CORPORATE REAL ESTATE PERFORMANCE IN MALAYSIAN PUBLIC LISTED COMPANIES

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ABSTRACT

Trading and services, consumer products and industrial products are sectors in Bursa Malaysia that is considered as Corporate Real Estate (CRE) companies. This paper is going to discuss the impact of CRE performance on company performance in Malaysian public listed companies. CRE performance indicators used are Corporate Real Estate Ratio (CRER), Return on Property and Plant (ROPP), Property and Plant over Book Value (PP/BV) and Property and Plant over Market Value (PP/MV). While, indicators used for measuring company performance is Return on Equity (ROE) and Earnings Before Interest and Taxes (EBIT). Panel data analysis was used to get the results across the entities in this study. The results of the study show that only CRER and PP/BV have significant impacts on company's ROE. Therefore, the results indicate that the high intensity of corporate real estate in a company contribute to the increment of company overall performance.

Keywords: Corporate Real Estate performance, Company performance, Malaysian Public Listed Companies.

1.0 INTRODUCTION

Brueggeman (1990) has defined CRE as the land and buildings owned by company business not mainly in the real estate business. As an example is the real estate assets held by retail firms which their core-business is in retailing. Liow & Ingrid (2008); Manning & Roulac (1999), also defining CRE as land and buildings owned by non-real estate companies. In company's annual report, the land and buildings is reported in section of property, plant and machinery (Board of Malaysian Accounting Standards, 2010). However, property and plant is the only data used since CRE is only involved the land and buildings owned by the company. The value of property and plant owned by a company is determined by their business needs and practice. Table 1 show the mean value of property and plant for sectors of trading and services, consumer products and industrial products for the year of 2013.

CRE is used to support business operation such as providing space for firm's production and delivery. Many large business entity such as Tabung Haji, Telekom and Maybank have their own administrative headquarters building in order to promote their corporate image. Furthermore, CRE can act as an operational property to increase efficiency and profit of the firm and create its own significant value in in a firm (Liow & Ingrid, 2008; Wurdemann, 2012). This significant part of CRE has increased its value in the company instead of been recognising as medium for cost saving.

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Sector	Land ('000)	Building ('000)	Plant ('000)
Trading and services	261,467	261,467	3,568,792
Consumer products	195,066	287,600	249,145
Industrial products	6,734,641	26,376,773	79,253,446

Table 1.1: Mean value for property and plant owned by public listed companies in different sectors in 2013

Source : Respective annual reports, 2013

However, corporate world in Malaysia are lack of CREM knowledge and CRE performance measures (Hwa, 2002). Therefore, the management team does not know how important for them to manage their CRE efficiently and effectively. The company has to aware that CRE is important to them because CRE help to add value to their company. A fully utilised CRE assets instead of using CRE in their core-business activities only will improve their company's profits and functions (Krumm & Vries, 2003; Simpson & Mcdonagh, 2008a).

CRE acts as an indicator in measuring its company's strength (Liow & Ingrid, 2008). A company that has many portfolios is recognized as a strong company in the market. The public and investors view this property as a good investment. CRE is important to many people in a corporation such as investors because CRE helps investors create profit and wealth for them through ownership of equity in the company.

The effect of CRE on the company's performance is still unclear (Krumm & Vries, 2003). Global changes of capital markets, advancements in technology and the current economic conditions have increased the awareness of the importance of the CRE's contribution to the company performance (Simpson & Mcdonagh, 2008b). Therefore, this paper is going to evaluate the CRE performance indicators that may have impact on company's financial performance. By providing evidence about the significant of CRE performance on company's performance, it makes the top management people realised about the importance of CRE in the company rather than using it for their core-business operation.

2.0 OVERVIEW OF CORPORATE REAL ESTATE

CRE represents about 40 per cent of total corporate assets in a company (Nelson et al, 2000). Hence, it is important for a company to have a good CRE strategy. Having a good strategy and a good CRE executives created shareholder wealth and increase value of the firm. A good CRE executive should know how to make use their abandon office building to generate additional income for their company.

