



# Capital Structure on Company Value with Profitability as a Mediation Variable in Consumer Goods Sector Companies Listed on the Indonesia Stock Exchange

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**Abstract.** This study sets out to analyze how different capital structures affect the value of consumer goods companies listed on the Indonesia Stock Exchange, with profitability serving as a moderator. Companies producing consumer goods and trading on the Indonesia Stock Exchange are included in the population. We utilized a sampling strategy designed to get us the data we required. 175 samples were collected from 35 different companies over the course of 5 years. Path analysis is utilized for this data analysis technique. The results showed that the capital structure (LTDER) has a positive and statistically significant impact on the value of a company. Companies are worth more if they are profitable. Capital structure has a notable and favorable effect on investment return (DAR). Company value is affected by the structural capital variable (DAR) through the medium of profitability.

**Keywords:** *capital structure, profitability, and company value*

## 1 Introduction

Changes in the economy over the past five years, namely from 2015 to 2019, moved fluctuated and suppressed overall economic growth. These economic changes were caused more by the global economic crisis that almost hit the whole world. Company management must be able to control its performance so that it remains trusted by consumers and investors. In the midst of global economic developments, businesses need adequate funding and a solid management structure to underpin improved performance and ensure victory over rivals (competitive advantage).

Every business faces two main types of danger: internal (caused by the company itself) and external (arising from the market or other factors). Risks originating from within the company can be anticipated properly, such as the level of bankruptcy, while risks originating from outside cannot be anticipated by management, such as inflation rates and changes in the global economy. The weakening of the performance has prompted the government to monitor all the performance of companies that have the potential to fail in the future. However, the company's management must not remain silent and take no action against the decline in performance.

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Because of the numerous dangers that exist in business, investors are hesitant to invest their shares in the company. According to Widnyana (2020), The low number of Indonesian investors and issuers is due to a lack of understanding of investment instruments, the risk of large stocks in the eyes of the public, investment is only for the rich, and the middle class prefers to save rather than invest in securities. Lack of knowledge about the importance of investment makes the demand for company shares low so that the fluctuations in changes last for quite a long time. So investors will look for issuers with good company values. This is to reduce the risk of investment failure.

Investments made in companies must be carried out carefully because they have the potential to pose risks to investors. The risks that arise are the loss of stock trading transactions and the bankruptcy of a company. Before making a decision, investors must thoroughly comprehend the valuation of the company's state. The key to the company retaining its investors is to maintain the value of the company. According to [3], to increase company value, it is necessary to pay attention to a more structured approach. Managers need a comprehensive strategy for identifying opportunities to increase the company's value, developing strategies to do so, measuring that value, and eventually realizing it. As part of its obligations, management must raise the value of the company.

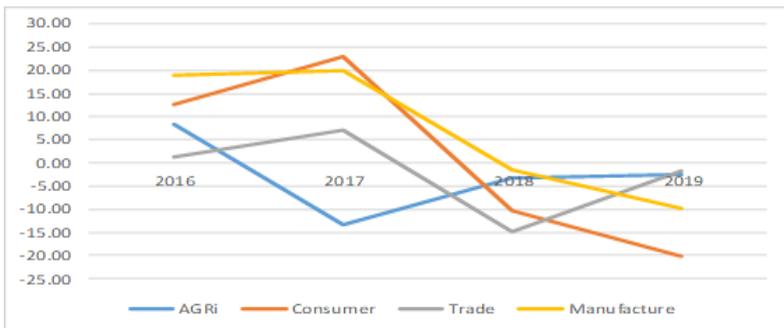
The profitability of an investment in a firm is reflected in its worth to potential buyers. According to [8], the value of a company is the sum of the effects of management on a number of different factors, such as its net cash flow from investments, its rate of growth, and its cost of capital. The market's perception of a company's business viability is largely based on its stock price, which is why investors place such a premium on it. A firm's performance can be gauged by its stock price, which rises as confidence in the company grows among investors. Lenders place significant weight on a company's market value because it is directly correlated with the company's capacity to repay a loan. The danger of loss, be it in the form of capital loss or the bankruptcy of a firm, can be avoided if negative perceptions of the company's value are predicted.

An organization's worth is directly proportional to its efficiency. Investors, business owners, and the economy as a whole have a serious issue with firm performance, claims Mardones (2019). Allocating resources and gauging a business's financial health over a specific time period are both controlled by its performance. A company's success is tied to its ability to amass and properly utilize resources in order to compete successfully. It is essential to use these indicators to measure financial success since the value of the company, in the eyes of investors, is a solid proxy for the value of profitability.

Widnyana (2020) argues that investors can infer information about a company's worth even if they are unaware of its management. When the stock price rises, so does the worth of the company. In total, there are ten distinct industries represented on the Indonesia Stock Exchange. These include agriculture, mining, basic industry, miscellaneous industry, consumer goods, property, real estate, building construction, infra-

structure, utilities, transportation, finance, commercial services, and investment. To determine the object of research, the trend of stock price developments will be seen based on the last day of stock exchange transactions each year. On the basis of 2020 information from the Indonesia Stock Exchange, during 2018 and 2019, there were four sectors that had a declining trend, namely agriculture, industry of consumer goods; commercial, service, and investment production; industrial production. Meanwhile, other industries experienced less dramatic shifts.

