

International Conference on Accounting Studies (ICAS) 2017  
18-20 September 2017, Putrajaya, Malaysia

# Capital Structure of Malaysian Government Linked Companies during the GLC Transformation Program

Nurdiyana Nazaruddin<sup>\*a</sup>, Rahimah Mohamed Yunos<sup>b</sup>, Nini Suhana Mastini Razi<sup>c</sup>

<sup>a</sup> Faculty of Business Accounting Linton University College, Malaysia

<sup>b,c</sup> Universiti Teknologi Mara Cawangan Johor, Malaysia

---

## Abstract

Malaysian government introduced Government Linked Companies Transformation Program (GLCT program) in 2004. This study aims to investigate how debt equity choices of Malaysian listed Government Linked Companies are influenced by the firm's characteristics and corporate governance's characteristics after the introduction of the GLCT Program. It was identified that profitability; potential growth and free cash flow determined the debt ratio of the GLCs. The outcomes from this study will assist entrepreneurs and top management of the companies in formulating better capital structure decision in respect of the mixture between debt and equity capital and provide the exercise control over capital structure planning.

**Keywords:** Capital structure, GLCs, debt, profitability, cash flow, corporate governance

---

## 1. INTRODUCTION

Government Linked Companies (GLCs) are privatized companies with at least 20% of issued and paid up capital is owned by the government. It was introduced to encourage Bumiputras to actively involve in the economic activities, apart from reducing government's burden in providing essential services to the public. GLCs are considered as booster to Malaysian economic, apart from making profit it contributes to public interest through job creation and scholarship provider.

In 2004, Malaysian government introduced the Government Linked Companies Transformation Program (GLCT program) which is a ten year program to upgrade the effectiveness of GLCs' corporate governance, adopting corporate best practices within GLCs and drive the performance through the use of key performance indicators (KPIs) (Dahlan, 2009). The Asian financial crisis in late 1990s had caused financial distress to many companies and one of the key domestic factors that caused the crisis was high dependency on debt financing(Suto, 2003). Sound capital management will enhance working capital (Dahlan, 2009).Therefore, the GLCT initiatives introduced the Purple Book in 2006 to establish guidelines for GLCs in optimizing their capital structure. The GLCT Progress review 2013 by The Putrajaya Committee on GLC High Performance Secretariat indicates that the introduction of GLCT Program is making a strong progress and continues to record success: "...Non-bank G20 Operating Cash flow grew from RM14.9b in FY2004 to RM22.3b in FY2012. Non-bank G20 Debt to Equity ratio has improved from 51% in FY2004 to 36% in FY2012..."

This study examined six factors which are profitability, tangibility of asset, potential growth, free cash flow, board size and board independence, and test whether they determine the debt ratio of the GLCs. The results

---

\*Corresponding author.  
E-mail: rahim221@johor.uitm.edu.my

indicate that profitability, potential growth and free cash flow determined the companies' debt level. Next section discusses previous empirical studies, research methods and followed by the findings and discussions. The final section concludes the paper with suggestions for future research.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The Purple Book by Putrajaya Committee on GLC High Performance (PCG) (2006) highlighted the benefits and costs of optimal capital structure decision: "...Leverage deliver clear benefits; it also carries costs; Benefits: Tax savings from the tax deductible interest charges for debt, improved investment discipline imposed on managers. Costs: Costs of bankruptcy and business erosion, potential costs of investor conflict that is, conflict of interest between debt holders, shareholders and managers". Agency theory suggests that optimization of debt usage able to reduce managers' opportunistic behavior; and firms enjoy tax savings. Pecking Order theory however suggest firm to maintain financial slack so that they have sufficient funds at time they need to take up profitable investments. Hence, it suggests internal funds must be used up before resorting to debt.

