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CAPITAL STRUCTURE OF GOVERNMENT-LINKED COMPANIES IN MALAYSIA

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ABSTRACT

This study investigates the cross-sectional variation in leverage among publicly listed Government Linked Companies (GLCs) and non-GLCs (NGLCs) in Malaysia for the period from 1997 to 2008. The study uses balanced panel data with multivariate regression as the method of analysis. Results reveal that the GLCs are consistently more heavily leveraged than NGLCs. The findings indicate a significantly positive association between debt ratio (DR) and tangible assets but a negative relationship between DR and profitability for both GLCs and NGLCs. However, firm size is significantly negatively related to DR for GLCs and significantly positively related to DR for NGLCs. The study also finds that tangible assets and profitability have an inverse relationship with long-term debt. There is a significant negative association between asset structure, profitability and short-term debt. However, firm growth and cash flow have no influence on the determination of short-term and long-term debt.

Keywords: capital structure, GLCs, NGLCs, Malaysia, debt ratios

INTRODUCTION

Finance managers often face challenges in determining optimal capital structure. An incorrect financing decision may lead to financial distress and eventual bankruptcy (Eriotis, Vasiliou, & Neokosmidi, 2007). Different levels of debt and equity used in capital structure suggest that managers may employ firm-specific strategies for improved performance (Gleason, Mathur, & Mathur, 2000). Although financial theory suggests that firms should strive to obtain an optimal capital structure (i.e., one that minimises a firm's cost of capital), no specific method has been identified to help financial managers determine the optimal level of leverage (Eriotis et al., 2007). Thus, financial managers are primarily

concerned with whether their firms are over- or underleveraged and are less concerned about the optimal level of debt.

In one of its post-independence industrialisation plans, the Malaysian government introduced a proactive entrepreneurial role by establishing state enterprises, which were later called government-linked companies (GLCs). GLCs are defined as companies that have a primarily commercial objective despite the Malaysian government holding a direct controlling stake. GLCs exist in most Malaysian industries, including manufacturing, plantation, finance, trading, transportation, shipbuilding, and services. In this respect, Malaysia differs from the other countries in which private enterprises drive economic growth. Nevertheless, the strategy of state capitalism has been considered successful in Malaysia, and GLCs have evolved into important national institutions that bear a close resemblance to private enterprises. In fact, many GLCs have been partially privatised and listed in the Malaysian stock exchange, the Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange).

Besides having ownership in GLCs, the Malaysian government influences the appointment of the board of directors and senior management positions. The government also has a controlling stake in major decisions such as contract awards, strategy, restructuring and financing, and acquisition and investment (Lau & Tong, 2008). GLCs contribute significantly to Malaysia's economic development. However, many critics contend that GLCs could perform better than private firms because of their close relationship with the government, which gives them special advantages in terms of accessing funds and engaging in growth opportunities. With such connections, they have larger areas of economy than private firms. However, GLCs may also perform worse than private firms because their managers are mainly civil servants who lack business acumen, and their investment decisions may be politically rather than economically motivated. Although Lau and Tong (2008) conclude that government intervention improves firm value, this finding contradicts the adverse perception of GLCs commonly held in Malaysia.

Various studies discuss the relationship-based capitalism in Malaysia. For example, Gomez and Jomo (1997, 1998) and Gomez (2002) report close links between business and politics in Malaysia. Johnson and Mitton (2003) reveal that Malaysian firms with political patronage tend to carry more debt. Fraser, Zhang and Derashid (2006) find a positive link between political patronage and capital structure. However, few studies empirically examine the capital structure of GLCs in Malaysia or compare this structure with firms that are not GLCs. This study fills this gap.

This study examines the antecedents of capital structure of publicly listed companies in Malaysia for the period of 1997 to 2008. It also compares GLCs with non-GLCs (NGLCs) to investigate the implications of government affiliation. This study also examines the financing decisions of GLCs and NGLCs to better understand capital choice decisions by GLCs. Furthermore, this study examines short- and long-term financing decisions of Malaysian firms.

This paper has five sections. The first section provides a brief overview of the study's objectives and contributions. The next section provides a literature review focusing on studies that previously examine the antecedents of capital structure. The third section discusses the sample and research methodology. The fourth section offers an interpretation of the findings. The final section provides a summary and conclusions.