Industry expansion charts for agriculture, consumer products, trade, services, investments, and production are as follows:



**Figure 1.** Development of Stock Price Index in Agri, Consumer, Trade, and Manufacturing Sector

Figure 1 explains that the sector with the highest declining trend is the consumer goods industry (consumer goods industry) which reached 20% in 2019. At the same time, the agriculture sector had the highest decline in 2017, which only reached 13.30%. The trade, service, and investment industry sector declined the most in 2018 which, reached 14.94%. The manufacturing industry sector declined the most in 2019, which only reached 9.72%. This study focuses on the consumer goods business because it has experienced the greatest decline during the past five years. Companies in the consumer goods industry see their value decrease as a result.

The term "consumer goods industry" refers to the manufacturing of products that people use on a regular basis, whether it is food and drink, cigarettes, medicine, cosmetics, or home furnishings. If the consumer goods industry suffers a drop in corporate value, it will have a significant impact on the lives of many people because it offers essential products. As a result of the fall in the value of the corporation, there will be fewer products of daily use in the community. Researchers describe the phenomenon of firm value at the company PT. Unilever Indonesia (UNVR), PT. Handjaya Mandala Sampoerna (HMSP), PT. Kimia Farma (KAEF), PT. Tri Banyan Tirta (ALTO), and PT. Langgeng Makmur Industry (LMPI) has a high impact on influencing stock declines. The development of company value is:

**Table 1.** Overview of Company Value Development

| KODE | Indikator | 2015  | 2016  | 2017  | 2018  | 2019  | Rata-Rata |
|------|-----------|-------|-------|-------|-------|-------|-----------|
| UNVR | Tobins Q  | 18,64 | 18,40 | 23,29 | 17,68 | 16,26 | 18,85     |
|      | PBV       | 58,48 | 62,93 | 82,44 | 46,91 | 60,67 | 62,29     |
| HMSP | Tobins Q  | 0,18  | 10,68 | 12,96 | 9,50  | 5,10  | 7,68      |
|      | PBV       | 0,03  | 13,04 | 16,13 | 12,20 | 6,85  | 9,65      |
| KAEF | Tobins Q  | 1,92  | 0,84  | 0,82  | 0,76  | 0,63  | 1,00      |
|      | PBV       | 2,59  | 0,67  | 0,58  | 0,35  | 0,09  | 0,86      |
| ALTO | Tobins Q  | 1,18  | 1,22  | 1,39  | 1,44  | 0,89  | 1,23      |
|      | PBV       | 1,43  | 1,53  | 2,03  | 2,26  | 0,69  | 1,59      |
| LMPI | Tobins Q  | 0,64  | 0,66  | 0,75  | 0,76  | 0,73  | 0,71      |
|      | PBV       | 0,28  | 0,33  | 0,45  | 0,44  | 0,31  | 0,36      |

Based on Table 1 explains that there are several companies with declining firm value. The value of Tobin's Q in 2018 and 2019 in all companies is moving in a downward direction. The price book value (PBV) in 2018 and 2019 that experienced a decline were HMSP, KAEF, ALTO, and LMPI. The decline in company value measurement indicators such as Tobin's Q and price book values (PBV) should be investigated because it will greatly impact the economy in the future. This phenomenon will have a negative impact on investors because companies with declining values will harm investments, such as losses on stock transactions or the possibility of the issuer going bankrupt.

Management's job is to make the company more valuable by raising the amount of money it spends on operations. According to [9], Whether or not a company issues debt, Modigliani and Miller's thesis posits that the prospect of an arbitration process will result in the same stock price or value regardless of whether or not the company issues debt. The arbitration process in question is the possibility of using two options in carrying out the company's operations, namely, based on capital and debt. This process arises because investors will prefer investments that require fewer funds but provide large returns or with the same risk. Investors will prefer companies that earn the same profit but with a smaller investment, such as companies that do not have debt. In this case, not all investors are aware of the investment risks arising from the investment process using arbitration or non-arbitration systems. In conditions such as a perfect capital market and taxes, investors will benefit more if they invest in companies that have debt and make efficient use of capital. If the company has debt, interest payments will reduce operating profit so that income tax payments will be smaller. Companies that issue debt have a higher value than those that don't because their owners benefit from lower tax obligations.

According to [9], When taking on debt, the trade-off theory states there will be rewards, but there will also be consequences, such as potential bankruptcy. The benefits of using debt can reduce tax payments and improve company operations, but the use of debt can create bankruptcy costs because of the high interest paid. Bankruptcy costs consist of fees paid to lawyers to settle claims and company assets that are forced to be sold below fair value at the time of bankruptcy. So, in this instance, the corporation must be careful not to incur any unnecessary debt. As a result of these advantages and

disadvantages, the use of debt must be balanced so as not to interfere with the resulting benefits. In order to maximize shareholder value, businesses should use debt strategically, with the goal of maintaining the lowest possible cost of capital. Consequently, upward or downward adjustments to the capital structure of the company could impact its value.

According to Widnyana (2020), the pecking order principle, the usage of internal funding sources will be prioritized above external funding sources like debt and shares. Thus, there are various explanations for the correlation between capital structure and business value, and in this situation, capital structure plays a relatively little role in explaining variation in company worth. With this research, we hope to settle the debate over which of these conflicting hypotheses provides the most convincing explanation for future discoveries.

Measurement of debt can be linked to various accounts that exist in financial statements, such as assets and capital or what is known as a capital structure. Capital structure, as defined by [9], is the proportion of a company's funding that comes from debt, as measured by the debt ratio or by the amount of the company's own capital. Capital structure, including debt, is critical to maximizing output and value for shareholders. It is imperative for a company's leadership to implement a capital structure that can grow the enterprise's worth.

