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The effect of capital structure on profitability and stock returns: Empirical analysis of firms listed in Kompas 100

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Abstract

Purpose – The purpose of this study is to examine the factors that influence capital structure, profitability and stock returns and the relationship between capital structure, profitability and stock returns. The endogenous variables in this study are capital structure, profitability and stock returns, whereas the exogenous variables are firm size, growth opportunity, tangibility, liquidity, volatility and uniqueness.

Design/methodology/approach – The population used is a company that is listed on the compass index 100 period of August 2016. A total of 64 companies are sampled in this study. The unit of analysis is 448 data. The data analysis technique used is path analysis with the help of AMOS.

Findings – The results obtained show only profitability variables that affect stock returns. Variable capital structure, firm size, growth opportunity, tangibility and liquidity have no significant effect. Variables that influence capital structure are only influenced by growth opportunity, whereas other variables are not significant and variables that affect profitability are firm size, growth opportunity, uniqueness and volatility.

Originality/value – Path analysis is a model similar to the multiple regression analysis, factor analysis, canonical correlation analysis, discriminant analysis and more general multivariate analysis groups. This research discusses that capital structure is useful for increasing the value of the company in the sense that the more debt that is used, a tax deduction will be obtained because of interest costs. So that the company's profits will increase and eventually will increase the value of the company. This opinion remains a controversy among financial experts. Until now, there is no agreement that can explain the capital structure in all conditions of the company. There are two important theories concerning capital structure, trade-off theory and pecking order theory.

Keywords Profitability, Stock returns, Pecking order theory, Capital structure, Path analysis, Trade-off theory

Paper type Research paper

1. Introduction

Indonesia's foreign debt tends to increase every year. It reached $US202.41bn in 2010 and $US352.25bn in 2017(Bank Indonesia and Ministry of Finance, 2018). The debt is a combination of the Indonesian Government debt and private debt. Government debt reached $US 118.62bn in 2010, whereas private debt reached $US83.79bn. In 2017, government debt reached $US180.62bn, whereas private debt reached $US171.63bn. The debt of private companies in Indonesia increased dramatically to 104.83 per cent within seven years. This shows that Indonesian companies still rely on sources of debt funds.

Since Modigliani and Miller announced the publication of their paper on "irrelevance theory," many studies have criticized and researched capital structure. Some say that debt will affect the capital structure, whereas others say debt has no effect on capital structure. Dawar, a researcher who researched companies in several sectors on the Bombay Stock Exchange, found a negative effect of capital structure on profitability. In other words, an

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increase in debt will result in a decrease in company profits (Dawar, 2014). On the contrary, Gill *et al.* (2011) who examined service and manufacturing companies listed on the New York Stock Exchange found a positive effect of capital structure on profitability. In addition, Yang *et al.* (2010) in their research on companies listed on the Taiwan Stock Exchange found a negative effect of capital structure on stock returns in 2005. In contrast, for research in 2003 and 2004, they found a positive effect of capital structure on stock returns. In the research conducted by Ahmad *et al.* (2013), they found a positive effect of profitability on stock returns.

This study aims to examine the factors that affect capital structure, profitability and stock returns, as well as the relationship between capital structure, profitability and stock returns in firms listed in *Kompas 100*.

2. Literature review

2.1 Financial management

The purpose of the company was established to gain profits, survival and growth of the company. To achieve the management objectives of this company, financial managers need to make decisions about financial policy as follows (Chandra, 2016):

- the investment decision;
- the financing decision; and
- the dividend decision.

By optimizing the three decisions mentioned above, it is expected to increase optimal company value. This means that if all three decisions can be taken optimally, then the stock price and dividends, which are elements in the stock return, will increase. Increasing stock returns will further increase the prosperity of shareholders.

2.2 Capital structure

The most optimal capital structure is a condition where the cost of capital is charged and the risks faced reach a minimum. If the most optimal capital structure is obtained, it is expected to increase the company's stock price and then increase the value of the company.

2.3 Net profit approach

This net income approach was developed by David Durand in 1952 (Chandra, 2016). Net profit meant here is profit that is obtained after deducting all costs, but not deducted from income tax paid by the company. The emphasis of the net profit approach is on the relationship between cost of capital, capital structure and firm value.

2.4 Net operating profit approach

Net operating profit (net operating income) is profit earned after deducting the company's operating costs. So, this net operating profit does not include other costs and other income in the company.

2.5 Traditional approach

In this traditional approach, it is said that the use of debt to a certain extent will not increase the risk of the company. If you do not experience an increase in risk, the cost of debt (Ki) and the cost of your own capital (Ke) will be constant. This condition will result in a decrease in the weighted capital cost (Ko) as experienced in the net income approach.

2.6 Trade off model approach

The trade off model tries to explain the risk factors for bankruptcy of the company, which will result in costs if the company has to experience financial distress. The cost of financial difficulties can be in the form of costs to sell company assets below market prices, fees for managing company liquidations and costs at the concern of management to avoid bankruptcy so that they do not concentrate on managing the company's operations. The cost of bankruptcy will increase according to the increase in debt usage by the company.

2.7 Pecking order theory approach

There are several ways to get the most optimum capital structure by considering taxes and costs associated with bankruptcy (financial distress) and costs associated with the agency. This pecking order theory began its theory with asymmetric information, namely, Myers believed that there was information inequality between company managers and investors. Investors have less information about companies than company managers. As a result, there are often differences in views on the policies taken by the company manager.

