

LEVERAGE RATIO EFFECT ON STOCK RETURN IN THE COMPANIES SECTOR OF PROPERTY, REAL ESTATE AND CONSTRUCTION IN INDONESIA: PANEL DATA ANALYSIS

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ABSTRACT

One of the capital market instruments most widely known to the public is a stock. The main purpose of investors or potential investors to invest in stocks is to obtain rate of return (return) maximum and minimum risk. To predict stock returns are many factors that can be used as a parameter, one of them by calculating financial ratios of the company. The better the level of financial performance of a company, it is expected the stock price increases, and benefit (return) of shares to investors. The purpose of this study to analyze the variables Return on Assets (ROA), Price to Book Value (PBV), the Current Ratio (CR), Debt to Equity Ratio (DER), and Total Assets Turnover (TATO) on the level of stock returns to firms of property, real estate and construction of buildings listed on the Indonesia Stock Exchange period 2011-2014. The sample used in this study as many as 18 companies, obtained by using purposive sampling method. The analytical tool used is a panel data regression analysis. The results showed that DER influences the stock return.

Keywords: return on assets, price to book value, current ratio, debt to equity ratio, total assets turnover

1. Introduction

In 2012 and the first half of 2013 the property sector Indonesia is growing rapidly, the growth in the profits of the property developer Indonesia rose sharply (from 45 property companies listed on the Indonesia Stock Exchange in 2012, 26 companies recorded a net profit growth of more than 50%) and, obviously, Indonesia property prices increased in line with the situation (generally in residential property prices grew by almost 30% per year between 2011 and 2013) Van der Schaar, RMA (2015)

Companies that go public consist of various types, which are divided by line of business in a particular sector, one of which is the property sector, real estate and construction. These sectors are selected in this study because it is a sector that has developed very rapidly over approximately the last five years in Indonesia. Based on the data obtained, it is known that the movement of stock price in the property sector from 2010-2014, always increase. Increasing

stock prices are quite high occurred in the period 2011 - 2012 which is approximately 100 points or an increase of approximately 42%.

If the stock price has increased from one period to another period, it will create return. The amount of return depends on the stock price changes in the trading price of the shares. The stock price is affected by many factors such as fundamental and technical factors. Factors fundamental information obtained from the company that from the financial statements, while the factors of technical information obtained from outside the company such as economic conditions, and political (Dzulqarnain, 2014). In carrying out the investment needs to be a consideration and calculations done for their elements of risk and uncertainty, resulting in investment activities must decide how the amounts invested and in what asset investment is made (Tyas 2010). According to Hermi and Kurniawan (2011), the financial performance of a company is a major consideration for investors. The better the level of financial performance of a company, it is expected the stock price increases, and benefit (return) of shares to investors.

Based on the results of these studies, the research generally will analyze the influence of financial ratios to return stock in companies that have gone public in the property sector, real estate and construction. The purpose of the research in this study is to analyze the effect ROA, PBV, the CR, DER and TATO to Stock Return. This study used a sample of companies as much as 18 and the study period was 4 years old. The estimation method used in this study is panel data regression analysis with the consideration that, by applying panel data estimation process, at the same time the characteristics of individuals can be estimated with attention to the dynamics between the times of each variable used in the study. Using the panel data estimation will be more comprehensive and include things that are close to reality (Ekananda, 2014).

2. Theoretical Framework and Related Articles

2.1 Stock Return and Financial Performance

Stock returns is one of the factors that motivate investors to invest and also a reward for the courage of investors bear the investment risk undertaken (Tandelilin, 2010: 102). According to Jones et.al (2009: 141) return is a benefit for doing investment activities. Return stock consists of two components, namely the yield and capital gain (or loss). The yield is an income or cash flow received by investors, for example in the form of dividends or interest. Capital gain (or loss) is the difference between the purchase prices of shares at the price when the stock is sold. So it can be concluded that stock returns is stock returns expected by investors on investments made in stock. According to Muslich (2004:44), the company's financial performance is financial performance is reflected in the financial statements, namely the balance sheet, income statement and financial performance illustrates the company's business. To analyze the performance of the company may use financial ratios that are divided into four groups: liquidity ratios, activity ratios, leverage ratios, profitability ratios and the ratio of the market. The liquidity ratio used in this study is the Current Ratio, the ratio of activity namely TATO, DER leverage ratio ie, profitability ratios of ROA and the ratio of the market is the PBV.