LITERATURE REVIEW

The study of capital structure has generally been driven by two major theories. First, Miller (1977) proposes trade-off theory (TOT). An implication of this theory is that if firms are more profitable, they prefer debt financing to equity financing as a means of further improving their profits. Second, Myers (1984) and Myers and Majluf (1984) propose the pecking order theory (POT). Under this theory, firms that have high profits tend to have low debt levels.

Various studies discuss different countries' antecedents of capital structures using either a single-country analysis or panel data. For example, in the United States, studies examine industries such as manufacturing (Titman & Wessels, 1988), biotechnology (Liu, 2001), restaurants (Upneja & Dalbor, 2001), agricultural (Sporleder & Moss, 2004), lodging and software (Tang & Jang, 2005). A few studies compare the capital structure between countries and regions. For example, Deesomsak, Paudyal and Pescetto (2004), who conduct a study in the Asia-Pacific region, conclude that environment affects a firm's decisions about capital structure. Delcoure (2007) investigates emerging Central and Eastern European countries to confirm the traditional capital structure theories of TOT, POT and AT. Cespedes, Gonzalez and Molina (2009) examine the capital structure of Latin American firms using a comprehensive sample. Their evidence supports the hypothesis that Latin American firms prefer debt to equity.

Given that several studies review the literature on capital structure, this section focuses only on discussing studies that focus on Malaysia. Classens, Djankov and Lang (1998) report that Malaysia's firms widely used debt in the 1990s. However, according to Pandey (2004), Malaysia's firms had low debt ratios during the period from 1996 to 1999. Fraser et al. (2006), Yau, Lau and

Liwa (2008) and Suhaila and Wan Mahmood (2008) find that Malaysia's firms are following POT. Nevertheless, Wickramanayake (2009) finds that small and medium enterprises (SMEs) in Malaysia are not in line with POT, where profitability is positively related to the long-term debt ratio.

Pandey (2004), Fraser et al. (2006), Yau et al. (2008) and Wickramanayake (2009) agree that firm size has a significant positive relationship to total debt ratio. Larger firms tend to be more diversified and less prone to bankruptcy. The transaction costs of issuing debt are also smaller for larger firms. By contrast, Suhaila and Wan Mahmood (2008) find that larger firms are less dependent on debt financing than smaller firms. In terms of asset structure, Fraser et al. (2006), Yau et al. (2008), and Wickramanayake (2009) confirm that the value of collateral is an important consideration for firms that wish to carry more debt. Hence, tangible assets, which are easier to collateralise, are positively related to leverage.

Suhaila and Wan Mahmood (2008) and Wickramanayake (2009) include a growth variable but find contrary results. Noorhayati and Masyhuri (2008) add cash flow to their analyses and document a positive impact of internal cash flows on capital expenditures. In their study, capital expenditure is defined as the amount of funds allocated to fixed asset acquisition by management. Following Noorhayati and Masyhuri (2008), this study assumes that capital expenditure is positively associated with both debt and internal cash flow. On the other hand, Suhaila and Wan Mahmood (2008) note that firms with high liquidity rely less on debt because they are able to generate high cash inflows.

In summary, the literature documents that certain firm-level characteristics have a significant positive or negative relationship in determining a company's debt policy. Pandey (2004) reports that the 1997 Asian Financial Crisis caused an incremental increase in debt ratios by showing a saucer-shaped relationship between capital structure and profitability. Fraser et al. (2006) use three separate proxies of political patronage to investigate how firms with political patronage are able to carry more debt. Yau et al. (2008) test the POT hypothesis, but they do not differentiate by firm type within their sample. Noorhayati and Masyhuri (2008) concentrate exclusively on manufacturing companies and test the impact of internal cash flows on capital expenditures. Suhaila and Wan Mahmood (2008) conduct their study on the antecedents of capital structure for 17 listed companies only during the period of 2000 to 2005. Wickramanayake (2009) only studies the capital structure of SMEs in Malaysia.

Hence, this study extends the work of Fraser et al. (2006) in examining the variables that determine debt-policy decisions for GLCs, which is an important issue in Malaysia. Furthermore, this study compares the capital

structure of GLCs and NGLCs. Following Rajan and Zingles (1995), this study uses firm size, tangibility of assets, profitability and growth to further analyse the effects of firm structure on leverage. This study also extends the existing literature by including cash flow as an additional variable.

DATA AND METHODOLOGY

Source of Data

This research uses secondary data from Datastream. As of 31 December 2008, 40 GLCs were listed in Bursa Malaysia. To be included in the study, firms had to maintain their survivorship and report their annual accounts without any substantial gaps for the period of 1997 to 2008. After dropping firms with incomplete data, the remaining sample contained 22 GLCs.

