

The Relevance of Capital Structure Theories on Bursa Malaysia

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Abstract

This study attempts to explore sectorial specific capital structure determinants for listed Malaysian firms and examine whether their outcomes are in relevance with capital structure theories. Within the framework of Modigliani and Miller theory, Trade off theory and Pecking Order theory, the core objective of the study is to investigate sectorial specific capital structure determinants such as current assets, sales, total assets, earning per share, fixed assets and return on equity with capital structure formulation and to find if any of these capital structure theories are applicable in this case. Capital structure is measured by debt equity ratio and used as a variable of interest. Based on the key capital structure theories, theoretical conceptual framework is designed, which is tested in the Malaysian context. Using time series data collected from Bloomberg database, the empirical investigation is the first effort to analyze in-depth sectorial specific capital structure determinant by evaluating largest sample set in context of Malaysia. The large-scale investigation is carried out on 459 listed firms from eleven various sectors of Bursa Malaysia main market over the observed period of 2005-2016. The methodology is based on Multiple Regression model, which is used for examining sectorial specific determinants of capital structure. The findings are slightly surprising and the empirical results show that each capital structure determinant has a different effect in specific sectors. This thus confirms the robust presence of Modigliani and Miller theory in Bursa Malaysia main market. These results may benefit financial managers and policy makers to develop a comprehensive strategy to enhance organizational performance.

Keywords: Capital Structure Theories, Multiple Regression, Modigliani and Miller Theory, Time Series Data, Bursa Malaysia

1. Introduction

In corporate finance, one of the primary and critical decisions for a firm is financing decision (Mursalim et al., 2017). Capital structure explains the method by which firms finance their operations by using different sources of funds i.e. equity or debt (Ahmad et al., 2017). Firms' selections about financing are very important and require some special consideration (Abdul Hadi et al., 2017). However, numerous capital structure theories assist firms to attain long-term

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aims related to financial growth. In order to achieve financial growth, firms seek best mix of equity and debt which is termed as optimal capital structure. Likewise, to achieve financial performance, capital structure theories support the financial managers to select suitable combination of debt and equity for their firms. Therefore, the important of awareness of capital structure theories are essential for financial managers of firms (Utami and Inanga , 2012). Likewise, selection of best financing mix from debt and equity to formulate optimal capital structure can be done by considering institutional settings (Fan et al., 2012).

Mostly, firms acquire debt from banks and bondholders and raise equity by issuing their shares in capital market, which are endorsed by stockholders (Abdul Hadi et al., 2015). Bursa Malaysia is a main capital market of Malaysia that contributes significantly in country's economic growth (Abdul Hadi et al, 2018b). Similarly, in Malaysia, financial managers give priority to equity financing as compared to debt financing (Singh and Yusof, 2010). Hence, in order to achieve funds from equity, financing firms offer their shares in capital market. Previous studies which have been conducted in context of Bursa Malaysia for exploring capital structure determinants provide mix and contradictory results (see for example, Noraidi & Ramakrishnan, 2018; Hashemi, 2013). In addition, with few exceptions, prior studies generally do not offer noteworthy contributions, as they mainly focus on firm's characteristics by investigating few sectors instead of exploring sectorial related capital structure determinants (Goh et al., 2018). Since, previous related studies in Malaysian context are only focused on limited sectors; therefore, their sample size are small. As a result, previous investigations have failed to provide holistic, comprehensive and conclusive findings of overall Malaysian market (Noraidi and Ramakrishnan, 2018; Hussain and Miras, 2015). This shows that until now little or no importance is given to investigate sectorial specific capital structure determinants.

Moreover, several experts have described the theoretical relationship between capital structure and its determinants choices which affect overall value of firm and cost of capital (see for example Myers, 1984; Modigliani and Miller, 1958). In the past few years, three well-known and contrasting capital structure theories such as Modigliani and Miller (MM) theory, Trade off theory and Pecking Order theory have been used for explaining the question on how firms choose their capital structure choices from debt, equity and mixture of both.

