

INTERNATIONAL REAL ESTATE REVIEW

2015 Vol. 18 No. 3: pp. 331 – 364

Political Risk and the Cost of Capital in Asia-Pacific Property Markets

George D. Cashman

Rawls College of Business, Texas Tech University. E-mail: George.cashman@ttu.edu. Phone: (806) 834-1932

David M. Harrison*

Jerry S. Rawls Professor of Finance, Rawls College of Business, Texas Tech University. E-mail: david.m.harrison@ttu.edu. Phone: (806) 834-3190.

Hainan Sheng

Rawls College of Business, Texas Tech University. E-mail: Hainan.sheng@ttu.edu. Phone: (806) 834-2446

This study investigates the impact of political risk on the cost of capital for publicly traded real estate firms. More specifically, by using a sample of 102 REITs and listed property trusts, which hold nearly 6,000 distinct investment properties across the Asia-Pacific region, we find strong empirical evidence that increased exposure to political risk increases both the cost of equity financing of a firm and its weighted average cost of capital. Interestingly, no such linkages are apparent between political risk and the cost of debt of a firm. These empirical results are robust to a variety of alternative measures of political risk, including a: 1) political rights index, 2) political change index, and 3) corruption perceptions index.

Keywords:

political risk; cost of capital; REITs and listed property trusts; international real estate

* Corresponding author

1. Introduction

Recent empirical evidence highlights the importance of political risk as a determinant of the structure and operating characteristics of firms. This emerging literature documents that firms self-select into organizational structures designed to help them efficiently and effectively manage their exposure to such risks. While these findings offer unique insights into the structure and operations of cross-border firms, much work remains in analyzing and quantifying the economic impact of political risk on various dimensions of firm performance.

The purpose of the current investigation is to take one important step down that road. Specifically, by using the unique operating environment faced by real estate investment trusts (REITs) and listed property companies across the Asia-Pacific region, we investigate whether specific and unique aspects of the political and regulatory operating environments of each firm materially impact the cost of financing for these organizations. In previewing our empirical results, we find consistently strong and significant evidence that increased exposure to political risk directly increases both the cost of equity financing of a firm and its weighted average cost of capital (WACC). Interestingly, no such relation appears to exist between the political risk exposure of a firm and its cost of debt. As will be expounded upon more fully below, we argue that the lack of a relation between political risk exposure and the cost of debt is likely due (in no small part) to non-price efforts by lenders to manage their risk exposure along this dimension.

These findings are of potentially significant importance to both academics and market participants, but may be uniquely important within the framework of international real estate markets due to both the capital intensive nature of commercial real estate investment projects and market segmentation issues. More specifically, despite the rapid integration of international capital markets and continuing co-integration of international real estate markets, property investment decisions often retain a highly localized information component. Given the limited substitutability of commercial space across both alternative property type usages and geographic locations, effective market analysis often requires a micro-level perspective. Additionally, given the relatively large scale and financial commitment required to undertake major commercial property acquisition or development activities, real estate market participants may well be uniquely concerned with the impact of political risk on the cost of a firm to obtain the resources necessary to undertake such activities.

The unique regulatory environment faced by real estate firms that choose to organize as REITs further heightens the importance of such capital constraint issues, as the vast majority of countries impose non-trivial restrictions on the ability of such firms to retain income, and hence limit the ability of these

firms to endogenously fund firm growth and expansion activities.¹ Therefore, increased costs of funds may well severely hamper the ability of these firms to grow. Finally, unlike in U.S. markets where the majority of REIT investment property portfolio holdings are heavily concentrated within domestic markets, many publicly traded Asia-Pacific real estate firms hold investment property interests outside of the nation in which they are headquartered. As such, we view Asia-Pacific property markets as a uniquely compelling laboratory in which to examine the relation between the political risk exposure of a firm and its cost of capital.

The remainder of this paper is organized as follows. Section Two is a review of the existing empirical literature on both political risk and the cost of capital within real estate organizations. Section Three is an outline of the data and methodological techniques employed to investigate our focal hypotheses, while in Section Four, the results of this empirical analysis are provided. Finally, Section Five offers a brief summary of our key results and concludes.

2. Motivation and Literature Review

Effective real estate investment decision making often requires a complex, multifaceted framework, where an intimate knowledge of the idiosyncrasies, vagaries, and nuances of localized property markets may well have material impacts on the operating characteristics and performance of the individual firms that are competing in such markets. The challenges and difficulties associated with managing multiple dimensions of inter-jurisdictional differences in the legal, regulatory, and political environments of real estate organizations may well manifest themselves in either the choice of organizational form, or alternatively, be reflected in specific measures of firm performance, such as the cost of raising external debt or equity financing. The current investigation explores this latter dimension, and specifically investigates whether increased exposure to political risk increases the cost of debt and/or equity capital for real estate firms across the Asia-Pacific region.

The importance of managing political risk exposure has taken on an increasing importance over the recent past, as real estate markets have become more fully integrated into the broader global capital markets. For example, Yunus (2012) demonstrates that major property markets across the globe all appear to be co-integrated with the equity markets of their respective home country, as well as with both short-run and long-run macroeconomic factors.²

¹ For example, within the Asia-Pacific region, Australia (100%), Hong Kong (90%), Japan (90%), and Singapore (90%) all mandate substantive profit distributions (of net income) to retain REIT status. For further information on cross-border differences in regulatory requirements that are facing REITS, see Brounen and de Koning (2012).

² The cointegration of global real estate and capital markets has generated a tremendous amount of research and attention. Key early work in this area includes, but

Such integration adds significant complexity to the management, analysis, and valuation of real estate firms that are holding international portfolios of real property interests. For example, a recent report by Prudential Real Estate Investors (see Fiorilla, Kapas, and Liang, 2012) estimates the current size of the Asia-Pacific, institutional grade, commercial real estate market at approximately \$7.2 trillion, with nine separate countries in the region each exhibiting aggregate market values in excess of \$100 billion.³ This same report further highlights the importance of the Asia-Pacific region, noting an expected double digit annualized growth rate in commercial property interests over the next decade, leaving the region with an expected real estate market capitalization of nearly \$20 trillion by 2021, and far surpassing the expected stock of commercial investment properties available in either Europe (\$13.3 trillion) or the United States/Canada (\$11.5 trillion). Once again, these numbers highlight the significance and importance of fully understanding the determinants of capital acquisition costs within this market segment.

The size and growth potential of this market motivate the importance of understanding how firms operate within this environment. Thus, the next question becomes why might we expect political risk to influence the cost of raising funds for these real estate firms? Turning to the existing literature for guidance, we find several studies that outline the impact of political risk on the performance and operating characteristics of both REIT and non-REIT firms. For example, La Porta et al. (1998, 2000, and 2002) all demonstrate the importance of variation in the business environment of a country in explaining corporate behavior, while Fatemi (1988) and Doukas and Pantzallis (2003) both document that firms which operate across national boundaries employ less leverage.

With respect to real estate firms, the existing literature has primarily focused on the diversification effects of international investments with little exploration of how variation in the institutional characteristics of international investing influences firm operations. For example, Eichholtz (1996) compares the diversification benefits associated with cross-border investments and finds evidence that international diversification reduces the risk associated with a real estate portfolio more than either an equity or debt portfolio. Thus, international diversification gains may be uniquely important within real estate markets. Similarly, Conover, Friday, and Sirmans (2002) also find that

is not limited to Liu et al. (1990), Gyourko and Keim (1992), McCue and Kling (1994), Li and Wang (1995), Chen et al. (1998), Ling and Naranjo (1999), Phylaktis (1999), Quan and Titman (1999), Glascock, Lu, and So (2000), and Stevenson (2000). A complete discussion of these works is beyond the scope of the current investigation.

³ These countries include: Australia, China, Hong Kong, India, Indonesia, Japan, South Korea, Singapore, and Taiwan. Additionally, Malaysia, New Zealand, Philippines, Thailand, and Vietnam all have market caps in excess of \$20B.

international real estate investments offer more diversification benefits than international equity or debt investments.⁴

Turning to performance, Boer, Brounen, and Op't Veld (2005) present evidence that real estate property companies that are holding international properties (i.e., geographically diversified portfolios) are slightly less risky, yet have worse risk adjusted performance, than companies that are focusing on a single country. Along these same lines, Eichholtz et al. (1998) examine the importance of a continental factor in explaining real estate returns and find evidence that the returns generated by real estate investments within North America and Europe exhibit evidence of a continental factor. On the other hand, investments within the Asia-Pacific region are more independent, thus suggesting the need to invest across continents to enhance diversification.

Within this context, Geurts and Jaffe (1996) argue that researchers need to look beyond naïve diversification strategies (simply investing in various countries) and account for the institutional characteristics of the countries when looking for diversification benefits. Following this line of inquiry, Bond, Karolyi, and Sanders (2002), Ling and Naranjo (2002), and Edelstein, Qian, and Tsang (2011) all present evidence that country specific factors are important in explaining international real estate returns. That said, given the unique positioning and continuing emergence of international real estate investments, only a relatively small number of investigations in the existing real estate investment trust literature explore such phenomena.⁵ In general, these papers tend to confirm the notion that political risk represents a material, value relevant source of risk, and thus should be strategically evaluated and managed by real estate market participants. With direct regard to Asia-Pacific real estate markets, three recent investigations also document the importance of political risk on both the operating and financial structure of firms within this market segment.

Specifically, Cashman, Harrison, and Seiler (2014a, 2014b) demonstrate that Asia-Pacific REITs and listed property companies with cross-border investment property holdings strategically choose the nature of their investment advisory function (i.e., internal versus external advisement) by trading off the increased agency costs associated with outsourcing decision-making control and authority against the benefits of collocating decision rights with those market participants possessing or having access to location

⁴ Taking a slightly different tact, Hoesli, Lekander, and Witkiewicz (2004) find that real estate, and particularly international real estate, is an effective portfolio diversification component within mixed-asset portfolios.