Elton and Gruber (1970) suggest that researchers partition firms into groups having similar characteristics or behaviours. Thus, industrial classification is a suitable metric of homogeneity. Cohen and Pogue (1967) use two models to validate homogeneity among groups. In the first model, they assume that the relationship between firms may be expressed in terms of movement with the market as a whole. The second model is identical to the first, except that it allows industry movements to be correlated as a whole. Hence, this study chooses 22 NGLCs to match the 22 GLCs in the sample according to their homogeneous sector and share price in the industry.

Variables and Hypotheses

With this data set, the study employs a balanced panel for regression analysis. Proxies for dependent and independent variables are listed in Table 1.

It is common to only use total debt to measure capital structure in analysing leverage antecedents. However, Barclay and Smith (1995) and Hall, Hutchnison and Michaelas (2000) argue that any analysis of leverage antecedents based only on total debt may screen important differences between short-term debt and long-term debt. Therefore, to attain a better understanding of capital structure and its antecedents, this paper also analyses SDR and LDR.

Table 1
Variables and measurement

Variables	Measurement
Dependent variables	
Debt ratio (DR)	Ratio of book value of total debt to total assets
Short-term debt ratio (SDR)	Ratio of book value of short-term debt to total assets
Long-term debt ratio (LDR)	Ratio of book value of long-term debt to total assets
Independent variables	
Firm size (logSIZE)	Logarithm of total sales
Tangibility of assets (TANG)	Ratio of tangible assets (the sum of fixed assets and inventories) to total assets
Profitability (PROF)	Ratio of earnings before interest, tax and depreciation to total assets
Growth opportunities (GROWTH)	Annual percentage change in total assets
Cash flow (CF)	Operating cash flow to total sales

In response to the research objectives, the study empirically tests the following three multiple regression models relating to DR (Model 1), SDR (Model 2) and LDR (Model 3), respectively:

$$DR_{it} = \beta_0 + \beta_1 logSIZE_{it} + \beta_2 TANG_{it} + \beta_3 PROF_{it} + \beta_4 GROWTH_{it} + \beta_5 CF_{it} + \varepsilon_{it} \text{ (Model 1)}$$

$$SDR_{it} = \alpha_0 + \alpha_1 logSIZE_{it} + \alpha_2 TANG_{it} + \alpha_3 PROF_{it} + \alpha_4 GROWTH_{it} + \alpha_5 CF_{it} + \varepsilon_{it} \text{ (Model 2)}$$

$$LDR_{it} = \lambda_0 + \lambda_1 logSIZE_{it} + \lambda_2 TANG_{it} + \lambda_3 PROF_{it} + \lambda_4 GROWTH_{it} + \lambda_5 CF_{it} + \varepsilon_{it} \text{ (Model 3)}$$

where β_0, α_0 and λ_0 are the constant terms of Model 1, Model 2 and Model 3, respectively; β_i, α_i and λ_i, , i = 1 to 5, are coefficients of the respective variables for Model 1, Model 2 and Model 3, respectively, and ε_{it} is the error term.

Size

Both TOT and POT agree that a company's size is a major determinant of leverage. TOT suggests that larger firms are better diversified and have a low probability of experiencing financial distress or bankruptcy (Ang, Chua, & McConnell, 1982; Karadeniz, Kandir, Balcilar, & Onal, 2009). Morri and Cristanziani (2009) argue that larger firms have easier access to capital markets

and that they can borrow at more favourable interest rates. Therefore, leverage increases as a company's size increases. Marsh (1982) finds that large firms more often choose long-term debt while small firms prefer short-term debt.

In contrast, POT argues that firm size correlates negatively with debt (Rajan & Zingales, 1995; Frank & Goyal, 2003; Hijazi & Tariq, 2006) because information asymmetries are reduced in larger firms. Larger firms are less likely to undervalue new equity issues than smaller firms; thus, large firms are more likely to use equity financing, and larger firms tend to have lower DR. This study uses the natural logarithm of total sales to measure firm size because of the nonlinearity between size and leverage and because this measure smooths variation over the periods considered (Rajan & Zingales, 1995; Sogorb-Mira, 2002; Deesomsak et al., 2004).

