UDC 334

THE EFFECT OF PROFITABILITY, LIQUIDITY ON CAPITAL STRUCTURE AND FIRM VALUE: A STUDY OF PROPERTY AND REAL ESTATE COMPANIES LISTED ON INDONESIA STOCK EXCHANGE IN 2013-2015

Zulhilmi Wangsawinangun Rizki*, **Dzulkirom Mochammad**, **Rahayu Sri Mangesti**
Department of Business Administration, Faculty of Administrative Sciences,
University of Brawijaya, Indonesia
*E-mail:rizki.zulhilmi@gmail.com

ABSTRACT
This study aims to find out and explain the context of profitability, liquidity, capital structure and firm value by property and real estate companies listed on Indonesia Stock Exchange in 2013-2015; to know and explain the effect of profitability on capital structure, liquidity on capital structure, profitability on firm value, liquidity on firm value and capital structure on firm value by using some capital structure theories such as: Modigliani Miller theory (1963), Pecking Order Theory (Myers, 1984) and Trade-off Theory. This study uses explanatory research using annual report as secondary data. Secondary data is obtained from the annual report published by the companies in their official website. The sampling technique used is purposive sampling with 23 companies as the samples per research year. Data analysis in this study uses Smart PLS 3.0 with a significance level of 0,05. The analysis result in this research indicates that profitability has negative and significant effects on capital structure, liquidity has no significant effect on capital structure, profitability has no significant effect on firm value, liquidity has positive and significant effects on firm value, and capital structure has positive and significant effects on firm value. The results of this study show that when the capital structure of property and real estate companies in 2013-2015 has not reached an optimum point, then the addition of debt will increase the firm value.

KEY WORDS
Profitability, liquidity, capital structure, firm value, property, real estate companies.

The land price in Indonesia tends to increase every year. This is because the supply of land remains same but the demand for land increases. According to Sofyan Djalil, Minister of Agrarian Affairs and Spatial Planning, the rate of rise in land price is much higher than the inflation. If the inflation has a 1-digit increase, then the land price will increase by 2 digits. These causes the property and real estate companies in Indonesia look promising because the increase in land prices will certainly have a positive impact for the companies.

Based on the description above, the share price in property and real estate sector should be maximized. In fact, according to statistics published by Financial Services Authority (OJK), the share value and share volume of property and real estate companies in Indonesia have fluctuated during 2013 until 2015. In 2013, the share value of property and real estate sectors stood at IDR 10.524 billion while in 2014, it decreased to IDR 8.760 billion or a decline of 20%. There was an increase of share value to IDR 10.476 billion or an increase of 19% from the previous period in 2015. As for the share volume sold in 2013, it reached 19.290 million shares and decreased in 2014 to 14.064 million shares or a decline of 36% in share sales. There was an increase in share sales volume in 2015 to 16.571 million shares or an increase of 15% from the previous year.

The data indicates that investors are hesitant about deciding to buy shares in the property and real estate sectors listed on IDX during the study period. These reasons are reinforced by the decrease in average Return on Investment (ROI) during the study period. In 2013, the average ROI of property and real estate companies was 10.32% and decreased in 2014 to 9.04%. The average decline in ROI also occurred in 2015 to 6.89%.

Based on the background of problems that have been presented, the researchers are interested to examine how the effect of profitability, liquidity on capital structure and firm

value. This study uses several capital structure theories such as Modigliani Miller Theory (1963), Pecking Order Theory (Myers, 1984) and Trade-off Theory.

THEORETICAL REVIEW

Profitability is a company's ability to earn profits in relation to sales, total assets and own capital (Sartono, 2010). Profitability is very important for both companies and investors. For a company, profitability is the purpose of why a company is established. In addition, the higher profits that can be achieved by a company, will make the company more attractive in the eyes of investors. While for investors, especially shareholders, it is used to assess whether or not to invest in a company.

