

## THE EFFECTS OF THE ASSETS AND CAPITAL STRUCTURES ON FIRM VALUE: THE MEDIATING ROLE OF FINANCIAL PERFORMANCE, AN EVIDENCE IN HEALTHCARE PROVIDERS ON INDONESIA STOCK EXCHANGE (IDX) FROM 2017 TO 2021

Idham Sapta Yudi  
H. M. Roy Sembel  
Melinda Malau

### ABSTRACT

*This study is initial research on the healthcare provider (hospital companies) on IDX Health - F121 that analyze the effect of assets structure, capital structure and financial performance on the firm value of hospital companies in 2017-2021 and discusses lower NPM and ROE. The research method used is explanatory with a quantitative approach. The sampling technique used is purposive sampling with a total population of 10 hospital companies. Retrieval of company secondary data through IDX, the company's official website, Yahoo Finance and IDN Financial. The SmartPLS application is used in this research to analyze regression data, perform classical assumption tests and hypotheses tests. This research analyzed the effect and correlation among those variables and identified factors and problems that explain why the hospital companies have lower performances, invest in large capital, have large equity, and are still dependent on the government budget. Based on the research results, it was indicated that assets structure has significant effects on financial performance and firm value. An increase in asset utility contributed to generating revenue, however, fixed asset utilization tends to decrease as capital expenditure shifts from infrastructure to a technology base. Revenue is supported by covid-19 patients during the pandemic in 2020 - 2021 is covered by the government budget. Hospital companies tend to use internal capital rather than debt and become more conservative in their operating finance and investment financing. Their conservatism in finance is proven by Pecking Order Theory, and in Trade Off Theory, their tendency to use internal capital will have an effect on the lower ROE. Besides that, investors expect high returns and look for a higher NPM and ROE.*

Keywords: Capital Structure, Assets Structure, Financial Performance, Firm Value, Net Profit Margin.

### INTRODUCTION

Hospitals registered with the Ministry of Health are managed by various agencies or institutions, such as the Central and Regional Governments, TNI/POLRI, BUMN, and the Private Sector. Hospitals are categorized based on their services into general hospital (RSU) and special hospital (RSK). In 2017, the number of hospitals in Indonesia was 2,776, increasing to 3,042 in 2021, or increased by 9.6%. In 2021, the number of hospitals consisted of 2,522 RSU and 520 RSK, as shown in Figure 1.1 (Kemenkes RI, 2022).



Source: Ditjen Pelayanan Kesehatan, Kemenkes RI, 2022

Figure 1 Hospital Development in Indonesia 2017-2021

On the other side, the pharmaceutical and healthcare sector in Indonesia is one of the fastest-growing in the ASEAN region. The Indonesian government has prioritized widening healthcare access and increasing the healthcare system's capacity since 2014. However, Indonesia still has a gaping shortfall in hospital beds, qualified medical workers, including specialist doctors, and intensive care facilities and medical technology. Indonesia has a dual public-private healthcare system in which private healthcare providers play a crucial role, especially in delivering tertiary and specialist care. The responsibility for providing people healthcare has primarily been devolved to the Provincial Governments while the Central Government operates a limited number of multi-specialist hospitals. The hospital market in Indonesia continues to grow year by year and is expected to reach USD 14 billion by 2022. The hospital market is an important component of the overall healthcare market in Indonesia (Ken Research, 2022).



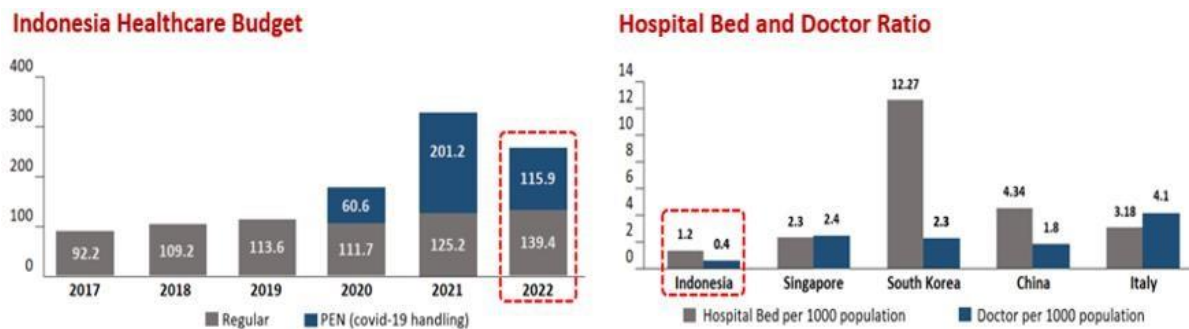
Source: Ken Research, 2022 and the company's annual reports

**Figure 2 Indonesia Hospital Market Outlook**

In addition, the hospital companies are expected have strong liquidity and working capital in balance with their healthcare service development plan as well as their capital expenditure plan, as they will need to spend quite a big of cash to purchase building assets, medical devices, laboratories, pharmacies, and information systems and technology. Sufficient liquidity and cash are the financial key to support this business and execute the business plan properly and reach optimal results. Thus, proper investment feasibility most needed to be ensured for there is no potential loss and can reduce risk. Furthermore, the long-term business plan should cover the investor expectations, which are that the cash invested can get appropriate returns in the future.

The Indonesian Government has allocated Rp 255 trillion for health spending, or 9.4% of the 2022 State Budget. The plan allocation will come from the Rp139.4 trillion routine budget and the Rp115.9 trillion National Economic Recovery program. Meanwhile, the allocation for health services in 2022 decreased by 21.8% from 2021 but increased by 11.3% when compared to the regular budget, in the hope that the covid-19 pandemic can be contained. Aside from the covid-19 allocation, the budget will focus on improving health facilities, lowering stunting rates, and strengthening the National Health Insurance (JKN) program (Source: Kemenkeu RI, 2022).

In terms of supply, the Indonesian market is still poorly penetrated. According to World Bank data for 2021, the ratio of hospital beds in Indonesia for every 1,000 residents is only 1.2 times, lower than Singapore's 2.3 times and South Korea's 12.27 times. Furthermore, the number of doctors per 1,000 residents is only 0.4, which is lower than in other countries. In terms of spending, Indonesia's healthcare spending is also still low, at 2.9% of GDP, lower than the average for low-income countries of 6.1% of GDP and also lower than the average for low-income countries. East Asia Pacific countries have 7.4% of GDP (Source: Ciptadana Sekuritas, 2022).



Source: Ciptadana Sekuritas, 2022

**Figure 3 Healthcare Budget and Hospital Bed and Doctor Ratio**

Currently, the Indonesian healthcare sector continues to grow and is wide open for foreign investment through the issuance of the Omnibus Law with Government Regulation Number 47 of 2021 (PP 47/2021). This regulation is expected to attract foreign investors to invest and do business in the healthcare sector. Foreign investors are also expected to pay attention to this regulation, which regulates the hospital sector. PP 47/2021 also regulates the hospital to reduce the number of beds and provide more supporting services, such as laboratory services, blood services, nutrition services, and other related services for hospitals directly owned by foreign investors (Source: UU Cipta Kerja, 2022, PP 47/2021 - Penyelenggaraan Bidang PerumahaSakitan, 2021).

There are 10 listed companies in IDX that operate hospitals, and the sub sector is Healthcare Providers (IDX - F121). Those hospital companies are (1) PT Bundamedik Tbk (BMHS), (2) PT Metro Healthcare Indonesia Tbk (CARE), (3) PT Mitra Keluarga Karyasehat Tbk (MIKA), (4) PT Royal Prima Tbk. (PRIM), (5) PT Kedoya Adyaraya Tbk (RSGK), (6) PT Sarana Meditama Metropolitan Tbk (SAME), (7) PT Siloam International Hospitals Tbk (SILO), (8) PT Sejahteraya Anugerahjaya Tbk (SRAJ), (9) PT Medikaloka Hermina (HEAL) and (10) PT Murni Sadar Tbk.

