



Asia-Pacific Journal of Accounting & Economics

Symposium 2004

Kuala Lumpur, Malaysia

Malaysian Studies

Board Characteristics and Early Adoption of MASB 22 (Segment Reporting) in Malaysia

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November 2003

Abstract

This study examines whether there are systematic differences between early adopters and a matched control group of non-early adopters of Malaysian Accounting Standards Board 22 on segment reporting. Using a sample of 32 early adopters and a matched-pair of non-early adopters, our findings show that early adopters have significantly higher proportion of non-executive directors, particularly non-independent non-executives, than non-early adopters. Further analysis shows that full early adopters are significantly larger in size than non-early adopters, but partial early adopters are significantly smaller in size than non-early adopters. Furthermore, partial adopters also tend to have significantly greater proportion of non-executive directors (especially non-independent) than non-early adopters.

Keywords: Board characteristics; Early adopt; Segment; Malaysia

Acknowledgement: We thank Prof. Ferdinand Gul (City University of Hong Kong) and Dr. Nordin Mohd Zain (Malaysian Accounting Standards Board) and participants at the 5th Asian Academy of Management Conference 2003 for their helpful comments. We gratefully acknowledge financial support from Universiti Utara Malaysia and CPA Australia. Any remaining errors are our own.

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1. Introduction

An important area of accounting research focuses on managers' voluntary accounting choice. Fields et al. (2001) provide a critical review of the empirical research on accounting choice in the 1990s and conclude that the evidence on the motivations behind accounting methods choice is largely circumstantial and direct and compelling evidence is still elusive.

In this study we focus on one aspect of voluntary accounting choice namely the adoption of an accounting standard prior to its effective date, and relate it to board characteristics. In most cases, early adoption affects the income statement or balance sheet accounts. In other cases, early adoption affects the level of disclosure or merely changes the format of the financial statements without affecting the account balances. Studies on early adoption to date (Ayres, 1986; Salatka, 1989; Trombley, 1989; Karmon and Lubwama, 1997) use accounting standards in the US that have income and balance sheet ramifications. Ayres (1986) and Trombley (1989) examine the characteristics of early adopters, Salatka (1989) investigates the economic consequences of early adoption and Karmon and Lubwama (1997) document opportunistic behavior motivates managers to be early adopters.

This study extends the literature on the timing of accounting standard adoption on two fronts. Firstly, it examines early adoption in Malaysia, a country with different institutional and regulatory features, and secondly it uses an accounting standard on segment reporting that leads to greater information disclosure without affecting income or balance sheet accounts. Although there are several studies that examine factors that motivate accounting method choice and voluntary disclosures in Malaysia, we are not aware of any empirical studies that seek to explain early adoption of accounting standards in Malaysia. In addition, segment reporting is a deserving area to study following recent calls for improvement in segment disclosures

(see for example the OECD's White Paper on Corporate Governance in Asia, 2003; AIMR, 2000).

Given that early adoption of Malaysian Accounting Standards Board (MASB) 22: Segment Reporting is similar to providing voluntary disclosures, this study seeks to find out whether there are systematic differences between early adopters and a matched control group of non-early adopters of MASB 22 based on several company characteristics, including board characteristics. Recent studies seeking to explain the determinants of specific disclosures which are similar to ours include Watson et al. (2002) which examines disclosure of accounting ratios and Wallace et al. (1999) which examines the comprehensiveness of cash flow reporting. However they do not specifically examine the role of board characteristics and financial disclosures. Eng and Mak (2003) and Ho and Wong (2001) incorporate board characteristics in their comprehensive voluntary disclosure studies.

Using a sample of 32 early adopters and without differentiating whether they disclose the required segment information in full or partially and a control group of 32 non-early adopters, our findings indicate that the characteristic that distinguishes between early and non-early adopters is non-executive directors. Early adopters have significantly higher proportion of non-executive directors, particularly non-independent non-executives, than non-early adopters. Inspired by Powell (1997), when early adopters are further classified into full or partial adopters, the result shows that full early adopters are significantly larger (in terms of total assets) than non-early adopters. However, when comparing between partial early adopters and non-early adopters, the evidence suggests that partial early adopters are significantly smaller in size than non-early adopters. This finding suggests that smaller companies may opt to adopt early to create a positive impression although in actual fact they are not making

full segment disclosures. Furthermore, partial adopters also tend to have significantly greater proportion of non-executive directors (especially non-independent) than non-early adopters. We find no evidence to indicate that there are significant differences between full early adopters, partial early adopters and non-early adopters in terms of board size, board leadership, independent directors, leverage, audit firm size and earnings volatility.

