# Capital Structure Determination Based On Company Life Cycle in the Manufacturing Sector in Indonesia

Moh Wakhid Kirom Mutohhar<sup>1</sup>, Elok Sri Utami<sup>2</sup>, Novi Puspitasari<sup>3</sup>

<sup>1</sup>Master of Management, Economic and Business Faculty, University of Jember Indonesia

Abstract: The capital structure relates to the financing decisions required by the company. The capital structure relates to the amount of the portion of the leverage or debt of a company. The need for internal and external sources of funds at each stage of the company's life cycle is largely determined by the company's ability to obtain cash flow and the level of risk preference. The life cycle of the company in this study uses three stages, namely Growth, Mature and Decline. This study aims to examine and analyze the determinants of capital structure based on the life cycle of manufacturing companies in Indonesia. Manufacturing companies were chosen because they have a large contribution to the National GDP (Gross Domestic Product) and are the largest share of issuers on the Indonesia Stock Exchange (IDX)

This study uses secondary data with an observation period of 2015 to 2019. The population of this study is the listed companies on the Indonesia Stock Exchange (IDX). Determination of the sample using purposive sampling method in order to obtain 85 samples. Samples are grouped at the stage of the growth, mature and decline life cycle companies each year based on the scoring of 4 variable classifications, namely dividend payout (DP), sales growth (SG), firm age (AGE), and capital expenditure (CEV). Capital structure is DER and the independent variable proxies are Size (Total Asset), Growth (Sales Growth), Profit (ROE), NDTS (Non Debt Tax Shield) and Dividend (DPR).

The results of this study indicate that size has a positive effect on capital structure in the Growth and Mature cycles, but size has no positive effect on capital structure in the Decline cycle. The findings on the growth (sales) variable show a positive effect on the capital structure in the growth cycle, while growth (sales) has no effect on the capital structure in the Mature cycle, but growth (sales) has a negative effect on the capital structure in the Decline cycle. The results of this study found that profit has a negative effect on capital structure in the Growth, Mature, and Decline cycles. The results of this study indicate that NDTS (Non Debt Tax Shield) and dividends do not have a negative effect on capital structure in the Growth, Mature, and Decline cycles. There are findings that liquidity has no positive effect on the capital structure in the Growth and Decline cycles, but liquidity has a negative effect on the capital structure in the Mature cycle. Overall, it can be concluded that there are differences and similarities in variables that affect the capital structure based on the life cycle stages of manufacturing companies in Indonesia during the period 2015 to 2019.

Keywords: Capital Structure, Firm Life Cylce, Growth, Mature, Decline

Date of Submission: 02-06-2021 Date of Acceptance: 15-06-2021

#### I. Introduction

The capital structure relates to the financing decisions required by the company. The right financing decision can maximize firm value (Damodaran 2008: 284). The main goal of the company is to maximize the prosperity of the owner. The capital structure relates to the amount of the portion of the leverage or debt of a company. A good capital structure will pay attention to a balanced debt composition compared to equity. Damodaran (2015: 328) argued that the need for internal and external sources of funds at each stage of the company's life cycle is largely determined by the company's ability to obtain cash flow and the level of risk preference. In general, at the establishment stage, the company's sources of funds came mostly from the company's founders (internal sources of funds) and bank loans. At the expansion stage, the increased need for funds is met from venture capital. At the high growth stage, the company becomes a public company (a source of external funds). At the maturity stage, the need for external funds begins to decline due to relatively sufficient internal sources of funds. In the last stage, the decline stage, the need for external and internal funds has drastically decreased. The debt ratio usually peaks when the company is in mature growth.

Manufacturing sector companies in general from 2015 to 2019 still have the largest number of issuers on the IDX (Indonesia Stock Exchange). There is an interesting phenomenon in manufacturing companies experiencing a downward trend in terms of the share of listed companies. In 2015 the share of the number of

DOI: 10.9790/487X-2306026372 www.iosrjournals.org 63 | Page

<sup>&</sup>lt;sup>2</sup>Master of Management, Economic and Business Faculty, University of Jember Indonesia

<sup>&</sup>lt;sup>3</sup>Master of Management, Economic and Business Faculty, University of Jember Indonesia

issuers reached 29%, in 2016 the share of the number of issuers reached 28%, while in the period 2017 to 2019 it decreased to 27%. In 2019, the decline in the manufacturing sector saw an increase in the share of issuers in the sector Infrastructure, Utilities, Transportation to 12% (up 1% compared to 2018) and the share of the number of issuers in the Trade, Service, Investment sector to 25% (up 1% compared to 2018). Is this condition an indication that the manufacturing sector is experiencing a downward cycle and is being replaced by the Infrastructure, Utilities, Transportation and Trade, Service, Investment sectors?

Research related to the capital structure and life cycle of companies in the Indonesia Stock Exchange has yielded different results. Aulia et al (2018) found that capital structure affects performance during the Start up, Growth and Mature stages. Nidar and Rizki (2017) found that the company's life cycle has an effect on leverage. Profit, Liquidity, Asset have a negative effect on the Introduction, Growth and Mature stages. Growth has a positive effect on the Introduction, Growth and Mature stages. Size and NDTS have no proven negative effect. Suyono et al (2017) found that life cycles have an effect on capital structure. Capital structure has a positive effect on performance. Pioneer stage and growth stage strengthen the effect of capital structure on performance. Mature stage and Decline stage weaken the influence of capital structure on performance. Damayanthy (2017) found that Life cycle stage, Profit, Growth, NDTS, Asset have no effect on leverage. Liquidity has an effect on leverage.

#### II. Literature Review

#### **Capital Structure Theory**

Capital structure theory has been continuously developed since Modigliani and Miller published it in 1958. As quoted in Brigham et al. (2006), at the time Modigliani and Miller introduced the irrelevance of the theory which states that the composition of the company's funding decisions will not have any effect on firm value. However, when they did research again in 1963, Modigliani and Miller revised their previous theory by saying that firm value can be affected by the capital structure which involves calculating the firm's tax factors derived from the use of debt.