CRE can be a flexible asset to meet up the company needs. Company tends to sell their CRE during good times to generate cash for business expansion (Liow & Ingrid, 2008). Disposing their CRE helps them to increase their liquidity. While, acquisition of CRE increase its figure in the balance sheet which reflects the company growth. Hence, CRE is conceived as a strategic asset that helps to disguise the underperform company business.

3.0 CORPORATE REAL ESTATE FINANCIAL POTENTIAL

CRE has its own potential in term of financial. It affects firm's financial parameters such as the market value of firm, debt capacity, ROE and firm size (Liow & Ingrid, 2008). Firm with high CRE intensity is recognised as a large firm. High intensity of CRE in a company contributed to high market value of firm. On the other hand, CRE helps to bring a bigger objective of the business through a smart investment decision (Jordan et al, 2009; Myers, 1984a). Organisation has to learn how to outperform their real estate potential to create a larger objective for their business needs and generate another profit for their corporation instead of depending on their sales only. Hence, CRE can serve as a profit centre of the company instead of recognising CRE as a cost centre.

Basically, company financial performance for public listed company is measured based on managerial compensation (Bacidore et al, 2012). Company financial performance indicators that were usually used are ROE, ROI and ROA. All this common indicators are connected with company's assets performance. When this return is positive, shareholder have more income to cover their risk and capital. But, if this return is negative, they have been inadequately compensated for risk. From this relationship, good financial performance measure should correlate highly with abnormal stock returns.

3.1 FINANCIAL PERFORMANCE GAPS IN CORPORATE REAL ESTATE

Value of CRE has been reported as property, plant and equipment in firm financial report. Every growth or depreciate in value of CRE will effect firm's financial structure. CRE continues to be an under-appreciated aspect of corporate affairs. These real estate assets in fact represent a significant proportion of firm value. Property has often been undervalued by corporate managers (Nelson et al. 2000). Knowledge of the CRE function is crucial to understanding an economy's value creation process of delivering goods and services to consumers (Roulac et al. 2005).

Financial analysis has been incorporated with company's productivity measures among variables that known as economic driver for firm (Bosch-Badia 2010). While, increase of cost flexibility and quality helps to increase financial performance of a firm (Kazan 2006). What the author is trying to say is same goes to the fact that the important of return on equity (ROE) variables in company financial report to investors. Financial analysis plays a role as a medium of reference for public to measure the performance of company.

However, the absence of research that has empirically tested the CRE strategy linkages with a company's financial performance. This study addresses this gap by focusing on an empirical investigation of CRE strategies and their relationships with the financial performance of companies (Ali et al, 2003). Lack of evidence to prove the positive contribution of CRE on company financial performance becomes a barrier to convince the top management level. Therefore, top management people do not interested in broadening the CRE functions in their company.

4.0 REVIEW FOR CORPORATE REAL ESTATE PERFORMANCE INDICATORS

CRE is the most neglected of all corporate assets (Stadlhofer 2010). Lack of knowledge and awareness of CRE makes them treat CRE as non-important corporate assets. CRE increase its company profit if it is highly performed. Lack of evidence for CRE performance has reduced the impact of CRE on the corporate balance sheet (Wurdemann 2012). Therefore, this study helps to examine the suitable CRE performance indicators can be used to measure CRE performance in a company.

According to Greenbaum (2007), there are several factors that trigger the need to measure CRE performance. They are manage a significant capital commitment, control linkage between overall corporate performance and real estate performance, efficiently manage overall costs, manage dynamic nature of acquisition and disposition, allow efficient collaboration across entire real estate lifecycle and manage compliance and regulatory risks.

One of the important need for CRE performance measurement as stated above is to control linkage between overall corporate performance and real estate. This factor indicates the importance of having a tool to measure CRE performance of a company and its contribution to company performance. If there is no indicator that link CRE performance and company performance, people at the strategic level will be not aware with their CRE contribution (Simpson & Mcdonagh 2008). Therefore, this study used corporate real estate ratio (CRER), return on property and plant (ROPP), property over book value (PP/BV) and property over market value (PP/MV) as the indicators to measure the CRE performance.