[24] evaluated capital structure utilizing the long-term debt-to-asset ratio (LTDAR), the debt-to-asset ratio (DAR), the long-term debt-to-equity ratio (LTDER), and the debt-to-equity ratio (DTE) (DER). Concerning the company's book value (PBV). There was shown to be a beneficial influence on a company's value when the debt-to-equity ratio (DER) was high, while there was a non-significant negative effect when the debt-to-assets ratio was high.

[1] finds no correlation between DAR/DER capital structure and business value. [14] asserts that the discounted cash flow (DAR) of a firm's capital structure has a materially detrimental impact on the value of that company. [9] research found that capital structure based on the DER significantly and positively affects firm value. It remains unclear why some research found a favorable effect while others found a negative one and why the DER and DAR always arrive at opposite conclusions. So this study will measure capital structure based on LTDAR, DAR LTDER, and DER.

Widnyana's (2020) study determines a company worth utilizing DAR, DER, and LTDAR in addition to Tobin's Q, PER, PBV, and EPS. But neither Tobin's Q nor PBV are employed in this valuation method. This is done since the data present in the PER and EPS is already incorporated into Tobin's Q ratio and the PBV.

The capital structure is important, but the management team's focus on the company's success is even more crucial to its overall worth. Any plan for raising capital should have the company's bottom line as its first priority. [9] claims that profitable companies employ signaling theory to induce shareholders to buy their stock by giving the impression that the company is doing well financially. If there is a lot of inter-

est in buying stock in a company that has been very profitable recently, the market will bid up the price, increasing the market capitalization. The worth of a firm tends to rise in tandem with its share price as its market capitalization grows.

The primary aspect of enhancing a company's performance is profitability ratios. [9] explains that the profitability ratio's goal is to measure how well a company turns revenue, assets, or equity into a profit. Each company has a different ability to generate profitability, even in the same industry. Reasons for this include high levels of rivalry within the industry and the ability of top management to optimize the firm's capital structure for maximum profit. The most widely used profitability ratio is the return on equity (ROE) because these two measurements symbolize the success of the capital structure in increasing company profits. This study's author, therefore, treats profitability as a moderating factor between capital structure and business value.

According to the findings of [16] study, business profitability significantly increases a company's worth. This study also concludes that profits can act as a go-between for capital structure and firm value. According to research by [9] and Widnyana (2019), profits cannot act as a go-between when it comes to the relationship between capital structure and firm value (2020). According to [9] study, profitability has no bearing on a company's worth. Previous research has shown conflicting results, with some claiming profitability is both a moderating and an influencing factor, while others claim it has neither of these effects. This study will therefore proceed with additional investigation using profitability as a mediating variable (as evaluated by ROA and ROE).

Research on the connection between capital structure and business value is mediated by profitability because investors need to know the characteristics that define firm value based on the composition of capital and the level of profit received. Changes in company value can be a reference for investors to choose companies that are considered profitable. It is possible for management's decisions on the company's capital structure, which are made with the express purpose of maximizing profits, to sway this evaluation. Increasing profits also need to be considered by investors in order to get benefits such as dividends or capital gains and reduce the risk of loss of investment value. These contrasting results have sparked interest in studying the impact of capital structure on business value as mediated by profitability.

The impact of financial results on stock prices is a well-documented phenomenon, and further research must be carried out. This is very significant data because a drop in the company's worth is an indicator of an impending economic downturn. The title of this post has piqued the interest of scientists "Analysis of Capital Structure on Firm Value with Profitability as a Mediation Variable in Consumer Goods Sector Companies Listed on the Indonesia Stock Exchange."

## 2 Literature Review

### 2.1. PeckingOrder Theory

The corporation could not function without the backing of both debt and equity investors. Affirmed by [23] in pecking order theory explains that the main priority in meeting funding needs is based on internal funding originating from retained earnings, then the use of debt, and the final part is through the issuance of shares. This theory assumes that the company will be profitable if it has little debt, so the use of funds should use internal funding. Pecking order theory holds that the company must issue debt so that if the financial condition is in a deficit, it will be very detrimental to the company.

### 2.2. Signaling theory

According to [11], "signaling theory" is when investors take action or respond in a certain way to share information with other investors about the company's performance and future value that is not shown in the financial statements. Investors will receive a favorable or negative signal to buy or sell the company's stock based on the availability of financial information. If a company's financial performance is strong or improving, that should give investors hope that they will reap substantial rewards from the venture in the years to come. As with positive signals, investors will worry that the company will lose money in the future if its financial performance declines or is otherwise unfavorable.

### 2.3. Firm Value

[2] claims that investors evaluate a company's worth based on its stock price's performance at a given point in time. The buying and selling of a company's shares determine its price on the stock market. Both internal and external factors, such as government regulations and the status of the economy, can impact the demand and supply of a company's shares. Internal factors consist of the condition of the company itself, such as changes in financial performance and changes in directors. According to Widnyana (2020), the formula for measuring what makes a firm valuable is:

1. Tobin's Q

$$\text{Tobin's Q} = \frac{\text{Market Capitalization} + \text{liability}}{\text{Total Assets}}$$

2. Price Book Value (PBV)

$$\text{PBV} = \frac{\text{Price Per Share}}{\text{Book Value Per Share}}$$

## 2.4. Capital Structure

Capital and debt are sources of finance for the company's operating activities, and both need careful management. Mustafa (2017: 85) explains that a well-balanced capital structure consists of several types of debt and equity. A company's "capital structure" refers to the ways in which it raises money internally and how these methods relate to external investments and debt. Capital structure decisions are continually weighed against the potential for gain and loss. Capital structure is the mix of long-term debt, short-term debt, business shares, and ordinary shares, as defined by Mustafa (2017: 85). The "capital structure" of a company describes the interplay between the owner's capital and other sources of funding, such as investments and debt. Capital structure is defined by the following equation, as provided by [24]:

