

THE CAPITAL STRUCTURES OF SMALL AND MEDIUM COMPANIES IN INDONESIA

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Abstract

Small and medium companies play an important role in the economic development of any country. This study aims to explore the determinants of capital structure in small and medium companies in Indonesia. The company's capital structure will be influenced by microeconomic and macroeconomic conditions. Purposive sampling conducted in this study generated 15 samples. Data panel analysis was used to analyze small and medium companies in the listed period of 2011-2016. Results of the analysis show that size and profit positively affect the company's capital structure, while other variables do not show significant effects. In average, the small and medium companies in Indonesia have conservative capital structures and positive profits. It is good for the companies to keep their capital structure to stay at a conservative level and continue to improve the company's profitability.

Key Words: *Macroeconomics, Microeconomics, Capital Structure, Small and Medium Companies*

1. Introduction

In many countries, small and medium companies play an important role as the backbone of their economy. More than 99% of businesses in Europe are supported by small and medium companies (Balios, Daskalakis, Eriotis and Vasillou (2016). In Indonesia, Micro, Small and Medium Companies (MSMEs) have an important and strategic role in the national economic development. In addition to its role in economic growth and employment, MSMEs also play a role in distributing the development products. MSMEs are also proven not to be affected by economic crisis. When the crisis occurred in the period of 1997 - 1998, MSMEs were the only companies being able to remain strong. According to data from the Ministry of Cooperatives and MSME of 2014 that was stated in the Business Profile of MSME in 2015, the MSMEs developed and big businesses decreased in 2011 and 2012. When in 2011, the large businesses reached 41.95%, the following year they were only 40.92%. The percentage decreases about 1.03%. On the other hand, the MSMEs experienced the opposite. The medium companies in 2011 were only 13.46% and in 2012, they reached 13.59%. There was an increase of 0.13%. In contrast to small businesses, there was a slight decrease from 9.94% in 2011 to 9.68% in 2012. It means that they decreased about 0.26%. A significant increase occurred in micro businesses that showed the percentage of 34.64% in 2011 and then went up about 4.17% to 38.81% in 2012.

With the increasing roles, it is important to acknowledge the determinants of capital structures of small and medium companies in order to know the optimum capital structure for MSMEs. Therefore, all stakeholders are able to make precise decisions about their activities.

This study was conducted on the basis of the fact that the theory of capital structure is not developed in the concept of small and medium-sized companies (Ang, 1991). They are Michaelas, Chittenden and Poutziouris (1999) who first attempted and implemented various theoretical attributes for small businesses. Related to funding, small and medium-sized businesses use small amount of external funding especially from banks (Beck, Demirguckunt and Maksimovic (2008).

Various studies on capital structure in small businesses have been done previously. The study of Cook and Tang (2010) found evidences that MSMEs adjust their capital structures when the macroeconomic conditions relatively are not good. Mokhova and Zinecker (2014) explored macroeconomic factors affecting capital structure in seven

countries in Europe and they concluded that external factors play an important role in the company's funding decision-making process.

Some empirical studies also showed that macroeconomic conditions will affect the company's capital structure policy. Damodaran in his research found that interest rate, exchange rate and inflation influence the policy of capital structure. The empirical evidences described that macroeconomic factors are considered by management in determining the Capital Structure. De Angelo and Masulis (1980) stated that inflation could theoretically encourage the use of debt because it is relatively cheaper.

In Indonesia, the study of capital structure in small businesses has not been done. Therefore, this study is necessary to exhaustively explore the capital structure of small and medium companies in Indonesia using data from 2011 to 2016. This study is expected to fill the knowledge in the field of financial management science especially on the study of capital structure in small and medium companies in Indonesia. Furthermore, it can also be beneficial for small and medium companies in making the right decisions in determining their capital structure. Meanwhile, for policy makers it can be used to propose policies about optimum capital structure for small and medium companies in Indonesia.

2. Literature Review

Modigliani and Miller (1958) argued that capital structure is irrelevance, which means that a company value is not influenced by corporate financing mix. Since then, literatures on funding have grown on the basis of two theoretical approaches: the trade-off and the pecking order theories.

The core of the trade-off theory is the balance between the benefits of debt (tax deductibility and agency costs) with the cost of debt (direct and indirect costs of financial distress). Meanwhile, the pecking order theory developed by Myers (1984) and Myers and Majluf (1984) refers to the existence of asymmetric information stating that the company's funding decision follows a hierarchy in which internal funding takes precedence over the external. Furthermore, this asymmetric information produces various approach such as the signaling theory (Ross, 1977) and then market timing approach (Lucas and McDonald, 1990).