**Research Gap and Novelty**

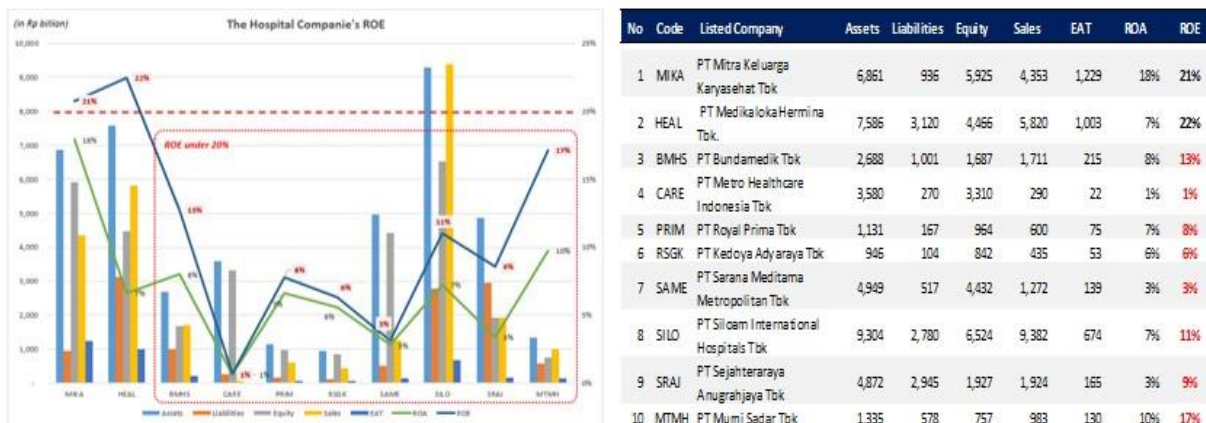
As a initial research in the healthcare provider sector on IDX - F121 that will discuss a new framework analysis to investigate the effects of asset structure, capital structure and financial performance on the firm value, and why the hospital compnies had lower NPM and ROE. This research also tries to use DuPont analysis, Pecking Order Theory and Trade-Off Theory to analyze financial performance and firm value.

**Problem Statement**

Almost of the hospital companies in Indonesia have lower NPM and ROE, and they are less than 20%, except MIKA and HEAL. This research considers the financial performance levels of BUMN Non-Infra that required ROE of 20% and S&P 500 for 2021 of 21.91% (source: Keputusan Menteri BUMN No. KEP-100/MBU/2002; S&P 500, 2022).

The main financial problems facing on the hospital companies are as follows: (1) they have lower performance, (2) generally, they invested in the large capital in business assets, (3) they have a large equity (4) they still dependents on the government budget and (5) the implementation of PP 47/2021 starts on January 1, 2023.

**Table 1 Hospital’s Financial Performance as of December 31, 2021**



Source: Author (Process Data, 2022)

**Research Questions**

Based on the background information and the identified problem statement above, this research would like to answer the following questions: (1) how does the effect of capital structure on the assets structure?, (2) how does the effect of capital structure on the financial performance?, (3) how does the effect of assets structure on the financial performance?, (4) how does the effect of financial performance on the firm value?, (5) how does the effect of capital structure on the firm value?, and (6) how does the effect of assets structure on the firm value?

**Research Objectives**

The research objectives are as follows: (1) to analyze and evaluate the effect of capital structure on the assets structure (H1), (2) to analyze and evaluate the effect of capital structure on the financial performance (H2), (3) to analyze and evaluate the effect of assets structure on the financial performance (H3), (4) to analyze and evaluate the effect of financial performance on the firm value (H4), (5) to analyze and evaluate the effect of capital structure on the firm value (H5), and to analyze and evaluate the effect of assets structure on the firm value (H6).

**LETERATURE REVIEW**

**Capital Structure Theories**

All firms need operating capital to support their sales, and in order to obtain that operating capital, funds must be collected through a combination of equity and debt. Although the actual levels of debt and equity may vary from time to time, most firms try to keep their financing mixed close to their capital targets (Eugene, 2007). The firm’s mixture of debt and equity financing is called its capital structure. The firm that financed and invested as partially or wholly with debt, it means that the firm employed financial leverage (Brealey, Myer, 2020; CFI, 2020).

The capital structure theory was initiated by Modigliani and Miller, known as the "theory of MM" (1958), which stated that the debt ratio was irrelevant and there was no optimal capital structure (Modigliani and Miller, 1958) . Firm value depends on the cash flow generated, not on the ratio of debt to equity. This theory can be applied with the assumptions that: (a) there are no brokerage fees; (b) no taxes; (c) no bankruptcy fees; (d) investors can borrow at the same interest rate as the company; (e) investors and management have the same information about the company and investment opportunities in the future; (f) debt does not affect on

EBIT. MM Proposition II measures the cost of capital of the company that has debt as being equal to the risk premium whose amount depends on the difference between the cost of capital and debt of the company that does not have debt, the amount of leverage used, and the value of corporate tax.

The second theory is Trade Off Theory (TOT). There are several things that prevent companies from maximizing debt as much as possible. This is because the higher the debt, the greater the interest that must be paid. The company will be in debt up to a certain point, at which point the tax savings from the additional debt equal the cost of financial distress. The costs of financial distress are bankruptcy costs and agency costs. TOT factors determine the optimal capital structure, such as: taxes, agency costs, and costs of financial difficulties, but still maintain the assumptions of market efficiency and asymmetric information as considerations and benefits of using debt. The optimal level of debt is achieved when tax savings reach the maximum amount compared to the cost of financial distress (Myers and Majluf, 1983).

The third theory is the Pecking Order Theory or Model that was introduced by Stewart Myers and Nicolas Majluf in 1984, which is related to the capital structure of the company. This theory describes a hierarchy when the company is considering sources of financing. The company prefers to issue debt rather than equity, if internal finances are insufficient. The hierarchy can be described as follows: (1) use internal financing (retained earnings) □ lowest cost, (2) Issue debts □ lower cost than equity and (3) equity financing as a last source □ high cost. According to this theory, profitable companies will use less debt and will prefer to use internal capital (retained earnings) instead (Myers and Majluf, 1983).

### **Assets Structure**

Assets are all the resources and property owned by the company for use in the activities of the company. Asset structure relates to the company's assets structure based on all balance sheet assets. Asset's structure shows the distribution of the total assets base, by proportion or percentage, across major asset categories. Asset's structure is the wealth or economic resources owned by the company that are expected to provide benefits in the future, consisting of fixed assets, intangible assets, current assets and non-current assets (Marty Schmidt, 2020; Bergeron and Bryan, 2018).

### **Financial Performance**

Financial performance measures a firm's ability to manage some financial aspects. It is evaluated based on a firm's assets, liabilities, revenue, expenses, equity, and profitability through various business-related formulas (financial ratios) regarding a firm's potential effectiveness. Financial performance metrics include quick ratio, current ratio, working capital, gross profit margin, net profit margin, equity multiplier, debt-to-equity ratio, return on equity, return on asset, total asset turnover, inventory turnover, and operating cash flow (Brealey, Myer, 2020; Desai, 2020; Singh, 2017).