The rest of the study is organised as follows. Section 2 reviews the theoretical review and empirical evidences of capital structure determinants. Section 3 gives detail of the data and methodology applied for this empirical investigation and section four presents the empirical

findings discussion in details. Finally, the conclusion part provides a detailed summary of the results with some recommendations for further investigations.

2. Literature Review

2.1 Theoretical Review of Capital Structure Determinants

The modern-day theory of capital structure is based on the work of Modigliani and Miller (1958) who demonstrated that within the perfect capital market the choice between debt and equity financing has no substantial effects on the firm value; they thus suggested that management of a firm should stop worrying about the proportion of debt and equity securities. Similarly, DeAnglo et al. (1980) proposed a theory, which is more similar with Modigliani and Miller theory and named as Trade off theory. This theory posits the idea of optimal capital structure and mentions that firms have opportunity to choose its level of debt which balance the disadvantages of financial distress cost with advantages of tax benefits (Myers, 2001). In contrast to Modigliani and Miller theory and Trade off theory, Pecking Order theory developed by Myers and Majluf (1984) suggest the idea that firms first emphasize on internal funding to meet their capital expenditures; however, if retained earnings is not enough, they then move to debt and prefer equity (Myers, 2001). Having now outlined the key theories of capital structure, the next section provides introduction of all those variables which are used in this empirical investigation.

2.2 Empirical Evidences of Capital Structure Determinants

Empirical studies generally test whether the determinants suggested by diverse theories are able to explain the capital structure employed by firms or not (Cevheroglu-Acar, 2018). However, by considering the Malaysian background, this study implies six different factors for empirical investigation: size, earning per share, total assets, current assets, fixed assets and return on equity. This empirical investigation also introduced two new proxies which are current assets and fixed assets because currently these variables are gaining special attention of investors (Abdul Hadi et al., 2018a). Moreover, in the current study, 'debt equity ratio' is used as a measure of capital structure, which is defined as a total liability over total stockholders' equity. Next sections will provide the theoretical relevancy and empirical evidence for each determinant used in the analysis.

2.3 Size

Normally, it is assumed that firms which are larger in size and financially stable easily maintain their cashflow; therefore, their chances of facing bankruptcy is minimum and they access to

debt market (Rajan and Zingales, 1995). In context of Malaysia, previous studies which investigated size as a capital structure factor shows a positive relation with a limited exception. Noraidi and Ramakrishnan (2018) investigate firm size by considering log value of annual sales and find positive and significant association among size of firm and capital structure. Similarly, Baharuddin et al. (2011) consider annual sales as a firm size of Malaysian construction firms and find positive association between capital structure and firm size. Therefore, this study considers annual sales figure as a proxy for firm size to investigate as a key determinants of capital structure in the Malaysian context.

2.4 Return on Equity (ROE)

Return on Equity is a financial ratio which is often used by financial analysts to judge financial performance of fund invested as a capital (Hamid et al., 2015). It is defined as a net income over shareholders' fund. In context of Malaysia, Tan and Hamid (2016) investigate capital structure factors of Malaysian listed Plantation firms and find significant and positive relation among ROE and firm's capital structure. Similarly, Abdul Hadi et al. (2018a) explore shariah and non shariah firms of Malaysian listed firms and find significant relationship between ROE and debt equity ratio. Thus, this study selected return on equity as an independent variable to investigate it as a capital structure of Malaysian listed firms.

2.5 Earning Per Share (EPS)

EPS measure shareholders' profitability by revealing how much profit a share generates (Shahveisi et al., 2012). It is defined as Profit before taxation over number of ordinary shares issued. In context of Malaysia, Salim and Yadav (2012) investigate capital structure and find positive relation of EPS with independent variables of short and long-term leverage and total leverage. Similarly, Tan and Hamid (2016) examine EPS as a capital structure determinant for Malaysian listed firms and find positive association of EPS with short-term debt to total assets and total debt to total assets. Thus, it is observed that EPS is constantly correlated determinant in Malaysian context with few exceptions. Therefore, this study considers EPS as a proxy of capital structure in the Malaysian context.

