

## The Effect of Research and Development Expenses, Total Asset Turnover, Return on Asset, and Debt to Equity Ratio on Profit Growth in Pharmacy Companies Listed on the Indonesian Stock Exchange Period 2016 – 2023

Muhammad Khuzaifah Nasution<sup>1</sup>, Erlina Erlina<sup>2</sup>, and Rina Br. Bukit<sup>3</sup>

Department of Accounting, Faculty of Economics and Business, Universitas Sumatera Utara, Indonesia

**Abstract:** This research aims to analyze the influence of research and development (R&D) costs, *total asset turnover* (TAT), *return on asset* (ROA), and *debt equity ratio* (DER) influence profit growth in pharmaceutical companies listed on the Indonesia Stock Exchange for the 2016 - 2023 period, both partially and simultaneously. This research is quantitative by testing causal relationships and using secondary data with data processing using Eviews 10. The population is 12 companies with the observation year 2016-2023. The total number of observations in the research was 96 samples. The results of this research conclude that partially R&D costs have a positive and significant effect on profit growth; total asset turnover (TAT) has no effect on profit growth; return on asset (ROA) has a positive and significant effect on profit growth; debt to equity asset (DER) has a negative and significant effect on profit growth. Meanwhile, simultaneously R&D costs, total asset turnover (TAT), return on asset (ROA), debt to equity ratio (DER) has a significant effect on profit growth in pharmaceutical companies listed on the IDX in 2016-2023 with a coefficient of determination of 29,67 percent, and 70,33 percent is influenced by other variables outside of this research.

**Keywords:** R&D Costs, TAT, ROA, DER, Profit Growth.

### INTRODUCTION

One of the main goals of establishing a company is to obtain optimal profits. To achieve optimal profits, it is very important for companies to consistently pay attention to their financial conditions. The expected financial condition is of course a good financial condition. With good financial conditions, the company's operational activities can run well and smoothly. Profit is an important indicator of financial reports which is used as a basis for decision making for investors and creditors. Profit information is used as a basis for investors to make decisions about whether to invest their capital or not, while for creditors profit information is useful as a basis for assessing whether or not a company is worthy of being given a loan.

Ardhianto, (2019) states that "profit is the excess of total income compared to total expenses, also called net income or net earnings". Therefore, one of the factors that can measure the success of a company can be seen from the company's profits. The company's ability to manage assets effectively and efficiently in order to produce greater profits than the previous period or the company's profit growth from one period to the next is one of the most expected things for a company because it can show that the company has good financial performance in managing assets or property owned by the company. Because profits are so important for companies, it is important for companies to know the factors that can influence profit growth.

Every company tries to obtain maximum profits. Profit is a reflection of success in carrying out the company's operational activities. Every company will always increase company profits because it is the goal of a company to get the maximum profit. So companies really need to always pay attention to the rate of profit growth on a regular basis. According to Dianitha, *et al.*, (2020) explain that profit growth is the change in the percentage increase in profits obtained by the company from the previous year. Good profit growth indicates that the company has good finances, which can then increase the company's value.

The importance of profit growth for a company is very large because it is an indicator of financial health and the company's ability to create value for its shareholders. Stable and sustainable profit growth shows that the company is able to generate income that is greater than the costs incurred, expand market share, or increase operational efficiency. Therefore, it is important for company management to understand the factors that influence profit growth and take the necessary steps to ensure sustainable and adequate profit growth to achieve the company's long-term goals.

Every company operating in any field will certainly pay close attention to the rate of profit growth that occurs. The pharmaceutical industry is no exception. Pharmaceutical companies are companies whose business operations are in the field of medicines, both manufacturing and retail. Apart from medicines to cure diseases,

pharmaceutical companies usually also make various other health products, such as food supplements and vitamins. The following table

presents the development of profit growth for pharmaceutical companies listed on the IDX for the 2016-2023 period.

