of externalities (i.e., social responsibility issues) but Baydoun and Willett were silent on this point. As explained earlier, Sulaiman (1998) elaborated on this aspect.

For the reasons cited above, one would expect committed Muslims to perceive the CVBS as providing more desirable information than would non-Muslims. Accordingly, one would also expect Muslims to favor the use of a CVBS over a historical cost balance sheet (HCBS).

2.2 THE VALUE-ADDED STATEMENT (VAS)

The emphasis in Islam is that economic growth should lead to social justice and a more equitable distribution of power and wealth.⁶ The Islamic concepts of brotherhood, equity and justice imply the presence of a conscious policy of redistribution and resource transfers amongst various groups in the society. A VAS showing how the benefits of the efforts of an enterprise are being shared amongst employees, shareholders, the government and the enterprise itself, might be especially useful to Muslims. The distribution of wealth between the different sectors of society is, by definition, a matter of social interest and it is this characteristic of VAS that supports accountability in Islam (Baydoun and Willett, 1994). The notion of increment in total value-added appears to be secondary. Thus, the value-added statement may be considered as being more in alignment with the concepts of justice and mutual cooperation that Islam propagates than is the profit and loss statement (PL). A device for greater awareness of the social impact of an enterprise's activities in a Muslim community should favor a VAS over the conventional PL. Accordingly, one would expect Muslims to perceive the VAS as being more useful for evaluating an enterprise with a view to supporting it than non-Muslims.

Since Baydoun and Willett's theoretical model is quite clear in its

claims for increased relevance to Muslims, it should be a relatively straightforward matter to put it to the test. The substantiation of their proposed corporate financial reporting model would be greatly enhanced if what Muslims *ought* to desire is consistent with what Muslims *would* desire or what Muslims *would* use for investment decision-making purposes. To this end, we investigate the usefulness of the CVBS and the VAS to Muslim and non-Muslim users through a laboratory experiment. If Muslims view and use corporate financial reporting information in the manner as propagated by Islam, significant differences will emerge between the responses of Muslim and non-Muslim subjects.⁷

3. IN SUPPORT OF THE EXPERIMENTAL METHOD

Any experimental design rests on three conditions: the ability of the researcher to manipulate the independent treatment variable, the identification and measurement of changes in the dependent variable and, lastly, the ability of the researcher to control the effects of any extraneous variables upon the dependent variable (Gill and Johnson, 1991). Emory and Cooper (1991) asserted that there are four main advantages in conducting laboratory experiments. The first two are those just referred to, namely the researcher's ability to manipulate independent variables and to control for extraneous variables more effectively than with other designs. Thirdly, laboratory experiments can be relatively inexpensive and convenient to carry out. Fourthly, it is possible to replicate experiments using different subject groups and conditions which would eventually lead to the discovery of an average effect of the independent variable across people, situations and times (Emory and Cooper, 1991).

However, the artificial setting in which an experiment is carried out is, arguably, one of its primary disadvantages, for this limits the generalizability of the findings (Abdel-khalik and Ajinkya, 1979). Further, the use of possibly unrepresentative subjects (usually students as surrogates) also compromises the impact these independent variables may have on subjects in the 'real' environment (Kerlinger, 1986). Swieringa and Weick (1982), on the other hand, contended that the inherent limitations in laboratory experiments do not mean that laboratory findings are not applicable. Rather, they are applicable only under certain conditions. They argued that realism may conceal information that a controlled artificiality may disclose. It is this

artificiality that makes it easier “to observe clear disconfirmations of theory and clear examples of novel relationships that are normally concealed by the sheer mass of covarying variables in realistic settings” (Swieringa and Weick, 1982, 79). The more artificial the setting, the more precisely the one theory in question may be expected to predict (Webster and Kervin, 1971). Hence, researchers may need more, and not less, artificiality in order for variables that are not relevant to the theories being tested to be eliminated from an empirical setting (Swieringa and Weick, 1982). Birnberg et al. (1990) echoed a similar sentiment when they contended that, because a researcher is able to obtain relatively precise measurements and high levels of control over variables in a laboratory experiment, it is possible to detect significant effects even when there are relatively weak manipulations of the independent variables.