2.6 Current Assets (CA)

This study considers current assets as one of the firm specific factors because in Malaysian context, major fragment (80%) of the market is covered by the Shariah based firms (Halim et al., 2017), which prefer short term debt to avoid high interest associated with long term debt. Similarly, current assets are liquid assets and firms which provide extra figure of liquidation

can easily access extra percent of debt (Harris and Raviv, 1991). This also shows that any increase in current assets of listed firms are likely to be backed by its short-term borrowings (Abdul Hadi et al., 2018a). Similarly, in settling short term debt, firm must have enough current assets. Shafaai and Masih (2013) claim that Malaysian firms are able to meet short term creditors with their current assets. This indicates that current assets of Malaysian firms have positive association with leverage. Therefore, this study introduces current assets as a main factor of capital structure in Malaysian context.

2.7 Fixed Assets (FA)

This study also introduces fixed assets as a capital structure determinant. It is because main purpose of the investors is to earn return. However, as mentioned if major market fragment (80%) consists of shariah grounded firms which avoids interest-based debt and solely depends on other sources of finance then financial institutions need to consider fixed assets. Moreover, fixed assets possession is a main feature which help firms in getting loans from financial institutions (Okpukpara, 2009). Likewise, for conventional firms, fixed assets have their own importance. Thus, this study considers and introduces fixed assets is a key determinant of capital structure in Malaysian context.

2.8 Total Assets (TA)

Firm's total assets have been used by various researchers as a determinant of capital structure. Hashemi (2013) explores total assets as a size variable of Iranian firms and find positive and significant impact on capital structure. Similarly, in context of Malaysia Sahudin et al., (2011) considers log value of total assets as a capital structure determinant and find positive association between firm's total assets and capital structure. Thus, because of constant positive and significant results, this study also considers total assets as a factor for capital structure of Malaysian listed firms.

Based on critical review of the literature presented in the above sections, the following theoretical framework (see Figure 1) is developed which portrays the key determinants (independent variables) and its association with dependent variable (Debt/Equity Ratio).

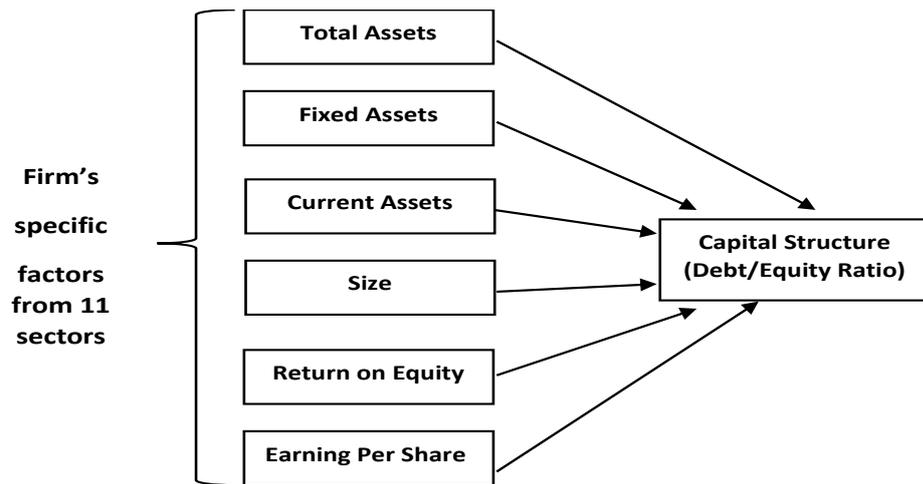


FIGURE 1: Theoretical framework for this study

3. Data & Methodology

This study examines the sectorial specific capital structure determinants for eleven selected sectors (REIT, construction, finance, hotel, IPC, mining, plantation, properties, trading/services, technology, industrial products) of Malaysian main market and check whether their results are in relevance with key capital structure theories. For the analysis, the time series data of total 459 firms over a twelve year's period of 2005-2016 is extracted from Bloomberg database. Yearly average values of each variable are calculated and SAS code is employed to explore sectorial specific capital structure determinants. By the end of year 2016, Bursa Malaysia main market is categorized into fourteen active sectors. However, three different sectors which included close end funds, special purpose acquisition company (SPAC) and consumer products are excluded because of data limitation.