⁵ Within real estate markets, we note the existence of a continuing literature stream that explores interjurisdictional differences in mortgage contracting terms. For insight into these dimensions of political/regulatory risk, see for example, Pence (2006), Ghent and Kudlyak (2011), Desai, Elliehausen, and Steinbuks (2013), and the cities contained therein.

specific soft information. As outlined above, the highly localized nature of many real estate markets makes this industry a prime laboratory for investigating such relationships.

Similarly, Cashman, Harrison, and Seiler (2014b) demonstrate that REITs and listed property companies across this same Asia-Pacific region strategically alter their capital structure based upon political risk exposure. Specifically, they find evidence that firms that are holding real estate investment properties in jurisdictions characterized by high levels of political instability employ less debt. Finally, Ling, Naranjo, and Giacomini (2013) further explore international capital structure issues in real estate firms and find limited support for the notion that firm-level financing constraints (which may well be induced by political and regulatory differences across jurisdictions) help explain variation in international REIT and listed property company returns. Once again, while these findings provide key insight into the importance of political risk on firm decisions, they provide little (if any) direct, tangible evidence on the effect of such risk exposure on the related constituents of a firm and the resulting costs of its continuing operations. One key contribution of the current investigation is in taking that next step and relating the political risk exposure of a firm to its cost of capital.

3. Data and Methodology

We begin our sample construction by identifying all REITs and listed property companies tracked by SNL Financial that trade on the Australian Stock Exchange, Bombay Stock Exchange, Hong Kong Stock Exchange, New Zealand Exchange Limited, Singapore Exchange, or Tokyo Stock Exchange over the period 2000 through 2011. For each firm year, we then calculate the cost of equity, cost of debt, and weighted average cost of capital of each firm. SNL Financial currently tracks 246 REITs and listed property companies across the Asia-Pacific region, which limits our final sample to firms for which we can calculate their costs of both debt and equity capital, thus resulting in a total sample of 102 listed real estate firms, holding 5,937 distinct investment property interests.⁶ As outlined in Table 1, these firms are both

⁶ SNL coverage captures a large proportion of the publicly traded real estate firms that are operating across the Asia-Pacific region, including (at a minimum) the five largest REITs in Australia, Hong Kong, Japan, and Singapore as identified by the EPRA (2013). As our cost of capital estimates require multiple years of performance data to impute, our final 102 firm regression sample is, by construction, disproportionately weighted toward older, more established firms that are likely better positioned to manage political risk exposure than firms omitted from the final sample. Therefore, we view our results as a conservative estimate of the impact of political risk on firm financing costs, and urge caution in generalizing our results to the analysis of new ventures, or start-up firms, within this market segment.

headquartered and hold investment property interests across multiple locations throughout the Asia-Pacific region.

Table 1 Firm and Property Location Breakdown

This table provides a breakdown of the headquarter locations of the real estate firms in our sample, as well as the geographic location distribution of all the properties owned by the sample firms.

| Country | # of R.E. Firms (%) | R.E. Firm Years (%) | # of Properties (%) |
|--------------|---------------------|---------------------|---------------------|
| Australia | 22 (21.6) | 94 (25) | 1,862 (31.4) |
| China | 5 (4.9) | 15 (4.0) | 1,424 (24.0) |
| Hong Kong | 34 (33.3) | 141 (37.5) | 686 (11.6) |
| Japan | 2 (2.0) | 4 (1.1) | 538 (9.1) |
| Singapore | 32 (31.4) | 101 (26.9) | 687 (11.6) |
| Other | 7 (6.9) | 21 (5.6) | 740 (12.5) |
| Total | 102 (100) | 376 (100) | 5,937 (100) |

Having identified our set of sample firms, we next proceed to measuring the cost of capital for each firm on an annual basis. In estimating the cost of equity capital of each firm, we embrace the cash flow based nature of many real estate investments and employ a modified residual income valuation approach as recently outlined and applied to real estate firms by Danielsen et al. (2014).⁷ More specifically, we employ the following model:

$$P_t = B_t + \sum_{i=1}^{\infty} \frac{E_t[NI_{t+i} - r_e B_{t+i-1}]}{(1+r_e)^i} \quad (1a)$$

$$P_t = B_t + \sum_{i=1}^{\infty} \frac{E_t[(ROE_{t+i} - r_e)B_{t+i-1}]}{(1+r_e)^i} \quad (1b)$$

where:

P_t = stock price at time t

B_t = book value at time t

$E_t[\]$ = expectations based on information available at time t

NI_{t+i} = net income at time $t + i$

r_e = cost of equity

ROE_{t+i} = after tax return on book equity for period $t + i$.

Conceptually, the current market value of a firm may be viewed as its book value plus the present value of any future abnormal earnings. In operationalizing this model, we employ a three year forward looking window for future earnings expectations, assume perfect foresight on the part of all

⁷ See Feltham and Ohlson (1995), Lee, Myers, and Swaminathan (1999), and Gebhardt, Lee, and Swaminathan (2001) for additional insight into the background and development of the residual income valuation approach to estimating the cost of capital of a firm.

market participants such that realized future earnings are assumed to equal the consensus forecast estimate by the market of projected future earnings at each point in time, and then recursively solve Equation 1b to back out the cost of equity financing which satisfies the proffered accounting relation.

With regard to firm borrowing, we estimate the cost of debt for each firm as its total interest expense divided by total debt. Both of these values are reported directly by SNL Financial. The WACC of each firm is directly based on these estimated costs of debt and equity financing, with the capital structure weights defined based on the market (as opposed to book) leverage ratio of each firm. As illustrated in Table 2, the average cost of equity across our 376 sample firm year observations is a relatively stout 19.2%. While this number may seem somewhat high to the casual observer, we offer two additional points for consideration. First, while this number may seem high by U.S. standards, recall that our sample is primarily composed of relatively small real estate firms that are operating across a variety of Asia-Pacific jurisdictions with varying degrees of political risk and informational opacity. Second, while a precise point estimate of the cost of debt and equity capital of each firm is obviously desirable, in investigating the linkages and relations between the cost of financing of a firm and its political risk exposure, the critical component of the analysis is the relative rank ordering of such capital cost measures rather than their explicit cardinal values. As such, and given the well-established theoretical and empirical precedents in applying these tools in prior settings, we are comfortable that our capital cost estimates (at a minimum) serve as legitimate proxies for the relative costs of obtaining financing for the sample firms. Similarly, while our cost of debt and weighted average cost of capital estimates appear roughly in-line with *a priori* expectations, we are again more interested in the relative rank ordering of these metrics across firms than their reported magnitudes.

Having constructed estimates of the cost of capital of each firm, we postulate that the cost of debt, cost of equity, or weighted average cost of capital of each firm takes the following general form:

$$\begin{aligned} \text{Cost of Capital} = & \\ & f(\text{Political Risk} + \text{Financial/Regulatory Environment} + \\ & \text{Firm Specific Attributes} + \text{Real Estate Market Factors} + \epsilon). \quad (2) \end{aligned}$$

In operationalizing this generic framework, we readily acknowledge that each of these determinants of firm financing costs may be measured or assessed in a variety of different manners. As such, to ensure the robustness of any potentially observable relations, we include multiple measures of each component cost throughout our empirical analysis which follows. The specific metrics that we include are outlined next.

Table 2 Descriptive Statistics

This table provides the basic descriptive statistics (sample size, mean, standard deviation, minimum, and maximum) for the variables considered in the analysis. The *political rights index* is based on surveys with regard to the electoral process, political pluralism, and the functioning of the government. The *political change index* is a measure of how political changes in the country will affect business, and the likelihood of change happening in the next ten years. The *corruption perceptions index* is a measure of the perceived level of corruption within the operating environment of a firm. The remaining variables are defined in Appendix A.

| Variable | Obs. | Mean | Std. Dev. | Minimum | Maximum |
|--|------|-----------|-----------|---------|------------|
| Dependent Variable | | | | | |
| r_D | 376 | 0.038 | 0.044 | 0 | 0.595 |
| r_E | 376 | 0.192 | 0.104 | 0.025 | 0.300 |
| WACC | 376 | 0.125 | 0.065 | 0.017 | 0.305 |
| Political Risk Variable | | | | | |
| Political Rights Index | 376 | 0.039 | 0.022 | 0 | 0.070 |
| Political Change Index | 376 | -0.570 | 0.128 | -0.760 | -0.228 |
| Corruption Perceptions Index | 376 | -0.048 | 0.05 | -0.096 | 0 |
| Financial/Regulatory Characteristic | | | | | |
| Legal Origin | 376 | 0.031 | 0.018 | 0 | 0.060 |
| Business Freedom | 376 | 0.784 | 0.172 | 0.431 | 1 |
| Bank Dominated | 376 | 0.101 | 0.302 | 0 | 1 |
| US 10-yr Rate | 376 | 0.040 | 0.006 | 0.033 | 0.048 |
| Tax Rate | 376 | 0.118 | 0.101 | 0 | 0.332 |
| GAAP | 376 | 0.154 | 0.362 | 0 | 1 |
| General Firm Characteristic | | | | | |
| Asset Tangibility | 376 | 0.161 | 0.188 | 0.001 | 1.760 |
| Total Assets | 376 | 4,298,725 | 6,701,107 | 536 | 47,729,513 |
| Profitability | 376 | 0.047 | 0.085 | -0.661 | 0.486 |
| Growth Options | 376 | 0.807 | 0.519 | 0.027 | 4.503 |
| Lagged Leverage | 376 | 0.371 | 0.189 | 0 | 0.959 |
| Real Estate Firm Attribute | | | | | |
| Development | 376 | 0.497 | 0.501 | 0 | 1 |
| Area | 376 | 7,451,531 | 8,943,630 | 0 | 45,904,043 |
| Secured Debt | 376 | 55.992 | 40.720 | 0 | 100 |
| Rated Debt | 376 | 0.250 | 0.434 | 0 | 1 |
| Split Bond Ratings | 376 | 0.051 | 0.219 | 0 | 1 |
| Asset Age | 376 | 3.787 | 2.053 | 1 | 8 |
| Repurchases | 376 | 0.016 | 0.125 | 0 | 1 |
| Operating Leverage | 376 | 1.775 | 2.720 | -4 | 8 |
| Lease Payments | 376 | 0.0004 | 0.002 | 0 | 0.021 |