Finally, a basic advantage of deliberate artificiality is that it may allow for a more direct test of the theory (Swieringa and Weick, 1982). Consequently, this may improve generalizability of a theory, if that theory is supported by the experimental results. Given the objective of this study, which is to test a theory concerning the decision usefulness to Muslims of a specific set of corporate financial reports, it is felt that a laboratory experiment will enable a direct test of this objective. It is further contended that the problem of empirical generalization of a laboratory experiment is likely to be mitigated by the fact that the independent variable of interest is religion. Since religious values are generally internalized in a person, irrespective of the setting, or the actors (in this study students were used as surrogates for investors), the findings may be more generalizable than when other variables are studied.

4. RESEARCH DESIGN AND HYPOTHESES

The experimental design of this study comprises both the *within-subjects* (repeated measures) design and the *between-subjects* design. In the within-subjects design, the user is provided with all the different types of financial reports under investigation in the study. That is, financial reports deemed more useful to Muslims, together with conventional (Western-based) financial statements, are given to all subjects. On the other hand, the between-subjects design requires that subjects be given either those financial reports deemed useful to Muslims or the Western-based report.

One criticism levelled at the within-subjects design is that it creates a “demand effect” in that it may sensitize subjects to the nature of the study. This, it is argued, leads to subjects being induced to give “socially desirable” responses. However, if this design is adopted, one is able to utilize subjects more efficiently. In addition, the within-subjects design is said to provide a control of subject variables which may result in statistical efficiency brought about by removing the within-group variance (Brownell and Trotman, 1988).

Prior research using experiments to examine the usefulness of alternative reporting models has often adopted a three group design (McIntyre, 1973; and Duncan and Moores, 1988). In studies comparing the usefulness of historical cost versus current cost accounting models (McIntyre, 1973; and Duncan and Moores, 1988), one group receives a set of historical cost accounts; another, a set of current cost accounts; while the third and last group receives both the historical and current cost accounts. A similar design is used in the present study. However, we depart from the preceding studies in two respects: instead of using three groups, there are four treatment groups and, secondly, while prior studies have only one control group, this study has two. The additional group is necessary in order to study the combined effects of the CVBS and the VAS.

4.1 TREATMENT GROUPS

Students are used as surrogates for investors. Students chosen for this study are those who had previously been exposed to financial reporting and the interpretation of accounts. It was felt that students majoring in accounting and in their final year of study would be the most knowledgeable to act as surrogates for shareholders.⁸ Subjects were randomly assigned to four treatment groups. Each treatment group received one of four information sets as shown in Table 1. Set 1 consisted of a historical cost profit and loss statement (PL), and a HCBS. Set 2 comprised Set 1 *plus* a CVBS. Set 3 comprised Set 1 *plus* a VAS while Set 4 was a combination of Sets 1, 2 and 3. The statement of source and application of funds was deliberately left out so as not to overwhelm participants with too much information. Subjects were also told that although under normal circumstances they would have available to them a multitude of information, for the purpose of the experiment they were

TABLE 1
Experimental Groups and Treatments

Group 1 (G1)	Group 2 (G2)	Group 3 (G3)	Group 4 (G4)
HCBS	HCBS	HCBS	HCBS
PL	PL	PL	PL
	CVBS	VAS	CVBS
			VAS

Notes: HCBS : Historical cost balance sheet.

PL : Profit and loss statement.

CVBS : Current value balance sheet.

VAS : Value-added statement.

to base their decisions on the information provided.

Structurally, the design and the treatments are as shown in Table 2. 'R' represents the random assignment of subjects. 'G1', 'G2', 'G3' and 'G4' are the four treatment groups while 'O1', 'O2', 'O3' and 'O4' are the experimental results (i.e., outcome 1, outcome 2, outcome 3 and outcome 4).

TABLE 2
Structural Design of Experiment

Method of subject Assignment	Treatment groups	Experimental results
R	G1	O1
R	G2	O2
R	G3	O3
R	G4	O4

Notes: R represents random assignment of subjects.

G represents group.

O represents outcome.

4.2 MEASURE OF USEFULNESS

The variable of primary interest is usefulness. This study partially adopts McIntyre's (1973) operational definition of usefulness. He defined useful information as information that produced decisions that were 'different' and 'better'. 'Different' decisions were measured by direct

comparison of investment decisions amongst treatment groups. A decision was 'better', according to McIntyre (1973), if it led to a greater return on investment. However, sole emphasis on maximizing return on investment is not representative of a 'better' decision for Muslims. Therefore, only the first of the two criteria is utilized. Our measure of usefulness of the financial reports is limited to differences between Muslims and non-Muslims *within* the four treatment groups, as well as 'differences' *between* the groups. The latter focuses on the usefulness of the CVBS and the VAS by Muslims and non-Muslims, examined separately. The issue of whether one group made 'better' decisions as compared to the other is not investigated.