Multiple Regression model is applied to find out the relationship between selected sectorial specific capital structure determinants and DE ratio. Generally, this estimation model is used to study the association among one dependent and numerous independent variables (Gujarati et al., 2012). Considering the assumptions of classical regression model and by using the conditional exception of dependent variable Y on each side of equation, Multiple Regression model is formulated as in the following

$$E (Y_i | X_{2i}, X_{3i}) = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} \text{ --- (1)}$$

In words, equation (1) provides the expected value of Y or conditional mean of the fixed values of X_2 and X_3 . Similarly, in Multiple Regression analysis, multicollinearity is also a problem which effects estimators' results. Multi Regression assume no multicollinearity in the model. A necessary condition for the identification

$$E(\mu | x_1, x_2, \dots, x_k) \dots\dots\dots (2)$$

Above equation states that all determinants in Multi Regression model for the unobserved error term are assumed zero and uncorrelated with independent variables. Furthermore, another issue with Multiple Regression estimation is autocorrelation which is specially observe when time series data is involved for investigation and error term transfer from one to another period. Multiple Regression estimation assumes no autocorrelation between the error terms.

$$cov(\mu_i, \mu_j) = 0 \quad i \neq j \dots\dots\dots (3)$$

Similarly, one of the important assumptions of Multiple Regression is that there should be no heteroscedasticity in the model. Heteroscedasticity is present in the model when error term size is not constant across explanatory variable values (Gujarati et al., 2012). An essential condition for the constant variance or heteroscedasticity is

$$var(\mu_j) = \delta^2 \dots\dots\dots (4)$$

Thus, the main Multi Regression model of this empirical investigation involves determinants that are constantly correlated in Malaysian context and explained in literature review. The empirical model of this study is expressed as follows:

$$DE_t = \alpha + \beta_1 TA_t + \beta_2 FA_t + \beta_3 CA_t + \beta_5 Size_t + \beta_6 ROE_t + \beta_7 EPS_t + \mu_t \dots\dots (5)$$

Where: α and β indicate coefficients, DE indicates debt equity ratio, TA indicates total assets, FA indicates fixed assets, CA indicates current assets, Size indicates annual sales, ROE indicates return on equity, EPS shows earnings per share, μ is the error term and t defines time period.

4. Empirical Findings

Multiple Regression analysis is based on statistical standards explained by many scholars. According to them, variables have significant relationship if $p < 0.01$ and $p < 0.05$ (Gelman, 2012; Hair et al, 2010). The results are reported below.

Insert Table 1: Model Summary (Hotel, Industrial Product & Mining sectors)

Table 1 reports the results of Multiple Regression analysis of Hotel, Industrial Products and Mining sectors. Looking at the statistical results obtained from Multiple Regression, it is evident that there is no significant relationship between controlled variables and DE ratio. Thus, this indicates that Modigliani and Miller theory is valid for these sectors, which confirmed that the choice between debt and equity financing has no considerable effects on the value of firm.

Insert Table 1 : Model Summary (REIT, Trading & Service, Technology sectors)

Similarly, Multiple Regression analysis is executed for REIT, Trading and Services and Technology sectors (see Table 2). The results suggest that no significant relationship is found between controlled variables and DE ratio of Trading and Services sector. However, FA, TA and Size in REIT and CA in Technology sector are found statistically significant determinants. This further confirms the presence of Modigliani and Miller. Likewise, Trade off theory also confirms the presence in REIT (FA, TA) and Technology sectors (CA) which explains the trade-off between benefits and costs of the firm.