The rest of the paper proceeds as follows. In the next section, we provide background information on the financial reporting framework and segment disclosures in Malaysia and a brief review of the relevant literature in order to formulate the hypotheses. The methodology section explains the identification of early adopters, procedure adopted to match early adopters against non-early adopters, data collection and the regression methods used. The findings discussed the descriptive statistics and results from univariate analysis, binary logistic regression and multinomial regression. The final section contains conclusion, limitation and suggestions for future research.

2. Literature Review

2.1 Financial Reporting Framework and Segment Disclosures in Malaysia

Initially, financial reporting practices in Malaysia were based on compliance with the Ninth Schedule of Companies Act 1965 and accounting standards promulgated by the two professional accounting bodies; The Malaysian Institute of Accountants (MIA) and the Malaysian Institute of Certified Public Accountants (MICPA). In 1997, the MASB and Financial Reporting Foundation (FRF) were established under the Financial Reporting Act 1997 in order to raise the level of corporate reporting for Malaysian companies. MASB is established as an

independent authority to develop and issue accounting and financial reporting standards in Malaysia. The function of MASB is to review, revise or adopt existing accounting standards as approved accounting standards. As at the date of writing, MASB has issued 33 accounting standards, including an accounting standard on presentation of financial statements of Islamic financial institutions. The FRF is a trustee body and has responsibility for oversight of the MASB's performance, financial and funding arrangements and as an initial source of views for the MASB on proposed standards and pronouncements. With this regulatory change Malaysia became the first country in Asia to set up an independent and statutorily incorporated accounting standard-setting body with representation from all relevant parties in the standard-setting process, including preparers, users, regulators and accounting profession. The Kuala Lumpur Stock Exchange (KLSE) requires its listed companies to comply with all the MASB approved accounting standards.

Prior to 2002, KLSE-listed companies were required to comply with the original International Accounting Standard (IAS) 14, one of the extant accounting standards approved by the MASB. The revised IAS 14 which became effective for periods beginning on or after 1 July 1998 was not adopted in Malaysia. With the recent introduction of MASB 22: Segment Reporting, listed companies in Malaysia are now required to disclose segment data similar to the requirements under the revised IAS 14 for the periods beginning on or after 1 January 2002. The MASB 22-cum-IAS 14 (revised) presents major departures from the original IAS 14. The differences include the adoption of two-tier segmentation with either the business segment or the geographical segment as the dominant basis of segment reporting (primary) and the other secondary, differential information disclosure for primary segment (full disclosure) and secondary segment (less disclosure), consistent use of

accounting policies across segments and standardized measure of segment results across companies.

Some companies have elected to adopt MASB 22 prior to its effective date, thereby voluntarily disclose more information especially for the primary basis of segment reporting since they have to provide additional disclosures such as depreciation and amortization expenses and other significant non-cash expenses by reportable segments to enable users to “predict the overall amounts, timing, or risks of a complete enterprise’s future cash flows”. In addition, unlike the original IAS 14, MASB 22 also requires disclosures of segment liabilities in the primary segment reports and capital expenditure in both the primary and secondary segment reports, if any. Appendix 1 highlights the mandatory items to be disclosed in the primary segment reporting.

2.2 Prior Studies and Hypotheses Development

Empirical studies investigating the determinants of extensiveness of segment disclosures, levels of voluntary disclosures or comprehensiveness of mandatory disclosures around the world invariably consider company specific factors to explain the varying levels of disclosures. Ahmed and Courtis (1999) provide a meta-analysis of 29 comprehensive disclosure studies between 1968 and 1997 and conclude that disclosure levels have positive relationships with firm size and leverage.¹ They conclude the lack of conclusive findings between other company attributes and corporate disclosure is due to differences in disclosure index construction and definition of the explanatory variables.

Of late there emerged new studies that relate corporate governance with corporate transparency (Eng and Mak, 2003; Bujaki and McConomy, 2002; Ho and Wong, 2001). The level of corporate governance in a firm is determined to a large

extent by the composition of its board of directors i.e. the balance between outside and inside directors and whether the chairman of the board and the Chief Executive Officer (CEO) being the same person. It has been widely recognized that independent boards are essential to a sound governance structure. A CEO who is also chairman of the board usually signifies that the management is controlled by a dominant personality (Molz, 1988). The person who occupies both roles, i.e. duality board leadership, tends to withhold information to external users.