Trade-off theory suggests the higher level of profit earned by a company, then the company should be more daring to take advantage of debt in the capital structure because the tax shield received by the company is higher. But on the other side, according to pecking order theory states that the higher profit ratio obtained by companies, the lower the use of debt because companies tend to prioritize the use of internal funds in advance to support their investment activities before using debts.

Delcoure (2004) in his research found that profitability has a negative and significant effect on capital structure. This is in line with pecking order theory in which the higher profitability of companies then the use of debt will be reduced. Chen (2003) who states that profitability has a negative and significant effect on capital structure and these findings support pecking order theory.

H1: Profitability has a significant effect on capital structure.

Company's liquidity shows the ability to pay short-term financial liabilities in time. The company's liquidity is indicated by the magnitude of current assets, i.e. assets that are easy to convert into cash including cash, securities, accounts receivable and inventory (Sartono, 2010). This notion is reinforced by Syamsudin's opinion (2007), liquidity is an indicator of company's ability to pay all short-term financial liabilities at maturity by using current assets available. From some definition above, it can be concluded that liquidity is a company's ability to pay financial liabilities by comparing financial liabilities and current assets owned by the company.

Pecking order theory states that companies generally prefer to use internal funding sources in advance to fund their operations before using external funding. Companies that have a high level of liquidity, tend to reduce the risk level of company by reducing debts. So, companies with high liquidity capability are increasingly able to use internal funding sources to fund their operational activities.

Frieder and Martell (2006) found that companies with high liquidity levels have lower leverage, as predicted in the Trade-Off Theory. Lipson and Mortal (2000) found that more liquid companies have less debt. Udomsirikul et al. (2010) in their research state that when companies consider external financing, then companies with higher liquidity tend to choose to issue shares rather than debt. Based on the description above, the researchers assume that liquidity has an effect on capital structure.

H2: Liquidity significantly affects the capital structure.

Signaling Theory states that the increase in profitability contained in a financial statement is an effort to provide a positive signal to investors related to company performance and future business growth prospects. The better the growth of profitability means that the prospect of the company in the future is considered better as well, in the eyes of investors. If the company's ability to make profits increases, then the share price will also increase (Husnan, 2001). From the explanation, it can be seen that the better growth of profitability, then the future of the company especially in the eyes of investors will be increasing which causes the company's share value to be better.

Septiono (2013) in his research found that profitability has a significant effect and positive relationship with firm value, so it can be concluded that the higher profitability level of the company will increase the firm value. Hargiansyah (2015) in his research also found that profitability has a positive and significant effect on firm value. A company with high

profitability will attract investors to invest in the company. Based on some researches above, the researchers propose the following hypothesis:

H3: Profitability has a significant effect on firm value.

A more liquid company will be trusted by investors because it is considered to have a good corporate performance. This is because companies with high levels of liquidity will have large internal funds, so that the companies can use their internal funds in advance to finance their investments before using external financing. Brealey and Myers in Uremadu et al. (2012) state that investors will be interested in a company that earns money to repay debt on its liabilities.

Fahmi (2014, p.250) states that in order to minimize liquidity risk, companies must strengthen their liquidity value. This is because companies that have high liquidity ratios will attract investors and automatically will impact on share prices to rise due to high demand, in which the share price reflects the firm value.

Aisyah (2014) in her research states that liquidity has a positive and significant effect on firm value. The results of the study are also supported by the results of research from Nugroho (2014) which states that liquidity has a positive and significant effect on firm value. Based on some researches above, hence the researchers propose the following hypothesis:

H4: Liquidity has a significant effect on firm value.

According to Van Horne and Wachowicz (2005), capital structure is the proportion of long-term permanent funding of a company represented by debt, equity of preferred stock and common stock. Capital structure is related to the way of a company finances its assets through a combination of capital and debt. The capital structure or composition should be arranged in such a way so as to ensure the achievement of company's financial stability. There is no definite measure on the amount and composition of capital in each company, but basically the arrangement of capital structure in each company must be oriented towards achieving financial stability and ensuring the survival of the company.

