

DYNAMIC EFFECT OF CORPORATE GOVERNANCE ON FINANCING DECISIONS: EVIDENCE FROM SRI LANKA

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ABSTRACT

This study investigates the role of corporate governance in influencing the debt financing decision of 198 non-financial listed companies in Sri Lanka from 2009 to 2016. Sri Lanka's corporate governance (CG) code promotes dispersed ownerships, larger board size and balance of power and authority through various means, such as exclusivity between the Chief Executive Officer and Chairperson and the independent Board composition. This study tests the role of CG through four indicators while controlling for other firm-specific variables. Results of the two-step system Generalized Method of Moments on a balance panel data shows that the effect of CG indicators on financing decision depends on the financing terms. In general, the influence of CG indicators is significant on the two debt financing measurements, except for managerial ownership when investments in assets are involved. This influence appears eminent in predicting the debt ratio, although the effect is not necessarily consistent with the hypotheses. The latest revision on CG codes of best practices has also improved firms' access to debt financing, except for raising long-term debt to acquire assets. Results imply that the Sri Lankan firms adopting the CG best practices would need to rely on other factors to access long-term debt financing or on other external financing sources.

Keywords: financing decision, corporate governance, corporate finance, system GMM, Sri Lanka capital market, Colombo Stock Exchange

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INTRODUCTION

As the policymaker in firms, the Board of Directors (Board) serves as the primary and dominant internal corporate governance mechanism. The Board plays a crucial role in ensuring that Corporate Governance (CG) practices facilitate firms in attaining their competitiveness, growth and sustainability. While every firm's decision has a valuation implication, none is weighed more than a financing decision. The decision that commonly forms the corporate financial structure refers to the specific combination of debt and equity capital that the firm uses to finance its operations and growth. Trade-off theory posits that firms should aim for the optimal capital structure because it maximises their value. In practice, however, firms differ in optimising capital structure requirements. Due to market imperfections, the choice of a capital structure depends on its ability to maintain sustainability and profitability and produce more wealth (Kajananthan, 2012). This study revisits corporate financing decisions in Sri Lanka because, like in many developing markets, the firms in this country heavily rely on bank facilities. Colombage (2005) found that banks provide 90% of corporate debt capital in Sri Lanka. Given that bank debt imposes a strict debt covenant that is highly likely to be exercised if firms encounter financial problems, a heavy reliance on banks may distort the further growth of these newly emerging firms. The rippling effect of firms' failures on banks can be very damaging because it could bring even the largest economy in the world to an economic crisis. Given that the Board is responsible for delivering effective CG, this study proposes that Board-based CG indicators must be considered in explaining firms' financing decision. This proposition is in line with Colombage's (2005) assertion that CG plays a vital role in ensuring debt usage effectiveness in enhancing firm performance, that is, apart from the need for a well-developed capital market, financial intermediary and legal protection offered by a country. Claessens et al. (2002) assert that good CG benefits firms through greater access to external finance, lower cost of capital and favourable treatment of all stakeholders.

In the context of Sri Lanka, this study contributes to the scant literature on capital structure and CG because, as Azeez (2015) claims, previous research focuses more on the link between capital structure and firm performance. The existing evidence, which remains inconclusive, is drawn from limited CG variables and/or a small sample (Kajananthan, 2012; Ajanthan, 2013). Heenetigala (2011) suggests that future research be carried out on a larger sample. Given that the Sri Lankan market regulator introduced the mandatory code of best practices in 2008, the present study begins in 2009 to provide ample time for the firms to adjust to the new ruling.

The importance of CG in the Sri Lankan business environment may be best understood through its history. Sri Lanka has been operating as an open economy since 1977 and has become one of the fastest rising emerging markets in the South Asian region. In 2015, the country experiences strong growth with an economy worth USD80.591 billion and a per capita GDP of approximately USD11,069 (Central Intelligence Agency (CIA), 2015). Between 2009 and 2015, the Sri Lankan economy had recorded an annual growth rate of 6.4% and was ahead of other countries in the South Asian region in terms of GDP per capita (CIA, 2015). The open economic policy has been successful in reviving business sectors. The number of listed firms has grown by 77% from 141 in 1977 to 250 in 2011, and further increasing by 15% to 287 in 2016. This development occurred despite the fact that Sri Lanka had gone through nearly three decades of civil war, which was brought to an end in May 2009. During the 30-year war period, activities in the Colombo Stock Exchange (CSE) was rough. Investments from local and foreign investors flowed in once the war was over. Figure 1 illustrates the development in the Sri Lankan capital market, showing that its contribution to the economy has increased remarkably after the war ended in 2009.

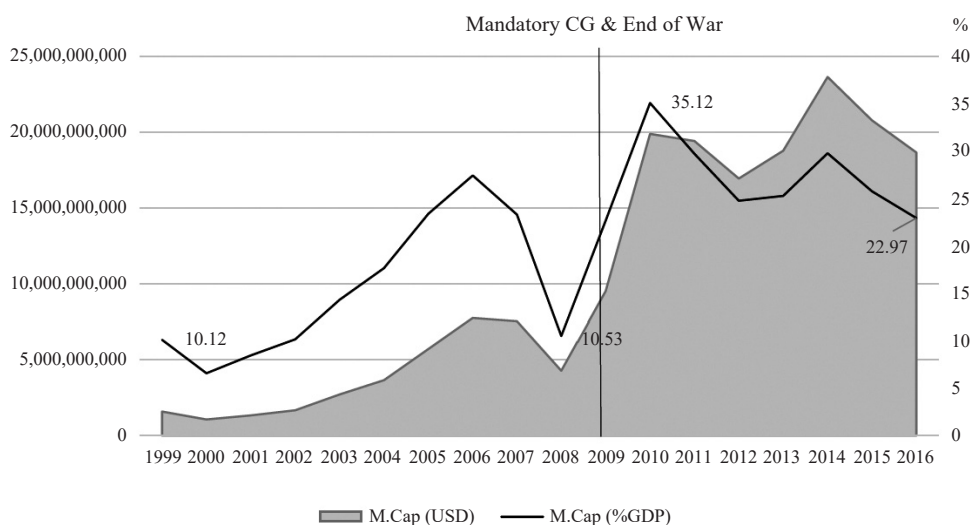


Figure 1. Market capitalisation (USD) and percentage of GDP

Rapid growth in business activities is sustainable if carried out with good CG practices. Outstanding lessons can be learned from infamous cases of large companies such as Enron, HIH Insurance and Siemens that failed terribly due to inadequate CG implementation. The first code on CG best practices in Sri Lanka was introduced in 1997 by the Institute of Chartered Accountancy Sri Lanka (ICASL). Since then, the code had been revised several times (in 2002,