Research on capital structure is one of the most interesting topics in financial management. Since Modigliani and Miller (1958) conducted publication of their paper on "irrelevant theory," which states that capital structure has no effect on company value, there are many financial experts who criticize this theory. In this theory, the assumptions used are very strict including the non-existence of tax. In 1963, they were forced to make a revision by loosening the assumption of the existence of tax. In this second paper, they argued that capital structure is useful to increase company value. In other words, the more debt that is used, a tax deduction will be obtained because of interest costs. Thus the company's profits will increase and eventually will increase company value. This opinion remains a controversy among financial experts. Until now, there is no agreement that can explain the capital structure in all conditions of the company. Frank and Goyal (2009) in their paper proposed three important theories concerning capital structure.

2.7.1 Trade-off theory. According to Jensen and Meckling (1976), the use of debt is a good thing for a company because the use of debt will reduce the cost of debt as a result of tax deductive from interest costs. Therefore, the use of debt will increase the profitability of the company and it will increase company value. However, the use of debt that is too large will actually increase the cost of financial distress. Increasing the cost of financial distress will result in an increase in the cost of debt and it will reduce the profitability of the company and ultimately reduce company value. Therefore, trade-off theory suggests to use debt, but not to use excessive one. The ideal use of debt is if the marginal present value of the tax shield equals the marginal present value of the cost of financial distress (Chen *et al.*, 2014).

2.7.2 Pecking order theory. This pecking order theory began its theory with asymmetric information, namely, Myers believed that there was information inequality between company managers and investors. Investors have less information about companies than company managers. As a result, there is often a difference of views on the policy taken by company managers. The actions taken by investors often do not in line with the expectations of the investment manager. This is in contrast to the assumptions used by Modigliani and Miller, who stated that capital markets are efficient or perfect so that information obtained by investors is the same as information obtained by company managers. Myers and Majluf (1984) in their paper argued that company tends to like using internal sources rather than external sources of funds. The use of external sources of funds will only lead to information asymmetry which will increase the cost of capital and ultimately reduce the profitability and company value.

2.7.3 The market timing theory. Baker and Wurgler (2002) introduced the market timing theory. In this theory, it is said that company managers will try to use the cheapest sources of funds that are adjusted to the timings at that time. The use of debt or equity depends on which one is the cheapest at that time. If indeed, the debt is cheaper than equity at that time, the source of debt will be used. Conversely, if equity is cheaper, the equity will be used.

This study uses three endogenous variables, namely, profitability (Y_1), capital structure (Y_2) and stock returns (Y_3) and six exogenous variables, namely, firm size (X_1), growth (X_2), tangibility (X_3), liquidity (X_4), uniqueness (X_5) and volatility (X_6). Each variable and the relationship between the variables will be discussed in the following section.

2.8 Firm size (X_1)

Banz (1981) in his study found a negative effect of firm size on stock returns. In other words, small companies tend to provide higher stock returns compared to large companies. The results of this study were supported by research conducted by Rezaei and Habashi (2012). On the contrary, Acheampong, *et al.* (2014) conducted a research on companies in the Ghana Stock Exchange and they found that small companies tend to provide lower stock returns than large companies. This means that there is a positive effect of firm size on stock returns. The results of this study are consistent with the research conducted by Abdullah *et al.* (2015) and Chandra and Idrus (2015).

Kim *et al.* (2006) conducted a research on companies in Korea, and found firm size has a negative effect on capital structure. In other words, large companies tend to use internal sources of funds rather than external sources of funds. This is in line with the principle of pecking order theory. On the contrary, Jensen and Meckling (1976) in the trade-off theory argued that large companies are more able to diversify risk which leads to lower risk of bankruptcy. The low risk of bankruptcy can be seen from their higher credit rating compared to small companies. With a higher credit rating, large companies are more courageous in taking debt. This means that firm size has a positive effect on capital structure. Ahmed Sheikh and Wang (2011) in their research on manufacturing companies listed on the Karachi Stock Exchange found that firm size has a positive effect on capital structure. The results of this study are in line with the research conducted by Chandra (2014), Chang *et al.* (2014), Chen *et al.* (2014) and Manos and Ah-hen (2008).

Dawar (2014) in his research on a company listed on the Bombay Stock Exchange found a positive effect of firm size on profitability. As explained earlier, the trade-off theory states that large companies tend to use debt as a source of funds. The use of debt is intended to use tax deductive from interest costs so that it will increase profitability. The results of this study are in accordance with the research conducted by Abor (2005), Adewale and Ajibola (2013), Ahmed Sheikh and Wang (2013) and Isik (2017). On the contrary, research conducted by Lazăr (2016) in Romanian companies found that small companies are more able to generate profits than large companies. This is because small companies are more dynamic in taking policies.

2.9 Growth (X_2)

Research conducted by Yang *et al.* (2010) in companies in Taiwan found a positive effect of growth on stock returns. Investors tend to respond positively to companies that have high growth. The company's high growth reflects high profitability in the future. The results of this research are in accordance with the research conducted by Ahmad *et al.* (2013) and Hermuningsih (2013). On the other hand, research conducted by Rezaei and Habashi (2012) in companies in Tehran Stock Exchange actually found a negative effect of growth on stock returns.

Quang and Xin (2014) who conducted a research on companies listed on the Ho Chi Minh Stock Exchange found growth had a positive effect on profitability. In other words, companies that have high growth tend to have high profitability as well. The results of this study are in accordance with the research conducted by Ahmed Sheikh and Wang (2013), Goyal (2013) and Salameh *et al.* (2012). In contrast, according to Titman and Wessels (1988), companies that have high growth tend to have many investment choices. As a result, agency costs will increase and eventually will reduce profitability. In terms of growth, it will negatively affect profitability.

Viviani (2008) found growth has a positive effect on capital structure. This result is consistent with the pecking order theory, which states that companies that have high growth will use internal sources of funds first. If it is not sufficient, it will be filled with debt. This has the effect that companies that have high growth tend to use debt. Their goal to be in debt is to avoid information asymmetry. This result is in line with research conducted by (Chang *et al.*, 2014). On the contrary, the trade-off theory states that companies that have high growth tend to avoid debt (Chen *et al.*, 2014). This finding is in line with research conducted by (Alipour, *et al.*, 2015; Chandra and Idrus, 2015; Kim *et al.*, 2006; Yinusa *et al.*, 2015).