Capital structure is a combination of long-term debt and equity in the financial structure of a company (Gitman, 2006: 538). The company's financial structure is reflected on the right side of the balance sheet, which consists of current liabilities, long-term debt and stockholder's equity. Meanwhile, the capital structure is part of the financial structure that pays more attention to long-term and permanent capital. The condition of an efficient mix of long-term debt and equity is known as the optimal capital structure. By optimizing the capital structure, the cost of capital will be lower so that the company value will increase.

According to Elsas and Florsyak (2011), dynamic capital structure theory predicts that corporate leverage can systematically deviate from the target, even though the choice of capital structure follows the trade off theory. Adjustment costs include transaction costs for issuing securities, and opportunity costs for deviating from the target. In a frictionless environment, companies can instantly adjust their capital structure towards the target. With the asymmetry of information, transaction costs and other transaction costs or benefits, companies cannot fully adjust their actual debt ratio from the previous period to the target debt ratio.

# Trade Off Theory (TOT)

This theory states that the optimal capital structure can maximize firm value. The debt ratio target or target is set by management based on the benefits and costs of using the debt. There are three factors that influence the determination of the debt ratio target, namely taxes, financial distress costs and agency costs. The trade off theory explains that there is an optimal capital structure that can maximize firm value if the costs and benefits derived from additional debt reach a balance. The costs and benefits in question are the cost of debt and the benefits of tax savings (Ghazouani, 2013). If the cost of debt is higher than the tax savings received, it will result in financial distress that leads to company bankruptcy

## Packing Order Theory (POT)

Packing Order Theory explained that the company will finance the company's capital first with internal funding (retained earnings), debt, then the issuance of shares. Funding based on this theory is based on differences in information asymmetry between insiders and outsiders. Companies use funding priorities from the lowest cost to the highest cost so that in this theory the company is difficult to be able to determine the optimal capital structure (Kewal, 2019)

## Firm Life Cycle (Company Life Cycle)

Damodaran (2001) which is freely translated by Gumanti (2001) divides five stages of the product life cycle associated with funding decisions. The first stage is the Establishment Stage (start up). At this stage, it is the initial stage for each new company. Everything that supports the company's operations is new, such as labor, premises and other facilities. Usually a newly established company is in the form of an individual company

where the capital needs are met by the owner (founder) plus a loan from the bank. The nature of newly established companies is their reluctance to rely on loan funds from outside parties because infrastructure capabilities are still not possible.

The second stage is the expansion stage. At this stage the company already hascustomers and is sufficiently capable of positioning its presence in the market. Management is motivated to do development, for that it requires a lot of funds. At this stage the need for external funds is very high because the cash inflow is relatively small. Initial options usually come from private or individual funds (private equity) and venture capital. It is not uncommon for companies to make the decision to become a public company (go public).

The third stage is the Growth Stage (high growth). The company is entering a transition period to become a public company, the choice of funding sources is becoming more open. At this stage, the need for external funds is moderate relative to firm value. The trend of cash flow behavior at this stage is still not much different from the second stage where the profit earned is still not balanced compared to operating income (sales and cash inflows are also not much while investment needs are relatively high). Usually companies that have become public companies and are in the growth stage will look for other funding alternatives besides adding to the shares offered to the public through the rights issue or equity options mechanism. If the company chooses to use a source of debt funds,

The fourth stage is the Maturity Stage (mature). Companies that enter this stage have two characteristics. The first characteristic is an increase in profit and a rapid cash flow as a reflection of the success of past investments. The second characteristic is that the need for funds for investment in new products and projects will begin to decline. The company's growth rate will begin to level out. At this stage the need for external funds begins to decline and in return, because the company has been able to meet internal funding needs, internal funds will be more attractive to be used as an alternative funding. Types of external funding requirements began to change. Companies will prefer debt funds, especially from banks or by issuing bonds.

Then the last stage in the company's life cycle is the decline stage. At this stage the main characteristic encountered is a steady decline in revenue and profit as a consequence of the company's maturity and the entry of new competitors. Although the existing investment is still able to generate cash flow, the amount is relatively small. In addition, the company's need for new investment began to decline. At this stage the need for external funds drastically decreases because new projects or investments also decline and the amount of internal funds available in the company is very large. The company thinks that the sale of shares or bonds is no longer an attractive alternative even with excess internal funds the company starts thinking about paying off all its obligations or buying back its shares. At this stage it can be said that the company is gradually experiencing what is known as self-liquidating

Company life cycle (Firm Life Cycle) is a company development that is marked by the stages that each company goes through. Some researchers use a different approach. Anthony and Ramesh (1992), Etemadi and Mougiue (2015), and Cempakasari et al (2019) divide the company's cycle into 3 stages, namely (1) Growth (2) Mature (3) Decline. Gup and Aggrawal (1996) determine the company's life cycle using a sales growth approach. Gup and Aggrawal (1996) divided the company's life cycle into 4 stages, namely (1) Pioneer (2) Growth (4) Mature (4) Decline. Dickinson (2011) divides the company's life cycle, namely: (1) Introduction (2) Growth (3) Mature (4) Shake Out (5) Decline. The cash flow approach to dividing the company's cycle by Castro et al (2016) is divided into 3 stages, namely: (1) Introduction (2) Growth (3) Mature (4) Shake Out / Decline

#### III. Conceptual Model

This study will divide the samples into the stages of the company's life cycle, namely Growth, Mature, and Decline. This study uses the dependent variable Size (X1), Growth (X2), Profit (X3), NDTS (X4), Dividend (X5) and Liquidity (X6) as independent variables while the dependent variable is Capital Structure (Y). Independent variables that affect the dependent variable will be observed based on the growth, mature, and decline company cycles. The observation is expected to find out whether there are differences or similarities in the influence of the independent variables on the dependent variable based on the growth, mature, and decline company cycles.

## **HYPOTHESIS**

The company's capital structure will be different according to the company's life cycle conditions that occur. For example, will the factors that influence the growth stage of the company cycle still affect the Decline stage? This research uses the model of Anthony and Ramesh (1992), Etemadi and Mougiue (2015), and Cempakasari et al (2019) dividing the company's cycle into 3 stages, namely (1) Growth (2) Mature (4) Decline. Furthermore, the determinants of the company's capital structure will be tested in more detail according to each company's life cycle.

