Research on Capability evaluation index of property management company upgrading to REITs asset service institutions

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Abstract. Real Estate Investment Trust (REITs) is the most popular pathe of real estate asset securitization. Nowadays, the oversea REITs attach importance on the real estate properties in China increasingly, and the Chinese market is get ready to develop local REITs. They all need professional institutions to manage the REITs' properties in China. This paper observes empirical capability evaluation indexes to judge what kind of property management company may upgrading to excellent REITs asset service institutions during field survey. Meanwhile, through regressive data analysis of the REITs listed on the American market, and the property management companies listed on the Chinese market and the NEEQ (National Equities Exchange and Quotations), the validity of these empirical capability evaluation indexes is verified.

1. Introduction

Real Estate Investment Trusts (abbreviated as "REITs") is a kind of trust funds or special companies, which raise funds from investors through issuance of shares or beneficiary certificates, and employs professional investment institutions to manage the real estate investment. The earnings thus obtained are distributed to investors according to the contribution ratio. Originated from the United States in the 1960s, the basic organizational structure of an REIT is shown as Fig. 1 below:
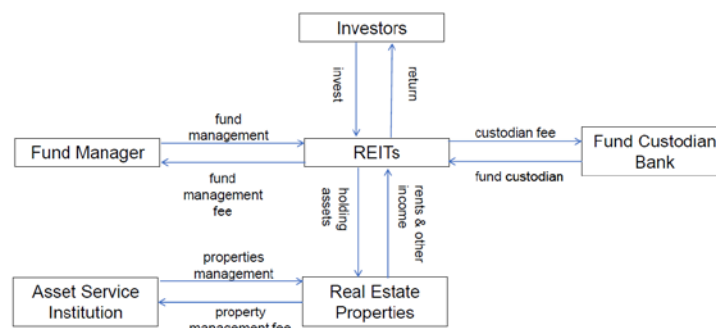

Fig. 1: REIT organizational chart

After more than two decades of rapid development of China's real estate market, statistics suggest that the stock of commercial properties and office buildings for retail in major Chinese

cities has reached 110 million square meters; the real estate market scale reached 44 trillion USD; the market value of REITs exceeded 1.67 trillion USD, far exceeding the total of the Asian REIT market, and even comparable to the American market scale. This suggests that China has adequate market space for development of REITs. However, development of REITs relies on long-term real estate management and operation services provided by professional institutions (hereinafter abbreviated as "REIT asset service institutions"). Though there has not yet been any professional REIT asset service institution in China, the Chinese market has developed a mature real estate management and operation industry. The real estate management and operation institutions are usually overlapped with REIT asset service institutions in terms of their business. In the future, real estate management and operation institutions, either for management of China's domestic REITs or management of overseas REITs in China, can be upgraded into asset service institutions. This paper mainly examines which type of property management and operation institutions has a stronger capability to get transformed into REIT asset service institutions.

2. Factors for assessment of asset service institutions' operation and management capability

From Fig. 1, one can observe that fund managers entrust professional asset service institutions to provide operation and management services of real estate properties held by REITs, including office buildings, architectural buildings, and shops. The basic reason for the generation of the principal-agent relationship is increasing specialization following the vigorous development of productivity and appearance of large-scale production. On the one hand, right owners cannot exercise their rights because of limitations of their knowledge, ability and energy. On the other hand, specialization has generated a large number of agents with professional knowledge, who have the ability and energy to be agents to implement the entrusted affairs. The real estate operation and management earnings of REITs constitute the main source of earnings for REITs. The role of quality service institutions in improving earnings of REITs is self-evident. Under the context of REITs, this paper defines the quality asset service institutions as those with a strong capability to manage and operate real estate properties. Therefore, the real estate management and operation institutions which have the capability to get transformed into quality asset service institutions should also be institutions with the outstanding real estate operation and management capability. In other words, the stronger the real estate operation and management capability of a traditional real estate management and operation institution is, the stronger it is to get transformed and upgraded into a quality asset service institution for REITs.

