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Sponsor Ownership in Asian REITs

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This study examines the relationship between sponsor ownership and firm performance proxied by firm value, operating cash flow, and dividend policy with Asian real estate investment trusts (REITs) in Japan, Hong Kong, Malaysia, and Singapore for the period from 2002 to 2012, focusing on both the incentive alignment effect and the entrenchment effect. Our study sheds new light on effective corporate governance for Asian REITs that are prone to agency problems. Such agency problems arise from the inequitable distribution of power to sponsors that results from the external management structure. The findings suggest that larger sponsor ownership aligns the interests of sponsors and minority shareholders and enhances the performance of Asian REITs, while such an effect diminishes as sponsors become more entrenched. We find that the incentive alignment effect and entrenchment effect are primarily driven by developer-sponsored REITs. Also evident is that the presence of institutional investors mitigates agency problems and increases firm performance.

Keywords: Asian REITs · Sponsors · Corporate governance · Ownership structure · Firm value · Operating cash flows · Dividend policy · Agency problems

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I. Introduction

Real estate investment trusts (REITs) in Asian countries are structured as "captive REITs," managed by external asset management companies that are wholly or partially owned by the sponsors (see Figure 1 for details). Most sponsors of Asian REITs are banks or developers holding large portfolios of illiquid investment-grade real estate. Such sponsors use the REIT structure to offload properties during initial public offerings (IPOs). Therefore, the sponsor can significantly influence Asian REITs' investment policies and operations because the sponsor has control over the asset managers and the board of trustees; this creates conflicts of interest between the sponsor/manager and the shareholders (Berle and Means, 1932; Jensen, 1986; Morck et al., 1988).

The conflicts of interest result in agency problems, as evidenced by some of related party property transactions[1] (RPTs) and financing activities between sponsors and their REITs (Hsieh and Sirmans, 1991; Ooi, Ong, and Neo, 2011). Sponsors, who own and control REIT advisors, act as both sellers and buyers in these transactions, raising concerns over the price paid for and the quality[2] of such transactions (CFA, 2011; RiskMetrics, 2009). As summarized in Appendix A, REITs pay more for properties acquired from their sponsors than they would pay for properties acquired from independent third parties (Fortune REIT; FC Residential Investment Corporation; Keppel REIT) and REITs involve financing activities favorable to sponsors (MacArthurCook REIT; Mori Hills REIT). In fact, studies that have focused on

[1] In their study on property transactions made by Japan and Singapore REITs from 2002 through 2007, Ooi et al. (2011) observe that almost one third of all the property transactions are related party acquisitions with the sponsors.

[2] Sponsors also have a tendency to keep their "trophy assets" in their portfolio while disposing of smaller properties into the REITs. In their research report, RREEF (2012) illustrates that J-REIT sponsors tend to only feed smaller properties into their REITs. While the average total assets hold by J-REITs is approximately JPY 111 billion in 2011, about 50 buildings in Japan alone are worth as much as the entire REIT portfolio.

externally managed US REITs (Hsieh and Sirmans, 1991; Cannon and Vogt, 1995; Capozza and Seguin, 2000) suggest that sponsors benefit from these related party transactions and REITs are merely divestment vehicles for illiquid investment-grade real estate, allowing sponsors to recycle capital efficiently. Figure 2 shows that sponsors gradually offload their shareholdings as their REITs get older.

Being inherently vulnerable to agency problems largely due to the unique external management style, Asian REITs must seek ways to mitigate agency problems to increase firm value. One notable solution is through the management of ownership structure, especially equity ownership by sponsors (sponsor ownership). Jensen and Mackling's (1976) model predicts that large managerial shareholdings result in higher firm value because it allows managers' interests and incentives to be closely aligned with those of outside shareholders (incentive alignment effect). Morck, Shleifer, and Vishny (1988) and Stulz (1988) show that the firm's value increases only until a certain point, after which managers become entrenched and pursue private benefits at the expense of outside shareholders (entrenchment effect).

The purpose of this study is to examine whether and how sponsor ownership interacts with agency problems prevalent in Asian REITs and affects firm performance. Specifically, we examine the effects of sponsor ownership on REIT firm value (*Tobin's Q*), operating performance (*FFO/Total Assets*), and dividend policy (*Dividend Yield* and *Dividend Payout*), while considering both the incentive alignment effect and the entrenchment effect. We further hypothesize that the effect of sponsor ownership on performance measures can be influenced by sponsor type (banks and developers). Developer sponsors,[3] which tend to conduct more frequent related party property transactions with their REITs (Wong et al., 2013), have more opportunities to consume perquisites or enhance their REITs' growth opportunities with property pipeline support. Similarly, while the strong banking relationships with bank sponsors

[3] Approximately 77% of all the related party property transactions in Japan and Singapore REITs from 2003-2011 are made between developer sponsors and their REITs.

can ensure access to bank debt and enhance REITs' growth opportunities, the lack of real estate expertise of bank sponsors (property pipeline support) could negatively affect operating performance. We also examine whether governance mechanism affects agency problems of Asian REITs or firm performance because Ghosh and Sirmans (2003), Han (2006), and Hartzell et al. (2006) provide some evidence of effects of governance mechanism on agency issues among US REITs.

While the literature on corporate governance in Asian REITs remains fairly thin, the unique environment of Asian REIT markets where all REITs are externally managed warrants understanding the role of sponsor ownership in relation to prevailing agency issues. This study contributes to the existing literature by deepening an understanding of effective corporate governance for Asian REITs.

We find a significant positive effect of sponsor ownership on firm value and operating cash flows, which diminishes as sponsor ownership further increases. This finding is consistent with the incentive alignment hypothesis, whereby larger sponsor shareholdings align the interests of sponsors with those of minority shareholders and, thus, enhance REIT performance. The non-linearity of the effect suggests the existence of the entrenchment effect. We also find a negative non-linear relationship between sponsor ownership and dividend policy, suggesting that committed sponsors are long-term investors, retaining cash for future growth opportunities instead of distributing it to enhance personal wealth. Different governance mechanisms, with the exception of institutional investors, have weak impacts on REIT performance. The results further show that incentive alignment effects are driven by developer sponsors. Specifically, higher firm valuation for developer-sponsored REITs can stem from either enhanced growth opportunities from lower dividend payments or improved operating cash flows caused by the increasing sponsor shareholdings. Major results remain robust even after controlling for endogeneity between sponsor ownership and firm value.

The rest of the paper is organized as follows. The next section outlines the previous studies relevant to this study. The data and methodology we employ in this study are detailed in the subsequent section followed by discussion of descriptive statistics and regression results. The final section concludes.

II. **Literature Review**

The separation of ownership and control exacerbates agency problems (Berle and Means, 1932) as managers can act against the interests of shareholders, through either empire building (Jensen, 1986) or consumption of perquisites (Morck et al., 1988). However, studies (Demsetz and Lehn, 1983; 1985) also show that managerial shareholdings should have no relationship with firm performance as both managerial holdings and firm performance are endogenously determined by changes in the firm's contracting environment. Thus, the relationship between managerial ownership and firm performance remains an empirical puzzle that stimulated the examination of the relationship between managerial ownership and firm value with REITs that are more prone to agency issues. Agency issues with REITs arise from unique regulations (Friday et al., 1999; Han, 2006) or the weak disciplining mechanisms relative to general corporations (Ghosh and Sirmans, 2003; Hartzell et al., 2006).