# a.Size

Research by Yang et al (2015) and Rani et al (2019) found that size has a significant effect on capital structure. Warmana and Widnyana (2016), Nosita (2016) found that size has no significant effect on capital structure. Sibuea and Yulianto (2018) and Ritha (2016), Widodo (2019) and Aderajew et al (2019) found that size has a significant positive influence on capital structure. Kaloudis and Dimitrious (2019) found that size has a significant negative effect on capital structure. Tian et al (2015) found that size has a significant effect on the capital structure in the firm life cycle transition. Castro et al (2016) found that size has a positive effect on capital structure at the growth and maturity stages. Nidar and Rizki (2017) found that size does not have a negative effect on capital structure at the company life cycle stage. Fuady et al (2019) found a negative size for the debt target. Based on this description, there are still inconsistencies in the research results so that the researchers formulate the following hypothesis:

- H1: Size has a positive effect on the capital structure at the Growth cycle stage
- H2: Size has a positive effect on the capital structure at the Mature cycle stage
- H3: Size has a positive effect on the capital structure at the Decline cycle stage

#### b.Growth

Research by Khairani (2015), Yang et al (2015), Warmana and Widnyana (2016), Cempakasari et al (2019), Kaloudis and Dimitrious (2019) and Rani et al (2019), found that growth has a significant effect on capital structure. Sibuea and Yulianto (2018), Widodo (2019) and Aderajew et al (2019) found that growth has a significant negative effect on capital structure. Damayanthy (2017) and Nosita (2016) found that growth has no effect on leverage. Tian et al (2015) found that growth has a significant effect on capital structure on a life cycle transition. Castro et al (2016) found that growth affects the capital structure at the growth and maturity stages. Nidar and Rizki (2017) found that growth has a positive effect on capital structure at the Introduction, Growth and Mature stages. Based on this description, there are still inconsistencies in the research results so that the researchers formulate the following hypothesis:

- H4: Growth has a positive effect on the capital structure at the Growth cycle stage
- H5: Growth has a positive effect on the capital structure at the Mature cycle stage
- H6: Growth has a positive effect on the capital structure at the Decline cycle stage

#### c. Profit

Research by Yang et al (2015), Wadelmi (2016), Damayanthy (2017), Basheer (2018) found that profit is not significant in capital structure. Cempakasari et al (2019), Warmana and Widnyana (2016), Kaloudis and Dimitrious (2019), and Rani et al (2019) found that profit has a significant effect on capital structure. Dewi and Ramli (2016), Widodo (2019), and Aderajew et al (2019) found that profit has a significant negative effect on capital structure. Nosita (2016) and Fuady et al (2019) found that profit has a significant positive effect on capital structure. Castro et al (2016) found that profit has a negative effect on capital structure in each life cycle. Nidar and Rizki (2017) found that profit has a negative effect on capital structure at the Introduction, Growth and Mature stages. Based on this description, there are still inconsistencies in the research results so that the researchers formulate the following hypothesis:

- H7: Profit has a negative effect on the capital structure at the Growth cycle stage
- H8: Profit has a negative effect on the capital structure at the Growth cycle stage
- H9: Profit has a negative effect on the capital structure at the Decline cycle stage

## d. NDTS (Non Debt Tax Shield)

Research by Yang et al (2015) and Kaloudis and Dimitrious (2019) found that NDTS (Non Debt Tax Shield) has a significant effect on capital structure. Damayanthy (2017) and Rani et al (2019) found that NDTS had no significant effect on capital structure. Nidar and Rizki (2017) state that NDTS has a negative effect on the capital structure is not proven. Fuady et al (2019) found negative NDTS to debt targets. Based on this description, there are still inconsistencies in the results of the research so that the researcher formulates the following hypothesis:

- H10: NDTS has a negative effect on the capital structure at the Growth cycle stage
- H11: NDTS has a negative effect on the capital structure at the Mature cycle stage
- H12: NDTS has a negative effect on the capital structure at the Decline cycle stage

## e. Dividend

Research by Yang et al (2015), Kaloudis and Dimitrious (2019) found that dividends have a significant effect on capital structure. Wadelmi (2016), Dewi and Ramli (2016), Basheer (2018) found that dividends have no significant effect on capital structure. Based on this description, there are still inconsistencies in the results of the research so that the researcher formulates the following hypothesis:

H13: Dividend has a negative effect on the capital structure at the Growth cycle stage

- H14: Dividend has a negative effect on the capital structure at the Mature cycle stage
- H15: Dividend has a negative effect on the capital structure at the Decline cycle stage

#### f. Liquidity

Research by Warmana and Widnyana (2016), Damayanthy (2017), Kaloudis and Dimitrious (2019), Rani et al (2019) found that liquidity has a significant effect on capital structure. Fuady et al (2019) found that liquidity has a positive effect on capital structure. Cempakasari et al (2019) found that the Decline Cycle has a significant effect on capital structure. Nidar and Rizki (2017) found that liquidity has a negative effect on capital structure at the Introduction, Growth and Mature stages. Based on this description, there are still inconsistencies in the results of the research so that the researcher formulates the following hypothesis:

- H16: Liquidity has a positive effect on the capital structure at the Growth cycle stage
- H17: Liquidity has a positive effect on the capital structure at the Mature cycle stage
- H18: Liquidity has a positive effect on the capital structure at the Decline cycle stage

# IV. Methodology

This research was designed with a positivist paradigm of quantitative methods. The positivist paradigm is to consider the social reality that occurs as something that is empirical and can be actually observed and can be proven scientifically. The type of research used in this research is explanatory research type. Singarimbun and Effendi (2006: 4) explain explanatory research, which is research used to explain the causal relationship between variables through hypothesis testing which is formulated or often referred to as explanatory research.