### **Firm Value**

Firm value is the value of everything that a firm owns, and the enterprise value is the value of operating assets. To maximize firm value, firm value must be linked to the three corporate finance decisions: investment, financing, and dividend decisions. The link between these decisions and firm value can be made by recognizing that the value of a firm is the present value of its expected cash flows, discounted back at a rate that reflects both the riskiness of the firm's projects and the financing mix used to finance them. Enterprise value used several financial metrics that compares the company performances, such as valuation multiples. (Brealey, Myer, 2020; Damodaran, 2014; Desai, 2020).

### **Effect of Capital Structure on Assets Structure**

The capital structure is the funding that consists of short-term debt, long-term debt, preferred stock, and shareholder capital. Funding or capital sources can include internal funding in the form of own capital or external funding through the use of debt (Myers and Majluf, 1983). The company's management is required to be able to make better plans to determine the optimal capital structure in order to minimize risk and generate profits for the company. An increase in the capital structure within the company can improve the asset's structure due to the purchase of fixed assets and additional working capital. The use of long-term debt can be used to purchase fixed assets such as buildings, and the use of short-term debt is used to increase working capital. If the company has a high fixed assets structure, it can use these assets as collateral in obtaining debt from creditors, such as buildings, machinery, and vehicles, or it can obtain a loan from a bank to purchase the necessary fixed assets (Santoso and Willim, 2022; Dhita et al., 2017; Lim, Naysary, 2022).

### **Effect of Capital Structure on Financial Performance**

One of the most confusing problems faced by financial management is determining the effect of capital structure on company profitability. Many approaches and methods have been used to examine the effect of capital structure on company profitability. The influence of debt and equity ratios on profitability will also have an effect on ROE (Modigliani and Miller, 1958). According to various studies, the capital structure of a companies has a positive effect on their profitability. The relationship between capital structure and profitability cannot be ignored because increasing profitability is necessary for the long-term performance of the company. Since interest payments on debt are tax deductible, adding debt to the capital structure will increase the profitability of the company. Therefore, it is important to examine the relationship between capital structure and firm profitability in order to make better capital structure decisions (Umar, 2020; Dhita et al., 2017; Lim, Naysary, 2022).

**Effect of Assets Structure on Financial Performance**

The assets structure shows the amount of money allocated to each component of an asset. The allocation is important, because it is related to the amount of funds needed for the firm's long-term plan, which will determine the investors' perception of the firm (Bergeron, 2018; Marty Schmidt, 2020). The company's assets show the components and structure of the assets owned, such as cash, receivables, inventories, advances, investments, fixed assets and other non-current assets. This asset structure is critical in planning because it not only demonstrates its usefulness or contribution to revenue but also measures the extent to which management applied profitability and liquidity principles in the company. Thus, the assets' structure can describe the position of the company's financial strengths and weaknesses (Ciputri, L. and Malau, H., 2021; Novia, 2021; Sahabuddin, 2017; Santoso and Willim, 2022).

**Effect of Financial Performance on Firm Value**

Financial performance is also the result of management policies and activities in running the company for a certain period, and its performance can be measured by two indicators, namely, profit margin and return on investment. The size of the company's financial performance itself depends not only on the efficiency of the company but also on the market in which the company operates, which is known as financial stability. (Brealey, Myer, 2020; Bergeron and Bryan, 2018). The financial performance is an analysis performed to determine the extent to which a company has properly implemented financial implementation rules (Umar, 2020; Halim et al., 2022; Bahraini et al., 2021).

**Effect of Capital Structure on Firm Value**

According to Modigliani and Miller's (MM) Theory, there is no relationship or influence between capital structure and a firm's value when there is no tax. Modigliani and Miller, on the other hand, observe from a different perspective, which is tax influence. MM then concludes that the debt of the company (leverage) will increase the company's value because it gives tax deductibility (Modigliani and Miller, 1958).

The trade-off theory explains that if the capital structure position is below the optimal point, then debt will increase the firm's value. Otherwise, if the capital structure position is above the optimal point, then debt will decrease the firm's value (Myers & Majluf, 1983).

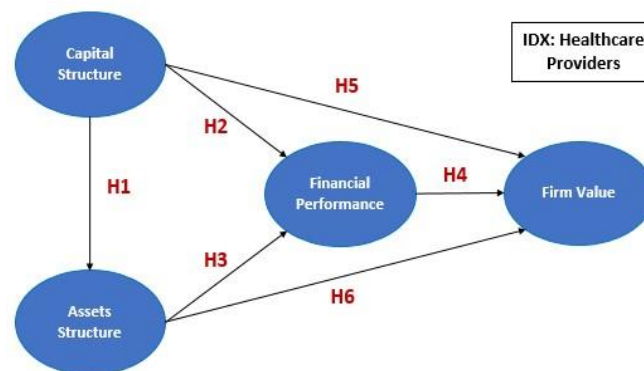
The third theory is the Pecking Order Theory or Model, which is related to the capital structure of the company. Introduced by Stewart Myers and Nicolas Majluf in 1984, this theory describes a hierarchy when the company is considering sources of financing. The company prefers to issue debt rather than equity, if internal finances are insufficient.

**Effect of Assets Structure on Firm Value**

Asset structure is a component of current assets and fixed assets used in the company's operations. In particular, fixed assets are an indicator of growth and company value because they show how much the asset structure can be used as collateral to support financing, increase operating volume, generate profitability, and increase company value. In addition, growth and firm value show a positive relationship with asset structure. This means that companies with relatively large tangible assets will have a greater ability to increase the value and volume of their operations. (Brealey, Myer, 2020; Marty Schmidt, 2020). In general, the companies that have rapid growth often have to adding their assets (Santoso and Willim, 2022; Ariyani et al., 2018; Bahraini et al., 2021).

**Framework and Hypotheses Development**

The relationship between variables and the framework model developed that will be tested are as follows:



Source: Author, 2022

**Figure 4 Research Framework**

This research proposes six hypotheses, which are as follows: H1: the capital structure has an effect on the assets structure, H2: the capital structure has an effect on the financial performance, H3: the assets structure has an effect on the financial performance, H4: the financial performance has an effect on the firm value, H5: the capital structure has an effect on the firm value and H6: the assets structure has an effect on the firm value.

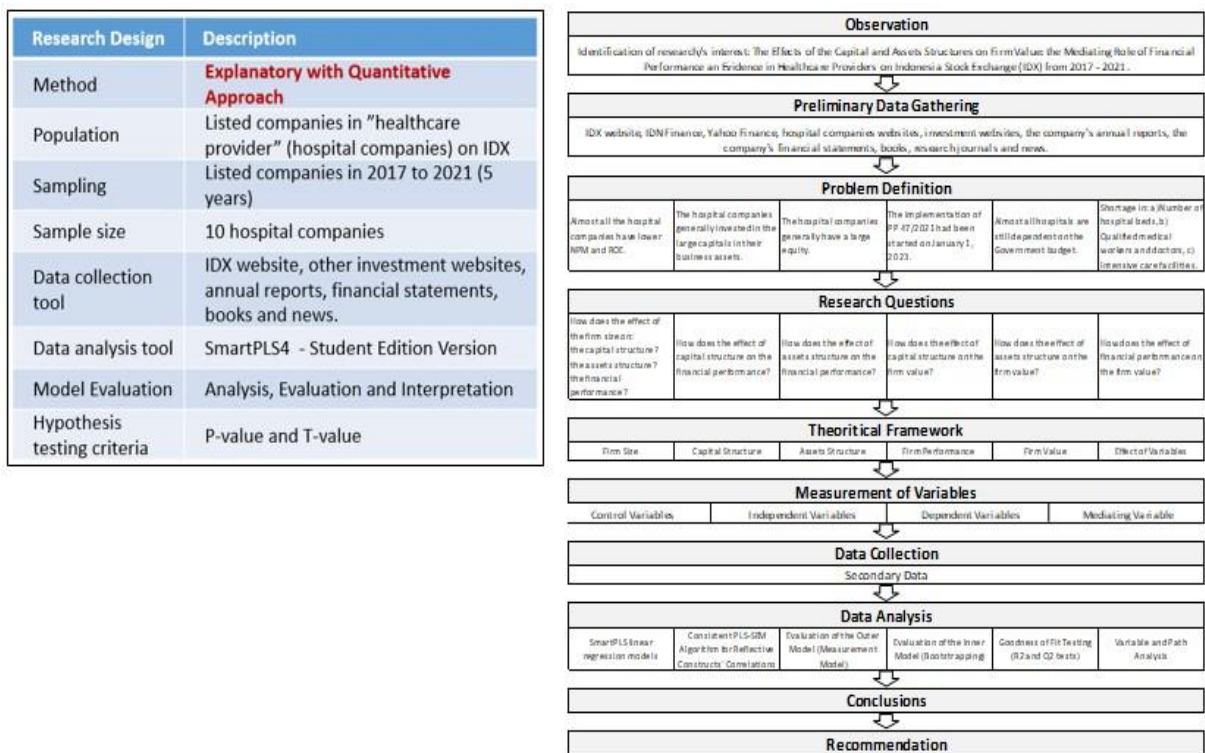
Published Data Within The Last Five Years