Stretcher and Johnson (2011) pointed out that rational capital structure decision is when an optimized usage of debt maximized the firm value. Most recent empirical evidence reported that the higher the firms' profit the lesser they use financial leverage in their capital structure (see: Acaravci, 2015; Al-Najjar & Hussainey, 2011; Alipour, Mohammadi, & Derakhshan, 2015; Bundala, 2012; Sheikh & Wang, 2011; Ting & Lean, 2011; Tongkong, 2012). The positive association between profitability and leverage is consistent with the pecking order theory. Profitable firms have high internal fund and prioritized them before resorting to costly external financing. It is hypothesized that,

H1: There is a significant relationship between profitability and capital structure among Malaysian G20 GLCs.

Sogorb-Mira (2005) stated that lenders are more attracted to fund companies with high tangible assets as it can be used as collateral to secure debts. The finding of Ting and Lean (2011) confirmed that firms with tangible assets had higher debt ratio. The use of tangible assets as collateral however, is only significant for long term debt (Benkraiem & Gurau, 2013; Cassar & Holmes, 2003). Recent evidence showed that debt ratio increased as firms had more tangible assets (see: Harc, 2015; Malm & Krolikowski, 2017). The following hypothesis is,

H2: There is a significant relationship between tangible assets and capital structure among Malaysian G20 GLCs.

Benkraiem and Gurau (2013) found that high growth firms were associated with higher debt ratio; could be due to growth that lasts in several years. Conversely, Coleman, Cotei and Farhat (2014) found that high growth firms used less debt due to high asymmetric information that constrain firms from obtaining bank loan. Study on Malaysia sample performed by Ting and Lean (2011) and Shahar, Adzis and Baderi (2016) however found insignificant results. The following hypothesis is developed,

H3: There is a significant relationship between potential growth and capital structure among Malaysian G20 GLCs.

The association of cash flow and debt is argued by agency theory and pecking order theory. Agency theory suggests firms with high cash flow uses more debt so that managers are obliged to pay the debt rather than spending the extra cash for personal advantage. The pecking order theory however suggests debt to be the last option in financing decision. The decision to use internal fund or external financing relies on the availability of cash in the firm. Kim (2014) stated that financially constrained firms with low internal fund need to use debt financing. On the same ground, Nguyen and Cai (2017) reported that diversified firms that have more free cash flow issued less debt and equity and finance its operation using the internal fund. It is hypothesized that,

H4: There is a significant relationship between cash flow and capital structure among Malaysian G20 GLCs.

Lipton and Lorsch (1992) and Jensen (1993) argued that firms should not appoint too many directors to the board and suggested a maximum of seven or eight directors. It was argued that decision made in large board is time consuming and difficult to achieve cohesiveness. Empirical results showed that board size that is neither too small nor too big is ineffective for sound corporate governance. However, board size that is effective depends on the complexity or simplicity of the firm's business (Y.-C. Wang, Tsai, & Lin, 2013). They argued that large board for complex business enables the board members to exchange more ideas and perform their advisory function effectively. On the other hand, smaller board size will be more effective for firms with simple

business nature. Sheikh and Wang (2011) and Naseem, Zhang, Malik and Rehman (2017) reported that larger board size employed more debt while C. J. Wang (2012) showed that board size is associated with firm risk taking option. Larger board was associated with lower risk taking project while the small board associated with lower debt but involved with high risk investment. The following hypothesis is developed,

H5: There is a significant relationship between board size and capital structure among Malaysian G20 GLCs.

More independent directors can actively monitor the management's activities to ensure it align with interest of shareholders (Sheikh & Wang, 2011). Heng, Azrbajani and San (2012) argued that the presence of independent board in every company is crucial in order to overcome agency issues. Agency theory suggests that board with higher proportion of independent director reflects strong governance and will use more debt to reduce agency conflict. The findings of Tarus and Ayabeir (2016) support the agency theory. Contradicting to the agency theory Purag, Abdullah and Bujang (2016) found that board dominated by independent directors had lower debt ratio. According to Shahzad, Shahid, Sohail and Azeem (2015) sound corporate governance pursue lower debt to reduce financial risk and avoid dilution of power. Kalyanaraman and Altuwajri (2016) found no significant results. The following hypothesis is developed:

H6: There is a significant relationship between board independence and capital structure decision among Malaysian G20 GLCs.

The conceptual framework adopted in this study is presented in Figure 1.