2003 and 2008). The latest revision was in 2013, and the ICASL issued the edition in collaboration with the Securities and Exchange Commission (SEC) Sri Lanka. This CG code also covers practices that ensure the Board's effectiveness, appointment of the Chairman and non-executive directors and the director's meeting and training requirements. The CG code also specifies the directors' responsibility for the presentation of financial statements, compliance to reporting standards, internal control, Board committee structures and the audit, remuneration and nomination committees.

With the aim to maintain a balance of power and authority, Sri Lankan CG promotes the separation between the individual holding the positions of CEO and Chairperson of the Board. Maintaining such balance is crucial to ensure that no individual or small group of individuals can dominate the Board's decision-taking (SEC, 2013). If the Chairperson and CEO are the same person, then the non-executive directors should comprise a majority of the Board. Having independent directors on the Board is essential to maintain balance in control and power because they represent the interest that is strictly free from shareholders (either through direct or indirect ownership) and their relationship with the firms' insiders. If the Board comprises only two non-executive directors, both must be independent. In all cases, two or one-third of the non-executive directors must be independent, whichever is higher.¹

This study put forward the importance of CG in corporate finance decisions through four of the standard CG dimensions: Board size, Board independence, CEO/Chairperson duality and managerial ownership. Specifically, this study is set with an objective to determine the role of CG factors in influencing financing decisions while considering the effect of other variables known to have an impact on financing decisions. The study period begins in 2009 for two main reasons. The first is to allow the listed firms to revise their CG practices according to the 2008 CG mandatory compliance guidelines. The second reason is to minimise the effect of the civil war, which ended in early 2009.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Previous studies (e.g., Berger et al., 1997; Friend & Lang, 1988) identified CG as one of the critical factors influencing firms' financing decisions or capital structure. The Board, as the body representing shareholders' interest, is the key decision-maker of corporate policies and practices. The Board plays the leading role in ensuring the CG practices deliver the desired outcomes of competitiveness, growth and sustainability. The role of CG is tested in various ways, one that is most commonly used is through the Board structure. The present study

chooses four of the Board indicators: managerial ownership, Board size, Board independence (representation by outside independent directors) and the CEO and Chairperson duality.

Jensen and Meckling (1976) suggested that having a sizeable managerial shareholding helps improve firm performance. Given that they are also the firms' owners, managers are discouraged from consuming privileges and expropriating shareholders' wealth. The alignment of interests between the management and shareholders can reduce agency conflicts (Claessens & Fan, 2002). Wellalage and Locke (2014) asserted that managerial ownership works as an internal control mechanism. Managerial ownership should positively affect firms because it minimises managerial entrenchment, moral hazards and asymmetric information problems. From the perspective of debtholders, higher managerial ownership is beneficial because they have more motivation to be closely involved in CG (Strätling, 2003).

On the other hand, Friend and Hasbrouck (1988) and Chen and Steiner (1999) argued that increased insiders' ownership tends to reduce leverage given that owner managers minimise additional financial and bankruptcy risk. This condition leads to a negative association between managerial ownership and leverage (Hasan & Butt, 2009). Given the stronger theoretical argument for the positive relationship between managerial ownership and financing decision, specifically, debt financing, the present study hypothesises that:

H1: Managerial ownership has a positive relationship with debt financing.

The next dimension of CG is the Board size. Jensen (1986) argued that the Board size is relevant to the financing decision, associating large debt with a larger Board. Wen et al. (2002) posited that the positive association between Board size and debt is probably because the involvement of more directors complicates and lengthen the process of reaching a consensus. Abor (2007) found evidence to support the positive relationship between capital structure policy and Board size in Ghanaian companies. Similarly, Coles et al. (2008) found a positive relationship between Board size and debt ratio in their sample firms in the United States (U.S.). These findings indicate that large boards are more entrenched to improve the firm value.

By contrast, Berger et al. (1997) concluded that a large board tends to keep a low debt ratio and prefer issuing equity. Meanwhile, Magdalena (2012) and Hasan and Butt (2009) found a significant negative relationship between Board size and debt to equity ratio. Again, because of the stronger argument

for the positive relationship between Board size and leverage, the present study hypothesises that:

H2: Board size has a positive relationship with debt financing.

The third dimension of CG in this study is Board independence. Pfeffer and Salancick (1978) and Rashid (2018) argued that external directors are crucial. These directors enhance the firm's ability to protect itself from internal and external threats because they align the interest between managers and shareholders. Studying firms in Bangladesh, Rashid (2018) argued that Board independence does not work in family-owned firms because their decisions typically overwrite the management decision. Put differently, Board independence has worked effectively in Anglo-American countries because their companies separate management from shareholders.

In the context of Sri Lankan firms, the CG code recommends that as the number of non-executive directors in a firm increase, one-third of the Board should comprise independent directors. The SEC of Sri Lanka, under the Board Balance item, outlines that when the Board includes only two non-executive directors, both should be independent (SEC, 2013). In all cases, at least two directors must be independent. Otherwise, they should represent one-third of the number of non-executive directors on the Board. In turn, non-executive directors must be the majority when the CEO and the Chairperson of the Board is the same person. Given that independent directors retain the Board's decision to align with all stakeholders' interests, their presence should mitigate agency conflicts and, therefore, are favoured by debtholders. Empirically, Berger et al. (1997) and Abor (2007) discovered that firms with more independent (external) directors tend to have a higher level of debt than other companies. However, Wellalage and Locke (2014) and Wen et al. (2002) found a negative relationship between Board composition and leverage. Despite the mixed empirical evidence on the above relationship, this study uses the theoretical argument to justify the hypothesis that:

H3: Board independence has a positive relationship with debt financing.