1. Debt to Assets Ratio (DAR)

$$\text{DAR} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

2. Long Term Debt to Assets Ratio (LTDAR)

$$\text{LTDAR} = \frac{\text{Long Term Debt}}{\text{Total Assets}}$$

3. Debt to Equity Ratio (DER)

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

4. Long Term Debt to Equity Ratio (LTDER)

$$\text{LTDER} = \frac{\text{Long Term Debt}}{\text{Total Equity}}$$

## 2.5. Profitability

[9] suggests using a profitability ratio to evaluate a firm's efficiency in turning its revenues, assets, and capital into a profit (2018: 76). Even within the same market, companies' potential for profit varies greatly. The company's key focus for the upcoming time period will be on increasing profitability to ensure it has access to sufficient funds to carry out its plans. The term "profitability" can also refer to the amount of money a business makes through its day-to-day operations during a given time frame. A formula for calculating return on equity, as provided by Widnyana (2020):

$$\text{ROE} = \frac{\text{Net Income}}{\text{Total Equity}}$$

### 3 Fundamental Of The Research Question

The study's hypothesis, which is based on the previously outlined theory and is backed by past research, with:

H1: What constitutes a company's capital structure has a major bearing on its value.

H2: The worth of a business is strongly influenced by its profitability.

H3: Profitability is significantly impacted by capital structure.

H4: Company value is significantly impacted by capital structure, with profitability serving as a moderating factor.

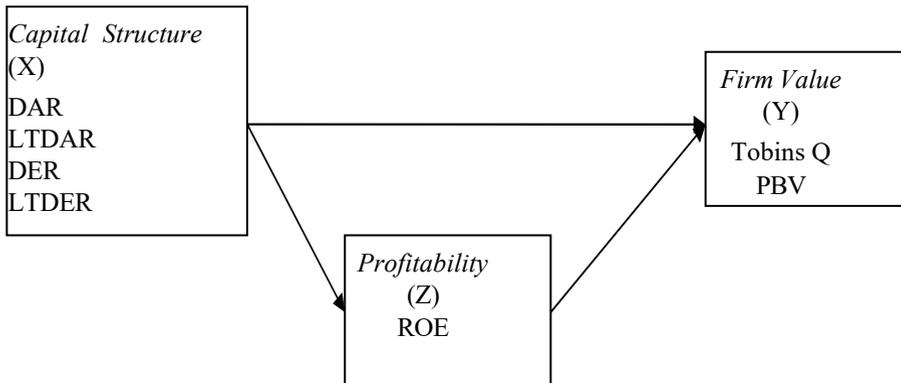


Figure 2. Conceptual Framework

## 4 Research Method

### 4.1. Population

The sample for this analysis consisted of consumer goods companies that were traded on the Indonesia Stock Exchange (IDX) between 2015 and 2019. Sampling was done so that the research could be conducted more precisely and with more reliable results.

### 4.2. Sample

Size and dispersion are only two aspects of the population that are captured by the sample. Purposeful sampling was used to choose the research sample. Purposive sampling, as defined by [22], is a method of sampling that takes into account predetermined criteria. Criteria for sampling:

The following are consumer-goods firms that have been listed on the IDX of Indonesia's stock market between 2015 and 2019.

Complete annual reports from businesses in the consumer products sector between the years of 2015 and 2019 are being accepted.

From a pool of 53 businesses, researchers were able to draw out 35 for in-depth analysis over the course of five years. That means there were 175 people in the study (35 companies multiplied by five years of research).

### 4.3. Data Analysis Technique

In this work, we employ documentation strategies to communicate information better. Documentation technique is a technique by combining several documents or analytical tools to be processed and form conclusions. This data was gathered from the 2015-2019 annual reports and websites of Indonesian corporations traded on the Indonesia Stock Exchange. Methods for evaluating hypotheses via path analysis. In path detection analysis, the regression equation is as follows:

1. Model 1

$$PF = b1DAR + b2LTDAR + b3DER + b4LTDER$$

2. Model 2

$$\text{Tobins } Q = b1DAR + b2LTDAR + b3DER + b4LTDER + b5ROA$$

3. Model 3

4.  $PBV = b1DAR + b2LTDAR + b3DER + b4LTDER + b5ROA$

## 5 Result and Discussion

### 5.1. Practical Contribution to Dentistry Field (Classic Assumption Test Results)

There are 6 data that are categorized as outliers so that they are excluded from the study. If the asymp sig value of the normality test for the unstandardized residual in Tobin's Q is more than 0.05, we can conclude that the data follow a normal distribution or distribution with equal size increments. A normality test on the unstandardized residual in Tobin's Q is considered to have passed if an asymp sig value of 0.245 > 0.05 was obtained.

The multicollinearity issues in the data have been fixed, and now it may be used in experiments. Assuming heteroscedasticity in the plot data is impossible if the Y-axis data are not normally distributed above and below zero. The data is free from autocorrelation so that it can be used for further statistical testing.

### 5.2. Model Test Results

Symptoms of multicollinearity have been eliminated, allowing the data to be used in further experiments. Heteroscedasticity is absent from the scatter plot because the data does not follow a regular distribution above and below 0 on the Y-axis.

The capital structure variable based on the DAR, LTDAR, DER, and the LTDER to firm value based on PBV through profitability has a 39.7 percent influence. The adjusted r-square value of 0.397 indicates that only 39.7 percent of the variation can be

attributed to factors inside the research model, while the remaining 60.3 percent is impacted by factors external to the study.