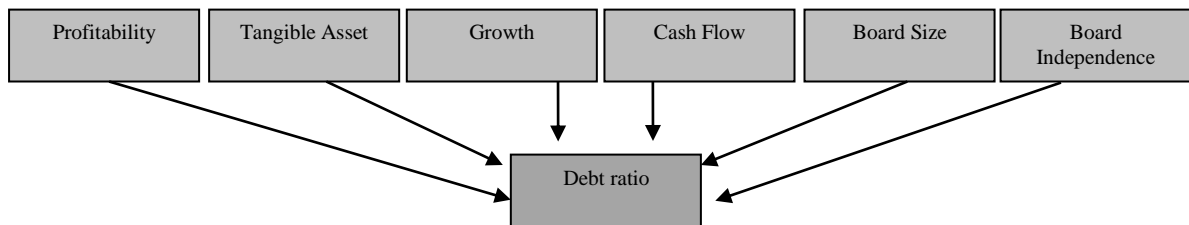


Fig. 1. Research framework.

### 3. RESEARCH METHODOLOGY

#### 3.1 Sample

This study focused on GLCs listed on the Bursa Malaysia that are involved in GLCT Program. The list of companies was obtained from Putrajaya Committee on GLC High Performance (PCG) available at [www.pcg.gov.my](http://www.pcg.gov.my). The list original comprised of 20 GLCs involve in GLCT Program which is named as G20. G20 is a selection of large GLCs that are controlled by government linked investment companies under GLCT Program and is used as a proxy for performance of GLCs. However, due to mergers and demergers and other corporate restructuring, G20 is currently a group of 17 GLCs. One company however, was delisted thus the remaining of 16 GLCs becomes the sample of this study. Annual reports for eight years starting from year 2006 until 2013 of the sample companies were obtained from the Bursa Malaysia website ([www.bursamalaysia.com](http://www.bursamalaysia.com)). The data of firms' characteristics (profitability, tangibility of asset, potential growth and free cash flow) was acquired from the financial statements section. Corporate governance structures (board size and board independence) were gathered from corporate information section of the annual report.

#### 3.2 Variable measurement

The dependent variable is the debt ratio; and can be the best proxy for what is left for shareholders after liquidation (Rajan & Zingales, 1995). This study used the same measurement as previous researchers such as Ting and Lean (2011), Sheikh and Wang (2012) and Ahmad and Abdullah (2013). Detailed operationalizations of the variables are presented in Table 1.

Table 1. Measurement of variables.

Variable	Abbreviation	Operationalization
Debt ratio	DEBT	Total debt ÷ Total Asset
Profitability (ROA)	PROFIT	Net Profit ÷ Total Asset
Tangibility of Asset	TANGI	Tangible Asset ÷ Total Asset
Potential Growth	PGROW	Market value ÷ Book value
Cash Flow	CF	Operating Cash Flow ÷ Total Sales
Board Size	BSIZE	Total board member
Board Independence	BIND	Total independent director on board ÷ Total board member
Firm Size	FSIZE	Logarithm of total sales
Sales Growth	SGROW	Annual increase in sales (%)

The regression model adopted in this study is as follows:

$$\text{DEBT} = \beta_0 + \beta_1\text{PROFIT} + \beta_2\text{TANGI} + \beta_3\text{PGROW} + \beta_4\text{CF} + \beta_5\text{BSIZE} + \beta_6\text{BIND} + \beta_7\text{FSIZE} + \beta_8\text{SGROW} + \text{YEAR} + \varepsilon \quad (\text{eq.1})$$

Where:

- DEBT : Total debt divided by total asset
- PROFIT : Net profit divided by total asset
- TANGI : Total tangible assets divided by total asset
- PGROW : Market value divided by book value
- CF : Operating cash flow divided by total sales
- BSIZE : Total number of directors on board
- BIND : Proportion of independent directors on board
- FSIZE : Natural logarithm of total asset
- SGROW : Percentage change in annual sales
- $\varepsilon$  : Error term