The REIT literature on the topic has provided mixed results using different measures of firm performance, including firm value (Friday et al., 1999; Capozza and Seguin, 2003; Han, 2006, Hartzell et al., 2006), operating performance (Ghosh and Sirmans, 2003; Capozza and Seguin, 2003), and risk-taking behavior (Dolde and Knopf, 2010). While some studies report a linear relationship between managerial ownership and firm performance, providing evidence for the incentive alignment effect (Cappoza and Seguin, 2003; Hartzell et al., 2006), others document a diminishing effect of managerial ownership on firm performance, suggesting the

existence of the entrenchment effect (Friday et al., 1999; Han, 2006). Ghosh and Sirmans (2003) find that the relationship between managerial ownership and firm performance with REITs becomes insignificant after controlling for alternative governance mechanisms and endogeneity between managerial ownership and firm performance. Further investigations reveal that the incentive alignment effect is evident because increased managerial ownership results in improved cash flow and lower managerial expense (Cappoza and Seguin, 2003). However, when managerial ownership is too high, REIT managers tend to undertake less risk (Capozza and Seguin, 2003; Dolde and Knopf, 2010) and invest in inferior opportunities (Hartzell et al., 2006), which provides evidence for the entrenchment effect with REITs.

Our choice of dividend policy as one of firm performance measures is motivated by findings in the REIT literature. For example, Wang, Erickson, and Gau (1993) illustrate how firms with a good track record, measured by return on assets, can convince shareholders of accepting lower dividend payouts. Ghosh and Sirmans (2006) investigate the impact of the chief executive officer (CEO) and board of directors on dividend payout and find that CEOs, who retain larger shareholdings, pay lower dividends, suggesting that, when investors believe that committed and aligned CEOs work as custodians and are concerned about long-term growth opportunities, they require less distribution. Therefore, we hypothesize that larger sponsor ownership should be associated with lower dividend payout as an evidence of mitigated agency problems.

Governance mechanisms seem to affect REIT performance. Specifically, Ghosh and Sirmans (2003) report that superior monitoring from outside directors and block holders can enhance performance. Han (2006) further illustrates that the capacity for managers to consume perquisites at high managerial ownership levels is nullified by the presence of institutional monitoring. Hartzell et al. (2006) demonstrate that institutional investors' involvement ensures that REIT managers invest responsibly. Therefore, we incorporate alternative governance mechanisms to examine the effect of sponsor ownership on firm performance.

The literature on corporate governance of Asian REITs is still fairly limited. Wong et al. (2013) illustrate that commitment from sponsors and institutional investors is correlated with superior performance during IPOs, suggesting that a stronger sponsor presence confers certification benefits. Kudus and Sing (2011) show that stock returns of Asian REITs with large sponsor shareholdings are higher than those of REITs with weak controlling sponsor shareholdings for the period from 2003 through 2007. Using a corporate governance scoring framework developed by the Asia Pacific Real Estate Association, Lecomte and Ooi (2013) illustrate that REITs with stronger corporate governance do not outperform operationally, while their risk-adjusted returns are much higher than those for REITs with weaker corporate governance.

III. **Data and Methodology**

Data

Our sample consists of 69 REITs[4] from Japan[5] (31), Hong Kong (7), Malaysia (11), and Singapore (22) for the period from 2002 through 2012. For this unbalanced panel of REITs, we collect the following information: the percentages of shares owned by sponsors (*SPOWN*), external block holders (*BLOCKOWN*), and institutional owners (*INSTIOWN*), board independence (*OUTBOD*), and board size (*BODSize*). We rely on the bi-annual financial statements provided by each REIT for information on sponsor, block ownership, and board

[4] Other REIT markets are not chosen either due to data unavailability or immaturity of markets.

[5] For J-REITs, there may be multiple sponsors. We choose the one that owns the management team of the REIT to identify a single sponsor for each J-REIT.

structures. Information on institutional owners is taken from the SNL REIT Database and missing data[6] are supplemented with the Factset Database.

Firm-specific characteristics such as leverage ratio (*Leverage*), stock price volatility (*Sigma*), firm size (*Size*), firm value (*Tobin's Q*), age of REIT (*REITAge*), dividend yield (*DIVYIELD*), operating cash flows (*FFO/TotalAsset*), return on assets (*ROA),* and asset growth (*Assetgrowth*) are collected from Datastream. Details on sponsor characteristics, such as sponsor type (*Dev_SP, Bank_SP, Others*), sponsor age (*SPAge*), listing status (*SPListed*), and number of REIT spin-offs from sponsors (*LN_Spinoffs*) are collected from the corporate website of each sponsor. In total, we capture 716 bi-annual observations (403 from J-REITs, 64 from M-REITs, 56 from HK-REITs, 193 from S-REITs). Missing observations of independent variables further reduce our sample size up to 651.

Sponsor Ownership, Firm Value, and Operating Performance

Our measure for REIT firm value is *Tobin's Q,* defined as the sum of market value of equity, the market value of preferred stock, and book value of long- and short-term debt divided by the book value of total assets (Perfect and Wiles, 1994). *Tobin's Q* has been widely used as a measure of firm value;[7] it is a valid measure of firm value especially for Asian REITs because properties held by REITs are appraised and their book values are updated semi-annually. We use funds from operations scaled by total assets (*FFO/TotalAsset*) as our measure of operating performance. This measure is superior to other performance measures (Vincent, 1999; Downs and Guner, 2006) for REITs.

[6] The SNL REIT database does not have institutional holdings for REITs in Malaysia. We supplement the missing observations with data from Factset.

[7] See Morck et al. (1988), McConnell and Servaes (1990), Cho (1998), Himmelberg et al. (1999), and Han (2006).

Our key independent variable is sponsor ownership (*SPOWN*), which is defined as the total shareholdings held by the sponsor firm and all its related companies divided by the number of shares outstanding of each REIT. To capture the non-linear relationship between sponsor holdings and firm value, we specify quadratic specification by including a squared term for sponsor ownership variable (*SPOWNsq*).

We further specify alternative governance mechanisms by six variables. Given that firm value is higher in firms with stronger boards (Ghosh and Sirmans, 2003), stronger monitoring from institutional investors (Pound, 1988; Han, 2006), and external block holders (Kaplan and Minton, 1994), we use board size (*BODSize*), board independence (*OUTBOD*), institutional ownership (*INSTIOWN*), and outside block ownership (*BLOCKOWN*).

Leverage (*Leverage*) is included as a control variable as debt holders are superior monitors that can alleviate agency problems due to their ability to collect information and screen a firm during lending activities (Diamond, 1984). Future growth opportunities of a REIT are likely to be reflected in *Tobin's Q*. Therefore, we include firm size (*Size*) as a control as larger REITs find it increasingly difficult to make yield accretive acquisitions (Ooi et al., 2011). Asset growth (*Assetgrowth*) is included to control for growth opportunities (Han, 2006). While we measure operating cash flows using *FFO/TotalAsset*, we account for the profitability of the REIT using the same variable for firm value specification because more profitable REITs are likely to be more highly valued by the market. Furthermore, we control for stock price volatility (*Sigma*) as it may induce concentrated managerial shareholdings due to greater scope of moral hazard (Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001).

Sponsor Ownership and Dividend Policy

Following Ghosh and Sirmans (2006), we measure the distribution of dividends using dividend yield (*DIVYIELD*), which is computed as the dividend per share divided by the price per share, and dividend payout (*DIVPAY*), which is computed as the total common dividends divided by net income. Our key independent variable is again sponsor ownership (*SPOWN*). A squared term for the sponsor ownership variable (*SPOWNsq*) is also included.

