

## Corporate Governance and Dividend Policy in Malaysia

Ravichandran Subramaniam  
American Degree Transfer Program,  
Sunway University College (SUC)  
Selangor Darul Ehsan, Malaysia  
Ravis @sunway.edu.my

Susela Devi.S  
Faculty of Business and Accountancy  
University of Malaya (UM)  
Kuala Lumpur, Malaysia  
susela@um.edu.my

**Abstract**— this paper investigates the relationship between Investment Opportunity Set and dividend policy and if board size and board composition moderate this relationship in an emerging economy context. The free cash flow theory is empirically examined using a series of firm characteristics including size, return on assets, duality and debt to assets. The results support the theory that high growth firms make lesser dividend payouts. Further, in the interaction between high growth firms and board size and board composition, there is evidence to show that the negative relationship between Investment Opportunity Set and dividend payout is weaker for firms with a larger board size and with a corresponding larger number of independent directors representing the board.

**Keywords:** *Dividend policy; Investment opportunity set; board size; board composition; free cash flow theory*

### I. INTRODUCTION

Dividend payment is clearly one of the most important unsolved problems in finance [1, 2]. This paper contributes to the dividend debate albeit from the perspective of an emerging economy. Several explanations are advanced such as tax clientele theory, signaling theory, free-cash flow hypothesis to solve the dividend puzzle. Tax clientele theory [3] posits that investors select portfolios by reference to their marginal tax rates. The free cash flow hypothesis [4,5] maintain that an increase in dividends is favorably received by investors because it means that managers will have less cash to invest in negative net present value (NPV) projects [2]. Increasingly, the support is for the notion that dividend payout can be an effective tool in mitigating agency costs [2, 6]. However, this notion is premised on two fundamental beliefs: that shareholders prefer dividend rather than capital gain because the promise for incremental value on stock in the future is more risky [7]; and the agency theory and shareholder theory model and mechanisms for mitigating agency costs are applicable [8]. Evidence from developed economies suggests an association between growth opportunities, debt, performance and dividend policy decisions [8- 12]. However, similar studies in emerging economies are limited except for China, India, Korea and Ghana [17, 34, 35 & 55]. There is growing importance of corporate governance (CG) in most emerging economies. Additionally, the differing regulatory and business environment in these economies, in terms of CG structure, sophistication of market; levels of investor protection and economic and social and cultural [13, 14 & 15] is motivation

for this paper to examine the role of corporate governance (board size and board composition in moderating the relationship between growth opportunities (measured in terms of investment opportunity set (IOS) and dividend policies in an emerging economy, Malaysia. Extant literature [16, 8, 9, 17] use agency and contracting theory to explain variation in important corporate policy decisions, however none thus far focus explicitly on the link between a firm's IOS and dividend policy and more importantly, whether CG variables such as board-size and board composition moderate the IOS and dividend policy relationship. Given Malaysia's institutional environment with its high concentration of ownership and its unique government policies, legal system and capital structure, it provides an opportunity to seek evidence on the relationship between growth opportunities and dividend policy and the impact of selected CG variables.

### II. LITERATURE REVIEW

This paper is concerned with three constructs, i.e. IOS, dividend policy and CG. IOS, denotes, growth opportunities. McGuire (2000) [23] observes that firms differ in their potential for future growth for many reasons: potential benefit from managerial talent, flexibility, ability to innovate and technological advantage [24-25]. Growth prospects may also arise from favorable industry conditions or competitive positioning [24, 26 & 27]. High growth and low growth firms exhibit different features. Accordingly, the performance of high growth firms are attributed to large investments in projects and low growth firms are attributed to smaller scale investments. These growth opportunities can only be measured using IOS via several proxy variables. A firm's cash-flow is linked to its investment and dividend policy. The higher the investment for the period the smaller the dividend paid out or the more the equity issued for the period. On the other hand firms with less growth opportunities have higher cash flow and thus pay higher dividends [5]. The probable factors that influence the dividend payout ratios (DPP) are profitability, risk, cash flow, agency cost, growth and investment and financing decisions [28, 29 & 31]. In Malaysia, there are no specific rules governing the distributability of dividend [32]. Companies are generally free to decide on the distribution of dividends. The Companies Act 1965 (section 365) only stipulates that dividend should be distributed from profits but does not indicate whether it should be current profits or accumulated profits. Thus this has lead to inconsistent