Fama and Jensen (1983) and Forker (1992) assert that the larger the proportion of independent or non-executive directors on the board, the more effective they are in monitoring management and corporate boards resulting in lower managerial opportunism and tendency to withhold information. Thus, independent or non-executive directors on board would improve the quality of financial disclosure. Similarly, Chen and Jaggi (2000) argue that greater representation of independent or non-executive directors on corporate board enable them to exert greater influence on management and encourage better compliance with mandatory disclosure requirements. Likewise, Eng and Mak (2003) assert that independent or outside directors who are less aligned to management have greater tendency to encourage firm to disclose more voluntary information to outside directors.

Forker (1992) finds a significant negative relationship between the existence of a dominant personality and the quality of share option disclosure. On the other hand, Ho and Wong (2001) investigate whether CEO/Chairman duality affects the extent of voluntary disclosure in Hong Kong and obtain positive but insignificant coefficient at the conventional level. Contrary to expectation, Haniffa and Cooke (2002) show that the presence of non-executive chairman on board is negatively associated with the extent of voluntary disclosure in Malaysia.

Although Chen and Jaggi (2000) find a positive relationship between the proportion of independent directors on board and comprehensiveness of mandatory financial disclosure in Hong Kong, Forker (1992) fails to find a positive association between non-executive directors and the quality of stock options disclosure. He attributes the lack of empirical support to the measurement error arising from the non-disclosure of information on non-executive director by some firms. Using Singapore data, Eng and Mak (2003) find that higher outside directorship reduces voluntary disclosure.

In Malaysia, the role of independent directors in improving corporate governance has also been recognized. The voluntary Malaysian Code on Corporate Governance (available at <http://sc.com.my/html/publications/inhouse/cgreport2000>) released in 2000 recommends (1) the separation of Board Chairman and CEO and (2) at least two members or one third of corporate board, whichever is higher, are independent directors. Based on the foregoing discussion, we hypothesized that:

H1: *Ceteris paribus*, there is a negative association between CEO duality and early adoption of MASB 22.

H2: *Ceteris paribus*, there is a positive association between the proportion of non-executive directors and early adoption of MASB 22.

3. Research Methodology

3.1 Sample Selection and Data Source

A total of 64 companies comprising 32 early adopters of MASB 22 and a control group of 32 non-early adopters are examined in this study. Early adopters are mainly identified by searching the 2001 and 2002 annual reports and/or annual audited accounts (excluding financial statements ended on 31 December 2002) in the

KLSE LINK database (<http://www.klse.com.my/announcements>) for phrases unique to MASB 22 such as “primary reporting”, “segment liabilities”, “MASB 22”, “standard 22” and “standard no 22”. The early adopters are matched on a paired basis with non-early adopters based on similar board of exchange (main or second board), KLSE sectoral classification, financial year end and number of business segments (plus or minus one is acceptable if exact matching is not possible).

For all the sample companies, we hand collect information from the annual reports relating to board composition (size of board, number of executives, number of non-executives (NONEXEC) comprising independent non-executive directors (INED) and non-independent non-executive directors (NINED)), board leadership and auditor. The number of business and geographical segments for sample companies are obtained from the segment disclosures in the notes to the financial statements. Financial data such as total assets, total liabilities, profit before tax (for the last five years) are taken from the KLSE-RIS (<http://www.klse-ris.com.my>).

We scrutinize the early adopters’ segment disclosures and code the accounting treatments for the mandatory items in the primary segment reporting format (please refer Appendix 1) as follows: (A) allocated to segments, (U) disclosed in aggregate in segment report without allocating to segments i.e. unallocated, (NA) not applicable (since the items are also not disclosed elsewhere in the consolidated financial statements, and (ND) not disclosed in segment report although they are disclosed elsewhere in the consolidated financial statements. Early adopters with at least one item designated “ND” are deemed not complying fully with MASB 22 disclosures and categorized as partial early adopters, and the remaining are labeled full early adopters. These procedures yield 15 full and 17 partial early adopters. The most glaring disclosure deficiency is the failure to disaggregate non-cash expenses other

than depreciation and amortization by reportable segments. Other deficiencies include non-disclosure of capital expenditure and investment in equity method associates by reportable segments. There are also a few instances where the basis for inter-segment pricing is mentioned in the related party disclosure rather than in the segment report.