To capture possible dividend smoothing from REIT managers, we include *FFO (t-1)* and *changeFFO*, defined as lagged funds from operations and change in funds from operations from the previous period, respectively. Following Wang, Erickson, and Gau (1993) and Ghosh and Sirmans (2006), we further control for performance ratios such as return on assets (*ROA*) and *Tobin's Q* as proxies for investment opportunities. If shareholders use past performance as an indication of future growth prospects, we expect REITs with superior past performance to pay out lower amounts of dividends.

We run pooled OLS regressions with heteroscedasticity robust standard errors for the main analyses where different firm performance measures become dependent variables and the percentages of shares owned by sponsors (*SPOWN*) and its squared term (*SPOWNsq*) are main independent variables along with relevant control variables. We also include sector dummies (Industrial, Hotel, Retail, Residential, Office, and Diversified), time dummies (i.e. year fixed effect), and country dummies (Japan, Malaysia, and Singapore).[8]

The descriptions of all the variables in our models are detailed in Table 1.

[8] As a robustness check, we run regressions using alternative models; random-effect flexible generalized least squares with cluster-robust standard errors and fixed-effect least-squares dummy-variables regression with cluster-robust standard errors, using the dividend payout model as an example. The results summarized in Appendix C confirm that the main results are robust against the choice of different estimation methods.

IV. **Results**

Descriptive Statistics

Figure 3 illustrates the distribution of sponsor shareholdings in Asian and US REITs across the different ownership breakpoints. Asian sponsors, on average, retain about 23.3% of their REIT shareholdings, much larger than the 16.2% held by US REIT managers. Ninety percent of the sponsors in Asia retain more than 5% of their REIT shareholdings, with 39% of the sponsors holding more than 25% of their REIT shareholdings.

Panel A of Table 2 reports the descriptive statistics of major variables;[9] sponsor shareholdings, firm value, operating performance, and dividend policies for the full sample and sub-samples by country of origin and sponsor type. Malaysian sponsors retain the largest shareholdings (52%) while Japanese sponsors retain the fewest shareholdings (16%). Developer sponsors hold more shares (27%) than bank sponsors (15%) and other types of sponsors (20%). While REITs in Asia appear to be trading close to their net asset values (0.99), this is largely driven by Japanese REITs (1.05). Most of the REITs in other countries, especially Hong Kong (0.82), are undervalued. Operating cash flows are highest for Malaysian REITs (0.06) and lowest for Hong Kong REITs (0.03). Singapore REITs tend to have high dividends when compared to price per share (0.078%), although the payout ratio (0.46) is lower than that of Japanese REITs (0.89).

Panel B of Table 2 summarizes statistics of sponsor characteristics, governance structures, and firm-specific characteristics of Asian REITs. Most of the REITs in Asia are backed by developers (68%) and banks (24%), suggesting the importance of the REIT as an

[9] This descriptive statistics are based on the full sample of 716 REITs. Different models have slightly different sample sizes due to missing values of independent variables included.

exit vehicle for developers. Of the REITs in Asia, 15.0% are backed by government-linked companies. Most of the sponsors are also fairly reputable; 77.0% of them are listed. The presence of alternative governance mechanisms is much stronger in US REITs.[10] Boards[11] are reported to be larger (8.08) and more independent (65.5%) in US REITs than the comparatively smaller (5.39) and less independent boards in Asian REITs (58%). The smaller board size for Asian REITs is largely driven by Japanese REITs, which on average have fewer than four board members. Institutional monitoring is also stronger in US REITs with larger institutional shareholdings (45.0%) than Asian REITs (28.0%). The lack of ownership restrictions could explain the larger shareholdings held by external block shareholders in Asian REITs (10.0%) than US REITs (5.3%).

As shown in Appendix B, the variance inflation factors (VIFs) of all major independent variables are smaller than 3 with the mean VIF of 1.46, suggesting that there is not any serious multi-collinearity issue among the variables.

Tobin's Q and Sponsor Ownership

Table 3 reports the results of regressions that examine the relationship between sponsor ownership and *Tobin's Q*. Results are shown for the entire sample and sub-samples based on sponsor type.[12] All specifications include time and sector fixed effects (*Hotel, Residential,*

[10] Figures of board size, independence, institutional ownership, and external block owner shareholdings are obtained from Hartzell et al. (2006).

[11] When we remove the J-REITs that have notably smaller board sizes, we document that the boards in Asian REITs are still smaller (7.52) than those in US-REITs.

[12] We show the results for REITs with banks sponsors and those with developer sponsors. There are REITs with other types of sponsors such as retail companies and railway companies. While the combined sample includes such REITs, the sample size of REITs with other types of sponsors is too small (around 50) for sub-sample regression analyses.

Retail, Office, Industrial, and Diversified) to avoid spurious correlations due to unobserved heterogeneity.[13]

With the combined sample, consistent with the findings of Han (2006), we report a strongly significant non-linear relationship[14] between sponsor shareholdings and REIT firm value. Other things being equal, *Tobin's Q* increases by around 0.01 with every 1% increase in sponsor holdings (*SPOWN*), while this rate appears to decrease as sponsor shareholdings increase, as evident with the significant negative effect of the squared term of sponsor ownership variable (*SPOWNsq*). [15] The results suggest that large sponsor ownership induces sponsors to pursue wealth maximizing policies that increase REIT firm value (incentive alignment effect), but such an effect diminishes as sponsor ownership becomes even larger (entrenchment effect).

Another notable finding is that higher firm value for REITs is associated with larger institutional shareholdings (*INSTIOWN*) similar to the findings reported in Pound (1988) and McConnell and Servaes (1990). The results imply that the involvement of institutional investors mitigates agency issues for Asian REITs, resulting in higher firm value.

We also find that older REITs (*REITAge*) are more highly valued by the market. This result suggests that more experienced asset managers may be more capable of creating wealth

[13] We avoid using firm fixed effects because sponsor shareholdings change very slowly over time, meaning that any relationship between firm value and ownership is likely to be captured cross-sectionally. As a result, employing the firm fixed effect, which removes cross-sectional variation across data, is likely to obscure the relationship between sponsor shareholdings and firm value (Zhou, 2001).

[14] Concerned that this positive relationship could be driven by the sample of Malaysian REITs with concentrated shareholdings, we remove them from our analysis as a robustness check and find that our results remain the same.

[15] Following Morck et al. (1988) and Han (2006), we also conduct piecewise linear regressions with breakpoints at 5% and 25% and find an attenuation of incentive alignment effects as sponsor shareholdings increase beyond 5%. This result, illustrating a possible trading off of incentive alignment and entrenchment effects, is consistent with the non-linear relationship reported in the quadratic specification.

for their shareholders. Our findings also indicate that larger REITs and REITs with higher stock volatility may have lesser future growth opportunities, as evident with the significant negative coefficient of *Size* and *Sigma*.

We further stratify our sample based on the notion that the capacity to create or destroy shareholder wealth may differ across sponsor types. Our findings reveal that incentive alignment effect is stronger among developer-sponsored REITs than among bank-sponsored REITs. A negative non-linear association is driven mainly by bank-sponsored REITs. Such entrenchment effect is much weaker with developer-sponsored REITs. Higher firm valuation could stem from real estate expertise or enhanced growth opportunities from property pipeline support (Wong et al., 2013) of committed developer sponsors.