administration of dividend policies [33]. Amidu & Abor (2006) [34] examine the determinants of dividend payouts in Ghana and find that the payout ratios are positively correlated to profitability, cash flow and tax but negatively related to risk and growth. From the perspectives of fast emerging economies such as India [34 & 35] a declining trend of dividend payout is observed from 448 in 1992 to 376 in 2004. Further, declining trend on dividends reinforces the notion that in a world of significant agency problems between corporate insiders and outsiders, dividends play a vital role [15, 33 & 36]. CG became a major concern especially after the Asian Economic Crisis in 1997. Rigorous efforts for CG reforms, by both government and industry, to identify and deal with weaknesses highlighted by the crisis to regain investors' confidence in the Malaysian capital market are evidenced [37]. Sing and Ling (2008) [38] document that independent directors in Malaysian firms generally play a passive role as their appointment is merely to fulfill listing requirement rather than as a measure at improving CG or to bolster the capability of the firm. Board size has been a particular area of focus for CG researchers [39]. One of the key duties of the board of directors is to hire fire and compensate the Chief Operating Officer (CEO) [53]. Yermack (1996) [40] observes the quality of monitoring and decision making and highlights the problems associated with co-ordination, communication and effective decision making in a large board. Hence, it can be surmised therefore that the IOS, dividend payments and specific CG variables are intertwined and an examination of this relationship is absent in extant dividend policy literature. Therefore, the objective of this paper is to examine the relationship between IOS, dividend policy and selected CG variables.

### III. RESEARCH DESIGN

The sample of the study consists of three hundred of the highest capitalized companies listed on Bursa Malaysia for the years ended 2004 till 2006. All the information obtained is from published data. The analysis involved all the sectors of the economy (See Table 1).

TABLE I. TABLE 1 SECTOR REPRESENTATION OF THE SAMPLE COMPANIES

	No of Companies	%
Consumer product	28	9.33
Trading/Services	108	36.00
Properties/Hotel	50	16.67
Construction	19	6.33
Plantations	32	10.67
Industrial	63	21.00
Total	300	100.00

E-views is use to compute the cross-sectional data using the Ordinary Least-Squares Regression. After elimination of missing data, the sample size is reduced to 409 companies (See Table 2). Data on CEO duality, board size (BSIZE) and board composition (BCOM) is collected from the Malaysian stock performance guide books.

TABLE II. TABLE 2 DERIVATION OF SAMPLE 2004 TO 2006

Sample selection	Total
Top 300 of the market capitalization of the companies for the three years as listed on the Main Board of Bursa Malaysia	900
Less:	
Banks, Insurance and unit trusts	24
Companies with incomplete data	467
Final sample	409

Data on financial information such as return on total assets (ROA), market capitalization (LOGMKTC), MBE and DPP are obtained from the OSIRIS and BANKSCOPE. On the measurement of independent variable, [41] evaluates the two most commonly used proxy variables as MBA ratio and MBE ratio. For this study, the independent variable, IOS is measured in terms of MBE. The dependent variable is the dividend per share (DPP) and the moderating variables are BSIZE and BCOM. Gaver & Gaver (1992) [9] use the DPP and the dividend yield as the two measures for dividend policy. The DPP is the cash dividend paid/Net income (Profit after tax). It is noted that the dividend yield is sensitive to share price whereas the DPP is not. For this reason the DPP is taken as the primary measure of financing and DPP [8, 9 & 41]. BSIZE refers to the number of directors on the board. This variable is widely used in the literature of CG and its value is found by counting the total number of directors on the board [42, 40 & 43]. Kesner *et al.* (1986) [43] refer to "BCOM" as the proportion of outside directors to total directors. The ratio gives an indication on the board's independence and to what extent the board is represented by outside directors. Other studies that identify external board members as non-executive directors are [43–45]. The control variables are firm size, performance, financial leverage and duality. Smith & Watts (1992) [8] find firm size is positively associated to various types of CG variables such as debt covenants, dividend policy and management compensation. In this study, LOGMKTC is use as a measure for firm size and is labeled as LOGMKTC. LOGMKTC measures the percentage of market captured by the firms [46 & 47]. ROA is use to evaluate the extent in which the assets are put to good use [33 & 48]. The financial leverage is measured as the ratio of the book value of long term debt divided by the book value of total assets (DTA) [48]. CEO duality is commonly measured as a dummy variable [49, 44 & 50]. Pool regression with cross sectional data is used for hypotheses testing and to reveal the relationship between IOS, DPP and control variables. The equation represents the model for the valuation of the IOS. The OLS estimator is unbiased, consistent and efficient in the class of linear unbiased estimators [51]. The regression tests whether the level of corporate controls moderates the negative association between growth opportunities and dividend policy.

$$DPP = \alpha_0 + \beta_1 MBE_{it} + \beta_2 BSIZE_{it} + \beta_3 BCOM_{it} + \beta_4 FLYC_{it} + \beta_5 GLC_{it} + \beta_6 DUAL_{it} + \beta_7 LOGMKTC_{it} + \beta_8 DTA_{it} + \beta_9 ROA_{it} + \sum_{i=1}^n \beta_{10} OTHERS + \epsilon$$

Where:  
*MBE* = Market to book value of equity at the end of year t  
*BSIZE* = Board size  
*BCOM* = Board composition  
*FLYC* = Value '1' for family & '0' otherwise  
*GLC* = Value '1' for government linked & "0" for otherwise

*DUAL* = Role duality  
*LOGMKTC* = Log of market capitalization  
*DTA* = Debt to Total Assets  
*ROA* = Return on assets  
 *$\epsilon, i$  and  $t$*  = Error term, company and time respectively  
 *$\alpha_0$*  = Intercept of the model

The *R* squared values in the econometric model explains the percentage of the dependent variables explained by the independent variables and they are called goodness of fit [52]. According to [51], the cross sectional diagonal measure is use to remove heteroscedasticity in the model. This treatment is used to correct the variance of the error term of the model as we will divide the error term with its variance. Additional econometrics and statistical tests in this study include correlation tests, descriptive tests and sensitivity analysis.

