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Corporate Risk Disclosure in Malaysia: The Influence of Pre-dispositions of Chief Executive Officers and Chairs of Audit Committee

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Abstract

Drawing on upper echelons theory, this study aims to provide evidence on the effects of the background influences of the Chief Executive Officer (CEO) and Chair of Audit Committee (CAC) on corporate risk disclosure. In practice, such corporate disclosures are found to be inadequate, and there is limited evidence on factors influencing risk disclosure decisions by management. Sampling from the 200 top listed companies in Malaysia, data is hand-collected from annual reports. Sentences in which pre-determined risk-related keywords appear are counted to measure total risk disclosure and its sub-categories. Demographic data for CEOs and CACs is collected, including age, functional track, education, tenure and ethnicity. The findings in this paper indicate that the CEOs' tenure and ethnicity significantly influence their decision making in regards to corporate risk disclosure. That is, CEOs with Bumiputera ethnicity and with shorter-tenured backgrounds are associated with higher corporate risk disclosure. However, the background of CACs is found to have no significant influence. These results have implications for board decisions on the recruitment of CEOs. Further, there are implications for corporate governance policy-makers concerning the credentials of CACs in Malaysia. This paper provides empirical evidence on the relationship between corporate risk disclosure and the influence of pre-dispositions of CEOs and CACs in Malaysian top listed companies since prior research has not investigated these two types of key management players in the area of corporate risk disclosure.

Keywords: Malaysia, Corporate risk disclosure, Upper echelons theory, Chief Executive Officer, Chair of Audit Committee, Demographic characteristics

1. Introduction

The recent increasing awareness on the issue of corporate risk reporting creates immense pressure for corporations to conduct business in a more publicly responsible way. More broadly, the dynamic nature of the business environment nowadays has increased public demand for greater disclosure by firms relating to risks and uncertainties (Linsley and Shrives, 2005). The extent to which companies provide transparency about the management of their various types of risk is a central issue in good corporate governance. In essence, companies need to maintain a sound system of internal control and risk management procedures in which the disclosure of risk information should be prioritised and emphasized. Research into the factors that drive risk disclosure decisions by managers can provide a way forward to help better explain and understand how to enhance the corporate practice of risk reporting. It can also motivate management to increase the extent of voluntary disclosure of corporate risk information.

Risk reporting would demonstrate that the board of directors understand, consider and manage risk well (Dobler, 2008). It is important to inform shareholders the effect of risk on company's future financial position. As the public demand for firms to make risk disclosure of corporate information has been increased, a number of well-structured approaches to risk management have been developed over the recent years. These approaches are to facilitate the control and communication of different type of risks (Linsley and Shrives, 2000). Deumes (2008, p.122) addressed this potential corporate risk disclosure stating that, 'studying risk disclosure is important because corporate transparency about risk is vital for the well-functioning of capital markets.'

The depth of research on corporate risk disclosure is substantially limited to its relationship with the company-specific characteristics. These relationships have been studied by, for example, Linsley and Shrives (2006), Hassan (2009) and Amran *et al.* (2009). However, few researchers have concentrated on the internal managerial factors that influence the decision-making of risk disclosure. In our research, corporate risk disclosure is

considered from the perspective of a company's disclosure decision-making processes. It addresses the research question of whether bounded cognitions or pre-dispositions arising from background experiences and qualifications of the key management players have an influence on the level of corporate risk disclosure in the Malaysian context.

A theoretical perspective that was developed to address influences of top managements in corporations is that of the upper echelons theory. This theory has been built from the premises of earlier strategic choice literature (e.g., Child, 1972; Montanari, 1978). It was first introduced in the strategic management literature by Hambrick and Mason (1984) in the context of the effects of top managers' bounded cognitions and values in their organization's strategic decisions. According to Hambrick and Mason (1984) upper echelons theory is attributed to top managers' bounded rationality (March and Simon, 1993; 1958) in which their choices are bounded and influenced by their idiosyncratic experiences and values. The central premise of upper echelons theory in which mainly built on the literature is that executive's experiences, values and personalities as well as cognitive processes to a great extent influence their interpretations of the situations they face and, sequentially affect their judgment and decision making.

The cognitive process of an individual is a psychological concept that is not directly quantifiable with sufficient objectivity across a range of situations. Hence, the argument of upper echelons theory is that demographic factors (age, ethnicity), experience (tenure, functional track) and educational qualifications will provide proxy data for the cognitive processes, and hence pre-dispositions, of executives. That is, demographics, experiential and educational factors are expected to shape the pre-dispositions and biases that executives bring to decision situations (Hambrick and Mason, 1984).

Upper echelons theory establishes the link between top managements' personal attributes and the firm's strategy decisions and outcomes. This theory plays a role in corporate disclosure because top executives have power to greatly influence the decision-making of organizations (Hambrick and Mason, 1984). Since these top managers have superior access as well as control over large corporate information, much of the company decision and strategic intent to disclose information rest on their discretion (Hambrick, 2007). Therefore, the idea that managerial characteristics could have an impact on corporate decisions on disclosure could be apparent. In relation to discretionary decisions about the public disclosure of a broad range of possible information on the past, present and future risks of the corporation and their management, the two key decision-makers are likely to be the Chief Executive Officer (CEO) and the Chair of Audit Committee (CAC). Note that the role of the audit committee of the board typically embraces the oversight of corporate reporting to shareholders and risk management.