With an adjusted r-squared value of 0.107 or 10.7 percent, we see that the DAR, LTDAR, DER, and LTDER all significantly affect ROE, with extraneous factors accounting for the remaining 89.3 percent.

A significance level of 0.000 0.05 from an F test using Tobin's Q as the measure of company value suggests that the null hypothesis is valid. Tobin's Q, which measures the worth of a company, responds strongly to changes in profitability and to measures of the firm's capital structure (including DAR, LTDAR, DER, and LTDER).

F-testing the firm value variable with PBV as the denominator yields a significant ( $p < 0.00005$ ) positive result in favor of the null hypothesis. The DAR, LTDAR, DER, and LTDER measures of capital structure, as well as the profitability variables, all interact significantly with one another to affect PBV.

The F test for profitability, as assessed by ROE, fails to reject the null hypothesis at the 0.00005 level of significance. Profitability is significantly impacted by capital structure factors based on the DAR, LTDAR, DER, and LTDER all at once.

### 5.3. Path Analysis Test Results

The results of the path analysis test with a direct effect are:

**Table 2.** Result of Direct Effect Test

| Variable | Model 1 |        |       | Model 2 |        |       | Model 3 |        |       |
|----------|---------|--------|-------|---------|--------|-------|---------|--------|-------|
|          | Beta    | t      | sig   | Beta    | t      | sig   | Beta    | t      | sig   |
| DAR      | 0,499   | 3,543  | 0,001 | -0,088  | -0,743 | 0,459 | -0,327  | -2,725 | 0,007 |
| LTDAR    | -0,070  | -0,400 | 0,690 | -0,381  | -2,688 | 0,008 | -0,501  | -3,488 | 0,001 |
| DER      | -0,207  | -1,494 | 0,137 | 0,019   | 0,171  | 0,865 | 0,227   | 1,976  | 0,050 |
| LTDER    | -0,327  | -1,782 | 0,077 | 0,391   | 2,604  | 0,010 | 0,627   | 4,125  | 0,000 |
| ROE      |         |        |       | 0,652   | 10,307 | 0,000 | 0,635   | 9,902  | 0,000 |

The findings of the indirect-effect path analysis are as follows:

**Table 3.** Indirect Effect Test Results

| Variable | Tobins Q |       | PBV   |       |
|----------|----------|-------|-------|-------|
|          | Sobel    | Sig   | Sobel | Sig   |
| DAR      | 3.350    | 0.000 | 3.335 | 0.000 |
| LTDAR    | 0.399    | 0.689 | 0.399 | 0.689 |
| DER      | 1.478    | 0.139 | 1.477 | 0.139 |
| LTDER    | 1.755    | 0.079 | 1.753 | 0.079 |

#### 5.4. Direct Effect on Profitability

The direct path analysis regression equation in model 1, namely profitability (ROE), is:

$$\text{ROE} = 0,499\text{DAR} - 0,070\text{LTDAR} - 0,207\text{DER} - 0,327\text{LTDER}$$

Model 1's direct path analysis regression equation for return on equity (ROE) is:

$$\text{ROE} = 0,499\text{DAR} - 0,070\text{LTDAR} - 0,207\text{DER} - 0,327\text{LTDER}$$

Due to the LTDAR-based capital structure variable's significance value being  $0.690 > 0.05$ , the null hypothesis is rejected. The LTDAR-based capital structure variable has a negative and negligible impact on profits. Increases in capital structure based on the LTDAR are unlikely to have a material effect on profitability.

In this case, the hypothesis is not supported because the significance level for the DER-based capital structure variable is  $0.137 > 0.05$ . As a result of its low statistical significance, the DER-based capital structure variable has a detrimental effect on profits. Profitability will not be drastically affected by any changes to the capital structure necessitated by the DER.

The hypothesis is rejected since the significance level for the LTDER-derived capital structure variable is  $0.077 > 0.05$ . A capital structure variable based on the LTDER has a small but negative effect on ROE as a measure of profitability. The LTDER does not foresee a material decline in profitability as a result of any proposed changes to the capital structure.

#### 5.5. Direct Effect on Firm Value (Tobins Q)

The direct path analysis regression equation model 2 on firm value (Tobins Q) is:

$$\text{Tobins Q} = -0,088\text{DAR} - 0,381\text{LTDAR} + 0,019\text{DER} + 0,391\text{LTDER} + 0,652\text{ROE}$$

The data from model 2's partial t-test of the direct effect on Tobin's Q-based firm value. The DAR-based capital structure variable is significantly different from zero ( $0.459 > 0.05$ ). Hence the null hypothesis is false. Tobin's Q undervalues the company by a small and insignificant amount due to the DAR capital structure variable. Tobin's Q valuation would not be significantly affected by DAR's proposed capital structure modification.

Since the significance level for the LTDAR-based capital structure variable is  $0.008 < 0.05$ , the null hypothesis is rejected. Tobin's Q is negatively impacted by LTDAR's capital structure variable. This effect is statistically significant. Based on Tobin's Q, the value of a company will drop dramatically if its capital structure is altered to accommodate an increase in LTDAR.

We reject the null hypothesis because the DER capital structure variable is statistically significant at the 0.866 level ( $\geq 0.05$ ). A DER-based capital structure variable has a positive and statistically negligible effect on Tobin's Q-measured firm value. Tobin's Q suggests that adjusting a company's capital structure in light of DER would not significantly increase its value.

