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THE CORPORATE GOVERNANCE STRUCTURES OF GLCs AND NGLCs AND FIRM PERFORMANCE IN MALAYSIA

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ABSTRACT

This study examines the relationship between corporate governance structures and the performance of matched-pairs of Government Linked Companies (GLCs) and Non-Government Linked Companies (NGLCs). The empirical results indicate that there are eight statistically significant differences between the corporate governance structures of GLCs and NGLCs, thus providing a rationale for examining the association between corporate governance structure and firm performance of these two distinct groups. Accordingly, univariate and multivariate analyses were performed on two sample sets: GLCs and NGLCs. In the univariate analysis, only Board size (BSZ) exhibited a significant relationship with respect to firm performance, in contrast the multivariate analysis found no empirical evidence of a consistent relationship between corporate governance structure and performance, which was measured in relation to Return On Assets (ROA) and Return On Equity (ROE) in GLCs and NGLCs over the same period. Statistically significant relationships were found across groupings and for different performance measures, but were not sustained across all the years considered. The results indicate that despite the identification of eight differences in the governance structures of GLCs and NGLCs, the observed differences in firm performance cannot be explained by governance structure. This finding supports the view that governance structures purely provide appropriate means to monitor company management rather than improve performance.

Keywords: *Corporate Governance, GLCs, NGLCs, Firm Performance*

INTRODUCTION

Although Government Linked Companies (GLCs) have undoubtedly been a major element in the socio-economic development of Malaysia, their performance has lagged behind that of more established Non-Government Linked Companies (NGLCs) (Lemmon and Lins, 2003). Previous theoretical and empirical studies suggest that the corporate governance structures of GLCs have a detrimental effect on firm performance. Among the empirical studies, Boardman and Vining (1989) analyzed the relative performance of the 500 largest non-U.S. mining and manufacturing companies in 1983 to determine whether privately owned firms outperform State-Owned Enterprises (SOEs), Mixed ownership Enterprises (MEs) and privately owned firms. Their findings indicated that private corporations are more profitable and efficient (measured as sales per employee and per asset) than SOEs and MEs. A longitudinal study by Dewenteur and Malatesta (1997), spanning a twenty-year period, determined that government firms display inferior profitability with respect to GLCs and NGLCs; a more recent study by Wang (2003) also found that GLCs performed worse than NGLCs.

LITERATURE REVIEW

Corporate Governance Practices of GLCs and NGLCs in the Context of Economic, Political and Social Backgrounds in Malaysia

The historical background of the economic, political and social circumstances in Malaysia have had a profound impact on corporate governance practices, because the country comprises of various races, religions, creeds, customs and languages (Haniffa, 1999), although Malaysians may be segregated into two main groups; bumiputra and non-bumiputra. After independence in 1957, the economic state of the country was relatively poor and even with an annual real growth in Gross Domestic Product (GDP) of 6.3% over the period 1961-1970 ethnic inequality had increased as economic activity was dominated by non-bumiputra (Ministry of Finance, 1970). The ratio of non-bumiputra to bumiputra median incomes rose from 1.99:1 in 1957/58 to 2.20:1 in 1967/68 (Gomez

and Jomo, 1997) and with a worsening economic outlook, coupled with frustration over the economic dominance of non-bumiputra, culminated in ethnic violence in 1969 (Jayasankaran and Hiebert, 1997).

In order to alleviate the situation, the government embarked on affirmative action in the form of the New Economic Policy (NEP) in 1970. The launching of the NEP was an economic turning point in that the government played a significant role and was actively involved in establishing a broad range of productive enterprises (Abdullah, 1992). The NEP had two major objectives: to eradicate poverty regardless of race and to restructure society by eliminating the identification of race with economic function. The ultimate objective of the NEP was to redistribute wealth more equally amongst Malaysian society (Hensley *et al.*, 1993).

FORMATION OF GLCS

In the early 1980s, the government made a significant incursion into the corporate sector by establishing GLCs, which was designed to act as a catalyst to achieve the objectives of the NEP. In a Treasury Circular (Ministry of Finance, 1993) a GLC was defined as a company in which the Government controls more than 20% of the equity shares through Khazanah Nasional Berhad (KNB), the Ministry of Finance (MOF), and other federal and state government-linked agencies. The formation of GLCs was performed progressively through privatisation and corporatisation; whereby many government departments were first privatised and later transformed into separate wholly-owned government companies (Ministry of Finance, 1993).