Insert Table 2 : Model Summary (Plantation, Construction & Finance sectors)

Likewise, using Multiple Regression analysis, the relationship between independent variables and DE ratio in context of Plantation, Construction and Finance sector (see Table 3) is investigated. In context of Plantation sector, the results suggest that there are no significant determinants in this sector. This finding is consistent with Modigliani and Miller theory. However, in Construction sector, Size, ROE and EPS show a significant influence on DE. The results also indicate that profitability (ROE, EPS) which are found significant determinants of finance sector are critical to explain. This endorses Pecking Order theory which explains that it is the past earnings that influence capital structure policy of firms. Hence, results confirm the presence of Modigliani and Miller theory in Plantation and Construction sector while there is Pecking Order theory in Construction and Finance sectors.

Insert Table 3 : Model Summary (Infrastructure & Properties sectors)

Similarly, using Multiple Regression analysis in Table 4, this study suggests that in Infrastructure sector ROE, EPS and sales which also indicate profitability and are found significant are critical to define. Furthermore, in Properties sector the results also present that Size and EPS are significant but critical factor in explaining capital structure in this sector. These results of Infrastructure and Properties sectors are also consistent with Pecking Order theory which explains that the past earnings are critical to support firm's capital structure.

Furthermore, Table 5,6,7,8 are used for diagnosing the multicollinearity, heteroskedasticity and autocorrelation in time series model. Multicollinearity analysis is grounded on statistical measure clarified by Myers (1990) who expounds that the variables have serious multicollinearity issue if the VIF value exceeds 10. Moreover, for checking autocorrelation, Durbin Watson D test is considered. A rule of thumb for Durbin Watson is that statistic values between the range of 1.5 to 2.5 are considered normal (Folarin and Hassan, 2015). Similarly,

values of moment specification are used for examining heteroskedasticity in the model. To test the validity of the models, the following hypothesis must be tested.

H₀: The measures used for this model are valid

H₁: The measures used for this model are not valid

Insert Table 4 : Model Diagnostic Test (Hotel, Industrial Product & Mining sectors)

Table 5 is consistent with Table 1, which clears that the VIFs coefficient shows pressure of multicollinearity in these sectors (Hotel, Industrial and Mining). The results show that except Size, all other explanatory variables are influencing each other and not independent. Moreover, for checking autocorrelation Durbin Waston D test and for absence of heteroskedasticity moment of specification p values are analysed. The results of p values of these two measures mentioned the absence of autocorrelation and heteroskedasticity in the model. Thus, the null hypothesis confirms the validity of these three sectors model.

Insert Table 5: Model Diagnostic Test (REIT, Trading & Service, Technology sectors)

The value of variance inflation factor (VIF) in Table 6 which is consistence with Table 2, shows serious multicollinearity issue in REIT, Trading & Services and Technology sectors' model. The results show that in REIT sector only ROE and in Trading and Services and Technology sectors ROE and EPS are not under Multicollinearity issue. However, p values of Durbin Waston D test show no autocorrelation in REIT and Technology sector. While, Trading and Services specifies autocorrelation issue in the model ($p > 2.5$) which postulates that the explanatory variables linearly depend on its own prior values. The p values also indicate the absence of heteroskedasticity in these three models. Thus, for REIT and Technology sectors null hypothesis is accepted which confirm the strength of these two models.

Insert Table 6: Model Diagnostic Test (Plantation, Construction & Finance sectors)

Likewise, Table 7 is related to Table 3 which presents empirical results of Plantation, Construction and Finance sectors. Table 7 shows presence of high multicollinearity issue in these sectors. The results show absence of multicollinearity in ROE and EPS of Plantation sector and Size, ROE and EPS of Construction and Finance sector. Similarly, the p values indicate absence of heteroskedasticity and autocorrelation in the model except for Finance sector which is suffering from autocorrelation issue ($p > 2.878$). This confirms that in Finance sector, model depends linearly on its previous values. Therefore, null hypothesis is accepted for Plantation and Construction sectors.