Tangibility of assets

TOT proposes that firms with higher ratios of fixed assets prefer to use debt financing because fixed assets serve as collateral for new loans. Furthermore, companies with higher ratios of tangible assets may be able to raise debt at a lower cost. Jensen and Meckling (1976) argue that if agency costs of debt arise as firms shift to riskier investments after issuing debt and if the transfer of assets is high, then these assets can be used as collateral. Hence, the study expects to find a positive relationship between the tangibility of assets and leverage. Empirical studies that confirm the above theoretical prediction include Voulgaris, Asteriou and Agiomirgianakis (2002), Chen (2004), Sporleder and Moss (2004), Tang and Jang (2005), Hijazi and Tariq (2006), Huang and Song (2006), Omet (2006), Amidu (2007), Norvaisiene and Stankevciene (2007), Oyesola (2007), Shah and Khan (2007), Viviani (2008), Abor and Biekpe (2009), Cespedes et al. (2009), and Qian, Tian and Wirjanto (2009).

According to Sogorb-Mira (2005), debt agency costs such as risk shifting, potential difficulties due to adverse selection, and moral hazard force creditors to acquire guarantees for their lending in the form of collateral. Hall et al. (2004) and Sogorb-Mira (2005) document a positive relationship between TANG and LDR and a negative relationship between TANG and SDR.

Profitability

TOT suggests that a firm would prefer to issue debt when profit is high in order to minimise the tax burden. However, POT argues that a firm would prefer to use internal capital sources when there is an improved profitability and its market value is expected to increase. Nevertheless, empirical studies generally find a negative relationship between leverage and profitability (Rajan & Zingales, 1995;

Frank & Goyal, 2003, Chen, 2004, Deesomsak et al., 2004, Huang & Song, 2006; Hijazi & Tariq, 2006; Morri & Cristanziani, 2009; Silva Serrasqueiro & Rego Rogao, 2009).

Growth

According to POT, growth opportunities positively relate to DR (Myers, 1984) due to the asymmetric information between investors and firm managers. At the same time, banks favour lending money to firms that display good growth opportunities. However, the empirical evidence is inconclusive. Bhaduri (2002), Chen (2004), Tang and Jang (2005), Norvaisiene and Stankevciene (2007), Oyesola (2007), Shah and Khan (2007), Al-Najjar and Taylor (2008), and Cespedes et al. (2009) find a positive correlation between growth opportunities and DR, whereas Titman and Wessels (1988), Rajan and Zingales (1995), Sporleder and Moss (2004), Dragota and Semenescu (2006) and Qian et al. (2009) find a negative correlation.

Myers (1977) states that underinvestment is a major issue for firms with greater opportunities for growth. Consequently, firms will look for short-term debt to alleviate the difficulty of underinvestment. On the other hand, TOT argues that firms with high growth opportunities in the long run tend to have higher financial distress costs due to their higher risk.

Cash flow

Jensen and Meckling (1976) indicate that the conflict of interest between managers and shareholders on payout policy is especially severe when firms generate substantial free cash flow. Sufficient cash flow motivates shareholders to use banks or lending institutions as a means of monitoring and curbing management spending by undertaking more debt. Thus, free cash flow tends to be positively associated with debt. Empirical studies that show a significant relationship between cash flow and debt include Bhaduri (2002), Tang and Jang (2005), and Norvaisiene and Stankevciene (2007).

FINDINGS AND ANALYSIS

Table 2 presents rankings by average DR for each company in the GLCs and NGLCs, respectively. The average DRs for GLCs and NGLCs are 0.2916 and 0.1752, respectively. These results are consistent with Johnson and Mitton (2003) and Fraser et al. (2006), who find that firms with political patronage tend to have more debt. This finding may be due for firms with established government relationships with easier access to loans because they have government backing.

Wiwattanakantang (1999) notes that companies for which the government is a major shareholder may have higher leverage due to the increased availability of secured loans.