Despite the existence of prior evidence about demography of top managers and corporate decision choices, there is no evidence about whether different characteristics of top managers might affect corporate risk disclosure. The disclosure of risk information depends largely on managers' willingness to actively disclose the sufficient information. Therefore, upper echelons theory is invoked to address the factors of the top management background that would influence their willingness to disclose risk information. The study has two objectives. The first objective is to establish a theoretical case, arising from upper echelons theory, for the relationship between specific demographic characteristics of the key executive (the CEO) and key director (the Chair of Audit Committee) and the level of corporate risk disclosure. The second objective is to empirically determine the effect of top managers' demographic characteristics on corporate risk disclosure which helps to enrich the determinants of influential factors on risk disclosure by companies.

2. Development of Hypotheses

Reviewing extant research based on upper echelons theory; five manager-specific characteristics are chosen to demonstrate the relationship with the corporate risk disclosure in Malaysian corporations. These include age, functional background, education, tenure and ethnicity of top managers' as recommended by upper echelons theory. Specifically, top managers refer to Chief Executive Officers (CEOs) and Chief of Audit Committees (CACs).

2.1 Age

Upper echelons theory suggests that managers' age can affect their values, cognitive styles and thus their decisions (Hambrick and Mason, 1984). Psychology and finance research has found that risk aversion (e.g., investment in risky assets) appears to increase with age (e.g., Palsson, 1996). In other words, older managers are expected to be less aggressive in their accounting choices relative to younger managers. There are three likely explanations based on Hambrick and Mason (1984). First, older managers are already established and obtain

their place in society and this advantage will therefore make them continue to choose a strategy that helps them maintain this position. Younger managers on the other hand, it is contended, prefer risky strategies that will induce more benefits in terms of making their mark with the public. Second, older managers have greater psychological commitment to the organizational status quo (Child, 1974). Third, older managers 'may be at a point in their lives at which financial security and career security are important' (Hambrick and Mason, 1984, p. 198). On any given decision-making, any potential actions that might have a risk to put their positions in danger are generally avoided. An empirical study by Palsson (1996) finds that age is associated with greater risk aversion in portfolio holdings. Bertrand and Schoar (2003) reported that older managers choose lower levels of corporate expenditures, lower leverage and larger cash holdings, consistent with conservatism. Since risk disclosure is a costly undertaking, these arguments suggest that older CEOs and CACs may develop more conservative and risk averse disclosure for fear such disclosures may prove inaccuracy.

Therefore, the study proposes the following hypotheses:

H_1: There is an inverse relationship between the age of (a) the CEO and (b) the CAC, respectively, and the levels of corporate risk disclosure.

2.2 Functional Track

Hambrick and Mason's (1984, p. 200) upper echelons theory suggests managers' primary functional track affects their choices because 'career experiences partially shape the lenses through which they view current strategic opportunities and problems.' In other words, managers adopt strategies that fit their personal and hands-on experience. Hambrick and Mason (1984) classified functional track into 'output functions' and 'throughput functions'. Output functions are functions such as marketing, sales and research and development (R&D). Throughput functions are functions such as production, process engineering and accounting. In this study, the categorisations of each function are broader with the inclusion of other related items. Specifically, it is found that the CEO's and the CAC's functional background are beyond what has been categorised as output functions and throughput functions above. Therefore, to reflect this study and particularly the Malaysian corporate environment, this study will add several more categories to be classified as output functions and throughput functions. There are three matched-categories developed for the purpose of functional track of top managers in this study. There are Entrepreneurial versus Bureaucratic, Public/Client engagement versus Internal organization role and Industry-specific expertise versus Widely-based expertise. Because output functions always relates to risky effort, output functions of managers are associated with the managers' propensity for risk taking. It is argued that additional output functions of managers (entrepreneurial, public/client engagement and industry-specific expertise) developed in this study is likely associated with the increasing of risk disclosure.

As the output function is often associated with risk and uncertainty, it may be concluded that output managers are more aggressive risk-takers than throughput managers. Gupta (1984) argues that entrepreneur with output functions are likely better to deal with an uncontrolled environment and uncertainty than those with other types of functions. In relation to this study, these output types of managers are expected to disclose more risk information. Managers with a throughput background and work function may adopt a conservative disclosure stance as they are considered less tolerant of ambiguity (Holland, 1997). In a similar vein, Bamber et al. (2010) who studied voluntary earnings-related disclosure found that disclosure styles of managers promote from accounting and finance disciplines are associated with fewer but more precise disclosures. This is deemed to reflect the element of conservatism. Since corporate risk disclosure is a complex task which has an impact on the entire organization, throughput function-experienced CEOs and CACs are not expected to disclose more risk information.

Therefore, the study proposes the following hypotheses:

H_2: There is an inverse relationship between the background of (a) the CEO and (b) the CAC, respectively in throughput functions and the levels of corporate risk disclosure.