Operating Performance and Sponsor Ownership

To understand the mechanisms of how sponsors can create or destroy shareholder wealth, we further examine the impact of sponsor shareholdings on operating performance measured with FFO scaled by total assets. Results are reported in Table 4.

Findings are similar to earlier findings for *Tobin's Q*. A significant positive relationship is found between *SPOWN* and *FFO/TotalAssets* that diminishes as sponsors become more entrenched. To provide a sense of the magnitude of sponsor shareholdings in REIT cash flows, holding all things constant, a 10% increase in sponsor shareholdings correlates with a 0.014% increase in operating cash flows. The existence of external block holders (*BLOCKOWN*), one of the governance mechanisms, enhances operating cash flows. Stratified estimations according to sponsor type illustrate that incentive alignment effects are largely driven by developer sponsors. A 10% increase in sponsor shareholdings is associated with a 0.02% increase in operating cash flow. This result is consistent with the notion that real estate expertise

from developer sponsors enhances the quality of REIT management teams. Enhanced operating performance can arise from timely acquisitions of high-quality assets and superior asset management that reduces vacancy risk and improves rental income. The entrenchment effect is also observed among developer-sponsored REITs. Larger shareholdings held by bank sponsors, on the other hand, do not correlate with superior cash flows.

Dividend Policy and Sponsor Ownership

One way that sponsors can extract wealth from their REITs is through dividend distribution. Sponsors can choose to enhance personal wealth instead of retaining cash for future growth opportunities by distributing larger dividends. Therefore, in the spirit of Ghosh and Sirmans (2006), we examine the relationship between sponsor shareholdings and dividend distribution (dividend yield and dividend payout). Result are reported in Table 5.

Similar to the findings of Ghosh and Sirmans (2006) for a sample of US REITs, we document a negative non-linear relationship between sponsor shareholdings and dividend yield[16] with the combined sample that appears to diminish as sponsor shareholdings increase. Other things being equal, dividend yield will fall by 0.1% with every 1% increase in sponsor shareholdings. It appears that sponsors, instead of paying out more dividends to increase their personal wealth, exert a stronger effort to retain cash for future growth opportunities as their shareholdings increase. From a shareholders' point of view, as sponsors retain more shares, shareholders consider sponsors to be custodians and may require smaller distributions. The

[16] Other than examining total dividend distributions, following Hardin and Hill (2008), we compute excess dividends and examine the relationship with sponsor shareholdings. Our findings (available upon request) are fairly consistent with our results for dividend yield. A negative non-linear relationship is detected between sponsor shareholdings and excess dividends, indicating that committed sponsors pay out less in excess dividends to enhance future growth opportunities.

significant and positive coefficient of *SPOWNSQ* suggests possible entrenchment effects as sponsor shareholdings increase. Larger dividend distributions are therefore required to mitigate such agency problems. These findings, however, do not remain robust when we stratify our sample according to sponsor type and when we examine dividend payouts. [17]

The effects of alternative governance mechanisms on dividend policy are mixed when we compare our findings between dividend yield and payout. Results are stronger for dividend yield specification. In particular, we observe that the stronger presence of institutional investors (*INSTIOWN*) lowers dividend yields. This finding suggests that committed institutional investors (*INSTIOWN*) enhance monitoring and ameliorate agency concerns. Block holders (*BLOCKOWN*), however, appear to pressure REIT managers to distribute more cash to enhance personal wealth.

We find that REITs with superior growth opportunities pay out fewer dividends, as evident with the negative coefficient of *TobinsQ* and *Size*. Supporting the notion that REITs with better performance are not required to compensate investors (Ghosh and Sirmans, 2006), we observe that REITs with higher *ROA* have lower dividend payouts. Unlike the findings reported in Bradley et al. (1998) and Hardin and Hill (2008) regarding US REITs, we do not observe that Asian REIT managers smooth their dividends to meet future expectations of dividend distributions.

Two-Stage Least Squares Estimation

[17] These effects are significant only with the combined sample, although the effects of the same directions are observed also with developer-sponsored REITs. We believe this is due mainly to the small sample sizes of sub-samples.

As mentioned, one major concern when examining ownership and performance is that the two can be endogenously determined. Many studies have addressed this econometric problem using the simultaneous equation approach[18] but, as highlighted by Himmelberg et al. (1999), it is often difficult to identify good instruments for ownership. In fact, widely used instruments like firm size (*Size* and *Sizesq*) and stock price volatility (*Sigma*) appear to be highly correlated with firm value, operating cash flows, and dividend distribution under a multivariate framework, which leads to questions about their validity as instruments (see results in Tables 3-5).

Therefore, we specify a vector of sponsor characteristics as instruments for sponsor shareholdings. Certain sponsors like developer sponsors (Wong et al., 2013) and government-linked sponsors (Mak et al., 2001) may subject their REITs to severe moral hazard issues and are required to hold more shareholdings to mitigate agency concerns. Based on this notion, we believe that sponsor types (*Bank_SP*, *Dev_SP*, *GLC_SP*) are valid instruments for sponsor shareholdings. We further hypothesize that the reputation of the sponsor can influence its capacity to retain its REIT shareholdings and we proxy for reputation using *SPList*, a binary variable that indicates whether the sponsor is listed, and *SPAge*, a continuous variable denoting the age of sponsor. We also account for the number of REITs spun off by sponsors (*LN_spinoffs*) as sponsors that are likely to influence sponsor shareholdings (see Table 1 for definition). Estimations between sponsor shareholdings and various performance metrics (firm value, operating cash flows, and dividend policy) using two-staged least squares are reported in Table 6.

Most of our findings remain robust after controlling for endogeneity between sponsor shareholdings and performance. A robust positive (negative) nonlinear relation is detected between sponsor shareholdings and firm value (dividend yield), respectively. The relationship

[18] See Himmelberg et al. (1999), Demsetz and Villalonga (2001), Ghosh and Sirmans (2003), and Han (2006) for more details.

between sponsor shareholdings and operating performance, however, becomes insignificant when estimated using 2SLS. We further confirm the effectiveness of institutional investors in mitigating agency problems, reducing the need to distribute dividends, and enhancing REIT firm value. Post estimation results validate the quality of the instrument variables.

V. **Conclusion**

This paper examines the relationship between sponsor holdings and firm value using cross-country panel data that consist of 69 REITs listed in Japan, Hong Kong, Malaysia, and Singapore for the period from 2002 through 2012. This study is motivated by the prevalence of agency issues in Asian REITs where sponsors are documented to expropriate their REITs from inequitable financing and related party property transactions. Concerns are raised whether sponsor shareholdings and governance mechanisms are sufficiently strong to mitigate the possible conflicts of interest between sponsors and minority shareholders in Asian REITs.

Our empirical findings confirm that larger sponsor shareholdings serve to align the interests of sponsors with minority shareholders and encourage them to pursue wealth-maximizing investment and financing decisions, while entrenched sponsor ownership diminishes such an incentive alignment effect, as evident with the positive non-linear relationship between sponsor ownership and REIT firm value. Consistent results surrounding operating cash flows and sponsor shareholdings imply that higher firm value surrounding REITs with committed sponsors could stem from superior cash flows. Lower dividend payouts for REITs with higher sponsor shareholdings suggest that committed sponsors are more concerned about retaining cash for future growth opportunities than enhancing personal wealth with larger dividend payouts.

