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The Study of Investment Portfolio Management and Sustainability of Property and Real Estate Companies in Indonesia Stock Exchange

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Abstract

Investment management emphasizes the importance of diversification through portfolio. The portfolio of financial assets is often studied. The study aims to analyze the property portfolio and sustainability in real assets. The population are property and real estate companies which are registered in Indonesia Stock Exchange. The research findings show that the highest expected return is obtained from the asset enhancements and the lowest is from hospitality services and infrastructures. At 5% alpha we found that property portfolio and sustainability are influenced by the company size. Inventories of property and investment properties are positively and significantly related to the corporate performance.

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Keywords: Investment Portfolio Management, Property Portfolio, Sustainability, Asset Enhancement

1. Introduction

An investment can be defined as the commitment of funds to one or more assets that will be held over some future

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period. It often refers to investing money in financial assets, such as certificates of deposit, bonds, common stocks, or mutual funds (Jones et al., 2009). However, the basic principles and techniques about financial assets investment are applicable to real assets (Jones et al., 2009).

In Indonesia, investment in real estate or property are usually held in the form of flats, land lots, shopping centers, dry port, shop houses, apartments, office towers, residential houses, and hospitality services and infrastructures. Properties are managed in the form of property management and asset enhancements to increase the value of the investment. Traditionally, residential real estate has been perceived as a relatively low risk asset class, showing returns above bank deposits and bonds but below the more volatile equity market (Hargreaves, 2005). Hargreaves (2005:5) found that the average annual percent capital appreciation for houses (21.3%) are higher than flats (12.2%) and apartments (11.7%). How about the return of the property investment in Indonesia?

There is an aphorism in financial assets investment called high risk – high return. Can this aphorism be proven in the case of the real assets investment where the real estate investment has some limitations such as localized market, heterogeneous, illiquidity, tax treatment, supply restriction, and has no symmetric information? In financial investment, the portfolio is done to reduce the risk. Markowitz had introduced the way to create an optimal financial investment portfolio. But, because of the different characteristics between the real estate and financial assets, it is difficult to create an optimal portfolio of real estate investment by using Markowitz model. Property and real estate companies in Indonesia create the portfolio based on the types of the properties. Why do they create portfolios? If there is a good management of the portfolios, there is an opportunity for the company to get more revenue and return.

Sustainable property is generally seen as those which are environmentally friendly, save energy, and reduce running cost (Schuman, 2010). Its concept needs the help of human to do activities which can indirectly help to take care of this planet. This concept is usually realized by creating green buildings. Petrini and Pozzebon (2010) found that large companies in Brazil are the leaders in sustainability practices where they created the integrated sustainability concept. Why should we apply the sustainability concept?

According to the Research of Institute for Building Efficiency (2010), green buildings have higher occupancy rate, increased resale value, increased rental rates, lower operating expenses, higher net operating income, lower capitalization rates, and productivity gains. These conditions are proven will increase the revenue and the return of the companies.

In property and real estate companies, properties to sell such as land lots, shop houses, residential houses, and other buildings are called as inventories. These inventories can be pledged for loan to the bank and can be more productive than inventories in manufacture companies. These inventories also generate revenue and return. Do these inventories have a correlation with the revenue and return on assets?

Investment properties are properties and infrastructures owned by the companies either to earn rentals or for capital appreciation, or both. Does this investment generate more revenue and return? Is it important to study the correlation between the investment properties and the company performance?

2. Literature Review

2.1 Property and Real Estate

Property is interests, benefits, and rights inherent in the ownership of real estate (Appraisal Institute, 2008). *Based on Appraisal Institute (2008), real estate* is the identification of parcels or parcel of land including repairs (if any).

They are parts or items that have been established or are on the ground or in the form of a permanent building, such as land, buildings, and fixtures in residential property.

The characteristics of real estate include differences in information, localized markets, heterogeneous properties, illiquidity, tax treatment, and supply restrictions (Chinloy, 1987 in Akkaya, 2005). Differences in information means that there is asymmetric information between the buyer and seller in real estate transaction. Localized market means the markets are local in scope for the physical properties. Heterogeneous properties refer to the varieties of the characteristics among the properties. Illiquidity means that the real estate is not mobile or profitable and needs some legal institution as well as large individisibility of size. Tax treatment, specifically the tax advantages can be the key factors in an investment decision. Supply restrictions explain that the land supply is relatively inelastic.

2.2 Risk Return

Investment decisions involve a trade-off between the return and risk. Investors should be willing to purchase a particular asset if the expected return is adequate to compensate for the risk (Jones et al., 2009). In the Chinese symbol of risk, risk is a combination of danger (crisis) and opportunity, representing the downside and the upside of the risk.