3.1 Political Risk Variables

Political risk exposure may take many forms. For example, substantial variation exists across countries with respect to the enforceability of contracts, efficiency of government functionality and support of business, regulatory burdens and constraints, perceived corruption levels, judicial philosophy and consistency, political stability, and the ability (or lack thereof) of government agencies to appropriate (i.e., nationalize) private property or otherwise extract payments or concessions from international investors. A variety of alternative metrics have been proffered and employed throughout the existing literature to capture these various dimensions of risk. Given the competing, yet often highly correlated nature of these metrics, we choose to measure the political risk exposure of each firm by employing three distinct metrics, a: 1) political rights index, 2) political change index, and 3) corruption perceptions index. The values of each of these firm specific indexes represent the weighted average scores of the political risk exposure confronted by each firm on a year by year basis. In constructing these metrics, we first determine the percentage of the investment property interests of each firm, which are physically located in each unique geographic jurisdiction (i.e., country). We then multiply these resulting percentages by the country specific index values of each political risk metric to create unique political risk exposure scores for each firm on an annualized basis. Thus, our political rights, political change and corruption perceptions indexes all represent firm specific property portfolio weighted average estimates of the political risk exposure of each firm.

More explicitly, these measures are all designed to capture various aspects of the political risk exposure associated with the investments of the firms, including the efficiency of the political process, likelihood of political change that will materially affect the business environment, and perceived level of corruption that the firm confronts. Our first metric, the political rights index, is estimated by using country specific index values provided by the Economic Freedom of the World. This is a survey based measure of the quality of the electoral process, political pluralism, and the functioning of the government. In general, higher scores represent a lower opinion on the quality of the political process, and thus represent an enhanced level of political risk exposure for the firm.

Our second metric, the political change index, measures the likelihood of political change occurring in a given country within the next 10 years that will materially and adversely impact the general business operating environment. The raw country scores used to calculate this index are provided by the Business Risk Service through their Political Risk Index (PRI). While higher raw PRI scores indicate a more business friendly operating environment with little chance for turmoil or change, we rescale these raw scores by multiplying them by negative one, and again construct the annual index value of each firm by using a geographic property weighted average index. Given our rescaling of the PRI of the Business Risk Service, higher scores are once again

indicative of increased exposure to political risk, as they imply political change that will materially affect business is more likely within the next ten years.

Our third and final political risk metric is based on the Transparency International Corruption Perception Index (TICPI).⁸ Following Cashman and Deli (2009), we employ a long run average of the TICPI score of each country. Once again, as with our political change index, we rescale the TICPI score of each country by multiplying it by negative one. Similarly, firm specific values for each year are then constructed by multiplying the fraction of the investment property portfolio interests of each firm which are held in a given country by the rescaled TICPI score of that nation. Under this approach, higher corruption perceptions index values indicate a greater level of perceived corruption within the country, and hence are hypothesized to be associated with enhanced levels of political risk exposure for the firm.⁹

3.2 Financial/Regulatory Environment

To ensure that our political risk relations are not driven by the unique financial and/or regulatory environment each firm operates within, we next include a number of measures related to the operating environment of a firm in each of our empirical specifications which follow. For example, we include the proportion of the investment property interests of each firm that are located in countries with civil law (French and Roman) based legal systems – as opposed to (British) common law based frameworks. La Porta et al. (2004) conclude legal systems based on common law (British) are generally more efficient in securing and enforcing property rights. On the other hand, Cashman, Harrison, and Seiler (2014b) contend firms that are investing across national boundaries may prefer the enhanced certainty associated with civil law based systems, which rely more explicitly on the written rule of law than on location specific customs.

Second, we also employ the Business Freedom Index from the Heritage Foundation to control for variation in the operating environment of each firm. As with the aforementioned political risk measures, our Business Freedom Index represents a weighted average index based on the number of investment property holdings located within each country. Higher values indicate

⁸ See http://www.transparency.org/policy_research/surveys_indices/cpi/2010 for complete details on the construction and limitations of this index.

⁹ As outlined above, numerous potential measures, or proxies, of political risk have been employed throughout the existing literature. Our selection of the three metrics employed throughout this investigation was driven by our desire to find distinct constructs, all measuring different component pieces of political risk, that were relatively uncorrelated with one another. None of the pairwise correlations between any of our political risk proxies exceed 0.3. As such, we view the consistently significant relations between these three alternative dimensions of political risk and the cost of capital of a firm as evidence of a robust underlying economic linkage.

enhanced systematic support for business operations, and thus are hypothesized to be associated with lower capital costs for the sample firms. Third, we also control for whether the underlying economic system of the country in which each firm is headquartered is bank dominated, as opposed to market dominated. Firms headquartered in these bank dominated countries may disproportionately rely on debt financing, as their access to well-functioning equity markets may be limited. As outlined in Demirgüç-Kunt and Levine (1999), an ongoing and unresolved debate continues in the literature as to whether “markets or bank-based intermediaries are more effective at providing financial services”.¹⁰ While the current investigation is not designed to resolve this debate, to control for potential variation across alternative market structures, we create an indicator variable set equal to one for all firms headquartered in countries which are bank dominated. Consistent with the prior literature, we define a country as bank dominated if the ratio of domestic assets on deposit in banks to total equity market capitalization is greater than 1.1.¹¹

Fourth, as the cost of capital is likely to be influenced by general worldwide interest rates, we must identify an appropriate proxy for their level. While arguments can clearly be made that country specific, government bond rates could be employed as a benchmark, given the integration of worldwide capital markets and varying levels of sovereign risk associated with countries across the Asia-Pacific region, we choose to employ the 10-year, constant maturity U.S. Treasury rate as a more appropriate proxy for risk-free, market-wide interest rates. Over our sample period, this benchmark risk-free rate averaged 4.0%. Fifth, to capture the potential influence of country specific fiscal policy on real estate investment decision making, we also control for the corporate tax rate that corresponds to the country of incorporation of each firm. As interest expense is generally tax deductible, higher tax rates may incentivize firms to rely more heavily on debt financing.¹² Sixth and finally, as the accounting statements of a firm may influence its perceived valuation, and hence its ability to raise capital, we control for the choice of accounting convention made by the firm. Specifically, we create a zero/one indicator variable that identifies firms which choose to report their financial statements by following the rules based on generally accepted accounting principles

¹⁰ A broad literature exists that addresses the dynamics and differences between bank dominated and market dominated economic systems. For further details, discussion, and analysis of these issues, see Allen and Gale (2001), Levine (2002), Demirgüç-Kunt and Levine (1999 & 2004), and Chakraborty and Ray (2006).

¹¹ Alternative cut-off values, or the employing of alternative classifications provided by Demirgüç-Kunt and Levine (1999 & 2004), produce virtually identical results.

¹² See, for example, Senbet (1979), for further discussion of the role of international tax differentials on firm financing decisions. Furthermore, while many sample firms enjoy some level of tax transparency (46% have elected REIT status, with many others are employing alternative tax advantaged organizational forms), country level corporate tax rates may serve more broadly as a proxy for the overall fiscal environment of the country.

(GAAP) as opposed to the principles based International Financial Reporting Standards (IFRS). To the extent that one convention is more informative, we would expect lower capital costs for firms that select that method.

3.3 General Firm Characteristics

In addition to controlling for the operating environment of a firm, we also control for firm characteristics that have been previously shown to influence firm financing decisions. In doing so, we separate these attributes into general firm characteristics which have been shown to alter capital costs across various industries, and real estate firm attributes which are of potentially unique importance for firms that are heavily invested in real property markets or related interests. Beginning with these general firm attributes, the existing literature provides both theoretical justification and empirical evidence for the notion that tangible assets serve as more effective collateral than their intangible counterparts. Evidence consistent with this view is provided by, among others, Myers (1977 and 1984), Williamson (1988), Titman and Wessels (1988), Jaffe (1991), Pulvino (1998), Shyam-Sunder and Myers (1999), Baker and Wurgler (2002), Barclay, Smith, and Morellec (2006), and Brown and Marble (2009) for the broad cross-section of firms, as well as by Feng, Ghosh, and Sirmans (2007), Boudry, Kallberg, and Liu (2010), and Harrison, Panasian, and Seiler (2011) within real estate markets. The presence of effective collateral is likely to reduce the cost of capital of a firm – regardless of the metric employed.

Similarly, larger firms are generally associated with enhanced stability. This, in turn, decreases their likelihood of bankruptcy, and thus, should reduce their cost of capital (Rajan and Zingales (1995)). Within the context of real estate markets, support for this proposition is found in, among others, Brown and Riddiough (2003). Specifically, they find direct and significant evidence that the securities of larger real estate firms are both more stable and more liquid than those offered by smaller firms within this industry. Taken together, these findings suggest a negative relation between the size of a firm, including Asia-Pacific real estate companies, and its cost of capital.

