Research on real estate investment trust (REIT) as real estate financing for developers: a methodology review of previous study

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Abstract. Project financing commonly found in Indonesia is conventional project financing, namely financing with own capital and long-term loans with a certain composition. The use of conventional financing often produces an un-optimal and unprofitable cost of capital. Real Estate Investment Trust (REIT) is one of alternative financing that can be applied in global property projects, but the use of this strategy is needed to be further analyzed to be used as a project financing option in Surabaya. The developer companies tend to agree with the development of REIT in Surabaya and also the benefits obtained from the implementation of REIT. However, they are still having doubts about implementing it. The purpose of this study is to examine using REIT as a method of real estate financing for developers. This research is focused on finding the consequences of using REIT from the developer side. Therefore, the literature review method will be carried out.

1. Introduction
The economic development of each country is dependent on the development of a good real estate market. Development is one important factor in the country's economy. Surabaya is the second-largest city in Indonesia with 3,158,943 populations according to 2019 statistical bureau. Population growth and community migration are expected in Surabaya since it is also a city with a strategic position that has economic development potential. Thus, the need for property development will keep rising. For successful property development, one needs a successful project. A successful project for property development is reflected in a good financing organization [26].

One characteristic of a construction project is that it always requires financing. Project financing is providing funds for a project from various sources whether it is from equity or loan [26]. Financing in the most common way, is done with own capital or with a loan with a certain composition. Financing must produce the most appropriate financing composition to produce the optimum cost of capital or the lightest and profitable to the company. However, this method often results in an un-optimal cost of capital and is detrimental to the company [21].

The development of the Real Estate Investment Trust (REIT) the first time in the United States of America in 1960 under the REIT Act policy was spread to various parts of the world [17]. REIT (Real Estate Investment Trusts) is a real estate investment fund, which is an important means of real estate
securitization. Specifically, REIT is a trust fund collected from many investors by issuing shares or certificates of income, real estate investment management by specialized investment institutions, and distributing income as regulated to investors. As of October 2018, 37 countries have adopted laws and issued REIT [14].

The REIT system is designed like a mutual fund, to provide opportunities for small and medium investors to invest in real estate. REIT also reduces the debt rate, because it can access public capital, besides, REITs have an average debt level of 40% of their market value, whereas the real estate industry usually has a debt level in the range of 80% [5]. Even so, REIT can still access debt through banks, to achieve certain objectives such as acquiring property and then issuing public securities to reconstruct capital structures [9].

The establishment of REIT can also be done to avoid some property development problems in Indonesia such as price fluctuations and capital outflows in the national property industry which is quite large. REIT can reduce these two. Also besides, the fund market media is also beneficial for increasing the frequency and volume of property asset trading in the form of secondary market management [22].

The only few companies that issue REITs in Indonesia show that REITs are underdeveloped in Indonesia. The underdevelopment of REIT is unfortunate because companies can benefit from it, such as 1) Recycle capital, which is the funds obtained from REIT can be used to expand or build property further, 2) REIT also strengthens the solvency ratio, which is REIT funds can be used to pay off debt-related to property payments [23]. The impact of cutting taxes into a single tax can also attract investors so that it can improve the performance and value of the company [24].

The developer company tends to agree with the development of REIT in Surabaya and also the benefits obtained from the implementation of REIT. However, they are still doubting implementing it [25]. This paper will focus on mapping the previous research literature that will be used to obtain perceptions about financing using Real Estate Investment Trust (REIT) for developers in Surabaya, Indonesia.

2. Literature Review of the Previous Study

2.1. Methodology
The papers used in theoretical mapping are papers obtained from various reputable journal sources to make sure the academic standards of the literature analyzed in this paper. In this review literature, there are 20 publications from 2010-2020. Table 1 will list the journals used along with the ranking based on the SJR.

| Journals Publication | SJR  | Q Category | Number of Papers |
|----------------------|------|------------|-----------------|
| Economic Modelling   | 0.97 | Q2 in Economics and Econometrics, Q1 in Economics, Econometrics, and Urban Studies, Q1 in Business, Management, and Accounting | 1 |
| Journal of Property Investment & Finance | 0.48 | Finance | 5 |
| Journal of Real Estate Finance and Economics | 0.63 | Q1 in Urban Studies, Q1 in Business, Management, and Accounting | 6 |
| Corporate Governance | 1.47 | Accounting | 1 |
| International Review of Economics and Finance | 0.81 | Q1 in Finance | 1 |
| North American Journal of Economics and Finance | 0.54 | Q2 in Economics and Econometrics | 1 |
| Real Estate Economics | 1.15 | Q1 in Accounting | 1 |
| Physica A: Statistical Mechanics and its Applications | 0.71 | Q2 in Condensed Matter Physics, Q1 in Business and International | 1 |
| Journal of Corporate Finance | 1.57 | Management | 1 |
| Journal of Behavioral and Experimental Economics | 0.7 | Q1 in Social Sciences (miscellaneous), Q1 in Business and International | 1 |
| European Journal of Management and Business Economics | 0.64 | Management | 1 |
2.2. Result

From the literature review, it is known that from previous studies, the scope of research on REIT revolves around the topic of financing, the risk of REIT, the benefits of REIT, as well as the concept and character of REIT itself. In Table 2, is a theoretical mapping from previous research related to REIT and financing. The scope of the research paper is written for each paper, as well as the methodology used in the study, data types, and notes regarding what kind of methods were used in the researches.