3.2 Testing the Relationship Between Early Adoption and Board Characteristics

We run two logistic regression models; binary and multinomial. In the binary model, the dependent variable is dichotomous and takes the value of either 1 (early adopters) or 0 (non-early adopters) and in the multinomial model the dependent variable is trichotomous and takes the value of 0 (full early adopters), 1 (partial early adopters) and 2 (non-early adopters). The motivation to run both binary and multinomial models comes from Powell (1997). He shows that in modeling the relationship between firm's characteristics and its takeover likelihood more insight can be gained from segregating takeover targets into hostile or friendly than treating them as homogeneous. He cautions that "the use of a binomial specification to model takeover likelihood is likely to be incorrect and conclusions based on such a model are likely to be misleading and result in incorrect inferences regarding the characteristics of firms subject to takeover" (p. 1026).

The independent variables used in both models are board composition (NONEXEC and DUALITY), and control variables such as company size, leverage, audit firm size and earnings volatility. Studies by Chow and Wong-Boren (1987), Ahmed and Courtis (1999) and Eng and Mak (2003) show that the level of disclosure is related to firm size, leverage and audit firm size. Waymire (1985) shows that companies that issue management's earnings forecast more frequently have lower earnings volatility than companies that issue management's forecasts on an infrequent basis, consistent with Imhoff (1978) and Ruland (1979).

We measure NONEXEC as the proportion of independent and non-independent (i.e. dependent) non-executive directors who sit on the board. DUALITY takes a value of 1 if the same person holds both the posts of chairman and CEO. We use the natural log of total assets (LNASSET) as a proxy for company size. LEVERAGE is measured as total liabilities divided by total assets and AUDIT takes a value of 1 if the company is audited by “Big 4”. In common with previous study by Mitchell et al. (1995), earnings volatility (VOLATILE) is measured by taking the difference between maximum and minimum profit before tax for five years divided by average profit before tax.

4. Findings

4.1 Sample Characteristics

A summary of the characteristics of sample companies is reported in Table 1. Panel A shows the characteristic of sample by board of exchange. Twenty-two (68.75%) early adopters are from the Main Board and the other 10 (31.25%) are from the Second Board. With respect to sector, nearly 70 percent come from four sectors namely construction, consumer products, industrial products and plantation. Panels C and D display information on number of business segments and geographical segments. The early adopters have, on average, four business segments and 70 percent of them have not more than two geographical segments. Panel E shows that 20 early adopters adopted MASB 22 for their financial years ended on or before 31 December 2001 while another 12 adopted for financial years ended between 31 January 2002 and before 31 December 2002.

The “Big 4” audits three quarter of early adopters. In terms of board leadership, six early adopters (about 19%) have duality board leadership structure

where the same person holds both the CEO and Chairman roles. This is consistent with the findings from the Corporate Governance Survey 2002 jointly organized by KLSE/PWC where 15 percent of listed companies have Chairmen who hold dual roles. Although not reported in Table 1, our sample results indicate that companies that do not separate the role of Chairman and CEO also have significantly smaller board (mean board size of 6.3 vs. 7.9) and are more likely to be from the Main Board (83 percent vs. 65 percent) and audited by Big 4 (83 percent versus 73 percent) than their counterparts. It is coincidental that the proportions of Big 4 auditor and duality among the non-early adopters are identical to early adopters.

4.2 Univariate Analysis

Table 2 gives the descriptive statistics of continuous independent variables included in the study, partitioned by full early adopters, partial early adopters and non-early adopters. Comparing between early and non-early adopters shows that early adopters are twice as large as non-early adopters, have lower leverage and greater earnings volatility. However none of these differences are significant. For early adopters, the proportion of non-executive directors (dependent non-executive directors) is about 67 percent (30 percent) compared to 57 percent (19 percent) for non-early adopters, and these differences are significant at ten (five) percent levels. Comparatively, the mean values for board size and independent non-executive directors are almost similar between early adopters and non-early adopters. The average board size of eight and the minimum proportion of independent directors which is less than one-third are identical to the findings from KLSE/PWC Corporate Governance Survey 2002. The survey reveals that the boards on average has eight directors and there are still a few companies which have not met the KLSE requirements of having a minimum of two or one-third independent directors on the

board, whichever is higher. Although not reported in Table 2, further analysis shows that in our sample there are eight companies (13 percent) that do not meet the KLSE requirement pertaining to composition of independent directors, of which four are full adopters, one is partial adopters and three are non-early adopters. Other points worth noting are the proportions of non-executive directors (and non-independent non-executives) are highest for full adopters, followed by partial and non-early adopters. The proportions of independent non-executives are identical for all subgroups.