**Table 1:** Percentage of Profit Growth Development for Pharmaceutical Companies Listed on the IDX for the 2016-2023 Period

No	Name of Company	Year							
		2016	2017	2018	2019	2020	2021	2022	2023
1	PT. Kalbe Farma	14.25	4.35	1.79	1.62	10.33	15.44	6.75	-19.47
2	PT. Phapros	38.08	43.98	6.41	-23.24	-52.43	-76.79	142.50	-28.05
3	PT. Sidomuncul	9.84	11.09	24.36	21.67	15.64	35.00	-12.39	-13.95
4	PT. Kimia Farma	2.28	22.13	21.13	282.69	82.08	15.44	6.75	345.34
5	PT. Soho Global Health	6.32	21.68	48.52	140.03	45.07	220.03	-35.22	4.01
6	PT. Millenium Pharmacon International (MPI)	15.56	11.32	37.12	-59.47	-64.41	241.30	155.60	35.22
7	PT. Mitra Keluarga Karyasehat (MIKA)	22.48	-1.66	-7.06	20.14	16.69	47.44	-19.65	-8.93
8	PT. Darya-Varia Laboratoria	40.96	6.68	23.67	10.53	-26.92	-9.61	1.96	-2.03
9	PT. Indofarma	-1.68	166.50	-29.27	-	-62.32	-219.04	35.77	17.54
10	PT. Merck	7.93	59.04	171.10	-88.20	-8.12	83.11	36.59	10.89
11	PT. Pyridam Farma	66.70	38.50	18.52	10.60	136.59	-29.97	322.97	-130.94
12	PT. Tempo Scan Pacific	3.08	2.17	-3.04	10.14	40.19	5.21	18.19	20.50

(Source: www.britama.com, 2024)

Based on table 1 above, it is known that the profit growth of pharmaceutical companies fluctuates and tends to decline in recent periods, especially during Covid 19. Some companies were able to survive and gain profit growth, but many pharmaceutical companies experienced a significant decline in profit growth from the previous year. This raises concerns regarding the company's financial health, company sustainability, and its ability to provide added value to shareholders.

Some of the most extreme companies experiencing increased profit growth are PT Kimia Farma in 2023, increasing by 345.34 percent; PT. Pyridam Farma in 2022 will increase by 322.97 percent; and PT Kimia Farma in 2019 increased by 282.69 percent. Meanwhile, the most extreme pharmaceutical company experienced a decline in profit growth, namely PT. Indo Farma in 2021 is -219.04 percent; PT. Pryidam Farma in 2023 will decrease by -130.94 percent; and PT Indo Farma in 2019 decreased -124.32 percent.

A decrease in profits for the company will be a separate note for the company when evaluating the company's performance based on previously determined financial targets. One of the important things that companies must know is to study and analyze further the factors that can influence the increase in company profit growth.

One of the many factors that can influence profit growth, especially in pharmaceutical companies, is research and development (R&D) expenses. This is in line with the opinion of Wang, *et al.*, (2019) which states that research and development costs are an important element in increasing profitability and creating competitive advantages in various business ventures. This has triggered an innovation race between companies. This was further confirmed by Hasanah, (2018) who explained that when a company completes research and development projects effectively and earlier than competitors, it is more likely for the company to gain market share regarding that innovative product. Thus, companies that succeed in gaining market share first will experience increased profit growth.

Research on R&D expenses and profit growth has previously been studied. Loppies, *et al.*, (2024) concluded that R&D costs have a positive and significant effect on company profit growth. However, this is different from the research results of Prananto, (2020) and Kusmawati, (2020) who concluded that R&D costs had no effect on profit growth. Of course, the gap in the results of this research is an interesting study to reveal further the role of R&D costs in increasing the profit growth of other companies, especially pharmaceutical companies listed on the IDX.

The next factor that can influence profit growth is total asset turnover (TAT). This is in line with the opinion of Brigham & Houston, (2011) explaining that the total asset turnover ratio of a company can provide a good signal for investors because it is one of the factors in making business decisions. A company can optimize the use of its assets to increase its sales, so that more sales occur, the company's profits will increase. This is reinforced by Sartono (2016) who states that total asset turnover shows how effectively the company uses all assets to create sales and earn profits.

Based on the opinion above, total asset turnover (TAT) measures how effectively a company uses its assets to generate sales. A high TAT shows that the company can generate more income per unit of assets it owns, which plays an important role in increasing the company's profit growth through optimizing assets through efficiency to produce maximum sales by reducing sales costs to increase profit margins.

