



## Research Article

# THE EFFECT OF LIQUIDITY AND LEVERAGE ON PROFITABILITY OF PROPERTY AND REAL ESTATE COMPANY IN INDONESIAN STOCK EXCHANGE

Rudin M.\*, Djayani Nurdin and Vita Yanti Fattah

Management Department, Tadulako University, Palu, Central Sulawesi, Indonesia

\*Corresponding author email: rudin.ternate@gmail.com

## Abstract

The objectives of this research were to know and analyze the effect of leverage and liquidity simultaneously and partially on profitability at go public real estate and property company in Indonesian stock exchange within the period of 2005 until 2010. In detail, this research aims were: 1) to know the effect of liquidity and leverage on profitability of property and real estate company in Indonesian stock exchange, 2) to know the effect of liquidity on profitability of property and real estate company in Indonesian stock exchange, and 3) to know the effect of leverage on profitability of property and real estate company in Indonesian stock exchange. Based on purposive sampling technique, this research determined 43 companies as research population, since 16 companies provide a comprehensive and complete financial report within the period of research. The data was analyzed using SPSS version 16 with multiple linear regression test. The result showed that: 1) leverage and liquidity simultaneously have significant effect on profitability, 2) liquidity have an effect partially on profitability, but the effect was not significant, 3) leverage have a significant effect on profitability partially.

**Keywords:** leverage; liquidity; Indonesian stock exchange; profitability; trade off

## Introduction

Indonesian stock exchange is one of the places to make a transaction and trade the stock exchange of various companies in Indonesia. The kinds of companies had been listed in Indonesian stock exchange include agricultural companies, mining companies, basic and chemical industries, various industry of consumed goods, infrastructure, finance, property and real estate companies. Indonesian stock exchange facilitate stock exchange trading (equity), obligation letter (fixed income), and derivative trading (derivative instruments).

The aim of Indonesian stock exchange are to increase the efficiency of financial capital market industry in Indonesia, including property and real estate companies, and to increase the attractiveness of investment. To reach their aims, the property and real estate companies managed their companies best to be able to compete with other companies. Investment in property and real estate sector is still a main choice of most people, because of the assumption that property and real estate is one of best ways to develop money.

The most interesting benefit of investing in property and real estate is the possibility of using other's money in investment. The society is attracted to invest their fund in property and real estate sector because the price tends to increase. Investment in property and real estate sector also have obstacles, for example delays of rent payment, people who rent move without information, and the damage of building.

To win the competition, every companies have to increase their profitability, which is the ability to produce profit. Profitability is a fundamental aspect of companies because it functioned as measurement tool of both effectivity and efficiency of resource usage. The increase of company's profitability is always affected by liquidity and leverage. Those two aspects are the references of company's profitability measurement. Liquidity and leverage are principal problem and important topic the companies often face, because almost all the attention of company is drawn to manage the smooth activa and obligation, and also the long term obligation as important part of company's fund source.

If the company decide to set the working financial capital in large quantity, the liquidity and leverage level will be stable

but the chance to get bigger profit will be decrease, and finally affect the decrease of profitability. Otherwise, if the company wants to maximize the profitability, it could also affect the company's liquidity and leverage level. The higher liquidity and leverage, the better position of company in creditor's view. In determining the management policy of liquidity and leverage, the companies are faced to trade off between the liquidity and leverage that can affect profitability (Van Horne, 1997)

The amount of liquidity and leverage should be suitable with company's need, because both excess and lack of them would lead to negative effect. Excess liquidity and leverage could harm the company because it stimulate gathering of large amount of fund without productive usage. Besides that, excess liquidity and leverage could also lead to inefficiency or waste in company's operation that hamper the profitability. Efficient liquidity and leverage management in the company leads to increase of profitability (Gitosudarmo, 2008). From the stock exchange holder's view, high liquidity and leverage is not always profitable because it increase the possibility of unemployed fund that should have been used to invest in more profitable projects (Tunggal, 1995).

More property and real estate companies managed to join Indonesian stock exchange in Jakarta show that liquidity and leverage management have a very important role in company's sustainability. Company's profitability would be achieved by balancing the efficiency of liquidity and leverage management. The change of liquidity and leverage affect the cost load and company's efficiency in production. The more obligation certified by company to fulfil their needs, the more cost to be fund, for example to pay the interest or to pay the obligation.