2.10 Tangibility (X_3)

Olowoniyi and Ojenike (2012) in their research on companies in Nigeria found that tangibility has a negative effect on stock returns. Companies that have high tangibility means having high fixed assets. The high level of fixed assets of the company causes the company not to move freely. As a result, the risks faced by the company also increased. As a result, investors will avoid this company which causes the stock returns will decrease.

Chiang *et al.* (2010) in their research on building contractor companies in Hong Kong found that tangibility has a positive effect on capital structure. This research is consistent with the trade-off theory, which states that companies that have high tangibility will need collateral assets to get bigger debt. The results of this study are in line with the research conducted by (Margaritis and Psillaki, 2007; Yang *et al.*, 2010).

In contrast, research conducted by Vo (2017) in non-financial companies at the Ho Chi Minh City Stock Exchange found that tangibility has a negative effect on capital structure. These findings are in line with the research conducted by Acaravci (2015), Chandra (2014), Huang and Song (2006) and Kim *et al.* (2006).

In a research conducted by Dawar (2014), it is found that the tangibility of companies can be used as collateral so that it can reduce agency costs and agency problems between shareholders and debt holders so that it will ultimately have an impact on increasing profitability. In other words, tangibility has a positive effect on profitability. On the contrary, Isik (2017) in his research on companies listed on the Borsa Istanbul Stock Exchange found that tangibility has a negative effect on profitability. This finding is in line with the research conducted by Adewale and Ajibola (2013), Ahmed Sheikh and Wang (2013), Lazăr (2016) and Vătavu (2015).

2.11 Liquidity (X_4)

The pecking order theory states companies prefer to use internal sources of funds rather than external sources of funds. Companies that have high liquidity will reduce the company's intention to use debt. Therefore, liquidity has a negative effect on capital structure. This result is in line with the research conducted by Haron (2016) and Myers and Rajan (1998). On the contrary, the trade-off theory states that companies that have high

liquidity tend to increase the use of debt. It means that liquidity ratio has a positive effect on capital structure. This result is in line with research conducted by Alipour *et al.* (2015), Pacheco and Tavares (2017) and Shah and Kausar (2012).

In a research conducted by Dawar (2014), it is found that high company liquidity will reduce interest costs, as a result, profitability will increase. This means that liquidity has a positive effect on profitability. This result is in line with the findings of Isik (2017) and Salameh *et al.* (2012). On the contrary, Vătavu (2015) actually found that liquidity has a negative effect on profitability. In the sense that liquidity that is too large is actually an indicator of the amount of unproductive funds, resulting in decreased profitability. Meanwhile, research conducted by Ahmad *et al.* (2013) on the Karachi Stock Exchange found a negative effect of liquidity on stock returns.

2.12 Uniqueness (X_5)

Titman and Wessels (1988) in their research explained the negative effect of uniqueness on capital structure. The uniqueness of a company's products will result in high costs. This uniqueness also requires specific workers and suppliers. As a result, the company becomes very non-liquid and it is difficult to switch to another business. For this reason, creditors will find it difficult to grant loans to companies. Meanwhile research conducted by Chang *et al.* (2014) and Kim *et al.* (2006) found that there is no effect of uniqueness on capital structure.

Meanwhile, a research conducted by Cheema and Kaikati (2010) found that the more unique a product is, it will be more demanded by consumers and as a result, purchase experiences an increase. Consumers who have high need for uniqueness will increase their purchase intention (Soni and Koshy, 2016). This means uniqueness has a positive effect on profitability.

2.13 Volatility (X_6)

Alipour *et al.* (2015) in their research on companies in Iran found that volatility has a negative effect on capital structure. These findings are consistent with the trade-off theory, which suggests that high-risk companies reduce the use of debt. The use of debt will not gain benefit from tax deductive of interest costs. On the contrary, research conducted by Chen *et al.* (2014) on companies listed on the Shenzhen Stock Exchange found a positive effect of volatility on capital structure. This is because most companies in China are dominated by state companies, so even though they have high volatility, they can still get loans. This result is in line with research conducted by Huang and Song (2006), Jordan *et al.* (1998) and Tse and Rodgers (2014).

Isik (2017) in his research at Borsa Istanbul Stock Exchange found companies that have long been operating can get high profitability despite its high volatility. It means that there is a positive effect of volatility on profitability. Conversely, for companies that are just operating and small companies, volatility has a negative effect on profitability. That is, the greater the risk of the company, the smaller the profit earned.

2.14 Profitability (Y1)

Ahmad *et al.* (2013) who conducted research on non-financial companies on the Karachi Stock Exchange found a positive effect of profitability on stock returns. These results indicate that companies that have high profitability tend to be one of the indicators of a strong corporate financial fundamentals. Having strong financial fundamentals will encourage investors to own company shares, so that stock prices will rise and stock returns will also increase. The results of this study are consistent with the research conducted by Hermuningsih (2013). While research conducted by Yang *et al.* (2010) in companies in

Taiwan found a positive effect of profitability on stock returns. However, in observation year of 2005, they found a negative effect of profitability on stock returns.