A number of theories attempt to explain the relationship between capital structure and firm value from different points of view. When the market condition was perfect (without taxes, transaction costs, bankruptcy costs, agency costs and information asymmetries), Modigliani and Miller (1958) made a theory that firm value is not affected by leverage. Trade-off model explains that if the capital structure is below the optimal point, then any additional debt will increase the firm value. On the other hand, if the capital structure position is above the optimal point then any additional debt will decrease the firm value.

Hamidy (2014) in his research found that capital structure has a positive and significant effect on firm value. The results show that the addition of debt made by the company will increase the firm value. The results of the study also correspond with the results of research conducted by Bukit (2012) and Mas'ud (2008) who state that capital structure has a positive and significant effect on the firm value. Based on some researches above, hence the researchers propose the following hypothesis:

H5: Capital structure has a significant effect on firm value.

METHODS OF RESEARCH

This research consists of 4 variables studied, namely profitability, liquidity, capital structure and firm value. Each variable consists of several indicators. Profitability is measured through Return on Investment (ROI) and Return on Equity (ROE). Liquidity consists of Current Ratio (CR) and Quick Ratio (QR). Capital structure is measured using Debt Ratio (DR) and Long-term debt ratio. Firm value is measured by using Price Earning Ratio (PER) and natural logarithm of share closing price.

The research method applied in this study is explanatory research with quantitative research approach. Sampling technique in this study uses purposive sampling with the following categories: property and real estate companies listed on IDX for 3 consecutive years during the study period; property and real estate companies that have issued financial statements during the study period; and property and real estate companies that make profits and share the profits per share consecutively during the study period. The data used in this

study is secondary data, i.e. data which is expressed numerically that describes the value of indicator. This study took data from Indonesia Stock Exchange in the form of annual report of property and real estate companies.
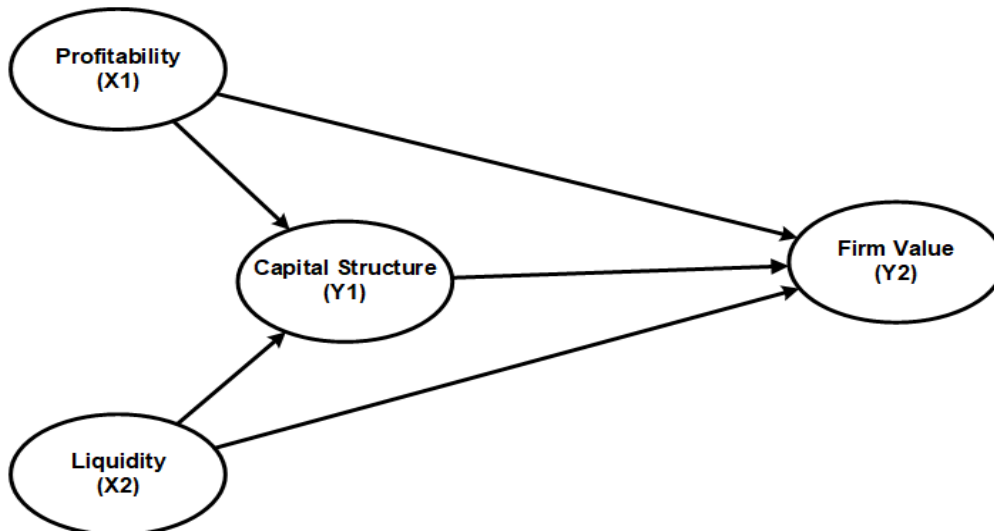

Figure 1 – Research Framework

RESULTS AND DISCUSSION

Data analysis technique in this study uses Partial Least Square (PLS) with SmartPLS 3.0 analysis tool. Data analysis with PLS consists of two stages: evaluation of measurement model (outer model) and evaluation of structural model (inner model).