4.3 Multivariate Analysis

The Pearson correlations between the variables are shown in Table 3. The proportion of non-executive directors is positively correlated with firm size and Big 4 auditor whilst leverage is negatively correlated with earnings volatility. However, none of the correlation coefficients among the independent variables are greater than 0.4.

Table 4 presents parameter estimates of binomial and multinomial models with corresponding coefficient values and standard errors. For the binomial regression (model 1), positive sign on a parameter indicates that an increase in the corresponding variable increases the likelihood of early adoption and a negative sign indicates the opposite. For the multinomial regression (model 2), the parameters are interpreted as indicating the probability of an event, either being a full adopter or partial adopter, relative to the probability of being non-early adopter.

The results show that model 1 has a likelihood ratio of 82.901 with six degree of freedom. The Nagelkerke R^2 of 0.116 indicates mild relationship between dependent variable and independent variables. In addition the Hosmer and Lemeshow goodness of fit gives a chi-square of 8.614 (level of significance is 0.376) which indicates a good model fit between the actual and predicted value of the dependent

variable. The percentage of correct classification for model 1 is 54.7 percent. The result reveals that only NONEXEC is significant at 10 percent level with positive direction. This suggests that the higher the composition of non-executive directors on the board the higher the likelihood to early adopt MASB 22. Interesting evidence is found when replacing NONEXEC with independent non-executives (INED) and non-independent non-executives (NINED). INED is found to be insignificant, whilst NINED is significant at five percent level with positive direction. This indicates that the dependent non-executive directors may play some important role in deciding on early adoption, but not independent directors. The results are consistent with the univariate analysis that shows early adopters have significantly higher percentage of dependent non-executive directors than non-early adopters, whilst the proportions of independent directors are identical for early and non-early adopters.

For model 2, the likelihood ratio is 110.911 with 12 degree of freedom and significant at five percent level. When early adopters are partitioned into full adopters and partial adopters, the strength of the relationship as indicated by the Nagelkerke R^2 is higher than model 1. Thus the multinomial model has a better explanatory power than the binary model that treats full and partial early adopters as homogeneous group. For full adopters, LNASSET is found to be significant at five percent level with positive direction which suggests that larger firm is more likely to early adopt MASB 22 (with full disclosure) and less likely to delay adoption of MASB 22. For partial adopters, variables LNASSET and NONEXEC are found to be significant at 10 percent level but having negative direction for LNASSET. The result suggests that the higher the proportion of NONEXEC increases the likelihood for firm to adopt partial disclosure of segment information in accordance with MASB 22 as opposed to not adopting MASB 22 at all. Interestingly smaller firms also tend to adopt partial

disclosure of segment information in accordance with MASB 22 as opposed to not adopting MASB 22 at all. However, in the binary model there is no evidence that firm size is an important characteristic that distinguishes between firms that elect early adoption versus defer adoption until the mandatory date. Thus, the model that pools full and partial early adopters as homogeneous is probably misspecified and yields spurious result that obscures the effect of firm size. The evidence which shows that smaller companies are more likely to adopt MASB 22 ahead of the mandated period, albeit with less than full primary segment disclosure, than delay adoption suggests there is a possibility that the decision to adopt early is a charade to create a positive impression. All in all, the results for the multivariate regressions are consistent with the univariate analysis.

5. Conclusion

The study reveals several interesting results on the characteristics of early adopters. First, full early adopters have larger size of assets than non-early adopters. Second, companies having smaller size of assets also made early adoption but they only complied partially with the segment disclosures. Third, the evidence suggests that non-executive directors do play some role towards early adoption of MASB 22. However the evidence indicates that dependent rather than independent non-executive directors are the one who probably make the difference between electing early adoption and delaying adoption. Our evidence which shows that a multinomial framework differentiating between full early adopters and partial early adopters is superior to a binomial framework is consistent with Powell (1997).