The research object used in this research is the audited annual financial statements of manufacturing companies listed on the Indonesia Stock Exchange (BEI) for the 2015-2019 period. The population of manufacturing companies listed on the IDX is 144 companies. The sample selection method used purposive sampling, in order to obtain 85 companies that meet the criteria for a predetermined research sample.

Division of samples into life cycles according to method division of the company's life cycle refers to Anthony and Ramesh (1992), Etemadi and Mougiue (2015), and Cempakasari et al (2019) which divides the company's cycle into 3 stages, namely (1) Growth (2) Mature (3) Decline which is carried out based on classification indicators, namely dividend payout (DP), sales growth (SG), firm age (AGE), and capital expenditure (CEV).

During the 5 years of observation, there is a possibility that a sample company is at the same cycle stage or is in a different cycle stage depending on the score and comparison with other samples. The data is processed based on each sample year from 2015 to 2019. Then each year the sample is divided into growth, Mature or Decline company life cycle classifications. Sample Classification Based on Company Life Cycle shows 85 manufacturing companieson the Indonesia Stock Exchange in the period 2015 to 2019 shows 38 samples or 9% of companies are in the Growth cycle stage, 330 samples or 78% of companies are in the Mature cycle stage and 58 or 13% of the sample companies are in the Decline cycle stage.

#### V. Data and Result

### a. Size

The results of multiple linear regression analysis on the t test in the Growth cycle indicate that size partially positive effect on capital structure. The level of significance is 0.036 and t is equal to 2,188 the meaning is higher size then the capital structure will experience an increase. The results of this study are in accordance with Sibuea and Yulianto (2018) and Ritha (2016), Widodo (2019) and Aderajew et al (2019) which found that the size is significantly positive on the capital structure. There are studies that only find significant, such as that conducted by Yang et al (2015) and Rani et al (2019) found that size has a significant effect on capital structure. This study is different from Kaloudis and Dimitrious (2019) which found a significant negative size on capital structure. This research is in line with the research on capital structure according to the company's life cycle by Castro et al (2016) which found that size has a positive effect on the growth and maturity stages.

The results of multiple linear regression analysis on the t test in the Mature cycle show that size partially positive effect on capital structure. The level of significance is 0.019, which means that it is higher size then the capital structure will experience an increase. The results of this study are in accordance with Sibuea and Yulianto (2018) and Ritha (2016), Widodo (2019) and Aderajew et al (2019) which found that the size is significantly positive on the capital structure. Castro et al (2016) found that size has a positive effect on the growth and maturity stages. This research is in line with previous research conducted by Yang et al (2015) and Rani et al (2019) which found that size has a significant effect on capital structure at the level of significance. This research is somewhat different from Kaloudis and Dimitrious (2019) which found a significant negative size for capital structure.

The results of multiple linear regression analysis on the t test in the cycle Decline show that size does not have a partially positive effect on capital structure. The significance level is 0.832, which means that it is higher size then the capital structure does not change. This research is in line with previous research conducted by Warmana and Widnyana (2016) and Nosita (2016) which found that size does not have a significant effect on capital structure. Research by Nidar and Rizki (2017) also found that size does not have a negative effect on the company life cycle stage.

When the cycle of manufacturing companies is in Growth and Mature conditions, usually the size condition in the form of Total Assets is experiencing an increase. Large assets will certainly make it easier to increase debt because it has collateral. Size has a positive influence on the cycle of manufacturing companies in Growth and Mature conditions. Manufacturing companies in the Growth and Mature cycles take an approach the principle of the Trade off Theory (TOT). The factors that influence the targeting of the debt ratio are taxes, financial distress costs and agency costs. By increasing the amount of debt during the Growth and Mature cycles, the company will benefit in the form of a potential tax reduction because there are payments in the form of interest from debt.

During the manufacturing company cycle Decline, the Size variable has no positive effect on capital structure. During the Decline cycle, manufacturing companies will find it difficult to convince creditors. Invoice companies tend to follow this approach principle Packing Order Theory (POT) that the company will finance the company's funding needs first with internal funding (retained earnings), debt, then the issuance of shares. In the Decline condition, the funding needs of manufacturing companies prioritize internal sources of funds compared to debt from external parties.

#### b. Growth

The results of multiple linear regression analysis on the t test in the Growth cycle show that growth has a partially positive effect on capital structure. The level of significance is 0.040 which means the higher the growth then the capital structure will experience a decline. This research is in line with Khairani (2015), Yang et al (2015), Warmana and Widnyana (2016), Cempakasari et al (2019), Kaloudis and Dimitrious (2019), Rani et al (2019), which found that growth was significant in capital structure. This research is in line with the research on capital structure according to the company's life cycle by Castro et al. (2016), growth has an effect on the growth and maturity stages. This research is different from previous research conducted by Sibuea and Yulianto (2018), Widodo (2019) and Aderajew et al (2019) which found that growth has a significant negative effect on capital structure.

The results of multiple linear regression analysis on the t test in the Mature cycle show that growth does not have a partial positive effect on the capital structure. The level of significance is 0.473, which means the higher the growth then the capital structure does not change. This research is in line with previous research conducted by Damayanthy (2017) and Nosita (2016) which found that growth has no significant effect on capital structure. This study is different from the results of the research on capital structure according to the company's life cycle by Castro et al. (2016) that growth has an effect on the growth and maturity stages.

The results of multiple linear regression analysis on the t test in the Decline cycle show that growth has a partial negative effect on capital structure. The level of significance is 0.015 which means the higher the growth then the capital structure will experience a decline. This research is in line with previous research conducted by Khairani (2015), Yang et al (2015), Warmana and Widnyana (2016), Cempakasari et al (2019), Kaloudis and Dimitrious (2019), Rani et al (2019), found that growth has a significant effect on capital structure.

During the company manufacturing cycle Growth, It was found that the growth variable had a positive effect on total debt. The condition of manufacturing companies at the time of growth will require funds to support sales growth. Companies tend to use outside funding in accordance with the principles of Trade off Theory (TOT) that the optimal capital structure is achieved when there is a balance between benefits and sacrifices arising from the use of debt. The cash flow from sales is expected to cover loan interest payments and is expected to get a bigger result than the debt value at the time of Growth manufacturing company conditions.

