

PAPER • OPEN ACCESS

## Linkages between capital structure policy and Malaysian real estate investment trusts property portfolio enlargement

To cite this article: Rohaya Abdul Jalil *et al* 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **620** 012008

View the [article online](#) for updates and enhancements.



**ECS** **240th ECS Meeting**  
Digital Meeting, Oct 10-14, 2021

**Register early and save  
up to 20% on registration costs**

Early registration deadline Sep 13

**REGISTER NOW**

# Linkages between capital structure policy and Malaysian real estate investment trusts property portfolio enlargement

Rohaya Abdul Jalil<sup>1</sup>, Maimunah Sapri<sup>1</sup>, Tiong Chai Ping<sup>1</sup>

<sup>1</sup>Centre for Real Estate Studies, Faculty of Geo-information & Real Estate, University Technology Malaysia

[rohaya@utm.my](mailto:rohaya@utm.my)

**Abstract.** The superiority of real estate investment trusts (REITs)'tax regime which gives tax waive provided REITs distributed 95 percent of earning to unit holders, had limits its potential to expand in term of its property portfolio enlargement (PPE). This study aims to determine the links between capital structure policy of Malaysian REITs (M-REITs) and PPE agenda. Adopting a descriptive analysis and deployed a ten years data of M-REITs, this study reveals that there is an opposite relationships between debt-to-equity ratio (D/E) and the average increase percentage of property total value (AIPPTV). This study indicates that as D/E grows, there will be a resistance in PPE agenda. This explains the poor size of M-REITs properties total value, which 58 percentage of it is less than RM1 billion. This study suggests M-REITs should plan their PPE financing option as the cost of debt ( $k_d$ ) advantage when lower interest rate imposed. There other factors influence REITs PPE such as the quality and the performance of properties, properties diversification in term of property type, geographical and size, institutional ownership of the property, externally managed managers and issue of cash flow of majority unitholders in REITs.

## 1. Introduction

The superiority of Malaysian real estate investment trusts (M-REITs)'tax regime rules tax waived for M-REITs companies which distributed 95 percent of earning to unitholders, had limits its potential to expand in term its property portfolio enlargement (PPE). Without further PPE, the distribution for unitholders remain the same or in fact lower for the coming year, indicating no or negative growth. This phenomenon, would depressed the unitholders and lead to exit the REITs and consequently cause REITs unit price diluted. Therefore, REITs need to plan for PPE to remain competitive in the market [1 and 2].

In the point of corporate finance, PPE can be implemented either through (i) new additional issuance of shares ; (ii) debt financing or ; (iii) internal sources of funding from retain earnings [3]. Nevertheless, third financial option above is not rational for REITs since they only left with 5 percent retained earnings to be brought forward for the subsequent financial year. This is the effects of the eligibility of tax waived given for REITs if distributes 95 percent of net profit after interest (NPAI) to the unitholders. Although internal sources of funding had its cost of capital towards the company, but it considered as lower compared to the other financial option.



However, the additional issuance of shares as well as debt financing have its own setback toward REITs. If additional issuance of REITs unit is adopted, it let an increase in number of unit in circulation [1]. Although, it lead an increase of NPAI but the increase of NPAI is not in tangent with the increase of REITs unit. This resulted less dividend per unit (DPU) distributed compare to the prior PPE by REITs. This will depressed REITs unitholders, and may lead them to exit their REITs investment. On the other hand, if debt financing is adopted, REITs will suffered financial commitment of interest payment regardless of profit making or not [4]. REITs will have a lower NPAI compare to the option of additional issuance of units [3], [5], [6] and [7]. Moreover, the tax shelter benefit would not be enjoyed by REITs since they are tax waived [1], [2] [8] and [9].