CRER is used to measure the CRE intensity over total assets in a company. Brounen et al (2005); Park & Glascock (2010); Seiler et al (2001), has used CRER to study the effect CRE ownership on firm performance. Brounen et al. (2005), has study on the effect of corporate real estate ownership on the stock performance of firms active in the international retail sector. From the study, the results show that corporate real estate ownership is diverges greatly across subsectors. Difference in location and customisation demands of real estate has caused the variation in the results. While, Liow (2010), has study on whether individual retail firms' real estate are affected by the firms' CRER levels and found that a higher real estate intensity does not necessarily cause higher real estate exposure after controlling for firm size, leverage and growth.

Return on property and plant (ROPP) indicator has been manipulated from return on assets (ROA) and return on property (ROP). The manipulation of variables in this indicator was made because the scope of this research is about CRE and only focus on property and plant (PP). Bosch-Badia (2010); Liow (2010); Wills (2008), use ROPP to measure the profit that CRE able to generate for every RM1 of CRE value owned by a company. Bosch-Badia (2010), use this indicator to measure the firm's profitability and connecting it with firms' productivity. Results from the study indicate that there is a relationship between firm's productivity and profitability. Certain firm's productivity is depending on their PP which helps to increase their production.

While, PP/BV and PP/MV was also used in this study to identify the impact of CRE ownership on firm return (Deng & Gyourko, 1999; Liow & Ingrid, 2008; Liow, 1999, 2010). PP/MV is an indicator that gives results in the percentage of firm market value of equity which is related to real estate holding. This indicator usually used together with PP/BV in measuring CRE performance. Liow (1999), use this indicator on public listed companies in Singapore stock market. The samples are from sectors of hotels and industrial and commercial. Results from the study show that the percentage of PP in the samples are over 61.5% of corporation's market value. Later, Liow & Ingrid (2008), doing a research on a combined perspective of CRE. In this paper, Liow stressed that this performance indicator helps to indicate the CRE ownership on the overall financial structure of the firm. This situation occurred during valuation of firms. Real estate owned by the firm helps to determine the market valuation of frim.

5.0 REVIEW FOR COMPANY PERFORMANCE INDICATORS

To identify the significant contribution of CRE in a company, company performance measurement indicator is use in this study as the dependent variable. Company performance indicators used in this study are ROE and EBIT.

Return on equity (ROE) is one of the most popular performance indicator used to measure firm's performance. Diaw & Mbow (2011); Dimitrios (2005); Molina et al (2009); Ng et al (2010), has use ROE as an indicator to measure the financial performance in a firm.

ROE can be simplified by dividing net income with shareholders' equity. Results of from equation express the amount of net income returned as a percentage of shareholders' equity. Ng et al, (2010) proved that franchisees depend on ROE to establish the financial attractiveness of a scheme. The author study about public-private partnership (PPP) and found that PPP helps to generate a higher return than the financial cost on behalf of the equity investors. From this result, it is identified that ROE is an important key performance indicator views by investors before deciding to invest in a firm.

While, the study on differences of ROE and mudharabah show that ROE tends to be higher than return on mudharabah (Diaw & Mbow 2011). This study also suggests that ROE related significantly with return on assets (ROA). This is because the shareholders will endure any advantage and disadvantages from the leverage effect. Dimitrios (2005), in the study about CRE performance relationship with stock's price return, has mentioned that ROE is one of important indicator and has been used widely to assess corporations' performance. This is because ROE is able to measures how efficient the shareholder equity capital is employed within the company.

EBIT is an indicator that was developed by combining two important financial variables in a company. EBIT was constructed by dividing operating profit with revenue. This indicator was constructed based on the most frequently used variable in measuring firm's performance. In this case, variable of operating profit was taken from economic value-added (EVA) indicator. Operating profit is suitable to estimate value creation for a company (Nappi-choulet et al, 2009). Revenue is firm's gross income.

EVA is a way to measure economic profit and suitable to estimate value creation for a company (Nappi-choulet *et al,* 2009). A PP considers creating wealth if it generates more profits than costs. There are many authors used EVA to measure performance of firm and stock return (Bahri et al. 2011; Nappi-choulet et al. 2009; Ismail 2006). Besides that, the reliable of operating profit variable in measuring corporate performance is undeniable.