2.2 Related Articles

Below is description of previous research related to the effect of the financial ratio to stock return. Hilmi and Kurniawan (2011) showed that financial performance in manufacturing companies consists of the Net Profit Margin (NPM), Return on Equity (ROE), Price to Earning Ratio (PER), Return On Investment (ROI), PBV, DER and Earning Per Share (EPS)

simultaneously have a significant effect on stock prices. The test results showed only partial EPS variables that have an influence on stock returns. Susilowati (2011) studied the influence of fundamental factors (EPS, NPM, ROA, ROE and DER) to stock return of manufacturing companies listed in Indonesia Stock Exchange for the period 2006-2008. The results showed that the DER affect on stock returns that are used by investors to predict the stock return of manufacturing companies. Kheradyar and Ibrahim (2011) analyzed the role of financial ratios as predictors of stock returns in Bursa Malaysia. The results showed that the variable Dividend Yield, Yield Earnings and Book-to-market ratio empirically able to predict stock returns. Tyas (2010) studied the influence of financial ratios to return stock at food and beverage sector (food and beverages) using the same three variables Thrisye and Simu (2013), namely TATO, DER and CR. ROA and EVA were not used by Thrisye and Simu (2013). The results showed that partially there was the influence of the variables CR and DER on stock returns, but simultaneously none of the variables showed a significant effect. Research Thrisye and Simu (2013) in the mining sector SOEs 2007-2010 period show that all variables affect the stock return. The result contradicted caused by different research object was agriculture food and beverage industry with state-owned mining sector. Other researchers are Nuryana (2013) used 17 variables to analyze the influence of financial ratios financial ratios on stock returns in LQ45 companies on the stock exchanges of Indonesia. The results showed only five variables that could be used in the regression equation, namely EPS, TATO, gross profit margin, and ROI. Dzulkarnain (2014) in research in the sector of the property industry, real estate and construction showed that ROA affect to stock returns. In that study DER, TATO, PBV, NPM and CR had no effect on stock returns.

3. Research Methode

This study used secondary data 2011-2014 period, the site listed companies were the object of research which was obtained from the publication of the Indonesia Stock Exchange and Yahoo Finance. The variables used in this study largely adopt from Dzulkarnain study (2014) that the stock return as dependent variable (Y) and the independent variable was ROA, PBV, CR, DER, TATO. The data used in this research was panel data, which was a combination of time series data and the cross section data. The technique used in this research was the panel data regression, three were three method i.e the common effect, fixed effect and random effect. To determine whether the model estimation used the common effect or fixed effect, the Chow test or Likelihood ratio test was conducted. The next step was the Hausman test conducted to determine whether the fixed effect model or random effect, assumes that the difference in the intercept in the equation. The fixed effect definition based on the differences in the intercept between companies, but the same intercept between time (time invariant) (Widarjono, 2007). The population in this research was all public companies listed on the Indonesia Stock Exchange (IDX), which belongs to the group of property, real estate and construction of as many as 51 companies. The sampling technique is purposive sampling, i.e companies that had the following criteria: (a) was listed on the Indonesia Stock Exchange; (b) has carried out an IPO before 2010; (c) Provided financial statements in the period of 2011-2014; (d) Has the completeness of the data and produce a profit every year. Subsequently obtained samples were 18 companies that meet the above criteria as follows:

Table 1. Sample of Companies Sector of Property, Real Estate and Construction

No.	Code	Company Name	No.	Code	Company Name
1	ADHI	Adhi Karya	10.	LPCK	Lippo Cikarang
2	ASRI	Alam Sutra Realty	11.	LPKR	Lippo Karawaci
3	BSDE	Bumi Serpong Damai	12.	PLIN	Plaza Indonesia Realty
4	CTRA	Ciputra Development	13.	PUDP	Pudjiadi Prestige
5	CTRP	Ciputra Property	14.	RDTX	Roda Vivatex
6	CTRS	Ciputra Surya	15.	SMRA	Summarecon Agung
7	DGIK	Nusa Konstruksi Enjiniring	16.	SSIA	Surya Semesta Internusa
8	GPRA	Perdana Gapuraprima	17.	TOTL	Total Bangun Persada
9	JRPT	Jaya Real Property	18.	WIKA	Wijaya Karya

The initial step of data processing was the classical assumption test. The test aimed to ensure that the model obtained actually meet the basic assumptions in the regression analysis which includes the assumption of normality happen, the data has no autocorrelation, no heteroskedasticity and multicollinearity. The next step was to estimate using Common Effect, Fixed Effects and the Random Effect.