It was hoped that the privatisation policy would expedite attainment of the NEP's goal of providing more avenues for bumiputra businessmen to participate in economic activities. Further to this the policy would reduce the government's burden by providing essential services to the public, for example road construction, health services, energy and power. Under government patronage, these privatised companies thrived and became very successful; subsequently, many of them were corporatized through the issuing of a portion of their shares through Bursa Malaysia. As the government maintained substantial ownership in these companies, these corporatized entities became to be known as Government-Linked Companies or GLCs (Ministry of Finance, 1993). Some of the more

prominent GLCs are Golden Hope Plantations Berhad, Kumpulan Guthrie Berhad, Telekom Malaysia Berhad (TMB), Malaysian Airline System (MAS) and Tenaga Nasional Berhad (TNB). Other than through corporatisation exercises, the government also obtained substantial ownership in many PLCs, directly or indirectly, through its investment holding companies.

The government also controls other major institutional funds, such as Perbadanan Nasional Berhad (PNB), the Employee Provident Fund (EPF), the Military Fund Board (LTAT), the Pilgrimage Fund Board (TH) and the Pension Trust Fund (KWAP). A panel of supervisory boards manages all these trust funds, but all decisions pertaining to investment strategies are under the authority and jurisdiction of the government. Collectively these institutional funds are known as government investment companies or GLICs (Ministry of Finance, 1993). Furthermore, all the State Economic and Development Corporations (SEDCs) and other state agencies that have at least a 20% shareholding in PLCs are also considered as GLCs (Ministry of Finance, 1993). As a consequence of the formation of GLCs via the NEP, the business environment and corporate governance structure of GLCs in Malaysia became quite unique (Thillainathan, 1999a).

OBJECTIVES AND RESEARCH QUESTIONS

This study investigates whether there is a relationship between the corporate governance structure and firm performance of GLCs and NGLCs in the post-Asian Financial Crisis (AFC) period from 2001 to 2003. Due to the manner in which GLC's were established it is anticipated that GLCs and NGLCs will exhibit very different corporate governance structures. Consequently, the first part of the presented study focuses upon the identification of any significant differences between the corporate governance structures of GLCs and NGLCs. The second part explores whether the identified differences in corporate governance structures have any significant effect on firm performance.

The first research question is: Are there any significant differences in the corporate governance structure of GLCs and NGLCs in the post-AFC period from 2001 to 2003? The second research question is: Do differences in the corporate governance structure of GLCs and NGLCs directly influence firm performance, over the period 2001 to 2003?

RESEARCH DESIGN AND METHODOLOGY

A comprehensive literature review pertaining to corporate governance of GLCs and NGLCs, and firm performance enabled testable hypotheses to be developed and identification of data required to perform the tests. Research objectives were established through analysis of interview responses from senior officers at the MOF with respect to the corporate characteristics of GLCs.

Using the matched-pair method applied by Daily and Dalton (1997) GLCs on the Bursa Malaysia were paired with NGLCs. Univariate analysis and paired sample-t-tests were conducted on the GLCs and NGLCs for 2001, 2002 and 2003 in order to ascertain any significant differences in the governance variables. Bivariate tests conducted on the GLCs and NGLCs were used to establish whether there are any statistically significant relationships between each independent variable and firm performance measured, ROA or ROE, existed. Multivariate analysis was used to determine whether a statistically significant relationship existed between the corporate governance structures of GLCs and NGLCs, and firm performance; if interrelationship between explanatory variables is permitted.

SAMPLE SELECTION AND DATA COLLECTION

The target population in this study comprised of companies listed on Bursa Malaysia in 2001, 2002 and 2003, and were in one of the seven economic sectors; construction, consumer products, industrial products, plantations, property, trading/services and technology. The sample companies chosen in this study included an equal number of GLCs and NGLCs taken from the target population and were selected according to the process presented in Table 1.

Table 1: Stages Applied in Matched-Pair Identification

Description	2001	2002	2003
Listed GLCs identified on Bursa Malaysia including banks and Financial Institutions, PN4 Companies and companies still under restructuring.	111	111	111
After deduction of Financial Institutions, PN4 Companies and companies under restructuring	89	89	89
Letters sent to paired GLCs (89) and NGLCs (89)	178	178	178
Annual Reports received [Hard and soft-copies]	106	106	106
After deduction of companies with extremely high profitability or losses (outliers)	98	98	98
After deduction of outliers	92	92	88

One hundred and eleven GLCs were identified from the target population, which reduced to eighty-nine after the deduction of Banks, Financial Institutions, PN4 companies and companies undergoing government restructuring (post-AFC). Letters of enquiry were sent out to all the identified GLCs and matching NGLCs of which fifty-three pairs (one hundred and six companies) responded (including e-mail responses).

All the pairs were examined for evidence of outliers, which constitutes as a company with abnormally high profitability or losses, or negative net assets. Outliers need to be excluded because they can cause model bias by affecting estimated regression coefficient values (Field, 2001). Four companies in all of the years considered were found to exhibit extremely high profits or losses and were thus classified as outliers and excluded from further analysis, as were three companies with negative assets, Table 1. Thus seven further pairs (fourteen companies) were excluded, since if a company from a pair is excluded; the matched company must also be removed.