Continuing, more profitable firms should also see a reduction in their cost of capital, as firms with greater earnings should be less likely to encounter financial distress. In turn, this reduction in the probability of declaring bankruptcy by a firm should reduce its cost of capital, again, regardless of the specific metric employed to examine financing costs. On the other hand, higher observed profit levels may be the by-product of investing in riskier ventures which demand a higher rate of return. To the extent that our profitability metric reflects the risk-return trade-off proposition within the investment property portfolio of a firm, higher levels of profitability may well be associated with an increased cost of capital for the firm. With regard to growth options, we argue that real estate firms with enhanced growth potential are likely to be more attractive to equity investors, and thus reduce their cost

of equity financing. On the other hand, as creditors do not typically get to share in the upside gains associated with abnormal firm growth or future profitability, we could easily foresee firms with high growth expectations that exhibit an enhanced level of both cashflow and valuation uncertainty, and thus exhibit an increased cost of debt. Similarly, the level of growth options of a firm may also be positively associated with its broader costs of financing, as growth options are likely to serve as less efficient collateral than either existing real property interests or projects already within the development pipeline of a firm.

Finally, as many firms either explicitly target or implicitly gravitate toward a target capital structure, we also control for the use of leverage by a firm within its capital structure. All else the same, as debt increases the uncertainty of future cash flows, an increased use of financial leverage by our sample real estate firms should be associated with an increased cost of both debt and equity financing. We next turn to an examination of the firm characteristics which are unique to real estate companies and markets that may also influence the capital costs of a firm.

3.4 Real Estate Firm Attributes

In the preceding section, we outlined the potentially superior nature of tangible assets as collateral for securing financial obligations. Given the nature of many real estate investments, such issues may well be uniquely important within this industry. Thus, in addition to controlling for the level of tangible assets of a firm as outlined above, we also include a zero/one indicator variable that identifies firms which are actively engaged in real estate development activities. The real assets associated with development projects are likely to provide more efficient collateral than the informationally opaque contracts often associated with managing and operating existing properties.

Similarly, while firm size was mentioned above as a potential determinant of firm financing decisions, within real estate markets, the geographic scope of the investment holdings of each firm may also influence firm level decision making. As such, we control for the size of the geographic area encompassed by the investment property holdings of the firm. In estimating this scope of operations (Area), we first identify the latitude and longitude of every property interest held within the investment property portfolio of each sample firm, and then use the maximum and minimum latitudes and longitudes of the individual properties held within each firm specific portfolio to determine the geographic area (i.e., rectangle) covered by the properties of the firm. The area of this rectangle is calculated as:

$$Area = \frac{\pi}{180} * R^2 * |\sin(lat_max) - \sin(lat_min)| * |long_max - long_min| \quad (3)$$

where R is the radius of the earth, lat_max is the maximum latitude coordinate for any investment property interest held within the investment property portfolio of the firm, and lat_min is the minimum latitude coordinate observable within the investment property portfolio of the firm. Similarly, $long_max$ and $long_min$ represent the maximum and minimum longitudinal coordinates, respectively, observed within the investment property portfolio holdings of each firm. Note that it is clearly possible that by spreading property interests over a larger geographic area that firms can lower their cost of capital by diversifying away the idiosyncratic risk associated with any one particular geographic location. On the other hand, managing and monitoring properties across a larger geographic area may well both increase coordination problems and engender incentive (agency) conflicts which would be more easily avoided in firms with more geographically concentrated property holdings.

Based on the findings of the previous literature, we also note that the debt financing structure of a firm could potentially influence its cost of capital. To control for these potential influences, we include three additional metrics in our empirical analysis: 1) the proportion of the outstanding debt of a firm which is secured by real property collateral or other claims against specific company assets, 2) the presence of rated debt within the capital structure of the firm, and 3) a zero/one indicator variable that identifies firms that are characterized by split bond ratings on their outstanding, publicly traded debt obligations. These debt characteristics are all likely to reflect the amount of information that the market has about the firm and its operations. For example, secured debt financing should provide creditors with a more precise indication of the nature and value of the recourse available to them in the event of financial distress by the firm. Similarly, if the firm already has publicly traded debt outstanding, it has likely already committed itself to fully and openly disclosing its true financial and operating position to the market place. Such actions likely make it easier for the market to have a clear understanding of the operations of the firm and potential for the future. Each of these attributes would thus be expected to potentially lower the cost of capital (particularly debt related claims) for the sample firms. Conversely, split bond ratings likely reflect disagreement amongst market participants, observers, and analysts with regard to the profitability of future firm operations. Such uncertainty, or divergence of opinion, may well be manifested in the form of higher capital costs for the sample real estate firms.

Along these same lines, the longer a given physical investment property has been in operation, the more time the market place has to fully understand the nature of the operations and cash flows of the building. Thus, while new properties may well be expected to command higher market rents and values, we anticipate asset age will be directly associated with information availability, and thus a reduced cost of capital, holding everything else constant. Finally, in recognizing the potentially complex nature of financial contracting relations that may materially influence both the existing financial

structure and related costs of the organization, as well as influence its future operating flexibility, we explicitly control for three additional characteristics of the sample firms. First, we control for whether the firm recently repurchased outstanding shares of its existing common stock. The decision of a firm to repurchase its shares may well provide a credible signal to the market place that company insiders believe its current share price is too low, and thus its current cost of capital is too high. Thus, we anticipate that the combination of the signal, and the increase in the share price that typically accompanies share repurchases, may well drive down the cost of capital for sample firms that are undertaking such activities. Similarly, financial and operating leverage are often viewed as substitutes with respect to leveraging firm attributes to maximize long-run performance. Thus, the use of operating leverage and/or long-term capital leases may well reduce the cost of capital of a firm, as they may provide an alternative means of financing to mitigate the amount of external funding that the firm requires directly from the open market. Therefore, throughout our empirical specifications which follow, we explicitly control for both the use of operating leverage by each firm and its existing commitments on capital lease obligations (as a percentage of total assets).

3.5 Descriptive Statistics -- Sample Firm Attributes

As mentioned above, each of these sample firm characteristics were either obtained directly from, or constructed by using, accounting and financial data from SNL Financial. A detailed description of the construction of each variable is provided in Appendix A, while descriptive statistics on each of these metrics are provided in Table 2. An examination of these descriptive statistics reveals relatively few surprises. For example, consistent with previous studies of Asia-Pacific property markets, the sample firms exhibit an average market capitalization of nearly \$4.3 billion, appear relatively profitable with an average funds from operations (FFO) to total assets ratio of 4.7%, employ almost 40% debt within the capital structure of the firm, and are perceived to have a somewhat limited ability to internally finance available growth options as the average market to book ratio across sample firms is only 0.807.¹³ Each of these metrics is very much in line with the findings of previous research and gives us confidence that our sample firms are representative of the broader universe of real estate firms that are operating across the Asia-Pacific region.¹⁴

¹³ Note that while our sample firms exhibit an average market capitalization of over \$4 billion, this number is driven markedly higher by a small number of very large sample firms. Perhaps a better measure of the size of a typical real estate firm within this market place would be the median market cap. The median market cap across the sample firms is, not surprisingly, substantively lower at just under \$2 billion. This latter number is much more in line with real estate firms headquartered within the United States.

¹⁴ Our initial SNL sample comprised 246 firms, 113 of which had elected REIT status. As a point of reference, Brounen and de Koning (2012) identify a universe of 175 total

Turning to our firm attributes which are uniquely important within the real estate industry, we once again find that our sample characteristics conform to both expectations and previous research findings. For example, as shown in Table 2, our sample real estate firms make extensive use of collateralized borrowing, with over half of all outstanding debt claims secured by real property collateral or other specifically pledged company assets. Additionally, while only one-quarter of the sample firms have outstanding debt which has even been rated by one of the major bond rating services, these obligations appear to be somewhat informationally opaque, as 5.1% of sample firm year observations exhibit divergent (i.e., “split”) bond ratings at the notch level across alternative rating agencies.¹⁵ Taken together, these results suggest that more than 1 in 5 sample firms with publicly traded, rated debt outstanding are characterized by information uncertainty issues large enough to result in split bond ratings. Interestingly, these information barriers do not appear to be driven by creative financing arrangements within the capital structure of the firm, as the sample firms make scant usage of either share repurchases or lease arrangements. On the other hand, sample firms do employ substantial operating leverage (as well as financial leverage discussed above). Finally, it appears that our sample firms are very evenly split between real estate development and real estate operating companies, with 49.7% of the sample firms having an active property development pipeline in place.

4. Analysis

The comparative portion of our analysis begins with a series of univariate tests of differences in the capital costs faced by real estate firms across alternative political risk exposure environments. The results of this univariate analysis are presented in Table 3. Specifically, we divide our sample into terciles along each of our three core dimensions of political risk (political rights, political change, and corruption). We then compare the cost of debt, cost of equity, and weighted average cost of capital across the high, medium, and low risk terciles along each of these three dimensions. Somewhat surprisingly, the results of this analysis offer very mixed results with respect to the relation between political risk exposure and the financing costs of the firm.

REITs as of their study date, while the EPRA (2013) covers 213 real estate firms across these same markets. Thus, our sample encompasses a solid proportion of the publicly traded real estate companies across this region. In the interest of full disclosure, Appendix B presents a listing of the 102 firms in our final regression sample based on their headquarter locations.

¹⁵ Notch level differences imply ratings of, for example, BBB and BBB⁺, by alternative rating agencies would be defined as a split rating.