## 4. RESULTS AND DISCUSSION

### 4.1 Descriptive Statistics

Figure 2 reports the average debt ratio of the sample from 2006 to 2013. During the period, the highest was in 2006 at 92.51% but declined in 2007 to 81.68% and rebounded to 86.68% in 2008. This pattern could be due to the negative implications of severe financial crisis occurred in the United States and spilled into most of developing countries including Malaysia. Further decline in the debt ratio was experience in 2009 and 2010 reaching at 66.16%. In the remaining years there was slight increase and decrease in each year, 69.87% in 2011, 69.71% in 2012 and 70.80% in 2013. The trend over the years indicates that the G20 GLCs reduced consumption of debt over the years, but still the companies used more than 50% of debt to finance the assets.

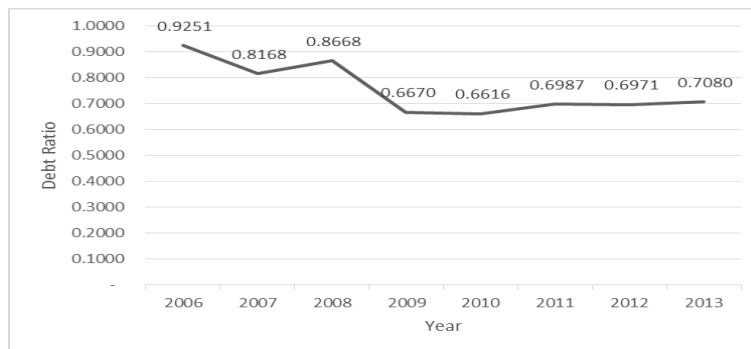


Fig. 2. Debt ratio for sample companies (2006-2013).

Table 2 presents the descriptive statistics of the variables. The mean value of the debt ratio indicates that the average debt used by the GLCs were 67%.; leaving only 33% for equity. There are losses making GLCs in the sample as shown by the minimum value of -0.20. The smallest board size in the sample was 6 directors and the biggest size was board with 15 directors. The average board size adopted by the GLCs was 9 directors. The average board independence of 49% is above the minimum one third requirements by the MCCG. However, there are GLCs that do not meet the requirement.

Table 2. Descriptive statistics.

Variable	N	Minimum	Maximum	Mean	Std Deviation
DEBT	126	0.22	0.89	0.67	0.12
PROFIT	126	-0.20	0.50	0.05	0.08
TANGI	126	0.00	0.92	0.48	0.85
PGROW	126	0.10	5.20	1.19	0.75
CF	126	-1.00	3.70	0.24	0.61
BSIZE	126	6	15	9.52	2.07
BIND	126	0.20	0.80	0.49	0.14
FSIZE	126	5.10	7.70	6.66	0.63
SGROW	126	-0.90	10.50	0.23	0.96

#### 4.2 Empirical Results and Discussion

Table 3 presents the results of the hypotheses testing. It was found that profitability had inverse relationship with debt ratio at 5% significant level. Supporting hypothesis 1 it implies that profitable companies tend to use lesser debt. This finding is consistent with previous studies such as Bundala (2012), Alipour et al. (2015) and Acaravci (2015). Profitable companies use less debt financing indicates that they prioritized internal fund over debt financing. Similar result was obtained by Ting and Lean (2011) on Malaysian GLCs. Debt ratio was positively associated with potential growth at 5% significant level and free cash flow at 1% significant level; and hence supports hypothesis 3 and 4. This implied that Malaysian G20 GLCs tend to use debt in funding its growth. The greater potential growth indicates low probability of bankruptcy. This will give confidence to the lenders or creditors to provide loans to high potential growth companies. The result is consistent with Benkraiem and Gurau (2013).