#### IV. RESULTS

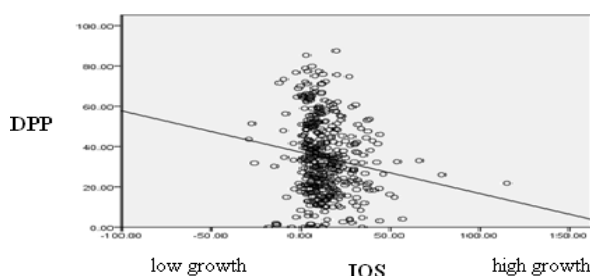
Table 3 (Appendix 1) reports on the descriptive statistics of continuous variables. The individual years for the *LOGMKTC* are in the range of 2.400 to 2.480 and 10.580 to 10.610, respectively. In terms of *ROA*, there seems to be a constant increase in the mean *ROA* i.e. from 0.038 percent in year 2004, 0.062 percent in year 2005 and subsequently 0.080 percent in year 2006. This indicates that the companies in general are maximizing their usage of assets to generate revenue. Similarly, the mean of *DTA* is at 56.3 percent for the three years in total and the mean ranged from 51.6 percent to 60.3 percent. Generally, the *DTA* for the sample of the 300 highest capitalized companies is low with the maximum of *DTA* representing 9.28 percent of the total assets of the company. *BFSIZE* is documented in Table 4 (Appendix 1). Prior study on *BFSIZE* by [14] for the period 1996 to 2000 depicts the average board size of Malaysian companies as eight directors however the mean size of 5 is within the range recommended by [53] for board effectiveness. In support of this, Business Star publication, 19 Sept 2009, reports that Malayan Banking Berhad (Maybank), being the largest bank in Malaysia and present in 13 countries with over 700 offices overseas worldwide, has only 8 directors. *BCOM*, as depicted in Table 4 (Appendix 1) show an average 41.2 percent of the board is represented by independent directors and hence almost 70 percent of the companies meet the recommendation of the MCGG 2000 to have at least 1/3 of the board to be represented by independent directors.

However, the domination of independent directors in prior studies in Malaysia is mixed [44 & 54]. 2006. In terms of *IOS*, the minimum and maximum varies from year to year from a minimum of -98.34 to a maximum of 135.80. There seem to be a drastic decline in the total value of *IOS* from the year 2004 onwards in which from 135.80, it drop to 39.89. The minimum *DPP* is where there is no dividends paid and the maximum *DPP* is at 87.5 percent in year 2006. To examine the correlation between the independent variables, a Pearson product moment correlation (*r*) is computed. As illustrated in Table 5 (Appendix 1), *IOS* is negatively and significantly correlated with *DPP* indicating that high growth firms have lower cash flow and, hence, pay lower dividends

[5, 55 & 34]. With regards to board size, there is a significant positive relationship between *BFSIZE* and *LOGMKTC*. These findings suggest that highly market capitalized companies tend to have bigger board size, high growth firms are represented by family controlled firms and larger board size companies probably pay higher dividends. Additionally, the results provide strong positive support of the relationship between the *LOGMKTC* and *ROA*, which reveals that higher market capitalized companies maintain a higher return on assets ratio and that high growth companies are companies with higher market capitalization. In contrast there is significant negative correlation between *DUAL*, *LOGMKTC* and *DPP* which suggest that low growth non-family controlled firms maintain duality. On correlation among variables, there is no multicollinearity between the variables as none of the variables correlates above 0.80 or 0.90.

Table 6 (Appendix 2) shows the summary of the results for the pooled data for all three years (2004 – 2006). To test the robustness of the basic model, additional variables were progressively added to the existing model to evaluate the impact on the association between *IOS* and *DPP*. There are six dummy variables and the dummies used are one less than the number of categories on industry type. The adjusted *R*<sub>2</sub> for all the models are in the range of 5 percent for the combined three year period of the panel data. Although the adjusted *R*<sup>2</sup> is considered low, it is slightly higher than the prior studies reported by [55] who examined the dividend policies among Korean companies, which is at 0.010 percent. The adjusted *R*<sup>2</sup> of Model 1 combined for the three years period is 4 percent. The results presented in Table 5 show significant associations between *IOS*, *FLYC*, *ROA* and industry type (CONSUMER; PLANTATIONS). The negative and significant result between dividend policy and *IOS* supports the FCF hypothesis, which suggests that high growth firms pay lower dividends and low growth firms pay higher dividends (See figure 1).

Figure 1



With respect to industry dummy variables, the study finds a significant positive association between consumer product and dividend policy. It suggests that firms associated with CONSUMER products declare higher dividends as compared to all types of products. On *ROA*, it was predicted that a positive return on assets shows better profitability and, hence, better dividend payout. The results are negative and significant, and provide evidence that high growth profitable firms pay lesser dividends.