3. Methods

3.1. Sample

The sampling frame for this study is the 200 top listed companies, based on market capitalization, listed on the Main Board of Bursa Malaysia for the year 2009. Elimination is made of licensed institutions (such as commercial banks and finance companies) as well as those companies with unavailable or incomplete data due to a missing 2009 annual report or whole components of manager-specific or financial data. The final sample is 128 companies. Consistent with previous corporate disclosure literature, this study chooses large companies

because they are more likely to disclose risk information (e.g., Deumes and Knechel, 2008; Abraham and Cox, 2007; Linsley and Shrives, 2006; Beretta and Bozzolan, 2004). These prior studies have found a positive association between risk disclosure level and firm size. All the data has been hand-collected from the contents within the sampled annual reports.

3.2. Measurement

3.2.1. Independent variables

Age (AGE) is measured by the actual ages of CEO and CAC, expressed in years.

Functional track (FUNCTR) is measured by distinguishing between a throughput function (accounting, finance, production, process engineering) and output function (sales, marketing, research and development) in the experiential background of the CEO and CAC of the firm (Hambrick and Mason, 1984). Other items are added to Hambrick and Mason's (1984) list for this study because of the background 'tracks' disclosed in the sampled annual reports. The throughput function includes bureaucratic and internal organizational roles, while output functions include entrepreneurial, public/client engagement and industry-specific expertise roles. The variable is dichotomised into a value of one if the CEO or CAC is from a throughput function, otherwise it is given zero. The variable is also recoded with a value of one if the CEO or CAC is from output functions; otherwise it takes a value of zero.

Education (EDU) is measured by the education level of the CEO and CAC of the firm holding professional accounting qualifications (CPA) and/or Master of Business Administration (MBA). In this study, the variable takes a value of one if the CEO or CAC holds CPA and/or MBA; otherwise it takes a value of zero.

Tenure (TEN) is measured by the number of years the firm's current CEO and CAC, respectively, have held the position.

Ethnicity (ETHN) is measured by Bumiputera and non-Bumiputera CEO and CAC. The variable takes a value of one if the CEO or CAC is Malay (Bumiputera), otherwise it takes a value of zero.

3.2.2. Dependent variable

The measurement of extent of risk disclosure involves collection of data through content analysis which has been a widely used approach in accounting disclosure literature (e.g., Milne and Adler, 1999; Beretta and Bozolan, 2004; Lajili and Zegal, 2005; Linsley and Shrives, 2005, 2006; Abraham and Cox, 2007; Deumes, 2008). Various units of analysis have been used by content analysts including words (e.g., Deegan and Gordon, 1996); sentences (Milne and Adler, 1999; Beretta and Bozzolan, 2004; Linsley and Shrives, 2006; Abraham and Cox, 2007) and proportions of a page (Guthrie and Parker, 1990). Milne and Adler (1999) and Linsley and Shrives (2006), choose sentences because they argue that these are more reliable than any other unit of analysis. They further argue that, a single word has no meaning to provide a basis for coding disclosures. Rather, an individual word should be looked at within a sentence to provide a proper context in order to achieve more valid measures. Therefore, the amount of disclosure chosen in this study to analyse the content of risk disclosure in annual reports is sentence count. This is in line with previous related risk disclosure studies (Beretta and Bozzolan, 2004; Linsley and Shrives, 2005, 2006; Abraham and Cox, 2007). Moreover, this approach is chosen based on its objective measure and perceived high degree of accuracy in the underlying quantification of the risk items provided in annual reports. Since this study does not intend to determine the quality of risk disclosure, using sentences as the coding scheme is expected to provide more complete, valid and meaningful data for further analysis (Milne and Adler, 1999; Linsley and Shrives, 2006).

In addition, to minimizing subjective judgement and inconsistency in quantifying risk disclosure from text, specific keywords are pre-defined. These keywords are drawn from a range of prior definitions of the risk. Annual reports are viewed through a portable document format (PDF) and details of keywords which are listed in Table 1 are searched. Further, all pictures and images such as charts, diagrams and their captions are excluded from the analysis to minimise the amount of subjectivity involved (Frost and Wilmshurst, 2000).

Table 1. List of Keywords

Basic Keyword: Risk	
Other Risk Keywords	
Firm's Expected Future Impacts	Firm's Current Vulnerability To Impact
Outlook Prospect Opportunity Uncertainty	Hazard Danger Harm Threat Exposure Loss Uncertainty

Sentences in which the keywords appear are counted for the entire annual reports and sentences that contain risk items are reviewed and classified according to the types of risks. These types of risks were drawn from previous literature in the area, dividing risk disclosures into the following four categories: 1) operational risk, 2) environmental risk, 3) financial risk and 4) strategic risk. These four categories are chosen from a combination of prior risk classification schemes by Beretta and Bozzolan (2004), Cabedo and Tirado (2004), Lajili and Zegal (2005), Abraham and Cox (2007) and Deumes (2008).

Table 2 gives definitions of each risk type.