Usefulness is measured by four questions. The first question required subjects to rate on a ten-point Likert scale, the *favorability* of investing in a fictitious company. The second question required subjects to indicate the *amount* they would *invest* in the company given the information that they had been provided with. This enabled the results obtained from the first question to be checked. The third question asked subjects to rate (again on a scale of '1' to '10'), the *adequacy of the information* that they had been provided with, in order for them to make the investment decision. To increase the assurance that respondents had thought through the answers, they were also asked to provide the reasons for their choice. The fourth question asked subjects to choose one financial report that they deemed important, from the list provided (the list depending on which group they were in), in their investment decision-making.

4.3 WITHIN-GROUP DIFFERENCES

Although previous studies on the usefulness of alternative accounting reports have focused on the between-group differences (that is on the information sets), this study's primary concern is with the within-group differences. In other words, the main objective is to investigate the differences in the usefulness of accounting information *between* Muslims and non-Muslims (within each financial statement treatment group) through favorability ratings, amounts invested, perception of adequacy of information and choice of financial statement. Specifically, for each separate set of financial reports, the following within-group hypotheses are tested.

- H1₀**: Favorability ratings do not differ between Muslims and non-Muslims.
- H2₀**: Amounts invested do not differ between Muslims and non-Muslims.
- H3₀**: Adequacy of information does not differ between Muslims and non-Muslims.
- H4₀**: Choice of financial report does not differ between Muslims and non-Muslims.

If the 'desired' financial statements of Muslims conform to the 'desirable' form argued for by Baydoun and Willett (1994 and 2000), Muslims would show significantly higher means for both **H1₀** and **H3₀**. In addition, when the within-group differences for Groups 2, 3 and 4 are examined, the amounts invested (**H2₀**) by Muslims would be expected to be significantly higher than that of non-Muslims. Finally, the additional report chosen would also be different between the two groups of users (**H4₀**); significantly more Muslims would be expected to choose the CVBS and the VAS as the additional statement that they would like to have before making any investment decision. Group 1 does not receive financial statements deemed to be useful to Muslims (i.e., the CVBS or the VAS) and, therefore, has the effect of the control group where no significant within-group differences are expected in relation to the first four hypotheses.

4.4 BETWEEN-GROUP DIFFERENCES

To examine if there are differences in the usefulness of alternative financial reports by both Muslims and non-Muslims (examined separately), a between-group analysis is undertaken. Specifically, the following between-group hypotheses are tested.

- H5₀**: Favorability ratings do not differ between alternative sets of financial reports.
- H6₀**: Amounts invested do not differ between alternative sets of financial reports.
- H7₀**: Adequacy of information does not differ between alternative sets of financial reports.
- H8₀**: Choice of financial statement does not differ between alternative sets of financial reports.

5. INSTRUMENTATION

5.1 DATA SET

The HCBS and the PL used in the study are those of a hypothetical company, ABA Berhad.⁹ The format of these financial reports, although resembling published accounts in Malaysia, was simplified. Notes to the accounts were very limited. The notes merely indicated the significant accounting policies, the manner in which operating profit was derived and information on investments. The hypothetical company was described as a parent company with a wholly-owned domestic subsidiary, thus eliminating the disclosure of minority interests. The historical accounts were provided for two years whereas those of the VAS and the CVBS were for the latest period. The CVBS was prepared based on the researcher's estimates using guidelines proposed by Chambers on Continuously Contemporary Accounting (CoCoA). In the CVBS, the figures for cash and bank balances, short-term deposits, bank borrowings, creditors, tax, proposed dividends, share capital, share premium and retained profits remained unchanged. Only stocks and quoted investments were revalued. All revaluations were adjusted through the revaluation reserve.