4. Result and Discussion

This study analyzed data from 2011 through 2014. The following was a descriptive analysis of data for 18 companies which become the sample. Based on the Figure 1. the development of CR could be concluded relatively fluctuate. The highest CR occurred in 2012 in the amount of 559.88, while the lowest CR occurred in 2013 that was equal to 24.05. During the study period, the company that received the highest CR was a company with a code LPKR i.e CR an average of 445.32, while the company with the lowest CR was a company with a code CR RDTX i.e on average 45 905. The Figure 1. was shown below.

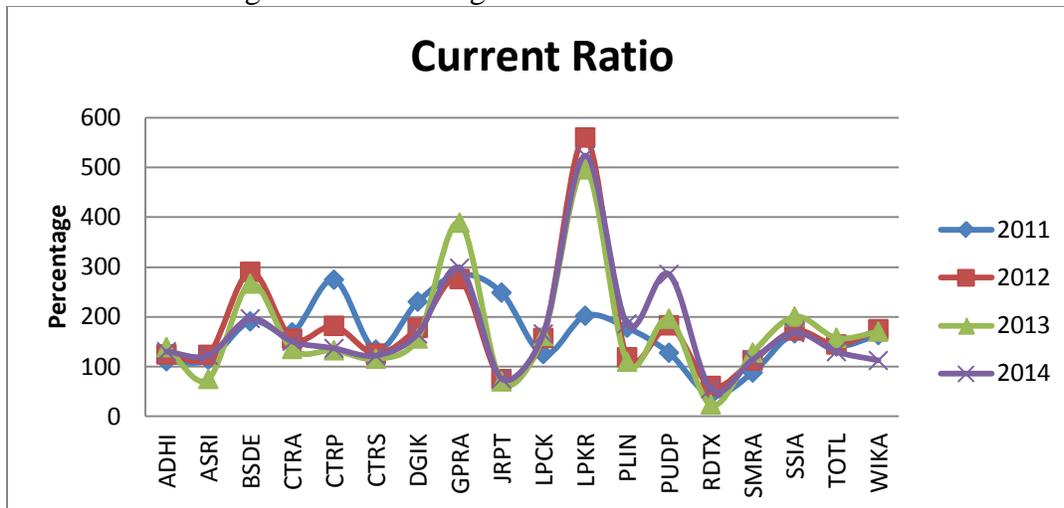


Figure 1. Growth of CR in the period 2011-2014

The Indonesian economy in 2011 showed strong resilience amid the global economic uncertainty, reflected in the growth performance even better and macroeconomic stability was

maintained. Indonesia's economic growth reached 6.5%, the highest figure in the last ten years. The decline in the BI Rate since October 2011 is expected to be able to turn the sources of domestic financing, particularly from the banking sector. The pace of investment growth is still predicted to increase which in turn will be able to maintain purchasing power. Opportunities to improve the investment will be even greater after the entire agency put back Indonesia into investment grade (Bank Indonesia, 2011).

The next financial ratio to be analyzed namely ROA. In a sample of 18 companies, ROA relatively stable at around 12:54 to 15:21, except in 2012, there was one company that received grades ROA rose very sharply, namely 75.07 from the previous year at 6:17. The highest ROA occurred in 2012 in the amount of 75.07 achieved by the company with the code PUDP, while the lowest ROA occurred in 2011 that was equal to 12:54 by firms DGIK. The ROA chart progress could be seen in Figure 2 below.