Revenue is also known as operating revenue and sales revenue. Revenue is firm's raw income. Bosch-Badia (2010), use revenue as the product between price change ratio and total factorial productivity (TFP). Objective of the study is measuring productivity return. Revenue is about sales of products or services that firm able to produce over the financial year. Hence, this reasoning makes revenue a suitable variable to measure company productivity.

Combination of revenue and operating profit for this indicator helps to show the whole performance of company in term of firm's productivity and profit. Results from this ratio indicate the proportion of operating profit in every RM1 of revenue generated.

6.0 DATA AND METHODOLOGY

6.1 Data sources

Data on value of property and plant, operating profit, revenue, market capitalisation, total assets, paid-up capital, net income and total equity are obtained from company's annual report, an annually publication from Bursa Malaysia. Sample for this study are 39 public listed companies in Malaysia. The companies are from sectors of trading and services, industrial products and consumer products.

The study period is from 2009 to 2013. The beginning period for the year 2009 is chosen to get the latest corporate real estate practiced for the last five years, ended 2013 which is the most suitable time range to view a trend for certain practiced in Malaysia.

To identify the significant of CRE performance, company performance indicators also included in the study to observe the relationship between the two performances.

6.2 Panel Data Analysis

Panel data analysis was used in this study because the sample of this study involved different entities across certain period of years. There are two models for panel data analysis was used in this study, they are random effects (RE) and fixed effects (FE).

In the analysis of variables relative to CRE performance and company performance, the use of time series-cross section is important to estimate the demand across the entities over a period of time (Hausman 1978). Therefore, in this study, to overcome the time-variant characteristics from the independent variables, fixed effects model is used. While, the use of random effects model in study is to assume that the entity's error term is not related with the independent variables which allows for time-invariant variables to play a role as explanatory variables.

For this study, CRE performance indicator variables are CRER, ROPP, PP/BV and PP/MV. Variable for CRER is computed by dividing CRE with total assets of the company. While, the ROPP of a company was computed by dividing company's operating profit with total amount of property and plant in the company. The other two variables were calculated by dividing the property and plant with book value of equity for PP/BV and dividing the property and plant with market value of the company for PP/MV.

The dependent variable for this study is the company performance indicators. Selected company performance indicators in this study are ROE and EBIT. The ROE is computed by dividing the company operating profit with the total equity. The ratio for EBIT can be calculated by dividing operating profit with company's revenue.

The general equation for fixed effects model was shown in Equation 1 and the equation for fixed effects model for this research will be as Equation 2.

$$Y_{it} = \beta_1 X_{it} + \alpha_i + \mu_{it} \qquad \text{Equation 1}$$

$$ROE_{it} = \beta_1 CRER_{it} + \beta_2 ROPP_{it} + \ldots + \alpha_i + \mu_{it} \qquad \text{Equation 2}$$

Where,

α_i	represents	the unknown intercept for each entity;
i	represents	the company;
t	represents	the time period;
μ_{it}	represents	the error term;
Y	represents	company performance indicators;
X	represents	the CRE performance indicators and;
β_1	represents	the coefficient for that independent variable.

The two alternatives model specification is different in the treatment of their individual effect. This fixed effects model treats α_i as fixed but unknown constant differing across entities.

The equation for random effects model is:

$$Y_{it} = \beta_1 X_{it} + \alpha + \mu_{it} + \varepsilon_{it}$$ Equation 3

$$\text{EBIT}_{it} = \beta_1 \text{CRER}_{it} + \beta_2 \text{ROPP}_{it} + \ldots + \alpha + \mu_{it} + \varepsilon_{it}$$ Equation 4

Where,

μ_{it}	represents	as between-entity error;
ε_{it}	represents	as within-entity error;
i	represents	the entities;
t	represents	the time period;
α	represents	the unknown intercept for each entity;
Y	represents	company performance indicators;
X	represents	the CRE performance indicators and;
β_1	represents	the coefficient for that independent variable.

An advantage of these random effects is the time invariant variables is included in the model while in fixed effects model, the variables are absorbed by the intercept.