5.2 ADMINISTRATIVE PROCEDURE

Data were collected from final year accounting students from the National University of Malaysia (UKM), the Putra University of Malaysia (UPM), the International Islamic University Malaysia (IIUM) and Otago University. Subjects from Otago University comprised only Malaysian students doing their final year, Bachelor of Commerce degree. Otago University students were included so as to increase the generalizability of the results. As noted elsewhere, subjects were randomly assigned to one of four treatment groups. Ideally, each treatment group was to have an equal number of Muslims and non-Muslims. However, due to administrative constraints, that was not possible. Subjects were told that the researcher was conducting an experiment concerning the use of accounting information in investment decisions and that not all subjects would receive the same information. It was indicated to students that the results of the study may help shed

TABLE 3
Respondents in Each Group

	Groups			
	G1	G2	G3	G4
Muslims	19	20	21	19
Non-Muslims	11	15	15	15
Total	30	35	36	34

some light on users' information needs for investment decision-making and this, in turn, may help shape future financial reporting regulations in Malaysia. Following a brief introduction, experimental packets were distributed in a random manner. Each packet contained the experimental instructions, a questionnaire and a set of financial statements.

6. RESULTS AND DISCUSSION

Out of the 154 experimental packets administered, useable responses numbered 135,¹⁰ of which 115 were valid for all questions. Table 3 reports the number of Muslim and non-Muslim subjects in each of the four groups, G1, G2, G3 and G4.

6.1 STATISTICAL ANALYSIS

The data was analyzed in two stages. Firstly, to examine the difference in perceptions of usefulness of the CVBS and the VAS between Muslims and non-Muslims, a *within-group* analysis was undertaken. Secondly, a *between group* analysis was conducted to investigate the usefulness of the CVBS and the VAS as compared to the HCBS and the PL respectively. Prior to proceeding with the statistical analysis, data was tested to investigate if it was normally distributed. The Lilliefors' test on the SPSS Windows required the null hypothesis of normal distribution to be rejected at the 1 percent level of significance. Subsequently, all analyses in this study have been restricted to non-parametric statistics, namely the Mann-Whitney U test (MWU).

TABLE 4
 MWU Tests on the Favorability ($H1_o$), Amount Invested ($H2_o$) and
 Adequacy of Information ($H3_o$) Between Muslims
 and Non-Muslims

Hypotheses	Groups			
	G1	G2	G3	G4
$H1_o$	ns	ns	$p=0.083$	ns
$H2_o$	ns	ns	ns	ns
$H3_o$	ns	ns	ns	ns

Note: ns: not significant at the 5% and 10% levels.

6.1.1 WITHIN-GROUP DIFFERENCES

$H1_o$: Favorability of investing in ABA Berhad

Table 4 reports the results of the Mann-Whitney U-tests conducted on the favorability of investing in ABA Berhad between Muslims and non-Muslims at 10 percent level of significance. Of the four groups, the only significant difference observed was in G3. Muslim subjects (mean 5.1) did, indeed, perceive the VAS as being significantly more useful than non-Muslims (mean 3.9) when it comes to establishing a favorable view of a company. However, as will be discussed later, the results for $H2_o$ (on the amount invested) and $H3_o$ (on the adequacy of information) did not seem to support the belief that the VAS made a significant difference in the *real* investment decision.

$H2_o$: Amount invested

$H2_o$ concerns the question of the amount subjects wished to invest in ABA Berhad. There were no significant differences found for the amount invested between Muslims and non-Muslims for the four groups (Table 4). Hence, there seemed to be no further evidence to support the belief that Muslims perceived the usefulness of the VAS as being significantly different from non-Muslims when it comes to making a resource allocation decision. For such to be concluded, the results would have been expected to show a significant difference on the amount of investment between Muslims and non-Muslims in G3. Thus, the theory

TABLE 5
Amount Invested

Groups	Muslims			Non-Muslims		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
G1	17200	9700	3	20500	10400	1
G2	15800	10300	4	13000	7800	4
G3	18800	9800	1	14500	7100	3
G4	17800	11000	2	16000	7400	2

that Muslims would find the VAS and the CVBS to be more useful than non-Muslims is not supported. As shown in Table 5, on the basis of the absolute amount invested; Muslims in G3 (who were given the HCBS, PL and VAS) invested the highest whereas Muslims in G2 (who were given the HCBS, PL and the CVBS) invested the lowest. While the G3 result is promising (as far as the theoretical supposition of the study is concerned), the G2 result is not. Despite being given the CVBS, the amount invested by G2 was less than those in G1 (subjects given just the HCBS and the PL). For non-Muslims, the highest amount invested was in G1 and the lowest in G2. It would seem that non-Muslim subjects in G1 regarded information currently supplied by companies in Malaysia as adequate for the purpose of investing.