During the manufacturing company cycle Mature, It was found that the growth variable had no positive effect on increasing debt. Manufacturing companies tend to follow principles Packing Order Theory (POT) explains that the company will finance the company's capital first with internal funding (retained earnings), debt, then issuance of shares. The cycle of Mature companies with an increasing sales position will result in manufacturing companies having excess cash flow. Manufacturing companies tend to use excess internal cash flow as a source of funding rather than debt.

During the company manufacturing cycle Decline, A new fact was found that the growth variable has a negative effect on the amount of debt. This finding is different from the initial hypothesis that growth will have a positive effect on total debt. Manufacturing companies in the Decline cycle, despite growing sales conditions, will certainly find it difficult to convince creditors. The greater the growth, there is a tendency for the company to reduce debt and use funding sources from the increase in sales according to principle Packing

Order Theory (POT) explains that the company will finance the company's capital first with internal funding (retained earnings), debt, then the issuance of shares.

#### c. Profit

The results of multiple linear regression analysis on the t test in the Growth cycle indicate that profit It has a partially negative effect on the capital structure. The significance level is 0.000, which means that it is higher profit then the capital structure will experience a decline. This study is in accordance with the research results of Dewi and Ramli (2016), Widodo (2019), Aderajew et al (2019) which found that profit has a significant negative effect on capital structure. This research is in line with previous research conducted by Cempakasari et al (2019), Warmana and Widnyana (2016), Kaloudis and Dimitrious (2019), Rani et al (2019) found that profit has a significant effect on the capital structure. This study is different from the results of Nosita (2016) and Fuady et al (2019) which found that profit has a significant positive effect on capital structure. So in this research it can be concluded that profit has a partial negative effect on the capital structure in the Growth cycle.

The results of multiple linear regression analysis on the t test in the Mature cycle show that profit partially negative effect on capital structure. The level of significance is 0.000, meaning that it is higher profit then the capital structure will experience a decline. This study is in accordance with the research results of Dewi and Ramli (2016), Widodo (2019), Aderajew et al (2019) which found that profit has a significant negative effect on capital structure. This research is in line with previous research conducted by Cempakasari et al (2019), Warmana and Widnyana (2016), Kaloudis and Dimitrious (2019), Rani et al (2019) found that profit has a significant effect on the capital structure. This study is different from the results of Nosita (2016) and Fuady et al (2019) which found that profit has a significant positive effect on capital structure. So it can be concluded that profit take effect partially negative on the capital structure in the Mature cycle.

The results of multiple linear regression analysis on the t test in the Decline cycle show that profit It has a partially negative effect on the capital structure. The level of significance is 0.000, which means that it is higher profit then the capital structure will experience a decline. This study is in accordance with the research results of Dewi and Ramli (2016), Widodo (2019), Aderajew et al (2019) which found that profit has a significant negative effect on capital structure. This research is in line with previous research conducted by Cempakasari et al (2019), Warmana and Widnyana (2016), Kaloudis and Dimitrious (2019), Rani et al (2019) found that *profit* has a significant effect on the capital structure. This study is different from the results of Nosita (2016) and Fuady et al (2019) which found that profit has a significant positive effect on capital structure. So it can be concluded in this study that profit take effect partially negative on the capital structure in the Decline cycle

When the manufacturing company experiences a profit in the cycle Growth, Mature or Decline, manufacturing companies have many alternative sources of funding. It is easier for manufacturing companies to increase debt as long as the benefits obtained are greater than the costs incurred. Approach the principle of the Trade off Theory (TOT) states that the optimal capital structure is achieved when there is a balance between benefits and sacrifices arising from the use of debt, which can be done at a time when profit conditions occur in any company's life cycle. This research shows that in the condition of profit, funding by increasing debt is an option because interest costs are still considered lower than the benefits obtained.

When the condition of a manufacturing company has a profit in the Growth, Mature or Decline life cycle, the manufacturing company does not use the Packing Order Theory (POT) principle approach which explains that the company will finance the company's capital first with internal funding (retained earnings), debt, then issuance of shares. Manufacturing companies do not first use internal funds on profit conditions but from this study there is a tendency for manufacturing companies to increase debt from external parties.

#### d. NDTS (Non Debt Tax Shield)

The results of multiple linear regression analysis on the t test in the Growth cycle indicate that NDTSdoes not have a partial negative effect on the capital structure. The level of significance is 0.302, meaning that it is higher NDTS then the capital structure does not change. This research is in line with previous research conducted by Damayanthy (2017), Rani et al (2019), and Nidar and Rizki (2017). NTDS does not have a significant effect on the capital structure. There are different findings from research by Yang et al (2015) and Kaloudis and Dimitrious (2019) which found that NDTS (Non Debt Tax Shield) has a significant effect on capital structure. So in this study it can be concluded that NDTS does not have a negative effect on the capital structure in the Growth cycle.

The results of multiple linear regression analysis on the t test in the Mature cycle show that NDTS partially negative effect on capital structure. The level of significance is 0.391, meaning that it is higher NDTS then the capital structure does not change This research is in line with previous research conducted by Damayanthy (2017), Rani et al (2019), and Nidar and Rizki (2017) found that NDTS does not have a significant

effect on the capital structure. So it can be concluded in this study that NDTS does not have a negative effect on the capital structure in the Mature cycle.

The results of multiple linear regression analysis on the t test in the Decline cycle show that NDTS does not have a negative effect on the capital structure. The level of significance is 0.604, which means that it is higher NDTS then the capital structure does not change. This research is in line with previous research conducted by Damayanthy (2017), Rani et al (2019), and Nidar and Rizki (2017).NDTS is not has a significant effect on the capital structure. So it can be concluded in this study that NDTS does not have a negative effect on the capital structure in the Decline cycle.

In the manufacturing company cycle Growth, Mature and Decline found that NDTS had no negative effect on total debt. NDTS usually comes from the depreciation value of the company's assets. The depreciation value will be a profit deduction factor and will eventually reduce the tax value paid by the company. It is possible for a manufacturing company to use equipment with a small depreciation value so that it does not significantly reduce the value of the tax paid by the company.