REIT (Real Estate Investment Trusts) is a real estate investment fund, which is an important means of real estate securitization. Specifically, REIT is a trust fund collected from investors by issuing shares or certificates of income, establishing real estate investment management by specialized investment institutions, and distributing after-tax income as regulated to investors [14].

Tax concessions received by REIT companies make REIT must distribute a minimum after-tax profit of 90% to shareholders. However, this large profit-sharing also causes a decrease in retained earnings growth which is a component of shareholder funds [7].

Because of the limitations of REIT companies to maintain their capital, access to public capital markets is essential. However, accessing the capital market is not easy, so one alternative is to acquire and manage existing real estate assets [5].

As for acquiring these assets, relying on a mortgage from REIT alone is not enough. Many REIT companies are starting to turn to bank loans for acquisition funding while issuing public securities to reconstruct capital structures [9]. The acquisition of property by REIT makes REIT able to maintain high returns by reducing costs [5].

This asymmetrical information can affect the liquidation of a management company and can disrupt REIT credit lines from banks to acquire or investing [10]. It was also found that REIT might be sensitive to speculative bubbles. This speculative bubble affects the average return. Research result states that the highest average returns are in the REIT type equity, then the lowest average return is in type Mortgage REIT [1].

2.3. Discussion

The position diagram of each study in the literature is shown in figure 1. Based on figure 1, it can be depicted that the most commonly found research about REIT is about its characteristics, which means research about REIT is relatively new hence a lot of researchers are researching on REIT characteristics.

![Figure 1. Mapping positioning diagram](image-url)
| NO. | AUTHOR/YEAR     | SCOPE             | METHODS            | DATA TYPE   | Notes                                           |
|-----|----------------|-------------------|--------------------|-------------|------------------------------------------------|
| 1   | Lee et al, 2014| Financing, Risk, Benefit, Character | Quantitative, Qualitative | Primary, Secondary | Quantile Auto Regression (QAR) |
| 2   | Cardona, 2016  |                      |                     |             | 3 liquidity measurement and GMM regression |
| 3   | Ghosh et al, 2011 |                     |                     |             | Mathematic equation model |
| 4   | Morri and Baccarin, 2016 |                      |                     |             | Regression analysis |
| 5   | Scherrer, 2016  |                      |                     |             | Literature review |
| 6   | Gerlach et al., 2015 |                      |                     |             | EGARCH model |
| 7   | Seok et al, 2020 |                      |                     |             | Mathematic equation model |
| 8   | Marzuki et al, 2019 |                      |                     |             | Correlation analysis and mean-variance framework |
| 9   | Hardin III and Wu, 2010 |                      |                     |             | Descriptive and regression analysis |
| 10  | An et al, 2012  |                      |                     |             | Mathematic equation and regression analysis |
| NO. | AUTHOR/YEAR                  | SCOPE               | METHODS                      | DATA TYPE       | NOTES |
|-----|-----------------------------|---------------------|------------------------------|-----------------|-------|
| 11  | French & Price, 2018        | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 12  | Lu-Andrews, 2017            | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 13  | Loo dkk, 2015               | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 14  | Liu dkk, 2019               | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 15  | Doan dkk, Nguyen, 2018      | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 16  | Bericha dkk, 2019           | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 17  | Abdullah dkk, 2016          | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 18  | An dkk, 2016                | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 19  | Bao dan Gong, 2017          | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
| 20  | Grybas & Plinkiene, 2019    | Financing, Risk, Benefit | Character, Qualitative, Primary | Secondary       |       |
Figure 2. Scope of the previous study

Literature review in previous studies for theoretical mapping can be seen in table 2. Based on table 2, there are four scopes for REIT related paper used to be researched, namely REIT financing, REIT risk, REIT benefit, and REIT character. REIT financing scope is talking about the way REIT does its financing such as its capital structure, debt ratio, leverage, liquidity. REIT risk scope is about the risk that can be happened while using REIT. REIT benefit scope is about the benefit that could be obtained while using REIT. The last REIT character is talking about REIT’s basic concept or character when REIT met some occasions or conditions. The scope of the previous study and its content are described in figure 1.

Since it was mentioned in the literature mapping, there are literatures about REIT benefit and its characters to help the developers utilize it to its full advantage, and there are literatures that explained about its risks to be learned and be prepared for risks mitigation. Thus, the implementation of REIT as real estate financing for developers in Surabaya, Indonesia is encouraged.
3. Conclusion

This paper includes review of literature on real estate financing using Real Estate Investment Trust (REIT) for developers in Indonesia. The conclusions that can be drawn are as follows:

a. Using REIT as financing has advantages and risks for developers who will use it.

b. From the literature review, a lot of previous studies revolve around topics such as REIT characteristics, REIT financing, REIT benefit, and also REIT risk.

c. In this review, found that the most commonly found research about REIT is about its characteristics, which means research about REIT is relatively new hence a lot of researchers are researching on REIT characteristics.

As a continuation of the literature review and formulation of variable concepts to obtain a perception of using REIT as real estate financing for developers in Indonesia, a review needs to be conducted to analyze the methods to be used as research tools.

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