Therefore, REIT need to wisely decide which financing option to opt to materialize their PPE agenda. If PPE was not undertaken by REITs, and the properties portfolio remain the same, rental net operating income depleted over the year, and soon producing no growth for REITs distribution [2]. The investors will not tolerate with stagnant dividend yield (DY), moreover the effects of inflation will deteriorating the value of the distribution [10]. Distressed investors will exit their REITs investment thus diluted the REITs' unit price. The balance trade-off between debt or equity as capital structure policy is crucial issue among REITs. The issue of over gearing with REITs companies is crucial since it implicates the REITs' earnings in long run. Meanwhile, larger number of unit in circulation also resulted low distribution and effects the total return [11]. The Malaysian REITs Guidelines 2010, suggest the gearing level of REITs cannot more than 40 percent. Thus, does the combination of debt and equity proportion in capital structure would assists M-REITs PPE agenda? Thus, this study attempt to examine the M-REITs capital structure policy and to examine its interaction with M-REITs PPE. This study deployed a ten years data of M-REITs from year 2006 until 2015.

## **2. Property portfolio enlargement**

The dividend yield distribution by REIT is superior than the average companies, resulted REITs is perceived as a long term investment by investors. Therefore, in order to remains competitive REITs need to strategize on their operating rental activities, and PPE is one of the initiatives to improve REITs performance. Nevertheless, the REITs disposition, limits their aggressiveness expansion in term of new properties acquisition in the portfolio. Left with 5 percent retained earnings remain brought forward from prior year, it is insufficient to finance new property acquisition. REITs need to consider for external funding such as additional issuance of unit or debt financing.

The property investment acquisition depends on the property size, preferences on property type and criteria for obtaining mortgages [12]. Meanwhile [13], propose a normative model of the property investment decision- making process in REITs, in which comprised of stage of envisioning, planning, dealing and executing. Besides need to emphasised on the objectives, asset identification, portfolio impact assessment and post audit of property acquisition. The REITs shareholder return had a significant relationship with property portfolio acquisition. This excess return were as effect when REITs reconfirm their geographical focus in the property acquisition, private debt financing adopted or private placement with financial institutions to finance the acquisition transactions [14]. However, REITs due to not pay taxes, shown abnormal return in real estate sell-offs by all type of REITs. While, there inverse relationship between the REITs decision to benefit sale proceed to surrender long-term debt and the abnormal return [15]. The credit line availability had a significant relationship with property acquisition of the firm [16]. Besides, there are inverse relationship between REIT size and weighted average cost of capital (WACC) [17]. In fact, for all cost-of-capital measures found significant economies of scale, such as the positive and

significant relationship on firm size. While financing through equity are the mean for PPE compared to debt financing [18].

A contradict argument of properties restructuring effects of REITs by [19], that highlighted that REITs sell-off their property was to retire the long term loan as well as a strategy to repurchase new property cash from the sale proceed of earlier property divestitures. Moreover, the property sell-off by REITs was mechanism to reduce geographical dispersion and property type diversification, and as a strategy to increase operating efficiency within REITs property concentration.

### **3. New additional issuance of REITs unit**

Tax shelter is not been enjoyed by REITs resulted no advantages on debt financing. Thus, additional issuance of unit depends on financial situation sentiment, listing cost and cost of equity. The firm has an optimal capital structure, and new security issues represent a movement away from or toward this optimum. Determinants of the optimal capital structure may include taxes (as alluded to in the introduction), expected bankruptcy costs, and the minimization of agency costs. For a REIT, the optimal capital structure (based solely on tax considerations) is likely to be one hundred percent equity [20]. The implied-cash-flow change hypothesis suggests that unexpected offerings of securities, whether they are debt or equity, are used by investors to infer that operating cash flows are lower than expected [21]. As a general rule, REIT operating cash flows are difficult to forecast. For example, it is relatively easy to forecast the depreciation deduction and debt service with a fixed-rate mortgage but much harder to forecast expected rents, vacancies, or selling prices. Since the tax code by which REITs must abide forces them to follow a policy of high dividend payout rates, REITs should employ external markets more extensively than do corporations [22]. It follows that external security issues by REITs may be more predictable than for corporations. The issue of informational asymmetry has several different implications. First, firm managers may be viewed as having superior information and may wish to convey that information to the market. One way to accomplish this is through capital structure changes [23]. The managers with more information may decide to issue securities whenever the securities are overpriced in the market. In turn, the market may react negatively to the announcement of the issuance of any new securities [24]. Thus, the prediction of the informational asymmetry hypothesis is ambiguous.