#### d. Dividend

The results of multiple linear regression analysis on the t test in the Growth cycle indicate that dividend has no positive effect on capital structure. The level of significance is 0.986, which means that it is higher dividend then the capital structure does not change. This research is in line with previous research conducted by Wadelmi (2016), Dewi and Ramli (2016), and Basheer (2018) found that dividend does not have a significant effect on the capital structure. This study is different from the results obtained by Yang et al (2015), Kaloudis and Dimitrious (2019) found that dividend have a significant effect on capital structure. So it can be concluded in this study that dividend does not have a positive effect on capital structure in the Growth cycle.

The results of multiple linear regression analysis on the t test in the Mature cycle show that dividend are not negatively affects the capital structure. The level of significance is 0.517, meaning that it is higher dividend then the capital structure does not change. This research is in line with previous research conducted by Wadelmi (2016), Dewi and Ramli (2016), and Basheer (2018) found that dividend does not have a significant effect on the capital structure. This study is different from the results obtained by Yang et al (2015) and , Kaloudis and Dimitrious (2019) found that dividend have a significant effect on capital structure. So it can be concluded that in this study that dividend does not have a negative effect on the capital structure in the Mature cycle.

The results of multiple linear regression analysis on the t test in the Decline cycle show that dividend are not partially negative effect on capital structure. The level of significance is 0.843, meaning that it is higher dividend then the capital structure does not change. This research is in line with previous research conducted by Wadelmi (2016), Dewi and Ramli (2016), Basheer (2018) found that dividend does not have a significant effect on the capital structure. This study is different from the results obtained by Yang et al (2015), Kaloudis and Dimitrious (2019) which found that dividends have a significant effect on capital structure. So it can be concluded in this study that dividend does not have a negative effect on the capital structure in the Decline cycle.

Dividend distribution in the conditions of the manufacturing company cycle Growth, Mature and Decline has no negative effect on the capital structure. Dividend distribution will cause the company's cash flow to decrease so that it will increase the amount of debt that is not proven in this study. Manufacturing companies during the Growth and Decline cycles may pay dividend in small amounts or do not distribute dividend at all so that they do not result in an increase in the amount of debt. There is also a possibility that the dividend distribution of a manufacturing company will only be made when the company is experiencing a very large profit during the Mature cycle. Manufacturing companies are still able to meet their needs through internal funding according to the principle of Packing Order Theory (POT) which explains that the company will finance the company's capital first with internal funding (retained earnings), debt, then issuance of shares.

#### e. Liquidity

The results of multiple linear regression analysis on the t test in the Growth cycle indicate that liquidity does not have a negative effect on the capital structure. The level of significance is 0.829, which means that it is higher liquidity then the capital structure does not change. This study is not in line with previous research conducted by Warmana and Widnyana (2016), Damayanthy (2017), Kaloudis and Dimitrious (2019) and Rani et al (2019) who found that liquidity has a significant effect on the capital structure.

The results of multiple linear regression analysis on the t test in the Mature cycle show that liquidity negatively affects the capital structure. The level of significance is 0.000, meaning that it is higher liquidity then the capital structure has decreased. This research is in line with previous research conducted by Warmana and Widnyana (2016), Damayanthy (2017), Kaloudis and Dimitrious (2019) and Rani et al (2019) found thatli quidity does not have a significant effect on the capital structure

The results of multiple linear regression analysis on the t test in the Decline cycle show that liquidity does not have a partial negative effect on the capital structure. The level of significance is 0.362, meaning that it is higher liquidity then the capital structure does not change. This study is not in line with previous research conducted by Warmana and Widnyana (2016), Damayanthy (2017), Kaloudis and Dimitrious (2019) and Rani et al (2019) found that liquidity has a significant effect on the capital structure

On the company cycle Growth and Decline, the liquidity variable has no positive effect on the expansion of the amount of debt. The condition of the company at the time of Growth and Mature can be said to be unstable so that it is difficult to get the trust of creditors. This is in accordance with the principle of Trade off Theory (TOT) that the optimal capital structure is achieved when there is a balance between benefits and sacrifices arising from the use of debt.

In the manufacturing company cycle Mature, The liquidity variable has a negative effect on the amount of debt in the results of this research. This is somewhat different from the initial hypothesis which suspects liquidity has a positive effect on total debt. The findings of this study are close to the principle Packing Order Theory (POT), which explains that the company will finance the company's capital first with internal funding (retained earnings), debt, then the issuance of shares. Manufacturing companies in the Mature cycle, which have liquidity, tend to use internal funds rather than debt. The greater the liquidity, the smaller the amount of debt.

#### VI. Conclusion

Based on the descriptions that have been disclosed in the previous discussion, several conclusions can be drawn in response to the main problems raised by this study, as follows:

- 1. The results of multiple regression testing on the Growth and Mature cycles indicate that size has a positive effect on the capital structure while the Decline cycle shows that size has no positive effect on capital structure
- 2. The results of multiple regression testing in the Growth cycle show that growth shows a positive effect on capital structure, while in the Mature cycle it shows that growth has no effect on capital structure and in the Decline cycle shows that growth has a negative effect on capital structure.
- 3. The results of multiple regression testing on the Growth, Mature, and Decline cycles indicate that profit negatively affects the capital structure.
- 4. The results of multiple regression testing on the Growth, Mature, and Decline cycles indicate that NDTS does not have a negative effect on the capital structure.
- 5. The results of multiple regression testing on the Growth, Mature, and Decline cycles indicate that dividend does not have a negative effect on the capital structure.
- 6. The results of multiple regression testing in the Growth and Decline cycles show that liquidity has no positive effect on capital structure, while in the Mature cycle it shows that liquidity has a negative effect on capital structure.