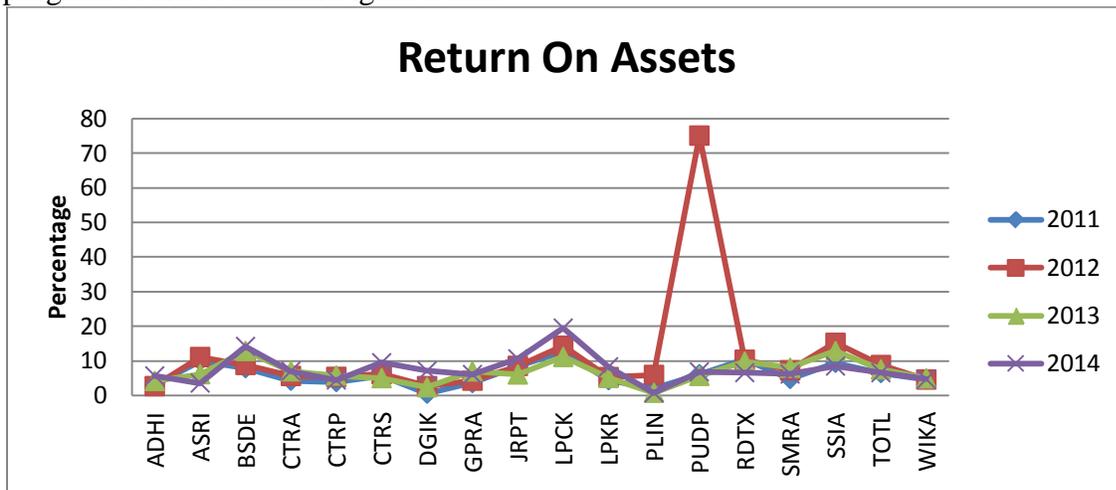


Figure 2. Growth of ROA in the period 2011-2014

TATO ratio development in a sample of 18 companies highly fluctuating. TATO highest ratio occurred in 2013 that at 1:13 was achieved by the company with the code ADHI, while the ratio of the lowest TATO occurred in 2011 of 0.1 achieved by the company with the code CTRP.

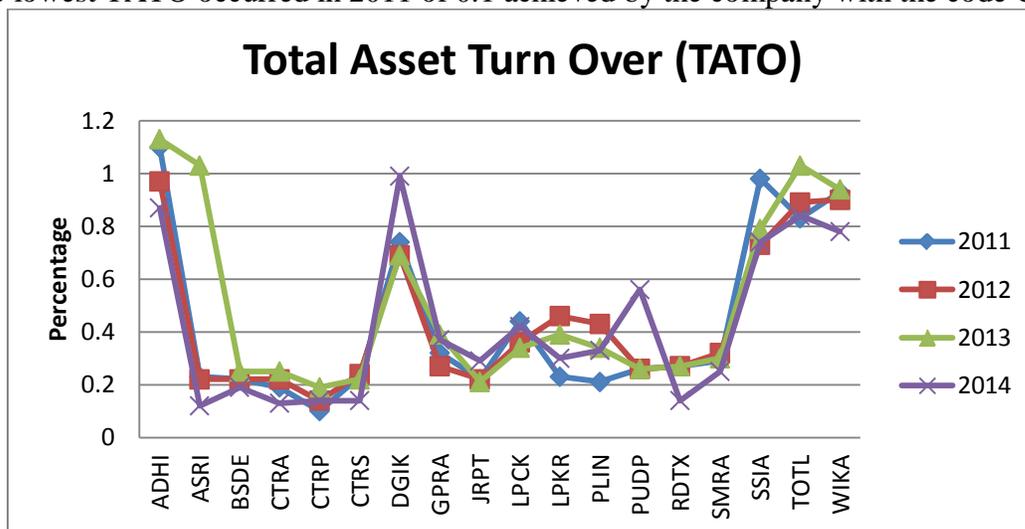


Figure 3. The growth of TATO in the period 2011-2014

Developments of PBV ratio at 18 sample companies relatively fluctuate. PBV ratio of the highest occurred in 2011 in the amount of 16.3 achieved by the company with the code RDTX. The opposite condition, most low PBV ratio occurred in 2014 of 0.25 achieved by the company with the code DGIK. PBV ratio chart progress could be seen in Figure 4. Below.