The size of a company, as measured by the log of total assets, has always been an important determinant for the company. Hanousek and Shamsur (2011) explained that

there is a positive effect between size and leverage. Therefore, large companies are suspected of having higher leverage.

Companies that have the opportunity to grow will be able to create moral hazard that will encourage companies to take big risks, so they tend to use less debt (Myers, 1977). It happens because they find difficulties to get loans from external. Therefore, the company's growth will negatively affect the company's debt. The growth of the company will be measured using the company's sales growth.

When risks (as measured by earning volatility) rise, companies will find difficulties to seek external funding (DeAngelo and Masulis (1980), Titman and Wessles (1988).) The condition results in the fall of the company's debt.

Small and medium companies are usually managed by their owners for a number of reasons, one of which is to minimize disruptions to their business. Therefore, internal financing becomes the first choice for their funding (Ballios, et.al, 2016). They will try to improve their welfare, so that high profits will be able to reduce the company's debt.

Inflation indicates the tendency of price increases for a certain period. When inflation is high, the cost of capital becomes cheaper. As the result, companies tend to use external funds. The studies of Frank and Goyal (2003) and Frank Dan Goyal (2009) showed a positive influence between inflation and corporate debt.

Company growth measured by using Gross Domestic Product (GDP) will be able to affect the capital structure of the company (Kim and Wu, 1988). Similarly, the study of Rajan and Zingales (1995) found that the growth of a country's economy will affect the capital structure policy of the company. The economic growth of a country also shows the growth of the company, so it is suspected that economic growth will have a positive effect on the company's debt.

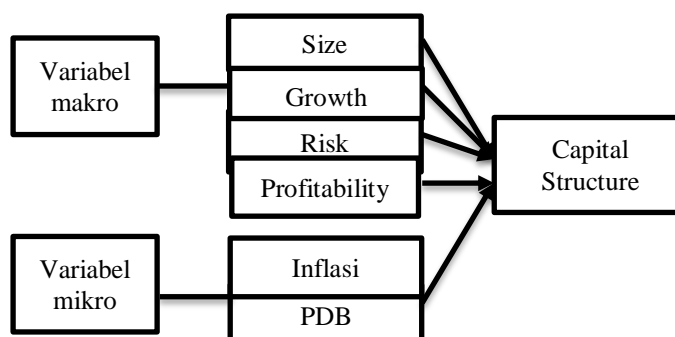


Figure 1. Thinking of framework

3. Methodology

The definition of small-scale businesses stated in the World Bank criteria is those whose income of one year does not exceed US15 million and the amount of assets does not exceed US 15 million. The population of this study is all companies listed on the Indonesia Stock Exchange in the period of 2012-2016. Purposive random sampling was performed with company criteria of small and medium companies and having complete data during the period of study. It generated 15 companies as samples.

Panel data is the data that combines time series and cross-sectional data (Wooldridge, 2010). This technique was used because the determination of capital structure is a dynamic procedure (Balios, et.al., 2016). The model used in this study is as follows:

$$DAR_{i,t} = B_0 + B_1 TAI_{i,t} + B_2 SIZE_{i,t} + B_3 GROWTH_{i,t} + B_4 RISK_{i,t} + B_5 PROFIT_{i,t} + B_6 INFL_{i,t} + B_7 PDB_{i,t} + e_{i,t}$$

There are three models that can be selected in estimating the panel data regression model, namely: common effect model, fixed effect model and random effect model. First, the Chow Test was performed to determine a method between the Common effect method and the Fixed effect method. After that, Hausman test was performed to choose whether fixed effect method or random effect method that will be used. Furthermore, Lagrange Multiplier (LM) test was applied to choose a method between random effect method and Common effect method.

Classic assumption test is required for multiple ordinary least square linear regression analysis (OLS). The data normality test is required to show that the sample data comes from a normally distributed population. Multicollinearity test was conducted to see the presence of correlation between the independent variables in a multiple linear regression model. Meanwhile, the autocorrelation test was done to test whether there is a correlation in a linear regression between errors in period t with error in period t-1.

4. Results and Discussion

Descriptive statistics in Table 1 show that the average capital structure of small and medium companies in Indonesia is 0.3643. This suggests that they apply a conservative capital structure. Companies use less debt than their own capital. The interesting thing is that the average profits of the companies are 1.8198, which means most companies do

not suffer losses during the study period. Table 2 shows the statistical test explaining that there is a significant negative effect between profitability and capital structure. The smaller the profitability is, the greater the leverage will be.