Expected return is the anticipated return in some future period while realized return is the actual return over some past period. Risk is the uncertainty about the actual return that will be earned on an investment (Jones et al., 2009). There are two components of return – yield and capital gain. Yield measures the cash flow of the price for the security. Capital gain (loss) is the appreciation (or depreciation) in the price of assets of the price change (Jones et al., 2009). Expected return can be calculated by weighted average of all possible outcomes (Jones et al., 2009) while the risk can be calculated by the variance or standard deviation of actual return. The risks in physical property including lower liquidity, higher management, and transaction costs, and vacancy risk.

Gross margin ratio is a profitability ratio that measures how profitable a company can sell its inventory. According to Hassan, et al. (2014), gross profit shows how much gain earned by the company after paying for variable cost of production. This term is used to explain the profit margin rations including the operating profit, operating income or return on sales.

2.3 Portfolio

In financial asset investment, there is a theory namely Modern Portfolio Theory which is developed by Markowitz in the 1952. Markowitz said, "Don't pull all of your eggs in one basket". Portfolio diversification works to reduce the risk of a portfolio to an investor (Jones et al., 2009).

2.4 Sustainability

Sustainability is to ensure that all businesses, public services, natural resources, the economy, and communities have the capacity to continue in the future (Schumann, 2010). Sustainable property can be in the form of green buildings or sustainable buildings. Green buildings are expected to deliver lower energy consumption and consequently lower CO_2 emissions (Schuman, 2010). The examples of the application of this sustainable concept including buildings with used mix, self-manufactured waste, and vegetation and parks supply to reduce heat and as reforestation.

2.5 Property management

Property management includes the day-to-day task of operating a development, such as selecting tenants, collecting rents, maintaining the building and grounds, making repairs, paying bills, and helping to plan and implement capital improvements (Paris and Kangari, 2005). Professional property managers normally handle some duties, such as enforcement of the rental unit property rules and regulations, performance of rental market surveys and rental cost setting, preparation, advertisement, and showing of rental unit, preparation of accounting reports, property inspection, rent collection, repair and maintenance of the rental unit, response to tenant complaints, and tenant screening and selection (Griswold, 2008).

2.6 Assets Enhancement

Assets enhancement is an effort to enhance the asset and to create value of retail or commercial property or sites through design innovation, enhancing viability, increasing income generation, improving marketability and minimizing life cycle operating cost. According to Hung (2014), assets enhancement works are carried out by property developers and business owners to improve the physical condition and enhance the market value. There are four types of asset enhancement, namely improvement of accessibility, improvement of visibility, improvement of facilities and equipments, and replanning of space and layout (Hung, 2014), he found that asset enhancement in shopping center can increase the visitors.

2.7 Inventory

Inventory is an asset owned by a business that has the express purpose of being sold to a customer, including items sold to end customers or distributors, such as raw materials, work in process, and finished goods (Taras & Taras, 2013). In property and real estate companies, land and other buildings to sell are called as inventories.

2.8 Investment properties

Investment properties consist of land, buildings, and infrastructures owned by companies that are used to earn rentals or for capital appreciation or both instead of as the production or supply of goods or services or for administrative purpose or sale in the ordinary course of business.

3. Research Methodology

This study is a quantitative design and using secondary data. The total of populations are 45 real estates and property companies which are listed at Indonesia Stock Exchange and all of the populations are samples for this research. The kind of data that is used in this research is secondary data and the characteristic is cross section, by seeing financial statements on December 31th 2014, annual report, company profiles, and from published data such as companies advertising, observation about the properties and sustainability concept that built by companies which are become samples and by doing interview with property expert also conducted to get comprehensive results.

In this research, the return that we used is gross margin return using a formula as follow : sales revenue minus cost of goods sold and divided by total sales revenue. Especially for inventories of property and investment property, we make standardization with total assets (inventories divided by total assets and investment also divided by total assets).

3.1 Data Analysis

3.1.1 Descriptive Statistic

Gross margin return are counted for every property type and property management only for the company that show the item separately in the notes of financial statements. The researchers count the average of that return to get expected return. Standard deviation of the return is a risk for property type. Rank are made for the expected return to get description about return of every property type and management property.

3.1.2 Correlation

Correlation analysis was conducted between expected return and risk, between inventories of property and return on asset, inventories of property and revenue, investment properties and return on asset and investment properties and revenue.

3.1.3 Logistic Regression

Logistic regression was conducted for knowing the influence of company size for portfolio and sustainability concept.
There are two logistic models, they are :

3.1.3.1. First Model

First model is to test the company size will influence them to make the portfolio above average. Property and real estate companies that are listed at Indonesia Stock Exchange shown 11 kinds of investments in property and property management (such as asset enhancements, flats, land lots, shopping centers, dry port, shop houses, apartments, office towers, property and portfolio management, residential houses, hospitality services and infrastructures). The average of portfolio shown 5.5. Portfolio above the average is 6 and up. In this research, we are conducted the logistic regression. Y is 1 if the company make portfolio above the average while Y is 0 if the company doesn't.