As such, forty-six pairs (ninety-two companies) were included in the final test samples for 2001 and 2002, however for 2003 this was reduced to forty-four pairs (eighty-eight companies), because two of the GLCs were delisted from the Stock Exchange in 2003. Although these two companies were replaced with the listing of their subsidiaries, it is considered to be a new listing and therefore the two GLCs together with their pairings were excluded for analysis.

OPERATIONALISATION OF THE DEPENDENT, INDEPENDENT AND CONTROL VARIABLES

Firm performance is evaluated with respect to the dependent variables ROA and ROE, where ROA is the average annual realised rate of return defined to be earnings after tax divided by the total assets and ROE is the average annual realised rate of return defined to be earnings after tax divided by shareholder equity. These performance criteria are consistent with those used in other studies, and are frequently used by market and financial analysts in assessing company performance (Shrader *et al.*, 1997), whereby high ROA and ROE values signify favourable firm performance.

Fourteen independent variables are considered in the presented study, all of which are features of the internal governance system related to the board structure and composition. The fourteen variables identified are Board Size (BSZ), Board Meeting Frequency (BMF), Role Duality (RDU), Non-Executive Directors (NEX), Independent Directors (IND), Directors with Accounting and Finance Qualifications (DAF), Women Directors (WOM), Bumiputra Directors (BUM), Senior Government Officers Directors (SGO), Politician Directors (POL), Family Member Directors (FAM), Audit Committee Size (ACS), Audit Committee Meeting Frequency (ACM) and Big-Four Auditors (AUD), were selected based on the preliminary findings of a pilot study and an in-depth study of literature pertaining to corporate governance structures in the Malaysian business environment.

Two control variables; sales and industry-type were also included in order to minimize firm performance being influenced by other factors. The natural Logarithm of Annual Sales (LSALE) is used as the proxy for size and is expected to be positively related to performance, since larger firms tend to be more profitable than smaller firms and benefit from the economies of scale and can spread their risk (Ghosh, 1998). Variations in performance, based on industry type, were addressed through the creation of dummy variables for each of the seven-industry classifications used by Bursa Malaysia (construction, consumer products, industrial products, plantations, property, trading/services and technology).

HYPOTHESES TESTING

This study considers the following three hypotheses for the two aforementioned research objectives.

H1	GLC Corporate governance structures differ significantly from those of NGLCs.
H2	There is a significant relationship between corporate governance structures and the performance of GLCs in the post-AFC period from 2001 to 2003.
H3	There is a significant relationship between corporate governance structures and the performance of NGLCs in the post-AFC period from 2001 to 2003.

The hypotheses were assessed in relation to firm performance and the fourteen identified independent variables pertaining to corporate governance structures. Of the fourteen considered only three; BUM, POL and SGO, are not commonly used in assessing firm performance, but have been included since they are of significance with respect to the NEP (1971) and ICA implementation (1975) in Malaysia. These directors are implicitly believed to have considerable links with the government and their appointments are consistent with resource dependence theory.

SUMMARY OF THE UNIVARIATE RELATIONSHIP BETWEEN INDEPENDENT VARIABLES AND FIRM PERFORMANCE (ROA AND ROE)

This section presents the results for the univariate analysis of the relationships between the independent variables and firm performance with respect to ROA and ROE, which are presented in Tables 2 and 3, respectively.

Table 2: Return on Assets (ROA)

VAR	GLCs			NGLCs		
	2001	2002	2003	2001	2002	2003
1. BSZ	+0.385 ***	+0.347 **	+0.289 *	+0.041	+0.130	+0.006
2. BMF	+0.159	-0.026	+ .334**	+0.226	+0.196	+0.054
3. RDU	-0.223	-0.204	-0.006	+0.215	-0.089	-0.084
4. NEX	+0.047	-0.151	-0.202	-0.030	+0.090	+0.215
5. IND	-0.079	-0.095	+0.132	-0.221	-0.235	-0.158
6. DAF	+0.074	+0.235	+0.235	-0.086	+0.000	-0.132
7.WOM	-0.060	-0.105	-0.167	-0.106	-0.291**	- 0.351 **
8. BUM	+0.140	-0.131	-0.129	+0.031	+0.007	-0.035
9. SGO	-0.030	-0.076	+0.069	+0.090	+0.149	+ 0.322**
10. POL	+0.060	-0.131	+0.068	+0.194	+0.208	+ 0.326 **
11.FAM	-0.099	+0.087	-0.061	-0.120	-0.095	-0.171
12. ACS	+ 0.312**	+0.065	+0.025	+ 0.308**	+0.060	-0.127
13.ACM	+0.086	-0.053	+0.120	-0.059	+0.113	-0.069
14.AUD	-0.058	-0.156	- 0.381**	-0.195	-0.149	-0.245