The last dimension of CG in this study is the CEO and Chairperson duality. Stewardship theory suggests a positive relationship between CEO duality and leverage. The theory posits that CEO duality eliminates communication struggles in uncertain situations and provides a clear sense of companies' strategic decision. Empirically, Bokpin and Anastacia (2009) found a positive relationship of CEO duality with financial leverage, but a negative relationship with the debt ratio in their sample firms in Ghana. A similar study in Ghana by

Abor (2007) concluded that CEO duality has a significant positive influence on the firms' leverage. In the U.S., Fosberg (2004) revealed that a two-tier leadership structure results in a higher debt/equity ratio. His results, however, were statistically insignificant. The effect of CEO duality on leverage is not always positive. From the viewpoint of agency theory, which is seemingly the basis of the Sri Lankan CG code, CEO duality has a negative impact because it compromises the CEO's monitoring and control. One of the Board's primary functions is to monitor the CEO in governing corporate affairs in the shareholders' best interest. In CEO duality, internal monitoring may fail because the CEO also leads the Board. Given that debt capital serves as an external monitoring mechanism, the firms (the decisions of which are influenced by the CEO/Chairperson) are motivated to use less debt to disrupt the CEO/Chairperson's total control over its policies. Given that monitoring is costly, the CEO/Chairperson may find that he or she is entitled to have his or her self-interest prioritised to the rest of the shareholders' interest. The negative relationship between CEO duality and leverage has been documented by Saad (2010) for Malaysian listed companies and by Ganiyu and Abiodun (2012) for Nigerian firms. Another study on Nigerian firms by Ranti (2013) found that the relationship is significantly positive. Based on the above discussion, the present study hypothesises that:

H4: CEO duality has a negative relationship with debt financing.

RESEARCH METHODOLOGY

As of 2016, the Colombo Stock Exchange (CSE) has 287 companies. This study excludes 75 financial firms because their financing decision is subject to different rules and regulations from non-financial firms. Firms that are not consistently listed on the CSE over the study period, which spans eight years from 2009 to 2016, are also excluded. As a result, this study has a final sample of 198 firms that create a balanced panel data of 1,584 firm-year observations. Table 1 shows that the sample firms are equitably distributed across various sectors, with noticeable representation from manufacturing and hotel and travel.

Table 1
Distribution of sample firms

Sectors	No. of firms	Percentage
Beverage, food and tobacco	20	10.10
Chemicals and pharmaceuticals	9	4.54
Construction and engineering	4	2.02
Diversified holdings	18	9.09
Footwear and textile	2	1.01
Health care	6	3.03
Hotels and travels	37	18.68
Investment trust	6	3.03
Land and property	11	5.55
Manufacturing	42	21.21
Motors	5	2.52
Oil palms	3	1.51
Plantations	13	6.56
Power and energy	5	2.52
Services	7	3.53
Stores supplies	1	0.50
Telecommunications	2	1.01
Trading	7	3.53
Total	198	100

Data on CG indicators (managerial ownership, Board size, Board composition and CEO, and Chairperson duality) are manually collected from the companies' annual reports. Accounting data are obtained from Datastream, while other information is gathered from the CSE's websites and other publications.

Model Specification

In general, the debt financing decision is modelled as follows:

$$\begin{aligned}
 FIN_{i,t} = & \alpha + \beta_1 MOWN_{i,t} + \beta_2 BSIZE_{i,t} + \beta_3 BIND_{i,t} + \beta_4 DUAL_{i,t} \\
 & + \beta_k \sum_{k=1}^6 CV_{i,t} + \varepsilon
 \end{aligned}
 \tag{1}$$

Where $FIN_{i,t}$ denotes debt financing decision of firm i at year t , and FIN is alternatively represented by debt ratio or long-term debt ratio; $MOWN$ is managerial ownership; $BIND$ is board independence; $DUAL$ is CEO and Chairperson duality; and CV is control variable $k = 1, \dots, 6$. In this study, the control variables are firm size, corporate tax expenses, dividend payout ratio, investment and tangibility. Investment is measured alternatively with changes in total assets and Tobin's Q. Table 2 details the operational definition of each of these variables.

Table 2
Operational definition of the variables

Variables	Abbreviation	Definition
Financing	FIN	FIN1: debt ratio = ratio of total liabilities to total assets FIN2: long-term debt ratio = ratio of long-term debt to total assets
Managerial ownership	MOWN	Percentage of ordinary shares owned by the CEO and other directors to the total number of shares outstanding
Board size	BSIZE	Number of directors on the Board
Board independence	BIND	The ratio of number of independent directors (non-executive directors) to total number of directors
CEO duality	DUAL	A dummy variable that takes a value of 1 if the CEO and chairman is the same person, and 0 otherwise
Profitability	PRFT	Percentage of earnings before interest and tax to total assets
Dividend payout ratio	DIV	Percentage of total dividend to net income
Investment	INV	INV1: ΔTA = Percentage of changes in total assets from the previous year to the current year INV2: Tobin's Q = Ratio of market value of equity plus book value of debt to book value of equity plus debt
Tangibility	TAN	The ratio of fixed assets to total assets
Firm size	FSIZE	The logarithm of total assets
Corporate tax	TAX	The ratio of corporate tax paid to profit before tax

Estimation Method

The regression model in Equation (1) is estimated using the GMM, which was introduced by Hansen (1982). GMM has become the leading statistical tools for the analysis of economic and financial data, particularly after Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998) extended the model. Baum et al. (2002) explained that GMM solves problems

that threaten the validity and efficiency of independent variable estimators caused by the omnipresence of heteroskedasticity of unknown forms. GMM has many variations. This study uses the two-step system GMM by Blundell and Bond (1998) due to its ability to address the problem of endogeneity, which broadly characterises corporate financial decisions.