Table 2. Type of Risks and Its Definition

Type of Risks	Definition
Operational risk	The risk of the probability of losses arising from the essential operations side of the firm. It should covers issues such as internal control and information systems, risk management policies, project failure, product failure, operational problems, operational disruptions and health and safety.
Environmental risk	The risk that relates to external factors which are beyond the organization's control and comprises risks such as political risk, social risk, legal and regulation risk, climate and catastrophic risk and industry sources of risks such as competition, suppliers and customers.
Financial risk	The risk that refers to financial management objectives and policies, interest rate risk, foreign currency exchange rate risk, price and commodity risk, credit risk, market risk and cash flow and liquidity risk.
Strategic risk	The risk that relates to events that are external to the company, but have a significant impact on its strategic decisions or activities. It is often the risk that organizations may have to take in order to expand and for the long-term continuity and sustainability of the organization which affect the overall direction of business.

3.2.3. Control variables

As with prior studies, this study includes company size, leverage, auditor size and industry classification as control variables in the regression model given the evidence of the association between these variables and corporate disclosure. Based on prior studies, these variables are shown to have an impact on corporate risk disclosure (Aljifri, 2008; Abraham and Cox, 2007; Linsley and Shrives, 2006; Oliveira *et al.,* 2006; Haniffa and Cooke, 2005; Raffournier, 1995).

The summary of all the operational variables in this study is shown in Table 3.

Table 3. Summary of the Operationalization of the Research Variables

Variables	Acronym	Operationalization
Dependent variable:		
Corporate risk disclosure	CRD	Total corporate risk disclosure sentences in the year 2009
Independent variables:		
Age	AGE	Overall number of age (in years)
Functional track	FUNCTR	Dichotomous of 1 if managers rise from throughput function and 0 in output function
Education	EDU	Dichotomous of 1 if managers posses CPA and/or MBA, 0 otherwise
Tenure	TEN	Number of years the firm's current managers have held the position or the number of years the firm's current managers in the positions since their first appointment.
Ethnicity	ETHN	Dichotomous of 1 if the company has a Malay (Bumiputera) manager; 0 otherwise
Control variables:		
Firm size	LNSIZE	Natural log of total assets
Leverage	LEV	The ratio of long-term debt to equity
Auditor type	BIG4	Dichotomous of 1 for firm that audited by Big 4, 0 otherwise
Industry classification: 1. Trading / Services 2. Construction 3. Consumer product 4. Industrial product 5. Plantation 6. Properties 7. Infrastructure and Technology	DUMMY INDUSTRY	Dichotomous of 1 if the firm is in trading and services sector, 0 otherwise; 2 if the firm is in the construction sector, 0 otherwise; 3 if the firm is in consumer product sector, 0 otherwise; 4 if the firm is in the industrial product sector, 0 otherwise; 5 if the firm is in plantation sector, 0 otherwise; 6 if the firm is in the properties sector, 0 otherwise; 7 if the firm is in infrastructure and technology sector, 0 otherwise.

4. Results and discussion

4.1. Descriptive statistics

Table 4 and Table 5 present the descriptive statistics of the continuous and dichotomous variables, respectively, used in the regression tests of risk disclosure and top managers' demographic characteristics. As reported in Table 4, the mean value of corporate risk disclosure is 90.68 sentences (the average number of risk disclosure sentences disclosed by the 128 sampled companies in 2009) which is approximately 37% of the maximum score of 244 sentences. The table shows that there is a fair amount of variation in the disclosure frequency for the sampled companies. The overall disclosure frequency ranges from 41 to 244 sentences. The mean score for each category of risk disclosure reveals that financial risk disclosure is highest (40.18 sentences), closely followed by operational risk disclosure (38.67 sentences). The risk categories of environmental risk disclosure (5.84 sentences) and strategic risk disclosure (5.99 sentences) are much lower.

Table 4. Descriptive Statistics of Continuous Variables

	N	*Minimum*	*Maximum*	*Mean*	*Standard Deviation*
(Sentence count for disclosure items)					
Corporate Risk Disclosure (CRD)	128	41	244	90.68	36.623
Operational Risk Disclosure (OPER_RD)	128	9	144	38.67	23.386
Environmental Risk Disclosure (ENVIRO_RD)	128	0	24	5.84	3.956
Financial Risk Disclosure (FIN_RD)	128	14	86	40.18	11.962
Strategic Risk Disclosure (STRAT_RD)	128	0	25	5.99	4.713
Age CEO (years) (AGE_CEO)	128	38	75	53.76	7.347
Age CAC (years) (AGE_CAC)	128	40	88	63.42	9.515
Tenure CEO (years) (TEN_CEO)	128	0	40	11.34	10.157
Tenure CAC (years) (TEN_CAC	128	0	37	8.54	7.211
Size (RM mil) (LNSIZE)	128	234.1	71363.0	5695.0	10286.7
Leverage (ratio) (LEV) (LEV)	128	0.000	3.880	0.367	0.584

Turning to predictor variables, Table 4 shows that the age of CEOs ranges from 38 years to 75 years with the average age of 54 years. The age of CACs on the other hand ranges from 40 years to 88 years with the average age of 63 years. With respect to functional track characteristics, Table 5 shows the majority of CEOs and CACs are in the 'throughput' category. This is shown by the average value of 64.8 percent and 85.2 percent, respectively. With regards to tenure characteristics, the length ranges from zero to 40 years for the CEOs and zero to 37 years for the CACs with the average of 11.34 years and 8.54 years, respectively. This result shows that the CEOs tenure in Malaysian companies is longer than the CACs tenure, suggesting that some of the CEOs are also likely to be the founder or pioneer of the companies.The mean size, as represented by total assets of the firm, is RM 5,700mil. The average for firm leverage is 36.66 percent.

