

# FEATURE ARTICLE

**HAVE REIT ACQUISITIONS LED TO AN INCREASE  
IN RETAIL RENTS?**

# HAVE REIT ACQUISITIONS LED TO AN INCREASE IN RETAIL RENTS? <sup>1</sup>

## EXECUTIVE SUMMARY

- In recent years, there has been a growing perception that Real Estate Investment Trusts (REITs) are driving up retail rents. Indeed, a casual comparison of retail rents in REIT-owned and other malls may have contributed to this perception, as rental levels and rental growth tend to be higher in REIT-owned malls. However, such a comparison does not take into account the fact that REIT-owned malls tend to have better physical characteristics (e.g., better location) and as such, can command higher rents.
- After controlling for the observable characteristics of the malls such as location and the asset enhancement initiatives (AEIs) taken, we find that the rents in REIT-owned malls are not statistically different from rents in single-owner malls. Furthermore, among the malls that are acquired by REITs, we find no evidence to indicate that the rents in these malls increased *as a result of* the acquisition.

The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry or the Government of Singapore.

## INTRODUCTION

In recent years, there has been a growing perception among retailers and the public that one of the main causes of rising retail rents is the acquisition of retail malls by Real Estate Investment Trusts (REITs)<sup>2</sup>. REITs are often perceived to be driving up rents in order to benefit their unit holders. On their part, the REIT managers have argued that REITs are not dominant players in the retail mall market<sup>3</sup>. As retailers are free to choose between different malls, the REITs are not in a position to raise rents unjustifiably. They also highlight that through more professional management of the malls, in terms of both hardware (e.g., asset enhancement initiatives, AEIs) and software (e.g., tenant mix and marketing programmes), they are able to increase footfalls in their malls and create value for their tenants.

The objective of this study is to examine the causal impact of REITs on retail rents, using micro data on rental transactions. The rest of the paper proceeds as follows. First, we present a brief literature review. Second, we describe the data used for the study. Third, we describe our empirical strategy before discussing the results of the study. The final section concludes.

## LITERATURE REVIEW

The bulk of the academic literature on REITs focuses on their financial performance. These studies generally find that the market segment that the REITs invest in is the key driver of their performance. For instance, Brady and Conlin (2004) examined the United States' hotel property market and found that REIT-owned properties tended to have higher revenue growth, but this was due to the type of properties

<sup>1</sup> We would like to thank Yong Yik Wei, Kuhan Harichandra, Goh Sze Lyn and Ajinkya Chougule for their inputs to this study. All errors belong to the authors.

<sup>2</sup> REITs are securities that sell like stocks on the Singapore Exchange and invest in real estate directly. REITs were introduced in Singapore in 2002.

<sup>3</sup> This argument is corroborated by a study by the Competition Commission of Singapore in 2008, which found that no landlord holds a dominant position in the retail mall market.

acquired by the REITs. Upon controlling for the market segment of the properties, there was no indication that REIT-owned properties performed significantly better than other properties.

## DATA AND SUMMARY STATISTICS

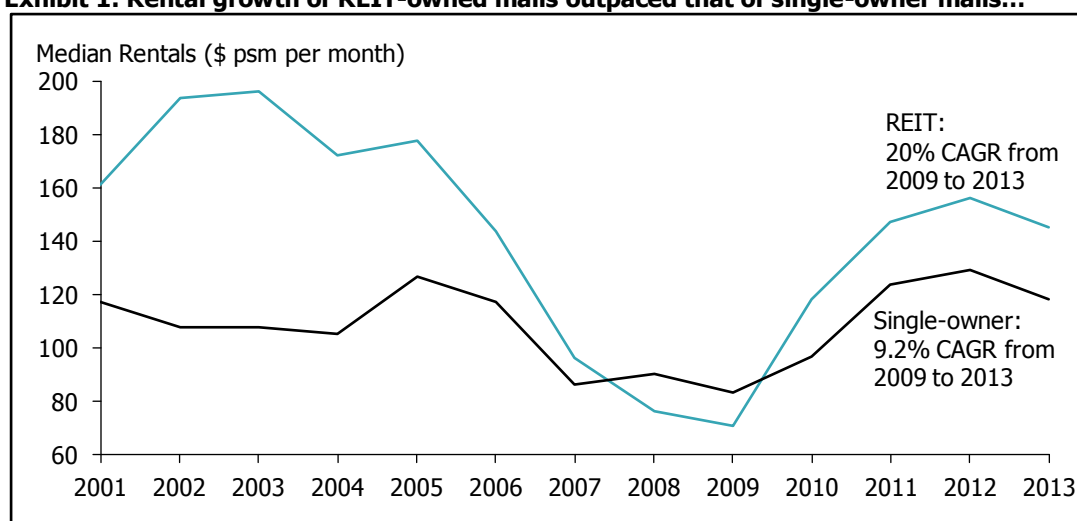
The key dataset used in this study comprises anonymised retail rental transaction data from the Inland Revenue Authority of Singapore (IRAS). Specifically, this dataset contains information on the monthly rent<sup>4</sup>, rental commencement date and physical characteristics (e.g., total floor area, type of retail outlet and floor level) of individual retail units, as well as the postal code of the mall in which the unit is located.