#### References

- [1] Aderajew Tamirat S., Barrera Andres Trujillo dan Pennings Joost M.E. 2019. Dynamic Target Capital Structure and Speed of Adjustment in Farm Business, European Review of Agricultural Economics pp. 1–25
- [2] Amirullah.2013. Metodologi Penelitian Manajemen: Disertai Contoh Judul Penelitian dan Proposal. Bayumedia Publishing Anggota IKAPI Malang
- [3] Anthony J, Ramesh K. 1992. Association between accounting performance measures and stock prices. *Journal of Accounting and Economics* 15(2-3): 203-227. https://doi.org/10.1016/0165-4101(92)90018-W
- [4] Ary, Tatang Gumanti. 2011. Manajemen Investasi . Konsep, Teori dan Aplikasi, Mitra Wacana Media, Jakarta
- [5] Atansil Leo. 2012, Studi Eksistensi Dynamic Trade Off Capital Structure pada Perusahaan Non Finansial di BEI Periode 2002-2009. . Jurnal Manajemen Teori dan Terapan. Tahun 5. No.3 Desember 2012
- [6] Aulia Tia Ardianty , Wahyuni Nining Ika , Purnamawati Indah . 2018. Pengaruh Struktur Modal Terhadap Kinerja Perusahaan Berdasarkan Siklus Hidup Perusahaan. *e-Journal Ekonomi Bisnis dan Akuntansi*, 2018, Volume V (1): 69-75
- [7] Basheer Muhammad Farhan, Waemustafa Waeibrorheem, dan Ahmad Aref Abdullah. 2018. The Paradox of Managerial Ownership and Financial Decisions of the Textile Sector: An Asian Market Perspective. *The Journal of Social Sciences Research*. Special Issue. 4, pp. 184-190, 2018
- [8] Cahyaningdyah Dwi, 2017.Trade Off Theory dan Kecepatan Penyesuaian ke Arah Target Leverage. *Bisnis dan Manajemen*. Volume 9 No 2 April Tahun 2017.
- [9] Castro Paula, Fernandez María Teresa Tascon dan Tapia Borja Amor .2016 Alberto de Miguel. Target leverage and speed of adjustment along the life cycle of European listed firms. *BRQ Business Research Quarterly* . (2016) 19, 188 sd 205.
- [10] Cempakasari, Erika Putri, Firdaus Muhammad dan Hardiyanto, Arief Tri. 2019. Dynamics of Firm's Capital Structure along The Life Cycle of Indonesian Manufacturing Firms. *Indonesian Journal of Business and Entrepreneurship*, Vol. 5 No. 1, January 2019
- [11] Citro, Veronica D. H. (2014). Pengaruh Determinan Struktur Modal Terhadap Leverage dan Speed of Adjustment Industri Pertambangan di Indonesia. FINESTA, Vol. 2, No. 1 Hal. 48-55.
- Damayanthy Syafitri, Tandika Dikdik dan Nurdin. 2017. Pengaruh Life Cycle Stage Terhadap Leverage pada Perusahaan Sektor Properti dan Real Estate yang Terdaftar di BEI Selama Periode 2013-2015. *Prosiding Manajemen*. Vol 3 No.1
- [13] Damodaran Aswath, 2014. Applied Corporate Finance. 4th edition. Wiley
- [14] Dewi Syanti dan Ramli Ishak .2016. Struktur Modal Pendekatan Dinamis Perusahaan Otomotif dan Komponennnya Saat Krisis Global 2008. Jurnal Ekonomi. Volume XXI, No.03 November 2016: 360-374.