### **4. Debt financing**

The REITs decided to hold little cash to reduce the agency problem of cash flow and in a long run, it increased transparency and reduced the future cost of external capital [25]. The REITs dividend policies were being determined by agency cost, while higher payout ratio were favoured by the investors as they use it as a device to supervise management investment decision [26]. On average, dividend payout ratio of REITs was 70 percent higher than what was required by the tax regulation. This was due to the agency theory that explained the excess dividend phenomenon [27]. The determinants are such as free cash flow, management type, firm size, real estate investment growth rate, leverage ratio and return on asset(ROA). Despite the restriction of tax regulation on REITs, the REITs still benefit the use of debt. This is because REITs had advantages in terms of its tangibility to attract better debt deal compared to non-REIT companies [1], [28], [29] [30] and [31].

The larger the size of REITs, the more advantages in debt financing choice and difference property type result in different return which affect lower financial risk [1]. REITs of riskier firm tend to reduce the overall company uncertainty by adopting a more careful capital structure due to negative relationship between operating risk and leverage. The REITs' size was directly influenced by the amount of debt issued which confirmed the hypothesis that debt was cheaper for bigger firm. While its issue was affected

by economies of scale. The REITs' size is an important factor in determining their strategic and financing choices, where larger REITs have less constrain when seeking fund in the capital market compared to smaller REITs that need to focus on achieving financial return. The tangibility of REITs asset caused more favourable financing term because the nature of fixed asset was to retain more value in case of liquidation. REITs with more operating risk will choose low financial risks.

However, this seems to be the opposite of the finding by [32], on the scale of efficiency on increase cost of debt. The diversified REITs were less levered due to its low collateral value of assets and less attractive [28]. The pecking order theory on cost of capital indicated REITs with more growth opportunities will have higher leverage ratios. The tangibility of asset result in a positive correlation with leverage and riskier operating REITs choose a lower financial risk and low gearing. The following Figure 1, depict the simulation on wealth effect of debt financing over the additional issuance of share. This tax implication on REITs and Non-REITs companies are portrayed, besides that the earning implication financing option. Although the Figure 1, showed that REITs which adopt debt financing enjoyed high dividend per unit (DPU), but this is subject to lower interest rate. Besides, the REITs should benefit the information asymmetry on the equity financing if the issuing cost is lower than the cost of debt financing.

	Non REIT (RM'000)	REIT (RM'000)	
			Adopt Debt Financing
			Adopt Additional New Issuance of Unit/ share
Net Profit Before Interest &Tax (NPBIT)	130	130	130
<b>Less: Interest</b>	<u>( 30)</u>	<u>( 30)</u>	<u>( - )</u>
	100	100	130
<b>Less: Tax(24%)</b>	<u>( 24)</u>	<u>( - )</u>	<u>( - )</u>
Net Profit After Interest &Tax (NPAIT)	76	100	130
<b>Dividend Distribution</b>			
- <b>REIT Tax regulation at REIT 95%</b>		<b>95</b>	<b>123.5</b>
- <b>Non REIT company at 60% (assumption)</b>	<b>45.6</b>		
Retained Earnings	30.4		
Therefore, dividend per unit(DPU)	<u>45,600</u> 1,000,000 <b>= 4.6 sen</b>	<u>95,000</u> 1,000,000 <b>= 9.5 sen</b>	<u>123,500</u> 1,375,000 <b>= 9.0 sen</b>
<b>Assumption</b>			
i. Additional capital investment need is RM 375,000.00.			
ii. The existing the number of unit/share is 1,000,000 with face value RM1.00 each.			
iii. New Issuance of Unit/Share for RM375,000 for capital investment result in additional number of 375,000 unit/share.			
iv. Debt financing is at 8% interest yearly.			