The IRAS dataset was augmented with data from other sources. First, information from the annual reports of REITs and property developers was used to ascertain whether a mall is owned by a REIT or a single-owner<sup>5</sup>, and if so, the date of acquisition. Second, the history of AEIs for each mall was obtained from the Building and Construction Authority's Construction Infonet. Third, geospatial information from Geospace was used to ascertain the distance of each mall from key amenities such as the nearest MRT station.

In all, we study a total of 35 REIT-owned malls and 76 malls owned by single-owners over the period of 2000 to 2013.<sup>6</sup> We exclude strata-titled malls from the analysis as these malls are likely to be very different from the REIT-owned malls in terms of their characteristics and clientele. Single-owner malls, on the other hand, are likely to be more similar to REIT-owned malls and hence would form a better comparison group.

A casual observation of rental trends indicates that REIT-owned malls generally have higher rents than single-owner malls. They also seem to enjoy higher rental growth, at 20 per cent on a compounded annual growth rate (CAGR) basis between 2009 and 2013, compared to single-owner malls (9.2 per cent) ([Exhibit 1](#)). Such casual observations of rental data could have led to the perception that REITs are driving up retail rents.

**Exhibit 1: Rental growth of REIT-owned malls outpaced that of single-owner malls...**



Note: The rental trend for the REIT-owned malls is for all the malls that were eventually acquired by a REIT within the time period of the study.

<sup>4</sup> The monthly rent, which is declared by the retail company, is the average rent that it expects to pay the landlord over the tenure of the rental contract, and would encompass both the base rent and the expected gross turnover rent (i.e., the rent that is tied to the revenue of the retailer).

<sup>5</sup> Non-REIT malls can either be single-owner or strata-titled malls. Single-owner malls have one management operating the building. For strata-titled malls, each unit in the mall is typically owned by an individual. REIT-owned and single-owner malls were identified based on company annual reports as of 2 May 2014.

<sup>6</sup> The 111 REIT-owned and single-owner malls account for approximately a third of all the malls in Singapore.

Yet, the observed differences in the rental levels and growth rates of REIT-owned malls and single-owner malls may have been due to systematic differences in the characteristics of the malls, *rather than because of the nature of mall ownership*. In particular, REIT managers may have been selecting malls of certain characteristics to acquire. These could be observable physical characteristics such as location or proximity to the nearest MRT station, or non-physical characteristics such as quality of previous mall managers or mall profitability. If these characteristics also have a bearing on rental rates in the malls, they could explain the differences in rental trends between the two types of malls. Indeed, a simple analysis of the location of the malls shows that REIT-owned malls tend to be better located (e.g., in core central region) and are closer to key amenities like MRT stations ([Exhibit 2](#)). It would thus be important to control for the impact of such characteristics on retail rents in the malls, in order to isolate the impact of REIT ownership on rents.

**Exhibit 2A: REIT-owned malls tend to be better located than single-owner malls...**

	Number of Malls		
	Core Central Region	Rest of Central Region	Outside Central Region
REIT-owned Malls	16 (45%)	8 (23%)	11 (31%)
Single-owner Malls	30 (35%)	26 (34%)	20 (30%)

Note: Proportion of REIT-owned and single-owner malls in each region is given in brackets.

Source: Geospace

**Exhibit 2B: ...and are also closer to the nearest MRT station**

	Average Distance to Nearest MRT (m)
REIT-owned Malls	223
Single-owner Malls	418
Overall	362

Source: Geospace

## METHODOLOGY

In view of the issues highlighted above, we adopt two empirical approaches to tease out the impact that REITs have on retail rents. We first run a *hedonic regression* which will allow us to control for the impact of observable physical characteristics on rents. The specification of the regression is as follows:

$$\log(\text{rentpsm}_{ijt}) = \sum_{t=2000}^{2013} \alpha_t(\text{reit}_j \times y_t) + \sum_{t=2000}^{2013} \beta_t y_t + \gamma \text{controls}_{ijt} + \gamma_j + \varepsilon_{ijt} \quad (1)$$