Revolving around the issue of "decisive factors of the real estate operation and management capability", the author interviews management personnel from domestic and foreign famous real estate consulting institutions, including Jones Slang Lasalle (JLL), Savills, and RET, in China, and visits 18 senior management personnel of national large-scale business management companies represented by Wanda Commercial Management Group Co., Ltd. and Joyceland Commercial Management Co., Ltd. Based on market experience, basic methods to judge the operation and management capability of commercial real estate management and operation institutions are collected. The visit and survey results suggest that personnel from different institutions deem the earning power of the real estate management and operation institutions as the most direct index of their operation and management capability. Considering comparability of property management and operation companies providing different real estate services, it is feasible to adopt the return on asset (ROA) as a direct index to reflect these institutions' earning power. However, when the ROA of real estate management and operation institutions is inconvenient for direct observation, the scale, background, management expertise, and operation efficiency of these institutions can be employed to indirectly reflect institutions' operation and management capability.

Considering the indexes to judge real estate management institutions' operation capability which are implemented internally, it is found out that the internal assessment indexes of Joyceland Commercial Management Co., Ltd. are highly representative. Since Joyceland manages more than 60 commercial complex projects distributed in different parts of China, and the project owners are still operating and managing the projects under the unified guidance of Joyceland, this paper thinks

that the indexes used by Joyceland to judge commercial real estate management and operation institutions' operation and management capability can provide more references for judgment of asset management institutions' operation and management capability.

Combining indexes adopted by Joyceland for its internal management, this paper regards the company scale and background, earning power, team, and management expertise as core indexes to assess commercial real estate management and operation institutions' management and operation capability. The following parts provides a brief introduction of the connotation of these core assessment indexes:

Company scale and background: Comprehensive assessment of the company asset scale and industrial assessment can reflect the comprehensive abilities of property management and operation companies.

Earning power: Through investigation of property management and operation companies' integrated earning power and profit growth, the integrated operation and management level of these companies in managing and operating projects can be reflected.

Project management expertise: The number of projects under the management of real estate management and operation companies can reflect their project management expertise. After further investigation, the city grade, business circle grade and project grade involved in management projects of the property management and operation companies can be included into the indexes to reflect real estate management and operation companies' management expertise

Project operation efficiency: The fixed assets turnover of proprietary projects of real estate management and operation companies can directly reflect the operation efficiency and management level of projects.

In order to verify the validity of assessment indexes, the following part verifies the data of real estate management and operation companies, including REITs listed on the American market as well as real estate management and operation companies listed in China and the New Third Board.

3. Empirical test of factors assessing real estate management and operation companies' operation and management capability

The above visit of senior personnel in the field of commercial real estate management shows that "earning power" is the most direct and effective index to assess property management and operation companies' operation and management capability. ROA is a direct index to reflect the earning power. If the asset service institution is a listed company and its financial status is open and just, financial statements can directly provide an overview of its earning power, but a large number of asset service institutions are not listed companies, and their earning power, if directly observed from financial statements, might be inaccurately judged. Visit of senior personnel in the field of commercial real estate management shows that the company scale and background project management expertise and project operation efficiency can be adopted to directly reflect the company's earning power. Therefore, this paper analyzes the influence of the company scale and background, project management expertise, and project operation efficiency on real estate management and operation companies' ROA to verify the validity of market experience.

3.1 Empirical test of China's market data

3.1.1 Model objectives and hypotheses

This paper studies the data of real estate management subsidiaries affiliated to real estate companies listed on the A-share market and the data of real estate operation companies listed in the New Third Board, and uses the regression model to verify the influence of "company scale and background", "management project experience" and "operation efficiency" on the real estate management and operation companies' earning power. On that basis, what characteristics the real estate management and operation companies should have to become real estate operators with "strong operation and management capability". This is to apply the logic of data verification of

listed companies to non-listed companies, because two indexes-"company scale and background" and "project management expertise"-of non-listed companies are easier for accurate observation, while the "project operation efficiency" can be used for cross-validation of the authenticity of non-listed companies' financial data.