3.1.3.2. Second Model

Second model is to test, the sustainability will be influenced by company size. We give 1 if the company create the sustainability concept and zero for others which don't. Company size, that is measured by natural logairthm from total asset.

4. Results and Finding

4.1 *Expected Return Rank*

Table 1. Expected Return and Standard Deviation of the Property and Property Management

Type	Expected Return	Standard Deviation	n
Asset Enhancements	0.98	-	1
Flats	0.71	-	1
Land Lots	0.68	0.16	13
Shopping Centers	0.63	0.15	12
Dryport	0.63	-	1
Shop Houses	0.60	0.11	7
Appartements	0.58	0.21	14
Office Towers	0.55	0.14	13
Property and Portfolio Management	0.54	0.58	2
Residential Houses	0.50	0.19	13
Hospitality services and infrastructure	0.42	0.20	29

Asset enhancement is important to increase the value of property. Flats are property for middle income society, this property type still interested in Indonesia and give more return. Land lots also give high return because the property companies just sell land to develop with few facilities. For shop houses and residential houses, the property companies should develop the land and give more facilities for the customer. So the returns are not higher than land lots' return. For apartment and office tower, the companies should give more services to customer. The term of hospitality service and infrastructure in this paper include hospitality services, facilities, city management, recreation area, sports area, golf, water installation, water meter maintenance, building maintenance, installation, maintenance, slop management, office service, parking area, building management, industrial park management, restaurant, and hotel. The return of hospitality service and infrastructure are the smallest, it is because of the complicated working.

4.2 Risk and Return

In this research, for property investment there is no significant correlation between risk and expected return with Alpha 5%. Coefficient of correlation is -0.507 and ρ value is 0.111. We have no evidence to prove the aphorism that is "high risk high return" in property investment.

4.3 Property Portfolio

İt is founded that ρ value is 0.002 and Exp(B) is 3.339. Hosmer and Lemeshow is 0.906 that means this model is acceptable. Nagelkerke R square is 0.432. Omnibus test of coefficient is 17.430. -2 Loglikehood is 43.860 this model is suitable. Prediction of correct prcentage is 73.3. Company size has positive and significant impact for the company for having the probability to make the sustainability concept.

4.4 Sustainability

The reserachers are founded 15 companies create the sustainability concept and 30 companies don't. it is founded ρ value is 0.004 and Exp(B) is 2.958. Hosmer and Lemeshow is 0.401 that means this model is acceptable. Nagelkerke R square is 0.369. Omnibus test of coefficient is 14.057. -2 Loglikehood is 44.516 this model is also suitable. Prediction of correct percentage is 73.3 Company size has positive and significant impact for the company for having the probability to make the sustainability concept.

4.5 Correlation Property Portfolio andSustainability with Return on Assets and Revenues

Coefficient of correlation between property portfolio and return on Assets is -0.073 (ρ value 0.633). Meanwhile, coefficient of correlation between property portfolio and revenue is 0.597 (ρ value 0.000). Property portfolio and sustainability concept that are shown by companies have no significant correlation with return on assets, that means they have no correlation with assets efficiency. They have positive and significant correlation with revenue, that means when they have many works, so the revenues also high. When the companies create the sustainability concept. So the revenue also high.

4.6 Correlation of Inventories of Property and Investment Properties with Corporate Performance

Table 2. Correlations Inventories of Property and Investment Properties with Return on Assets and Revenues

Type	Return on Assets	Revenues
Inventories of Property to Total Assets Ratio	0.367 (0.013)	0.022 (0.887)
Investment Property to Total Assets Ratio	0.881 (0.000)	-0.039 (0.800)

Figure in parantheses is ρ value

Inventories of property for total assets ratio shows the portion of assets tied up in property for sale. This research found that the higher value inventories of properties, the higher return will received by companies, but it is not direct correlation with revenues. That means, the company with higher inventories of properties also have economic scale.

5. Conclusion and Implication

The order of expected return starts from the higher is asset enhancements, then followed by investment in flats, land lots, shopping centers, dry port, shop houses, apartments, office towers, property and portfolio management, residential houses, hospitality services and infrastructures. There is no significant correlation between risk and expected return in property investments with alpha 5%. Company size will be influenced by making property portfolio above average and creating sustainability. They do not associate with the amount of return on assets, but related to the revenues. Inventories of property and investment properties are positively and significantly related to the corporate performance.

The implication is that the companies need to make portfolio in property investment and create sustainability because invesment diversification and sustainability give high revenues. Asset enhancement can get the higher return. By doing this effort, the company should have good skills. Just a few of competitor wants to do this job because this is one of a good opportunity.

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