Findings from stratified analysis illustrate that sponsor type (bank, developer, and others) matters. Most of our earlier findings for the entire sample are driven by developer sponsors. This confirms the capacity of developer sponsors to enhance firm value and operating performance, either with their real estate expertise or their pipeline property support. Better investment opportunities surrounding developer sponsors could explain why committed developer sponsors prefer to pay out fewer dividends and retain cash for future growth opportunities. Finally, the presence of alternative governance mechanisms has a weak effect in monitoring sponsors and mitigating agency concerns. Only institutional investors have a robust effect in enhancing firm value and reducing dividend yield.

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Figure 1: Typical management structure in Asian REITs

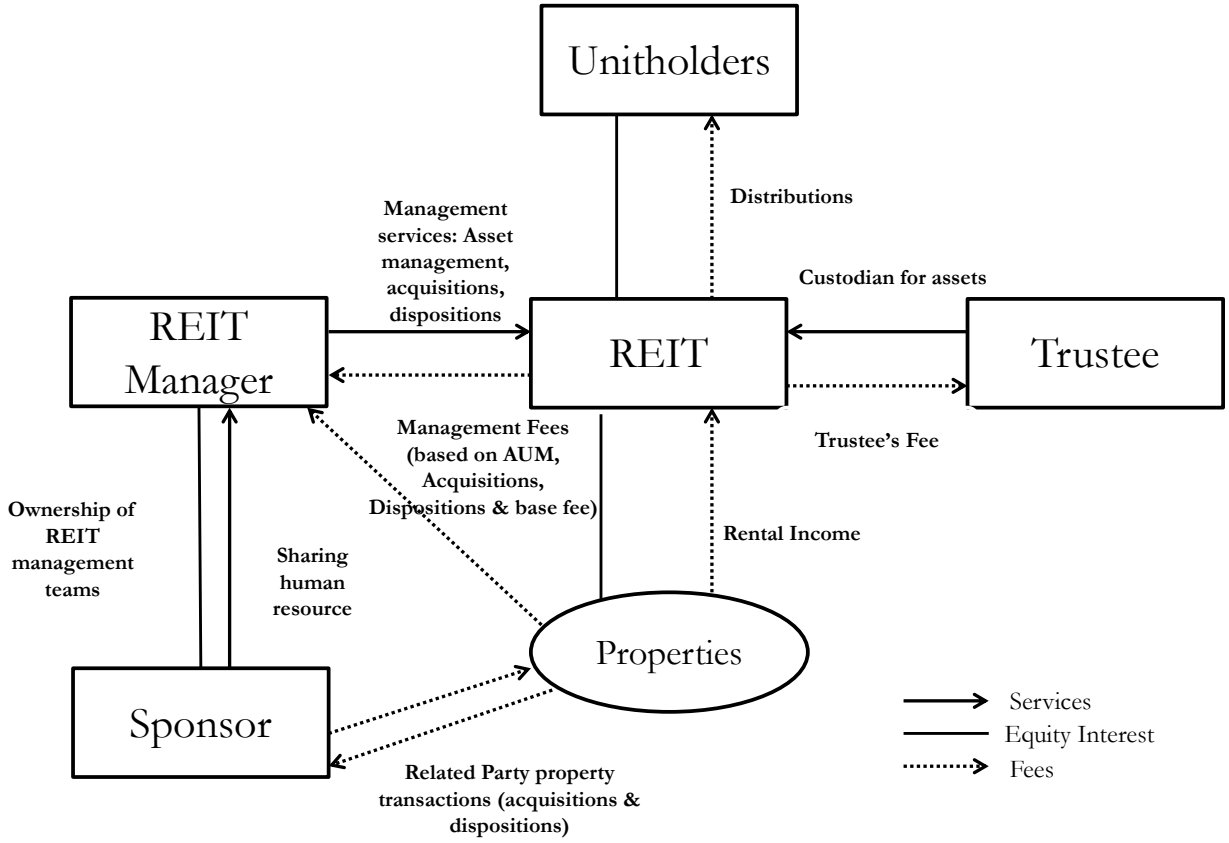

Figure 2: Sponsor shareholdings and REIT age

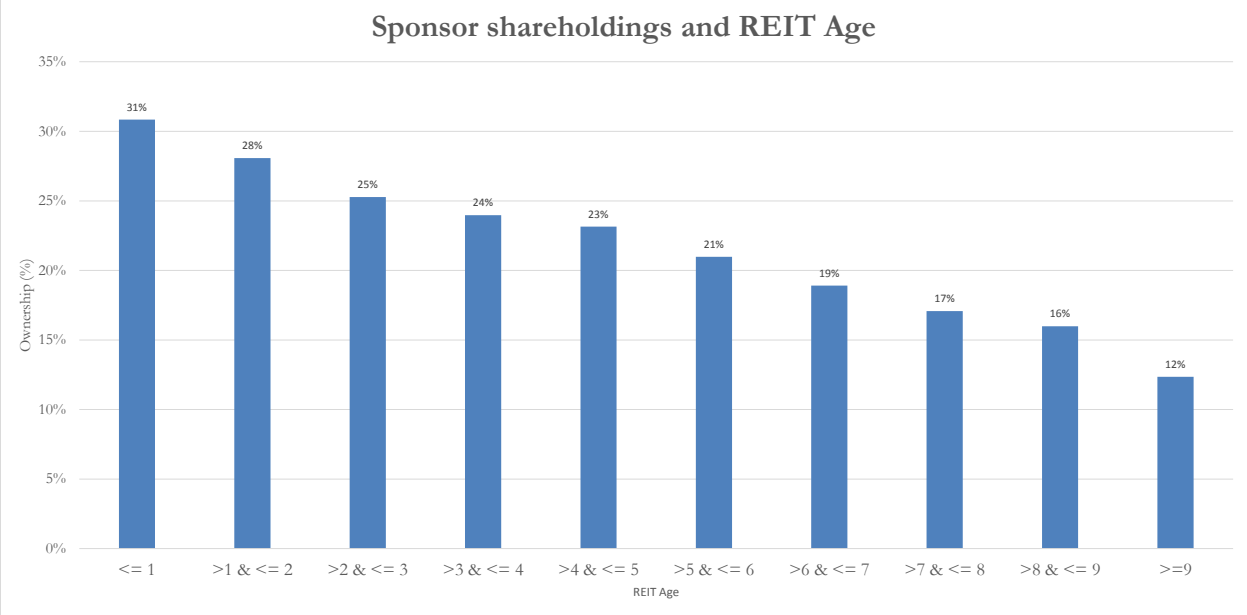

Figure 3: Distribution of sponsor shareholdings in Asian and US REITs

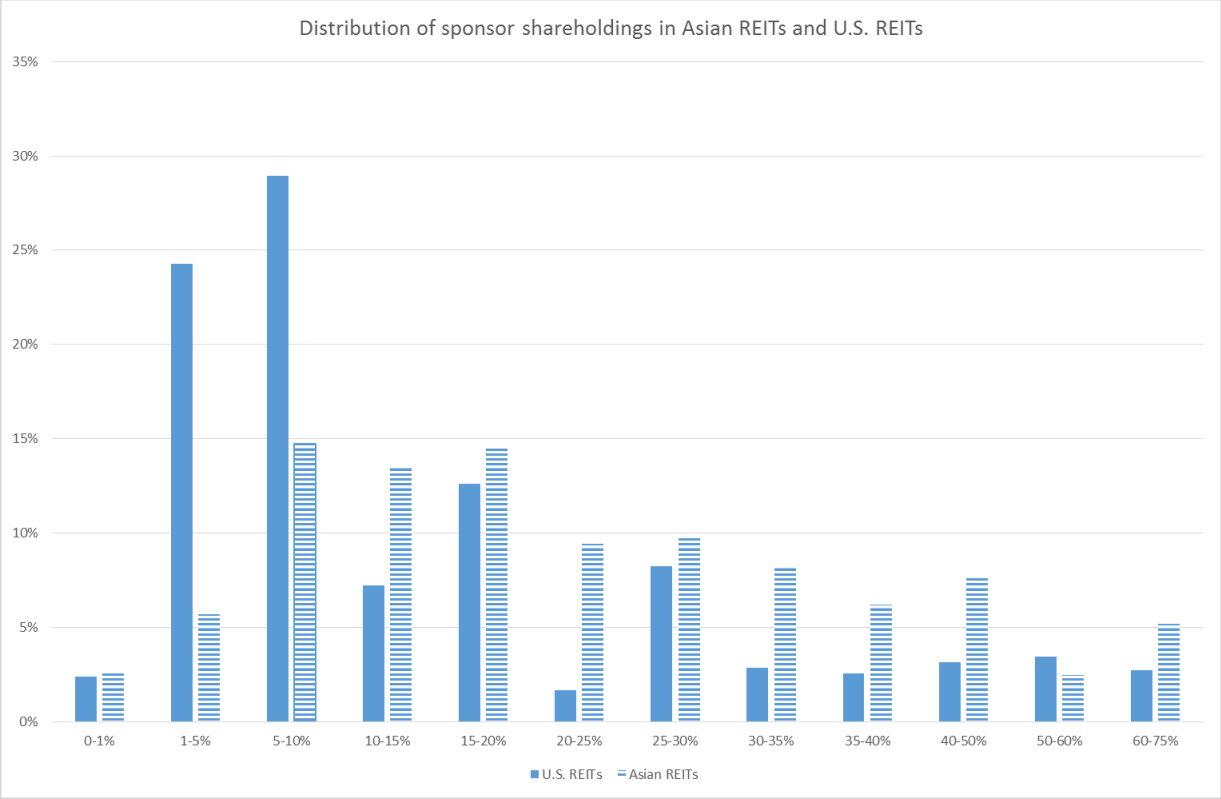

Table 1: Variable description

Variable Name	Definition
Tobin's Q	Market value of equity plus market value of preferred stock plus book value of liabilities divided by book value of total assets
DIVYIELD	Dividends per share divided by price per share
DIVPAY	Total common dividends divided by net income
SPOWN	Total common equity held by sponsors as a fraction of total common equity outstanding
SPOWN_SQ	Square of SPOWN
INSTIOWN	Total common equity held by institutional investors as a fraction of total common equity outstanding
BLOCKOWN	Total common equity held by external shareholders with shareholdings of more than 5% as a fraction of total common equity outstanding
OUTBOD	Number of outside directors expressed as a percentage of total board size
BODSize	Natural logarithm of the size of the board
Leverage	Book value of debt divided by book value of asset
REITAge	Duration from IPO dates (in years)
ROA	Ratio of operating income to total assets
FFO/TotalAsset	Ratio of funds from operations scaled by total assets