As reported in Table 5 for the education characteristics, the majority of CEOs (73.4 percent) do not have any professional accounting qualifications or MBA qualifications. On the other hand, more than half of the CACs (56.3 percent) hold professional accounting qualifications or MBA qualifications. With respect to the ethnicity of managers, Bumiputera (Malay) CEOs represent an average of 34 percent of the sample companies, indicating non-Bumiputera[1] CEOs domination in the Malaysian corporations. However, the average of CACs who are Bumiputera is slightly higher (50.8%) than the non-Bumiputera CACs (49.2%).

Table 5. Descriptive Statistics of Dichotomous Variables

N	128	
Dichotomous Variable	1 Refer to Table 3 for explanation	0
Functional Track CEO	64.8%	35.2%
(FUNCTR_CEO)	83	45
Functional Track CAC	85.2%	14.8%

[1]In this study, Bumiputera refers to the Malay group and non-Bumiputera refers to the non-Malays which include Malaysian Chinese, Malaysian Indians and other ethnicity background.

(FUNCTR_CAC)	109	19
Education of CEO	26.6%	73.4%
(EDU_CEO)	34	94
Education of CAC	56.3%	43.7%
(EDU_CAC)	72	56
Ethnicity CEO	34.4%	65.6%
(ETHN_CEO)	44	84
Ethnicity CAC	50.8%	49.2%
(ETHN_CAC)	65	63
Auditor Size	74.2%	25.8%
(BIG4)	95	33
Trading / Services sector	32.8%	67.2%
(TRADSERV)	42	86
Consumer sector	20.3%	79.7%
(CONSUMER)	26	102
Industrial sector	26.6%	73.4%
(INDUSTRIAL)	34	94
Construction sector	7.0%	93.0%
(CONSTRUCTION)	9	119
Plantation sector	4.7%	95.3%
(PLANTATION)	6	122
Property sector	5.5%	94.5%
(PROPERTY)	7	121
Infrastructure and Technology sectors	3.1%	96.9%
(INFRATECH)	4	124

In terms of auditor size, 74.2 percent of companies are audited by a Big 4 audit firm. Finally, with respect to the industry classification, 32.8 percent of companies fall under the trading/services sector. This is followed by the industrial product sector and consumer product sector which comprise of 27 percent and 20 percent, respectively. The rest of the industry classifications form a minority proportion which comprise of construction, plantation, property and infrastructure and technology industries with the average values of 7.0 percent, 4.7 percent, 5.5 percent and 3.1 percent, respectively.

4.2. Correlation analysis

To examine the correlation between the independent variables and each category of dependent variable, a Pearson product-moment correlation (r) is computed. This correlation analysis has been performed to test the correlation between the dependent variable (risk disclosure sentences) and independent variables. Table 6 reports the correlation results.

Table 6. Correlation Coefficients between Risk Disclosure and Independent Variables

	Corporate Risk Disclosure	Operational Risk Disclosure	Environmental Risk Disclosure	Financial Risk Disclosure	Strategic Risk Disclosure
AGE_CEO	-0.188*	-0.176*	-0.125	-0.104	-0.061
AGE_CAC	0.044	0.060	-0.077	0.023	0.013
FUNCT_CEO	0.095	0.120	-0.035	0.000	0.093
FUNCT_CAC	0.047	0.052	0.069	-0.064	0.173
EDU_CEO	0.116	0.178*	-0.087	-0.030	0.069
EDU_CAC	0.105	0.099	0.226**	-0.056	0.216*
TEN_CEO	-0.181*	-0.181*	-0.135	-0.049	-0.119
TEN_CAC	-0.002	-0.017	-0.170	0.135	-0.125
ETHN_CEO	0.490**	0.521**	0.222*	0.108	0.348**
ETHN_CAC	-0.022	-0.053	0.003	-0.007	0.128
LNSIZE	0.456**	0.414**	0.255**	0.237**	0.287**
LEV	0.179*	0.245**	0.032	0.003	-0.012
BIG4	0.199*	0.227**	0.039	0.019	0.170
TRADSERV	0.156	0.211*	-0.030	-0.050	0.185*
CONSUMER	-0.165	-0.146	-0.013	-0.102	-0.144
INDUSTRIAL	-0.111	-0.105	-0.065	0.001	-0.191*
CONSTRUCTION	0.076	0.018	-0.035	0.111	0.183*
PLANTATION	0.039	0.003	-0.010	0.087	0.040
PROPERTY	0.014	-0.084	0.193*	0.112	0.066
INFRATECH	0.064	0.116	0.087	-0.048	-0.086