The addition on Model 2 is with regard to board size (BSIZE). A positive association between BSIZE and dividend policy is expected to be effective in performing monitoring functions of the board. In terms of IOSBSIZE, the results show a positive but non-significant relationship and hence indicate that the negative relationship between high growth firms and dividend payout is weaker for large board size. However, the coefficient results are positive but not statistically significant. The additions to Model 3 are the variables IOSBSIZE and board size. The results show a positive but non-significant relationship. On industry type, only CONSUMER products and PLANTATIONS related products are positively associated and significant. In Model 4 (Table 7 Appendix 2), an additional variable on BCOM is included. A positive association between BCOM and dividend policy is predicted as larger boards have more independent directors and, hence, more dividend payouts. In Model 5, an additional variable IOSBCOM, together with BCOM as per Model 4, was included in the original model. In terms of IOSBCOM, the results show no significant association between IOS and the proportion of independent directors representing the board. The addition to Model 6 (Table 7 – Appendix 2) is related to the combination of the following variables i.e IOSBSIZE, BSIZE, IOSBCOM and BCOM. The progressive additions to the original model result in the IOSBSIZE and IOSBCOM having a positive significant association with dividend policy and indicate that the negative relationship between high growth firms and DPP is weaker for firms with larger board size and more independent directors representing the board.

#### V. IMPLICATIONS

This study found a strong negative and significant relationship between growth opportunities and dividend policy. It is reassuring to note that this is consistent and extends the literature on the contracting explanation based on Jensen's Free Cash Flow theory. More precisely, the model on 'dividend as an outcome of legal protection of shareholders' is more appropriate in this context as this model views that an effective system of legal protection of shareholders and minority shareholders acts as a deterrent for the insiders from using too high a fraction of company profits to benefit themselves [21-22]. The implication to policy setters is that in Malaysia, the size of the board and the proportion of independent directors representing the board does not have any effect on dividend policy. With respect to the interaction between IOS and BSIZE and BCOM, this contributes to extant literature, as this study found a positive significant association between the interactions and dividend policy. Hence, the implication on the interaction between BSIZE and IOS is that high growth companies seem to maintain a larger number of directors on the board with a proportionate larger number of independent directors representing the board.

#### VI. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study was based on the top 300 highest capitalized Malaysian public listed companies meaning that the validation of the conclusion might be applicable to large companies only. Furthermore, as the CG data for three years is used it may not be generalized for other periods such as prior to governance reforms or during the crisis. There is also a strong element of sample bias as only firms reporting details on all the corporate variables of interest were included in the analysis. Another factor to consider is the unique institutional environment of Malaysia in which caution should be exercised in generalizing the results in other economic settings. Extension to the current study is possible in the following areas: Other important monitoring mechanism variables that could be added to the model to provide greater support on the association between CG and dividend policy include the interaction between politically and non-politically linked government companies and IOS, ethnicity and IOS and other corporate policy choices.

#### VII. CONCLUSION

More importantly this study, in contrast to developed countries, documents the consistent (contracting theory based on Jensen's FCF theory) strong support on the negative significant association between growth opportunities and dividend payout in the context of non-government linked companies. Further, this study found that corporate governance mechanisms such as board size and board composition do not influence the dividend policy of Malaysia and hence contradicts other recent studies in Malaysia [18 – 20].

#### REFERENCES

- [1] R. A. Brealey and S.C. Myers, *Principles of Corporate Finance*, 7<sup>th</sup> ed [McGraw-Hill, 2003].
- [2] N. Bhattacharya, A. Mawani and C.K.J. Morrill, "Dividend payout and Executive Compensation: Theory and Evidence," *Journal of Accounting and Finance*, vol 48 (4), 2008, pp 521-541.
- [3] M. H. Miller and F. Modigliani, "Dividend Policy, growth and the valuation of shares." *Journal of Business*, vol 34/10, 1961, pp 411-433
- [4] F.H. Easterbrook, "Two Agency-Cost Explanation of Dividends." *American Economic Review*, vol 74 (September) 1984, pp 650-659.
- [5] M.C. Jensen, "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers." *American Economic Review*, 1986, vol 76 (2), pp 323-329.
- [6] E. Fama and K. French, "Disappearing dividends: Changing firm characteristics or Lower Propensity to Pay?" *Journal of Financial Economics*, 2001, vol 60, pp 3-43.
- [7] M. Gordon, "Dividends, earnings and stock prices." *Review of Economics and Statistics*, 1959, vol 41(2), pp99-105.
- [8] C. Smith and R. Watts, "The investment opportunity set and corporate financing, dividend and compensation policies." *Journal of Financial Economics*, 1992, vol 32, pp 509-522.
- [9] J.J. Gaver and K.M Gaver, "Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies." *Journal of Accounting and Finance*, 1993, vol 16(1-3), pp 125-160.