Hassan et al. (2019) explained the two-step system GMM combining the estimations of regression models in level and first difference as shown in Equations (2) and (3), respectively:

$$FIN_{i,t} = \alpha_i + \gamma FIN_{i,t-1} + \beta_1 MOWN_{i,t} + \beta_2 BSIZE_{i,t} + \beta_3 BIND_{i,t} + \beta_4 DUAL_{i,t} + \beta_5 DUMMY_t + \sum_{k=1}^6 \beta_k CV_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$FIN_{i,t} = \alpha_i + \gamma(FIN_{i,t-1} + FIN_{i,t-2}) + \beta_1(MOWN_{i,t} - MOWN_{i,t-1}) + \beta_2(BSIZE_{i,t} - BSIZE_{i,t-1}) + \beta_3(BIND_{i,t} - BIND_{i,t-1}) + \beta_4(DUAL_{i,t} - DUAL_{i,t-1}) + \beta_5(DUMMY_t - DUMMY_{t-1}) + \sum_{k=1}^6 \beta_k(CV_{k,i,t} - CV_{k,i,t-1}) + \varepsilon_{i,t} \quad (2)$$

Where FIN_{t-1} is the lagged financing variable and Dummy, a binary variable that takes a value of “1” for 2013 onward and “0” otherwise, is included in the model to test the effect of the latest CG revision that took place in 2013. The other variables are as defined in Equation (1). FIN_{t-1} is included to construct a dynamic specification that allows for the autoregressive (AR) process’s possible effect and adjustment cost (Byoun, 2008). In general, if X represents a matrix of explanatory variables in Equation (2), the following moment conditions apply:

$$E[X_{i,t-s}, \Delta \varepsilon_{i,t}] = 0 \quad \text{for } s \geq 2, t = 3, \dots, T \quad (4)$$

$$E[\Delta X_{i,t-s}, \varepsilon_{i,t}] = 0 \quad \text{for } s = 1, t = 3, \dots, T \quad (5)$$

The moment conditions in Equation (5) apply to the regression in differences while those in Equation (4) apply to the regression in levels. Although system GMM is possible in one-step or two-steps, this study chooses the latter for its greater efficiency than the former. Two-step GMM uses optimal weighting matrices, which allows the yield of more efficient and consistent parameter estimates.

A GMM is appropriate once it satisfies these four diagnostic tests:

1. The number of instruments should be less than the number of groups.
2. Lag dependent must be significant and less than 1.
3. AR(2) must not be significant.
4. The Sargan or Hansen test must not be significant.

Hassan et al. (2019) asserted that the last two specific diagnostic tests must be satisfied to ensure the consistency of GMM estimators. Hansen test of over-identifying restrictions must be insignificant to indicate the validity of instruments. Arellano and Bond (1991) test of serial correlation (AR2) must also be insignificant to indicate the absence of second-order serial correlation.

RESULTS AND DISCUSSION

Descriptive Analysis

Table 3 presents a summary of the descriptive statistics of the variables used in this study. For the two measures of debt financing, the debt ratio records a mean value of 0.481, consistent with the mean value (0.499) for a sample of Sri Lankan listed companies by Vijeyaratnam and Anandasayanan (2015). With such a debt ratio, Sri Lanka fits among countries that record the highest leverage ratio (Fan et al., 2012). The authors used debt or leverage ratio measured slightly differently, that is, by dividing the book value of current and long-term interest-bearing debt by the market value of equity plus book value of debt. From the sample firms that cover 39 countries, Fan et al. (2012) found that developing countries mostly record the highest (median) debt ratios (e.g., Korea, Indonesia, Brazil, Thailand and India). The mean debt ratio for the overall 36,767 sample firms is 29%. The debt ratio for Sri Lankan firms is not much different from 44.49% for the four Asian tigers (Korea, Taiwan, Hong Kong and Singapore) (Chang et al., 2019).

For the long-term debt ratio, the mean is 0.201, which implies that more than half of the total debt is made up of current liabilities, including those that are available spontaneously through normal business operations. This ratio suggests an increase in the use of long-term debt among Sri Lankan firms, compared with previous reports of the mean value at 18% by Aivazian et al. (2005) and 15.6% by Sangeetha and Sivathaasan (2013).

Table 3
Descriptive statistics

Variable	Mean	Std. Dev	Min	Max
Total debt/total asset	0.481	0.216	0.020	0.940
Long term debt/total assets	0.201	0.097	0.010	0.700
Increment in total asset	0.097	0.060	0.010	0.410
Tobin's Q	0.833	0.468	0.016	1.994
Dividend payout ratio	0.118	0.136	0.000	0.460
Managerial ownership*	0.108	0.166	0.000	0.710
Board size	7.818	1.994	3.000	15.000
Board independence	0.390	0.124	0.000	0.900
CEO/Chairperson duality	0.422	0.494	0.000	1.000
Tangibility	0.614	0.211	0.120	0.920
Profitability	0.075	0.111	-0.390	0.520
Firm size	7.909	0.317	6.642	9.017
Effective corporate tax	2.097	6.143	0.000	29.237

Notes: Definition of each variable as in Table 1. * The minimum of managerial ownership is 0.01%. Firm size is in $\text{Lg}(\text{Total Assets in LKR})$ where LKR is the Sri Lankan currency, Obs = 1,584.

Figure 2 illustrates the yearly mean values. The high debt ratio shows a slight upward trend in recent years. The long-term debt ratio is, however, stable at approximately the overall mean value. Both debt and long-term debt ratios do not appear to be influenced by economic conditions (GDP growth – plotted in Figure 1 in a unit of 10th). Both ratios consistently remain around their mean values throughout the study period. The Sri Lanka economy boomed from 2010 to 2012 at 8.02% to 9.14% per year but slowed down in 2013. This trend is a good indication that the company's policymakers are actively involved in financing decisions.

For the CG indicators, the mean of managerial ownership for Sri Lankan firms is 10.8%, which is higher than the 7.7% documented by Guo and UdayaKumara (2012) but comparable with 9.8% reported by Kulathunga and Azeez (2016). Board size records a mean value of 7.82, which is very consistent with the 7.91 documented by Azeez (2015) and 7.78 reported by Guo and UdayaKumara (2012). This finding is consistent with the Sri Lankan CG code that recommends firms to increase the Board size. As reported by Gunathilake et al. (2011), the Board size of Sri Lankan firms was only four in 1951 before gradually increasing to five in 1971 to seven in 2004.