However, the determinants of whether to use fixed effects model or random effects model is by conducting the Hausman test. For Hausman test, any p-value that is below than 0.05 will be rejected the null hypothesis. Rejecting the null hypothesis meaning that the best model should be used is fixed effects model.

7.0 RESULTS

Based on the previous study in measuring CRE performance, the previous researcher preferred to used other method rather than panel data analysis. Liow (1999), used descriptive analysis such as mean and ANOVA F-values as the parametric test and Wilcoxon signed Z-scores as non-parametric test in the study of examining the capability of company's assets in enhancing corporate wealth. The research has proved the importance of CRE as a triggered factor that enhance the capital structure, asset structure and stock market valuation of "property-intensive" CRE firms.

Table 7.1 show the results from Hausman test analysis. All the three sectors give out a consistent reading in the test. The result shows fixed effects model is the most suitable model to measure the impacts of CRE performance on company's ROE. While, to measure EBIT of a company, the most suitable model is random effects model since the Hausman test has indicate the probability chi-squared reading for EBIT is greater than 0.05.

From the results, the readings generated from fixed effects model show that CRER and PP/BV have significant impacts on ROE. In this model, industrial products and trading and services becomes the dummy variable. While, the consumer products is the reference in the model. The results show CRER increased 0.3954% of company's ROE. While, PP/BV reduced 0.2389% of company's ROE.

The impacts of CRER in increasing the company's ROE proved that the composition of CRE in company's total asset influence the total equity return. Acquiring a property gives a positive return to a company. The significant impacts on CRE concentration ratio on the company performance such as ROE supports by (Ke 2005; Niskanen et al. 2011; Liow & Ingrid 2008).

	Random Effects Coefficient (p-value)	Fixed Effects Coefficient (p-value)
Constant	0.1308 (0.364)	0.2848 (0.000)
CRER	0.4078 (0.005)	0.3954 (0.013)
ROPP	0.0014 (0.083)	0.0005 (0.499)
PP/BV	-0.2251 (0.000)	-0.2389 (0.000)
PP/MV	0.2943 (0.706)	-0.0421 (0.961)
Industrial products	-0.3329 (0.034)	
Trading and services	-0.2532 (0.008)	
No. of observations	195	195
Hausman Test		118.00 (0.000)

Table 7.1 : Analysis of fixed effects and random effects on ROE

Source : The author, 2014.

Meanwhile, PP/BV is used in indicating the influence of CRE ownership on the overall financial structure of the company and has been supported by (Liow & Ingrid 2008). Even though the PP/BV is reducing the ROE, the company are able to acquire or owned a property and increase their property's value ownership as a return for company's expenditure.

	Random Effects Coefficient (p-value)	Fixed Effects Coefficient (p-value)
Constant	0.1527 (0.001)	0.1396 (0.000)
CRER	0.1056 (0.129)	0.1155 (0.131)
ROPP	0.0000 (0.858)	0.0000 (0.915)
PP/BV	-0.0360 (0.086)	-0.0292 (0.237)
PP/MV	-0.2022 (0.587)	-0.3283 (0.427)
Industrial products	0.0599 (0.480)	
Trading and services	-0.0190 (0.717)	
No. of observations	195	195
Hausman Test	0.81 (0.9367)	

Table 7.2 : Analysis of fixed effects and random effects on EBIT

Source : The author, 2014.

However, analysis on EBIT give out a result that all CRE performance indicators have no impacts on company's EBIT. The p-value for all CRE performance variables are greater than 0.05. One of the reason why CRE performance is not related to company's EBIT is because of the company itself. CRE companies does not involve in real estate business. Companies do not sell and buy property for business purposes which will be stated in company's revenue. Revenue and operating profit in CRE companies only stated the sales and profits they obtain from their ordinary activities (Malaysian Accounting Standards Board, 2010). In the other hand, revenue is used to measure the productivity of the company. This is because revenue is about sales of products or services that firm able to produce over the financial year.