**Figure 1.** The simulation on wealth effect of debt financing over the additional issuance of share

Source: Authors compilation

## 5. Data analysis and discussion

The following Table 1 is the correlation analysis table of the linkages between capital structure policy and M-REITs PPE. It is showed that  $K_d$  had a insignificant relationship with TPV (corr: 0.023), while  $K_e$  had a significant relationship with TPV (corr: 0.397). The result indicates that M-REITs PPE is execute through financing option of additional new issuance of REITs unit [24] and [31]. The M-REITs are overpriced and the effect of information asymmetry encouraged additional new issuance unit compared to the debt financing. This resulted an overall influenced of WACC and TPV (corr: 0.204).

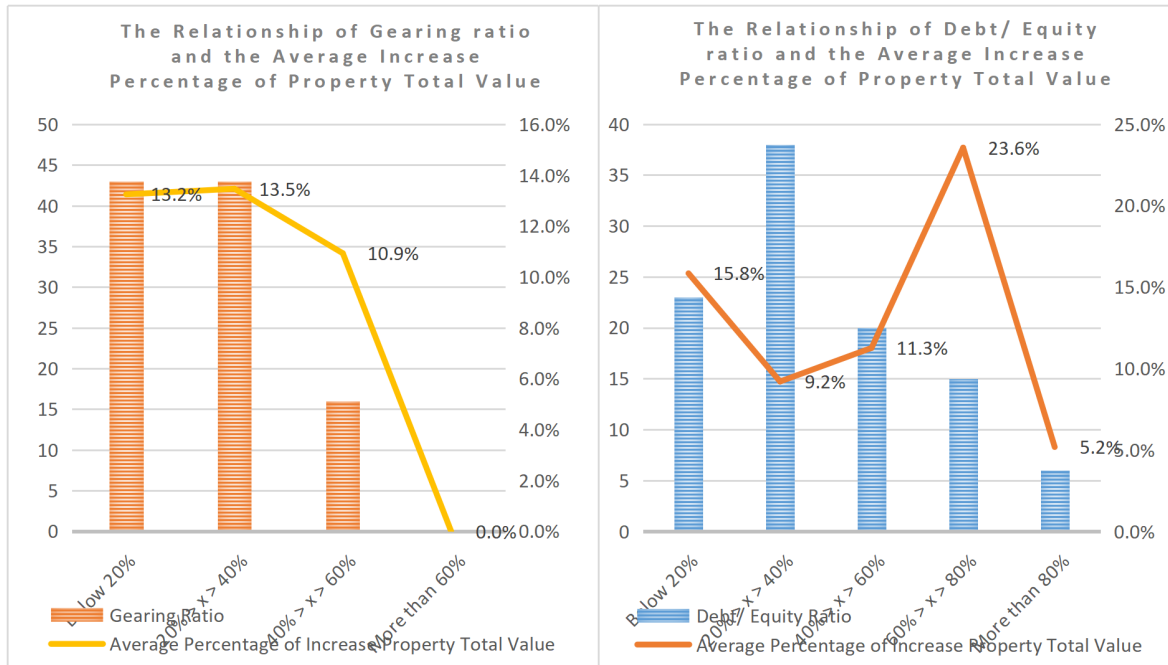
**Table 1.** Correlation analysis of capital structure policy and M-REITs property portfolio enlargement

	Kd	Ke	WACC	Debt/ Equity Ratio	Gearing Ratio	Total Value of Property
Kd						
Ke	0.103					
WACC	0.414	0.059				
Debt/ Equity Ratio	0.281	0.083	0.181			
Gearing Ratio	0.292	0.06	0.215	0.983		
Total Value of Property	<b>0.023</b>	<b>-0.397</b>	<b>0.204</b>	<b>0.033</b>	<b>0.091</b>	