Insert Table 7: Model Diagnostic Test (Infrastructure & Properties sectors)

Table 8 which is consistent with Table 4, concludes that in Infrastructure and Properties sectors except ROE and EPS all other variables are suffering from issue of high multicollinearity. Similarly, models show that both sectors are under autocorrelation issue as p values of Durbin Waston are more than 2.5. Thus, this conclude that published and available data on listed firms of these selected sectors is immaterial in influencing capital structure of Malaysian listed firms.

5. Conclusion

From the findings, it can be determined that in Hotel, Industrial Products, Mining, Trading and Services and Plantation sectors, there is no significant relationship between selected determinants with firm's capital structure. It is surprising to find that none of the selected variables has significant influence on the firm's capital structure within these sectors. Similarly, this shows that only Modigliani Miller theory is valid in defining capital structure for these five sectors. However, in REIT sector FA, TA, Size and in Technology sector CA are find significant determinants of capital structure. Thus, FA, CA and TA indicate presence of Trade off theory in REIT and Technology sector. In Construction sector, Size, ROE and EPS show significant relationship with firm's capital structure. This shows that Modigliani and Miller and Pecking Order theory widely explain capital structure policy of listed firms in the Construction sector. Similarly, in Finance and Infrastructure sector, ROE and EPS which indicate profitability in the industry are hard to explain. This endorses Pecking Order theory in aforesaid sectors. However, in context of Properties sector, Size and EPS which indicate earnings are critical factors in defining capital structure of listed firms. Pecking Order theory explains that the past earnings are critical to support firm's capital structure. Perhaps, future researchers create new knowledge by exploring country specific determinants of capital structure on Bursa Malaysia. As a whole, results indicate robust presence of Modigliani and Miller theory in most sectors of Bursa Malaysia.

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Table 1. Model Summary (Hotel, Industrial Product & Mining sectors)

Variables	Sectors								
	Hotel			Industrial Products			Mining		
	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t
Intercept	3.1621	2.86	0.0352	1.14758	6.69	0.0011	0.20574	-1.74	0.1425
FA	0.00077685	-1.31	0.2467	0.00121	-1.11	0.3173	0.01408	-0.83	0.4459
TA	0.00102	-1.04	0.3447	0.00017828	0.28	0.7896	-0.0000993	-0.12	0.9064
CA	0.00020697	-0.07	0.9438	0.00014518	0.22	0.8369	0.01613	1.40	0.2193
Size	0.00306	-1.27	0.2608	0.0003190	-1.80	0.1313	0.01656	1.05	0.3436
ROE	9.25541	-1.20	0.2822	1.02998	0.61	0.5683	1.02684	1.32	0.2435
EPS	2.42451	1.09	0.3235	0.06239	-0.20	0.8494	0.51538	-1.42	0.2151

Source: Authors' own elaboration

Table 2: Model Summary (REIT, Trading & Service, Technology sectors)

Variables	Sectors								
	REIT			Trading & Services			Technology		
	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t
Intercept	1.30085	15.86	<.0001	1.34316	7.97	0.0005	0.33304	0.60	0.5742
FA	0.00106	-2.94	0.0324**	0.00009487	0.19	0.8555	0.00971	1.35	0.2356
TA	0.00096635	2.80	0.0382**	0.00005415	-0.16	0.8789	0.00837	-1.22	0.2751
CA	0.00034566	-0.86	0.4303	0.00006039	-0.11	0.9131	0.01902	2.11	0.0891*
Size	0.00066741	-2.15	0.0839*	0.00019019	-1.33	0.2419	0.00378	-1.33	0.2402
ROE	0.41838	-0.82	0.4487	0.07727	1.00	0.3653	0.95671	-0.68	0.5248
EPS	0.07870	0.82	0.4492	0.05396	-0.8	0.4593	0.99911	-0.82	0.4478

******, * Significant at 5%, 10% level

Source: Authors' own elaboration

Table 3: Model Summary (Plantation, Construction & Finance sectors)