- [10] J. D' Souza and A. Saxena, "Agency cost, market Risk, investment Opportunities and dividend Policy: An International Perspective." *Managerial Finance*, 1999, vol 25, pp 35-43.
- [11] T. Mitton, "Corporate governance and dividend policy in emerging markets." *Emerging Markets Review*, 2004, vol 5, pp 409-426.
- [12] P.D.A. Alonso and F.J.L. Iturriaga, "Financial decisions and growth opportunities: a Spanish firm's panel data analysis." *Applied Economic Letters*, 2005, vol 15, pp 391-407.
- [13] S. Claessens, S. Djankov and L.H.P. Lang, "The separation of ownership and control in East Asian Corporations". *Journal of Financial Economics*, 2000, vol 58 (1/2), pp 81-112.
- [14] R. Haniffa and M. Hudaib, "Corporate governance structure and performance of Malaysian listed firms." *Journal of Business Finance and Accounting*, 2006, vol 33 (7) and (8), pp 1034 – 1062.
- [15] J. Sawicki, "Corporate governance and dividend policy in Southeast Asia pre-and post-crisis." *The European Journal of Finance*, 2009, vol 15(2), pp 211-230.
- [16] M.C Jensen, and W.H. Meckling, "Theory of the firm: managerial behaviour, agency Costs and ownership Structure." *Journal of Financial Economics*, 1976, vol 3 (40), pp 305-360.
- [17] F.A Gul, "Government share ownership, investment opportunity set and corporate policy choices in China." *Pacific Basin Finance Journal*, 1999, vol 7, pp 157-172.
- [18] Z. Zubaidah, M.K. Abidin and J. Kamaru zaman, "Board structure and Corporate Performance in Malaysia." *International Journal of Economics and Finance*, 2009, vol 1(1), pp 150-164.
- [19] B. Jackling and S. Johl, "Board structure and Firm Performance: Evidence from India's Top Companies." *Corporate Governance: An International Review*, 2009, vol 17(4), pp 492-509.
- [20] S. Cheng, J.H. Evans and N.J. Nagarajan, "Board size and firm performance: the moderating effects of the market for corporate control." *Rev Quant Finan Acc*, 2008, vol 31, pp 121-145.
- [21] Z. Fluck, "The optimality of debt versus outside equity." Unpublished manuscript
- [22] S. Myers, "Determinants of Corporate Borrowing." *Journal of Financial Economics* 1977, vol 5, pp 147-175.
- [23] J. McGuire, "Corporate Governance and Growth Potential: an empirical analysis." *Corporate Governance*, 2000, vol 8(1), pp 136-152.
- [24] P. Wright and S. Ferris, "Agency conflict and corporate strategy: The effect of divestment on corporate value." *Strategic Management Journal*, 1997, vol 18, pp 77-83.
- [25] H. Feeser and G. Willard, "Founding strategy and performance: A comparison of high and low growth high tech firms." *Strategic Management Journal*, 1990, vol 11, pp 87-98.
- [26] R. Miles, C. Snow and M. Sharfman, "Industry variety and performance." *Strategic Management Journal*, 1993, vol 14, pp 163-177.
- [27] P. McDougall, J. Covin, J.R. Robinson and L. Herron, "The effects of industry growth and strategic breadth on new venture performance and strategic content." *Strategic Management Journal*, 1994, vol 15, pp 537-554.
- [28] M. Rozeff, "Growth, Beta and Agency Costs as Determinants of Dividend Payout Ratios." *Journal of Financial Research*, 1982, vol 5(Fall), pp 249-259.
- [29] S.W. Pruitt and L.W. Gitman, "The interaction between the investment, financing and dividend decisions of major US firms." *Financial Review*, 1991, vol 26 (33), pp 409-430.
- [30] A. Rashid, "Product market competition, regulation and dividend payout policy of Malaysian Banks." *Journal of Financial Regulation and Compliance*, 2008, vol 16(4), pp 1358-1968.
- [31] A.A. Al-Twaijry, "Dividend policy and payout ratio: evidence from the Kuala Lumpur stock exchange." *Journal of Risk Finance*, 2007, vol 8(4), pp 349-363.
- [32] W.M. Chaw and S.D. Susela, "Malaysia's Dividend Rule: A Blot in Corporate Governance?" *Accountants Today*, Sept 2009.
- [33] S.N. Abdullah, "Board composition, audit committee and timeliness of corporate financial reports in Malaysia. Corporate ownership and control." 2007, vol 4(2), pp 48-62.
- [34] F.S. Ling, M.L. Abdul Mutalip, A.R. Shahrin and M.S, "Dividend Policy: Evidence from Public Listed Companies in Malaysia." *International Journal of Business and Management*, 2008, vol 4(4), pp 208-222.
- [35] M. Amidu and J. Abor, "Determinants of dividend payout ratios in Ghana." *The Journal of Risk Finance*, 2006, vol 7(2), pp 135-145.
- [36] M. Singhanian, "Trends in Dividend Payout: A study of Select Indian Companies." *Journal of Management Research*, 2005, vol 5(3), pp 130-142.
- [37] M.H. Che Haat, "The effect fo corporate governance on transparency and performance of Malaysian companies." Unpublished PhD Dissertation. University Technology Mara, Malaysia.
- [38] N.K. Sing and V.M. Ling, "Relationship between firm ownership and performance: The mediating role of internal governance mechanism." *Corportate Ownership and control*, 2008, vol 5(4), pp 461-470.
- [39] B.S. Black, H. Jang, and W. Kim, "Predicting firms' corporate governance choices: Evidence from Korea." *Journal of Corporate Finance*, 2006, vol 12, pp 660-691.
- [40] D. Yermack, "Higher Market Valuation of Companies with a Small Board of Directors." *Journal of Financial Economics*, 1986, vol 40, pp 185-211.
- [41] T. Adam and V.K. Goyal, "The investment opportunity set and its proxy variables." *Journal of Financial Research*, 2008, vol xxxi (1), pp 41-63.
- [42] R. La Porta, F. Lopez-De-Silanes and A. Shleifer, "Corporate ownership around the world." *Journal of Finance*, 1999, vol 54, pp 471-517.
- [43] M.J. Conyon and S.I. Peck, "Board control, remuneration committees and top management compensation." *Academy of Management Journal*, 1998, vol 41(2), pp 140-157.
- [44] C.H. Ponnun, "Corporate Governance Structures and the Performance of Malaysian Public Listed Companies." *International Review of Business Research Papers*, 2008, vol 4(2), pp 217-230.
- [45] P.M. Guest, "The determinants of board size and composition: Evidence from UK." *Journal of Corporate Finance*, 2008, vol 14, pp 51-72.
- [46] M. Billet, D. King and D. Mauer, "The effect of growth opportunities on the joint choice of leverage, maturity and covenants." *Journal of Finance*, 2007, vol 58, pp 135-157.
- [47] C.A. Leng, "The Impact of Internal and External Monitoring Measures on Firm's Dividend Payout: Evidence From Selected Malaysian Listed Companies. *International Journal of Business and Management*, 2007, vol 2(5), pp 31-45.
- [48] S. Imm Song, A. Ruhani and P. Subramanim, (2008). Effects of Take-over Motives and Ownership Structure on Premiums Paid: Evidence from Malaysia." *International Journal of Business and Management*, 3(6), 75-88.
- [49] C.M. Daily, D.R. Dalton and A.A. Cannella Jr, "Corporate governance: Decades of dialogue and data." *Academy of Management Review*, 2003, vol 28 (3), pp 371 -38.
- [50] S.N. Abdullah, "Board composition, audit committee and timeliness of corporate financial reports in Malaysia." *Corporate ownership and control*, 2007, vol 4(2), pp 18-27.
- [51] B. Vogeang, *Econometrics, Theory and Applications with Eviews*. (Ed.), 2005, England: Prentice Hall.
- [52] J. Campbell, "Understanding risk and return." *Journal of Political Economy*, 1996, vol 104, pp 298-345.
- [53] M.C. Jensen, "The modern industrial revolution, exit and the failure of internal control system." *The Journal of Finance*, 1993, vol 48, pp 831-880.