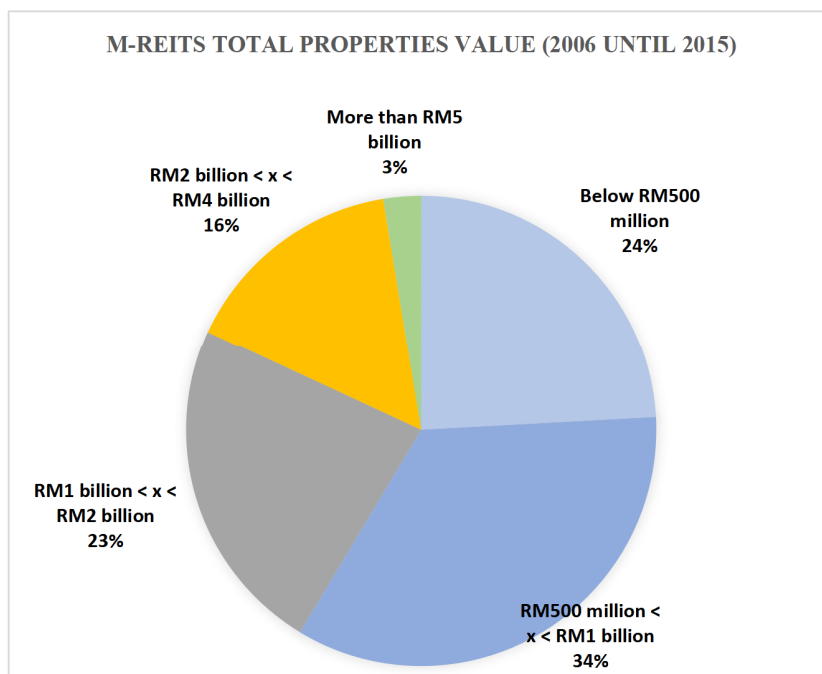
Meanwhile the capital structure proportion which represented by D/E and gearing ratio showed (corr: 0.033) and (corr: 0.091) respectively. The result indicates that gearing ratio had superior impact on TPV.

Further analysis on D/E ratio and gearing ratio upon the average increase percentage of property total value (AIPPTV) showed in Figure 2 which consist Gering Ratio and D/E ratio. There are 42 percent of M-REITs gearing below than 20 percent and had AIPPTV at 13.2 percent. Another 43 percent of M-REITs gearing between (20 percent < x < 40 percent) show they had AIPPTV at 13.5 percent. There are 17 percent of M-REITs is geared between (40 percent < x < 60 percent) and they had AIPPTV at 10.9 percent. Meanwhile D/E showed that there are 60 percent of M-REITs D/E below than 40 percent and had AIPPTV at 25 percent. Another 34 percent of M-REITs D/E between (40 percent < x < 80 percent) show they had AIPPTV at 34.8 percent. There are 6 percent of M-REITs D/E more than 80 percent and they had AIPPTV at 5.2 percent.

This study reveals that there is an opposite relationships between debt-to-equity ratio (D/E) and the average increase percentage of property total value (AIPPTV). It indicates that as D/E grows, there will be a resistance in PPE agenda. This seem to confirm the prior findings on the significant relationship of  $K_e$  and TPV which implied that equity financing would be preferable as mechanism of M-REIT PPE. Figure 3 show the M-REITs property total value hold from year 2006 until 2015. This explains the poor size of M-REITs properties total value, which 58 percentage of it is less than RM1 billion and only 3 percent of M-REITs PTV more than RM5 billion. This study suggests M-REITs should plan their PPE financing option benefiting the information asymmetry on equity financing  $K_e$  and took advantage of cost of debt ( $K_d$ ) when lower interest rate imposed.



