THE EFFECT OF CAPITAL STRUCTURE AND LIQUIDITY ON FIRM VALUE MEDIATED BY PROFITABILITY

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The purpose of this study is to examine and prove the effect of capital structure and liquidity on firm value as mediated by profitability. The data used in this study are financial reports and annual reports of infrastructure companies (2014-2018), the sample size is nine companies. The analysis technique used is panel data regression (pooled data), with descriptive statistical analysis, stationarity test, regression model selection, classical assumption test, and hypothesis testing in model suitability test (R²m), individual parameter significance test (t-test), and sobel test done in the Eviews 10. The results of this study indicate that capital structure and liquidity have no effect on firm value. Profitability was found to be unable to mediate the effect of capital structure on firm value, but was able to mediate the effect of liquidity on firm value.

Keywords: capital structure; liquidity; profitability; firm value

Introduction

Infrastructure covers basic physical needs organized in a structural system that is needed to guarantee the economy of the public and private sectors with the provision of services and facilities necessary for the economy to function properly. Infrastructure plays an important role in increasing economic growth. When the state of infrastructure in a country is

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weak, it means that the country's economy is operating in a very inefficient manner. If the country's economy does not run efficiently, it will cause very high logistics costs, resulting in the state when companies and businesses lack competitiveness (due to high business costs).

Indonesian government is aware of the importance of improving the state of infrastructure so that the investment and business climate becomes more attractive.

Currently, Indonesian government is carrying out a lot of infrastructure development projects such as toll roads construction, power plants construction projects, reservoirs/dams construction and so on. The budget of Indonesian infrastructure sector is increasing with every new year.

These improving conditions have their impact on competition among the construction companies that would like to get these projects. One of the problems that must be faced by construction companies is the capital that will run the project if it is chosen as the winner. One way that companies can take to meet these fund needs is by selling long-term financial instruments, both stocks and bonds, at the capital market.

The condition of a stock that is in the capital market will affect the interest of investors. The investors' assessment of a stock is an indicator measuring the success of company management, where market strength at the stock exchange is measured through sale and purchase transactions of company's shares at the capital market. Investors will also see the price of a company's shares and decide about investing in it. Finally, share price is an indicator to measure the welfare of shareholders.

Stock price can also describe the value of a company. If the stock price of a company rises, this indicates that company's performance is good. In other words, profits obtained from its operational activities are getting bigger, resulting in the demand for the number of shares which results in an increase in stock prices.

The higher the stock price, the higher the value of the company.

Likewise, the lower the stock price of a company, then the company should get concerned about its poor performance. One of the things that affect investors in their decision-making about investing their shares in a company is by looking at the stock returns that a company can get. Return is the most important measure for investment decisions. Investment is essentially a postponement of current consumption with the aim of obtaining a rate of return that will be received in the future.

Investors can only estimate what the expected return will be and how far it is likely that the actual results will deviate from the expected results.

The results of the research conducted by Lubis et al. (2017) and also by Dhani and Utama (2017) both show that profitability and liquidity have positive effects on firm value. On the other hand, they both also show that capital structure does not affect firm value.

Another case is the research conducted by Hamidy, Wiksuana and Artini (2015). It shows that capital structure has a positive effect on firm value, and also a positive effect on profitability. Meanwhile, profitability has a positive effect on firm value and is also able to mediate the effect of capital structure on the value of a company.

This study aims to determine the effect of capital structure and liquidity, direct or indirect one, on firm value in the construction sector, while profitability serves as a mediation variable.

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Literature Review

Signaling Theory

Signaling theory emphasizes that companies are required to disclose information to external parties to minimize information asymmetry and reduce uncertainty about the company's future prospects (Zhang et al., 2017). According to Luthfiah and Suherman (2018), the signaling theory emphasizes that the information published by a company has an important role for investors outside this company. Signaling theory can be also interpreted as an effect arising from the announcement of financial statements whereas these effects can be used as threats and opportunities by other market players while making their investment decisions (Andhov et al., 2019).

Using the signaling theory, companies can increase their value through reporting as the latter is sending signals, usually annually. Information held by management regarding company's internal financial performance reports and information concerning the external market serves to assist management in making decisions that can increase company's value. Company management must wisely determine the information that would simplify decision-making both internally and for investors, so that both types of decisions taken will have positive impacts on company's value (Zolocheskaya et al., 2018).