2.15 Capital structure (Y_2)

Research conducted by Khan *et al.* (2013) in textile companies in Pakistan found a significant positive effect of capital structure on stock returns. This means that the greater the debt used by the company, it tends to increase the risk of the company. The increase in the company's risk will encourage shareholders to demand a higher risk premium. As a result, stock returns are expected to increase. This result is consistent with the research conducted by Bhandari (1988), Hermuningsih (2013) and Yang *et al.* (2010). On the contrary, research conducted by Abdullah *et al.* (2015) in manufacturing companies on the Dhaka Stock Exchange found a negative effect of capital structure on stock returns. This research, found manufacturing companies in Dhaka tend to maintain a low capital structure. In addition, financial institutions in Dhaka also do not want to provide loans to manufacturing companies because of their low competitive power and low debt requirements. As a result, the use of debt becomes small. In contrast, shareholders demand a higher risk premium, so that stock returns will increase. The results of this study are consistent with the research conducted by Ahmad *et al.* (2013).

Myers and Majluf (1984) in pecking order theory argued that companies tend to use internal sources of funds compared to external sources of funds. The use of internal funds will reduce agency costs, so that the company's profitability will increase. Dawar (2014) in research conducted on companies listed on the Bombay Stock Exchange found a negative effect of capital structure on profitability. The results of this research are in line with the research conducted by Basit and Hassan (2017), Chen *et al.* (2009), Isik (2017), Odusanya *et al.* (2018) and Quang and Xin (2014). On the contrary, Adewale and Ajibola (2013) in their research on manufacturing companies in Nigeria found a positive effect of capital structure on profitability. The results of this research are consistent with Modigliani and Miller (1963) which stated that the use of debt will reduce the cost of debt due to tax deductive from interest costs so that the company's profitability will increase. Other research that found a positive effect of capital structure on profitability are Chisti *et al.* (2013), Gill *et al.* (2011) and Goyal (2013).

3. Research methodology

3.1 Population and sample

The population used in this study is firm listed in a compass 100 index or *Kompas 100* for the period of August 2016. The sample is selected by using purposive sampling. The criteria used are that:

- the company has been registered before January 2009 and
- the banking companies are not included in the analysis because banking companies have different perception of valuation of capital structure than other companies.

Therefore, the companies used in this analysis are 64 companies. The data obtained are from 2010 to 2016. Thus, there are 448 data for unit of analysis in this study.

The hypotheses in this study are:

H1. Effect of company size, growth, tangibility, liquidity, capital structure and profitability on stock returns.

H2. Effect of growth, tangibility, liquidity, uniqueness, volatility on capital structure.

H3. Effect of firm size, growth, tangibility, liquidity, uniqueness, volatility and capital structure on profitability.

3.2 Data collection method

The data collected in this study are secondary. The research data are sourced from the company's financial statements published by their respective companies through mass media and the Indonesia Stock Exchange website (www.idx.co.id). All data for endogenous variables (capital structure, profitability and stock returns) and exogenous variables (firm size, growth, tangibility, liquidity, uniqueness and volatility) are sourced from financial statements (balance sheet and income statement) from 2010 to 2016.

3.3 Research variables and measurement

The operational variables used in this study are shown in Table I.

3.4 Research model and data analysis technique

From the results of the discussion of the literature review above, a research model can be designed, as shown in Figure 1 below.

Meanwhile, the data analysis technique used in this study is path analysis. The structural models that can be designed are as follows.

$$Y_{CS} = \alpha_0 + \beta_1 X_{Size} + \beta_2 X_{Go} + \beta_3 X_{Tang} + \beta_4 X_{Liq} + \beta_5 X_{Uniq} + \beta_6 X_{Vol} + \varepsilon_1$$

$$Y_{Prof} = \alpha_0 + \beta_7 Y_{CS} + \beta_8 X_{Size} + \beta_9 X_{Go} + \beta_{10} X_{Tang} + \beta_{11} X_{Liq} + \beta_{12} X_{Uniq} + \beta_{13} X_{Vol} + \varepsilon_2$$

$$Y_{SR} = \alpha_0 + \beta_{14} Y_{CS} + \beta_{15} X_{Prof} + \beta_{16} X_{Size} + \beta_{17} X_{Go} + \beta_{18} X_{Tang} + \beta_{19} X_{Liq} + \varepsilon_3$$

where:

Y_{CS}	= Capital structure
Y_{SR}	=Stock returns
X_{Prof}	= Profitability
X_{Size}	= Firm size
X_{Go}	= Growth
X_{Tang}	= Tangibility
X_{Liq}	= Liquidity
X_{Vol}	= Volatility
X_{Uniq}	= Uniqueness
α_0	= Intercept
$\beta_1 \ldots \beta_{19}$	= Coefficient of variable
$\varepsilon_1 . \varepsilon_3$	= Error term

4. Results and discussion

4.1 Goodness of fit

To be able to use the path analysis model, it is necessary to test the model. The test results for the model are illustrated in Table II.

From the results of the model test with the goodness of fit as shown in Table II, it can be said that the results are fit or the model is well designed and feasible to continue the analysis.

No.	Variable name	Ratio	Source
1	Profitability (Y1)	$\text{Profitability} = \frac{\text{Earning after Tax}}{\text{Total Assets}}$	(Cekrezi, 2013; Chandra, 2014)
2	Capital structure (Y2)	$\text{Capital Structure} = \frac{\text{Total Debt}}{\text{Total Assets}}$	(Ahmed Sheikh and Wang, 2013; Lazăr, 2016)
3	Stock returns (Y3)	$\text{Stock Returns} = \frac{\text{Price}_{t1} - \text{Price}_{t-1}}{\text{Price}_{t-1}}$	(Yang *et al.*, 2010)
4	Firm size (X1)	Firm Size = Ln (Sales)	(Ahmed Sheikh and Wang, 2013)
5	Growth (X2)	GO = % Change in Total Assets	(Rezaei and Habashi, 2012; Yang *et al.*, 2010)
6	Tangibility (X3)	$\text{Tang} = \frac{\text{Total Fixed Assets}}{\text{Total Assets}}$	(Alipour *et al.*, 2015)
7	Liquidity (X4)	$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$	(Alipour *et al.*, 2015; Chadha and Sharma, 2015)
8	Uniqueness (X5)	$\text{Uniqueness} = \frac{\text{Selling Expencess}}{\text{Total Revenue}}$	(Yang *et al.*, 2010)
9	Volatility (X6)	$\text{Volatility} = \frac{\text{Std Dev. EBIT}}{\text{Total Assets}}$	(Chandra, 2015; Yang *et al.*, 2010)