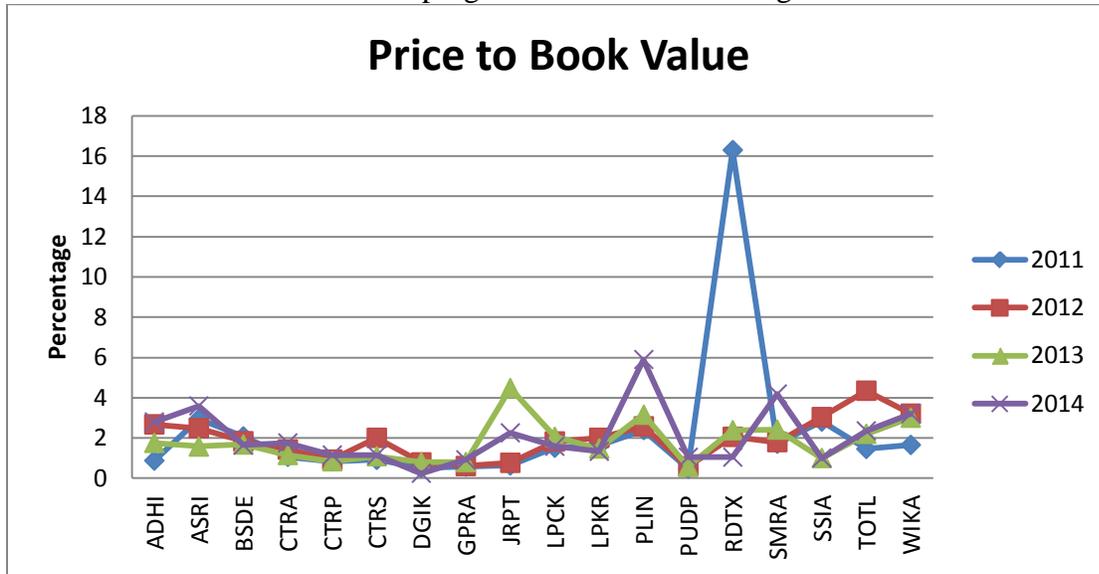


Figure 4. The Growth of PBV Ratio in the period 2011-2014

The DER on a sample of 18 companies highly fluctuating. DER highest occurred in 2013 in the amount of 5.67 achieved by the company with the code ADHI, while the lowest DER occurred in 2011 yaitu of 0.2 achieved by the company with the code CTRP. DER was a leverage ratio or no mention of the term means the solvency ratio measures the company's ability to meet its financial obligations (Husnan, 2004). DER with numbers below 1.00, were indicating that the company has a debt that was smaller than its equity. But as an investor, should be careful in looking at this DER, because if the total debt was greater than the equity, it must be seen further whether the current liability or long-term debt that was greater which was owned by the company.

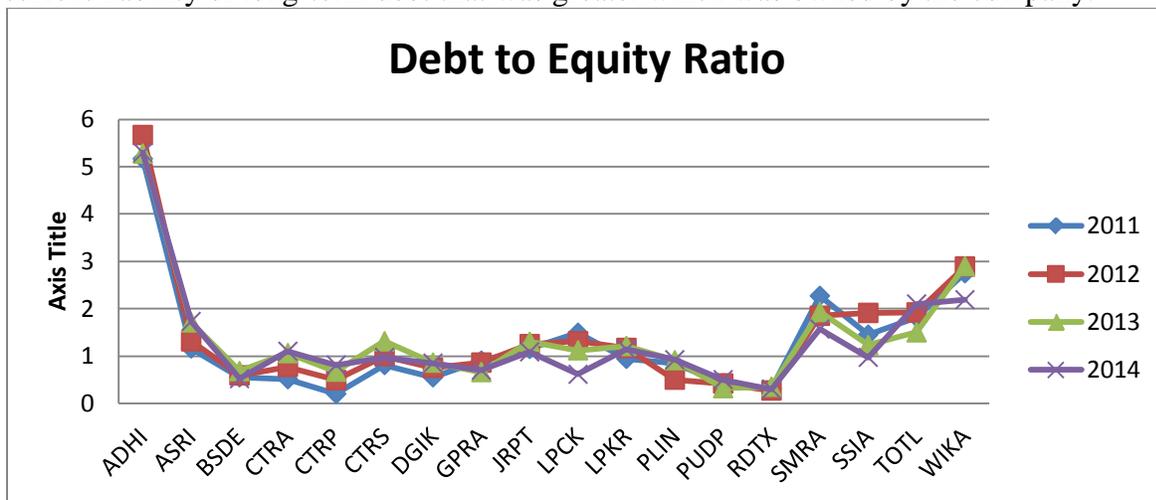


Figure 5. The Growth of DER in the period 2011-2014

Overall, almost all companies in this study had a CR of more than 100%, except for companies with a code RDTX. This showed that the majority of companies in this study were in good shape, but the CR did not reflect the company's profit. CR only reflects how the company can meet its obligations. The next step in the data processing is to conduct the classical assumption test. The classic assumption test results showed that the study data were normally distributed. A common problem that occurs in the data panel was autocorrelation and heteroscedasticity. The test results showed that the data used in this study were free of autocorrelation, but there were symptoms of heteroscedasticity. However, the panel data regression results were not intrusive to the process of further data processing.