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

As illustrated in Table 6, ethnicity of CEO (ETHN_CEO) and company size (LNSIZE) are significantly related to corporate risk disclosure ($p < 0.01$). Age of CEO (AGE_CEO), tenure of CEO (TEN_CEO), leverage (LEV) and auditor size (BIG4) are also significantly related to corporate risk disclosure ($p < 0.05$). Other independent variables and control variables are not correlated with corporate risk disclosure. The correlation coefficients between age of CEO and tenure of CEO with the corporate risk disclosure are negative. These results indicate that risk disclosure decreases with the increase of the age of CEO and CEO tenure. With respect to the operational risk disclosure, this is significantly positively correlated to ethnicity of CEO (ETHN_CEO), company size (LNSIZE), leverage (LEV) and auditor size (BIG4). Similar to the corporate risk disclosure, both age of CEO (AGE_CEO) and tenure of CEO (TEN_CEO) are significantly negatively correlated with operational risk disclosure ($p < 0.05$). Another upper echelons characteristic that is correlated with operational risk disclosure is education of CEO (EDU_CEO) which is significantly positively correlated ($p < 0.05$). This indicates that CEOs who are younger, have been in the position of CEO for a shorter period and hold either a professional accounting or MBA qualification tend to disclose more operational risk.

With regards to financial risk disclosure, it is significantly positively related to company size (LNSIZE). In relation with upper echelons characteristics, no variable is found to have correlation with financial risk disclosure. This indicates that demographic characteristics of top managers are likely to have no influence towards financial risk disclosure, perhaps because the mandatory nature of financial risk disclosure in a dominant determinant.

Environmental and strategic risks reveal similar significant relationships with upper echelons characteristics. The

variables are significantly positively related to ethnicity of CEO (ETHN_CEO) and company size (LNSIZE). However, only strategic risk disclosure is significantly positively related to education of the CAC (EDU_CAC). This indicates that CACs with higher education tend to seek narrower disclosure of more non-technical risk information.

With respect to industry classifications, the results are varied in terms of discretionary disclosures. The trading/services sector is found to disclose more information on operational risk and strategic risk. Companies within the construction sector also tend to disclose more information on strategic risk. However, companies within the industrial sector are found to disclose less information on strategic risk. Companies within the property sector on the other hand tend to disclose more environmental risk.

4.3. Multiple regression analysis

This section provides results and discussion on multiple regression analysis for testing all ten hypotheses regarding the relationship between the CEO and CAC demographic characteristics and corporate risk disclosure.

4.3.1. Chief Executive Officer (CEO) and corporate risk disclosure

Several directional, but non-significant, relationships are seen in Table 7. From Table 7, the relationship between age of CEO (AGE_CEO) and corporate risk disclosure is negative and supports the contention that older managers are more conservative and tend not to disclose more information on risk. Since older CEOs are already established and have developed their place in the business community, they therefore continue to choose a strategy that helps them maintain their *status quo* by disclosing less risk information. However, the coefficient is not statistically significant; hence, hypotheses H_{1a} is rejected. Second, this study finds a negative association between functional track of CEO (FUNCT_CEO) and corporate risk disclosure. This result suggests that a CEO with experience in 'throughput functions' will disclose less information on risk. However, the coefficient is not statistically significant, therefore, this finding does not support hypothesis H_{2a}. Third, it is found that the education of CEO (EDU_CEO) in terms of those holding a professional accounting qualification or an MBA qualification is positively related to corporate risk disclosures. This result shows that executives with higher qualifications tend to disclose more risk information. However, the coefficient is not statistically significant thus allowing this study to reject hypotheses H_{3a}.

There are some significant relationships in Table 7. First, the relationship between the tenure of a CEO (TEN_CEO) and corporate risk disclosure, is found to be significantly negative ($p < 10\%$). This finding suggests that longer-tenured CEOs are not willing to take risk and tend to be less confidence in disclosing risk information which is full of uncertainty. This result also indicates that the increase in the number of years a CEO has served in the firm is expected to have a stronger negative influence on the disclosure of risk information, which results in a lower total risk disclosure. Therefore, hypothesis H_{4a} can be accepted. Second, the relationship between ethnicity of CEO (ETHN_CEO) and corporate risk disclosure is significantly positive, suggesting that greater risk disclosure is associated with Bumiputera (mainly Malay) CEOs. Hence, hypothesis H_{5a} is accepted. This result suggests that CEOs from an ethnic background typically associated with lower socio-economic status, collectivist culture and Islamic faith that views transparency as virtuous, tend to direct their company to pursue strategies of transparency, including more risk disclosure, compared to non-Bumiputeras (composed of Chinese, Indians and foreigners). When the regression models were run for the sub-categories of risk disclosure (i.e., operational risk disclosure, environmental risk disclosure, financial risk disclosure and strategic risk disclosure) there were similar conclusions to the results presented here for total risk disclosure. That is, age and ethnicity of the CEO are the most consistently significant determinants of the various sub-categories of risk disclosure.