3.1.2 Measurement and data

Samples for empirical analysis come from data provided by Wind financial terminal. "Wind Real Estate Operation Companies", the tertiary industry based on Wind industrial classification, are adopted as standards. The financial data of all the 147 listed companies and companies listed on the New Third Board,which have main business of real estate operation, are acquired from their annual report of 2018.And the employee data on Jan. 1st , 2019 was used. Except 10 ST and *ST samples and 4 data lost samples,all the other 133 samples were used in the research. [1]

For the convenience of measurement and observation, this paper adopts the Return on Assets (ROA) to represent the company's earning power, use "Assets" as the substitute index of the company scale and background, use "Employee" to represent the project management experience, since the number of projects under the management of real estate management and operation companies is positively correlated with the number of workers. Meanwhile, "Faturn" (fixed assets turnover) is employed as the substitutive index of the real estate management and operation companies' proprietary project operation efficiency. All the data come from Wind financial terminal.

Table 1. Domestic data descriptive statistics

Variables	Samples	Mean	Standard deviation	Minimum	Maximum
ROA	133	7.6757	3.85592	-25.24	59.70
Assets	133	145.3183	69.25600	.15	2306.99
Employee	133	2965.33	3073.14158	10	38455
Faturn	133	93.3578	.10176	.00	6085.05

3.1.3 Method and model

The following regression model is built to verify whether the "Assets" representing the company scale and background, "Employee" representing the project management experience, and "Faturn" representing the project operation efficiency can represent the real estate management companies' earning power, and directly influence the companies' ROA:

$$ROA = \alpha + \beta_1 \ln Assets + \beta_2 \ln Employee + \beta_3 Faturn + \varepsilon \qquad (1)$$

Where, ε denotes the regression error.

3.1.4 Results and analysis

From the perspective of regression results, the "Assets" representing the company scale and background exerts a negative influence on ROA on the significance level of 5% [2], the influence of "Employee" representing the project management experience on ROA is positive; the influence of "Faturn" representing the project operation efficiency on ROA is positive. The regression results suggest that increase of real estate management and operation companies' scale cannot directly improve companies earning power. However, real estate management and operation companies with rich project management experience, high real estate operation efficiency and a large number of projects under management are found to have a stronger earning power and also a stronger operation and management capability.

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[1] The data obtained from June 21, 2019 should prevail.

[2] Data analysis of American listed REITs suggest that the influence of the company scale and background on ROA is not significant on the significance level of 5%. Data analysis of Chinese samples indicate a negative correlation, which is partially caused by the inclusion of real estate management subsidiaries of listed real estate companies in the real estate operation and management company samples. These companies are light-asset subsidiaries.

Table 2: Domestic data regression results

Explanatory Variables	(1) ROA	(2) ROA
Assets	-1.615***	-1.606***
	(0.377)	(0.360)
Employee	2.460***	2.733***
	(0.580)	(0.558)
Faturn		0.005***
		(0.001)
Constant	-5.174	-7.542**
	(3.603)	(3.499)
Number of samples	133	133
R^2	0.153	0.088

Notes: (1) The number within the brackets is the standard deviation of robust estimation;
(2) Significance level: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

3.2 Empirical test of American domestic market data

3.2.1 Model objectives and hypotheses

Currently, the number of real estate management and operation companies listed in China or on the New Third Board is still limited, and the main business of many companies is still the traditional real estate management services, which might not be suiTable for this paper that focuses on studying the "commercial real estate comprehensive operation and management capability". Therefore, in order to enhance the accuracy of verification results, this paper uses the same model and method to analyze the data of American listed REIT companies to verify the influence of "company scale and background", "management experience" and "operation efficiency" on the earning power of real estate management and operation companies, and also to further examine which characteristics a real estate management and operation company should have to become a real estate operator with a "strong operation and management capability". Therefore, REIT companies listed on the American market are adopted as research objects, since a majority of American REITs manage real estate properties on their own, which, in other words, means that the American listed REITs have the characteristics of property management and operation companies. Hence, it is feasible to adopt the American listed REITs for a comparative study with the Chinese "real estate management and operation companies".

3.2.2 Measurement and data

Samples for empirical research are provided by Wind financial terminal. Based on standards of the "Wind REITs", the tertiary industry of Wind by industrial classification, 173 REITs with the financial reports in 2018, and listed on NYSE or NASDAQ are acquired from Wind [3]. Since 13 samples do not have adequate data, other 160 REITs are all left for analysis. And the employee data on Jan. 1st , 2019 was used.