Table I.
Operational variables of research

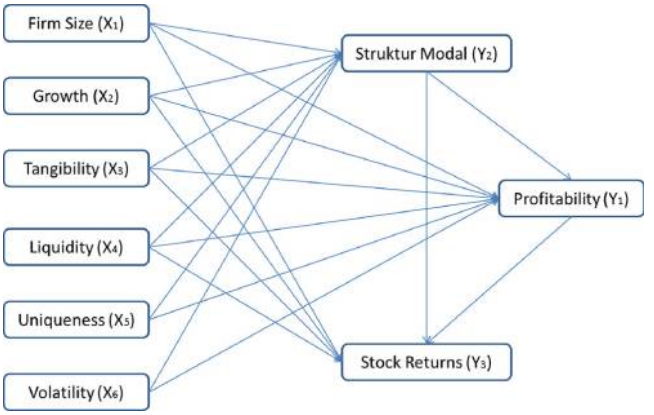

Figure 1.
Research model

4.2 Hypothesis test results

The results of hypothesis testing for this research model can be seen in Table III and Figure 2.

Firm size, Growth, tangibility, liquidity, uniqueness, volatility and capital structure.

To explain the results of this study, we will explain the results per research variable in the following section.

4.2.1 Firm size (X_1). Company size does not have a significant effect on capital structure or stock returns. This result shows that both investors and creditors have little influence on

Goodness-of-fit index	Cut-off*	Result	Conclusion
Chi-square		5.415	Fit
Probability	≥0.05	0.067	
Cmin/DF	≤5.00	2.708	Fit
GFI	≥0.90	0.997	Fit
AGFI	≥0.90	0.940	Fit
TLI	≥0.90	0.903	Fit
CFI	≥0.90	0.995	Fit
NFI	≥0.90	0.992	Fit
IFI	≥0.90	0.995	Fit
RMSEA	0.05-0.08	0.062	Fit

Table II.
Goodness-of -it test results

Note: **source:* (Hair *et al.*, 1998)

Endogenous variable	Exogenous variable	Hypothesis	Estimated parameters	*t*-value	*P*-value
Stock return (Y_3)	Capital structure (Y_2)	–	–0.003	–0.044	0.965
	Profitability (Y1)	+	0.082	1.652	0.099
	Firm size (X_1)	+	–0.072	–1.388	0.165
	Growth (X_2)	–	–0.073	–1.001	0.317
	Tangibility (X_3)	–	0.014	0.274	0.784
	Liquidity (X_4)	–	–0.018	–0.351	0.726
Capital structure (Y_2)	Firm size (X_1)	+	0.022	0.617	0.537
	Growth (X_2)	–	–0.713	–20.679	0.000
	Tangibility (X_3)	+	0.021	0.583	0.560
	Liquidity (X_4)	+	–0.049	–1.417	0.157
	Uniqueness (X_5)	–	–0.018	–0.543	0.587
	Volatility (X_6)	–	0.043	1.290	0.197
Profitability (Y1)	Capital structure (Y_2)	+	0.172	2.685	0.007
	Firm size (X_1)	+	0.232	4.733	0.000
	Growth (X_2)	+	0.352	5.403	0.000
	Tangibility (X_3)	+	–0.037	–0.754	0.451
	Liquidity (X_4)	+	0.071	1.515	0.130
	Uniqueness (X_5)	+	–0.085	–0.908	0.056
	Volatility (X_6)	+	0.241	5.339	0.000

Table III.
Final estimation of measurement model parameters

the firm size. On the other hand, firm size has a significant positive effect on profitability. This result means large companies are better able to generate greater profits compared to small companies. In other words, large companies are better able to take advantage of economies of scale so they can be more efficient and will ultimately increase the company's profit. This result is in line with research conducted by Abor (2005), Ahmed Sheikh and Wang (2013), Dawar (2014) and Isik (2017).

4.2.2 Growth (X_2). Growth does not have a significant effect on stock returns. Conversely, growth has a significant negative effect on capital structure. This result is consistent with the trade-off theory, which states that companies that have high growth tend to avoid debt (Chen *et al.*, 2014).

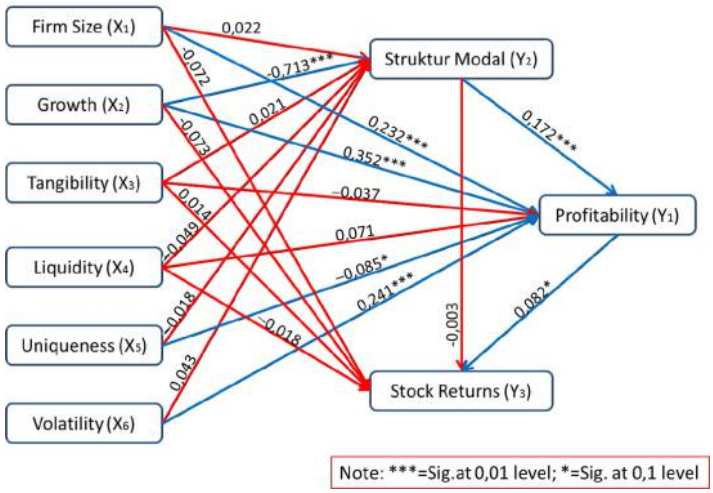

Figure 2.
Final model

In addition, growth also has a significant positive effect on profitability. This result is in line with the research conducted by Ahmed Sheikh and Wang (2013), Goyal (2013), Quang and Xin (2014) and Salameh *et al.* (2012). This means that companies that have high growth tend to get high profitability as well.