Table 2
Ranking according to the debt ratio

GLCs	Debt ratio	Ranking	NGLCs	Debt ratio	Ranking
Lityan Holding	0.8191	1	Muhibbah Engineering	0.3536	1
Time Engineering	0.6366	2	AIC	0.3372	2
Faber Group	0.5304	3	KFC Holding (M)	0.3208	3
Malaysian Res.	0.4906	4	Fitters Diversified	0.3091	4
Tenaga Nasional	0.4736	5	Shell (M)	0.3004	5
Parkson Holding	0.3893	6	YTL Cement	0.2949	6
Malaysia Building Society	0.3671	7	Hume Industrial (M)	0.2919	7
Boustead Holding	0.3560	8	KPJ Healthcare Bhd.	0.2096	8
MISC Bhd.	0.3225	9	Glenealy Plantation	0.1556	9
Malaysia Airlines	0.3214	10	Star Publications	0.1554	10
Chemical Malaysia	0.3042	11	TA Enterprise	0.1517	11
Telekom Malaysia	0.2966	12	Genting	0.1315	12
Petronas Gas	0.2088	13	HDBS	0.1277	13
Malayan Banking	0.1793	14	HL Finance Group	0.1115	14
CIMB	0.1786	15	The Store (M)	0.1075	15
Affin Holding	0.1726	16	Resorts World	0.1066	16
Pos Malaysia	0.1242	17	AEON Co.	0.0993	17
UMW Holding	0.1183	18	Oriental Holding	0.0979	18
Proton Holding	0.0918	19	Cycle & Carr. Bintang	0.0974	19
Petronas Dagangan	0.0343	20	Public Bank	0.0781	20
UAC	0.0020	21	KAF-Seagroatt & Campbell	0.0161	21
Syarikat Takaful	0.0002	22	Amway (M) Holding	0.0000	22
Average	0.2916		Average	0.1752	

Figure 1 reports the DRs of GLCs and NGLCs from 1997 to 2008. The figure reveals that GLCs are consistently more heavily levered than NGLCs. DR increases from 1997 to 1998 for both GLCs and NGLCs. In 1998, the Central Bank of Malaysia imposed a reduction in the Statutory Reserve Requirement

(SRR) as one counter measure to the Asian Financial Crisis. This liquidity framework introduced a reduction in lending rates. Hence, firms had greater access to funds after the crisis. The low interest rate environment reduced the cost of borrowing and increased the incentive to borrow. The DR was relatively stable over 2000 to 2006. It declined in 2007 but rebounded for GLCs in 2008. This pattern is due to the negative implications of the U.S. sub-prime crisis. The Malaysian government's capital injection thus has some positive impact on the financing decision of GLCs.

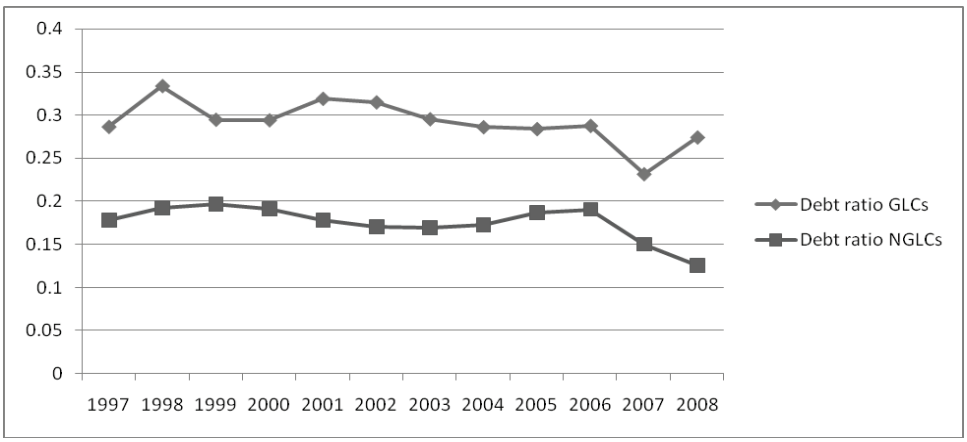

Figure 1. Debt ratio for GLCs and NGLCs from 1997–2008

Table 3 presents descriptive statistics for DR and the explanatory variables. The mean DR reveals that the average liabilities are about 18% of total asset value for NGLCs and 29% for GLCs in the sample of Malaysian firms. Deesomsak et al. (2004) report that the mean DR in Malaysia was 0.2697 for the period 1993 to 2001. SDR constitutes 60% of total debt while LDR constitutes 40%. GLCs hold around 17.5% of short-term financing while NGLCs hold only 11%. Meanwhile, GLCs also carry 11.6% of LDR compared to 6.7% held by NGLCs. The high standard deviations of DR, SDR and LDR for GLCs compared to NGLCs indicates greater dispersion of these leverage ratios for GLCs.