Bosch-Badia (2010), cited that the variable of operating profit is used as a measurement to measure the firm's profitability and connecting it with the firm production. Basically, the operating profit of a company is generated by subtracting the main sales with the cost of goods sold. Hence, the operating profit value for these three sectors is not including the CRE transaction since their main business is not involved in real estate. Hence, these two variables are unsuitable to use as the measurement for CRE company performance when involved it with CRE ownership or performance.

8.0 CONCLUSION AND DISCUSSION

The purpose of this research is to evaluate the CRE performance indicators that may have impact on company's financial performance for Malaysian public listed companies. The major contribution of this research is providing evidence on the most suitable CRE performance measurement that connected with company performance. Panel data analysis was used to justify on how CRE ownership and performance, as presented by corporate real estate ratio (CRER), return on property and plant (ROPP), property and plant over book value of equity (PP/BV) and property and plant over market value (PP/MV), affected ROE and EBIT of non-real estate companies that own significant portfolios.

CRER and PP/BV show a significant impact on ROE of a company. However, the result for EBIT show that the CRE performance indicators have no significant impact on company's EBIT. This is due to the unsuitable selection of variables used in EBIT. The variables in EBIT are mainly used to measure the company's productivity which is unsuitable in measuring CRE company performance which is uncorrelated with real estate business.

However, there is limitation in this study. The limitation in this study is lack of continuous data from the annual reports. If there is more detailed data can be extracted from the annual reports, the results for this study will be more accurate. Further research is definitely necessary to explore and compare the trend and relation of CRE performance to non-real estate company performance in other sectors listed in Bursa Malaysia. In all, it is interesting to find out there is significant impact of CRE performance in company performance which help to convince the Malaysian corporation about the importance and positive contribution of CRE in the company.

9.0 REFERENCES

Ali, Z. et al., 2008. Corporate Real Estate Strategy : The Malaysian Perspective. *Journal of Real Estate Literature*, 16(1), pp.35–54.

Bacidore, J.M. et al., 1997. The Search for the Performance Best Financial Measure. , 53(3), pp.11–20.

Bahri, M., St-Pierre, J. & Sakka, O., 2011. Economic value added: a useful tool for SME performance management., 60(6), pp.603–621. Available at: http://www.emeraldinsight.com/journals.htm?articleid=1942843&show=abstract [Accessed October 7, 2013].

Board, M.A.S., 2010. *Financial Reporting Standard 118*,

Bosch-Badia, M.T., 2010. Connecting productivity to return on assets through financial statements: Extending the Dupont method. *International Journal of Accounting and Information Management*, 18(2), pp.92–104. Available at: http://www.emeraldinsight.com/10.1108/18347641011048093 [Accessed April 10, 2013].

Brounen, D., Colliander, G. & Eichholtz, P.M.A., 2005. Corporate real estate and stock performance in the international retail sector. , 7(4), pp.287–299.

Brueggeman, W., 1990. Rethinking corporate real estate. *Journal of Applied Corporate Real Estate*, 3(1), pp.39–50. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6622.1990.tb00193.x/full [Accessed March 5, 2014].

Deng, Y. & Gyourko, J., 1999. *Real estate ownership by non-real estate firms: The impact on firm returns*, Available at: http://lusk.usc.edu/sites/default/files/working_papers/wp_1999_103.pdf [Accessed September 30, 2014].

Diaw, A. & Mbow, A., 2011. A comparative study of the returns on Mudharabah deposit and on equity in Islamic banks. *Humanomics*, 27(4), pp.229–242. Available at: http://www.emeraldinsight.com/10.1108/08288661111181288 [Accessed January 27, 2014].

Dimitrios, I., 2005. *CORPORATE PERFORMANCE MEASURES AND STOCKS ' PRICES RETURNS*. University of Greenwich.

Greenbaum, J., 2007. Real Estate Performance Management : Realizing the Value of an Enterprise Approach to Corporate Real Estate.

Hausman, J., 1978. Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 46(6), pp.1251–1271. Available at: http://www.jstor.org/stable/1913827 [Accessed September 21, 2014].

Ismail, A., 2006. Is economic value added more associated with stock return than accounting earnings? The UK evidence. *International Journal of Managerial Finance*, 2(4), pp.343–353. Available at: http://www.emeraldinsight.com/journals.htm?articleid=1575914&show=abstract [Accessed October 1, 2014].