Size	Natural logarithm of the market capitalization
Size_SQ	Square of Size
Sigma	Annualized standard deviation of stock return calculated using past one-year trading data
AssetGrowth	Change in the size of the total asset from time t+1
FFO(t-1)	Lagged funds from operation at t-1
ChangeFFO	Change in FFO from t-1
Instruments	
Dev_SP	Dummy variable equal to 1 if main Sponsor is a developer
Bank_SP	Dummy variable equal to 1 if main Sponsor is a bank
GLC_SP	Dummy variable equal to 1 if Sponsor is government linked
SPAge	Natural logarithm of the Sponsor Age (calculated from founding date)
SPList	Dummy variable equal to 1 if Sponsor is listed in stock exchange
LN_Spinoffs	Natural logarithm of the total number of spinoffs by Sponsor

Table 2: Descriptive statistics

This table reports descriptive statistics for variables used in this empirical study. See Table 1 for definitions of all the variables.

Panel A											
		SPOWN		Tobin's Q		FFO/TA		DIVYIELD		DIVPAYOUT	
Sample	N	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Full	716	0.230	0.160	0.990	0.360	0.049	0.046	0.068	0.047	0.710	0.320
Country											
HK-REIT	56	0.330	0.160	0.820	0.150	0.030	0.015	0.066	0.050	0.380	0.210
J-REIT	403	0.160	0.110	1.050	0.440	0.054	0.059	0.064	0.046	0.890	0.230
M-REIT	64	0.520	0.170	0.970	0.150	0.062	0.024	0.067	0.028	0.580	0.270
S-REIT	193	0.280	0.120	0.910	0.230	0.041	0.012	0.078	0.052	0.460	0.250
Sponsor Type											
Bank	174	0.150	0.090	1.050	0.270	0.049	0.026	0.061	0.049	0.880	0.240
Developers	485	0.270	0.170	0.980	0.390	0.050	0.053	0.069	0.043	0.660	0.320
Others	57	0.200	0.190	0.850	0.260	0.043	0.027	0.083	0.068	0.590	0.330

Panel B		
	Mean	Std. Dev
Sponsor Characteristics		
% Dev_SP	68.0%	
% Bank_SP	24.0%	
% GLC_SP	15.0%	
% SPList	77.0%	
# of Spinoffs	1.74	1.14
SPAge	48.31	37.64
Alternate Governance		
% BLOCKOWN	10.0%	12.0%
% INSTIOWN	28.0%	17.0%
BODSize	5.39	2.34
% OUTBOD	58.0%	14.0%
Leverage	43.0%	14.0%
Firm Characteristics		
Size	7.19	1.11
Sigma	10.4%	13.9%
ROA	4.0%	5.0%
AssetGrowth	8.0%	22.0%
REITAge	3.87	2.24
% Diversified	20.0%	
% Hotel	4.0%	
% Industrial	11.0%	
% Office	29.0%	
% Residential	13.0%	
% Specialty	3.0%	
% Retail	20.0%	