(Spearman coefficients-Significant at 1%= ***, 5%= ** and 10%= *)

Table 3: Return on Equity (ROE)

VAR	GLCs			NGLCs		
	2001	2002	2003	2001	2002	2003
1. BSZ	+0.532 ***	+ 0.328**	+0.405***	+ 0.358**	+0.044	-0.081
2. BMF	+ 0.354 **	-0.055	+ 0.324**	+ 0.386***	+ 0.262*	+0.087
3. RDU	-0.099	-0.224	+0.075	+0.155	+0.009	+0.000
4. NEX	+0.100	-0.180	-0.200	-0.026	+0.040	+0.035
5. IND	-0.026	-0.005	+0.096	-0.195	- 0.251	-0.040
6. DAF	-0.076	+0.132	+0.138	-0.155	+0.038	-0.034
7.WOM	-0.024	-0.233	-0.158	-0.145	- 0.314**	- 0.303**
8. BUM	+0.069	-0.019	-0.133	-0.015	+0.086	-0.065
9. SGO	-0.117	-0.087	+0.007	-0.018	+0.213	+0.288*
10. POL	+0.153	+0.054	+0.055	+0.129	+ 0.394***	+ 0.285*
11.FAM	-0.033	-0.011	-0.107	+0.024	-0.021	-0.129
12. ACS	+0.151	+0.015	+0.097	+ 0.062*	+0.076	+0.110
13.ACM	+0.082	-0.077	+0.064	+0.085	+0.150	-0.020
14.AUD	-0.082	-0.190	- 0.324**	-0.013	-0.089	-0.127

(Spearman coefficients-Significant at 1%= ***, 5%= ** and 10%= *)

From the results presented it is evident that some of the independent variables exhibit significant correlations thereby supporting the proposed hypotheses.

SUPPORTED HYPOTHESES

Board size (BSZ) is the only independent variable that consistently exhibits significant correlation to firm performance. For both ROA and ROE assessment there is significant correlation between BSZ and GLC firm performance for all three years considered, which supports H2. A significant BSZ correlation is only exhibited for NGLCs with respect to ROE in 2001, therefore H3 is only partially supported.

PARTIALLY SUPPORTED HYPOTHESES

H2 is only partially supported with respect to BMF, which exhibits significant correlations for two years and one year for ROE and ROA, respectively. It is of note that there is partial support for H3 in relation to BMF, but only with respect to ROE; 2001 and 2002. Significant correlations with respect to composition are inconsistent; H3 is partially supported with respect to WOM for both ROA and ROE; 2002 and 2003, POL for ROA and ROE in one and two years, respectively, and SGO only exhibits significant correlations for NGLCs for ROA and ROE in 2003. The hypotheses with respect to audit committees and auditors are also inconsistently supported; ACS exhibits significant correlation with respect to NGLCs in 2001 for both ROA and ROE, but for GLCs significant correlation is only exhibited for ROA in 2001, and AUD only exhibits significant correlation in 2003 for GLCs with respect to both ROA and ROE.

REJECTED HYPOTHESES

The results presented indicate that six variables; RDU, NEX, DAF, BUM, FAM and ACM, exhibit no significant correlations for any years and for neither type of company, and consequently the hypotheses relating to these variables are rejected.

RESULTS OF THE PAIRED SAMPLE T-TESTS ON GLCS AND NGLCS

Based on the results of the paired sample-t-tests conducted on GLCs and NGLCs for 2001, 2002 and 2003, significant differences exist between the governance structures with respect to eight independent variables, Table 4. Comparison of GLCs and NGLCs using paired-sample t-tests indicate statistically significant differences in seven of the fourteen identified governance variables. Four of these; NEX, BUM, SGO and FAM, are statistically significant with a 1% confidence level for all years, whereas BSZ, BMF and RDU are significant with at least 10% confidence level (except BSZ in 2001 and 2002, and RDU in 2003 with 1% confidence levels). Analyses of the identified differences suggest that GLCs have more frequent board meetings (BMF) than NGLCs, which may be a consequence of having larger boards, there is also a higher representation of NEX, BUM and SGO in GLCs compared to NGLCs. However NGLCs exhibit greater family member representation, FAM, and more role duality, RDU, than GLCs. POL was also determined to be statistically significant for two years (2001 and 2002) and constituted the eighth significant independent variable. Hence, H1 is supported in that the first corporate governance structures of GLCs differ significantly from those of NGLCs.