From this result, it can be said that good growth will not be of concern to investors. Good growth is accompanied by high corporate profits that will be of concern to investors.

4.2.3 Tangibility (X_3). In this research, there is no significant effect of tangibility on capital structure, profitability or stock returns. This result shows that companies in Indonesia that have high tangibility are not used as guidelines for obtaining loans. High tangibility is also not a significant burden for companies in Indonesia in gaining profit. Investors also do not make tangibility as a consideration in buying shares.

4.2.4 Liquidity (X_4). Similar to tangibility, liquidity also does not have a significant effect on capital structure, profitability or stock returns. Companies that have large liquidity also do not fully use liquidity as a source of internal funds. Therefore, it will not affect capital structure policies. Some companies that have large liquidity tend to be used to pay short-term debt with the aim of reducing interest costs and ultimately will increase company profits. Meanwhile, some investors consider companies that have large liquidity as companies that are less productive in using their funds, consequently investors will avoid this company. However, because not all companies apply the same, the effect is not significant.

4.2.5 Uniqueness (X_5). Titman and Wessels (1988) stated that uniqueness has a negative effect on capital structure. This is because the more unique products produced by the company, it will require a unique workforce and suppliers. Therefore, the company will find it difficult to switch business because the company's risk will increase. This makes it difficult for creditors to grant loans to unique companies. This research also found a negative effect of uniqueness on capital structure. However, it is not significant. This means that this opinion is only for some firms listed in *Kompas 100*.

Similar to the capital structure, uniqueness also has a negative effect but it is significant on profitability. This result is contrary to the results of the research conducted by Cheema

and Kaikati (2010). This means that the unique products that are produced do require greater costs so that they tend to reduce profits. The advantage of getting a bigger market is still less than the costs incurred.

4.2.6 Volatility (X_6). This research found that volatility has a positive but non-significant effect on capital structure. This result is not in accordance with the research conducted by Alipour *et al.* (2015) and Chen *et al.* (2014). This means that in deciding capital structure policies, company managers do not consider the risk factors faced by the company.

Conversely, volatility has a significant positive effect on profitability. This result is in line with research conducted by Isik (2017) who found that companies that have long been operating can get high profitability despite having high volatility. This shows that companies in Indonesia are well-established companies and can take advantage of high volatility to achieve even greater profits.

4.2.7 Profitability (Y_1). Profitability has a significant positive effect on stock returns. This result is consistent with the research conducted by Ahmad *et al.* (2013) on the Karachi Stock Exchange. The results of this research indicate that increasing company profits can increase stock returns. It means that investors are still considering company profits in deciding stock transactions.

4.2.8 Capital structure (Y_2). This study found that capital structure has no effect on stock returns. This means that this research is not in line with the research conducted by Khan *et al.* (2013) who found a positive effect of capital structure on stock returns. This research is also not in line with research conducted by Abdullah *et al.* (2015) which researched on manufacturing companies which showed that there was a negative effect of capital structure on stock returns. This finding explains that investors are not too concerned about the company's capital structure policy.

Meanwhile, the capital structure has a significant positive effect on profitability. This finding supports the trade-off theory, which states that companies tend to be indebted to get tax deductive benefits from interest costs. With the tax reduction, the profitability of the company will increase.

The results of the study show that profitability is influenced by several exogenous firm size, growth, uniqueness and volatility, whereas endogenous affects only the capital structure. Capital structure variables are only influenced by one exogenous, namely, growth. But none of the exogenous variables affect the stock return. Stock returns are only influenced by profitability. This proves that Indonesian investors do not consider the company's financial fundamentals in deciding to buy and sell shares. In other words, most investors in Indonesia are speculators who play stocks for short term.

5. Conclusion

Capital structure is only significantly influenced by growth. The effect of growth on capital structure is negative. This indicates that companies in Indonesia tend to adopt a trade-off theory. This means that companies that have high growth tend to avoid debt (Chen *et al.*, 2014). This opinion about trade-off theory is reinforced by the significant positive effect of capital structure on profitability. The company will use debt to get tax deductive from interest costs, so that it can increase profits.

Company profitability is influenced by capital structure, firm size, growth, uniqueness and volatility. This means that companies in Indonesia that can generate high profits are large companies that are well established so they can control risks and the products produced are not so unique that production costs are low. Therefore, the company growth is good and can use debt as a source of funds to get tax deductive benefits from interest costs.

The main consideration of investors in buying company shares is the company's profitability. The company's capital structure will not be taken into consideration directly by investors. However, a good capital structure that can generate profits for the company will be taken into consideration by investors. Likewise, the firm size and company growth will not be a direct consideration, but if coupled with an increase in profit, investors will consider the factors. Therefore, to be able to increase company value, company managers need to pay attention to the profits that will be obtained by the company.

This study took samples from firms listed on *Kompas 100*. The compass 100 index or *Kompas 100* consists of many sectors. It is hoped that the future researchers will conduct a research on a more specific sector.

References

Abdullah, M.N., Parvez, K., Karim, T. and Tooheen, R.B. (2015), "The impact of financial leverage and market size on stock returns on the Dhaka stock exchange: evidence from selected stocks in the manufacturing sector", *International Journal of Economics, Finance and Management Sciences*, Vol. 3 No. 1, pp. 10.

Abor, J. (2005), "The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana", *Journal of Risk Finance*, Vol. 6 No. 5, pp. 438-445.

Acaravci, S.K. (2015), "The determinants of capital structure: evidence from the Turkish manufacturing sector", *International Journal of Economics and Financial Issues*, Vol. 5 No. 1, pp. 158-171.