H3_o: *Adequacy of information*

Under **H3_o**, subjects were asked if they considered the information package given to them to be adequate for the purpose of investing in ABA Berhad. Subjects were told to rate between '1' (least adequate) and '10' (most adequate). As shown in Table 4, there were no significant differences detected between Muslims and non-Muslims for all the four groups. More specifically, in the case of G3, there was no significant difference evidenced, indicating no further support to the findings in **H1_o**, discussed earlier.

H4_o: *Choice of financial statement*

Subjects were asked to choose (from a given list) an additional financial statement they would like to have in order for them to make the investment decision. The list provided was different for each group.

TABLE 6a:
Financial Statement Choice of Muslims

	Groups							
	G1		G2		G3		G4	
	No	%	No	%	No	%	No	%
Cash Flow	13	68	10	50	11	53	11	58
VAS	4	21	3	15	*	*	*	*
CVBS	2	11	*	*	4	19	*	*
Funds Flow	*	*	6	30	3	14	7	37
Others	0	0	1	5	3	14	1	5
Total	19	100	20	100	21	100	19	100

Note: * Not included in the list.

TABLE 6b
Financial Statement Choice of Non-Muslims

	Groups							
	G1		G2		G3		G4	
	No	%	No	%	No	%	No	%
Cash Flow	4	36	10	67	7	46	7	47
VAS	2	18	2	13	*	*	*	*
CVBS	5	46	*	*	4	27	*	*
Funds Flow	*	*	2	13	4	27	6	40
Others	0	0	1	7	0	0	2	13
Total	19	100	15	100	7	100	15	100

Note: * Not included in the list.

However, all groups included a cash flow statement. In 3 out of the 4 groups, the cash flow statement showed the highest percentage for both Muslims and non-Muslims (Tables 6a and 6b). Only in the case of non-Muslim subjects in G1 was there evidence of a greater preference for the CVBS (46 percent as opposed to 36 percent for the cash flow statement). Muslims in G1, however, still preferred the cash flow statement.

6.1.2 BETWEEN-GROUP DIFFERENCES

Responses to questions 1 through 3 were analyzed to examine if there were differences between the respective pairs of experimental groups. Altogether, there were five different combinations investigated. The following summarizes the objective of comparing each pair of groups:

- a. **G1 and G2:** To examine the usefulness of the CVBS.
- b. **G1 and G3:** To examine the usefulness of the VAS.
- c. **G1 and G4:** To examine the usefulness of the CVBS and VAS simultaneously.
- d. **G2 and G4:** To examine the usefulness of the VAS.
- e. **G3 and G4:** To examine the usefulness of the CVBS.

The last two, in effect, provided further evidence as to the usefulness of the VAS and the CVBS, respectively. Should there be significant differences in (a) (in the direction of the theoretical supposition of this study) with the further support of a significant finding in (e), one could be more confident of concluding that the CVBS is, indeed, useful for investment decision-making. Similarly, significant findings in (b) and (d) would place higher confidence on the fact that the VAS is perceived to be useful by subjects.

TABLE 7
Between Group Differences on the Favorability of Investing

	G1/G2	G1/G3	G1/G4	G2/G4	G3/G4
Combined	ns	ns	ns	ns	ns
Muslims	ns	ns	ns	ns	ns
Non-Muslims	ns	ns	ns	ns	$p=0.0900$

Note: ns: not significant at the 5% and 10% levels.

H5₀: *Favorability of investing*

Table 7 indicates that there is no significant difference in responses (evidenced at the 5 percent level) for Muslims and non-Muslims for all pairs of groupings. However, at the 10 percent level, there was a significant difference ($p=0.0900$) detected between G3 (mean 3.87)

TABLE 8
Between Group Differences on Amount Invested

	G1/G2	G1/G3	G1/G4	G2/G4	G3/G4
Combined	ns	ns	ns	ns	ns
Muslims	ns	ns	ns	ns	ns
Non-Muslims	$p=0.0769$	ns	ns	ns	ns

Note: ns: not significant at 5% and 10% levels.

and G4 (mean 4.67) for non-Muslims. On the basis that there was no significant difference detected between G1 and G2, it was concluded that this result was due to a chance occurrence. Thus, the results did not indicate that subjects would prefer the CVBS over the HCBS.