Table 7. Multiple Regression Results

$CRD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{11} LNSIZEjt + \beta_{12} LEV_{jt} + \beta_{13} BIG4_{jt} + \beta_{14} DUMMY\ (INDUSTRY) + \varepsilon_{jt}$

	CORPORATE RISK DISCLOSURE	
	Coefficients	t-stat
(Constant)	-125.333	**-2.067****
AGE_CEO	-0.048	-0.557
AGE_CAC	-0.019	-0.187
FUNCT_CEO	-0.138	-1.588
FUNCT_CAC	-0.014	-0.159
EDU_CEO	0.028	0.312
EDU_CAC	0.103	1.039
TEN_CEO	-0.162	**-1.739***
TEN_CAC	0.094	0.971
ETHN_CEO	0.379	**4.296*****
ETHN_CAC	0.027	0.331
LNSIZE	0.402	**4.239*****
LEV	-0.073	-0.732
BIG4	0.055	0.658
TRADSERV	0.169	0.408
CONSUMER	0.159	0.446
INDUSTRIAL	0.168	0.435
CONSTRUCTION	0.173	0.731
PLANTATION	0.146	0.725
PROPERTY	0.137	0.647
INFRATECH	0.100	0.623
Adjusted R^2	0.307	
F-Value	**3.809*****	
N	128	128

Notes: ***Significant at 0.01 level; **Significant at 0.05 level; *Significant at 0.1 level

CRD = measured by risk disclosure score for year 2009, AGE_CEO = Age of CEO, AGE_CAC = Age of CAC, FUNCT_CEO = Functional track of CEO, FUNCT_CAC = Functional track of CAC, EDU_CEO = Education of CEO, EDU_CAC = Education of CAC, TEN_CEO = tenure of CEO, TEN_CAC = Tenure of CAC, ETHN_CEO = Ethnicity of CEO, ETHN_CAC = Ethnicity of CAC, LNSIZE = Size, LEV = Leverage, BIG4 = Auditor type, DUMMY (INDUSTRY) = Industry classification

4.3.2. Chairman of Audit Committee (CAC) and corporate risk disclosure

Table 7 reveals that all the CAC background characteristics have the predicted sign except for the variable tenure. The relationship between the tenure of CAC (TEN_CAC) and corporate risk disclosure is positive suggesting that the longer a CAC has held that position, the more corporate risk disclosure will be supplied. However, none

of the variables have a significant relationship with corporate risk disclosure. Therefore, hypotheses H_{1b}, H_{2b}, H_{3b}, H_{4b} and H_{5b} are rejected. These results infer that the CAC's pre-disposition based on his or her background might be suppressed by the formal regulatory compliance pressures of the CAC'a role.

4.4 Endogeneity test between risk disclosure and ethnicity of CEO

Research that models and tests the relationship between corporate outcomes (such as the level of financial performance or extent of corporate disclosure) and various governance mechanisms or management characteristics can be subject to the problem of endogeneity. Broadly, a loop of causality between the independent and dependent variables of a model leads to endogeneity. The problem of endogeneity occurs when the independent variable is correlated with the error term in a regression model. This implies that the regression coefficient in an ordinary least squares (OLS) regression is biased.

The results presented earlier on the OLS regressions reveal that there is a significant positive relationship between corporate risk disclosure and the ethnicity of CEO. CEO ethnicity is found to be the most significant hypothesised explanatory variable in Table 7. This result indicates that firms with a Bumiputera CEO will disclose higher risk information. However, intuitively, there could be loop causality between a CEOs ethnicity and a firm's risk disclosure. It was hypothesised in H_{05} that Bumipitera CEOs, due to ethnic-religious values they hold, would influence their firm towards higher disclosure of risk information. However, reverse causality could be argued. Thus, boards of firms wishing to change the level of risk disclosure might be prepared to change the CEO when the opportunity to make a change arises. Over time, boards wishing to reduce the level of risk disclosure might choose a non-Bumiputera CEO, whereas those wishing to increase the level of risk disclosure might choose a Bumiputera CEO. Because of this reverse causal relationship, the ethnicity of CEO will be endogeneous.

The problem of endogeneity, between ethnicity of CEO and corporate risk disclosure can be statistically tested. This problem is statistically referred to as simultaneity because it has to do with two variables simultaneously causing each other. To solve this problem, instrumental-variable estimation is used. In particular, an instrument (or a set of instruments) that is assumed to be exogeneous is selected and then two-stage simultaneous least squares (2SLS) regression is performed. In this case, the endogeneous independent variable is ethnicity of CEO (ETHN_CEO). The instrumental variable (deemed to be exogeneous to risk disclosure level) could be the firm's earnings per share (EPS). The reverse causality model between ETHN_CEO and RD that contains the instrumental variable EPS, is shown in equation 5.1. Equation 1 is regressed simultaneously with the 'initial model' developed for this study and repeated in equation 2.

$$ETHN\_CEO_{jt} = \beta_0 + \beta_1 RD_{jt} + \beta_5 EPS_{jt} + \varepsilon_{jt} \quad \text{.....(1)}$$

$$RD_{jt} = \beta_0 + \beta_1 AGE\_CEO_{jt} + \beta_2 AGE\_CAC_{jt} + \beta_3 FUNCT\_CEO_{jt} + \beta_4 FUNCT\_CAC_{jt} + \beta_5 EDU\_CEO_{jt} + \beta_6 EDU\_CAC_{jt} + \beta_7 TEN\_CEO_{jt} + \beta_8 TEN\_CAC_{jt} + \beta_9 ETHN\_CEO_{jt} + \beta_{10} ETHN\_CAC_{jt} + \beta_{10} LNSIZE_{jt} + \beta_{11} LEV_{jt} + \beta_{12} BIG4_{jt} + \beta_{13} DUMMY\ (INDUSTRY) + \varepsilon_{jt} \quad \text{.....(2)}$$

Equations 1 and 2 above were run simultaneously using the 2SLS estimator. The results are presented in Table 8.