This study is initial research on the healthcare provider (hospital companies) on IDX Health - F121 that analyzes the effect of capital structure, asset's structure and financial performance on the firm value of hospital companies in 2017-2021 (five years). As initial research, the researcher has limited knowledge in discussing the financial performance of hospital companies as well as with all of their financial issues. However, a good general rule is to start research with sources published within the last five years and related to that, almost all those hospital companies had been listed in IDX for five years.

**RESEARCH METHOD**

**Research Location, Population and Design**

This research takes an explanatory and quantitative approach. Quantitative research is research that does not focus on how deep the data is. The important part of quantitative research is to record as much data as possible from a certain population. While explanatory research describes the causal relationship or influence between variables through hypothesis testing.



Source: Author, 2022

**Figure 5 Research Design**

The research design is a plan to collect, measure, and analyze data based on research questions (Sekaran and Bougie, 2017).

Through this research, the researcher tries to explain the effects of capital structure, assets structure, and profitability on the firm value of 10 hospital companies (healthcare providers) listed on IDX for the years of 2017-2021 as shown on Table 2 and Table 8.

**Table 2 Population and Sampling Criteria**

No	Code	Listed Company	EAT	ROA	ROE	
1	MIKA	PT Mitra Keluarga Karyasehat Tbk	1,229	18%	21%	> 20%
2	HEAL	PT Medikaloka Hermina Tbk.	1,003	7%	22%	> 20%
3	BMHS	PT Bundamedik Tbk	215	8%	13%	< 20%
4	CARE	PT Metro Healthcare Indonesia Tbk	22	1%	1%	< 20%

5	PRIM	PT Royal Prima Tbk	75	7%	8%	< 20%
6	RSGK	PT Kedoya Adyaraya Tbk	53	6%	6%	< 20%
7	SAME	PT Sarana Meditama Metropolitan Tbk	139	3%	3%	< 20%
8	SILO	PT Siloam International Hospitals Tbk	674	7%	11%	< 20%
9	SRAJ	PT Sejahteraraya Anugrahjaya Tbk	165	3%	9%	< 20%
10	MTMH	PT Murni Sadar Tbk	130	10%	17%	< 20%

Source: Author, 2022

### Variables and Measurement

The research variables are an attribute or nature or value of people, objects or activities that have certain variations set by the researcher to be studied and then drawn conclusions. The types of variables used in this research are independent, dependent and mediating variables (Sugiyono, 2017). The variables and indicators used in this research are listed in the following table.

**Table 3 Variables and Indicators**

#### Independent Variable

##### X2: Capital Structure

- X2.1: Assets to Equity Ratio (AER)
- X2.2: Debt to Total Assets Ratio (DAR)
- X2.3: Debt to Equity Ratio (DER)

**21 Indicators to be tested**  
Consist of Ln Firm Size & Financial Ratios

#### Dependent Variables

Y1: Assets Structure	Y2: Financial Performance	Y3: Firm Value
Y1.1: Current Assets Ratio (CAR)	Y2.1: Gross Profit Margin (GPM)	Y3.1: Dividend Yield (DIY)
Y1.2: Fixed Assets Ratio (FAR)	Y2.2: Net Profit Margin (NPM)	Y3.2: Dividend Pay-Out Ratio (DPO)
Y1.3: Inventory Turnover (ITO)	Y2.3: Return on Assets (ROA)	Y3.3: Dividend per Share (DPS)
Y1.4: Account Receivable Turnover (ARTO)	Y2.4: Return on Equity (ROE)	Y3.4: Earning per Share (EPS)
Y1.5: Fixed Assets Turnover (FATO)		Y3.5: Price to Book Value (PBV)
Y1.6: Total Assets Turnover (TATO)		Y3.6: Price Earnings Ratio (PER)
		Y3.7: Tobin's Q Ratio (Tobin)
		Y3.8: Market Price

Source: Author, 2022

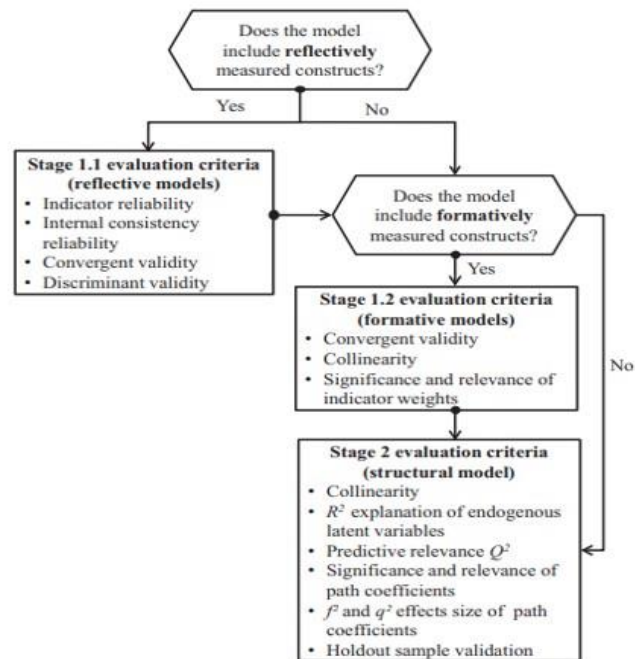
### Data Analysis Technique

This research uses a data analysis technique called partial least squares (PLS) by using PLS software (Smart PLS 4.0 Student Version). The data analysis technique of PLS is appropriate because the research model is structural and has more than one dependent variable (Garson, 2016).

PLS-SEM model evaluation (Adapted From Sarstedt et al. 2014)

The procedures evaluating **PLS-SEM** :

1. Stage 1.1: Reflective Measurement Model Assessment
2. Stage 1.2: Formative Measurement Model Assessment
3. Stage 2: Structural Model Assessment
4. Evaluation of Outer Model
5. Evaluation of Inner Model and R<sup>2</sup> test
6. Predictive Relevance (Q<sup>2</sup>)



Source: Sarstedt, Hair, 2013 & Author, 2022

Figure 6 PLS-SEM model evaluation

## DATA ANALYSIS AND DISCUSSION

### Data Analysis with SEM-PLS

The results of model analysis in this research will be divided into 3 parts, which are: (1) evaluation of the outer model (validity and reliability testing), (2) evaluation of the inner model (bootstrapping/hypothesis test), and (3) the compatibility or goodness of fit testing (R<sup>2</sup> and Q<sup>2</sup> tests).