[54] M. Nordin, D. Agus. Harjito and M. Junaina, "The effect of CEO duality, board composition and board size on organisational performance of companies listed on KLSE." Sinergi, 2005, vol 7(2), pp 1-16.

[55] F.A. Gul, and B.T. Kealey, "Chaebol, Investment Opportunity Set and Corporate Debt and Dividend Policies of Korean Companies." Review of Quantitative Finance and Accounting, 1999, vol 13, pp 401-416.

Appendix 1

TABLE 3 DESCRIPTIVE STATISTICS OF CONTINUOUS VARIABLES

		All	2004	2005	2006
<b>LOG MKTC</b>	<b>Mean</b>	6.406	6.390	6.305	6.521
	<b>Median</b>	6.270	6.250	6.110	6.380
	<b>Std Dev</b>	1.371	1.346	1.387	1.376
	<b>Min</b>	2.400	2.480	2.480	2.400
	<b>Max</b>	10.610	10.580	10.610	10.610
	<b>N</b>	825	275	275	275
<b>ROA</b>	<b>Mean</b>	0.062	0.038	0.062	0.080
	<b>Median</b>	0.050	0.060	0.050	0.050
	<b>Std Dev</b>	0.315	0.543	0.080	0.137
	<b>Min</b>	-8.170	-8.170	-0.160	-1.500
	<b>Max</b>	1.260	0.630	0.610	1.260
	<b>N</b>	780	238	272	270
<b>DTA</b>	<b>Mean</b>	0.563	0.603	0.516	0.570
	<b>Median</b>	0.450	0.450	0.440	0.455
	<b>Std Dev</b>	0.719	0.875	0.492	0.741
	<b>Min</b>	0.000	0.000	0.000	0.000
	<b>Max</b>	9.280	8.030	3.990	9.280
	<b>N</b>	832	270	276	286