Firm's Value

Firm value is the present value of expected cash flows and discounted returns that reflect both the risk and the funding used. Meanwhile, company value is the total market value of its debt and shares. For companies that are listed at capital markets, company value is reflected in the market price of its shares (Aprilia, 2018).

In financial management literature, increasing of firm value can be carried out through the functions of financial management, while financial decisions will impact or influence other financial decisions and have implications for firm value. Such financial decisions concern investments and capital structure.

Capital Structure

Capital structure is part of the financial structure which can be interpreted as the reflection of the balance between long-term debt and equity. One of the most important decisions as to financial functions concern company's ability to meet the needs in funds that will be later used for both operational activities and for expansion. Fulfillment of such funding needs can be obtained both internally and externally.

The forms of internal financing include retained earnings and depreciation. External sources of funding can be divided into debt financing and equity financing. Debt financing can be obtained through loans, while own capital is usually obtained through the issuance of new shares.

Thus, capital structure is defined as a balance or comparison between the amount of long-term debt and equity (Jensen & Meckling, 1976).

Liquidity

Liquidity is directly related to the company's ability to meet its financial obligations that must be paid off immediately. In liquidity there are three basic components — density,

depth and resilience. These components are interrelated as they serve to maintain the level of liquidity and economic stability in a company.

The following is the explanation of these three components. Density — the gap or distance that occurs between the normal price of an item and the agreed price. Depth — the amount or volume of goods sold and purchased at a certain price level. Resilience — the speed of price changes toward efficient prices after a deviation or price instability occurs.

Profitability

Profitability is the company's ability to earn profits. The greater the level of profit, the better management will be in managing the company. The measure of profitability can be divided into various indicators, such as operating profit, net income, rate of return on investment or assets, and the rate of return on owner's equity. Profitability is one of the basic indicators for assessing the overall condition of a company.

Methodology

This research study uses path analysis along with the model used by Risman et al. (2017, 2020), according to which:

H1: Capital structure has a direct effect on firm value.

H2: Liquidity has a direct effect on firm value.

H3: Capital structure has an indirect effect on firm value through the mediating variable of profitability.

H4: Liquidity has an indirect effect on firm value through the mediating variable of profitability.

Operationalization of the key variables in this study is presented in Table 1 below.

Table 1 - Operational Variables
(Results of co-authors study)

Variables	Proxy	Measurement
Capital Structure	DER	$\frac{Total\ Debt}{Capital}$
Liquidity	CR	$\frac{Current\ Assets}{Current\ Debt}$
Profitability	ROA	$\frac{Earning\ After\ Tax}{Total\ Assets}$
Firm value	Tobin's Q	$Q = \frac{(EMV + D)}{(EBV + D)}$

The entire population of 9 (nine) companies is used as our sample, so this research can be treated as a census research.

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This study has used panel data (pooled data), which is a combination of time series data and cross-section data from nine companies across five years (2014 to 2018).

Results and Discussion

Stationarity Test

Table 2 - Unit Root Test Results
(Results of co-authors study)

Variable	Level	
	p-value	Conclusion
Tobins'Q	0.0000	Stationary
DER	0.0000	Stationary
CR	0.0000	Stationary
ROA	0.0000	Stationary

From the results of the stationary test in Table 2 above, it can be seen that all the variables in this study are stationary.

Multicollinearity Test

Table 3 - Multicollinearity Test Results of the Regression Equation
(Results of co-authors study)

	Q	DER	CR	ROA
Q	1.000000	0.256914	-0.173115	0.330941
DER	0.256914	1.000000	-0.601204	-0.017502
CR	-0.173115	-0.601204	1.000000	0.351712
ROA	0.330941	-0.017502	0.351712	1.000000

From Table 3 above, the regression equation for each variable has a multicollinearity value below 0.8 which means that in this study there is no multicollinearity problem in the research variables.

Heteroscedasticity Test

Table 4 - Heteroscedasticity Test Results of the Regression Equation
(Results of co-authors study)

Panel Cross-section Heteroskedasticity LR Test			
Null hypothesis: Residuals are homoskedastic			
Equation: UNTITLED			
Specification: Q C DER CR ROA			
	Value	df	Probability
Likelihood ratio	8.462715	9	0.4883

The heteroscedasticity test of the regression, namely the heteroscedasticity LR test method, shows that the prob value is 0.4883, which is greater than the 0.05 significance level. Thus, it can be concluded that there is no heteroscedasticity in our research model.