Where,

$\log(\text{rentpsm}_{ijt})$  is the log of the rent of retail unit  $i$ , in mall  $j$  at year  $t$ , measured in terms of nominal dollars per square metre per month,

$\text{reit}_j$  is a dummy indicating whether a mall has ever been acquired by a REIT,

$\text{controls}_{ijt}$  is a set of unit-level controls for retail unit  $i$ , in mall  $j$  at year  $t$ . These controls can vary with time (e.g., property use, tenancy and AEI), or be time invariant (e.g., area, property type and floor number),

$y_t$  is a set of time dummies for years  $t$ , where  $t$  ranges from 2000 to 2013,

$\gamma_j$  is a mall fixed effect,

$\alpha_t$  represents the vector of coefficients identifying the difference between the rents in REIT-owned malls and that in single-owner malls in each period after controlling for all observable characteristics of the malls, and

$\beta_t$  represents the vector of coefficients identifying the rental levels of single-owner malls in each period after controlling for all observable characteristics of the malls.

However, while the hedonic regression is able to control for the characteristics of the malls that we can observe or are invariant over time, it will not be able to account for selection biases caused by unobservable characteristics. For instance, as highlighted earlier, REITs may have systematically chosen malls with certain characteristics that we are not able to observe in the data (e.g., mall revenue) to add

to their portfolio. If these unobservable characteristics also affect the rents in the mall, the results of the hedonic regression will be biased.

Our second empirical approach therefore attempts to reduce such potential selection biases. Here, we restrict the sample to only malls that will eventually be owned by a REIT on the assumption that these malls all have the same unobservable characteristics. We then exploit differences in the acquisition dates of the malls to estimate the difference between the rents of the malls that have been acquired and those that have yet to be acquired. In other words, we use the yet-to-be acquired malls in a particular time period as a control for malls that have already been acquired. We compare the differences in rents for the two groups for up to 5 years before and after the REIT acquisition. Specifically, we run the following *pre-post regression*:

$$\log(\text{rentpsm}_{ijt}) = \sum_{t=-\tau}^{\tau} \delta_t \tau_{jt} + \gamma \text{controls}_{ijt} + \gamma_j + \gamma_t + \varepsilon_{ijt} \quad (2)$$

Where, in addition to the previously defined terms,

$\tau_{jt}$  is a set of dummies indicating that the rental transaction occurred  $\tau$  years before or after a REIT has acquired mall  $j$  at year  $t$ ,

$\delta_t$  represents the vector of coefficients identifying the rental levels of REIT-owned malls in the years before and after the REIT acquisition, after controlling for all observable characteristics of the malls, and

$\gamma_t$  is a set of time dummies for years  $t$ , where  $t$  ranges from 2000 to 2013.

## RESULTS AND DISCUSSION

### A. Hedonic Regression

The results of the *hedonic regression* show that differences in the rents of REIT-owned and single-owner malls were not statistically significant in all time periods, after controlling for the observable physical characteristics of the malls ([Exhibit 3A](#)).<sup>7</sup> We also find that differences in rental growth between the REIT-owned and single-owner malls narrowed considerably, and in fact became statistically insignificant, once the physical characteristics have been controlled for. Between 2009 and 2013, rental growth was 8.4 per cent on a CAGR basis for REIT-owned malls and 6.7 per cent for single-owner malls ([Exhibit 3B](#)). This is in contrast to the 20 per cent and 9.2 per cent increase for REIT-owned malls and single-owner malls respectively over the same period, when we did not control for observable characteristics.

These findings suggest that the observed differences in rental trends of REIT-owned and single-owner malls can largely be explained by the physical characteristics of the malls, rather than the nature of ownership of the malls. Specifically, the higher rents observed in the REIT-owned malls in [Exhibit 1](#) are likely to be due to their more desirable physical characteristics, including location, AEI undertaken and tenant activities. Once these have been accounted for, there is no evidence to suggest that the rental trends of REIT-owned malls are significantly different from that of single-owner malls.

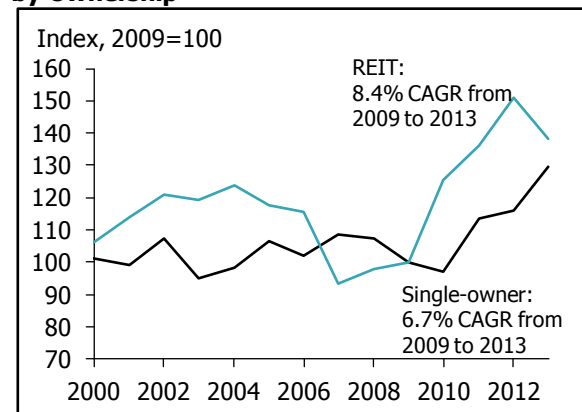
<sup>7</sup> Specifically, in all periods, there was an overlap in the 95% confidence interval for rents in REIT-owned and single-owner malls. Furthermore, the regression estimates of  $\alpha_t$  was not statistically significant.