The validity and reliability tests in this research use the consistent PLS-SEM algorithm because it performs a correction of the reflective constructs' correlations to make results consistent with a factor-model (source: SmartPLS, Consistent PLS-SEM). The following Tables describe a validity test based on the loading factor for the first stage. Based on the validity testing of the loading factor, some indicators will not be valid and should be removed from the analysis process, and continued with the second stage test with the validated indicators.

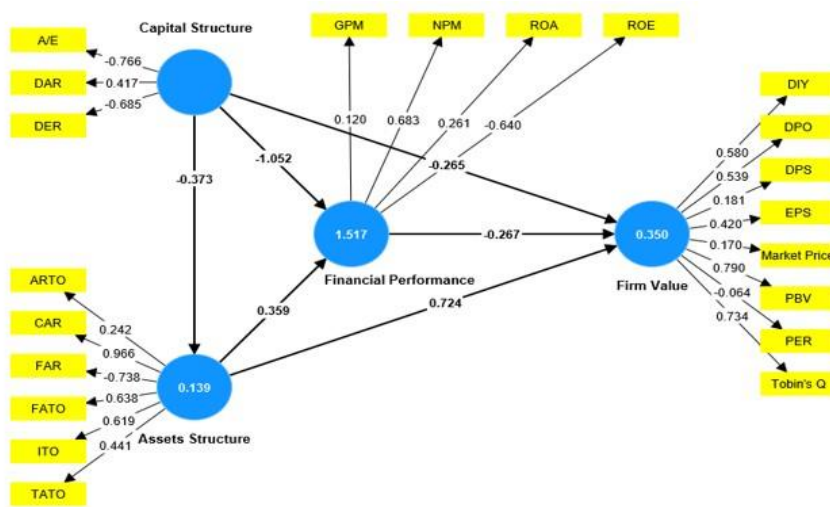
### Evaluation of the Outer Model

There are two criteria for assessing whether the outer model meets the convergent validity requirements for the reflective constructs, there are: (1) the loading factor must be above 0.7, and the loading factor between 0.50-0.70 will be considered. (2) The P-Value is significant (< 0.05) (Hair et al., 2013). The validity and reliability test in this research use the Consistent PLS-SEM Algorithm due to it performs a correction of the Reflective Constructs' Correlations to make results consistent with a factor-model (source: [www.smartpls.com/documentation/algorithms-and-techniques/consistent-pls/](http://www.smartpls.com/documentation/algorithms-and-techniques/consistent-pls/)).



Table 4 Validity Test Based on Loading Factor for First Stage

	Assets Structure	Capital Structure	Financial Performance	Firm Value
A/E		-0.766		
ARTO	0.242			
CAR	0.966			
DAR		0.417		
DER		-0.685		
DIY				0.580
DPO				0.539
DPS				0.381
EPS				0.420
FAR	-0.738			
FATO	0.638			
GPM			0.120	
ITO	0.619			
Market Price				0.170
NPM			0.683	
PBV				0.790
PER				-0.064
ROA			0.261	
ROE			-0.640	
TATO	0.441			
Tobin's Q				0.734



Source: Author (SmartPLS, Data Process, 2022)

Based on the first stage, the validity of the loading factor in Table 4, there are indicators such as A/E, ARTO, DAR, DER, DPS, EPS, FAR, GPM, Market Price, PER, ROA, ROE and TATO are not valid because the loading value is less than 0.50, so these indicators must be removed from the analysis process.

Table 5 Validity Test Based on Loading Factor for Second Stage

Validity Test Based on Loading Factor for Second Stage, Loading Factor > 0.5. (9 valid indicators)

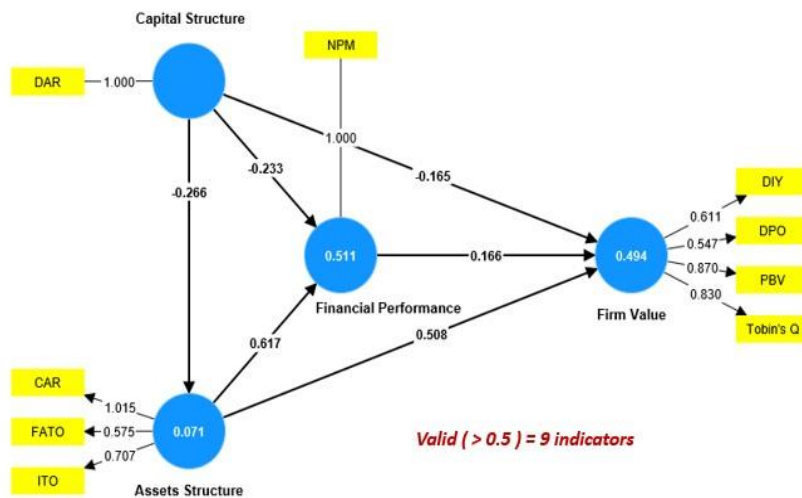
	Assets Structure	Capital Structure	Financial Performance	Firm Value
CAR	1.015			
DAR		1.000		
DIY				0.611
DPO				0.547
FATO	0.575			
ITO	0.707			
NPM			1.000	1.015
PBV				0.870
Tobin's Q				0.962

Construct Reliability and Validity Test, AVE > 0.5

	Cronbach's alpha	Composite reliability (rho_c)	Composite reliability (rho_c)	Average variance extracted (AVE)
Assets Structure	0.808	0.887	0.822	0.620
Firm Value	0.808	0.842	0.833	0.529

Discriminant Validity Test

	Assets Structure	Capital Structure	Financial Performance	Firm Value
Assets Structure				
Capital Structure	0.257			
Financial Performance	0.698	0.397		
Firm Value	0.649	0.359	0.573	



Valid (> 0.5) = 9 indicators

Source: Author (SmartPLS, Data Process, 2022)

Based on testing the validity of the loading factor in Table 5, all loading values are > 0.7 and which means they have met the validity requirements based on the loading factor. In addition, there are loading factor between 0.50 and 0.70, it is necessary to analyze the impact further if this indicator can increase the average variance extract (AVE). Furthermore, validity testing was carried out based on the AVE value.

The recommended AVE value is above 0.5, and based on the construct reliability and validity test, all AVE values are > 0.5, which means that they have met the validity requirements based on AVE. The reliability testing is carried out based on the composite reliability (CR) value. The recommended CR value is above 0.5 or 0.7, and based on the construct reliability and validity test, all CR values are > 0.5, which means that they have fulfilled the reliability requirements based on CR. Furthermore, the reliability testing was conducted based on the Cronbach's alpha (CA) value. The recommended CA value is above 0.5 or 0.7, and based on the construct reliability and validity test, all CA values are > 0.5, which means that they meet the reliability requirements based on Cronbach's alpha.

In the second stage, the researcher conducts tests on the capital structure variable to identify and eliminate the loading factor with a value less than 0.5, and the lowest value of the loading factor is eliminated one by one before running the calculation process. Based on the second stage the validity of the loading factor in Table 5, there are indicators such as DAR, CAR, FATO, ITO, NPM, DIY, DPO, PBV and Tobin's Q are valid loading factors.

**Significance Influence Test (Bootstrapping/Hypothesis Test)**

The significant influence test in this research uses the consistent PLS-SEM bootstrapping. Bootstrapping is a nonparametric procedure that allows testing the statistical significance of various PLS-SEM results such as Path Coefficients, Cronbach's alpha, HTMT, and R<sup>2</sup> values (source: SmartPLS, Consistent Bootstrapping). The results are shown on Table 6.