Table 3
Descriptive statistics for debt ratio and explanatory variables (1997–2008)

Group		DR	SIZE	TANG	PROF	GROWTH	CF	SDR	LDR
GLCs	Mean	0.2916	6.1880	35.7770	2.7420	13.4320	26.9480	0.1753	0.1163
	SD	0.2684	0.7359	29.0611	12.0879	42.8551	72.0772	0.1487	0.1197
	N	263	261	262	262	257	258	263	263
	Min	0	4.4796	0.3301	–103.2134	–77.1645	–144.9000	0	0
	Max	0.8514	7.4108	97.5040	67.0778	464.5245	890.6700	0.5225	0.3289
	Kurtosis	7.9350	–0.9640	–0.9980	27.1650	49.3160	81.7760	43.5750	5.6140
	Skewness	2.1010	–0.2810	0.4490	–2.7700	5.0220	7.4160	6.0350	1.9510
NGLCs	Mean	0.1752	5.8725	34.6560	7.1234	12.8297	20.5905	0.1087	0.0665
	SD	0.1554	0.6429	23.0773	7.9008	39.5795	35.6182	0.0946	0.0608
	N	264	264	264	264	263	260	264	264
	Min	0	4.0016	0.4261	–28.4451	–87.0259	–45.7500	0	0
	Max	0.5514	7.1168	80.9229	40.6388	246.0156	502.9500	0.3533	0.1981
	Kurtosis	–0.7610	–0.1930	–1.0350	4.0000	10.9980	131.5390	12.6650	0.3150
	Skewness	0.6210	–0.4340	0.1050	0.4940	2.2190	10.0230	2.5640	1.1220

In terms of tangibility, fixed assets represent about 35% of total assets for both groups. On the other hand, the average mean of profitability over total assets for GLCs is much lower than that of NGLCs despite the high DR. The disparity in PROF ranges from –103% to 67% for GLCs. NGLCs appear to have better financial performance than GLCs. The finding contradicts Lau and Tong (2008), who find a significant positive relationship between the degree of government ownership and firm value. They argue that even though GLCs have several goals, the government's priority is economic development. Therefore, they conclude that government intervention improves firm value.

Table 4 shows the results of separate regression analyses using DR, SDR, and LDR as the dependent variables for GLCs and NGLCs, respectively. Multicollinearity tests among the five independent variables are conducted using variance inflation factor (VIF) techniques. At a cut-off value of 5, the test shows no multicollinearity among the variables.

In Panel A of Table 4, the results show that TANG, GROWTH and CF positively relate to DR while PROF has a negative relationship with DR for both GLCs and NGLCs. Firms that are more profitable prefer to finance new investment opportunities by using retained earnings rather than by issuing costly debt (Morri & Cristanziani, 2009). However, the coefficients on SIZE suggest that firm size is negatively related to DR for GLCs but positively related to DR for NGLCs. In other words, leverage increases as the company's size grows, fulfilling the TOT prediction for NGLCs. This finding suggests that larger firms without government ownership in Malaysia can more easily attract credit. Al-Najjar and Taylor (2008) note that larger firms have the required resources and abilities to minimise their investment risk. Hence, institutional investors and

bankers prefer to invest in larger firms. However, the result is the opposite for GLCs because GLCs prefer to finance projects internally or to use the least risky equity financing available. Table 5 indicates that the total common equity of GLCs increased significantly from 1997 to 2008. The 133.14% increase over the sample period shows that GLCs prefer to finance their projects internally to maximise shareholder value.

Table 4
Multiple regression results

Panel A: Dependent Variable: DR

	GLCs		NGLCs	
IVs	β	*t*	β	*t*
SIZE	–0.294***	–5.115	0.097*	1.791
TANG	0.333***	6.116	0.278***	5.086
PROF	–0.321***	–5.794	–0.416***	–7.653
GROWTH	0.110	0.205	0.051	0.945
CF	0.132***	2.484	0.053	0.965
	R^2 = 0.321		R^2 = 0.269	
	F-stat = 23.421***		*F*-stat = 18.608***	

Panel B: Dependent Variable: SDR

	GLCs		NGLCs	
IVs	α	*t*	α	*t*
SIZE	–0.203***	–3.220	0.227***	4.979
TANG	–0.133**	–2.228	–0.339***	–7.383
PROF	–0.272***	–4.492	–0.452***	–9.902
GROWTH	0.047	0.809	0.066	1.445
CF	–0.085	–1.456	0.356***	7.755
	R^2 = 0.185		R^2 = 0.485	
	F-stat = 11.283***		*F*-stat = 47.607***	

Panel C: Dependent Variable: LDR

	GLCs		NGLCs	
IVs	λ	*t*	λ	*t*
SIZE	0.002	0.031	0.202***	3.688
TANG	0.444***	7.546	0.371***	6.738
PROF	0.008	.138	–0.236***	–4.310
GROWTH	–0.058	–1.018	0.009	0.864
CF	0.002	0.040	–0.072	–1.306
	R^2 = 0.204		R^2 = 0.260	
	F-stat = 12.673***		*F*-stat = 17.790***	

Notes: The figures shown in the table are the standardised regression coefficients and the *t*-statistics. ***, ** and * indicate that the estimated coefficient is significant different from zero at 1%, 5% and 10% respectively.