Table 3 Univariate Analysis

This table provides the mean values and univariate tests of differences in the means for our cost of capital estimates disaggregated by the relative political risk exposure of the firm. High risk exposure firms are those in the upper tercile of political rights, political change, and corruption perceptions, respectively.

| Variable | Low Risk Tercile (125) | Middle v Low Diff. t-Test | Middle Risk Tercile (125) | High v Middle Diff. t-Test | High Risk Tercile (126) | High v Low Diff. t-Test |
|--------------------------------------|------------------------------|---------------------------------|------------------------------------|----------------------------------|-------------------------------|----------------------------|
| <i>Political Rights</i> | | | | | | |
| r_D | 0.028 | 1.06 | 0.035 | 3.63*** | 0.052 | 4.47*** |
| r_E | 0.202 | 0.50 | 0.208 | -3.17*** | 0.166 | -2.78*** |
| WACC | 0.127 | 1.02 | 0.135 | -2.52*** | 0.113 | -1.71*** |
| <i>Political Change</i> | | | | | | |
| r_D | 0.041 | -1.03 | 0.035 | 0.55 | 0.039 | -0.39 |
| r_E | 0.168 | 1.86* | 0.192 | 1.82* | 0.216 | 3.77*** |
| WACC | 0.118 | -0.71 | 0.113 | 3.94*** | 0.144 | 3.08*** |
| <i>Corruption Perceptions</i> | | | | | | |
| r_D | 0.047 | -2.02** | 0.034 | 0.10 | 0.034 | -2.73*** |
| r_E | 0.179 | 0.54 | 0.186 | 1.91* | 0.211 | 2.42** |
| WACC | 0.130 | -1.92* | 0.114 | 2.18** | 0.131 | 0.06 |

Specifically, in focusing on comparisons between the high and low risk terciles, Table 3 shows that while seven of the nine tests identify statistically significant differences, only four of these seven are directionally consistent with increased risk exposure raising capital costs. For example, consider our political rights index. Higher index values along this dimension are associated with increased political inefficiencies. Thus, our observed positive relation between risk exposure and the cost of debt of the firm is consistent with expectations. On the other hand, both our cost of equity and weighted average cost of capital appear to decrease in the presence of such political inefficiencies – a result directly at odds with our hypothesized focal relation. Conversely, when examining both our political change and corruption perceptions indexes, we find exactly the opposite sign pattern. More specifically, the cost of debt appears to be negatively related to both of these political risk metrics, while both the cost of equity and weighted average cost of capital increase in the presence of higher political risk exposure. One may be tempted to conclude from these results that there is a lack of a clear relation between the cost of capital of a firm and its exposure to political risk. Yet recall that these are only univariate results. While these descriptive and univariate statistics provided in Tables 2 and 3 provide important insights into the nature of the real estate firms that are operating across the Asia-Pacific region, to fully investigate the relation between political risk exposure and the cost of capital of a firm requires a multivariate context which controls for a broader array of factors including both the operating environment and firm characteristics of a firm. Therefore, Tables 4 - 6 examine the relation between the cost of capital of a firm and its exposure to political risk in just such a multivariate setting.

To begin, Table 4 presents the results of the multivariate analysis of the cost of debt of a firm and political risk exposure. Unlike in the univariate analysis, where the cost of borrowing increases with political inefficiencies, is unaffected by exposure to political change, and decreases with the perceived level of corruption, within this multivariate setting, we find no significant relation between the cost of debt of a firm and its exposure to political risk – regardless of which metric is employed. More specifically, Column I employs our (property weighted) political rights index as a measure of political risk exposure of each firm, Column II employs the (property weighted) political change index, and Column III employs the (property weighted) corruption perceptions index. While all three metrics are directionally consistent with our proposed focal hypothesis, none are statistically significant at conventionally accepted levels. One possible explanation for this finding is the potentially endogenous nature of the relation between the political risk of a firm, its use of leverage, and its cost of debt. Cashman, Harrison, and Seiler (2014b) document that political risk reduces the amount of financial leverage real estate firms across the Asia-Pacific region choose (or are allowed) to employ. Unreported supplementary results confirm that within our sample, real estate firms with less exposure to political risk do indeed employ more financial leverage, on average, than their counterparts with greater exposure to political

risk.¹⁶ This suggests that real estate firms across this region may well trade off political risk for financial risk, and that the cost of debt is ultimately a function of both.

Table 4 **Determinants of the Cost of Debt for Asia-Pacific Real Estate Companies**

This table presents the results of three regressions that are used to investigate the determinants of the cost of debt financing of Asia-Pacific real estate firms. The models regress the cost of debt of a firm against our three measures of political risk, while controlling for the financial and regulatory standards, as well as firm and industry level variables. In Model (1), the political rights index is used. In Model (2), the political change index is utilized, while Model (3) employs our corruption perceptions index. The t-tests reported in parentheses are all based on standard errors clustered by firm.

| Variable | (I) | (II) | (III) |
|--|--------------------|----------------------|----------------------|
| Intercept | 0.044 (1.30) | 0.042 (1.25) | 0.035 (1.20) |
| <i>Political Risk Variable</i> | | | |
| Political Rights Index | 0.205 (0.56) | | |
| Political Change Index | | 0.004 (0.17) | |
| Corruption Perceptions Index | | | 0.080 (1.63) |
| <i>Financial/Regulatory Characteristic</i> | | | |
| Legal Origin | -0.837 (-1.53) | -0.578*** (-2.97) | -0.608*** (-2.85) |
| Business Freedom | -0.032 (-1.10) | -0.027 (-1.05) | -0.024 (-0.93) |
| Bank Dominated | -0.001 (-0.07) | -0.003 (-0.21) | -0.003 (-0.19) |
| US 10-yr Rate | 0.027 (0.05) | 0.049 (0.09) | 0.173 (0.36) |
| Tax Rate | -0.053 (-1.48) | -0.050 (-1.38) | -0.051 (-1.47) |
| GAAP | 0.012 (0.96) | 0.013 (1.01) | 0.013 (1.12) |
| <i>General Firm Characteristic</i> | | | |
| Asset Tangibility | 0.012 (0.33) | 0.011 (0.28) | 0.011 (0.29) |
| Total Assets/ 1,000,000 | -0.007* (-1.95) | -0.007** (-1.99) | -0.007* (-1.97) |

(Continued...)

¹⁶ Additionally, we note that we obtain qualitatively similar results in regressions by using both fixed and random effects designed to account for such endogeneity concerns.

(Table 4 Continued)

| Variable | (I) | (II) | (III) |
|--|-------------------|-------------------|--------------------|
| Profitability | 0.023 (0.24) | 0.025 (0.25) | 0.033 (0.32) |
| Growth Options | 0.033 (1.31) | 0.033 (1.30) | 0.033 (1.31) |
| Lagged Leverage | 0.043 (1.55) | 0.042 (1.56) | 0.044 (1.59) |
| <i>Real Estate Firm Attribute</i> | | | |
| Development | -0.006 (-0.99) | -0.007 (-1.00) | -0.007 (-1.04) |
| Area/ 1,000,000 | -0.003 (-0.81) | -0.003 (-0.87) | -0.003 (-0.85) |
| Secured Debt | -0.000 (-0.75) | -0.000 (-0.76) | -0.000 (-0.71) |
| Rated Debt | -0.003 (-0.49) | -0.003 (-0.48) | -0.003 (-0.47) |
| Split Bond Ratings | 0.008 (0.92) | 0.008 (0.88) | 0.008 (0.84) |
| Asset Age | 0.002** (2.17) | 0.002** (2.24) | 0.002** (2.30) |
| Repurchases | -0.009 (-1.33) | -0.007 (-1.23) | -0.009* (-1.68) |
| Operating Leverage | -0.000 (-0.69) | -0.000 (-0.65) | -0.000 (-0.65) |
| Lease Payments | 1.383 (0.54) | 1.365 (0.53) | 1.360 (0.53) |
| Observations | 376 | 376 | 376 |
| R-Squared | 0.251 | 0.250 | 0.252 |
| Property Type Fixed Effects | Yes | Yes | Yes |

Note: *** Indicates statistical significance at one percent level, ** Indicates statistical significance at five percent level, * Indicates statistical significance at ten percent level.

By briefly examining the significant control variables contained within these regressions, consistent with the arguments of Cashman, Harrison, and Seiler (2014b), we find some evidence that borrowing costs are lower for firms that are holding higher proportions of their investment property assets in countries that follow civil law based legal systems. As outlined above, judicial systems within these countries tend to more explicitly rely on the written rule of law, which may well reduce uncertainty for international investors and lenders not intimately familiar with local market knowledge, customs, and/or business practices. Similarly, consistent with the arguments and findings of both Rajan and Zingales (1995) and Brown and Riddiough (2003), larger firms appear to enjoy (marginally) lower costs of debt. Finally, older buildings appear to serve as less effective collateral than their newer, more modern counterparts. This suggests the value premium attached to newer facilities outweighs the

marginal benefits associated with the resolution of uncertainty that surrounds the acceptance and profitable operations of a building within the marketplace. The remaining control variables fail to attain statistical significance at conventionally accepted levels, and thus we choose not to further expound on these null results.

Continuing, Table 5 is an examination of the relation between the cost of equity and the political risk exposure faced by the firm. Once again, our property weighted political rights index (Column I), political change index (Column II), and corruption perceptions index (Column III) serve as the focal variables of interest. As with our preceding cost of debt analyses, these multivariate results markedly differ from the univariate findings. More specifically, within this multivariate analysis, we find a significant positive relation between the cost of equity of a firm and its exposure to political risk, regardless of the political risk proxy examined. Perhaps most interesting, the strongest statistical relation is evidenced between our political rights index and the cost of equity. Within our univariate context, the relation between these two variables exhibits an unexpected negative sign. While we have little to offer in the way of a rational explanation for such a complete change in sign pattern, we do note that the more sophisticated multivariate results (across all three metrics) are entirely consistent with our focal hypothesis, and *a priori* expectations, that enhanced exposure to political risk should increase the cost of financing for Asia-Pacific real estate firms.