Outer model evaluation consists of three criteria, namely convergent validity, discriminant validity and composite reliability. In the calculation of convergent validity, the minimum criterion of loading factor is 0.50, (Chin in Ghozali, 2014). Discriminant validity is measured by comparing the square root of AVE for every construct and the correlation value between constructs in the model. Good discriminant validity is the square root of AVE for each construct which is greater than the correlation between constructs in the model. If the AVE root value is higher than the correlation value between the constructs, then good discriminant validity has been achieved. The next test to analyze the outer model is by looking at the construct reliability of latent variable measured by two criteria, namely composite reliability and cronbach alpha from the indicator block measuring the construct. The construct is declared reliable if the value of composite reliability and the value of cronbach alpha are above 0,70. Here is the output of composite reliability and cronbach alpha:

Table 1 – Outer Loadings (Mean, STDEV, T-Values)

Variables	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STERR|)
ROE -> Profitability	-0.0282	0.1925	0.1465
ROI -> Profitability	0.3784	0.2023	1.8698
CR -> Liquidity	0.9603	0.103	9.3257
QR -> Liquidity	0.9935	0.1733	5.7317
DR -> Capital Structure	0.9948	0.0488	20.4065
LTL -> Capital Structure	0.8124	0.1054	7.7041
CP -> N. Companies	0.6664	0.1751	3.8068
PER -> N. Companies	0.99	0.2074	4.7723

Source: PLS (2018).

Table on the output illustrates the value of loading factor (convergent validity) of each indicator. The value of loading factor > 0,7 can be said valid, but the rule of thumbs on the interpretation of loading factor value > 0,5 can be said valid. From the table, it is known that

all loading factor values of Profitability (X1), Liquidity (X2), and Capital Structure (Y) and Firm Value (Y2) indicators are greater than 0,60. This shows that the indicators are valid.

Inner model or structural model testing is conducted to know the relationship between significance level and R-square of the research model. The structural model is evaluated by using R-square for dependent t test as well as the significance of structural path coefficient.
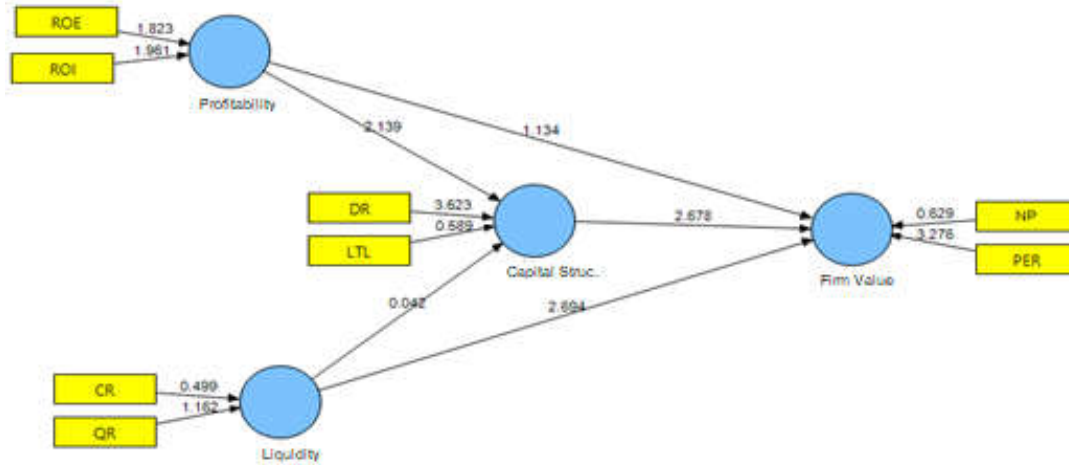

Figure 1 – Structural model (Inner Model) (Source: Smart PLS, 2018)

Testing on the structural model is conducted by looking at the R-square value which is a goodness-fit test model.