Panel Data Regression Model Selection

Table 5 - The results of the regression model selection test
(Results of co-authors study)

Testing	Indicators	Probability	Accepted Model
Chow test	Cross-section F	0.5842	Common Effect
	Cross-section Chi-square	0.4111	
Hausman test	Cross-section random	0.4995	Random Effect
LM test	Cross-section One-sided	0.4806	Common Effect

According to the p-value, a suitable regression model has the common effect.

Goodness of Fit Model

Table 9 - R-Square (R2)
(Results of co-authors study)

Construct	Regression Equation	R2 Value
R1	Firm's Value = $\alpha + \beta_1\text{DER} + \beta_2\text{CR} + \beta_3\text{ROA} + e$	0,212509
R2	ROA = $\alpha + \beta_1\text{DER} + \beta_2\text{CR} + e$	0,182610

From Table 9 above, the following results are obtained:

$$Q^2 = 1 - ((1 - 0,212509) \times (1 - 0,182610)) = 0,356312$$

This figure shows the good influence of the two independent variables and the mediating variable that can affect firm value.

Hypotheses Testing

Table 10 - Hypotheses Testing Results
(Results of co-authors study)

Hs	Variables Relationship	Prob.	Significant/ Not Significant
H.1	DER → Firm Value	0.5399	not significant
H.2	CR → Firm Value	0.1910	not significant
H.3	DER → ROA → Firm Value	0.1412	not significant
H.4	CR → ROA → Firm Value	0.0405	significant

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1. Effect of Capital Structure on Firm Value

Based on the results of testing our hypotheses, the capital structure has no effect on firm value. This shows that the use of high debt will cause higher interest expenses. This also results in reduced company assets to cover these expenses.

The results of this study support the previous empirical findings of Lubis et al. (2017), Lestari (2017), Dhani and Utama (2017) who found that capital structure has no effect on firm value.

2. The Effect of Liquidity on Firm Value

Based on the results of testing the hypotheses, liquidity has no effect on firm value. In other words, investor does not often pay attention to firm liquidity, primarily because this ratio only shows the company's ability to pay short-term obligations with the company's current assets.

The results of this study support the previous empirical findings of Lubis et al. (2017) and Dhani and Utama (2017).

3. The Effect of Capital Structure on Firm Value Mediated by Profitability

This study has found that profitability was not able to mediate the effect of capital structure on firm value. This shows that the addition of the profitability variable or the ability to earn profits does not affect leverage in increasing firm value.

The results of this study support the previous empirical findings of Aprilia et al. (2018), who also have found that profitability was not able to mediate the effect of leverage on firm value.

4. The Effect of Liquidity on Firm Value is Mediated by Profitability

This study has found that profitability was able to mediate the effect of liquidity on firm value. This shows that the addition of the profitability variable or the ability to earn profits can affect liquidity in increasing firm value. Profits obtained by a company through the sale of assets that it owns, can add value to this company's liquidity.

The results of this study support the previous empirical findings of Aprilia et al. (2018) who also found that profitability was able to mediate the effect of capital structure on firm value.

Conclusion and Suggestions

The following conclusions can be drawn from the research results above:

1. Capital Structure has no effect on Firm Value.
2. Liquidity has no effect on Firm Value.
3. There is no influence of Capital Structure on Company Value which is mediated by Profitability.
4. Profitability can mediate the effect of Liquidity on Firm Value.

Our suggestions that are stemming from the results of this study are as follows:

1. Companies should always consider the value of their profitability because it is proven to be able to mediate the relationship between liquidity and firm value. Profits

obtained by the company through the sale of owned assets can add value to this company's liquidity. This ultimately becomes of interest for both investors and potential investors of the company. The more investors invest their capital, the more the share price will rise. And when the company's stock price rises, then the company's value also increases. The higher the company value, the more valuable the company overall is.

2. For investors and potential investors, profitability can be used as an indicator to determine the value of the company. This is mainly because profitability is able to mediate liquidity against firm value. High profitability can increase the company's liquidity value. This shows that the company can guarantee its short-term debt with the profits earned. Companies with a high level of liquidity will increase the probability of future dividend distribution in the form of cash.

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