Variables	Sectors								
	Plantation			Construction			Finance		
	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t
Intercept	0.40552	3.86	0.0118	2.20951	8.35	0.0004	2.48465	2.44	0.0584
FA	0.00014197	-0.66	0.5409	0.00226	0.84	0.4404	-0.00380	-0.88	0.4193
TA	0.00004779	0.20	0.8488	0.00022213	0.14	0.8962	0.00015179	-0.57	0.596
CA	0.00002842	-0.80	0.9429	0.00106	-0.46	0.6659	0.00023735	0.46	0.6658
Size	0.00012995	0.87	0.4232	0.00143	-2.04	0.0967*	0.00398	-1.79	0.1337
ROE	0.30702	-0.32	0.7606	6.02045	2.28	0.0716*	7.16270	5.79	0.0022**
EPS	0.04664	0.3	0.7756	5.65385	-2.14	0.0853*	0.37987	5.79	0.0022**

******, * Significant at 5%, 10% level

Source: Authors' own elaboration

Table 4 : Model Summary (Infrastructure & Properties sectors)

Variables	Sectors					
	Infrastructure			Properties		
	Parameter Estimate	t Value	Pr > t	Parameter Estimate	t Value	Pr > t
Intercept	5.28152	1.65	0.1605	0.89089	9.8	0.0002
FA	0.00143	2.01	0.1001	0.00072275	0.38	0.7218
TA	0.00208	-1.86	0.1215	0.00198	-1.71	0.1483
CA	0.00291	-2.15	0.0839*	0.00062992	-0.69	0.5210
Size	0.00027335	0.64	0.5510	0.00858	4.71	0.0053**
ROE	3.59330	3.24	0.0229**	0.03466	0.74	0.4921
EPS	5.27829	-2.06	0.0939*	2.68988	-3.95	0.0108**

******, * Significant at 5%, 10% level

Source: Authors' own elaboration

Table 5 : Model Diagnostic Test (Hotel, Industrial Product & Mining sectors)

Variables	Sectors								
	Hotel			Industrial Products			Mining		
	Variance Inflation factor (VIF)	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)
FA	32.04688	0.8047	1.820	30.57748	0.9004	1.947	27.83521	0.6302	2.264
TA	68.27794			72.42101			15.57889		
CA	12.85147			31.99498			35.24239		
Size	3.22454			1.55951			4.03215		
ROE	352.77275			3.31733			28.42826		
EPS	137.5430			2.75622			32.77273		

Source: Authors' own elaboration

Table 6 : Model Diagnostic Test (REIT, Trading & Service, Technology sectors)

Variables	Sectors								
	REIT			Trading & Services			Technology		
	Variance Inflation factor (VIF)	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)
FA	17115	0.7095	1.932	448.27820	0.6072	2.708	32.57571	0.6107	1.671
TA	19157			1079.918			102.4634		
CA	113.645			230.6754			91.17273		
Size	64.9609			26.84446			27.46583		
ROE	7.38793			1.60688			10.40195		
EPS	15.1948			1.72685			2.93609		

Source: Authors' own elaboration

Table 7 : Model Diagnostic Test (Plantation, Construction & Finance sectors)

Variables	Sectors								
	Plantation			Construction			Finance		
	Variance Inflation factor (VIF)	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)
FA	30.26431	0.7090	1.813	123.99251	0.8549	1.333	2.78740	0.5697	2.878
TA	130.61836			445.62617			4.30890		
CA	38.87502			214.11582			5.37068		
Size	13.21755			5.32625			2.02421		
ROE	3.91829			5.20706			5.23058		
EPS	2.89170			6.56327			4.82641		

Source: Authors' own elaboration

Table 8 : Model Diagnostic Test (Infrastructure & Properties sectors)

Variables	Sectors					
	Infrastructure			Properties		
	Variance Inflation factor (VIF)	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)	Variance Inflation (VIF)	Moment Spec. H ₀ (p-value)	Durbin Watson D H ₀ (p-value)
FA	50.00116	0.5287	2.816	372.35405	0.7220	2.864
TA	12.05344			959.49218		
CA	22.01845			141.43435		
Size	11.39804			161.18089		
ROE	5.10858			4.54999		
EPS	6.55159			5.82192		

Source: Authors' own elaboration