Acheampong, P., Agalega, E. and Shibu, A.K. (2014), "The effect of financial leverage and market size on stock returns on the Ghana stock exchange: evidence from selected stocks in the manufacturing sector", *International Journal of Financial Research*, Vol. 5 No. 1, pp. 125-134.

Adewale, M.T. and Ajibola, O.B. (2013), "Does capital structure enhance firm performance? evidence from Nigeria", *The IUP Journal of Bank Management*, Vol. 12 No. 4, pp. 43-44.

Ahmad, H., Fida, B. a. and Zakaria, M. (2013), "The co-determinants of capital structure and stock returns: evidence from the Karachi stock exchange", *The Lahore Journal of Economics*, Vol. 18 No. 1, pp. 81-92.

Ahmed Sheikh, N. and Wang, Z. (2013), "The impact of capital structure on performance: an empirical study of non-financial listed firms in Pakistan", *International Journal of Commerce and Management*, Vol. 23 No. 4, pp. 354-368.

Ahmed Sheikh, N. and Wang, Z. (2011), "Determinants of capital structure: an empirical study of firms in manufacturing industry of Pakistan", *Managerial Finance*, Vol. 37 No. 2, pp. 117-133.

Alipour, M., Mohammadi, M.F.S. and Derakhshan, H. (2015), "Determinants of capital structure: an empirical study of firms in Iran", *International Journal of Law and Management*, Vol. 57 No. 1, pp. 53-83.

Baker, M. and Wurgler, J. (2002), "Market timing and capital structure", *Journal of Finance*, Vol. 57 No. 1, pp. 1-32.

Bank Indonesia and Ministry of Finance (2018), *External Debt Statistics of Indonesia*, Indonesia.

Banz, R.W. (1981), "The relationship between return and market value of common stocks", *Journal of Financial Economics*, Vol. 9 No. 1, pp. 3-18.

Basit, A. and Hassan, Z. (2017), "Impact of Capital structure on firm performance: analysis of food sector listed on Karachi stock exchange", *International Journal of Management, Accounting and Economics*, Vol. 4 No. 2, pp. 118-135.

Bhandari, L.C. (1988), "Debt/equity ratio and expected common stock returns: empirical evidence", *Journal of Finance*, Vol. 43 No. 2, pp. 507-528.

Cekrezi, A. (2013), "Impact of firm level factors on capital", *European Journal of Sustainable Development*, Vol. 2 No. 4, pp. 135-148.

Chadha, S. and Sharma, A.K. (2015), "Determinants of capital structure: an empirical evaluation from India", *Journal of Advances in Management Research*, Vol. 12 No. 1, pp. 3-14.

Chandra, T. (2014), "Faktor-Faktor yang mempengaruhi struktur modal pada perusahaan properti dan real estate di Indonesia <factors affecting the capital structure of property and real estate companies in Indonesia>", *Ekuitas (Jurnal Ekonomi Dan Keuangan)*, Vol. 18 No. 4, pp. 507-523.

Chandra, T. (2015), "Analysis of factors affecting Capital structure on listed company in kompas 100 index", *International Journal of Applied Business and Economic Research*, Vol. 13 No. 9, pp. 7049-7066.

Chandra, T. (2016), "The Influence of leadership styles, work environment and job satisfaction of employee performance – studies in the school of SMPN 10 Surabaya", *International Education Studies*, Vol. 9 No. 1, pp. 131-140.

Chandra, T. and Idrus, H. (2015), "Testing fama and french three factor model within the context of Indonesia stock exchange", *The Social Sciences, Medwell Jurnals*, Vol. 10 No. 4, pp. 499-509.

Chang, C., Chen, X. and Liao, G. (2014), "What are the reliably important determinants of capital structure in china?", *Pacific Basin Finance Journal*, Vol. 30, pp. 87-113.

Cheema, A. and Kaikati, A.M. (2010), "The effect of need for uniqueness on word of mouth", *Journal of Marketing Research*, Vol. 47 No. 3, pp. 553-563.

Chen, J., Chen, M., Liao, W. and Chen, T. (2009), "Influence of capital structure and operational risk on profitability of life insurance industry in Taiwan", *Journal of Modelling in Management*, Vol. 4 No. 1, pp. 7-18.

Chen, J., Jiang, C. and Lin, Y. (2014), "What determine firms' capital structure in China?", *Managerial Finance*, Vol. 40 No. 10, pp. 1024-1039.

Chiang, Y.H., Cheng, E. W. l. and Lam, P. T. i. (2010), "Epistemology of capital structure decisions by building contractors in Hong Kong", *Construction Innovation*, Vol. 10 No. 3, pp. 329-345.

Chisti, K.A., Ali, K. and Sangmi, M.-D. (2013), "Impact of Capital structure on profitability of listed companies (evidence from India)". *The USV Annals of Economics and Public Administration*, Vol. 13 No. 1, pp. 183-191.

Dawar, V. (2014), "Agency theory, capital structure and firm performance: some Indian evidence", *Managerial Finance*, Vol. 40 No. 12, pp. 1190-1206.

Frank, M.Z. and Goyal, V.K. (2009), "Capital structure decisions: which factors are reliably important?", *Financial Management*, Vol. 38 No. 1, pp. 1-37.

Gill, A., Biger, N. and Mathur, N. (2011), "The effect of capital structure on profitability: evidence from the United States", *International Journal of Management*, Vol. 28 No. 4, pp. 3-15.

Goyal, A.M. (2013), "Impact of capital structure on performance of listed public sector banks in India", *Nternational Journal of Business and Management Invention*, Vol. 2 No. 10, pp. 35-43.

Hair, J.F.J., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis (Fifth Edit)*, Prentice Hall Internatiional, inc.

Haron, R. (2016), "Do Indonesian firms practice target capital structure? a dynamic approach", *Journal of Asia Business Studies*, Vol. 10 No. 3.