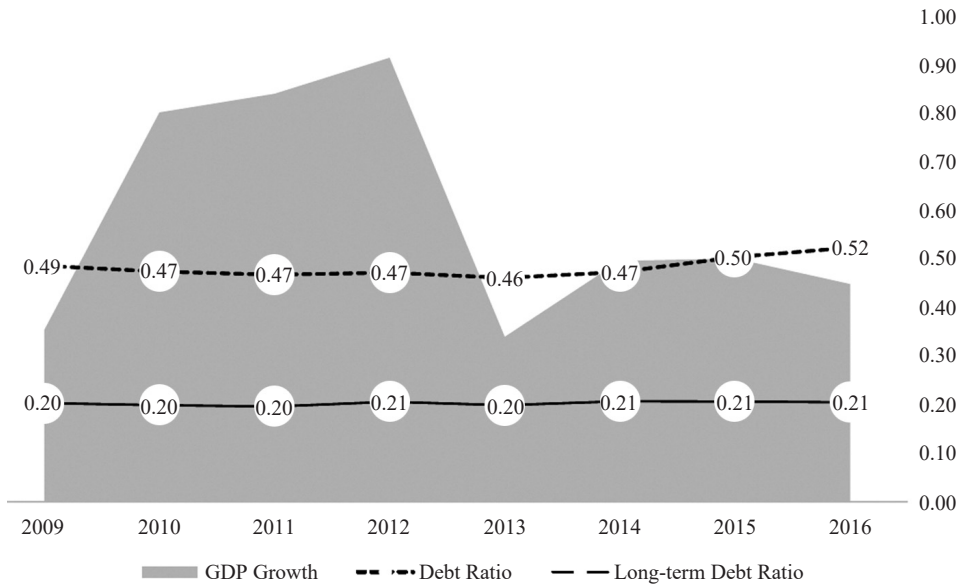


Figure 2. Yearly debt and long-term debt ratios, along with the GDP growth rates
 (Source: The World Bank, <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=LK>)

The mean value of Board independence (BIND) is 0.390, which barely meets the guideline of one-third of the independent directors. This value is similar to that documented by Amran and Ahmad (2010) for Malaysian firms but is lower than the mean value of 0.650 reported by Azeez (2015) for Sri Lankan firms. For CEO and Chairperson duality, the mean value is 0.422, which is consistent with the 0.431 reported for Sri Lankan firms by Azeez (2015) but much higher than the 0.12 reported by Guo and UdayaKumara (2012). A closer look at the company level reveals two deviations from the CG best practices code. Firstly, 13% of 669 firm-year observations that practice CEO and Chairperson duality do not comply with the CG Code. Recall that the code recommends that the Board should comprise two independent directors or one-third of a majority (non-executive) directors, whichever is higher (SEC, 2013). In this study, only 18 (1.14%) firm-year observations record less than two independent directors as recommended by the CG Code. In general, the Sri Lankan sample firms follow the best CG practices as far as the four indicators are concerned.

For the control variables, dividend payout records a mean value of 11.8%. Investment in the total assets is 9.7%, which is only half of the 17% reported by Aivazian et al. (2005). Profitability records a mean value of 7.5%, and the rate ranges from -39% to 52%. Its standard deviation is 11.1%.

The mean value of the total assets (proxies for firm size) of the sample firms is 7.909 (in the log), which corresponds to LKR13.596 billion (approximately USD105.57 million). This value is relatively larger than Ln’s mean value (9.291) recorded by Kulathunga and Azeez (2016), but is consistent with Lg(7.455) in a sample of all non-financial listed firms in Wellalage and Locke (2014) and Lg(8.97) in a sample of manufacturing listed firms in Niresch and Velnampy (2014). All of these studies examined Sri Lankan firms. Figure 3 illustrates the size of the sample firms. Their total yearly assets (in USD) are plotted against all listed companies’ total market value that is reported by the World Bank. The sample firms’ total assets account for 70% to 96% of the total market value, with the smallest market-to-book ratio recorded in 2016. The average increase in assets is 9.7% and range from 1% to 41%. The average Tobin’s Q is 0.833, indicating that the companies are generally operating with rather subtle growth opportunities.

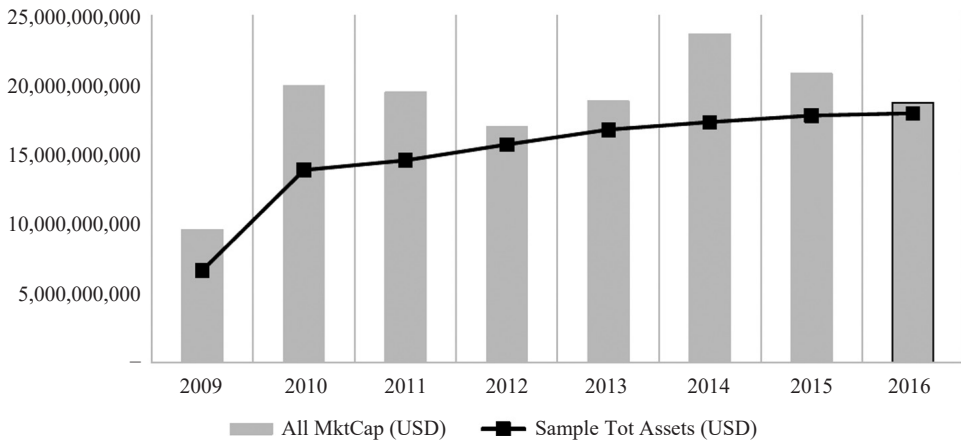


Figure 3. Relative value of sample firms

(Source: The World Bank, <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=LK>)

The mean percentage of tax expense is 2.097% of profit before tax and range from 0 to 29.23%. These low percentage corresponds with the low profitability mean reported for the sample firms and negative profitability (ROA) among 17% of the firm-year observations. During the study period, the corporate tax rates range from 15% in 2016, a record low for Sri Lanka, to 35% in 2009 and 2010.² For the remaining years, the tax rate stood at 28%. The mean value of the asset tangibility ratio is 0.614, which indicates that the level of fixed assets is relatively high among the sample firms. The high asset tangibility is particularly crucial because firms put up collateral when they resource to banks to secure debt capital.