TABLE 4 DESCRIPTIVE STATISTICS OF CONTINUOUS VARIABLES

		All	2004	2005	2006
<b>BSIZE</b>	<b>Mean</b>	5.384	5.384	5.384	5.384
	<b>Median</b>	5.000	5.000	5.000	5.000
	<b>Std Dev</b>	2.161	2.163	2.163	2.163
	<b>Min</b>	2.000	2.000	2.000	2.000
	<b>Max</b>	12.000	12.000	12.000	12.000
	<b>N</b>	843	281	281	281
<b>BCOM</b>	<b>Mean</b>	0.412	0.412	0.412	0.412
	<b>Median</b>	0.400	0.400	0.400	0.400
	<b>Std Dev</b>	0.252	0.252	0.252	0.252
	<b>Min</b>	0.000	0.000	0.000	0.000
	<b>Max</b>	1.000	1.000	1.000	1.000
	<b>N</b>	843	281	281	281
<b>IOS</b>	<b>Mean</b>	13.011	13.280	14.266	11.737
	<b>Median</b>	10.260	9.640	11.180	10.100
	<b>Std Dev</b>	16.418	22.977	10.553	10.802
	<b>Min</b>	-94.340	-94.340	0.800	-17.990
	<b>Max</b>	135.800	135.800	56.070	39.890
	<b>N</b>	571	214	157	200
<b>DPP</b>	<b>Mean</b>	33.789	34.040	33.769	33.600
	<b>Median</b>	31.905	34.041	31.220	31.970
	<b>Std Dev</b>	18.902	18.641	18.354	19.764
	<b>Min</b>	0.000	0.670	1.530	0.000
	<b>Max</b>	87.500	85.330	76.300	87.500
	<b>N</b>	592	178	197	217

TABLE 5 CORRELATION

	GLCNG LC	FLYC	BSIZE	BCOM	DUAL	LOGMK TC	ROA	IOS	IOSBCO M	IOSBSI ZE	DTA	DP P
GLNGL	1											
FLYC	-0.113 (0.001)** *	1										
BSIZE	-0.026 (0.454)	0.139 (0.000) ***	1									
BCOM	0.041 (0.234)	-0.033 (0.336)	-0.285 (0.000) ***	1								
DUAL	-0.014 (0.692)	0.177 (0.000) ***	0.025 (0.475)	0.013 (0.706)	1							
LOGM KT	0.344 (0.000)** *	0.164 (0.000) ***	0.125 (0.000) ***	0.084 (0.017) ***	-0.056 (0.114)	1						
ROA	0.039 (0.273)	0.006 (0.861)	-0.001 (0.971)	0.010 (0.785)	0.008 (0.826)	0.138 (0.000)** *	1					
IOS	-0.011 (0.787)	-0.025 (0.545)	-0.025 (0.556)	0.037 (0.388)	0.107 (0.012) ***	-0.029 (0.493)	0.028 (0.515)	1				
IOSBC OM	-0.041 (0.319)	-0.010 (0.807)	0.143 (0.000)	0.076 (0.066)	0.022 (0.601)	0.041 (0.326)	0.036 (0.396)	0.345 (0.000) ***	1			
IOSBSI ZE	-0.033 (0.431)	0.051 (0.227)	0.181 (0.000) ***	-0.012 (0.772)	0.115 (0.006) ***	-0.036 (0.399)	-0.016 (0.713)	0.820 (0.000) ***	-0.066 (0.122)	1		
DTA	-0.021 (0.545)	0.027 (0.424)	-0.030 (0.404)	-0.049 (0.170)	-0.045 (0.207)	-0.001 (0.969)	-0.033 (0.379)	-0.022 (0.619)	0.035 (0.434)	-0.038 (0.380)	1	
DPP	0.045 (0.282)	-0.007 (0.860)	-0.003 (0.941)	-0.051 (0.228)	-0.037 (0.384)	0.357 (0.000)** *	0.262 (0.000) ***	-0.216 (0.000) ***	-0.014 (0.783)	-0.241 (0.000)** *	0.01 2 (0.79 0)	1

Note \* Significance at the 10 % level; \*\* Significance at 5 % level; \*\*\* Significance at 1 % level

DUAL = Duality, LOGMKTC = Log of Market Capitalization, Return on Assets = ROA, DTA = Debt to assets, IOS = Investment opportunity set. BSIZE = Board size, BCOM = Board composition (in terms of proportion of independent directors), GLCNGLC = Government linked & non-government linked companies, FLYC = Family controlled firms, IOSBCOM = interaction between IOS and BCOM, IOSBSIZE = interaction between IOS and BSIZE, DPP = dividend payout policy