To maximize profit, the management division should identify the aspects that could affect profit production. This is important because the change of liquidity, leverage, and fund sale will affect the profitability of company. To reach maximum profit, it needs highly effective management. The measurement of management effectiveness showed by the profit achieved and investment could be done by knowing the ratio of profitability (Weston and Brigham, 1991). By knowing the ratio of profitability, the company could monitor its development. To maximize the profit of company, the financial manager should know the trade-off of liquidity and leverage. By knowing the effect of liquidity and leverage on profitability, company leaders could determine the steps of problems solving and minimize their negative effects.

The increase and decrease of company's profitability could be known by looking at the ratio of Return on Investment (ROI). It shows the number of companies have already get the profit on all financial resource planted in the company. This research used Return on Investment (ROI) as measurement tool of property and real estate company's profitability. The development of property and real estate industry's profitability in Indonesian stock exchange during 2005-2010 could be seen in Table 1.

The objectives of this research were: 1) to know the effect of liquidity and leverage on profitability of property and real estate companies in Indonesian stock exchange, 2) to know the effect of liquidity on profitability of property and real estate companies in Indonesian stock exchange, 3) to know the effect of leverage on profitability of property and real estate companies in Indonesian stock exchange.

**Table 1:** The Development of Property and Real Estate Industry's Profitability in Indonesian Stock Exchange during 2005-2010

No	Company Name	Year					
		2005	2006	2007	2008	2009	2010
1	PT. Citra Kebun Raya Tbk	0.02000	0.02000	0.83000	6.68303	2.51697	0.04711
2	PT. Ciputra Surya Tbk	0.97000	0.63000	8.93000	3.63669	0.93984	0.02751
3	PT. Duta Pertiwi Tbk	1.65000	1.61000	1.31000	0.88845	8.46450	0.00306
4	PT. Bakrieland Development Tbk	1.01000	2.82000	2.35000	3.26455	1.14125	0.01047
5	PT. Gowa Makassar Tourism Tbk	2.54000	2.75000	2.82000	2.78746	4.41754	0.07681
6	PT. Jaya Real Property Tbk	0.42000	5.00000	0.62000	6.68415	7.41443	0.01666
7	PT. Dayaindo Resources Tbk	0.48000	0.39000	1.81000	0.82613	1.24807	0.02726
8	PT. Lamicitra Nusantara Tbk	1.31000	0.20000	2.80000	1.45449	2.06388	0.04745
9	PT. Lippo Cikarang Tbk	1.50000	0.28000	1.70000	1.01327	1.65700	0.01758
10	PT. Lippo Karawaci Tbk	1.21000	0.28000	1.42000	3.14647	3.20014	0.01579
11	PT. Pembangunan J, Ancol Tbk	0.40000	13.23000	0.56000	9.93014	8.98392	0.09034
12	PT. Pudjiadi And Sond Estate Tbk	2.00000	4.41000	1.71000	8.03606	11.01549	0.04722
13	PT. Pudjiadi Prestige Limited Tbk	0.67000	0.11000	2.67000	0.78462	2.44361	0.03551
14	PT. Pakuwon Jati Tbk	20.00000	8.04000	2.69000	0.26663	4.21628	0.06948
15	PT. Surya Inti Permata Tbk	0.15000	13.44000	6.93000	3.08139	2.63190	0.00030
16	PT. Summarecon Agung Tbk	1.23000	7.67000	5.28000	2.59229	1.50893	0.01659
	Mean	2.22250	3.80500	2.77688	3.44224	3.99148	0.03432

Source: Indonesian Capital Market Directory (ICMD) 2011

## Research Method

The research was descriptive verificative research. This research involved testing to know the effect of independent variable on dependent variable set as the object of this research. The research was located in Indonesian stock exchange in Jakarta, and done within sixty days since August 8<sup>th</sup>, 2011 until November 8<sup>th</sup>, 2011. The population of this research was all of the go public property and real estate companies in Indonesian stock exchange during 2005-2010, with total number of 43 companies. The sample was 96. The sample number was derived from 16 companies that issued and sold stock exchange or obligation multiplied by 6 years of financial report, so the total number was 96.