Table 1. Deskriptive Statistic

		DAR	SIZE	GROWTH	RISK	ROA	INFLASI	PDB
Mean	Mean	0.364308	11.16005	0.142292	98132.01	1.819846	0.055200	0.053600
Median	Median	0.140000	11.34700	-0.009000	88664.71	1.430000	0.064000	0.050000
Maximum	Maximum	7.510000	12.07400	4.597000	120740.8	40.24000	0.070000	0.062000
Minimum	Minimum	-9.710000	9.245000	-1.259000	77814.62	-15.16000	0.035000	0.048000
Std. Dev.	Std. Dev.	2.499170	0.676350	0.914313	17099.98	8.655176	0.013750	0.005468
Skewness	Skewness	-0.795526	-1.143920	2.587435	0.275174	1.704865	-0.429415	0.512040
Kurtosis	Kurtosis	9.286758	3.958844	11.50447	1.329551	9.686091	1.434820	1.539816
Jarque-Bera	Jarque-Bera	113.8983	16.66598	268.4099	8.377640	152.5606	8.632479	8.614881
Probability	Probability	0.000000	0.000240	0.000000	0.015164	0.000000	0.013350	0.013468
Sum	Sum	23.68000	725.4030	9.249000	6378580.	118.2900	3.588000	3.484000
Sum Sq. Dev.	Sum Sq. Dev.	399.7344	29.27677	53.50196	1.87E+10	4794.372	0.012100	0.001914
Observations	Observations	65	65	65	65	65	65	65

In the initial stage, estimation of the panel data regression was done by Chow test. Based on the Chow test, the cross-section Chi-square of 17.383 has a probability of 0.1357. It is above the value of 0.05, which means that the selected model is common effect method. Afterwards, the Hausman test is needed to determine whether the model used is fixed effect method or random effect method. The results of Hausman test show that random cross-section with probability of 0.218 is above 0.05. It means that LM Test is required to choose a method between random effect method and common effect method. HM test shows that the breusch-pagan cross section is below 0.05 meaning that the selected method will be Random Effect. The data estimation results show the results as shown in Table 2. The classical assumption test shows that all data is normally distributed and there is no multicollinearity or autocorrelation.

Table 2. Results of statistical test

Variable	Sign of Hipotesis	Coefficient	Prob.	Sign of the result
Constanta		-15.188	0.056***	
Size	Positive	1.469	0.020**	Positive
Growth	Negative	-0.104	0.748	Positive
Risk	Negative	-9.00E-06	0.588	Negative
ROA	Negative	0.110	0.004*	Positive
Inflasi	Positive	-17.073	0.718	Negative
PDB	Positive	-18.187	0.509	Negative
R-squared	0.1915			

***) significant at alpha 10% **) significant at alpha 5% *) significant at alpha 1%

Source: Estimation results

The model used in this study is as follows:

$$\text{DER}_{i,t} = -15.188 + 1.469 \text{ SIZE} - 0.104 \text{ GROWTH} - 9.00\text{E-}06 \text{ RISK} - 0.110 \text{ ROA} - 17.073 \text{ INFL} \\ - 18.187 \text{ PDB} + e$$

The results of statistical tests show that partially, there is a significant positive influence between size and ROA. Other variables such as growth, risk, inflation and GDP have no significant effect on capital structure.

This study shows that the larger the size of the company is, the greater the company's capital structure will be. The bigger the company is, the need to finance its operational activities is also getting bigger. It urges the company to increase its capital. An alternative source of capital that can be used is debt.

Profitability (ROA) has a significant positive effect on the capital structure of the companies. It signifies that the greater the company's profits are, the greater the capital structure of the company will be. The DER mean of these companies is 0.364, which means that on average, samples of companies have very conservative capital structures, although the growth is only 14.23%. Companies whose profitability is greater will be able to grow and become larger. Therefore, it will require greater capital to finance its activities.

This study proves that for small and medium companies, internal financing is the first choice for their funding (Ballios, et.al, 2016). It can be seen from their capital structure that is below 50%. It happens because the companies will try to improve their welfare, so that with high profits they will be able to reduce the company's debt.

5. Conclusions and Recommendations

Companies of small and medium-sized industries in Indonesia have a conservative capital structure. Although these companies have relatively small growth but the company has a positive average of profits. Debt is not always bad if it is led with high profitability. Further research is expected to be able to explore the determinant factors for the company's capital structure by increasing the variable of price ratios (price book value, price earning ratio) and corporate governance variables such as board size or audit committee.

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