Jordan, M., McCarty, T. & Velo, B., 2009. Performance measurement in corporate real estate. *Journal of Corporate Real Estate*, 11(2), pp.106–114. Available at: http://www.emeraldinsight.com/10.1108/14630010910963142 [Accessed July 2, 2013].

Kazan, H., 2006. Insights from research The effect of manufacturing strategies on financial performance. , 10(1), pp.14–26.

Ke, Q., 2005. *The Corporate Governance Structure and Corporate Performance : Empirical Studies of China ' s Listed Real Estate Companies*. University of Greenwich.

Liow, K.H., 1999. Corporate investment and ownership in real estate in Singapore: Some empirical evidence. *Journal of Corporate Real Estate*, 1(4), pp.329–342.

Liow, K.H., 2010. Is real estate an important factor in corporate valuation? Evidence from listed retail firms. *Journal of Corporate Real Estate*, 12(4), pp.249–278. Available at: http://www.emeraldinsight.com/10.1108/14630011011094685 [Accessed March 26, 2013].

Liow, K.H. & Ingrid, N.-C., 2008. A combined perspective of corporate real estate. *Journal of Corporate Real Estate*, 10(1), pp.54–67. Available at: http://www.emeraldinsight.com/10.1108/14630010810881667 [Accessed July 2, 2013].

Manning, C. & Roulac, S.E., 1999. Corporate Real Estate Research within the Academy. *Journal of Real Estate Research*, 17(3), pp.265–279.

Myers, S., 1984. Finance theory and financial strategy. *Interfaces*, 21(6), pp.698–720. Available at: http://www.emeraldinsight.com/10.1108/17410381011064003 [Accessed October 13, 2014].

Nappi-choulet, I., Missonier-piera, F. & Cancel, M., 2009. Value creation and the impact of corporate real estate assets An empirical investigation with French listed companies.

Nelson, T.R., Potter, T. & Wilde, H.H., 2000. Real estate assets on corporate balance sheets. *Journal of Real Estate Research*, 2(1), pp.29–40.

Ng, S.T., Xie, J. & Kumaraswamy, M.M., 2010. Simulating the effect of risks on equity return for concession-based public-private partnership projects. *Engineering, Construction and Architectural Management*, 17(4), pp.352–368. Available at: http://www.emeraldinsight.com/10.1108/09699981011056565 [Accessed February 12, 2014].

Niskanen, J., Rouhento, J. & Falkenbach, H., 2011. European real estate equities: ownership structure and value of the firm. *Journal of European Real Estate Research*, 4(2), pp.131–144. Available at: http://www.emeraldinsight.com/10.1108/17539261111157307 [Accessed May 18, 2014].

Roulac, S. et al., 2005. Corporate strategic decision making: A comparative analysis of companies in the industrial and non-industrial sectors. *Journal of Property Investment & Finance*, 23(4), pp.364–378. Available at: http://www.emeraldinsight.com/10.1108/14635780510602426 [Accessed March 19, 2013].

Simpson, J.H. & Mcdonagh, J., 2008. Financial reporting on corporate real estate : A study of the annual reports of non - investment companies listed on the New Zealand Stock Exchange (NZSE). , pp.1–17.

Stadlhofer, G., 2010. Corporate real estate performance: Contribution to core business competitiveness at global pharmaceutical enterprises. *Journal of Corporate Real Estate*, 12(2), pp.96–116. Available at: http://www.emeraldinsight.com/10.1108/14630011011049540 [Accessed March 24, 2013].

Standards, B. of M.A., 2010. *Financial Reporting Standard 116 Property , Plant and Equipment*,

Wills, P.C., 2008. Corporate real estate practice in Australia. *Journal of Corporate Real Estate*, 10(1), pp.40–53. Available at: http://www.emeraldinsight.com/10.1108/14630010810881658 [Accessed July 2, 2013].

Wurdemann, W.W., 2012. *Corporate Real Estate Performance, The added value measured*. Bradford University School of Management.

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