The study is not without its limitations. The low R^2 suggests that there may be other important variables that are left out. One possibility is ownership structure.

Recent studies which show that ownership structure influences the level of disclosure include Chau and Gray (2002) and Eng and Mak (2003). It is interesting to see whether the inclusion of ownership variable would improve the model, and to compare the determinants of early adoption for standards that affect the extent of disclosure only against standard that affect income and balance sheet figures, such as MASB 23 on Impairment of Assets. Another burning research question remains unanswered is what are the economic consequences of early adoption of MASB 22 or quality of segment disclosures in terms of earnings forecast accuracy and cost of capital.

Table 1: Sample Characteristics

	<i>Early Adopter</i>	<i>Non-early adopter</i>	<i>Total</i>
Panel A: By Board of Exchange			
Main board	22	22	44
Second board	10	10	20
Panel B: By Sector			
Construction	6	6	12
Consumer products	7	7	14
Finance	2	2	4
Industrial products	6	6	12
Plantation	5	5	10
Properties	3	3	6
Technology	1	1	2
Trading/services	2	2	4
Panel C: By Number of Business Segments			
1	1	1	2
2	4	4	8
3	11	11	22
4	7	4	11
5	7	8	15
6	2	3	5
7	0	1	1
Panel D: By Number of Geographical Segments			
1	17	12	29
2	7	10	17
3	5	3	8
4	2	1	3
At least 5	1	6	7
Panel E: By Year			
2001	20	20	40
2002	12	12	24
Panel F: By Auditor			
Big 4	24	24	48
Non Big 4	8	8	16
Panel G: By Duality			
CEO = Chairman (1)	6	6	12
CEO ≠ Chairman (0)	26	26	52

Table 2: Descriptive Statistics for Continuous Independent Variables

	<i>Mean</i>	<i>Min.</i>	<i>Max.</i>	<i>T-statistic Full vs Late Full vs Partial Partial vs Late Early vs Late</i>
Asset (RM billion):				
Full Adopter	2.49	0.06	12.47	2.098*
Partial Adopter	0.46	0.03	2.43	2.287**
Early Adopter	1.42	0.03	12.47	-0.889
Non-early adopter	0.64	0.03	2.75	1.660
LN(Asset) (RM million):				
Full Adopter	6.90	4.14	9.43	2.258**
Partial Adopter	5.43	3.35	7.80	2.908**
Early Adopter	6.12	3.35	9.43	-1.210
Non-early adopter	5.86	3.47	7.92	0.751
Board Size:				
Full Adopter	8.27	5.0	12.0	1.385
Partial Adopter	7.65	5.0	12.0	0.858
Early Adopter	7.94	5.0	12.0	0.564
Non-early adopter	7.34	4.0	12.0	1.236
Non-executive (NONEXEC):				
Full Adopter	0.69	0.33	1.0	1.700*
Partial Adopter	0.65	0.33	1.0	0.460
Early Adopter	0.67	0.33	1.0	1.388
Non-early adopter	0.57	0.20	0.9	1.939*
Independent non-executive (INED):				
Full Adopter	0.36	0.13	0.60	-0.798
Partial Adopter	0.37	0.13	0.67	-0.307
Early Adopter	0.36	0.13	0.67	-0.493
Non-early adopter	0.39	0.20	0.67	-0.822
Non-independent non-executive (NINED):				
Full Adopter	0.33	.00	0.67	2.360**
Partial Adopter	0.28	.00	0.63	0.686
Early Adopter	0.31	.00	0.67	1.474
Non-early adopter	0.19	.00	0.50	2.365**
LEVERAGE:				
Full Adopter	0.39	0.03	0.97	-2.011*
Partial Adopter	0.50	0.04	2.14	-0.832
Early Adopter	0.45	0.03	2.14	-0.836
Non-early adopter	0.62	0.03	2.03	-1.520
Earnings Volatility (VOLATILE):				
Full Adopter	-0.01	-10.21	1.89	-0.125
Partial Adopter	2.44	-5.64	31.11	-1.198
Early Adopter	1.30	-10.21	31.11	0.950
Non-early adopter	0.20	-14.39	26.05	0.617

Full (n=15) and partial adopters (n=17) are subset of early adopters (n=32). There are 32 non-early adopters.