### Independent Variable (X)

Liquidity variable (X1) in this research was measured by current ratio (CR). This ratio shows the ability of company in fulfilling its short term obligation by comparing smooth activa and obligation. Leverage variable (debt) (X2) is the ratio used to measure the comparation between fund provided by company's owner and fund from company's creditor.

### Dependent Variable (Y)

The dependent variable in this research was profitability, represented by Return on Investment (ROI). ROI is the ratio used to compare the business result achieved from company's operation (net operating income) and investment or activa used to produce profit.

### Data Gathering Technique

The method of data gathering used in this research was documentation method. This method was done by taking notes or collecting financial report data included in Indonesian Capital Market Directory (ICMD). The data was in form of published financial report data of property and real estate companies listed in Indonesian stock exchange during 2005-2010.

## Data Analysis

### Descriptive Analysis Method

Descriptive analysis metode was used to know the description of liquidity and leverage on profitability through return on investment of companies that were compared externally. It included a company compared with average condition from all of the object of research.

### Quantitative Method

The analysis model approach used was Multiple Linear Regression analysis based on Sugiyono (2007:275) as follows.

$$Y = a + b_1 X_1 + b_2 X_2 + e$$

$$Y = \text{Profitability}$$

$$X_1 = \text{Liquidity}$$

$$X_2 = \text{Leverage}$$

$$a = \text{Constant}$$

$$b_1 b_2 = \text{Regression Coefficient}$$

$$e = \text{Disturbing variable}$$

### F Test or Simultan Test

In hypothesis testing, F test was used to test the effect of independent variables simultaneously on dependent variable from a multiple regression equation by using statistical hypothesis. The decision making was based on Sig value derived from data analysis assisted by *Statiscal Product and Service Solution* (SPSS 16.0) program.

### t-Test or Partial Test

In hypothesis testing, t test was used to test the effect of independent variables partially on dependent variable, that is the effect of each independent variables consisting of liquidity and leverage on profitability (dependent variable). The decision making of hypothesis test partially based on the result of analysis assisted by SPSS 16.0 software.

## Result and Discussion

### Descriptive Analysis Method

The descriptive analysis result showed that in 2005, return of investment above 50% was achieved by 9 companies. Then in 2006, it showed that there were 10 companies had return of investment level above 50%. In 2007, all of the companies had return of investment level above 50%, and then in 2008 there were 15 companies had return of investment level above 50%. In 2009, all of the companies observed had return of investment level above 50%. In 2010, the average of return of investment was 0,3432 or only 34,32%. This showed the development of each property ang real estate companies' return of investment within 2005-2010 period.

### Quantitative Analysis Method

Multiple Linear Regression analysis results is shown in Table 2.

### Hypothesis 1 Testing (F test/Simultan Test)

Based on ANOVA test, the F value was 15,879 and the Sig value was 0,000. Because the Sig value was smaller than  $\alpha$  0,05, it could be concluded that the first hypothesis stated that liquidity and leverage affect simultaneously on profitability of property and real estate company in Indonesian stock exchange was accepted.

### Hypothesis 2 Testing (t test/Partial Test)

The t test result showed that current ratio value was 0,882 and Sig value was 0,380 or Sig  $\alpha$  0,882 > 0,05. Therefore, it could be concluded that the second hypothesis stated that liquidity affect partially on profitability of property and real estate Company in Indonesian stock exchange was rejected.

**Table 2:** Result of Multiple Linear Regression Analysis on Profitability

Model Summary <sup>b</sup>							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson		
1	.505 <sup>a</sup>	.255	.239	3.03470449	1.283		
ANOVA <sup>b</sup>							
Model		Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	292.471	2	146.235	15.879	.000 <sup>a</sup>	
	Residual	856.477	93	9.209			
	Total	1148.948	95				
Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.942	.389			2.421	.017
	Currentratio	.024	.027	.080		.882	.380
	Debtequityratio	.858	.152	.509		5.633	.000

Source: Output SPSS 16.0

**Hypothesis 3 Testing (t test/Partial Test)**

Based on t test result, the Debt to Equity Ratio was 5,633 and Sig value was 0,000. Because the Sig value was smaller than  $\alpha$  0,05 ( $5,633 < 0,05$ ), it could be concluded that the third hypothesis stated that leverage affect partially on profitability of property and real estate company in Indonesian stock exchange was accepted.