H₆: *Amount invested*

At the 5 percent level of significance, there were no significant difference evidenced between the groups in amount invested, as indicated in Table 8. At the 10 percent level, the MWU test conducted to examine the differences in amount invested between groups revealed a significant difference only between G1 and G2 for non-Muslims (Table 8). The means and standard deviations on the amount invested (for Muslims and non-Muslims separately) have been provided in Table 5. As discussed earlier, on the basis of absolute amounts, Muslims in G3 had the highest average amount invested at \$18,800 with G4 second at \$17,800 (Table 5). In the case of non-Muslims, the highest investment was recorded in G1 and the lowest in G2. Even though non-Muslims in G2 were given the additional financial statement (i.e., the CVBS) they had significantly lower amount of investments than those in G1. This may be due, in part, to having four subjects in the group indicating that they did not wish to invest in ABA Berhad at all.

On the basis of the above results, one can conclude that overall, subjects in the laboratory experiment did not perceive the two additional statements, the VAS and the CVBS, as providing significantly more useful information for decision-making. For some reason, non-Muslim subjects felt that historical cost accounts were sufficient for the purpose of investment decision-making as reflected in the highest dollar value of investment in G1. This is contrary to some prior studies that indicated

TABLE 9
Between Group Differences on Adequacy of Information

	G1/G2	G1/G3	G1/G4	G2/G4	G4/G4
Combined	ns	ns	ns	ns	ns
Muslims	ns	ns	ns	ns	ns
Non-Muslims	ns	ns	ns	ns	ns

Note: ns: not significant at the 5% and 10% levels.

a preference for current cost/current value accounting (Estes, 1968; McIntyre, 1973; McKinnon, 1984; and Duncan and Moores, 1988) and the VAS (Renshall et al., 1979).

H7_o: *Adequacy of information*

The MWU tests of between group differences on the adequacy of information are reported in Table 9. No significant differences were found for any pair of groups for Muslims and non-Muslims (analyzed separately) suggesting that subjects remained indifferent as to the types of information provided to assist them in their investment decision-making.

TABLE 10
Financial Statement Choice of Each Group

	Groups							
	G1		G2		G3		G4	
	No	%	No	%	No	%	No	%
Cash Flow	17	57	20	57	18	50	18	53
VAS	6	20	5	14	*	*	*	*
CVBS	7	23	*	*	8	22	*	*
Funds Flow	*	*	8	23	7	19	13	38
Others	0	0	2	6	3	9	3	9
Total	30	100	35	100	18	50	15	100

Note: * Not included in the list.

H8_o: *Choice of financial statement*

To test **H8_o**, subjects were asked to indicate the financial statement they would like to have in order to aid them in their decision-making. Each group (as explained earlier) was given a different list to choose from (depending on which experimental package they received). Table 10 presents the results. The cash flow statement was the most popular choice with 57 percent of subjects in both G1 and G2 indicating that they would like to have such a statement, 50 percent in G3, and 53 percent in G4. This appears to be consistent with Epstein and Pava's (1993) study. They found that users placed greater importance on the cash flow statement in 1991 than in 1973. Where the list included the CVBS (i.e., for G1 and G3), 23 percent in G1 and 22 percent in G3 wanted to purchase such a statement. In the case of VAS, 20 percent in G1 and 14 percent in G2 would like to have such information. The source and application of funds statement had 23 percent and 19 percent in G2 and G4 wanting to purchase it, respectively.

6.2 QUALITATIVE FINDINGS

Comments included in the experimental results revealed certain additional matters. Of those who felt that ABA Berhad was not a favourable investment, most cited declining profits as the reason. Related to that, some cited the low earnings per share. Others felt that the company was too highly geared. A few calculated ratios such as 'quick' asset and current asset ratios, and concluded that the company's liquid position was weak. The reasons cited appeared not to be specific to one particular religious group. Only one subject, a Muslim, said that he would want to know if the company was engaged in a non-*halal* (forbidden) activity before deciding to invest.¹¹ Consequently, the participants probably regarded the laboratory study as a test of their decision-making competence rather than a study of broader issues of usefulness. Comments to question 2 were somewhat similar to question 1. On the adequacy of information (question 3), most wanted to know the kind of industry the company was in, with a view to assessing ABA Berhad's economic viability. Some would have liked to see more future-oriented information such as forecast results and the company's future plans. A few wanted to have information pertaining to the political affiliation of the company on the basis that this would somehow indicate the risk of the investment.