Table 3: Tobin's q and sponsor ownership

The table shows the results of regressions that examine the relationship between Tobin's Q and sponsor ownership (SPOWN) for overall sample and sub-samples based on sponsor type. Sector dummies (Industrial, Hotel, Retail, Residential, Office, and Diversified sector controls) and time dummies are included in each estimation but are not reported. Other independent variables are defined in Table 1. Robust t-statistics are reported in parenthesis. *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Variables	Tobin's Q		
	Combined	Bank	Developers
SPOWN	0.894 ***	1.140 *	0.697 **
	(2.71)	(1.88)	(2.02)
SPOWNsq	-0.894 *	-3.233 ***	-0.581
	(-1.78)	(-2.61)	(-1.09)
INSTIOWN	0.516 ***	0.185	0.422 **
	(3.24)	(0.87)	(2.57)
BLOCKOWN	-0.011	0.057	0.027
	(-0.07)	(0.22)	(0.14)
OUTBOD	0.158	0.128	0.024
	(1.41)	(0.35)	(0.16)
BODSize	0.070	0.079	0.035
	(1.33)	(1.01)	(0.42)
Leverage	0.298	0.128	0.246
	(0.80)	(0.84)	(0.45)
REITAge	0.127 ***	0.082 *	0.116 ***
	(5.08)	(1.73)	(3.91)
Size	-0.730 **	-0.171	-1.281 **
	(-2.10)	(-0.65)	(-2.39)
SizeSQ	0.041 *	0.015	0.077 **
	(1.95)	(0.88)	(2.27)
Sigma	-0.977 **	-7.289 ***	-0.467
	(-2.50)	(-4.08)	(-1.08)
FFO_TotalAssets	-0.211	-0.695	-0.221
	(-0.82)	(-1.40)	(-0.74)
AssetGrowth	-0.117	-0.055	-0.213
	(-1.51)	(-1.38)	(-1.44)
Japan	0.129 *	0.306 **	0.207 *
	(1.75)	(2.05)	(1.81)
Malaysia	-0.269	Omitted	-0.378 *
	(-1.39)		(-1.66)
Singapore	-0.009	0.202	0.053
	(-0.18)	(1.08)	(0.85)
N	692	171	465
adj. R-sq	0.274	0.708	0.261

Table 4: Operating performance and sponsor ownership

The table shows the results of regressions that examine the relationship between operating performance and sponsor ownership (SPOWN) for the overall sample and sub-samples based on sponsor type. Sector dummies (Industrial, Hotel, Retail, Residential, Office, and Diversified sector controls) and time dummies are included in each estimation but are not reported. Other independent variables are defined in Table 1. Robust t-statistics are reported in parenthesis. *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Variables	FFO scaled by total assets		
	Combined	Bank	Developers
SPOWN	0.134 **	0.152	0.192 ***
	(2.43)	(1.47)	(2.65)
SPOWNsq	-0.172 **	-0.300	-0.249 **
	(-2.32)	(-1.51)	(-2.52)
INSTIOWN	0.002	-0.017	-0.013
	(0.21)	(-0.55)	(-1.13)
BLOCKOWN	0.031 **	0.038	0.041 *
	(2.09)	(1.50)	(1.96)
OUTBOD	0.007	0.008	-0.024
	(0.53)	(0.20)	(-1.07)
BODSize	-0.010	-0.003	-0.011
	(-1.27)	(-0.46)	(-1.10)
Leverage	-0.012	-0.004	-0.007
	(-1.10)	(-0.15)	(-0.47)
REITAge	0.010 ***	0.006	0.009 ***
	(3.05)	(1.15)	(2.81)
Size	-0.023	-0.223 ***	-0.006
	(-1.44)	(-3.16)	(-0.24)
SizeSQ	0.001	0.014 ***	0.000
	(1.25)	(3.16)	(0.14)
Sigma	-0.006	-0.050	0.042
	(-0.12)	(-0.15)	(0.93)
AssetGrowth	0.023	0.017	0.041
	(1.30)	(1.33)	(1.03)
Japan	0.012 *	-0.006	0.034 ***
	(1.71)	(-0.42)	(3.90)
Malaysia	0.011	Omitted	0.033
	(1.20)		(3.05) ***
Singapore	-0.002	-0.046 **	0.007
	(-0.27)	(-2.07)	(1.27)
N	692	171	465
adj. R-sq	0.068	0.378	0.08

Table 5: Dividend policy and sponsor ownership

The table summarizes the regression results among dividend yield, dividend payout, and sponsor ownership for the overall sample and for the sample stratified according to sponsor type (Bank and Developer). Sector dummies (Industrial, Hotel, Retail, Residential, Office, and Diversified sector controls), time dummies, and country dummies (Japan, Malaysia, and Singapore) are also included in each estimation but are not reported. Other independent variables are defined in Table 1. Robust t-statistics are reported in parenthesis. *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Variables	Dividend Yield			Dividend Payout		
	Combined	Bank	Developers	Combined	Bank	Developers
SPOWN	-0.093 ***	-0.119	-0.059	-0.030	0.535	-0.260
	(-2.82)	(-1.02)	(-1.43)	*(-0.12)*	(0.83)	(-0.82)
SPOWNsq	0.078 *	-0.003	0.060	-0.215	-1.797	0.155
	(1.69)	(-0.01)	(1.08)	(-0.56)	(-1.26)	(0.33)
INSTIOWN	-0.056 ***	-0.146 ***	-0.029 *	0.054	0.054	-0.021
	(-3.84)	(-2.65)	(-1.92)	(0.57)	(0.20)	(-0.16)
BLOCKOWN	0.051 **	0.107 **	0.088 ***	-0.315 **	-0.361	0.046
	(2.15)	(2.06)	(2.91)	(-2.12)	(-0.69)	(0.27)
OUTBOD	-0.009	-0.021	-0.016	0.179	0.020	0.156
	(-0.56)	(-0.51)	(-0.81)	(1.63)	(0.09)	(0.94)
BODSize	-0.025 ***	-0.016	-0.037 ***	0.003	-0.120 *	0.141 **
	(-3.30)	(-1.26)	(-4.39)	(0.07)	(-1.96)	(2.20)
Leverage	0.002	0.014	-0.022	-0.374 ***	-0.634 ***	-0.490 ***
	(0.14)	(0.60)	(-1.27)	(-4.56)	(-2.86)	(-5.73)
ChangeFFO	0.003	-0.423 *	0.025	-0.387	-0.974	-0.347
	(0.10)	(-1.98)	(0.95)	(-1.63)	(-0.77)	(-1.51)
FFO(t-1)	0.051	0.256	0.005	-0.744 ***	0.098	-0.854 ***
	(0.89)	(1.00)	(0.14)	(-3.69)	(0.10)	(-3.82)
Size	-0.056 ***	-0.023	-0.045 *	0.311 **	0.502	0.585 ***
	(-2.84)	(-0.33)	(-1.92)	(2.50)	(1.38)	(3.16)
SizeSQ	0.003 ***	0.002	0.003 *	-0.022 ***	-0.036	-0.039 ***
	(2.61)	(0.37)	(1.86)	(-2.70)	(-1.53)	(-3.29)
ROA	0.005	-0.083	0.006	-1.032 ***	0.163	-0.990 ***
	(0.12)	(-0.48)	(0.18)	(-3.07)	(0.17)	(-2.76)
TobinsQ	-0.030 ***	-0.062 ***	-0.026 ***	0.069 ***	0.159 *	0.081 ***
	(-4.95)	(-3.64)	(-4.97)	(2.99)	(1.97)	(2.75)
Japan	-0.018 *	-0.020	-0.021 *	0.499 ***	0.453 ***	0.580 ***
	(-1.89)	(-0.73)	(-1.87)	(9.07)	(3.70)	(7.88)
Malaysia	-0.026 **	Omitted	-0.020	0.315 ***	Omitted	0.399 ***
	(-2.24)		(-1.56)	(3.89)		(4.08)
Singapore	0.013 **	0.040	0.001	0.094 ***	0.200	0.022
	(2.40)	(1.32)	(0.17)	(2.70)	(1.14)	(0.49)
N	575	157	383	574	157	382
adj. R-sq	0.438	0.663	0.386	0.562	0.585	0.576