With respect to our control variables, the majority of these measures are again statistically insignificant, thus requiring little comment. Of those remaining attributes that exhibit consistently significant explanatory power over the financing costs of the firm, the relations generally comport with expectations. For example, larger firms, as well as those with enhanced growth options, or those that hold investment property interests across a broader geographic area, all exhibit reduced costs of equity. On the other hand, equity costs appear to increase for firms that are operating in countries with higher tax rates and nations with market, as opposed to bank, dominated economic systems. Interestingly, our asset age metric is once again statistically significant; however, in direct contrast to the results reported for borrowing costs, asset age appears to reduce the cost of raising external equity. One potential explanation for these seemingly contradictory results may be found in the residual nature of the equity claim. While age may well have offsetting costs and benefits, for higher priority debt claims, the value premium associated with newer construction may outweigh the uncertainty resolution associated with long-run market acceptance and profitability. For equity claimants, the long-run residual nature of their claims may well alter the dynamics of this trade-off, as uncertainty resolutions may provide key insights into value potential and long-run welfare maximization as opposed to simple risk management and short-run assurance of payment. Lastly, Table 5 again provides limited evidence in support of the notion that more explicit civil law

based judicial systems facilitate lower (equity) capital acquisition costs for international real estate market participants.

Table 5 Determinants of Cost of Equity for Asia-Pacific Real Estate Companies

This table presents the results of three regressions that are used to investigate the determinants of the cost of equity financing of Asia-Pacific real estate firms. The models regress the cost of equity of a firm against our three measures of political risk, while controlling for the financial and regulatory standards, as well as firm and industry level variables. In Model (1), the political rights index is used. In Model (2), the political change index is utilized, while Model (3) employs our corruption perceptions index. The t-tests reported in parentheses are all based on standard errors clustered by firm.

| Variable | (I) | (II) | (III) |
|--|----------------------|----------------------|----------------------|
| Intercept | 0.317*** (4.33) | 0.303*** (3.93) | 0.256*** (3.46) |
| <i>Political Risk Variable</i> | | | |
| Political Rights Index | 2.343*** (4.52) | | |
| Political Change Index | | 0.075* (1.94) | |
| Corruption Perceptions Index | | | 0.406** (2.45) |
| <i>Financial/Regulatory Characteristic</i> | | | |
| Legal Origin | -2.903*** (-3.96) | 0.135 (0.40) | -0.169 (-0.49) |
| Business Freedom | -0.069 (-1.63) | -0.003 (-0.06) | -0.004 (-0.09) |
| Bank Dominated | -0.044* (-1.79) | -0.066*** (-2.66) | -0.064*** (-2.64) |
| US 10-yr Rate | -0.202 (-0.18) | 0.000 (0.00) | 0.709 (0.63) |
| Tax Rate | 0.128* (1.91) | 0.152** (2.22) | 0.169** (2.35) |
| GAAP | 0.003 (0.23) | 0.011 (0.72) | 0.018 (1.18) |
| <i>General Firm Characteristic</i> | | | |
| Asset Tangibility | -0.024 (-0.48) | -0.034 (-0.64) | -0.045 (-0.85) |
| Total Assets/ 1,000,000 | -0.020*** (-3.07) | -0.018** (-2.59) | -0.017** (-2.35) |
| Profitability | 0.069 (1.29) | 0.083 (1.46) | 0.124** (2.17) |
| Growth Options | -0.066*** (-4.59) | -0.069*** (-4.76) | -0.071*** (-4.92) |
| Lagged Leverage | 0.055** (2.04) | 0.041 (1.49) | 0.049* (1.85) |

(Continued...)

(Table 5 Continued)

| Variable | (I) | (II) | (III) |
|-----------------------------------|----------------------|----------------------|----------------------|
| <i>Real Estate Firm Attribute</i> | | | |
| Development | 0.012 (1.00) | 0.008 (0.64) | 0.004 (0.32) |
| Area/ 1,000,000 | -0.017** (-2.22) | -0.020** (-2.60) | -0.022*** (-2.80) |
| Secured Debt | 0.000 (0.01) | 0.000 (0.10) | 0.000 (0.09) |
| Rated Debt | 0.000 (0.03) | 0.001 (0.09) | 0.000 (0.02) |
| Split Bond Ratings | 0.013 (0.59) | 0.011 (0.56) | 0.013 (0.69) |
| Asset Age | -0.009*** (-3.44) | -0.008*** (-2.70) | -0.007** (-2.39) |
| Repurchases | 0.022 (0.69) | 0.036 (1.08) | 0.028 (0.87) |
| Operating Leverage | 0.000 (0.12) | 0.000 (0.27) | 0.001 (0.30) |
| Lease Payments | -3.272 (-0.93) | -3.549 (-1.00) | -3.435 (-0.98) |
| Observations | 376 | 376 | 376 |
| R-Squared | 0.340 | 0.315 | 0.323 |
| Property Type Fixed Effects | Yes | Yes | Yes |

Note: *** Indicates statistical significance at one percent level, ** Indicates statistical significance at five percent level, * Indicates statistical significance at ten percent level.

Finally, Table 6 replicates the preceding analyses by using the weighted average cost of capital of the firm as the dependent variable of interest. Not surprisingly, given the overall findings across Tables 4 and 5, we find evidence of a positive relation between the exposure of a firm to political risk and its weighted average cost of capital. Once again, this relation is observable regardless of the political risk metric employed – the political rights index in Column I, political change index in Column II, or corruption perceptions index in Column III. Given the nature of the aforementioned relations between political risk and the individual component costs of financing, these findings for the weighted average cost of capital of a firm are almost tautological by construction, and hence warrant little further comment.

Turning one last time to our control variables, consistent with our previous analyses, the financial and regulatory metrics again provide some evidence that civil law based judicial systems are associated with lower capital acquisition costs, as are real property investments in both bank dominated countries and countries with lower tax rates. With respect to firm attributes, listed real estate firms that are larger in terms of either total market capitalization or the geographic scope of their investment property holdings

continue to enjoy reduced capital costs. Similarly, firms with enhanced growth options also continue to be characterized by reduced cost of capital estimates. Interestingly, within this overall WACC specification, our profitability (FFO/Total Assets) metric engenders a positive coefficient. As outlined above, this is consistent with efficiently operating real estate investment property markets in which higher realized profit levels are associated with increased risk-taking, and hence higher expected (and required) capital costs. Taken together, these results are broadly consistent with, and supportive of, the notion that exposure to enhanced levels of political risk for Asia-Pacific REITs and listed property companies manifests itself in the form of increased (weighted average) capital acquisition costs for the firm.

Table 6 Determinants of the Weighted Average Cost of Capital for Asia-Pacific Real Estate Companies

This table presents the results of three regressions that are used to investigate the weighted average cost of capital determinants of Asia-Pacific real estate firms. The models regress the weighted average cost of capital of a firm against our three measures of political risk, while controlling for the financial and regulatory standards, as well as firm and industry level variables. In Model (1), the political rights index is used. In Model (2), the political change index is utilized, while Model (3) employs our corruption perceptions index. The t-tests reported in parentheses are all based on standard errors clustered by firm.

| Variable | (I) | (II) | (III) |
|--|----------------------|----------------------|---------------------|
| Intercept | 0.203*** (4.37) | 0.198*** (4.28) | 0.166*** (3.56) |
| <i>Political Risk Variable</i> | | | |
| Political Rights Index | 1.796*** (4.65) | | |
| Political Change Index | | 0.082*** (3.24) | |
| Corruption Perceptions Index | | | 0.171* (1.65) |
| <i>Financial/Regulatory Characteristic</i> | | | |
| Legal Origin | -2.380*** (-4.78) | 0.019 (0.09) | -0.254 (-1.14) |
| Business Freedom | -0.023 (-0.94) | 0.037 (1.38) | 0.019 (0.75) |
| Bank Dominated | -0.028 (-1.61) | -0.045*** (-2.67) | -0.043** (-2.62) |
| US 10-yr Rate | -0.425 (-0.55) | -0.304 (-0.40) | 0.063 (0.08) |
| Tax Rate | 0.057 (1.35) | 0.067 (1.58) | 0.092* (1.85) |
| GAAP | 0.005 (0.50) | 0.010 (0.87) | 0.016 (1.46) |

(Continued...)

(Table 6 Continued)

| Variable | (I) | (II) | (III) |
|------------------------------------|----------------------|----------------------|----------------------|
| General Firm Characteristic | | | |
| Asset Tangibility | 0.013 (0.39) | 0.010 (0.31) | -0.005 (-0.13) |
| Total Assets/ 1,000,000 | -0.010** (-2.18) | -0.009* (-1.75) | -0.008 (-1.50) |
| Profitability | 0.131*** (3.26) | 0.141*** (3.38) | 0.159*** (3.56) |
| Growth Options | -0.015* (-1.72) | -0.016* (-1.87) | -0.019** (-2.20) |
| Lagged Leverage | -0.046*** (-2.76) | -0.058*** (-3.06) | -0.052*** (-2.88) |
| Real Estate Firm Attribute | | | |
| Development | 0.005 (0.68) | 0.003 (0.34) | -0.001 (-0.14) |
| Area/ 1,000,000 | -0.012*** (-2.87) | -0.014*** (-3.20) | -0.016*** (-3.57) |
| Secured Debt | -0.000 (-1.09) | -0.000 (-0.87) | -0.000 (-1.00) |
| Rated Debt | 0.003 (0.29) | 0.004 (0.43) | 0.002 (0.24) |
| Split Bond Ratings | 0.011 (0.98) | 0.008 (0.70) | 0.012 (0.79) |
| Asset Age | -0.004** (-2.09) | -0.003 (-1.52) | -0.003 (-1.25) |
| Repurchases | 0.025 (1.11) | 0.035 (1.41) | 0.034 (1.28) |
| Operating Leverage | 0.000 (0.22) | 0.000 (0.35) | 0.001 (0.46) |
| Lease Payments | -3.204 (-1.27) | -3.480 (-1.38) | -3.303 (-1.32) |
| Observations | 376 | 376 | 376 |
| R-Squared | 0.267 | 0.237 | 0.228 |
| Property Type Fixed Effects | Yes | Yes | Yes |

Note: *** Indicates statistical significance at one percent level, ** Indicates statistical significance at five percent level, * Indicates statistical significance at ten percent level.