Table 4: Comparison of the Mean, t-Value and Significant Differences between GLCs and NGLCs for 2001, 2002 And 2003

			2001			2002			2003		
			Mean	t-value	Sig. (2-tailed)	Mean	t-value	Sig. (2-tailed)	Mean	t-value	Sig. (2-tailed)
1	BSZ	G	8.5098	3.444	0.001***	8.9412	3.776	0.000***	8.5100	1.907	0.063*
		NG	7.2000			7.6900			7.8000		
2	BMF	G	6.0196	2.323	0.024**	6.4314	2.212	0.032**	6.2000	2.174	0.035**
		NG	5.1200			5.3300			5.2889		
3	RDU	G	0.1373	-2.11	0.040**	0.1373	-2.023	0.048**	0.0900	-3.5	0.001***
		NG	0.3300			0.3100			0.4000		
4	NEX	G	79.791	5.634	0.000***	82.181	6.877	0.000***	84.2924	6.107	0.000***
		NG	63.515			63.816			63.8873		
5	IND	G	37.122	0.716		39.167	-0.658		40.5796	-0.187	
		NG	35.218			40.683			40.9482		
6	DAF	G	21.275	-0.03		23.063	-0.132		20.9013	-1.203	
		NG	21.337			23.355			23.2209		
7	WOM	G	9.1980	2.051		8.5157	2.844	0.006***	6.2558	0.076	
		NG	5.3725			3.5765			6.0918		
8	BUM	G	72.229	6.973	0.000***	72.508	6.349	0.000***	75.5307	7.466	0.000***
		NG	42.986			44.463			40.6536		
9	SGO	G	58.398	8.272	0.000***	52.749	9.053	0.000***	51.132	6.198	0.000***
		NG	23.616			21.677			21.16		
10	POL	G	7.5882	2.774	0.008***	6.9588	2.274	0.027**	4.1276		
		NG	1.7667			2.3333			2.7		
11	FAM	G	3.0549	-3.85	0.000***	3.5882	-3.152	0.003***	3.4498		0.002***
		NG	16.077			13.369			16.4291		
12	ACS	G	3.5686	0.659		3.8235	0.659		3.8222	1.238	
		NG	3.4706			3.7255			3.6		
13	ACM	G	4.3333	-0.230		5.1800	0.798		5.1400	-0.191	
		NG	4.3700			4.9800			5.2045		
14	AUD	G	1.1373	-1.4		1.1373	-1.4		1.1111	0	
		NG	1.2353			1.2353			1.1111		

(Key: ***= statistically significant at 1%, **= statistically significant at 5%, *= statistically significant at 10%)

MULTIVARIATE ANALYSIS

Specification of Regression Models

Since eight independent variables were identified to exhibit significant correlation to firm performance it was decided to limit the multivariate analysis to the same eight variables, plus sales and company-type, with respect to firm performance (ROA and ROE). The regression model used is presented in Figure 1, where $i = 1, 2, \dots, n$ and corresponds to each firm.

$$Y_i = B_0 + B_1X_{1i} + B_2X_{2i} + B_3X_{3i} + B_4X_{4i} + B_5X_{5i} + B_6X_{6i} + B_7X_{7i} + B_8X_{8i} + B_9X_{9i} + B_{10}X_{10i} + E_i$$

Figure 1: The Regression Model

where Y_i corresponds to the dependent variables: Return on Assets (ROA) and Return on Equity (ROE), and the independent variables are:

X_1	<i>board size</i>
X_2	<i>frequency of board meetings</i>
X_3	<i>role duality</i>
X_4	<i>percentage of non- executive directors</i>
X_5	<i>percentage of bumiputra directors</i>
X_6	<i>percentage of government officers as directors</i>
X_7	<i>percentage of family members as directors</i>
X_8	<i>percentage of politicians as directors</i>
X_9	<i>sales (in millions)</i>
X_{10}	<i>industry-type</i>
B_0	<i>constant</i>
E_i	<i>error term</i>

Multiple linear regression analysis was performed on GLC and NGLC datasets for 2001, 2002 and 2003 using SPSS. According to Cooke (1998) better relationships between corporate governance variables and performance can be established if data is transformed, hence the datasets were normalised with respect to the number of observations so that each region are equal; this method is more commonly referred to as the Van Der Waerden (1953) approach. The main advantage of transforming data to normal scores is that any subsequent analyses, which require normalised

data, will exhibit significance levels that can be determined with more confidence; F- and t-tests may be more meaningful, and the power of the F- and t-tests may be fully utilized (Cooke, 1998). Additionally, the regression coefficients derived using normal scores preserve the monotonicity in the relationships between the independent and dependent variables, and in the case of non-linear systems exhibiting data concentration, the use of normal scores can be used to disperse the data.