To facilitate comparison, this paper also adopts the ROA as the representative of the company's earning power, "Assets" as the substitutive index of the company scale and background, "Employee" as the representative of project management experience. Since real estate management

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[3] Data on June 21, 2019 should prevail.

and operation companies are labor-intensive service institutions, the number of projects under their management is highly and positively related to the number of staff. Since the American listed REITs lack complete data for "Faturn", the "Assets-turn" is adopted as the substitutive index of "project operation efficiency". Since the American law sets a rigid requirement on REITS to "have no lower than 75% of assets for real estate investment", the "Assets-turn" of American listed REITs can be compared with the "Faturn" of Chinese real estate management and operation companies. All the data are obtained from Wind financial terminal.

Table 3. Data descriptive statistics of American samples

Variables	Samples	Mean	Standard deviation	Minimum	Maximum
ROA	160	4.9220	3.85592	-13.69	16.16
Assets	160	62.6282	69.25600	.22	384.18
Employee	160	1315.4000	3073.14158	1.00	22000.00
Assets-turn	160	.1589	.10176	.00	.65

3.2.3 Method and model

The following regression model is built to verify whether the "Assets" representing the company scale and background, "real estate net value" representing the project management experience, and "Faturn" representing the project operation efficiency can represent the real estate management companies' earning power, and directly influence the companies' ROA:

$$ROA = \alpha + \beta_1 Assets + \beta_2 Real\_Estate\_Net + \beta_3 Asstes\_Turn + \varepsilon \tag{2}$$

Where, ε denotes the regression error.

3.2.4 Results and analysis

Table 4. Data regression results of American samples

Explanatory Variables	(1) ROA	(2) ROA
Assets	-1.615***	-1.606***
	(0.377)	(0.360)
Employee	2.460***	2.733***
	(0.580)	(0.558)
Assets-turn		0.005***
		(0.001)
Constant	-5.174	-7.542**
	(3.603)	(3.499)
Samples	133	133
R^2	0.153	0.088

Notes: (1) The number within the brackets is the standard deviation of robust estimation;

(2) Significance level: *** p<0.01, ** p<0.05, * p<0.1

Regression results suggest that the index "Assets" representing the company scale and background of REITs does not have a significant influence on ROA; the influence of "Employee" representing project management experience on ROA is positive; the same positive influence is found with "Assets-turn" indicating the project operation efficiency on ROA. The regression results suggest that the increasing scale of American REITs cannot directly improve their earning power, but the REITs with rich project management experience and high project operation efficiency have stronger earning power and property operation and management capability.

4. Conclusions

The core capability for traditional real estate operation and management to get transformed and upgraded into REIT asset service institution is their "operation and management capability". By visiting management personnel from domestic and foreign famous real estate consulting institutions, including Jones Slang Lasalle (JLL), Savills, and RET, in China, and senior management personnel of national large-scale business management companies, it is observed that experiential indexes used to evaluate real estate management and operation companies' operation and management capability can also be applied to evaluate the capability of traditional real estate management and operation companies to get transformed into REIT asset service institutions.

Empirical research of data of real estate management and operation companies listed on the Chinese market and on the New Third Board and data of American listed REIT companies both suggests that improvement of project management experience and project management efficiency can improve the earning power of real estate management operation companies, but the expanding company scale will not directly result in strengthening of real estate management and operation companies' earning power. Therefore, the empirical research of this paper substantiates that to adopt the company scale and background as a standard to evaluate the company's operation and management capability lacks the empirical basis, but real estate management and operation companies with rich project management experience and higher project operation efficiency have a stronger operation and management capability, and also a stronger capability to get transformed and upgraded into asset service institutions.

Since China's REITs are still at the starting stage, their market experience and empirical data are both lacking, and this research is also faced with various data limitations. With the development of China's local REITs and professional real estate management and operation industry, research findings of this paper can be further deepened to build a more reasonable, accurate and comprehensive index system to evaluate REIT asset service institutions' management and operation capability.

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