Table 2 – R-Square

Variables	R Square
Y1	0.5565
Y2	0.4786

Source: PLS (2017).

In table 2, R-squared value for the Capital Structure variable was obtained at 0,5565. The R-squared value shows that 55,65% of Capital Structure (Y1) variable can be affected by Profitability (X1) variable and Liquidity (X2) variable. While the remaining 44.35% is affected by other variables outside of the objects studied. The R-squared value for the Firm Value variable is 0,4786. This indicates that 47,86% of Firm Value (Y2) variable is affected by Profitability (X1), Liquidity (X2), and negative capital variables. Whereas the remaining 52,14% is affected by other variables outside the objects studied.

Furthermore, evaluation of PLS model is conducted using Q^2 predictive relevance which is used to measure how well the observation value generated by the model and also its parameter estimation. The value of Q^2 predictive relevance can be obtained through the following equation:

$$Q^2 = 1 - (1 - R^2) \times (1 - R^2) = 1 - (1 - 0.5565) \times (1 - 0.4786) = 0.7687$$

Based on these results, the structural model in this study can be said to have goodness of fit.

Significance of estimated parameters provides useful information on the relationship between research variables. In the PLS testing, statistically each hypothesized relationship is performed using a simulation. In this case the bootstrap method on the sample is applied. Testing with bootstrap is also intended to minimize the problem of research data abnormalities. The test results with bootstrapping from PLS analysis can be seen in table 3:

Table 3 – Path Coefficient

Variable	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STERR|)
Profitability -> Capital Structure	-0.7455	0.3486	2.1388
Liquidity -> Capital Structure	-0.0071	0.171	0.0417
Profitability -> Firm Value	0.2338	0.2061	1.1342
Liquidity -> Firm Value	0.5697	0.2114	2.6944
Capital Structure -> Firm Value	0.5589	0.2087	2.6783

Significance of estimated parameters provides useful information on the relationship between research variables. Basis used in testing the hypothesis is value contained in the output of result for inner weight. Hypothesis testing can be done by comparing t-statistics and t-table. T-table can be obtained from 69 samples which ultimately obtained t-table equal to 1,960. Therefore, it can be concluded that the analysis results of hypothesis testing are H1, H4 and H5 accepted.

Hypothesis 1 indicates that the relationship between Profitability variable (X1) and Capital Structure (Y1) shows the path coefficient value of -0,7455 with a t-value of 2,1388. The value is greater than t table (1,960). This result means that Profitability has a negative and significant effect on Capital Structure which also means that it corresponds to the first hypothesis where Profitability has a significant effect on Capital Structure. These results support the Pecking Order Theory which explains a company's reasons for determining the most preferred hierarchy of funding sources, based on asymmetric information. A company that has greater levels of profits will have a larger internal funding source so that this will affect the decision of capital structure or the funding decision of a company, that is in financing its business activities, such as developing a product or a need to finance investment, allowing a company to use its own capital i.e. its internal funds first, such as in the form of retained earnings as part of profits generated by a company compared to using external funds or funds from external parties such as debt so that the level of debt used by the company is relatively low and will reduce the risk of bankruptcy as a result of high Cost of Capital. These results are in accordance with the results of previous researches conducted by Rajan and Zingales (1995) and Titman and Wesel (1998).

Hypothesis 2 indicates that relationship between Liquidity variable (X2) and Capital Structure (Y1) shows the path coefficient value of -0,0071 with a t-value of 0,0417. The value is smaller than t table (1,960). This result means that Liquidity has a negative and insignificant effect on Capital Structure. Liquidity has no effect on capital structure because the companies studied have a fairly high average level of liquidity or above 100% each year, so that the companies tend to use internal funding or issue shares in advance rather than in debt. Another reason that causes liquidity does not affect the capital structure is the companies studied in this research tend to have a good liquidity ratio, so the financial managers are more concerned with the need for investment and do not consider liquidity in determining their capital structure.