The positive effect of cash flow on debt ratio contradicts with results reported by Kim (2014) and Nguyen and Cai (2017). It suggests that companies use more debt when they have more cash. Eriotis, Vasiliou and Ventoura-Neokosmidi (2007) stated that free cash flow can be an indicator of future growth of the company. It is evident from the finding that both factors cash flow and potential growth influence the companies' debt ratio. It also supports the agency theory, where commitment for debt payment will reduce manager's opportunistic behavior of spending company's cash for personal interest. This finding contradicts with Ting and Lean (2011) on Malaysian GLCs and period of study may have contributed to the difference. Tangibility of asset, board size and board independent have no influence on the companies' debt ratio; thus rejecting hypothesis 2, 5 and 6. Wiwattanakitang (1999) argued that GLCs can easily get access to secured loan. Thus, with that assumption, the insignificant effect of tangible asset on debt ratio could be due to its easy access of borrowing from banks or other institutional investor regardless of the nature of their asset. Insignificant results on the corporate governance structure advocate its ineffectiveness to influence the usage of debt. Larger GLCs significantly associated with higher debt ratio contradict with the argument that larger firm can easily raise fund from equity in relative to small firms that depend on borrowing.

Table 3. Multiple linear regression results.

Variable	Coefficient	t-value	Sig.
(Constant)		-1.343	0.182
PROFIT	<b>-0.494**</b>	-5.263	0.000
TANGI	-0.035	-0.371	0.711
PGROW	<b>0.228**</b>	3.184	0.002
CF	<b>0.290***</b>	3.733	0.000
BSIZE	-0.089	-1.132	0.260
BIND	-0.024	-0.335	0.738
FSIZE	<b>0.205**</b>	2.506	0.014
SGROW	0.016	0.229	0.819
Adjusted R square	0.416		
R Square	0.454		
F-value	<b>12.145***</b>		

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.10$

#### 5. CONCLUSION

This study examined factors that influence capital structure of Malaysian government linked companies (GLCs). The sample companies are GLCs that are involved in the GLC Transformation Program, so called G20 GLCs. The debt ratio of the G20 GLCs over eight year's period evolved from average of 92.51% in 2006 to 70.80% in 2013. This implies that the government implemented a good control over the use of debt among Malaysian GLCs after the implementation of GLC Transformation Program in year 2006. The decreasing trend of debt level also proves that the introduction of the Purple Book reflects a better guidance for Malaysian GLCs. The results showed that profitability, potential growth and free cash flow were significantly related to debt ratio.

Tangibility of asset and corporate governance structure did not influence the debt ratio. This study observed 126 annual reports for a period of eight years from 16 Malaysian GLCs listed in Bursa Malaysia. The findings from this study however may not be generalized to all Malaysian companies. The findings are beneficial to corporate participants, inside stakeholders (management and employees) as well the outside stakeholders (creditors, investors, supplier and public) as they can enhance their knowledge on capital structure decision of Malaysian GLCs. Specifically, the outcomes of the study may guide entrepreneurs, creditors and top management in formulating better capital structure decision in respect of the mixture of debt and equity capital to exercise control over capital structure planning. Future studies can include extensive corporate governance attributes to verify the effectiveness of the governance mechanisms in the GLCs. Additionally, comparative analysis of GLCs across countries may provide interesting insight on the performance of Malaysian GLCs in relative to those in other countries.

## ACKNOWLEDGEMENTS

We would like to thank Linton University College, Kuala Lumpur for granting fund that enables this paper to be presented in ICAS 2017.