The hypothesis is accepted due to the significant value of 0.010 0.05 for the capital structure variable based on the LTDER. The LTDER-derived capital structure variable positively and significantly affects Tobin's Q-based company value. Based on Tobin's Q, an increase in LTDER-based capital structure would significantly boost a company's worth.

Since the significance level for the LTDER-based capital structure variable is 0.010 0.05, the hypothesis is accepted. Capital structure factors in LTDER have a positive and statistically significant effect on the valuation of enterprises as measured by Tobin's Q. Tobin's Q suggests that any modifications to a company's capital structure in response to LTDER would significantly increase the value of the business.

### 5.6. Direct Effect on Firm Value (PBV)

The results of the path analysis model 3 test with a direct influence on the price book value (PBV) firm value are:

$$PBV = -0,327DAR - 0,501LTDAR + 0,227DER + 0,627LTDER + 0,635ROE$$

A summary of the direct influence on PBV-based company value as determined by a partial t-test of Model 3. Statistical analysis of the data confirming the hypothesis finds that the capital structure DAR variable is significant at the 0.007 level (0.05). Capital structure as a DAR variable significantly reduces PBV in a negative way. The PBV of a corporation will drop drastically if its capital structure is expanded in accordance with the DAR.

LTDAR-based capital structure variable at 0.001 0.05 significance level supports the null hypothesis. To rephrase, LTDAR's capital structure is statistically and notably negative for PBV. Any changes to the capital structure that are mandated by the LTDAR will have a dramatic effect on the enterprise's PBV.

For the reason why the significance level for the DER-based capital structure variable is 0.05 = 0.05, the null hypothesis is not supported. The DER-based capital structure variable has a positive and non-trivial effect on PBV calculations. Alterations to the capital structure initiated by DER are not anticipated to result in a material increase in PBV.

With a significance level of 0.000 0.05 for the capital structure variable based on the long LTDER, we, therefore, conclude that H0 is false. LTDER capital structure significantly affects PBV in a favorable way.

Because the profitability variable's significance level is 0.000 0.05, the hypothesis is accepted. A positive and statistically significant association exists between the profit-

ability variable and PBV-based firm valuation. A considerable increase in PBV can be expected once the company's profitability improves.

### **5.7. Indirect Effect on Firm Value (Tobins Q) Through Profitability**

Due to the capital structure DAR variable's significance at the 0.05 level, the null hypothesis is rejected. The DAR-based capital structure variable has a positive and substantial effect on Tobin's Q, which is dependent on a company's profitability. Using profitability as a proxy, the DAR's capital structure variable significantly raises Tobin's Q, a measure of business worth.

LTDAR capital structure has a significance value of  $0.689 > 0.05$ , which suggests the hypothesis can be rejected. Tobin's Q is a profitability-based valuation metric, and the capital structure variable based on the LTDAR has a positive but small impact on this metric. There is no moderating effect of profitability on the link between LTDAR capital structure components and Tobin's Q valuation variables.

The hypothesis can be rejected because the significance level for the DER-based capital structure variable is  $0.139 > 0.05$ . Tobin's Q, which is dependent on the firm's profitability, is positively and insignificantly affected by the capital structure variable based on the DER. The correlation between the DER and Tobin's Q valuation is unaffected by the company's profitability.

The hypothesis is rejected because the significance level for the capital structure variable based on the LTDER is  $0.079 > 0.05$ . A positive but modest influence on the firm's worth can be attributed to the capital structure variable based on the LTDER, as measured by Tobin's Q through profitability. The relationship between LTDER capital structure elements and Tobin's Q value of a firm is unaffected by the firm's profitability.

### **5.8. Direct Effect on Firm Value (PBV)**

The DAR-based capital structure variable is significantly different from zero. Hence the null hypothesis is rejected. Firm value (as measured by PBV) is positively and significantly impacted by the DAR capital structure variable, which is profit. Profitability mediates the link between capital structure factors (measured by DAR) and company value (measured by PBV).

In this case, the hypothesis can be rejected because the significance level for the LTDAR capital structure variable is  $0.689 > 0.05$ . Firm value, as measured by PBV, is positively and insignificantly impacted by the capital structure variable based on the LTDAR. Profitability has little impact on the association between LTDAR capital structure factors and PBV company value.

In this case, the hypothesis is not supported because the significance level for the DER-based capital structure variable is  $0.139 > 0.05$ . Profitability is the medium through which the DER capital structure variable influences PBV and this effect is positive and non-trivial. The association between DER capital structure variables and PBV company value is not mediated by profitability variables.

LTDER-based capital structure variable rejects the null hypothesis with a significance level of  $0.079 > 0.05$ . The positive and statistically insignificant effect of LTDER on PBV is mediated by profitability. Variables related to a company's profitability play no mediating role in the relationship between LTDER capital structure and PBV firm value.

## 5.9. Discussion

### Effect of Capital Structure on Firm Value

The theory presented in this investigation clarifies the connection between a firm's capital structure and its value. The tests of hypotheses reveal that the DAR-based capital structure variable has a negative and statistically insignificant effect on the value of the company as measured by Tobin's Q and a negative and statistically significant influence on the value of the company as assessed by PBV. Tobin's Q and PBV are negatively impacted by LTDAR's capital structure variables. This effect is statistically significant. Tobin's Q and PBV, which are measures of market capitalization, are positively affected by the capital structure variable based on DER, though the effect is small. Tobin's Q and PBV, two measures of market value, are positively and significantly affected by the capital structure variable based on the LTDER.