**Discussions****The Effect of Liquidity and Leverage on Profitability (H1)**

Based on the multiple linear regression test, it was shown that liquidity and leverage simultaneously have significant effect on profitability of property and Real Estate Company in Indonesian stock exchange. Empirically, it could be said that first hypothesis was accepted. This research revealed that 25, 05% profitability was affected by liquidity and leverage of go public property and real estate industry in Indonesian stock exchange. Meanwhile, the rest 74, 50% was affected by other factors such as financial capital intensity and market segment outside the boundaries of this research.

**The Effect of Liquidity on Profitability (H2)**

The data analysis showed that current ratio wasn't affect significantly on profitability of property and real estate company listed in Indonesian stock exchange. High or low current ratio only have 0,024 effect on company's profitability. This is because the aspects determining the profitability of a company were level of financial capital rotation and other external factors. This research result was confronting Lukman (2007) said that "a company with high current ratio level will also have a good profitability, and

vice versa". This research result was also confront the research result of Estiningsih (2005) and Dani (2003) that showed significant effect of liquidity (current ratio) on profitability.

**The Effect of Leverage on Profitability (H3)**

The research result showed that leverage had significant effect on company's profitability. It means that if property and real estate companies in Indonesian stock exchange increase their leverage amount, the profitability could be affected. Leverage of 16 property and real estate companies in Indonesian stock exchange had been well managed, proven by their expansion and profit makings since 2005 until 2010. Besides that, development of Indonesian loan interest in 2009 and 2010 tends to be stable, ranging from 14-15% each year. This stimulate the companies in property and real estate to do the expansions, so that they could achieve maximum profit. This research result was in line with previous research done by Seleng (2009) stated that debt to equity/ratio had significant effect on company's profitability.

**Conclusion**

From this research, it could be concluded that: 1) liquidity and leverage simultaneously have significant effect on profitability of property and real estate industry in Indonesian stock exchange within the period of 2005-2010, 2) liquidity partially has no significant effect on profitability of property and real estate industry in Indonesian stock exchange within the period of 2005-2010, and 3) leverage partially has significant effect on profitability of property and real estate industry in Indonesian stock exchange within the period of 2005-2010.

## Suggestions

From this research results, it is suggested that: 1) company's management should be able to increase the company's profitability by enhancing the cost efficiency, in production aspect, sale, financial, and marketing aspects; 2) investors in property and real estate companies should also analyze the liquidity ratio, leverage, and profitability ratio as consideration in making decision of investment; 3) for the next researcher, it is suggested to expand this research by studying the other variables such as market segments, sale growth, or company size that theoretically could affect the company's profitability.

## References

- Bursa Efek Indonesia (2011) *Indonesian Capital Market Directory*. Retrieved from [www.idx.co.id](http://www.idx.co.id) (accessed December, 2011).
- Dani (2003) *The Effect of Liquidity, Leverage, and Efficiency of Financial Capital on Profitability*. Bachelor thesis, unpublished. Management Department, Faculty of Economics, State University of Semarang.
- Estiningsih (2005) *The Effect of Financial Capital Policy on ROI*. Bachelor thesis, unpublished. Accounting Department, Faculty of Economics, Semarang Diponegoro University.
- Gitosudarmo, Indriyo, and Basri (2008) *Manajemen Keuangan, 4<sup>th</sup> Edition*. Yogyakarta: BPFE.
- Lukman S (2007) *Manajemen Keuangan Perusahaan*. Jakarta: PT. Rajagrafindo Persada.
- Seleng K (2009) *The Effect of Market Segment, Leverage Ratio, and Ratio of Final Capital Intensity on Profitability of Automotive Industry in Indonesian Stock Exchange*. Thesis, unpublished. Palu: Graduate Program of Tadulako University.
- Sugiyono (2007) *Statistika untuk Penelitian, 12<sup>th</sup> Edition*. Bandung: CV. Alfabeta.
- Tunggal WA (1995) *Dasar-dasar Analisis Laporan Keuangan*. Yogyakarta: Penerbit Rhineka Cipta.
- Van Horne W Jr. (1997) *Terjemahan Heru Sutojo. Prinsip-prinsip Manajemen, Keuangan*. Jakarta: PT. Raja Grafindo Persada,
- Weston JF and Brigham. (1994). *Dasar-Dasar Manajemen Keuangan*. Jakarta: Erlangga.