Hermuningsih, S. (2013), "Profitability, growth opportunity, capital structure and the firm value. Bulletin of monetary", *Buletin Ekonomi Moneter Dan Perbankan*, Vol. 16 No. 2, pp. 115-136.

Huang, G. and Song, F.M. (2006), "The determinants of capital structure: evidence from China", *China Economic Review*, Vol. 17 No. 1, pp. 14-36.

Isik, O. (2017), "Determinants of profitability: evidence from real sector firms listed in Borsa Istanbul", *Business and Economics Research Journal*, Vol. 8 No. 4, pp. 689-698.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360.

Jordan, J., Lowe, J. and Taylor, P. (1998), "Strategy and financial policy in UK small firms", *Journal of Business Finance Accounting*, Vol. 25 Nos 1/2, pp. 1-27.

Khan, W., Naz, A., Khan, M., Khan, W.K.Q. and Ahmad, S. (2013), "The impact of capital structure and financial performance on stock returns "a case of Pakistan textile industry ", *Middle-East Journal of Scientific Research*, Vol. 16 No. 2, pp. 289-295.

Kim, H., Heshmati, A. and Aoun, D. (2006), "Dynamics of Capital structure: the case of Korean listed manufacturing companies", *Asian Economic Journal*, Vol. 20 No. 3, pp. 275-302.

Lazăr, S. (2016), "Determinants of firm performance: evidence from Romanian listed companies", *Review of Economic and Business Studies*, Vol. 9 No. 1, pp. 53-69.

Manos, R. and Ah-hen, C. (2008), "Evidence on the determinants of capital structure of non-financial corporates in Mauritius", *Journal of African Business*, Vol. 4 No. 2, pp. 129-154.

Margaritis, D. and Psillaki, M. (2007), "Capital structure and firm efficiency", *Journal of Business Finance and Accounting*, Vol. 34 Nos 9/10, pp. 1447-1469.

Modigliani, F. and Miller, M.H. (1958), "The cost of capital, corporate finance and theory of investment", *The American Economic Review*, Vol. XLVIII No. 3, pp. 261-297.

Modigliani, F. and Miller, M.H. (1963), "Corporate income taxes and the cost of capital: a correction", *The American Economic Review*, Vol. 53 No. 3, pp. 433-443.

Myers, S.C. and Majluf, N.S. (1984), "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics*,

Myers, S.C. and Rajan, R.G. (1998), "The paradox of liquidity", *The Quarterly Journal of Economics*, Vol. 113 No. 3, pp. 733-771.

Odusanya, A.I., Yinusa, O.G. and M.Ilo, B. (2018), "Determinants of firm profitability in Nigeria: evidence from dynamic panel models. SPOUDAI", *Journal of Economics and Business*, pp. 43-58.

Olowoniyi, A.O. and Ojenike, J.O. (2012), "Determinants of stock return of Nigerian-listed firms", *Journal of Emerging Trends in Economics and Management Sciences*, Vol. 3 No. 4, pp. 389-392.

Pacheco, L. and Tavares, F. (2017), "Capital structure determinants of hospitality sector SMEs", *Tourism Economics*, Vol. 23 No. 1, pp. 113-132.

Quang, D.X. and Xin, W.Z. (2014), "The impact of ownership structure and capital structure on financial performance of Vietnamese firms", *International Business Research*, Vol. 7 No. 2, pp. 64-71.

Rezaei, F. and Habashi, S.S. (2012), "Co-determination of capital structure and stock return through simultaneous structural equations model", *Journal of Basic and Applied Scientific Research*, Vol. 2 No. 12, pp. 12939-12948.

Salameh, H.M., Al-Zubi, K.A. and Al-Zu'bi, B. (2012), "Capital structure determinants and financial performance analytical study in Saudi Arabia market 2004-2009", *International Jpurnal of Economic Perspective*, Vol. 6 No. 4, pp. 18-33.

Shah, S.Z.A. and Kausar, J. (2012), "Determinants of capital structure of leasing companies in Pakistan determinants of capital structure of leasing companies in Pakistan", *Applied Financial Economics*, Vol. 22 No. November, pp. 37-41.

Soni, M.J. and Koshy, A. (2016), "An examination of response of consumers with different levels of uniqueness to limited quantity offers", *Vikalpa*, Vol. 41 No. 3, pp. 209-221.

Titman, S. and Wessels, R. (1988), "The determinants of capital structure choice", *Journal of Finance*, Vol. 43 No. 1, pp. 1-19.

Tse, C.-B. and Rodgers, T. (2014), "The Capital structure of Chinese listed firms: is manufacturing industry special?", *Managerial Finance*, Vol. 40 No. 5, pp. 469-486.

Vătavu, S. (2015), "The impact of capital structure on financial performance in Romanian listed companies", *Procedia Economics and Finance*, Vol. 32 No. 15, pp. 1314-1322.

Viviani, J.L. (2008), "Capital structure determinants: an empirical study of french companies in the wine industry", *International Journal of Wine Business Research*, Vol. 20 No. 2, pp. 171-194.

Vo, X.V. (2017), "Determinants of Capital structure in emerging markets: evidence from Vietnam", *Research in International Business and Finance*, Vol. 40, pp. 105-113.

Yang, C.-C., Lee, C., Gu, Y.-X. and Lee, Y.-W. (2010), "Co-determination of capital structure and stock returns—a LISREL approach, an empirical test of Taiwan stock markets", *The Quarterly Review of Economics and Finance*, Vol. 50 No. 2, pp. 222-233.

Yinusa, O.G., Somoye, R.O.C., Alimi, O.Y. and Muzliu-Ilo, B. (2015), "Firm performance and capital structure choice of firms: evidence from Nigeria", *Journal of Knowledge Globalization*, Vol. 9 No. 1, pp. 1-16.

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