**significant at 5% level or better (two-tailed and assuming unequal variances).

* significant at 10% level or better (two-tailed and assuming unequal variances).

Table 3: Pearson Correlation Matrix

	NONEXEC	LEVERAGE	DUALITY	AUDIT	VOLATILE	DV2	DV1
LNASSET	0.348***	-0.121	-0.088	0.222*	-0.139	-0.251**	0.095
NONEXEC		-0.174	0.009	0.384***	0.060	-0.242*	0.239*
LEVERAGE			0.003	0.076	-0.381***	0.208*	-0.190
DUALITY				0.092	0.105	-0.058	0.000
AUDIT					-0.091	0.011	0.000
VOLATILE						-0.017	0.078
DV2							-0.9***

DV1 is dichotomous dependent variable and takes the value of either 1 (early adopters) or 0 (non-early adopters) and DV2 is trichotomous dependent variable and takes the value of 0 (full early adopters), 1 (partial early adopters) and 2 (non-early adopters). *** indicates significant at 1% level or better, ** indicates significant at 5% level or better and * indicates significant at 10% level or better.

Table 4: Parameter Estimates of the Binomial and Multinomial Models

Variables	<i>Binomial – Model 1</i>		<i>Multinomial – Model 2</i>			
	<i>(n=64)</i>		<i>Full (n=15)</i>		<i>Partial (n=17)</i>	
	<i>Coefficient</i>	<i>Standard error</i>	<i>Coefficient</i>	<i>Standard error</i>	<i>Coefficient</i>	<i>Standard error</i>
Constant	-1.013	1.405	-4.503	2.128	0.772	1.785
LNASSET	0.021	0.210	0.617**	0.312	-0.527*	0.311
NONEXEC	2.588*	1.533	2.186	2.084	3.065*	1.854
LEVERAGE	-0.735	0.714	-1.894	1.312	-0.394	0.836
DUALITY	0.048	0.676	1.046	0.905	-0.980	0.990
AUDIT	-0.453	0.676	-1.170	0.931	-0.017	0.830
VOLATILE	-0.001	0.040	-0.047	0.070	0.031	0.047

	<u>Model 1</u>	<u>Model 2</u>
Likelihood Ratio	82.901 (df = 6)	110.911 (df = 12)**
Nagelkerke R ²	0.116	0.333
McFadden R ²	-	0.166
Hosmer and Lemeshow	8.614 (df = 8)	-
Percentage Correct	54.7%	54.7%

In model 1, the dependent variable is dichotomous and takes the value of either 1 (early adopters) or 0 (non-early adopters). In model 2, the dependent variable is trichotomous and takes the value of 0 (full early adopters), 1 (partial early adopters) and 2 (non-early adopters). ** indicates significant at 5% level or better and * indicates significant at 10% level or better.

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Appendix 1

Mandatory Disclosures for Primary Segment Reporting Based on MASB 22

1. An enterprise should disclose segment revenue for each reportable segment. Segment revenue from sales to external customers and segment revenue from transactions with other segments should be separately reported.
2. An enterprise should disclose segment result for each reportable segment.
3. An enterprise should disclose the total carrying amount of segment assets for each reportable segment.
4. An enterprise should disclose segment liabilities for each reportable segment.
5. An enterprise should disclose the total cost incurred during the period to acquire segment assets that are expected to be used during more than one period (property, plant, equipment, and intangible assets) for each reportable segment. While this sometimes is referred to as capital additions or capital expenditure, the measurement required by this principle should be on an accrual basis, not a cash basis.
6. An enterprise should disclose the total amount of expense included in segment result for depreciation and amortisation of segment assets for the period of each reportable segment.
7. An enterprise should disclose, for each reportable segment, the total amount of significant non-cash expenses, other than depreciation and amortisation, that were included in segment expense and, therefore, deducted in measuring segment result.
8. An enterprise should disclose, for each reportable segment, the aggregate of the enterprise's share of the net profit or loss of associates, joint ventures, or other investments accounted for under the equity method if substantially all of those associates' operations are within that single segment.
9. If an enterprise's aggregate share of the net profit or loss of associates, joint ventures, or other investments accounted for under the equity method is disclosed by reportable segment, the aggregate investments in those associates and joint ventures should also be disclosed by reportable segment.
10. The basis of pricing inter-segment transfers should be disclosed.

¹ They exclude studies that examine specific disclosure aspects such as segment reporting and corporate social reporting.