Table 5
Total common equity of GLCs from 1997 to 2008

Year	Mean (RM)
1997	17 16 922.18
1998	17 56 482.73
1999	15 58 604.48
2000	19 65 254.68
2001	19 36 174.73
2002	21 72 945.95
2003	24 78 189.41
2004	27 00 680.18
2005	29 96 480.86
2006	32 53 586.95
2007	38 31 058.82
2008	40 02 748.73

The coefficient on GROWTH is not significant at the 0.10 level, indicating that GROWTH may not be an important explanatory variable of DR. This result is consistent with Suhaila and Wan Mahmood (2008), who do not find any support for the relationship between growth opportunities and leverage in Malaysia. The current study finds a significant positive relationship between CF and DR for GLCs but not for NGLCs. The positive sign is consistent with the AT, as discussed in Section 2. Therefore, higher CF motivates owners in GLCs to increase leverage. A high CF indicates that the firm is able to pay its obligations

and that it has a lower risk of default, assuming that the firm is backed by the government.

Panel B of Table 4 reports the regression results for SDR. SIZE is significantly negative for GLCs but significantly positive for NGLCs. A negative association between SIZE and SDR for GLCs suggests that larger sales are related to lover levels of financing through SDR because SIZE closely relates to risk and bankruptcy costs. In other words, relatively large GLCs may have the option of relying more on LDR and less on SDR. On the other hand, larger NGLCs can more easily attract SDR. This result may stem from the fact that SDR constitutes a significant portion of bank capital. Furthermore, NGLCs normally do not receive direct assistance from the government, and short-term credit provides flexibility and speeds the loan application process.

The findings show that asset structure is in line with POT for both GLCs and NGLCs. This result is consistent with Amidu (2007). The statistically significant inverse relationship between asset structure and SDR indicates that firms are using a maturity matching approach in their financing policy. In other words, firms try to finance their fixed assets with LDR and their current assets with SDR. The evidence shows that profitable firms from both GLCs and NGLCs hold lower amounts of short-term debt and prefer to accumulate internal reserves. This result may be due to short-term debt being riskier than long-term credit because of interest rate fluctuation. This finding supports studies by Titman and Wessels (1988), Amidu (2007), Eriotis et al. (2007) and, Abor and Biekpe (2009).

Again, GROWTH does not significantly influence SDR in GLCs or NGLCs. CF is also not important in determining when the SDR for GLCs, but it is significantly positive for NGLCs. CF indicates a firm's quality and credit worthiness; thus, bankers and institutional investors prefer to offer more short-term debt to firms with high CF in the belief that their default risk is low. On the other hand, CF does not show any significant effect for GLCs. One explanation may be that major stockholders such as the government would rather avoid the commitment of using cash flow to repay short-term debt.

Panel C of Table 4 reports results for LDR. The positive coefficient of SIZE again confirms that larger NGLCs rely more on long-term debt for their financing requirements. However, the finding also indicates that SIZE is not significantly related to LDR in GLCs. This result could reflect preferential access of funds, tenders and opportunities for firms with strong governmental connections. Therefore, SIZE does not appear to be an important consideration for GLCs when using long-term debt.

In contrast to SDR, firms with a higher proportion of operating assets prefer to use long-term debt financing. According to Amidu (2007), a higher proportion of operating assets denotes less operating risk; therefore, firms may limit their exposure to risk by using more long-term debt capital. This study generally confirms that listed companies in Malaysia, regardless of their political relationships, prefer to finance their fixed assets with LDR and their current assets with SDR.

The negative relationship between PROF and LDR in NGLCs implies that higher profits decrease the level of long-term debt. The finding is consistent with Chen (2004), Huang and Song (2006), Al-Najjar and Taylor (2008), and Abor and Biekpe (2009). However, the insignificant relationship between PROF and LDR in GLCs reveals that government ownership tends to alter fundamental financial decision. In other words, GLCs do not conform to financial fundamentals when adjusting their debt levels specifically in LDR. Moreover, the study finds that neither GROWTH nor CF has a significant relationship with a firm's capital structure regardless of firm type.