Diagnostic Tests

Before examining the results of the diagnostic tests, the existence of the multicollinearity problem is tested based on the correlations between explanatory variables and the variance inflation factors (VIF). Table 4 shows the correlation matrix, where none comes close to the cut-off point of 0.8. The VIF values are always less than 2, which is also far below the 5.0 cut-off point.

Table 4
Correlation matrix

Variables	1	2	3	4	5	6	7	8	9	10
1. MOWN										
2. BSIZE	0.062									
3. BIND	-0.067	-0.103								
4. DUAL	0.115	-0.186	0.125							
5. INV1	0.051	0.039	-0.037	-0.048						
6. INV2	0.094	0.052	0.081	0.063	-0.020					
7. DIV	0.001	0.106	0.011	-0.078	0.073	0.014				
8. TAN	0.028	0.083	0.223	0.172	-0.12	0.080	-0.021			
9. PRFT	-0.029	-0.014	-0.040	-0.124	0.018	0.110	0.146	-0.152		
10. SIZE	-0.028	0.092	0.195	-0.085	0.033	-0.050	0.162	0.116	0.073	
11. TAX	0.054	-0.101	-0.069	-0.196	0.065	-0.118	0.123	-0.249	0.122	-0.002

Notes: The correlation between $FIN_{TD/TA}$ and $FIN_{LTD/TA}$ is 0.437. Abbreviations INV1 is investment which is measured with changes in total assets (ΔTA) or INV2 is investment, which is alternatively measured using Tobin's Q, DIV is dividend payout ratio, MOWN is managerial ownership, BSIZE is board size, BIND is board independence, DUAL is role duality between CEO and Chairperson of the Board of Directors, TAN is tangibility, PRFT is profitability, FSIZE is firm size ($LgTA$), and TAX is the effective corporate tax expenses. Number in column corresponds to variables in the row.

Table 5 reports the four debt financing models; the first two represent debt financing measured by debt ratio ($FIN_{TD/TA}$) and the last two by long-term debt ratio ($FIN_{LTD/TA}$). The estimations are reliable because they meet the four specific diagnostic tests of GMM, as reported at the bottom of Table 5. Firstly, the number of instruments (152) are always less than the number of groups (198) in all models. Secondly, the lag dependents are always significant at a 1.0% level, and the coefficients are less than 1.0 (0.881 and 0.855 for $FIN_{TD/TA}$) and 0.857 and 0.792 for $FIN_{LTD/TA}$). Finally, the Arellano-Bond tests of AR(2) ($prob > 0.602$) and the Hansen tests of over-identification restriction ($prob > 0.306$) are not significant in all models. Given that the models fulfil the last two criteria, the GMM estimators are consistent, and the instrument are valid (Hassan et al., 2019). The Arellano and Bond tests of serial correlation (AR2) are insignificant, indicating the absence of second-order serial correlation.

Table 5
Regression results on financing decisions

Financing measures	FIN _{TD/TA}	FIN _{TD/TA}	FIN _{LTD/TA}	FIN _{LTD/TA}
Constant	0.520*** (8.760)	0.375*** (4.840)	0.071 (1.630)	-0.051 (-1.160)
Corporate Governance Indicators:				
Managerial Ownership (MOWN)	-0.000 (-0.650)	-0.001*** (-2.770)	0.000 (0.760)	0.000*** (3.710)
Board Size (BSIZE)	0.003*** (2.700)	0.003** (2.350)	0.001*** (2.110)	-0.001 (-1.190)
Board Independence (BIND)	0.048*** (3.050)	0.054*** (3.290)	-0.007 (-0.730)	-0.045*** (-4.330)
CEO/Chair Duality (DUAL)	0.020*** (2.660)	0.032*** (4.950)	0.011*** (4.090)	0.027*** (8.060)
Control Variables				
Tangibility (TAN)	-0.063*** (-3.610)	-0.084*** (-5.610)	-0.022*** (-3.390)	-0.025*** (-3.290)
Investment (Δ TA)	0.052*** (2.920)		-0.032*** (-4.180)	
Investment (Tobin's Q)		-0.018*** (-3.830)		0.001 (0.460)
Dividend Payout (DIV)	0.000* (1.740)	0.000** (2.380)	0.000*** (3.300)	0.000*** (3.590)
Profitability (PRFT)	-0.234*** (-15.350)	-0.234*** (-13.020)	-0.062*** (-6.610)	-0.070*** (-8.530)
Firm Size (SIZE)	-0.061*** (-8.050)	-0.038*** (-4.040)	-0.005 (-0.840)	0.015*** (2.670)
Corporate Tax (TAX)	0.002*** (4.830)	0.002*** (6.010)	0.000* (1.870)	-0.000 (-1.590)
Dummy (Δ CG)	0.012*** (7.070)	0.008*** (4.700)	-0.001 (-0.700)	0.002* (1.930)
Lagged Financing (FIN _{TD/TA} (-1))	0.881*** (68.490)	0.855*** (74.110)		
Lagged Financing (FIN _{LTD/TA} (-1))			0.857*** (72.440)	0.792*** (62.860)

(continue on next page)

Table 5 (continued)

Financing measures	FIN _{TD/TA}	FIN _{TD/TA}	FIN _{LTD/TA}	FIN _{LTD/TA}
GMM Summary:				
Number of group	198	198	198	198
Number of instruments	152	152	152	152
Arellano-Bond (AR(2)): <i>prob > z</i>	0.757	0.796	0.608	0.602
Hansen Test of Overid.: <i>prob > chi²</i>	0.583	0.321	0.306	0.380

Notes: *** significant at 1% level, ** significant at 5% level, and * significant at 1% level. The dummy variable, which gives a value of “1” for years 2013 onward and “0” otherwise, is to test the effect of changes in Governance Code in 2013.