**Table 6 Path Coefficients and Significant Effect Test**

6 Phat Coefficients	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
Assets Structure -> Financial Performance	0.617	0.620	0.084	7.317	0.000
Assets Structure -> Firm Value	0.508	0.546	0.194	2.623	0.009
Capital Structure -> Assets Structure	-0.266	-0.261	0.115	2.311	0.021
Capital Structure -> Financial Performance	-0.233	-0.230	0.109	2.135	0.033
Capital Structure -> Firm Value	-0.165	-0.149	0.104	1.578	0.115
Financial Performance -> Firm Value	0.166	0.153	0.151	1.101	0.271

Source: Author (SmartPLS, Data Process, 2022)

**Significance Influence Test (Bootstrapping / Hypothesis Test / Inner Model) Rquare Calculation**

**Table 7 R-Square Test**

	Original sample (O) / R-Square	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
Assets Structure	0.071	0.082	0.059	1.204	0.229
Financial Performance	0.511	0.525	0.094	5.425	0.000
Firm Value	0.494	0.545	0.143	3.464	0.001

Source: Author (SmartPLS, Data Process, 2022)

The R-Square value: the assets structure = 0.071, the financial performance = 0.511 and the firm value = 0.494. It means that the assets structure, the capital structure and the financial performance are able to influence the firm value = 49.4% .

**Q-Square Calculation**

Predictive-relevance (Q2) value is calculated as follows:

$$Q2 = 1 - (1-R12) (1-R22) \dots (1-Rp2)$$

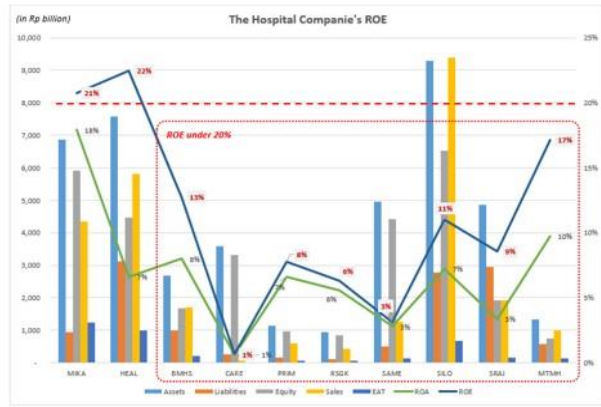
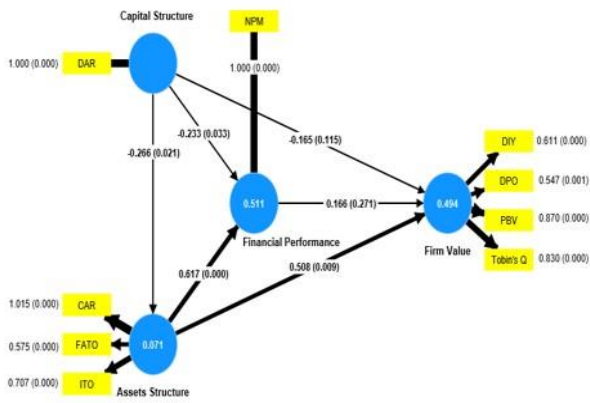
$$Q2 = 1 - (1-0.071) (1-0.511) (1-0.494)$$

$$Q2 = 0.77013$$

Q2 value of 0.77013 and indicates that the diversity of the data obtained by this model is 77.01% or whereby the data contained are 77.01% can be explained by this model. Q2 > 0.05, means that this construct model is relevant.

**Discussion of the Effects between Variables**

On the Figure 8, describes that the assets strucutre has significat and positive effects on the financial performance and firm value (assets utility), and the capital structure has negative effect on the financial performance and firm value (conservative in finacing).



Source: Author 2022

Figure 8 Variables Correlation

Table 8 Financial Performance

Code	Listed Company	NPM				ROE					CAR FATO		DAR PBV Tobin's Q		
		2017	2018	2019	2020	2017	2018	2019	2020	2021	2021	2021	2021	2021	2021
<b>ROE &lt; 20%</b>															
BMHS	PT Bundamedik Tbk	2%	1%	2%	8%	5%	1%	3%	9%	14%	38%	1.13	25%	4.56	3.07
CARE	PT Metro Healthcare Indonesia Tbk	-37%	-32%	-16%	7%	1139%	97%	-1%	0%	0%	30%	0.10	20%	5.19	4.28
PRIM	PT Royal Prima Tbk	11%	8%	1%	15%	8%	2%	0%	4%	8%	39%	1.25	0%	1.41	1.35
RSGK	PT Kedoya Adyaraya Tbk	13%	5%	8%	14%	5%	5%	4%	6%	32%	0.69	3%	1.77	1.69	
SAME	PT Sarana Meditama Metropolitan Tbk	9%	6%	-22%	-37%	7%	4%	-12%	-32%	4%	17%	0.36	1%	1.65	1.51
SILO	PT Siloam International Hospitals Tbk	2%	0%	-5%	2%	1%	0%	-6%	2%	10%	38%	1.85	6%	0.27	0.49
SRAJ	PT Sejahteraraya Anugrahjaya Tbk	-16%	-12%	-1%	13%	-6%	-5%	-1%	9%	-1%	21%	0.55	17%	1.93	1.37
MTMH	PT Murni Sadar Tbk	0%	-3%	-19%	3%	0%	=	=	36%	18%	18%	0.93	28%	3.92	2.62
<b>ROE &gt; 20%</b>															
MIKA	PT Mitra Keluarga Karyaschat Tbk	27%	23%	23%	25%	18%	15%	17%	17%	23%	47%	1.38	0%	6.11	4.92
HEAL	PT Medikaloka Hermina Tbk.	4%	4%	9%	15%	21%	7%	16%	25%	22%	33%	1.19	22%	3.57	2.51

Source: Author 2022

### Capital Structure:

DER → Conservative in financing and investment made, prefer to form of partnerships rather than using debt.

Hospital companies tend to use their sources of financing from internal working capital, issuing debt, and finally increasing equity. It's a problem to increase their ROE. MIKA and PRIM have no debts and even MIKA conducts buyback of their shares or accumulates their treasury shares.

### Assets Structure:

CAR → The CAR and liquidity will impact on the cash flow from operations. Higher in-patient receivables such as BPJS and insurance receivable will raise potential for bad debt.

FATO → Fixed assets utilization decreased due to the capital expenditure shifting from infrastructure to technology base.

ITO → Improve pharmacy stock turnover reflects their assets utilization.

The assets' structure has a significant effect on the firm value and the investors more response on their business expansion and prospect. In addition, CA turnover > FATO > TATO > 1, will describe their assets utility and operating efficiently target and only MIKA has assets turn over more than 1 or TATO > 1.

### Financial Performance

NPM → Revenue is still supported by covid-19 patients during the pandemic in 2020 to 2021 and tends to decrease.

- NPM is relatively lower of 12% in average.
- Decline in patient volume due to a lack of healthcare facilities and services.
- Assets utilization and changing medical technology contribute to generating new healthcare services.

The lower NPM is not attractive to investors, and they will expect high returns. SILO has a maximum TATO more than 1 time, but they have a lower NPM of 7% and ROE of 10%. MIKA and HEAL have the highest ROE and NPM. Efficiency in operation is a must to improve NPM.

### Firm Value

PBV → The market share price did not fluctuate, and share prices was slightly increased in the last 5 years.

- Have good business prospects in the future due to Indonesia has a shortage of hospital beds and doctors.

Tobin's Q → All hospital companies have overvalued (Tobin's q > 1), except SILO has an undervalued (Tobin's q < 1).