RESULTS OF THE ANALYSIS ON THE NORMALISED DATASETS WITH RESPECT TO GROUPING AND YEAR

Table 5 presents a summary of the analysis performed on the normalised datasets with respect to grouping and year accompanied by the significance of independent variables.

Table 5: Multivariate analysis results for the normalised GLC and NGLC datasets with respect to grouping and year

No	Variables	Firm Performance	GLCs			NGLCs		
			2001	2002	2003	2001	2002	2003
1	BSZ	ROA	+	+	+	+	+	--
		ROE	+ ***	+	+ **	+ **	+	--
2	BMF	ROA	+	--	+	+	+	--
		ROE	+	--	+	+ **	+	--
3	RDU	ROA	--	--	--	+	--	--
		ROE	--	--	--	+	--	+
4	NEX	ROA	+	--	--*	--	+	+**
		ROE	+	--	--	--	+	+***
5	BUM	ROA	--	+	--	--	--	--**
		ROE	+	+	--	--	--	--*
6	SGO	ROA	--*	--	--	+	--	+*
		ROE	--	--	--	+	--	+
7	FAM	ROA	--	+	--	--	--	+
		ROE	--	+	--	+	+	+
8	POL	ROA	--	*	--	+	+	+ *
		ROE	--	--	--	--	+**	+
9	LSALE	ROA	+***	+**	+	+	+***	+*
		ROE	+	+***	+	+	+***	+*
10	INDUS	ROA	+***	+***	+	--	--	--
		ROE	--	+**	+	+	--	+

(Key: ***= statistically significant at 1%, **= statistically significant at 5%, *= statistically significant at 10%)

BSZ TO FIRM PERFORMANCE

For GLCs, there is a consistent and positive relationship between BSZ and firm performance (ROA and ROE) for all the years considered; furthermore they are statistically significant for ROE in 2001 and 2003 at 1% and 5% confidence levels, respectively. Therefore, the hypothesis that a significant relationship between BSZ and the firm performance of GLCs exists is supported for two out of three years. NGLCs relationship with firm performance (ROA and ROE) is positive for 2001 and 2002, with statistical significance of 5% in 2001, but negative in 2003. The implications are that the hypothesis, which proposes that a significant relationship between BSZ and the firm performance of NGLCs exists, only has support for one year in three with respect to ROE.

Overall, the results indicate that a positive relationship between BSZ and firm performance exists, but the relationship is not statistically significant for any of the years with respect to ROA, whereas for ROE the relationship is statistically significant for one year and two years out of three for NGLCs and GLCs, respectively. This result is consistent with the work of Chaganti *et al.* (1985), Pearce and Zahra (1992), Dalton *et al.* (1998), and Kiel and Nicholson (2003) who determined that BSZ is positively associated with firm performance. It can be concluded that the hypothesis of a significant relationship between BSZ and performance has limited support for ROE, but is not supported with respect to ROA. The variable results between year and grouping are consistent with the lack of agreement on the extent and direction of any relationship between BSZ and firm performance present in extant literature.

BMF TO FIRM PERFORMANCE

There is a consistent and positive relationship between BMF and firm performance (ROA and ROE), except for GLCs in 2002 and NGLCs in 2003. However, there is no statistically significant relationship for GLCs and therefore the hypothesis of a significant relationship between BMF and performance is not supported. For NGLCs a statistically significant relationship only exists for ROE in 2001, which means that the hypothesis that a significant relationship between BMF and firm performance exists has limited support.

From the results presented it is apparent that there is a positive relationship between BMF and firm performance, however there is little statistical significance and therefore the support for H2 and H3 is limited with respect to BMF. The inconsistency in the results are in agreement with extant literature, which states that the relationship between BMF and firm performance is complex and its direction is uncertain (Evans *et al.*, 2002).

NEX TO FIRM PERFORMANCE

The results indicate that there is little or no evidence to support that a relationship exists between NEX and firm performance with respect to ROA and ROE. Therefore even though NEX may be a majority on firm boards, they do not significantly influence firm performance. This could be attributed to a lack of business acumen and that acquaintances perform their duties on their behalf, because they are not fully involved in company management (Patton and Baker, 1987). Hence Non-Executive Directors may not be effective and capable in discharging their duties, thus failing to enhance firm performance, but their presence on the board of directors is to merely provide checks and balance rather than contribute through business expertise. The results presented are consistent with the work of Goodstein *et al.* (1994) who suggested that large numbers of NEX could stifle strategic actions and constitute unnecessary monitoring of management with a consequent reduction in firm performance. This is also in agreement with the works of Hermalin and Weisbach (1991), and Mehran (1995) who determined that there were no significant relationships between NEX and firm performance.