The main results from Table 5 show the role of CG, as represented by its four indicators, in influencing debt financing decision. The first CG indicator is managerial ownership (MOWN) that appears to have different effects on debt financing decision depending on the measurement used. MOWN is significantly positive on the long-term debt ratio as predicted by agency theory but is significantly negative on the debt ratio. However, the effect is significant only when Tobin’s Q is used as the investment measurement. Although against the theory, a negative relationship in Sri Lanka was documented by Kulathunga et al. (2017). The relationship between managerial ownership and debt ratio is significantly positive in the overall sample, but significantly negative in the hotel sector. The positive impact of managerial ownership on long-term debt financing suggests that investors see an alignment of interest between management and shareholders. As agency costs are expected to be lower, the firms gain greater access to banks and other long-term debt investors. From the debtholders’ viewpoint, higher managerial ownership works in their favour because agency conflicts decrease as these manager–shareholders become more involved in governing companies (Strätling, 2003). The different effect of managerial ownership on debt and long-term debt ratios suggests that firms use less short-term liabilities because they practice more prudent and conservative working capital policy. This conservative policy hypothesis is also supported by the positive effect of managerial ownership on the long-term debt ratio. More financing needs must be funded with longer-term debt capital. Recall from the earlier discussion that Sri Lanka has an increasing trend in the long-term debt ratio.

The effect of Board size on debt ratio supports the Sri Lankan CG code, which encourages a larger Board. Although Board size is negative on the long-term debt ratio, but only when investment is measured using Tobin’s Q and the effect is insignificant. This result is consistent with that of Wellalage

and Locke (2014) for Sri Lankan firms, but contradicts those of Balagobei and Velnampy (2017), who found a significant positive impact of Board size on the long-term debt ratio. The possible reason is that the sample in Balagobei and Velnampy (2017) is restricted to 29 firms and exclusively from the manufacturing sector. Although a larger Board size increases monitoring, which subsequently reduces agency conflict, wealth expropriation from debtholders to shareholders is more likely when the Board is large and powerful. Like firms in Bangladesh, Sri Lankan firms are also known to be family-owned and most likely run by the founder or, his or her family members. These factors tend to make access to long-term debt more difficult. Besides, creditors might favour a small Board because a large one tends to be less efficient in making decisions. After all, consensus must be achieved with more individuals.

The relationship between Board independence and financing decision also depends on the financing measurement. As hypothesised, this relationship is positive and significant in the debt ratio model. This result contradicts that of Wellalage and Locke (2014) but is consistent with that of Siromi and Chandrapala (2017). Board independence turns negative and significant on long-term debt ratio, consistent with the results of Balagobei and Velnampy (2017). Similarly, Wen et al. (2002) and Al-Najjar and Hussainey (2011) argued that due to rigorous monitoring by independent directors, managers avoid using high leverage to avoid excessive monitoring from creditors or financial institutions that hinders business undertakings. In a study on firms in Bangladesh, Rashid (2018) argued that Board independence does not produce the expected impact because, in that market, the decision making is still heavily influenced by the family founders and managers. The same explanation applies to firms in Sri Lanka. As Masulis et al. (2011) reported, Sri Lanka has the highest percentage of listed firms belonging to a family group (67%) compared with 44 other countries.

The impact of CEO duality on financing decision is consistently positive and significant, which contradicts the hypothesis. However, similar results were documented by Bokpin and Anastacia (2009), Abor (2007), Ganiyu and Abiodun (2012), Fosberg (2004) and Saad (2010). To a certain extent, using debt capital for financing needs is convenient if the CEO/Chairperson intends to preserve control over the firm's policies because debt financing does not dilute or disrupt the ownership structure. Preference for debt capital can benefit the existing shareholders because it (mainly when supplied by banks) can also serve as an external monitoring mechanism. In other words, debt financing can help align the CEO/Chairperson's decisions with the firms' shareholders and debtholders' interest. In short, although the Sri Lankan CG code promotes

separation in the top two positions, the firms balance the CEO duality's control over the firms by imposing an external monitoring mechanism. Given that debt capital serves as an external monitoring mechanism, the firms of which decisions are influenced by the CEO/Chairperson use debt to counter the issue. This strategy can be advantageous because the major lenders in Sri Lanka are banks, which are strict and prudent in monitoring their borrowers.

Then, the dummy variable representing the 2013 CG revision is consistently positive and significant on the debt ratio and on long-term debt ratio, except in one model. As explained in the Introduction, the 2013 revision aims to improve the Board's effectiveness. The results generally suggest that the resulting CG practices help convince creditors, allowing companies better access particularly to short-term debt. In the case of long-term debt, the revision has a similar favourable effect but only when investment is associated with a growth factor (Tobin's Q).

Moving on to the control variables, in a comparative study that covered 45 countries, Fan et al. (2012) found that firms with a larger size, greater tangibility and higher profitability use more leverage. However, the results of the present study are almost entirely in contrast with their findings except for the firm size. Theoretically, tangible assets serve as debt collateral, such that firms with high tangibility have better access to debt financing. However, the present study finds that tangibility is consistently significant and negative on debt financing decisions. This negative relationship has two possible explanations. Firstly, the preliminary findings show that the sample firms use more short-term debt than long-term debt and do not require collateral to acquire the former. Secondly, these firms show a tendency to exhaust internal funding before seeking external financing. In other words, given that firms with high tangibility tend to be less financially constrained, they use external (debt) financing as a last resort.

Next, consistent with Pecking Order Theory, profitability is also significantly negative on debt financing decisions. The result indicates that Sri Lankan firms rely on internal funds for financing needs before they resort to costly external funds, including debt. Titman and Wessels (1988), Huang and Song (2006) and Chang et al. (2019) reported similar results. Concerning size, similar to Fan et al. (2012), Huang and Song (2006) and Friend and Lang (1988), the present study also finds firm size to be significant and positive in determining financing decision. The common argument associates a large firm size with a greater capacity to service debt (Pandey, 2004) and less information asymmetry (Rajan & Zingales, 1995), which entitle them to greater access to external capital such as debt. However, the positive relationship is only

supported in the long-term debt model when investment is associated with growth opportunities. In the other three models, firms' size is significantly negative in influencing debt financing. This finding suggests that debt financing is prevalent among smaller firms that are more financially constrained. A similar result is reported by Rajan and Zingales (1995).