DIY/DPO → There were no larger dividends that distributed to shareholders.

Investors will expect a high return and dividends, and will look at a higher NPM when measuring investor return. This matter will reflect on the market share price. On the other side, the signal of the higher firm values can be measured through the business prospects.

### The Pecking Order Theory/Model (POT):

#### The Effect of the Capital Structure on the Assets Structure (H1)

##### Effect Between Variables:

- H1 is Accepted (P-Values = 0.021 < 0.05).
- The direction has a **negative effect of -0.266**
- R-Square test: 7.1% on the assets structure.

#### The Effect of the Capital Structure on the Financial Performance (H2)

##### Effect Between Variables:

- H2 is Accepted (P-Values = 0.033 < 0.05).
- The direction has a **negative effect of -0.233**
- R-Square test: 51.1% on the financial performance.

#### A Simple Pecking Order Model by using H1 & H2:

- **H1**, conversely, if **assets increase has positive effects of 0.266 on the assets structure.**
- **H2**, conversely, if **assets increase has positive effects of 0.233 on the firm value.**

According POT: Profitable firms use less debt, they use internal capital (retained earnings) instead.

### The Trade-Off Theory (TOT):

TOT factors in determining the optimal capital structure such as: taxes, agency costs, and costs of financial difficulties, but still maintain the assumptions of market efficiency and benefits of using debt. The optimal level of debt is achieved when tax savings reach the maximum amount compared to the cost of financial distress.

In TOT, the companies with high levels of fixed assets can be used as collateral for debt and have an opportunity to issue debt. Similar with this research, the companies tend to use internal financing (retained earnings). Decrease the WACC through: (1) they can consider to pay a larger dividends to shareholders, and/or accumulate their treasury shares, and (2) they have bigger fixed assets and can obtain more debt easily.

## CONCLUSION, LIMITATION, THEORETICAL, PRACTICAL AND MANAGERIAL IMPLICATIONS, FUTURE RECOMMENDATIONS.

### Conclusion

This research has four problems. The first is that almost all hospital companies are still dependent on the government budget. The second is that almost all hospital companies have problems achieving a ROE over 20% and have a lower NPM. The third is that hospital companies generally invest a large amount of capital in their business assets, and the fourth is that they have large equity.

This research used data analysis techniques by Structural Equation Modeling - Partial Least Squares (SEM-PLS) to answer all of the research questions. Analysis and discussion of the results of each test are as follows:

1. The capital structure, DAR, has negative effects on the assets structure, financial performance and firm value. Hypotheses on H1 and H2 are accepted and H4 is rejected.
2. The assets' structure, CAR, FATO and ITO have significant and positive effects on the financial performance and firm value. Hypotheses on H3 and H6 are accepted.
3. The financial performance, NPM has positive effect on the firm value and hypotheses on H5 is rejected.

### Limitation

As initial research: (1) the researcher has limited knowledge in discussing the financial performance and financial issues in the healthcare provider, (2) use fundamental financial data and ratios and cannot describe an analysis of entire financial performance, and (3) the results only apply to the hospital companies in Indonesia and could not be generalized.

### Theoretical Implication

- The results showed that the fundamental variables affect the firm value and share price.
- Assets Turn Over : CA turn over > FATO > TATO > 1.
- DuPont Formula : Net Profit Margin X (Cost to Assets Ratio + ROA) X (1+DER) Cost to Assets Ratio is other efficiency analysis in assets invested.  
DER is how much debt is obtained.  
The assets turnover formula is taken from the highest revenue performance samples, and the modified DuPont formula proposed to focus on efficiency and cost analysis.
- Conservatism in the financing has an impact on the higher cost of capital and lower ROE.
- The assets ratio and turnover are two indicators that have a significant impact on NPM and can be used to assess the company's efficiency.

### Practical Implication

There are several practical implications, as follows: (1) Total assets and revenue are dominant indicators. The larger fixed assets can pledge to obtain debt and revenue can be compared with competitors and both of them can be analyzed as assets utilization and efficiency. (2) To increase shareholder value can consider financing combination of debt and equity. Through using debt up to some point can optimize capital structure and getting tax benefits. (3) The cost ratio (variable and fixed costs) can use for the financial analysis in assessing the efficiency and assets utility, and DER can be considered for the leverage and ability of the capital structure. (4) The asset investment plan must be analyzed and made feasible, particularly of assets utilization, in terms of the assets that can generate revenue and cash.

In addition, to increase shareholder value can consider use financing combination of debt and equity. Through using debt up to some point that can optimize capital structure and had tax benefits.

### Managerial Implication

There are several managerial implications that should become a concern for the hospital company's management, as follows: (1) Management must understand that capital expenditure is very important and ensure that it is feasible because each asset purchased must be able to contribute to generating revenue and cash every year in the long term. (2) In managing the assets structure, management must pay attention to the composition of current assets, fixed assets and their financing, whereby current assets must be financed through current liabilities and fixed assets including other long-term assets must be financed through long-term debt. (3) Tendencies to use internal capital or be conservative in finance can decrease ROE because the cost of debt is lower than the cost of equity. Management should be able to decrease the cost of capital to increase ROE by lowering the WACC up to some point. Management can do by paying larger dividends to shareholders, accumulating treasury shares, and obtaining debt by pledging their fixed assets. (4) Hospital revenue is still supported by covid-19 patients and depends on the government budget. Management should refocus on their core programs for non-covid-19 patients and continue to improve assets utilization to generate revenue and increase efficiency.

## Recommendations

Based on the limitations of this research, there are several recommendations for the other researchers to continue and expand this research. The recommendations are as follows: (1) The scope of this research was limited to the Healthcare Provider sector on IDX and as fundamental analysis through internal business variables. Subsequent research is expected to use external business variables such as macro-economic variables (economic growth, government healthcare budget, and interest rate). (2) In determining the Firm Value, this research only used Tobin's Q, and further research is expected to use the cash flow base (operating cash flow and free cash flow) as variable indicators to predict valuation and as variable indicators to test the Pecking Order Model and Trade Off Theory. (3) Further research is expected on the analysis of assets utilities by expanding the Assets Structure and assets turnover into assets efficiency analysis (cost to assets ratio) to identify problems with the lower NPM and ROE that are related to operating costs and expenses. (4) Further research is encouraged to analyze the impact of the capital expenditure of medical technology and the digital healthcare business platform on the hospital company's performance.