5. Conclusion

The past two decades have seen an unprecedented growth in commercial real estate markets around the world, including across the Asia-Pacific region. This rapid growth, combined with increasingly integrated real estate capital markets, have opened up significant new opportunities for REITs and other real estate companies to participate in direct property investments across international borders. While such investments offer increased profit potential

and diversification benefits, they also expose firms to potentially increased levels of political risk.

In light of these developments, the current investigation examines the impact of political risk on the cost of debt, cost of equity, and weighted average cost of capital for publicly traded real estate firms across the Asia-Pacific region. More specifically, by using a sample of 102 REITs and listed property companies, which hold nearly 6,000 distinct investment properties across this geographic region, we find strong empirical evidence that increased exposure to political risk increases both the cost of equity financing of a firm and its weighted average cost of capital. Interestingly, no such linkages are apparent between political risk and the cost of debt of a firm. These empirical results are robust to three alternative measures of political risk, including a political rights index, political change index, and corruption perceptions index, as well as control for firm specific characteristics and attributes of the markets in which each firm holds investment property interests. Taken together, these results suggest political risk exposure is a material, and value relevant, concern for international REITs and listed property companies, which must be proactively and strategically managed to ensure the welfare maximization of the residual claimants of a firm.

Acknowledgement

We thank John Duca, Martin Hoesli, Ko Wang, and seminar participants at the 2014 American Real Estate Society (ARES) annual meeting for their helpful comments and suggestions. All remaining errors are, as always, the responsibility of the authors.

References

- Allen, F. and Douglas, M.G. (2001), Comparing Financial Systems, *MIT Press*, 2001.
- Baker, M. and Wurgler, W. (2002), Market Timing and Capital Structure, *Journal of Finance*, 57, 1, 1-32.
- Barclay, M.J., Smith, C.W. Jr. and Morellec, E. (2006) On the Debt Capacity of Growth Options, *Journal of Business*, 79, 1, 37-59.
- Bond, S.A., Karolyi, G.A. and Sanders, A.B. (2003), International Real Estate Returns: A Multifactor, Multicountry Approach, *Real Estate Economics*, 31, 3, 481-500.

Boudry, W.I., Kallberg, J.G. and Liu, C.H. (2010), An Analysis of REIT Security Issuance Decisions, *Real Estate Economics*, 38, 1, 91-120.

Boer, D., Brounen, D. and Op't Veld, H. (2005) Corporate Focus and Stock Performance International Evidence from Listed Property Markets, *Journal of Real Estate Finance and Economics*, 31, 3, 263-281.

Brounen, D. and Sjoerd de Koning (2012), 50 Years of Real Estate Investment Trusts: An International Examination of the Rise and Performance of REITs, *Journal of Real Estate Literature*, 20, 2, 195-224.

Brown, D.T. and Hugh Marble III (2009), Secured Debt Financing and Leverage: Theory and Evidence, University of Vermont *Working Paper*.

Brown, D.T. and Riddiough, T.J. (2003), Financing Choice and Liability Structure of Real Estate Investment Trusts, *Real Estate Economics*, 31, 3, 313-346.

Cashman, G.D. and Deli, D.N. (2009), Allocating Decision Rights: Evidence from the Mutual Fund Industry, *Journal of Financial Markets*, 12, 4, 645-671.

Cashman, G.D., Harrison, D.M. and Seiler, M.J. (2014a), Advisor Choice in Asia-Pacific Property Markets, *Journal of Real Estate Finance and Economics*, 48, 2, 271-298.

Cashman, G.D., Harrison, D.M. and Seiler, M.J. (2014b), Capital Structure and Political Risk in Asia-Pacific Real Estate Markets, Forthcoming: *Journal of Real Estate Finance and Economics*.

Chakraborty, S. and Ray, T. (2006), Bank-based Versus Market-based financial systems: A Growth-theoretic Analysis, *Journal of Monetary Economics*, 53, 2, 329-350.

Chen, S., Hsieh, C., Vine, T.W. and Chiou, S. (1998), Macroeconomic Variables, Firm-Specific Variables and Returns to REITs, *Journal of Real Estate Research*, 16, 3, 269-278.

Conover, M.C., Friday, S. and Sirmans, S. (2002), Diversification Benefits from Foreign Real Estate Investments, *Journal of Real Estate Portfolio Management*, 8, 1, 17-25.

Danielsen, B.R., Harrison, D.M. Van Ness, R.A. and Warr, R.S. (2014), Liquidity, Accounting Transparency, and the Cost of Capital: Evidence from Real Estate Investment Trusts, *Journal of Real Estate Research*, 36, 2, 221-252

Demirgüç-Kunt, Asli, and Levine, R. (1999), Bank-Based and Market-Based Financial Systems: Cross-Country Comparisons, *World Bank Policy Working Paper*.

Demirgüç-Kunt, Asli, and Levine, R. (2004), Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development, *MIT Press*.

Desai, C.A., Elliehausen, G. and Steinbuks, J. (2013), Effects of Bankruptcy Exemptions and Foreclosure Laws on Mortgage Default and Foreclosure Rates, *Journal of Real Estate Finance and Economics*, 47, 3, 391-415.

Doukas, J.A., and Pantzalis, C. (2003), Geographic Diversification and Agency Costs of Debt of Multinational Firms, *Journal of Corporate Finance*, 9, 1, 59-92.

Edelstein, R., Qian, W. and Tsang, D. (2011), How Do Institutional Factors Affect International Real Estate Returns? *Journal of Real Estate Finance and Economics*, 43, 1-2, 130-151.

Eichholtz, P.M.A. (1996), Does Institute International Diversification Work Better for Real Estate than for Stocks and Bonds? *Financial Analysts Journal*, 52, 1, 56-62,.

Eichholtz, P.M.A., Huisman, R., Koedijk, K. and Schuin, L. (1998), Continental Factors in International Real Estate Returns, *Real Estate Economics*, 26, 3, 493-509.

European Public Real Estate Association (EPRA) (2013), *Global REIT Survey 2013*.

Fatemi, A.M. (1988), The Effect of International Diversification on Corporate Financing Policy, *Journal of Business Research*, 16, 1, 17-30.

Feltham, G.A. and Ohlson, J.A. (1995), Valuation and Clean Surplus Accounting for Operating and Financial Activities, *Contemporary Accounting Research*, 11, 2, 689-731.

Feng, Z., Ghosh, C. and Sirmans, C.F. (2007), On the Capital Structure of Real Estate Investment Trusts (REITs), *Journal of Real Estate Finance and Economics*, 34, 1, 81-105.

Fiorilla, P., Kapas, M. and Liang, L. (2012), A Bird's Eye View of Global Real Estate Markets: 2012 Update, *Prudential Real Estate Investors*, February 2012.

Gebhardt, W.R., Lee, C. and Swaminathan, B. (2001), Toward an Implied Cost of Capital, *Journal of Accounting Research*, 39, 1, 135-176.

Geurts, T.G, and Jaffe, A.J. (1996), Risk and Real Estate Investment: An International Perspective, *Journal of Real Estate Research*, 11, 2, 117-130.

Ghent, A.C. and Kudlyak, M. (2011), Recourse and Residential Mortgage Default: Evidence From US States, *Review of Financial Studies*, 24, 9, 3139-3186.

Glascok, J.L., Lu, C. and So, R.W. (2000), Further Evidence on the Integration of REIT, Bond, and Stock Returns, *Journal of Real Estate Finance and Economics*, 20, 2, 177-194.

Gyourko, J. and Keim, D.B. (1992), What Does the Stock Market Tell Us About Real Estate Returns? *Real Estate Economics*, 20, 3, 457-485.

Harrison, D.M., Panasian, C.A. and Seiler, M.J. (2011), Further Evidence on the Capital Structure of REITs, *Real Estate Economics*, 39, 1, 133-166.

Hoesli, M., Lekander, J. and Witkiewicz, W. (2004), International Evidence on Real Estate as a Portfolio Diversifier, *Journal of Real Estate Research*, 26, 2, 161-206.

Jaffe, F.J. (1991), Taxes and the Capital Structure of Partnerships, REITs, and Related Entities, *Journal of Finance*, 46, 1, 401-407.

La Porta, R., López-de-Silanes, F., Pop-Eleches, C. and Shleifer, A. (2004), Judicial Checks and Balances, *Journal of Political Economy*, 112, 2, 445-470.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R.W. (1998), Law and Finance, *Journal of Political Economy*, 106, 6, 1113-1155.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2000), Investor protection and corporate governance, *Journal of Financial Economics*, 58, 1-2, 3-27.

La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2002), Investor Protection and Corporate Valuation, *Journal of Finance*, 57, 3, 1147-1170.

Lee, C., Myers, J. and Swaminathan, B. (1999), What is the Intrinsic Value of the Dow? *Journal of Finance*, 54, 5, 1693-1741.