The goal of a well-thought-out capital structure is to keep debt levels low without hampering a company's ability to operate. If the company's activities are currently funded at a low level, debt-based finance may be used to raise that level. Management must keep this up or face financial damages as a result of default. Therefore, this is crucial for investors to consider before putting money into the business. This implies that the capital structure size has no effect on the company's market value.

Widnyana (2020) and [24], for example, discovered no correlation between DAR and DER and firm value as evaluated by Tobin's Q, adding support to the results of the current study. These findings corroborate those of [14] and [16], who also found that different types of capital structure (DAR, LTDAR, and LTDER) have different effects on PBV-based company value.

The pecking order theory, as explained by [23] states that retained earnings should be the first source of finance for any company's capital expenditures, followed by the usage of debt and finally by the issuing of shares. Based on this notion, businesses should prioritize using their own cash reserves before taking on additional debt in order to maximize profits. According to the pecking order idea, a company's financial health will suffer greatly if it cannot issue loans.

### The Effect of Profitability on Firm Value

This study's theoretical framework shows that profits affect a company's value. Hypothesis testing indicates that the profitability variable positively and significantly affects both Tobin's Q and PBV measures of business value.

Profitability is the single most essential element for investors in deciding whether or not to put money into a firm. More investors will be interested in a firm if it has a bigger one because it shows that investors have confidence in the company's future

profitability. Because of this, the demand for shares of the company will rise, which will result in a higher share price. If stock prices go up, the market value of the company will rise.

Both Widnyana (2020) and [16] found that profitability had an impact on business value, lending credence to the findings of the current study. Previous research by [9] found no correlation between profitability and business valuation. However, our findings contradict that finding.

Widnyana (2020) states that corporations with high levels of profitability display good financial performance by purchasing back shares from investors, a phenomenon known as "signaling theory," which in turn increases the value of the company. High-profitability corporations will see a surge in demand for their shares, which will lead to a rise in price and a consequent expansion of market capitalization. The worth of a corporation tends to rise as its market cap grows.

### **Effect of Capital Structure on Profitability**

This study's hypothesis explains why capital structure matters for profits. Results from tests of the hypothesis claim that the capital structure variable based on DAR has a positive and statistically significant effect on profitability. Earnings are negatively affected by LTDAR, although only slightly. Profitability is negatively and insignificantly impacted by the capital structure variable depending on the DER. LTDER-based capital structure variable is negatively and insignificantly associated with bottom-line results.

Debt management policies, such as a firm's capital structure, should be implemented with care to ensure that they do not disrupt business as usual. Debt-based finance is required if the company's current source of funding for operations is inadequate. However, this must be maintained by management so as not to risk defaulting losses. Then it will not interfere with the increase or decrease in profit significantly.

In contrast, the findings of this study corroborate those of [16], who found that capital structure (DAR) affects profits. Capital structure (LTDAR, DER, and LTDER) had no effect on profitability, which is in line with the conclusions of studies by Widnyana (2020) and [9].

[23] argues that internal funding is preferable since it follows the pecking order hypothesis that a company will be profitable with a low debt load. Therefore, the capital structure has no bearing on profits in this scenario. According to the pecking order idea, a company's financial health will suffer greatly if it cannot issue loans.

### **Effect of Capital Structure on Firm Value With Profitability as a Mediation Variable**

The idea developed in this investigation establishes a bridge between capital structure and firm value by way of profitability. Testing of the hypothesized relationship between the DAR's capital structure variable and Tobin's Q and PBV measures of value for the firm reveals that profitability plays a mediating role. Tobin's Q and PBV can

stand in for value, and they can also mediate the relationship between capital structure (as measured by DAR) and value.

Tobin's Q and PBV, as well as the LTDAR's measure of capital structure, are positively impacted by the profitability variable, which in turn has a moderating influence on the LTDAR's capital structure variable. Tobin's Q and PBV, which are unmediated by profitability variables, are directly affected by a company's capital structure as evaluated by LTDAR.

Through the medium of profitability, the capital structure variable represented by the debt-to-equity ratio (DER) affects Tobin's Q and PBV in a positive and statistically insignificant way. The correlation between capital structure, DER, and Tobin's Q and PBV is unaffected by the presence or absence of profitability.

Profitability mediates the positive but minor influence of the LTDER capital structure variable on Tobin's Q and PBV measures of firm value. Changes in the capital structure (as measured by LTDER) have no effect on the value of a company (as assessed by Tobin's Q or PBV), and profitability cannot operate as a go-between.

Capital structure is a form of management policy in managing debt so as not to interfere with corporate operations, which should not affect profit decline. Therefore it can both increase and decrease firm value with profitability as a mediating variable. If the source of funding for the company's operations is low, then increased debt-based funding is needed. However, this must be maintained by management so as not to risk defaulting losses. So this is not a key factor for investors in investing their funds in the company. Company earnings and the stock price will be unaffected by the capital structure's size.

When profitability is taken into account, the results of this analysis are consistent with those of Widnyana (2020) and [9], who also found no correlation between capital structure and firm value. The results of this research run counter to those of [16], who discovered that capital structure affects firm value, with profitability serving as a mediator.

According to [23], the pecking order theory explains that the main priority in meeting funding needs is based on internal funding originating from retained earnings, then the use of debt, and the final part is through the issuance of shares. This theory assumes that the company will be profitable if it has little debt, so the use of funds should use internal funding. Pecking order theory holds that the company must issue debt so that if the financial condition is in a deficit, it will be very detrimental to the company.

## 6 Conclusion

Testing the researcher's hypotheses, we find that the LTDER capital structure variable influences Tobin's Q and PBV valuation metrics in a positive and statistically significant way.