- [15] Elsas, R dan Florysiak, D. 2011. Heterogeneity in the Speed of Adjustment toward Target Leverage. International Review of Finance, 11:2: 181–211
- [16] Etemadi dan Mougouie .2015.Firm's Life Cycle and Ohlson Valuation Model: Evidence from Iran. Asian Economic and Financial Review. 5(4): 641-652
- [17] Faff R., Kwok, W.C dan Podolski, E.J., Wong, G. 2016. Do Corporate Policies Follow a Lifecycle?, *Journal of Banking & Finance*. doi: http://dx.doi.org/10.1016/j.jbankfin.2016.04.009
- [18] Fuady Misbach, Safitri Julia, Rita Maria Rio, Pagestuti Irene Rini Demi, Wahyudi Sugeng. 2019. How Companies At Mature Stages Choose Their Capital Structure? Evidence From Indonesian Data Panel. International Journal Of Scientific & Technology Research. Volume 8. Issue 9. September 2019
- [19] Ghazouani, Tarek 2013. The Capital Structure through the Trade-Off Theory: Evidence from Tunisian Firm.International Journal of Economics and Financial Issues, Econjournals, vol. 3(3), pages 625-636.
- [20] Ghozali, Imam. 2016. Aplikasi Analisis Multivariate dengan program SPSS. Badan Penerbit UNDIP. Semarang
- [21] Gitman, L.J., 2006. Principle of Managerial Finance, Eleventh Edition. Pearson ducation, Inc., Boston.
- [22] Gujarati, Damodar N dan Dawn C. Porter. 2015. Dasar-Dasar Ekonometrika Edisi 5 Buku 2. Jakarta: Salemba Empat.
- [23] Kaloudis Andrea dan Tsolis Dimitrios . 2019 . Capital Structure and Speed of Adjustment in U.S. Firms. A Comparative Study in Microeconomic and Macroeconomic Conditions-A Quantile Regression Approach. *International Business Research*; Vol. 12, No. 10; 2019
- [24] Kewal Suramaya Suci.2019. Kecepatan Penyesuaian Struktur Modal Optimal Perusahaan di Bursa Efek Indonesia, *Jurnal Economia*, Volume 14, Nomor 1, April 2
- [25] Khairani Mimi .2015. Pengaruh Struktur Kepemilikan Manajerial dan Growth Opportunity terhadap Struktur Modal dan Kinerja Keuangan. JOMFEKON VOL. 2 NO. 1 Februari 2015
- [26] Laporan kinerja kementrian perindustria 2015-2019. Transformasi Manufaktur menuju Industri Maju. Tidak dipublikasikan. www.kemenperin.go.id.
- [27] Margana Made Yolanda Rizkita dan Wiagustini Ni Luh Putu. 2019. The Effect of Institutional Ownership, Managerial Ownership, and Firm Age on Capital Structure of Consumer Goods Companies listed on Indonesia Stock Exchange. American Journal of Humanities and Social Sciences Research (AJHSSR). Volume-3, Issue-11, pp-167-175
  Nidar Sulaeman dan Utomo P Rizki. 2017. Company Life Cycle and Capital Structure of Manufacturing Sector in the Consumer Goods Industry, Jurnal Bisnis & Manajemen, 2017, Vol. XVIII, No. 1, 46-54.
- [28] Nosita Firda . 2016. Struktur Modal Optimal dan Penyesuaian : Studi Empiris di Bursa Efek Indonesia. *Ekuitas: Jurnal Ekonomi dan Keuangan*. Volume 20, Nomor 3, September 2016 : 305 324
- [29] Oztekin Ozde, 2015. Capital Structure Decisions around the World: Which Factors Are Reliably Important?. Journal of Financial and Quantitative Analysis.. Vol. 50, No. 3, June 2015, pp. 301–323
- [30] Pandey Asheesh dan Sing Madan 2015. Capital Structure Determinants: a Literature Review. African J. Accounting, Auditing and Finance, Vol. 4, No. 2, 2015
- [31] Rani Neelam, Yaday Surendra S. dan Naliniprava Tripathy, 2019. Capital structure dynamics of Indian corporates. Journal of Advances in Management Research. 11 November 2019
- [32] Restuti Mitha Dwi dan Widyaningrum Luluk . 2015. Perbedaan Earnings Management Berdasarkan pada Tahapan Life Cycle Perusahaan yang Terdaftar di BEI . Jurnal Ekonomi dan Bisnis. Volume XVIII No. 3, Desember 2015
- [33] Ritha Henny. 2016. Faktor- Faktor yang Mempengaruhi Struktur Modal Perusahaan Konstruksi di Burs Efek Indonesia Periode 2009-2011. Majalah Ilmiah Ilmu Administrasi. Volume XIII, No. 02, September 2016
- [34] Sari Septi Diana , 2016. Pengaruh Risiko Bisnis, Life Cycle dan Diversifikasi terhadap Struktur Modal serta Hubungannya dengan Nilai Perusahaan Manufaktur di Indonesia. *Jurnal Manajemen Teori dan Terapan* . Tahun 9. No. 1, April 2016
- [35] Sibindi Athenia Bongani .2016.Determinants of Capital Stucture : A Literature Review. Risk Governance & Control: Financial Markets & Institutions. Volume 6, Issue 4, Fall 2016
- [36] Sibuea Ely Yulianita dan Yulianto A.2018. Speed of Adjustment Capital Structure (Study on Non Financial Company Listed on Indonesia Stock Exchage Period 2006-2016). *Management Analysis Journal*. 7 (4) (2018)
- [37] Singarimbun, Masri dan Sofian Effendi. 2016. Metode Penelitian Survei, Jakarta: LP3ES
- [38] Suyono Eko ,Yarram Subba Reddy dan Riswan Riswan.2017. Capital Structure , Corporate Performance and Life Cycle : Evidence From Indonesia. *Corporate Ownership & Control* . Volume 14, Issue 4, Summer 2017
- [39] Tarek Ghazouani. 2013. The Capital Structure through the Trade-Off Theory: Evidence from Tunisian Firm, International Journal of Economics and Financial Issues, Econjournals, vol. 3(3), pages 625-636.
- [40] Tian Lin, Hang Liang dan Zhang Song. 2015. Business Life Cycle and Capital Structure: Evidence from Chinese Manufacturing Firms. China 3 World Economy. 22-39.Vol 23. No.2. 2015
- [41] Tripathi Vibha . 2019 . Agency Theory, Ownership Structure and Capital Structure : An Empirical Investigation in The Indian Automobile Industry. Asia-Pacifc Management Accounting Journal, Volume 14 Issue 2. 2019
- [42] Van Horne James dan Wachowicz Jr John M. 2008. Fundamentals of Financial Management. 13<sup>th</sup> edition. Prentice Hall.
- [43] Wadood Misbah, Khan Hashim Khan, Wadood Hassan. 2019. A Dynamic Resource-Based View on Firm's Life Cycle Stages and Capital Structure Theories: A Comparative Analysis of Developed and Emerging Asian Markets. *Global Social Sciences Review* (GSSR). Vol. IV, No. IV (Fall 2019) | Page: 250 257
- [44] Waldelmi Idel. 2016. Pengaruh Kebijakan Deviden, Profitabilitas Dan Struktur Kepemilikan Institusional Terhadap Struktur Modal Dan Nilai Perusahaan. Jurnal Daya Saing. Vol 2 No 2 (2016)
- [45] Walid Youssef . 2019. Life Cycle Theory of Capital Structure : Evidence From Tunisian SMEs. Asian Economic and Financial Review.Vol. 9, No. 4, 432-449. DOI: 10.18488/journal.aefr.2019.94.432.449
- [46] Warmana G. Oka dan Widnyana I Wayan. 2016. Determinan dan Kecepatan Penyesuaian Struktur Modal Perusahaan pada Sektor Pertanian di Bursa Efek Indonesia. Agrimeta. Vol. 6 No. 12
- [47] Widodo Purwanto. 2019. Determinan Struktur Modal Dinamis: Studi Empiris di Bursa Efek Indonesia. *Inovator*. Vol 8, No 2 (2019)
- [48] Yang Ying, Albaity Mohamed dan Hashim Bin Hassan Che. 2015. Dynamic capital structure in China: determinants and adjustment speed. *Investment Management and Financial Innovations*. Volume 12, Issue 2, 2015
- [49] Zafar Sonia, Rahman Abdul ,Rizwan M. Faisal, SohailMuhammad Khalid, 2016. Capital Structure Decision and Firm's Life Cycle-A Study on Non-Financial Sector of Pakistan. NICE Research Journal, Published Dec 26,2016
- [50] Zhao Lanli. 2018. Literature Review of Capital Structure Theory and Influencing Fact. *Modern Economy*. 2018, 9, 1644-1653