Table 8. Simultaneous Equation Models Using 2SLS Estimator

Panel A						
Simultaneous equation model estimated with 2SLS (Dependent variable: Ethnicity of CEO)						
	Coef.	Std. Err.	z	P>[z]	[95% Conf. Interval]	[95% Conf. Interval]
RD	0.005	0.001	5.79	0.000	0.003	0.007
EPS	-0.001	0.001	-1.00	0.319	-0.002	0.000
CONSTANT	-0.152	0.104	-1.45	0.146	-0.357	0.053
Panel B						
Simultaneous equation model estimated with 2SLS (Dependent variable: Risk disclosure)						
	Coef.	Std. Err.	z	P>[z]	[95% Conf. Interval]	[95% Conf. Interval]
AGE_CEO	-0.251	0.616	-0.41	0.683	-1.459	0.956
AGE_CAC	0.308	0.558	0.55	0.580	-0.785	1.403
FUNCT_CEO	9.073	13.225	0.69	0.493	-16.847	34.994
FUNCT_CAC	6.333	12.269	0.52	0.606	-17.713	30.380
EDU_CEO	-43.085	32.076	-0.134	0.179	-105.953	19.782
EDU_CAC	4.142	9.701	0.43	0.669	-14.872	23.157
TEN_CEO	-0.205	0.452	-0.45	0.650	-1.092	0.681
TEN_CAC	-0.008	0.679	-0.01	0.990	-1.341	1.323
ETHN_CEO	136.688	27.269	5.01	0.000	83.240	190.135
ETHN_CAC	1.227	7.601	0.16	0.872	-13.671	16.125
SIZE	1.408	3.910	0.36	0.719	-6.254	9.072
LEV	3.701	8.957	0.41	0.679	-13.854	21.258
BIG4	7.587	9.890	0.77	0.443	-11.796	26.971
TRADSERV	-3.989	42.158	-0.09	0.925	-86.617	78.639
CONSUMER	6.581	41.966	0.16	0.875	-75.671	88.834
INDUSTRIAL	-0.020	41.673	-0.00	1.000	-81.698	81.656
CONSTRUCTION	0.760	44.392	0.02	0.986	-86.247	87.768
PLANTATION	34.440	48.117	0.72	0.474	-59.868	128.748
PROPERTY	4.483	44.246	0.10	0.919	-82.237	91.205
INFRATECH	-11.533	53.125	-0.22	0.828	-115.657	92.590
CONSTANT	-6.285	93.555	-0.07	0.946	-189.650	177.080

The result of the Hausman test for both equations is Chi^2 (df = 24) = 66 (p = 0.000). This significant Chi^2 for the simultaneous equation confirms that there is endogeneity problem existing between risk disclosure and ethnicity of CEO. Therefore, the OLS results shown previously in Table 7 would have been biased. These results need to be replaced with the findings given in Table 8 below. By running the 2SLS estimator, Table 8, Panel B, deals with the endogeneity problem and still shows ETHN_CEO to be significantly related to RD (P>[z] = 0.000). It also confirms the reverse relationship in Table 8, Panel A, that RD is significantly positively related to ETHN_CEO.

5. Conclusion and Summary

By invoking upper echelons theory, this study has examined the relationship between the demographic characteristics of the key executive (CEO) and the key director (CAC) and the extent of corporate risk disclosure. Using a sample of top listed companies in Malaysia, our findings indicate that the CEOs' tenure and ethnicity have significantly influence their decision making in regards corporate risk disclosure. Specifically, CEOs who are Bumiputera with shorter-tenured will influence the company to disclose more risk information to the public. However, it is important to note that the association between risk disclosure and manager-specific characteristics is still ambiguous. It could also be argued that unlike the effect of manager-specific factors on other types of corporate accounting choices and disclosure examined in prior studies, the manager-specific factors affecting the

level of risk disclosures are different.

Upper echelons theory suggests that managers' demographic characteristics are the appropriate starting point for exploring reasons for differences in individual managers' pre-dispositions. From a practical perspective, evidence on the relations between CEOs' reporting disclosure and their observable demographic characteristics can give some ideas to help investors evaluate the CEO's information disclosure practices. The implication is that company boards concerned with creating responsiveness in management to providing more transparency on corporate risk should consider the importance of recruiting top managers with this ethnic background and directing them in the early stage of their appointment. A further finding is that the CAC's background, including age, functional track, education, tenure or ethnicity, does not have a significant effect on the extent of corporate risk disclosure. This finding about the CAC has an implication for corporate governance policy-makers who set certain requirements/recommendations about the Chair and members of a company's Audit Committee. It suggests that corporate governance regulation requiring the CAC to have a specific education, functional track or other background characteristics is unlikely to be a means of achieving improved corporate risk disclosure.

This study mainly relies on the quantitative-based research approach in relation to determine the upper management characteristics. Perhaps future research could possibly use more in-depth information perspective such as interviews, questionnaire, survey and case study to probe into issues not clearly explainable in this study.

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