Profitability and market value are positively and statistically significantly related, as demonstrated by both Tobin's Q and PBV.

Profitability is positively and significantly impacted by the DAR-based capital structure variable.

Tobin's Q and PBV, which are measures of firm value, are positively and significantly impacted by the capital structure variable based on the DAR, thanks to the firm's profitability.

## 7 Research Limitations

Based on the conclusions, management, and interested parties can pay attention to research suggestions. The suggestions are:

1. Organizations would do well to focus on profit maximization strategies because of the weight investors give to this factor in valuing a company. Therefore, it will have a major impact on the value of the business.
2. When considering the value of a company to invest in, it is best to focus on the profit and how it has changed over time.

New factors, such as corporate social responsibility (CSR), that could affect a company's value should be included in future studies.

## References

- [1] Al-Nsour, Osama J. 2019. Capital Structure, Profitability, and Firm's Value: Evidence from Jordan. *Research Journal of Finance and Accounting*. Volume 10. No. 20. ISSN 2222-1697
- [2] Dewi, Gusti Ayu Ketut Rencana Sari dan Diota Prameswari Vijaya. 2019. "Investasi dan Pasar Modal Indonesia". Depok : PT. RajaGrafindo Persada.
- [3] Djaja, Irwan. 2019. "All About Corporate Valuation: Memetakan, Menciptakan, Mengukur, dan Merealisasikan Nilai Perusahaan". Jakarta: Gramedia
- [4] Fahmi, Irham. 2018. "Pengantar Manajemen Keuangan : Teori dan Soal Jawaban". Bandung : Alfabeta
- [5] Ghozali, Imam. 2017. "Ekonometrika : Teori, Konsep dan Aplikasi Dengan IBM SPSS 24". Semarang : Badan Penerbit Universitas Diponegoro
- [6] Ghozali, Imam. 2017. "Model Persamaan Struktural : Konsep dan Aplikasi Dengan Program Amos 24". Semarang : Badan Penerbit Universitas Diponegoro
- [7] Harmono. 2018. "Manajemen Keuangan : Berbasis Balanced Scorecard Pendekatan Teori, Kasus, dan Riset Bisnis". Jakarta : Bumi Aksara

- [8] Hirdinis. 2019. Capital Structure and Firm Size on Firm Value Moderated by Profitability. *International Journal of Economics and Business Administration*. Volume VII. Issue 1.
- [9] Husnan, Suad. 2018. "Dasar-Dasar Manajemen Keuangan" Yogyakarta : UPP STIM YKPN
- [10] Kadir. 2018. "Statistika Terapan : Konsep Contoh dan Analisis Data Dengan Program SPSS/Lisrel Dalam Penelitian". Depok : PT. RajaGrafindo Persada.
- [11] Kartika, Rusnindita. 2019. Analysis Of Size, Roa, And Growth Of Corporate Value; With Variable Capital Structure As Intervening. *International Journal Of Science, Engineering, And Information Technology*. Volume 04. Issue 02
- [12] Nasimi, Assad Naim. 2018. Effect of Capital Structure on Firms' Profitability: An Empirical Evidence from Pakistan Stock Exchange (PSX). *Research Journal of Finance and Accounting*. Volume 09. Nomor 11. ISSN 2222-1697
- [13] Mardones, Juan Gallegos dan Gonzalo Ruiz Cuneo. 2019. Capital Structure And Performance In Latin American Companies. *Economic Research- Ekonomiska Istraživanja*. ISSN: 1331-677X.
- [14] Moghadas, Atena et all. 2013. Impact Of Capital Structure On Firm Value: Evidence From Tehran Stock Exchange. *Management Science Letters*. Department of Accounting. Science and Research Branch. Islamic Azad University. Mazandaran. Iran
- [15] Musthafa. 2017. "Manajemen Keuangan". Yogyakarta: CV. Andi Offset
- [16] Rahayu, Sri Mangesti et all. 2019. The Reciprocal Relationship Between Profitability And Capital Structure And Its Impacts On The Corporate Values Of Manufacturing Companies In Indonesia. *International Journal of Productivity and Performance Management*. Emerald Publishing Limited. Volume 69. No. 02
- [17] Rahman, Ataur. Et al. 1., 2019. The Impact of Capital Structure on the Profitability of Publicly Traded Manufacturing Firms in Bangladesh. *Applied Economics and Finance*. Redfame Publishing. Volume 06. No. 02.
- [18] Santoso, Singgih. 2018. "Mahir Statistik Parametrik : Konsep Dasar dan Aplikasi Dengan SPSS". Jakarta
- [19] : PT. Elex Media Komputindo
- [20] Singh, Narinder Pal. 2019. The Effect of Capital Structure on Profitability: An Empirical Panel Data Study. *Journal of Business Research*. Jindal Global University
- [21] Sirojuzilam, Ngatemin, Azhar Maksum, Erlina. 2018. Value Of The Firm In Capital Structure Perspective (Case Study Of Tourism Companies In Indonesia Stock Exchange). *Economics*. Volume 06. No. 01.
- [22] Sugiyono. 2017. "Metode Penelitian Kuantitatif, Kualitatif, dan R&D". Bandung : Alfabeta
- [23] Syamsudin, Syamsudin. 2020. Corporate Governance and Firm Value: A Moderating Effect of Capital Structure. *International Journal of Innovation, Creativity, and Change*. Volume 12. Issue 02.

- [24] Uzliawati. 2018. Optimization of Capital Structure and Firm Value. European Research Studies Journal. Volume XXI, Issue 2. Faculty of Economics and Business. University of Sultan Ageng Tirtayasa

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