## REFERENCES

- Acaravci, S. K. (2015). The determinants of capital structure: Evidence from Turkish manufacturing sector. *African Journal of Economic and Management Studies*, 5(1), 158–171.
- Al-Najjar, B., & Hussainey, K. (2011). Revisiting the capital-structure puzzle: UK evidence. *The Journal of Risk Finance*, 12(4), 329–338.
- Alipour, M., Mohammadi, M. F. S., & Derakhshan, H. (2015). Determinants of capital structure: An empirical study of firms in Iran. *International Journal of Law and Management*, 57(1), 53–83.
- Benkraiem, R., & Gurau, C. (2013). How do corporate characteristics affect capital structure decisions of French SMEs? *International Journal of Entrepreneurial Behavior & Research*, 19(2), 149–164.
- Bundala, N. N. (2012). Do Tanzanian companies practice pecking order theory, agency cost theory or trade-off theory? An empirical study in Tanzanian listed companies. *International Journal of Economics and Financial Issues*, 2(4), 401–422.
- Cassar, G., & Holmes, S. (2003). Capital structure and financing of SMEs: Australian evidence. *Accounting and Finance*, 43, 123–147.
- Coleman, S., Cotei, C., & Farhat, J. (2014). The debt-equity financing decisions of U.S. startup firms. *Journal of Economics and Finance*, 40(1), 105–126.
- Dahlan, A. N. (2009). *The critical success factors for the effective performance of Malaysian Government Linked Companies*. Southern Cross University.
- Eriotis, N., Vasiliou, D., & Ventoura-Neokosmidi, Z. (2007). How firm characteristics affect capital structure: An empirical study. *Managerial Finance*, 33(5), 321–331.
- Harc, M. (2015). The relationship between tangible assets and capital structure of small and medium-sized companies in Croatia. *Econviews*, 28(1), 213–224.
- Heng, T. B., Azrbajani, S., & San, O. T. (2012). Board of directors and capital structure: Evidence from leading Malaysian companies. *Asian Social Science*, 8(3), 123–136.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48(3), 831–880.
- Kalyanaraman, L., & Altuwajri, B. (2016). The linkage between excess board independence and capital structure: An exploration in the context of listed companies in Saudi Arabia. *Journal of Applied Finance and Banking*, 6(3), 129–144.
- Kim, T.-N. (2014). The impact of cash holdings and external financing on investment-cash flow sensitivity. *Review of Accounting and Finance*, 13(3), 251–273.
- Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer*, 48(1), 59–77.
- Malm, J., & Krolikowski, M. (2017). Litigation risk and financial leverage. *Journal of Economics and Finance*, 41(1), 180–194.
- Naseem, M. A., Zhang, H., Malik, F., & Rehman, R. U. (2017). Capital structure and corporate governance. *The Journal of Developing Areas*, 51(1), 33–47.
- Nguyen, T., & Cai, C. X. (2017). How firms manage their cash flows: An examination of diversification's effect. *Review of Quantitative Finance and Accounting*, 48(3), 701–724.
- Purag, M., Abdullah, A., & Bujang, I. (2016). Corporate governance and capital structure. *Journal of Business and Retail Management Research*, 11(1), 18–30.
- Shahar, H. K., Adzis, A. A., & Baderi, N. (2016). The relationship between ownership structure, firm specific characteristics and capital structure: Evidence from Malaysian middle-capital public listed firms. *International Journal of Economics and Financial Issues*, 6(3), 36–43.
- Shahzad, A., Shahid, M. A., Sohail, A., & Azeem, M. (2015). Investigating the impact of corporate governance on capital structure: A case of KSE-listed companies. *IUP Journal of Corporate Governance*, 14(2), 30–43.
- Sheikh, N. A., & Wang, Z. (2011). Determinants of capital structure. *Managerial Finance*, 37(2), 117–133.
- Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994-1998 Spanish data panel. *Small Business Economics*, 25(5), 447–457.
- Stretcher, R., & Johnson, S. (2011). Capital structure: Professional management guidance. *Managerial Finance*, 37(8), 788–804.
- Suto, M. (2003). Capital structure and investment behaviour of Malaysian firms in the 1990s: A study of corporate governance before the crisis. *Corporate Governance*, 11(1), 25–39.
- Tarus, D. K., & Ayabeir, E. (2016). Board composition and capital structure: Evidence from Kenya. *Management Research Review*, 39(9), 1056–1079.
- Ting, I. W. K., & Lean, H. H. (2011). Capital structure of government linked companies in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 7(2), 137–156.
- Tongkong, S. (2012). Key factors influencing capital structure decision and its speed of adjustment of Thai listed real estate companies. *Procedia - Social and Behavioral Sciences*, 40, 716–720.
- Wang, C. J. (2012). Board size and firm risk-taking. *Review of Quantitative Finance and Accounting*, 38(4), 519–542.

- Wang, Y.-C., Tsai, J.-J., & Lin, H.-W. W. (2013). The influence of board structure on firm performance. *The Journal of Global Business Management*, 9(2), 7–14.
- Wiwattanakatang, Y. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, 7, 371–403.