It is of note that there is a significant positive correlation between NEX and performance in 2003 for NGLCs, which is consistent with the findings of Rosenstein and Wyatt (1990), Lee *et al.* (1992), Pearce and Zahra (1992), and Ezzamel and Watson (1993) who reported a positive relationship between the proportion of NEX on the board and firm performance.

BUM TO FIRM PERFORMANCE

The results provide little support for H2 and H3 with respect to a significant relationship between BUM and firm performance. The majority of the directions are negative, which implies that this variable has a depressing impact on performance and could be due to bumiputra directors focusing on the short-term (Hofstede, 1991) or exhibiting high uncertainty avoidance, which is reflected in their values of non-assertiveness, conflict avoidance and uneasiness in dealing with ambiguities and uncertainties (Abdullah, 1992). As such, the presence of Bumiputera on boards might just be window dressing in order to maintain good relations with the government (Gomez and Jomo, 1997) and is consistent with previous Malaysian studies on the subject of BUM (Haniffa, 1999).

SGO TO FIRM PERFORMANCE

The results indicate that SGO has a very limited impact on firm performance with only ROA exhibiting a statistically significant relationship in certain groupings, but the relationship is inconsistent across all years. Other groupings exhibit no relationships between SGO and firm performance. However, the negative and positive relationships for GLCs and NGLCs, respectively, indicate that SGOs in GLCs lower firm performance, but increase performance in NGLCs. It is plausible that in GLCs, since SGOs represent the shareholders (the government) their decision making might be dictated by and be in accordance with government policies for which profits may not be a priority and hence firm performance would be reduced. However, in NGLCs SGOs role as board members might give a company access to vital networks and sources of information within government, which might consequently enhance firm performance.

FAM TO FIRM PERFORMANCE

Although not statistically significant, the relationship between FAM and firm performance is more pronounced in NGLCs (four out of six instances compared to two out of six instances), which is consistent with a number of recent empirical studies in South Korea (Joh, 2003) and Hong

Kong (Carney and Gedajlovic, 2002) which indicate that controlling family ownership relates directly to better firm performance. A study by Barontini and Caprio (2005) stated that family control is positively related to firm value and operating performance. Overall the results indicate that companies that are controlled by a family do not outperform other companies and therefore the hypothesis that FAM is a strong determinant with respect to firm performance in Malaysian firms is not supported.

POL TO FIRM PERFORMANCE

Differences exist between the results for GLCs and NGLCs; there is a consistent negative relationship for GLCs, but a positive relationship for NGLCs in five out of the six samples. These differences are consistent with resource dependence theory, since politicians are valuable to NGLCs, because they can provide access to resources and networks within government (Gomez and Jomo, 1997). However, since there are no consistent statistically significant results, the hypothesis that a significant relationship exists between POL and firm performance is not supported.

LSALE TO FIRM PERFORMANCE

There is a consistent positive relationship between company size (proxied by LSALE) and firm performance for all groups of companies in all years. GLCs exhibit three statistically significant relationships; ROA 2001(1%) and 2002(5%), and ROE 2002(1%), which indicates that in GLCs company size is statistically significant to firm performance in three out of six samples. NGLCs also exhibit relationships for four samples; ROA and ROE in 2002 and 2003, with statistical significance of 1% and 10%, respectively. This indicates that in NGLCs company size is statistically significant to performance in four out of six samples.

The results clearly indicate that statistically significant positive relationships exist between LSALE and firm performance (twelve out of eighteen samples). Specifically, the results show that seven out of nine tests and five out of nine tests are statistically significant for ROA and ROE, respectively. Therefore, it can be concluded that company size is a strong determinant for Malaysian firm performance.

INDUS TO FIRM PERFORMANCE

There is a consistent positive relationship between INDUS and ROA for GLCs; of the samples considered two exhibit statistical significance of 1%, namely those in 2001 and 2002. The relationships between INDUS and ROE for GLCs are both negative (2001) and positive (2002 and 2003) for which only the 2002 relationship exhibits statistical significance of 5%. There is, however, a consistent negative relationship between INDUS and ROA for NGLCs in all years and a mixture of positive (2001 and 2003) and negative (2002) relationships between INDUS and ROE, of which none exhibit any statistical significance.

The results indicate that INDUS is positively and significantly related to the firm performance of GLCs, but is detrimental to that of NGLCs.