This study also considers other financial decisions, namely, dividend payout and investment, in determining debt financing decision. Dividend decision is consistently positive in influencing financing decisions. This positive relationship supports the assertion of Jensen et al. (1992) that corporate debt and dividend policy are directly interrelated. Given that higher dividend payout reduces retained earnings (internal financing), firms resort to costly external funding to cover the financing needs for investment or operations. However, this argument needs support by a positive relationship between investment and debt ratio. In the present study, the results are mixed. The positive relationship is only supported for debt ratio only when investment is measured by a change in total assets, which is significantly negative on long-term debt. This result suggests that the firms view the shortage in internal funds as temporary and accordingly compensate with short-term debt. In other words, investment, which changes total assets, is attributed to increases in current assets. Using long-term debt for temporary financing needs is costly to the firms, which are therefore financed with short-term liabilities. The CEO/Chairperson and his or her management team then face difficulties to sustain the interest expenses, in addition to the restrictions of debt covenant imposed by debtholders. The negative effect of investment on leverage is consistent with the findings of Lang et al. (1994) and Aivazian et al. (2005).

Investment that is measured with Tobin's Q is significantly negative on debt ratio but insignificantly positive on long-term debt ratio. These results suggest that to finance growth opportunities that normally involve long-term projects, the firms do not commonly rely on short-term debt over long-term debt financing. Overall, the results on tangibility, investment, dividend payout and profitability suggest that Sri Lanka sample firms are conservative because they rely on internal financing for investment before pursuing costly external capital sources. The firms also show reliance on long-term debt financing to finance long-term growth projects.

The last variable, effective corporate tax, is always significant in explaining debt financing decision. Corporate tax is positive on debt and long-term debt ratios, but its effect on the latter becomes insignificant and negative when Tobin's Q is used to measure investment. This finding is inconsistent

with those of De Jong et al. (2008). Fan et al. (2012) suggested that leverage tends to be higher in countries where firms enjoy greater tax gain from leverage. As stated earlier, the corporate tax rates in Sri Lanka were 28% from 2011 until 2015. This rate was 35% in 2009 and 2010 and was reduced to 15% in 2016. Despite the high tax rate, the result suggests that the firms avoid using high long-term debt when Q is high because financing profitable projects with internal resources are more advantageous to the existing shareholders. Long-term debt can induce financial distress, forcing firms to sustain income generation with the obligation to continuously service the debt for a long time. The positive effect of tax on debt ratio suggests that total debt comprises non-interest-bearing short term debts. In short, firms avoid using long-term debt because the costs of facing financial distress outweigh the tax shield's benefits.

Finally, a crucial result is that the lagged FIN variables are always significant in debt financing, indicating that Sri Lankan firms have a target capital structure. This result is consistent with trade-off theory, which predicts that firms make financial decisions that rebalance the target capital structure. Moreover, the lagged FIN variables' coefficients indicate these firms adjust to the target at a speed of 11.9% to 20.8%. These rates suggest the speed with which these firms close the gap between the previous year and target current leverage.

CONCLUSION

This study investigates CG factors in influencing the debt financing decision of 198 listed companies in Sri Lanka from 2009 to 2016 using a two-step system GMM, a method that can address the omnipresence of heteroskedasticity of unknown forms. This issue threatens the validity and efficiency of the independent variable estimators. CG is tested through four indicators: managerial ownership, Board size, Board independence and CEO and Chairperson duality. The first notable finding concerns the lagged debt financing variables, which consistently indicate that the sample firms have a target capital structure. In addition, the firms adjust to the target capital structure at a speed of 15% to 18%.

Concerning the CG indicators, the results show that managerial ownership negatively affects the total debt ratio, but the effect reverses in the long-term debt ratio. Meanwhile, the impact of Board size and Board independence is the opposite of that of managerial ownership. The effect of Board size on long-term debt ratio is not significant. The last CG factor, CEO and Chairperson duality, is always positive and significant on debt financing decision. The results imply that Sri Lankan firms use an unsustainable corporate financial

policy. Meanwhile, the initiative taken by market regulators in revising the CG best practices in 2013 is proven effective in improving investors' confidence in the Board, and consequently, give the firms better access to debt financing. However, access to long-term debt is still conditional to the investment associated with growth opportunities.

Given that firms with greater managerial ownership and role duality tend to use more long-term debt, the results suggest ample room for capital expropriation. Unless the Sri Lankan market is not increasing in efficiency, this corporate policy is not sustainable in the long-term when investors realise that debt capital is issued without adequate collateral. That is, tangibility is consistently and significantly negative on debt financing variables. The former contradicts the argument that firms with greater collateral have better access to external funding. While consistent with the Pecking order, the latter also implies that firms issue debt capital when they lack an internal financing source. On the positive side, this study finds that increases in total debt ratio are significantly influenced by increases in investment and corporate tax is associated with short-term financing needs. That is, firms use more current liabilities to finance increases in current assets. The negative impact of corporate tax on long term debt suggests that firms see the costs of financial distress resulting from long-term debt commitment to outweigh the benefit from interest tax shield. The dividend is also significant in increasing long-term debt, indicating that firms use an external source of capital to compensate for depleting retained earnings distributed to shareholders. This arrangement is also possible because investors see the distribution as an indication of a strong financial position.

This study acknowledges several limitations that can be addressed in future research. In discussing debt financing decision, the possibility of financial distress is eminent because failure to service the debt may result in the firms being forced to bankruptcy. Although financial distress can be implied through corporate tax (interest tax shield), future studies may use direct measures such as Altman's Z-score. This issue can also be addressed by separately testing non-interest-bearing debt from the total debt. Other related factors to be considered in future studies are non-debt tax shield and earnings volatility, which classic control variables in the debt financing model. In discussing ownership structure as a governance mechanism, this study incorporates managerial ownership. Future studies can consider the governance mechanism from institutional and even foreign ownership.

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NOTES

1. In the 2017 edition, the minimum number of independent directors is raised to three and for other cases, whichever is higher between three or two-thirds of the number of non-executive directors (ICASL 2017).
2. Trading Economics at <https://tradingeconomics.com/sri-lanka/corporate-tax-rate>

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