Generally, this study concludes that GLCs tend to follow a hierarchy in financing policy, beginning from internal financing (i.e., either retained earnings or common equity), then progressing to external financing. NGLCs with higher revenue and tangible assets are more likely to have higher debt levels than NGLCs with risky or intangible assets. Without direct intervention from the government, investors prefer to invest in large firms with the confidence that those firms have a low risk of bankruptcy.

CONCLUSION AND RECOMMENDATION

The main purpose of this study is to investigate factors that affect the capital structure decisions of GLCs and NGLCs in Malaysia. The study concludes that differences exist in the antecedents of capital structure between GLCs and NGLCs. Hence, investors should not treat GLCs and NGLCS equally making investment decisions.

The study also finds that GLCs have higher DR, SDR and LDR than NGLCs. Firm size is significantly negatively correlated with DR for GLCs, but it is significantly positively correlated with DR for NGLCs. TANG is significantly positively related to DR for both groups, showing that firms with higher tangible assets tend to have higher debt. On the other hand, PROF has a significantly negative relationship with DR for both groups. GROWTH is the only variable that does not show any significant influence on DR, SDR or LDR for both GLCs

and NGLCs. CF shows a positive relationship with leverage for GLCs but not for NGLCs.

This study also examines differences between long-term and short-term debt in influencing decisions about capital structure. SIZE has a significant positive association with leverage regardless of the loan term for NGLCs. However, it has a reverse relationship with SDR and does not affect LDR for GLCs. Furthermore, the relationship between TANG and SDR is found to be negative for both GLCs and NGLCs. In contrast, TANG is directly associated with LDR for both groups. These results generally confirm that listed companies in Malaysia would like to finance their fixed assets with LDR and their current assets with SDR. Moreover, profitable firms are holding less SDR in both GLCs and NGLCs. PROF is inversely associated with LDR in NGLCs. Finally, GROWTH and CF are not important antecedents in a firm's capital structure decision for either GLCs or NGLCs.

In conclusion, the evidence suggests that firm size, tangible assets, and profitability are the main factors determining a firm's capital structure in Malaysia. However, the direction of the association is different for GLCs and NGLCs for SIZE. Firms also have different capital structures relating to the term of a loan. Myers's (1984) question about how a firm selects its financial policy is still a puzzle. However, some observations may be made here. The irrelevance of changes of total assets and cash flow requirements for GLCs clearly indicates that their close relationship with government plays an important role in accessing debt financing. Therefore, GLCs should focus more on improving tangible assets and fostering close relationship with government for leverage activities.

However, Suto (2003) points out that increasing the dependency on debt financing before the crisis was one of the key domestic factors that accelerated economic distress in 1997. Therefore, GLCs should implement far-reaching improvements in corporate governance to foster confidence among foreign investors, who are important players in Malaysian capital markets.

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APPENDIX

Sample firms of the study

	GLCs		NGLCs	Sector
1	Affin Holding	VS	HDBS	Finance
2	Boustead Holding	VS	Glenealy Plantation (M)	Plantation
3	CIMB	VS	Public Bank	Finance
4	Chemical company	VS	Hume Industrial (M)	Industrial
5	Faber Group	VS	KPJ Healthcare Bhd	Trading/Service
6	Lityan Holding	VS	AIC	Technology
7	Malayan Banking	VS	HL Finance Group	Finance
8	Malaysian Airlines	VS	The Store	Trading/Service
9	Malaysia Building Soc.	VS	TA Enterprise	Finance
10	Malaysian Res.	VS	Muhibbah Engineering	Construction
11	MISC Bhd	VS	Amway (M) Holding	Trading/Service
12	Petronas Dagangan	VS	KFC Holding (M)	Trading/Service
13	Pos Malaysia	VS	Resorts World	Trading/Service
14	Proton Holding	VS	Cycle & Carr. Bintang	Consumer
15	Telekom Malaysia	VS	Star Publications	Trading/Service
16	Tenaga Nasional	VS	Genting	Trading/Service
17	Time Engineering	VS	Fitters Diversified	Trading/Service
18	UAC	VS	YTL Cement	Industrial
19	UMW Holding	VS	Oriental Holding	Consumer
20	Syarikat Takaful	VS	KAF-Seagroatt & Campbell	Finance
21	Petronas Gas	VS	Shell (M)	Industrial
22	Parkson Holding	VS	AEON Co. (M)	Trading/Service