## REFERENCES

- Adam Hayes (2021). Q Ratio or Tobin's Q: Definition, Formula, Uses, and Examples, Retrieved from Investopedia. <https://www.investopedia.com/terms/q/qratio.asp> (accessed on December 5, 2022; 11.46 PM).
- Ariyani, Rini and Toto (2018), The Effect of Assets Structure, Profitability, Company Size, and Company Growth on Capital Structure (The Study of Manufacturing Companies Listed on the IDX for the Period 2013 - 2017), *Business Strategic Journal*, Vol. 27, No. 2, pp. 123-136.
- Badan Pusat Statistik (2021), Profil Statistik Kesehatan 2021, No. Publikasi 04200.2122, <https://www.bps.go.id/publication/2021/12/22/0f207323902633342a1f6b01/profil-statistik-kesehatan-2021.html>, (downloaded on August 28, 2022).
- Bahraini, Endri, Santoso, Hartati, Pramudena (2021), Determinants of Firm Value: A Case Study of the Food and Beverage Sector of Indonesia, *Journal of Asian Finance, Economics and Business*, Vol. 8, No. 6, pp. 839-847.
- Bergeron and Bryan, (2018), *Performance Management in Healthcare - From Key Performance Indicators to Balanced Scorecard*, 2nd Edition, CRC Press.
- Brealey, Myer (2020), *Principle of Corporate Finance*, 13th Edition, McGraw-Hill. CFI: corporate finance institute (2020), Financial Leverage, Source: <https://corporatefinanceinstitute.com/resources/accounting/capital-structure-overview/>, (downloaded on August 28, 2022).
- Ciptadana Sekuritas (2022), Market Outlook 2022: Healthcare Sector, Healthcare Overweight, <https://ciptadana-sekuritasasia.com/news/296> (accessed on December 7, 2022; 00.16 AM).
- Ciputri, L. and Malau, H. (2021), The Effect of Profitability, Assets Structure on Capital Structure in Registered Chemical SubSector Companies on IDX from 2018-2020, *Budapest International Research and Critics Institute Journal*, Vol. 5, No. 3, pp. 28354-28361.
- Clayman, (2012), *Corporate Finance - A Practical Approach Second Edition - CFA*, Second Edition, Published: Wiley.
- Damodaran (2014), *Applied Corporate Finance*, 4th Edition, John Wiley & Sons, Inc.
- Deloitte (2020), 21st Century Health Care Challenges: A Connected Health Approach, *Megatrend in Healthcare*, <https://www2.deloitte.com/id/en/pages/life-sciences-and-healthcare/articles/ehealth-publication-Indonesia.html>, (downloaded on August 28, 2022).
- Desai (2020), *How Finance Works - The HBR Guide to Thinking Smart about the Numbers*, First Edition, Published: Harvard Business Press.
- Dhita, Azam and Sembel, R. (2018), Determinants of Capital Structure: Empirical Evidence from the Indonesia Stock Exchange, *European Journal of Business and Management*, Vol. 10, No. 17, pp. 36-45.
- Eugene, (2007), *Intermediate Financial Management*, 9th Edition, Published by Thompson.
- Garson (2016), *Partial Least Squares (PLS-SEM): Regression & Structural Equation Models and Statistical*, Published by Associates Publishing, Smartpls.com.
- Halim, B., Sembel, R. and Malau, M. (2022), Financial Performance Analysis and The Effect of Profitability and Market Return on The Stock Return of PT. Adaro Energy Indonesia Tbk - A Coal Mining Company in Indonesia, *International CEO (Communication, Economics, Organization) Social Sciences Congress*, pp. 994-1012, Publisher NCM Publishing House.
- IDX (2022), *IDX: The Hospital Company's Annual Report 2018-2021 of BMHS, CARE, MIKA, PRIM, RSGK, SAME, SILO, SRAJ, HEAL and MTMH*, <https://idx.co.id/id/perusahaan-tercatat/laporan-keuangan-dan-tahunan/>, (accessed on August 6, 2022 - December 8, 2022)
- Kemeneq BUMN RI, Keputusan Menteri BUMN No. KEP-100/MBU/2002 Tentang Penilaian Tingkat Kesehatan Badan Usaha Milik Negara, <https://peraturanpedia.id/keputusan-menteri-badan-usaha-milik-negara-nomor-kep-100-mbu-2002/> (accessed on December 8, 2022; 23.18 PM).
- Kemenkes RI, (2022), Profil Kesehatan Indonesia 2022, <https://www.kemkes.go.id/downloads/resources/download/pusdatin/profilkesehatan-indonesia/Profil-Kesehatan-2021.pdf>, (downloaded on August 28, 2022).
- Kemenkeu RI (2022), Buku II, Nota Keuangan Beserta RAPBN Tahun Anggaran 2022, <https://web.kemenkeu.go.id/media/18313/buku-ii-nota-keuangan-beserta-rapbn-ta-2022.pdf>, (downloaded on August 28, 2022).
- Kowoon Y., Sembel, R. and Malau, M. (2022), The Effect of Return on Equity, Net Interest Margin, Loan to Deposit Ratio, Total Assets Turnover, and Assets to Equity on Price Earnings Ratio in Top Five Banks of Indonesia, *International Journal of Business, Economics and Law*, Vol. 27, No. 1, pp. 71-84.
- Lim, Naysary (2022), Capital Structure and Corporate Performance of Listed Healthcare Companies in Malaysia, *People: International Journal of Social Sciences*, Vol. 8, Issue 1, pp. 17-35.

- Marty Schmidt (2020), *Business Case Essentials*, 5th Edition, Copyright 2022, Published: Solution Matrix Ltd.
- Modigliani and Miller (1958), *The Cost of Capital, Corporate Finance and the Theory of Investment*. *American Economic Review*, Vol. 48, No.3, pp. 261-297.
- Myers and Majluf (1983). *Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have*. *Journal of Financial Economics*, Vol. 13, pp. 187-221.
- Novia (2021), *The Effect of Profitability, Assets Structure on Capital Structure in Registered Chemical Sub-Sector Companies on IDX from 2018-2020*, *Budapest International Research and Critics Institute-Journal*, Vol. 5, No. 3, pp. 28354-28361.
- Research (2022), *Ken Research: Indonesia Hospital Market Outlook to 2022*, <https://www.kenresearch.com/healthcare/generalhealthcare/indonesia-hospital-market-outlook-to-2022/143547-91.html>, (accessed on August 28, 2022).
- Rist (2015), *Financial Ratios for Executives, How to Assess Company Strength, Fix Problems, and Make Better Decisions*, First Edition, Published by Apress.
- S&P 500 (2022), *Management Effectiveness Information & Trend, historic ROA, ROI and ROE information*, <https://csimarket.com/Industry/industryManagementEffectiveness.php?sp5>, (accessed on August 5, 2022; 11.07 PM).
- Santoso and Willim (2022), *The Influence of Assets Structure and Capital Structure on Firm Value with Asset Productivity and Operating Activities as Mediating Variables*, *International Journal Paper Public Review*, Vol. 3, No. 1, pp. 40-53.
- Sarstedt, Hair (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Second Edition, Published by Sage.
- Singh (2017), *Essentials of Management for Healthcare Professionals*, First Edition,, published by CRC Press or Productivity Press.
- SmartPLS (2022), *Consistent PLS-SEM*, <https://www.smartpls.com/documentation/algorithms-and-chniques/consistent-pls/>, (accessed on December 24, 2022; 01.54 AM).
- Umar (2020), *The Influence of Capital Structure and Profitability on Firm Value on Property and Real Estate Sector in Indonesia Stock Exchange*, *International Journal of Health, Economics, and Social Science*, Vol. 2, No. 3, pp. 184-195.
- Walsh, (2008), *Key Management Ratios*, Fourth Edition, Prentice Hall.
- Woolard (2018), *High Performance in Hospital Management: A Guideline for Developing and Developed Countries*. By Edda Weimann and Peter Weimann. Berlin: Springer Publishing Company, 2017. *South African Medical Journal*, Vol. 108, No.7, pp. 532.
- Yahoo Finance (2022), *BMHS.JK, CARE.JK, MIKA.JK, PRIM.JK, RSGK.JK, SAME.JK, SILO.JK, SRAJ.JK, HEAL.JK and MTMH.JK*, <https://finance.yahoo.com/> (accessed on August 6, 2022 - December 8, 2022).

Idham Sapta Yudi  
*PMI International Business School*  
Email: [idham.yudi@ipmi.ac.id](mailto:idham.yudi@ipmi.ac.id)

H. M. Roy Sembel  
*IPMI International Business School*  
Email: [roy.sembel@ipmi.ac.id](mailto:roy.sembel@ipmi.ac.id)

Melinda Malau  
*Universitas Kristen Indonesia*  
[melinda.malau@uki.ac.id](mailto:melinda.malau@uki.ac.id)