The question that often arises in the study using panel data analysis was whether the dependent variable likely to have characteristics that were static over time containing their observations or changes over time of observation. In the panel data regression techniques, there were 3 estimated methods, the common effect, fixed effect and random effect. The first step was the estimation of the common effect with the following equation results:

$$\begin{aligned} \text{Stock return} &= 11.3642 - 0.0136\text{CR} - 0.6717\text{ROA} - 3.2203\text{TATO} + 7.8374\text{DER} + 3.1137\text{PBV} \\ p\text{-value} & (0.0218) \quad (0.2871) \quad (0.8017) \quad (0.2609) \quad (0.4440) \\ R^2 &= 0.034 \end{aligned}$$

The estimation results indicated that all variable CR, ROA, TATO, DER and PBV, has no effect on stock return. R^2 value was also very small, so that the common effect indicated that the method was not suitable to be applied. Chow test results indicate that the model does not match estimated by common effect. The next step was the estimation of the fixed effect, with the result of the following equation:

Fixed Effect

$$\begin{aligned} \text{Stock return} &= -83.8139 + 0.0525\text{CR} - 0.0844\text{ROA} - 48.6634\text{TATO} + 90.2488\text{DER} + 4.5961\text{PBV} \\ p\text{-value} & (0.01944) \quad (0.7538) \quad (0.9378) \quad (0.1629) \quad (0.0269) \quad (0.3376) \\ R^2 &= 28.4\% \end{aligned}$$

Random Effect

$$\begin{aligned} \text{Stock return} &= 2.97219 - 3.814003\text{CR} - 0.767839\text{ROA} - 0.020305\text{TATO} + 7.837\text{DER} + 3.113\text{PBV} \\ p\text{-value} & (0.6677) \quad (0.8706) \quad (0.4638) \quad (0.9063) \quad (0.3389) \quad (0.4437) \\ R^2 &= 0.034 \end{aligned}$$

In panel data analysis, model selection with constant and random influences could be performed using Hausman test. In other words, the determination of fixed and random estimation method most appropriate that the problem utam research panel data was the Hausman test. (Ekananda, 2014). The estimation results by using random effect showed the results that R^2 very small and based on the p-value, the model indicated that none of the variables affect the stock returns. Hausman test results show that the model using Fixed Effect.

The variables that influence the stock return was DER with a p-value less than 0.05 and R^2 obtained was 28.4% as shown in equation. These results support the notion that the leverage ratio aims to boost the financial performance of the company. If companies rely on capital or equity only, then the company will be difficult to expand the business which is need additional capital. This ratio was often used by analysts and investors to see how much debt the company when compared to equity held by the company or its shareholders. The higher the number DER then assumed the company has a higher risk for the liquidity of the company (Anonymous, 2013). These results are consistent with research Tyas (2010), Thrisye and Simu (2010 and Susilowati (2011). These results can be explained that the factor of macroeconomic conditions greatly affect the growth of the property sector, real estate and construction. Indonesia's

economic growth continued to fall. After achieving economic growth of 6.5 percent in 2011 and 6.23 percent in 2012, economic growth in 2013 was below 6 percent (Suryowati, 2014). The Central Statistics Agency (BPS) recorded economic growth in Indonesia during 2013 amounted to only 5.78 percent. The numbers are down compared to the whole 2013 by 6.23 percent. Based on reports from BPS (2015), Indonesia's economy grew 5.02 percent in 2014 slowed down compared to the year 2013 by 5.58 percent. From the production side, the highest growth was accomplished by Business Information and Communication Sector of 10.02 percent. On the expenditure side the highest growth achieved by Component Non Profit Institution Consumption Expenditure Household (LNPRIT) amounted to 12.43 percent (Badan Pusat Statistik-Central Bureau of Statistics, 2015). Other conditions that could be explain from the results of this research, that consumers' needs for housing was a basic requirement that even though there was tendency of rising house prices, the purchase of the house was still being done.

Summary

Based on the results of the panel data regression, the variables that affect stock returns in this study is the DER. The Indonesian economy is likely to decelerate in the last three years and the special characteristics possessed by property sector, real estate and building construction affect the state of the company's financial performance. This research has limitation that the variable used in the model only examined in terms of the fundamentals of the company. The model in this research has not entered some macro economic factors such as inflation and interest rates.

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