**Figure 2.** The relationship of gearing ratio, D/E ratio and average increase percentage of property total value



**Figure 3.** M-REITs property total value hold from year 2006 until 2015.

## 6. Conclusions

The M-REITs PPE is important in order to ensure the REITs remain competitive as a long term investment instrument. The information asymmetry advantages on equity financing should be benefited since M-REITs is positively perceived and overpriced. Besides, debt finance also should be considered when the lower interest rate is offered. The capital structure policy is one factor that had been taken into account upon M-REITs PPE. Moreover, there are other determinants such as the quality and the performance of properties, properties diversification in term of property type, geographical and size, institutional ownership of the property, externally managed managers and issue of cash flow of majority unitholders in REIT that had influences on the M-REITs PPE agenda.

## 7. References

- [1] Morri, Giacomo and Cristanziani, Fabio (2009) What determines the capital structure of real estate companies? An analysis of the EPRA/NAREIT Europe Index. *Journal of Property Investment & Finance*, Vol 27, No 4 2009, pp 318-372
- [2] Boudry, Walter I, Kallberg, Jarl G and Liu, Crocker H (2007) An analysis of REIT security issuance decisions *University of North Carolina U S*
- [3] Ott, Steven H, Riddiough, Timothy J and Yi, Ha-Chin (2005) Finance, Investment and Investment Performance: Evidence from the REIT Sector *Real Estate Economic*, Spring 2005; 33, 1 pg 203-235
- [4] Ertugrul, Mine and Giambona, Erasmo (2010) Property Segment and REIT Capital Structure. *Journal Real Estate Finance Economic*, DOI 10 1007/s11146-009-9229-4
- [5] Kilpatrick, John A (2002) Agency Costs and The Determinants of The Capital Structure of REITs. *Degree of Doctor of Philosophy Dissertation*, Moore School of Business, University of South Carolina, 2002
- [6] Howe, John S. and Shilling, James D (1988) Capital structure theory and REIT security offerings *The Journal of Finance*, Vol 43, No 4, Sept 1988 pp 983-993
- [7] Erickson, John R and Fredman, Albert J (1988). Estimating the cost of capital for a REIT: A case study *Real Estate Appraiser and Analyst*, Fall 1987/Winter 1988, 53, 3, ABI/INFORM Global pg 39- 47
- [8] Cannaday, Roger E. and Yang, Tyler T (1996). Optimal leverage and strategy: Capital structure in real estate investments *Journal of Real Estate Finance and Economics*, 13, pp 263-271
- [9] Jaffe, Jeffrey F (1991) Taxes and the capital structure of partnerships, REITs, and related entities. *The Journal of Finance*, Vol 46, No 1(Mar. 1991), pp 401-407
- [10] Highfield, Michael J, Roskelley, Kenneth D and Zhao, Fang (2007) The determinants of the debt maturity decision for real estate investment trusts. *Journal of Real Estate Research*, Vol 29, No 2 pg 173- 199
- [11] Brown, David T and Riddiough, Timothy J (2003) Financing choice and liability structure of real estate investment trusts *Real Estate Economics*, Fall 2003, 31,3, pg 313-346
- [12] Webb, R B and W McIntosh (1986) Real Estate Acquisition Rules for REITs: A Survey. *Journal of Real Estate Research*, 1986 1:1, 77- 98
- [13] David Parker, (2014) "Property investment decision making by Australian REITs", *Journal of Property Investment & Finance*, Vol 32 Issue: 5, pp 456-473
- [14] Campbell, Robert D, Petrova, Milena and Sirmans, C F 2003 Wealth Effects of Diversification and Financial Deal Structuring: Evidence from REIT Property Portfolio Acquisitions, *REAL ESTATE ECONOMICS*, Vol 31 Num 3: pp 347-366
- [15] Robert D Campbell, Milena Petrova and C F Sirmans 2006 Value Creation in REIT Property Sell-Offs *REAL ESTATE ECONOMICS*, Vol. 34 Num 2: pp 329-342