Table 6: Two-stage least squares estimation

The table shows the results of the two-stage least squares estimations among sponsor ownership, Tobin's Q, FFO/TotalAsset, and Dividend distribution (Dividend Yield, Dividend Payout). Instrument variables for endogenous variables (SPOWN and SPOWNsq) are GLC_SP, Bank_SP, Dev_SP, SPAge, SPList, and LN_Spinoffs. Definitions for instruments and other independent variables are provided in Table 1. Sector dummies (Industrial, Hotel, Retail, Residential, Office, and Diversified sector controls), time dummies, and country dummies (Japan, Malaysia, and Singapore) are also included in each estimation but are not reported. T-statistics are reported in parenthesis. *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Variables	2SLS			
	TobinsQ	FFO/TotalAssets	Dividend Yield	Dividend Payout
SPOWN	6.971 **	0.078	-0.961 *	3.515
	(2.28)	(0.23)	(-1.79)	(1.45)
SPOWNsq	-10.570 **	0.314	1.850 *	-6.337
	(-2.08)	(0.48)	(1.79)	(-1.36)
INSTIOWN	0.729 ***	0.023	-0.064 **	0.179
	(3.26)	(1.39)	(-2.09)	(1.24)
BLOCKOWN	-0.125	0.083 **	0.068	-0.337 *
	(-0.43)	(2.18)	(1.49)	(-1.82)
OUTBOD	-0.137	0.024	0.047	-0.000
	(-0.52)	(0.88)	(1.17)	(-0.00)
BODSize	0.073	-0.002	-0.016	-0.003
	(0.99)	(-0.20)	(-1.16)	(-0.05)
Leverage	-0.042	0.022	0.057	-0.513 ***
	(-0.07)	(0.52)	(1.17)	(-2.85)
REITAge	0.202 ***	0.015 ***		
	(4.10)	(2.98)		
Size	-0.793 **	-0.096 ***	-0.057	0.120
	(-2.10)	(-2.67)	(-1.00)	(0.46)
SizeSQ	0.047 **	0.006 ***	0.003	-0.007
	(1.99)	(2.67)	(0.73)	(-0.40)
Sigma	-2.536 **	0.032		
	(-2.45)	(0.28)		
FFO_TotalAssets	-0.947 **			
	(-2.01)			
AssetGrowth	-0.013	0.022		
	(-0.12)	(1.32)		
ROA			0.005	-1.064 **
			(0.07)	(-2.54)
TobinsQ			-0.022 **	0.024
			(-2.00)	(0.64)
ChangeFFO			0.010	-0.436
			(0.20)	(-1.30)
FFO(t-1)			0.118	-1.068 ***
			(1.52)	(-3.27)
N	692	692	575	574
adj. R-sq	0.438	0.663	0.386	0.386

Appendix A

REIT ~~Name~~	Country	Type	Details	Outcome
Fortune REIT	Hong Kong	RPTs	Fortune REIT proposed an acquisition of three properties from its sponsor, Cheung Kong. Fortune REIT planned to fund this acquisition by a rights issue of HKD 1.9 billion. At the point of acquisition, Cheung Kong is a significant shareholder of Fortune REIT holding almost 40% of the shares. The proposed transaction was unfavorable for Fortune REIT, as the net asset value per share would fall from $7.5 to $4.8 and the distribution yield would decrease from 9% to 7.2%. Fortune REIT was overpaying for these acquisitions as the non-prime properties were valued at overly optimistic yields.	On the day of acquisition, Fortune REIT lost about 10% of its share value due to excessive dumping of shares by investors.
FC Residential Investment Corporation	Japan	Financing	FC Residential REIT announced that it would acquire properties from its sponsors. Ichigo group intended to finance the acquisitions via private placements. Units would be issued into a special-purpose vehicle affiliated with the sponsor at a price of 180,000 yen, which was approximately 25% below the closing traded price and a 61% discount to its book value.	Several investors requested to suspend the proposed property transaction, which was highly disadvantageous to existing shareholders. The REIT was forced to suspend this transaction.
Keppeland REIT	Singapore	RPTs	K-REIT proposed to sell Keppel Towers and GE Towers at $573 million to its sponsor, Keppel Land, while using those proceeds to purchase 87.5% stake of Ocean Financial Center at $2.01 billion from Keppel Land. Questions were raised about the price paid by K-REIT for the acquisition of Ocean Financial Center as it was	K-REIT lost approximately 10% of its share value on the day of announcing the asset swap.

			very much overvalued as compared to recent transacted prices.	
Mori Hills REIT	Japan	RPTs Financing	Mori Hills REIT announced that it would acquire two properties from its sponsor, Mori Hill Building Co. and sell one of the properties back to its sponsor. This acquisition would be funded by private placement in which the sponsor would receive new units at 500,000 yen. This offering price was approximately 33% lower than the IPO price and a 13% discount from book value per share. In addition, Mori Hill was overpaying for the RPT as the transaction price was much higher than the appraised value. As a result of this transaction, sponsor ownership increased from 15% to 30%.	Mori Hill REIT managed to execute the transaction without investor intervention. The management indicated that the distribution per unit would not be affected by optimistic rental projections.
Macarthurcook REIT	Singapore	Financing	Macarthurcook Investment REIT (MI-REIT) faced difficulties in refinancing its expiring debts due to the subprime credit crisis in 2009. Around the same time, AIMS financial group acquired Macarthurcook Group (MI-REIT's sponsor). Cambridge Industrial Trust (CIT) proposed the acquisition of MI-REIT to bail it out from its refinancing crisis. However, AIMS Financial Group (the sponsor) was reluctant to sell to CIT and instead chose to recapitalize. New share units raised from the recapitalization would constitute 85% of the total units outstanding.	Severe dilution of the share value of existing unit holders occurred because of the reluctance of sponsors to divest the REIT. The recapitalization caused the share price to decline by more than 50%. Shareholders have no specific provisions to impose control on the severe dilution.

Appendix B: Summary of collinearity diagnostic

Variable	VIF	SQRT VIF	Tolerance	R-Squared
SPOWN	1.49	1.22	0.67	0.33
INSTIOWN	2.11	1.45	0.48	0.52
OUTBOD	1.62	1.27	0.62	0.38
BODSize	1.42	1.19	0.71	0.29
Leverage	1.31	1.15	0.77	0.23
REITAge	1.54	1.24	0.65	0.35
Size	1.79	1.34	0.57	0.43
Sigma	1.03	1.02	0.99	0.01
FFO/TotalAsset	1.56	1.25	0.64	0.36
AssetT	1.12	1.06	0.90	0.10
ChangeFFO	1.50	1.22	0.67	0.33
Tobin's Q	1.09	1.04	0.92	0.08
Mean VIF	1.46			

Appendix C: Dividend payout model with different estimation methods

The table summarizes the regression results between dividend payout and sponsor ownership for the overall sample, as an example model, using three different estimation methods: pooled OLS with heteroscedasticity robust standard errors, random-effect flexible generalized least squares (FGLS) with cluster-robust standard errors, and fixed-effect least-squares dummy-variables regression (LSDV) with cluster-robust standard errors. All relevant control variables are included in each estimation but are not reported. Robust t-statistics are reported in parenthesis. *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Variables	Dividend Payout model		
	Pooled OLS	Random-effect FGLS	Fixed-effect LSDV
SPOWN	-0.093 ***	-0.121 ***	-0.125 ***
	(-2.82)	(-3.17)	(-3.17)
SPOWNsq	0.078 *	0.123 **	0.178 **
	(1.69)	(2.30)	(2.22)
N	575	575	575
adj. R-sq	0.438	0.454	0.276