Hypothesis 3 indicates that the relationship between Profitability variable and Firm Value (Y2) shows the path coefficient value of 0,2338 with a t-value of 1,1342. The value is smaller than t table (1,960). This result means that Profitability has a directly positive and insignificant effect on Firm Value. Profitability has no effect on firm value because most companies studied have Net Profit After Taxes that fluctuated during the study period. The average value of companies' net profit in 2013 amounted to IDR 672.131.374.317 and increased to IDR 767.482.415.227 in 2014. There was a decline in net profit after tax in 2015 to IDR 600.938.123.495 or it became the lowest point during the study period.

Hypothesis 4 indicates that the relationship between Liquidity variable (X2) and Firm Value (Y2) shows the path coefficient value of 0,5697 with a t-value of 2,6944. The value is greater than t table (1,960). This result means that Liquidity has a positive and significant effect on Firm Value. High liquidity shows the funds available to finance the company's operations and investment so that investors have better perceptions on the company's performance. This is because a company with high liquidity has large internal funds so that the company will use its internal funds in advance to finance its investment before using

external financing through debt. This can increase investor demand for the company's shares. Increasing demand for shares will result in increased firm value. These results support the previous researches conducted by Aisyah (2014) and Nugroho (2004) which state that liquidity has a positive and significant effect on firm value.

Hypothesis 5 indicates that the relationship between Capital Structure variable (Y1) and Firm Value (Y2) shows the path coefficient value of 0,5589 with a t-value of 2,6783. The value is greater than t table (1,960). This result means that Capital Structure has a positive and significant effect on Firm Value. This confirms that the capital structure of property and real estate companies listed on Indonesia Stock Exchange in 2013-2015 has not reached its optimum point, in accordance with the theory put forward by MM which states that if the capital structure is below the optimal point then any additional debt will increase the firm value. This is explained by Trade-off Theory where the benefits of increased money are still greater than the sacrifices spent so that the benefits of using debt can directly increase the firm value. The increasing firm value due to an increase in the amount of debt (debt is still below its optimum point) is caused by the company management which uses debt for its business expansion. These results support the results of researches conducted by Bukit (2012) and Mas'ud (2008) which state that the capital structure has a positive and significant effect on the firm value.

CONCLUSION

Based on the results of research analysis descriptively and with calculations using Smart PLS which has been described in the previous chapter, it can be concluded the followings.

The results of analysis show that profitability variable has negative and significant effect to capital structure. These results support the pecking order theory which explains the most preferred hierarchy of funding sources, based on asymmetric information.

Profitability variable has no significant effect on firm value variable. This happens because the average Net Profit After Taxes on the companies studied during the study period fluctuated so that investors do not have certainty related to the profits which will be gained in the future.

Liquidity variable has an insignificant effect on the capital structure. This happens because the companies studied in this study tend to have a good liquidity ratio so that in determining the capital structure, the company managers tend to see other fundamental factors other than liquidity.

Liquidity variable has a positive and significant effect on firm value. This happens because the companies studied in this research tend to have a good level of liquidity so that investors have better perceptions on the company's performance.

Capital Structure variable has a positive and significant effect on firm value. This shows that the capital structure of companies studied in this research has not reached its optimum point so that the addition of debt at certain point will increase the firm value. This is in accordance with the theory put forward by MM.

The results of this research support Pecking Order Theory which suggests managers in determining the source of financing tend to use internal sources in advance before using debt and selling shares.

The results of this research support the results of previous researches conducted by Delcoure (2004) and Chen (2003) which state that profitability has a significant and negative effect on capital structure.

LIMITATION AND SUGGESTIONS

Based on the limitations of this study, there are several suggestions for company management, investors and subsequent research, namely:
The study period is limited only 3 years, starting from 2013 to 2015.

The research samples used are limited only to Property and Real Estate Companies listed in Indonesia Stock Exchange, so that the results of this research cannot be generalized to other company types.