- [16] Hardin III, William G and Hill, Matthew D 2011 Credit Line Availability and Utilization in REITs. *Journal of Real Estate Research*, Vol 33, No 4, pp 507- 530
- [17] Ambrose, Brent W, Highfield, Michael J and Linneman, Peter D. 2005 Real Estate and Economics of Scale: The Case of REITs, *Real Estate Economics*, Vol 33, pp 323-350
- [18] David T Brown and Timothy J Riddiough 2003 Financing Choice and Liability Structure of Real Estate Investment Trusts. *Real Estate Economics* Vol 31, Num 3, pp 313-346
- [19] Campbell, Robert D 2002 Shareholder Wealth Effects in Equity REIT Restructuring Transactions: Sell-offs, Mergers and Joint Ventures *Journal of Real Estate Literature*, Vol 10, Num 2, pp 205 – 222
- [20] Myers, Stewart C (1984) The corporate structure puzzle *The Journal of Finance*, Vol 39, No 3, *Paper and Proceedings, Forty –Second Annual Meeting*, American Finance Association, San Francisco, CA, December 28-30, 1983,(Jul, 1984), pp 575-592
- [21] Brady, Peter J and Conlin, Michael E (2004) The performance of REIT-owned properties and the impact of REIT market power *Journal of Real Estate Finance and Economics*, 2004, 28:1, pp 81-95
- [22] Below, Scott D, Stansell, Stanley R and Coffin, Mark (2000a) The determinants of REITs Institutional Ownership: Test of the CAPM. *Journal of Real Estate Finance and Economics*, Vol 21, No 3, pp 263- 278
- [23] Zietz, Emily N, Sirmans, G Stacy and Friday, H Swint (2003) The environment and performance of real estate investment trust *Journal of Real Estate Portfolio Management*, May- Aug 2003 Vol 9, Num 2, pp127- 165
- [24] Myers, Stewart C and Majluf, Nicholas S (1984) Corporate financing and investment decision when firms have information that investors do not have *Working paper* no W1396 NBER
- [25] Hardin III, Willian G, Highfield, Michael J, Hill, Matthew D and Kelly, Wayne.(2009) The determinants of REIT cash holdings *Journal Real Estate Finance Economic*, 39; pp 39-57
- [26] Wang, Ko, Erickson, John and Gau, George W (1993). Dividend policies and dividend announcement effects for real estate investment trusts *Journal of the American Real Estate and Urban Economics Association*, 1993, vol 21, 2, pp 181-201
- [27] Morri, Giacomo and Beretta, Christian (2008) The capital structure determinants of REITs Is it a peculiar industry? *Journal of European Real Estate Research*, Vol 1, No 1, 2008, pp 6-57
- [28] Feng, Zhilan, Ghosh, Chinmoy and Sirmans, C F (2007) On the capital structure of real estate investment trusts(REITs) *Journal of Real Estate Finance Economic*, 34:81-105
- [29] Campbell, Robert D, Petrova, Milena , Sirmans C F (2003) Wealth effects of diversification and financial deal structuring: Evidence from REIT property portfolio acquisitions *Real Estate Economics*, Vol 31, Num 3 pp 347-366
- [30] Chan, Su Han, Erickson, John, and Wang Ko (2003) Real Estate Investment Trusts: Structure, Performance, and Investment Oppurtunities *New York, Oxford University Press*
- [31] Anderson, Randy I, Fok, Robert, Springer, Thomas and Webb, James (2002) Technical efficiency and economies of scale: A non-parametric analysis of REIT operating efficiency. *European Journal of Operational Research*, Vol 139, pp 598-612
- [32] Jalil, R A and Hishammudin, M A (2015) Performance Determinants of Malaysian Real Estate Investment Trusts *Jurnal Teknologi*, Vol. 73:5, pp 151-159
- [33] Breidenbach, M, Mueller, G, & Schulte, K W (2006) Determining real estate betas for markets and property types to set better investment hurdle rates. *Journal of Real Estate Portfolio Management*, 12(1), 73-80