## Appendix 2

TABLE 6 MULTIPLE REGRESSION RESULTS

MODELS	1			2			3		
	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
Pooled EGLS (Constant)	27.940	4.198	0.000***	25.211	3.579	0.000***	26.341	3.733	0.000***
CONSUMER	11.599	2.709	0.007***	11.660	2.719	0.007***	11.648	2.724	0.007***
TRADING	3.668	1.030	0.304	4.101	1.144	0.253	4.509	1.259	0.209
PROPERTIES	3.421	0.925	0.356	3.179	0.857	0.392	3.437	0.929	0.354
CONSTRUCTION	3.018	0.610	0.542	2.371	0.476	0.635	2.344	0.472	0.637
PLANTATION	8.540	2.100	0.036**	8.726	2.141	0.033**	8.752	2.154	0.032**
GLCNGLC	0.197	0.046	0.964	0.519	0.120	0.905	0.239	0.055	0.956
FLYC	-8.033	-1.982	0.048**	-8.758	-2.134	0.034**	-9.043	-2.209	0.028**
DUAL	-5.206	-0.921	0.357	-5.401	-0.954	0.341	-5.444	-0.965	0.335
LOGMKTC	1.218	1.190	0.235	1.050	1.016	0.310	1.103	1.069	0.286
ROA	-30.524	-2.996	0.003***	-29.374	-2.868	0.004***	-29.463	-2.879	0.004***
DTA	0.996	1.073	0.284	1.052	1.132	0.258	1.143	1.228	0.220
IOS	-0.119	-1.979	0.049**	-0.113	-1.869	0.062*	-0.222	-2.534	0.012**
BSIZE				0.569	1.193	0.234	0.418	0.736	0.462
IOSBSIZE							0.025	1.710	0.088*
R <sup>2</sup>			0.090			0.091			0.096
Adjusted R <sup>2</sup>			0.041			0.412			0.047
Durban Watson			1.617			1.623			1.630
F statistic			2.347			2.273			2.326
N			409			409			409

\*\*\*Significance at 1 %; \*\*significance at 5 % level and \*significance at 10% level. Industry type = CONSUMER; TRADING; PROPERTIES; CONSTRUCTION; PLANTATIONS & INDUSTRIAL  
MBA = [Assets less total common equity add shares outstanding multiply shares closing price] divided by assets, MBE = [Shares outstanding multiply shares closing price] divided by common equity,  
GWTTA = % of growth to total sales, IOS = MBA + MBE+ GWTTA, BSIZE = Board size, BCOM = Board composition (in terms of proportion of independent directors), DUAL = Duality, GLCNGLC = Government linked & non-government linked companies, FLYC = Family control, ROA = Return on Assets, LOGMKTC = Log of Market Capitalization, IOSBSIZE = interaction between IOS and BSIZE.

TABLE 7 MULTIPLE REGRESSION RESULTS

MODELS	4			5			6		
	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
Pooled EGLS (Constant)	28.496	4.133	0.000***	28.416	4.112	0.000***	31.044	4.011	0.000***
CONSUMER	11.652	2.711	0.007***	11.644	2.707	0.007***	11.760	2.734	0.007***
TRADING	3.772	1.052	0.294	3.808	1.060	0.290	4.663	1.292	0.197
PROPERTIES	3.455	0.931	0.352	3.483	0.938	0.349	3.563	0.957	0.339
CONSTRUCTION	2.751	0.547	0.585	2.793	0.555	0.579	1.674	0.331	0.741
PLANTATION	8.655	2.113	0.035**	8.669	2.115	0.035**	8.543	2.083	0.038**
GLCNGLC	0.310	0.071	0.943	0.252	0.058	0.954	0.625	0.143	0.886
FLYC	-8.142	-1.996	0.047**	-8.162	-1.999	0.046**	-9.163	-2.223	0.027**
DUAL	-5.105	-0.899	0.369	-5.094	-0.897	0.371	-5.621	-0.988	0.324
LOGMKTC	1.233	1.201	0.231	1.249	1.213	0.226	0.966	0.928	0.354
ROA	-30.640	-3.003	0.003***	-30.636	-2.997	0.003***	-29.793	-2.915	0.004***
DTA	0.986	1.060	0.290	0.997	1.068	0.285	1.105	1.189	0.324
IOS	-0.118	-1.951	0.052*	-0.113	-1.763	0.079*	-0.547	-3.204	0.002***
BSIZE							-0.267	-0.404	0.686
IOSBSIZE							0.078	2.792	0.006***
BCOM	-1.676	-0.324	0.746	-1.665	-0.322	0.748	-0.549	-0.103	0.918
IOSBCOM				-0.004	-0.240	0.811	0.072	2.231	0.026**
R <sup>2</sup>			0.090			0.089			0.101
Adjusted R <sup>2</sup>			0.038			0.036			0.053
Durban Watson			1.621			1.619			0.738
F statistic			2.166			2.012			2.342
N			409			409			409

\*\*\*Significance at 1 %; \*\*significance at 5 % level and \*significance at 10% level. Industry type = CONSUMER; TRADING; PROPERTIES; CONSTRUCTION; PLANTATIONS & INDUSTRIAL MBA = [Assets less total common equity add shares outstanding multiply shares closing price] divided by assets, MBE = [Shares outstanding multiply shares closing price] divided by common equity, GWTTA = % of growth to total sales, IOS = MBA + MBE+ GWTTA, BSIZE = Board size, BCOM = Board composition (in terms of proportion of independent directors), DUAL = Duality, GLCNGLC = Government linked & non-government linked companies, FLYC = Family control, ROA = Return on Assets, LOGMKTC = Log of Market Capitalization, IOSBSIZE= interaction between IOS and BSIZE, IOSBCOM = interaction between IOS and BCOM