**Exhibit 3A: Results of the Hedonic Regression**

Year	Estimates
	$reit_j \times y_t$
2001	0.07
2002	0.08
2003	0.19
2004	0.19
2005	0.11
2006	0.09
2007	-0.18
2008	-0.11
2009	-0.09
2010	0.23
2011	0.12
2012	0.17
2013	-0.01

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Exhibit 3B: Rental Trends of Malls Broken Down by Ownership**

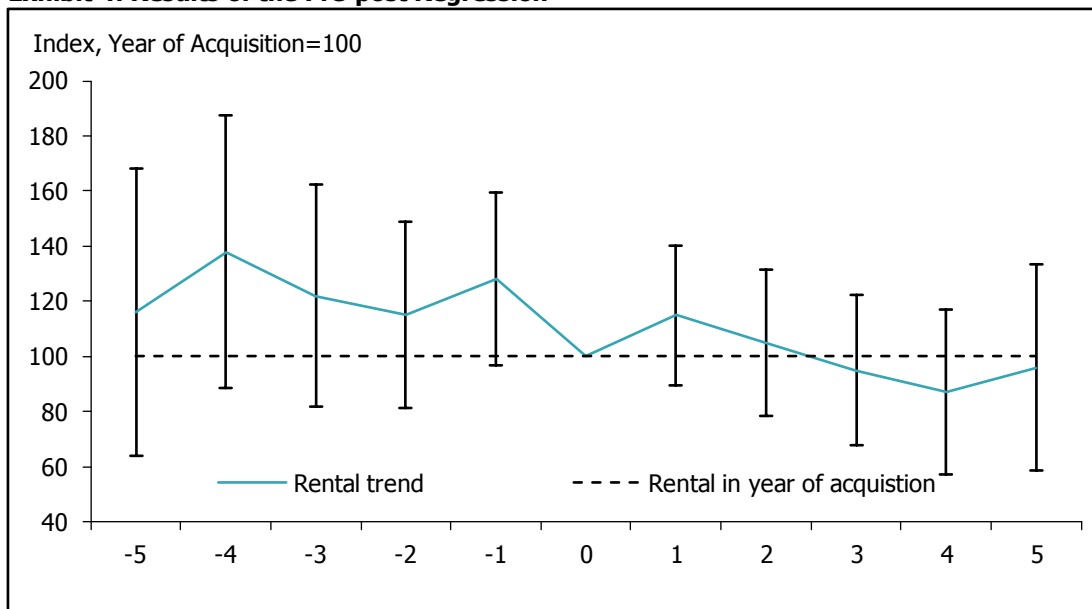


Note: Results were anti-logged before indexing to 2009.

**B. Pre-Post Regression**

For the *pre-post regression*, we also find no significant difference in the rents of the malls that have been acquired by a REIT when compared to the rents of the malls that have yet to be acquired (Exhibit 4). Specifically, for all values of  $\tau$ , the estimates of  $\delta_t$  were not statistically significant. This result suggests that the acquisition of a mall by a REIT did not lead to an increase in rents in the mall that is over and above that experienced in the malls that have yet to be acquired.

**Exhibit 4: Results of the Pre-post Regression**



Note: Error bars refer to 95% confidence intervals. The year of acquisition was used as the base year. All estimates were not significantly different from the rental level of malls that have yet to be acquired in the same period.

## CONCLUSION

In summary, this study finds that the higher levels and growth rates of rents observed in REIT-owned malls may have given rise to the perception that REITs are driving up retail rents in Singapore. Nonetheless, this phenomenon appears to be largely driven by the better physical characteristics of the REIT-owned malls. Specifically, after controlling for observable mall characteristics like AEIs and distance to the nearest MRT station, the level of rents in REIT-owned malls was not statistically different from that in single-owner malls. Furthermore, the difference in rental growth also narrowed considerably. In addition, among the malls which were acquired by REITs, there is no evidence to suggest that rents increased as a result of the REIT acquisition. In particular, after acquisition, the rents in REIT-owned malls were not statistically different from the rents in malls yet to be acquired by a REIT.

A key limitation of the current study is that we have only managed to control for a subset of the characteristics of malls. In particular, indicators that affect how much mall owners can charge their tenants (e.g., footfalls at the mall and profitability of retailers) have not been included as they are not readily available. An area for future analysis will thus be to collect data on these variables to ascertain whether the acquisition of malls by REITs improved the performance of the retailers, thus justifying a higher level of rent in these malls.

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