6.3 LIMITATIONS

The results in this study are subject to certain limitations. Students were used in the experiment for practical reasons. While it is acknowledged that there are limitations in using students as surrogates for investors, in the case of this project, this limitation should be less severe for the main reason that the focus here is religion. Since religion is internalized in an individual, the results would not be expected to be any different from what one would obtain from using 'real' investors. The reasonableness of the CVBS in the experiment is also a limitation although this may be mitigated by the fact that this is not a study on inflation accounting *per se*. Further, in an actual investment decision, investors may have an abundance of multiperiod qualitative and quantitative information available to them. In the case of the present study, the objective was merely to test the usefulness of the various financial statements. As a result, subjects were limited to the information they were provided with. Nevertheless, replicating the experiment using 'real' investors would greatly enhance the external validity of the findings in this study.

7. CONCLUSION

Overall, the results provided little evidence to suggest that Baydoun and Willett's theory is applicable in practice. That is, Muslim subjects in the experiment did not accord a significantly greater importance to the CVBS or the VAS as compared to the HCBS and the PL, or to non-Muslim subjects, respectively. The findings in this study as well as the Sulaiman (1998) survey, appear to suggest that Muslims and non-Muslims are, indeed, no different as far as accounting matters are concerned. Consequently, the suggestion that Muslims *ought* to be provided with financial information of a different character from what is normally disclosed in Western-based accounting systems, seems to have little support.

However, given that the CVBS and the VAS emphasize the Islamic concept of accountability to a greater extent than conventional Western-based financial reports (of the HCBS and the PL), one is drawn to consider *why* practice and theory do not coincide. Could it be that the technological basis of accounting is so strong that it transcends culture and religion? Or, alternatively, could this phenomenon be attributed to the impact of colonization and the globalization of the world economy?

Or, perhaps, the materialist philosophy (brought about by international trade and colonization) is so firmly embedded in the Muslim mind that although Islam may have an effect on how an individual behaves, the economic and social pressures exercise a much greater influence over attitudes prevailing in commercial life (Rodinson, 1974). Thus, an investigation into the reasons for the existence of the gap between what Muslims *ought* to desire and what they actually desire would provide an interesting dimension to the study of Islam on accounting.

ENDNOTES

1. "To Allah belongeth all that is in the heavens and on earth," (*al-Qur'Ēn*, 2:284).
2. Like Islamic accounting, corporate social responsibility accounting is also said to be value-laden. Opinions and value systems become much more apparent than is usually perceived to be the case with conventional accounting (Gray et al., 1987). Similarly, economics and economic development from an Islamic perspective are also value-laden activities (eg., Chapra, 1992; Mannan, 1986; and al-Buraey, 1990).
3. "And those in whose wealth is a recognized right. For the needy who asks and him who is prevented (for some reason from asking)," (*al-Qur'Ēn*, 70:24-25).
4. "Let there arise out of you a band of people inviting to all that is good, enjoining what is right, and forbidding what is wrong," (*al-Qur'Ēn*, 3:104).
5. In the area of Islamic banking, the need for current values is to ensure that investment account holders are not duly disadvantaged should they want to withdraw their deposits from the bank. However, this argument appears dubious since the justice that is at issue in this case only relates to one party, that of the depositors. One must also consider if justice is being served to the borrower (the entrepreneur) or the bank. Although this makes an interesting study, this is not being pursued here.
6. "What Allah has bestowed on His Messenger (and taken away) from the people of the townships - belongs to Allah - to His Messenger and to kindred and orphans, the needy and the wayfarer; in order that it may not (merely) make a circuit between the wealthy among you," (*al-Qur'Ēn*, 59:7).

7. Religion may, or may not influence the manner a person views accounting information. If religion does not affect the perception of what is useful accounting information, then there should be no difference in perceptions between a Muslim and a non-Muslim respondent. This, in no way, implies that religion is not significant.
8. A sophisticated user is one who has had occupational experience and/or educational training in accounting and finance and reads financial statements more thoroughly. For this study, accounting majors would seem to be a natural choice. The subjects are majors in accounting in their final year where exposure in accounting is at its maximum.
9. Most of the items are, however, extracted from the annual report of an anonymous Malaysian public company.
10. The responses that were excluded in the analysis were those that did not provide reasons for their choice on all of the first 3 questions. This was necessary in order to observe the 'experimental realism' that was discussed in Swieringa and Weick (1982). Experimental realism is when laboratory events are believed, attended to and taken seriously. Not providing reasons to their choices could well mean that the experiment was not taken seriously enough. As a result the said responses were excluded.
11. Informal discussions with a Muslim investor provided further insight into this aspect. According to him, it is 'understood' that a Muslim will never invest in a company that engages in 'non-*halal*' activities (*haram* or forbidden activities). This suggests that although only one student indicated very clearly this was an important issue, it did not mean that other Muslim students were not particularly concerned with it. It was most likely that they were not stating what appeared to be the 'obvious'.