For company management, to increase shareholder's trust in the company, the company should be able to show good corporate performance through a good level of liquidity and convey adequate information to investors about the company's development.

For investors, especially investors who will invest in property and real estate companies, in order to conduct an analysis of financial ratios, especially those that affect the firm value before making investments.

For further researches, in order to use a more diverse sample, extend and update the study period and also can add variables used so that the results obtained are more accurate.

REFERENCES

1. Aisyah, Resti Nur. 2014. "Pengaruh Likuiditas dan Struktur Modal terhadap Nilai Perusahaan." Universitas Komputer Indonesia.
2. Bukit, Rina Br. 2012. "Pengaruh Struktur Modal Terhadap Nilai Perusahaan Melalui Profitabilitas: Analisis Data Panel Perusahaan Manufaktur di Bursa Efek Indonesia". Jurnal Keuangan dan Bisnis. Vol 4. No. 3.
3. Chen, Jean J. (2004). "Determinants of capital structure of Chinese-listed companies". Journal of Business Research. pp. 1341-1351.
4. Delcoure, Natalya. 2007. "the determinants of capital structure in transitional economies". International review of economics and finance. pp. 400-415.
5. Fahmi, Irham. 2014. Manajemen Keuangan Perusahaan dan Pasar Modal. Jakarta: Mitra Wacana Media.
6. Frieder, L dan Martell, R. 2006. "On Capital Structure and the liquidity of a firm's stock. Pardue University.
7. Hamidy, Rahman Rusdi. 2014. "Pengaruh Struktur Modal Terhadap Nilai Perusahaan dengan Profitabilitas Sebagai Variabel Intervening Pada Perusahaan Properti dan Real Estate di Bursa Efek Indonesia". Tesis. Program Studi Manajemen Universitas Udayana.
8. Hargiansyah, R. F. 2015. Pengaruh Ukuran Perusahaan, Leverage, dan Profitabilitas Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa EFek Indonesia). Artikel Ilmiah. 1–6.
9. Lipson, M. dan Mortal, S., 2009. "Liquidity and capital structure". Journal of Financial Markets. pp. 611–644.
10. Mas'ud, Masdar. 2008. "Analisis Faktor-faktor yang Mempengaruhi Struktur Modal dan Hubungannya Terhadap Nilai Perusahaan. Jurnal Manajemen dan Bisnis. Vol 7 No. 1.
11. Nugroho, Asih Suko. 2004. "Analisis Faktor-faktor yang Mempengaruhi Struktur Modal Perusahaan Properti yang Go Public di Bursa Efek Jakarta Untuk Periode Tahun 1994-2004". Tesis. Magister Manajemen Pascasarjana. Universitas Diponegoro.
12. Rajan, Raghuram. What Do We Know About Capital Structure? Some Evidence from International Data. The Journal of Finance". Vol. 50, No.5. pp. 1421-1460.
13. Sartono, Agus. 2012. Manajemen Keuangan Teori dan Aplikasi. Yogtakarta: BPFE-Yogyakarta.
14. Septiono, Rizqy Wahyu. "Analisis Faktor Mikro Terhadap Struktur Modal dan Nilai Perusahaan". Fakultas Ilmu Administrasi Universitas Brawijaya.
15. Syamsudin, Lukman. 2007. Manajemen Keuangan Perusahaan. Jakarta: PT Rajagrafindo persada.
16. Titman, Sheridan dan Roberto Wessels. 1988. "The Determinant of Capital Structure Choice, The Journal of Finance. Vol. 43 No. 1. pp. 1-19.
17. Udomsirikul, Prasit., Seksak Jumreornvong. dan Pornsit Jiraporn. 2011. "Liquidity and capital structure: The case of Thailand". Journal of Multinational Financial Management. pp. 106-117.
18. Van Horne, James C. dan John M. Wachowicz. 2005. Prinsip-prinsip manajemen keuangan. Edisi kedua belas. Jakarta: Salemba Empat.