Levine, R. (2002), Bank-Based or Market-Based Financial Systems: Which Is Better? *Journal of Financial Intermediation*, 11, 4, 398-428.

- Li, Y. and Wang, K. (1995), The Predictability of REIT Returns and Market Segmentation, *Journal of Real Estate Research*, 10, 4, 471-482.
- Ling, D.C. and Naranjo, A. (1999), The Integration of Commercial Real Estate Markets and Stock Markets, *Real Estate Economics*, 27, 3, 483-515.
- Ling, D.C. and Naranjo, A. (2002), Commercial Real Estate Return Performance: A Cross-Country Analysis, *Journal of Real Estate Finance and Economics*, 24, 1-2, 119-142.
- Ling, D.C., Naranjo, A. and Giacomini, E. (2013), Leverage and Returns: A Cross-Country Analysis of Public Real Estate Markets, *University of Florida Working Paper*.
- Liu, C.H., Hartzell, D.J. Greig, W. and Grissom, T.V. (1990), The Integration of the Real Estate Market and the Stock Market: Some Preliminary Evidence, *Journal of Real Estate Finance and Economics*, 3, 3, 261-282.
- McCue, T.E. and Kling, J.L. (1994), Real Estate Returns and the Macroeconomy: Some Empirical Evidence from Real Estate Investment Trust Data, 1972-1991, *Journal of Real Estate Research*, 9, 3, 277-287.
- Myers, S.C. (1977), Determinants of Corporate Borrowing, *Journal of Financial Economics*, 5, 2, 147-175.
- Myers, S.C. (1984), The Capital Structure Puzzle, *Journal of Finance*, 39, 3, 574-592.
- Pence, K.M. (2006), Foreclosing on Opportunity: State Laws and Mortgage Credit, *Review of Economics and Statistics*, 88, 1, 177-182.
- Phylaktis, K. (1999), Capital Market Integration in the Pacific Basin Region: An Impulse Response Analysis, *Journal of International Money and Finance*, 18, 2, 267-287.
- Pulvino, T.C. (1998), Do Asset Fire Sales Exist? An Empirical Investigation of Commercial Aircraft Transactions, *Journal of Finance*, 53, 3, 939-978.
- Quan, D.C. and Titman, S. (1999), Do Real Estate Prices and Stock Prices Move Together? An International Analysis, *Real Estate Economics*, 27, 2, 183-207.
- Rajan, R.G. and Zingales, L. (1995), What Do We Know about Capital Structure? Some Evidence from International Data, *Journal of Finance*, 50, 5, 1421-1460.

Senbet, L.W. (1979), International Capital Market Equilibrium and the Multinational Firm Financing and Investment Policies, *Journal of Financial and Quantitative*, 14, 3, 455-480.

Shyam-Sunder, L. and Myers, S.C. (1999), Testing Static Tradeoff Against Pecking Order Models of Capital Structure, *Journal of Financial Economics*, 51, 2, 219-244.

Stevenson, S. (2000), International Real Estate Diversification: Empirical Tests Using Hedged Indices,” *Journal of Real Estate Research*, 19, 1, 105-131.

Titman, S. and Wessels, R. (1988), The Determinants of Capital Structure Choice,” *Journal of Finance*, 43, 1, 1-19.

Williamson, O.E. (1988), Corporate Finance and Corporate Governance,” *Journal of Finance*, 43, 3, 567-591.

Yunus, N. (2012), Modeling Relationships among Securitized Property Markets, Stock Markets, and Macroeconomics Variables, *Journal of Real Estate Research*, 34, 2, 127-156.

Appendix A - Variable Definitions

| | |
|-------------------------------------|---|
| Political Rights Index | The political rights index represents the property weighted average of the Freedom of the World Political Rights Index. Higher values indicate a less functional government. |
| Political Change Index | The political change index represents the property weighted average of the Political Risk Index from the Business Risk Service times negative one. Higher values indicate that political change is more likely to materially affect business. |
| Corruption Perceptions Index | The corruption perceptions index represents the property weighted average of the Corruption Perception Index published by Transparency International times negative one. Higher values indicate higher levels of perceived corruption. |
| Legal Origin | Legal origin represents the percent of the investment properties of a real estate company located in countries with civil law based legal systems. |
| Business Freedom | Business freedom represents the property weighted average of the Heritage Foundation's Business Freedom Index. |
| Bank Dominated | Bank dominated is an indicator variable that takes the value of one if the ratio of domestic assets of deposit money banks to total equity market capitalization is greater than 1.10, zero otherwise. |
| US 10-yr Rate | The US 10-yr rate represents the interest rate on the 10-year, constant maturity, U.S. Treasury note. |
| Tax Rate | The tax rate represents the highest corporate tax rate applicable in the country where the real estate company is headquartered. The tax rate is set to 0 for all REITs. |
| GAAP | GAAP is an indicator variable set to 1 if the firm uses GAAP financial reporting standards, and 0 otherwise. |
| Asset Tangibility | Total Real Estate Operations / Total Assets. |
| Total Assets | Represents total assets for each firm, each year, in US dollars. |
| Profitability | Equals FFO divided by Total Assets. |
| Growth Options | Equals Total Market Capitalization divided by the difference of Total Assets and Total Debt. |
| Lagged Leverage | Lagged leverage value. |
| Development | This is an indicator variable set to 1 if the firm engages in investment property development, construction programs, or has an active property development pipeline, and 0 otherwise. |
| Area | Area represents the surface area of a lat-long rectangle on a sphere, calculated by maximum and minimum latitudes and longitudes of the individual properties held within each firm each year to determine the geographic area. |
| Secured Debt | Equals Secured Debt divided by Total Debt. |
| Rated Debt | An indicator variable set to 1 if the firm has rated debt outstanding and 0 otherwise. |
| Split Bond Ratings | An indicator variable set to 1 if two or more rating agencies have different notch level long-term issuer credit ratings for the firm and 0 otherwise. |
| Asset Age | Asset age represents the time since the first record of the firm's total assets in SNL. |
| Repurchases | An indicator variable set to 1 if the shares of the firm outstanding declines by more than 2% over a given year and 0 otherwise. |
| Operating Leverage | Equals Δ FFO divided by Δ Revenue; winsorized. |
| Lease Payments | Equals total committed capital lease obligations of a firm divided by Total Assets. |

Appendix B - Sample Firms by Location

| | | | |
|--|--|---|---|
| <p><u>Australia</u> Abacus Property Group Aspen Group Astro Japan Property Trust Australand Property Group BWP Trust CFS Retail Property Trust Challenger Diversified Property Group Charter Hall Group Charter Hall Office Real Estate Investment Trust Charter Hall Retail Real Estate Investment Trust Commonwealth Property Office Fund DEXUS Property Group FKP Property Group GPT Group Goodman Group ING Real Estate Community Living Group Investa Office Fund Lend Lease Corporation Limited Mirvac Group Sunland Group Limited Thakral Holdings Group Westfield Group</p> <p><u>China</u> Agile Property Holdings Limited Guangzhou R&F Properties Company Limited KWG Property Holding Limited SOHO China Limited Shui On Land Limited</p> | <p><u>Hong Kong</u> Asian Growth Properties Limited Champion Real Estate Investment Trust Cheung Kong Holdings Limited China Overseas Land & Investment Limited China Resources Land Limited Chinese Estates Holdings Limited Country Garden Holdings Company Limited Far East Consortium International Limited Great Eagle Holdings Limited HKR International Limited Harbour Centre Development Limited Hon Kwok Land Investment Company, Limited Hongkong and Shanghai Hotels, Limited Hopewell Holdings Limited Hopson Development Holdings Limited Hysan Development Company Limited Kai Yuan Holdings Limited Kowloon Development Company Limited Lai Sun Development Company Limited Link Real Estate Investment Trust Mandarin Oriental International Limited New World China Land Limited New World Development Company Limited Pacific Century Premium Developments Limited Prosperity Real Estate Investment Trust Regal Hotels International Holdings Limited Regal Real Estate Investment Trust SRE Group Limited Shangri-La Asia Limited</p> | <p><u>Hong Kong continued</u> Shenzhen Investment Limited Shimao Property Holdings Limited Sino Land Company Limited Sunlight Real Estate Investment Trust Wharf (Holdings) Limited</p> <p><u>Japan</u> Industrial & Infrastructure Fund Investment Corporation Nomura Real Estate Residential Fund, Inc.</p> <p><u>Singapore</u> AIMS AMP Capital Industrial REIT Amara Holdings Limited Ascendas India Trust Ascendas Real Estate Investment Trust Ascott Residence Trust Banyan Tree Holdings Limited CDL Hospitality Trusts Cambridge Industrial Trust CapitaCommercial Trust CapitaLand Limited CapitaMall Trust CapitaRetail China Trust City Developments Limited First Real Estate Investment Trust Fortune REIT Frasers Centrepoint Trust Frasers Commercial Trust</p> | <p><u>Singapore continued</u> GuocoLand Limited Ho Bee Investment Limited Hotel Properties Limited K-REIT Asia Keppel Land Limited Lippo Malls Indonesia Retail Trust Overseas Union Enterprise Limited Parkway Life REIT Saizen Real Estate Investment Trust Stamford Land Corporation Limited Suntec Real Estate Investment Trust UOL Group Limited United Industrial Corporation Limited Wheelock Properties (Singapore) Limited Wing Tai Holdings Limited</p> <p><u>India</u> Indian Hotels Company Limited Mahindra Lifespace Developers Limited Parsvnath Developers Limited Royal Orchid Hotels Limited</p> <p><u>New Zealand</u> AMP NZ Office Limited Goodman Property Trust Kiwi Income Property Trust</p> |
|--|--|---|---|