REFERENCES

- Abdel-khalik, A. R., and B. B. Ajinkya. *Empirical Research in Accounting: A Methodological Viewpoint*. Sarasota, Florida: American Accounting Association, 1979.
- al-Buraey, Muhammad. *Management and Administration in Islam*. Dharan: King Fahd University of Petroleum and Minerals, 1990.
- Alif, Abdullh Y'usuf. *The Holy Qur'an: Text, Translation and Commentary*. Brentwood, Maryland: Amana Corporation, 1992.

- Baydoun, Nabil, and Roger Willett. "Islamic Corporate Reports." *Abacus* 36 (2000): 71-90.
- . "Islamic Accounting Theory." Paper presented at the AAANZ Annual Conference, Sydney, Australia, 1994.
- Birnberg, J. G., M. D. Shields, and S. M. Young. "The Case for Multiple Methods in Empirical Management Accounting Research." *Journal of Management Accounting Research*. (Fall, 1999): 33-66.
- Brownell, Peter. *Research Methods in Management Accounting*. Coopers & Lybrand and Accounting Association of Australia and New Zealand, 1995.
- , and Ken Trotman. "Research Methods in Behavioural Accounting." In *Behavioral Accounting Research: A Critical Analysis*, edited by K.R. Ferris, Columbus, Ohio: Century VII Pub. Co., 1988.
- Chapra, Umar. *Islam and the Economic Challenge*. Leicester, UK: The Islamic Foundation, 1992.
- Clarke, F., R. Craig, and S. Hamid. "Physical Asset Valuation and Zakat: Insights and Implications." *Advances in International Accounting* 9 (1996): 195-208.
- Duncan, K., and K. Moores. "Usefulness of CCA Information for Investor Decision Making: A Laboratory Experiment." *Accounting and Business Research* 18, no. 70 (1988): 121-32.
- Epstein, M.J., and M. L. Pava. *The Shareholders' Use of Corporate Annual Reports*. Connecticut: JAI Press Inc., 1993.
- Emory, C.W., and D.R. Cooper. *Business Research Methods*. Illinois: Richard Irwin, 1991.
- Gill, J., and P. Johnson. *Research Methods for Managers*. London: Paul Chapman Publishing Ltd., 1991.
- Gray, Rob, David Owen, and Keith Maunders. *Corporate Social Reporting: Accounting and Accountability*. UK: Prentice-Hall International, 1987.
- Hassan, Z. "Islamization of Knowledge in Economics: Issues and Agenda." *IIUM Journal of Economics and Management* 6, no. 2 (1998): 1-40.
- Kerlinger, F. *Foundations of Behavioural Research*. New York: Holt, Rinehart and Winston, 1986.
- Mannan, Muhammad Abdul. *Islamic Economics: Theory and Practice*. UK: Hodder and Stoughton, 1986.

- McIntyre, E. V. "Current Cost Financial Statements and Common Stock Investments Decisions." *The Accounting Review* (July, 1973): 575-85.
- Most, K. *Accounting Theory*. Columbus, Ohio: Grid Inc., 1977.
- Rodinson, M. *Islam and Capitalism*. Translated by Brian Pearce. Suffolk: The Chaucer Press, 1974.
- Sulaiman, Maliah. "The Usefulness of the Current Value Balance Sheet and the Value Added Statement to Muslims: Some Evidence from Malaysia." *Accounting, Commerce & Finance: The Islamic Perspective Journal* 2, no. 2 (1998): 24-66.
- Swieringa, R. J., and K. E. Weick. "An Assessment of Laboratory Experiments in Accounting." *Journal of Accounting Research*, (Supplement, 1982): 56-116.
- Webster, M., and J. B. Kervin. "Artificiality in Experimental Sociology." *Canadian Review of Sociology and Anthropology* (October, 1971): 263-72.