MAJOR FINDINGS OF THE STUDY

Eight differences between the corporate governance structures of GLCs and NGLCs have been identified with respect to univariate analysis. Consequently the first hypothesis, which proposes that there are significant differences between the corporate governance structures of GLCs and NGLCs, is supported. The six other variables do not have any bearing on the first hypothesis. The results of multivariate analysis indicate that there is no empirical evidence for differences in the relationships between corporate governance structures and the firm performance of GLCs and NGLCs. Although in certain years and performance aspects significant relationships do exist; both groups exhibit inconsistency with respect to the statistical significance of any relationships by grouping, firm performance (ROA and ROE), and year. Such inconsistencies indicate instability in the statistical relationships throughout the three-year period of study. The implications of inconsistent results with respect to a three-year corporate governance study is that empirical research may only attain conclusions based on statistical significance at one point in time and that such significance may only be relevant in that specific historical context and may not persist. The results indicate that, notwithstanding the identified eight differences in governance structure, the observed differences in firm performance between GLCs and NGLCs cannot be explained solely in relation to the corporate governance structure and it is of significant to note

that the relationship between corporate governance structure and the firm performance of GLCs and NGLCs does not differ much in the post-AFC period from 2001 to 2003. Hence, the hypothesis proposing that there is a significant relationship between corporate governance structure and the firm performance of GLCs and NGLCs in the post-AFC period from 2001 to 2003 is not supported.

These findings are consistent with the ambivalent position on the relationship between firm performance and corporate governance variables observed in the literature, which contains many conflicting arguments concerning the direction of relationships and empirical results that are extremely variable. The lack of any apparent relationships between corporate governance structure and the firm performance of GLCs and NGLCs indicates that the governance mechanisms act in accordance with the purpose of their establishment, which is to not specifically enhance performance, but to enable monitoring of the management and regulating companies thus increasing transparency and accountability, and thereby gaining investor confidence.

The findings of this study are consistent with the work of Suto (2003), which suggested that the absence of a clear link between corporate governance structure and the firm performance of GLCs was a consequence of weakened governance structures due to government interference and policies. The problem statement stated that GLCs in Malaysia are less efficient than NGLCs, because GLC directors are generally appointed from the ranks of SGO, BUM and POL, who often lack business acumen and their investment decisions may be motivated by social rather than commercial benefits. It is therefore assumed that their appointments contribute to the lower performance of GLCs, however this study indicates that there is no statistical significance with respect to firm performance.

LIMITATIONS OF THE STUDY

This study has a number of limitations; the first relates to the mechanism employed to match and pair the GLCs and NGLCs. There are over nine-hundred companies in Bursa Malaysia, however the identification of reasonably matched companies greatly restricts the coverage of the samples and means that it is far from truly random. Although every effort was made to produce an accurate match-pair, the process is inherently

compromised, for example no exact pair existed with respect to paid-up capital, and although the effect on firm performance is probably minimal, an inaccurate match-pair could invalidate the sample selection mechanism. A second limitation relates to the omission of variables in the regression model, which could exhibit statistical significance with respect to firm performance. The study examined the relationship of corporate governance structure to firm performance over a three year period, which is comparatively short and a longer period might yield more comprehensive results. However, in spite of these limitations, this study makes some unique contributions to the growing body of literature on the relationship between corporate governance structure and the firm performance of GLCs and NGLCs.

SUMMARY

This study has examined the relationship between corporate governance structure and firm performance of GLCs and NGLCs in Malaysia in the post-AFC period from 2001 to 2003. The findings indicate that out of fourteen independent variables evaluated in the univariate analysis, eight exhibited statistically significant differences between the corporate governance structures of GLCs and NGLCs in a sample of matched pairs. The first hypothesis, which proposed the existence of significant differences between the corporate governance structures of GLCs and NGLCs, is supported. Multivariate analysis of the sample, with one exception, did not elucidate any consistent statistical significance with respect to the relationships between a range of variables pertaining to corporate governance structure and the firm performance, measured in terms of ROE and ROA, of GLCs and NGLCs. The exception was BSZ, but statistical significance was only exhibited with respect to ROE, not ROA. The second and third hypotheses, which stated that significant relationships between corporate governance structure and the firm performance of GLCs and NGLCs in the post-AFC period from 2001 to 2003 exist, is not supported. These results suggest that observed differences in the firm performance of GLCs and NGLCs cannot be explained with respect to the corporate governance structure in place and that governance structures in GLCs and NGLCs probably enable appropriate monitoring of company management, as opposed to improving performance.

Although no consistent relationships between corporate governance variables and firm performance over the three year period of study were identified; a number of variables exhibit relationships of statistical significance in at least one period for ROA or ROE, but not both. This variability and the more general findings are consistent with the plethora of contradictory literature pertaining to the possibility of a relationship between corporate governance structure and firm performance. This study also identified that the relatively poor performance of GLCs in Malaysia, which has in the past been attributed to government influence on the board structure, such as the appointment of BUM, SGO and POL, is unfounded, because these variables exhibit no statistical significance with respect to adverse firm performance. As such, the under-performance of GLCs in Malaysia is a consequence of other, as yet unidentified, factors.

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