Research on total asset turnover (TAT) with profit growth has previously been researched by Estininghadi (2019), Agustina and Mulyadi (2019), and Irawan and Sitohang (2018) concluding that total asset turnover has a positive and significant effect on company profit growth. However, this is different from the research results of Septiyarina (2022) and Putri and Sitohang (2019) who actually concluded that total asset turnover had a negative effect on profit growth. Of course, the gap in the results of this research is an interesting study to reveal further the role of TAT in increasing the profit growth of other companies, especially pharmaceutical companies listed on the IDX.

Furthermore, apart from research and development expenses and total asset turnover (TAT), there are other factors that can influence profit growth, namely the return on assets (ROA) ratio. This is supported by the opinion of Kasmir (2016) which states that return on assets is a ratio that shows the results (profit) on the number of assets used in the company. Furthermore, Ang (2010) stated that companies with high ROA values are able to generate greater levels of profit compared to companies with low ROA.

Based on the explanation of expert opinion above, Return on Assets (ROA) measures a company's efficiency in generating profits from the assets it owns. A high ROA shows that the company is able to optimize the use of assets to generate profits.

This is important because good ROA reflects operational efficiency, where assets are used optimally to generate income. In addition, a high ROA shows that effective asset management ensures that each asset owned makes a maximum contribution to profits, avoiding waste and unproductive investments. Overall, a good ROA creates a positive cycle where increasing profits enable reinvestment from investors in productive assets, and also encourage sustainable profit growth.

Research on return on assets (ROA) with profit growth has previously been studied by Septiyarina (2022), Agustinus (2021), and Putri and Sitohang (2019) who concluded that return on assets (ROA) has a positive and significant effect on company profit growth. However, this is contrary to the research results of Safitri & Mukaram (2018), and Sipahutar, Gaol and Siboro (2024) which actually concluded that return on assets (ROA) had a negative and significant effect on profit growth. Of course, the gap in the results of this research is an interesting study to reveal further the role of ROA in increasing the profit growth of other companies, especially pharmaceutical companies listed on the IDX.

The last factor influencing profit growth examined in this research is the debt equity ratio (DER). Debt to equity ratio is a ratio used to assess debt versus equity. A low debt to equity ratio means that fewer company assets are financed by debt and the smaller the interest expense that must be paid, the company's profits will increase. If obligations or debts can be utilized effectively, then the results obtained in the form of profits can be sufficient to pay periodic interest costs plus the principal obligations (Agustina and Silvia, 2012). The size of the debt equity ratio will affect the company's level of profit achievement. The higher the debt equity ratio indicates the greater the company's burden on external parties. This is very likely to reduce company performance, because the level of dependence on external parties is increasing (Gunawan and Wahyuni, 2013).

Based on the expert explanation above, DER measures the proportion of debt to equity in a company's capital structure. A high DER indicates that the company uses more debt than equity, which can reduce the company's profit growth in several ways, namely high interest costs, financial risk, and low investor attractiveness. High debt increases interest expenses, which reduces net income. High interest costs reduce profits that can

be reinvested into the business. Because the DER is high, it increases financial risk, with a lot of debt the company is vulnerable to bankruptcy because of the obligation to pay interest and principal on the debt. Of course, this high DER will reduce the attractiveness of investors to invest. Overall, high DER increases costs and financial risks, which can significantly hinder a company's profit growth.

Research on debt equity ratio (DER) with profit growth has previously been studied by Widiana (2021) and Ardyanti, *et al.*, (2022) who concluded that debt equity ratio (DER) has a negative and significant effect on company profit growth. However, this contradicts the research results of Estininghadi (2019) and Agustinus (2021) which concluded that the debt equity ratio (DER) had a positive and significant effect on profit growth. Of course, the gap in the results of this research is an interesting study to reveal further the role of DER in increasing the profit growth of other companies, especially pharmaceutical companies listed on the IDX.

Based on the background explanation above, as well as gaps in previous research results, the author is interested in further researching the factors that influence company profit growth, especially in pharmaceutical companies listed on the Indonesia Stock Exchange for the period 2016 - 2023, in terms of research and development expenses. (R&D), total asset turnover (TAT), return on assets (ROA), and debt equity ratio (DER).

## RESEARCH METHODOLOGY

### A. Research design

This research aims to obtain empirical evidence of the influence of research and development (R&D) expenses, total asset turnover (TAT), return on assets (ROA), and debt to equity ratio (DER) on profit growth in pharmaceutical companies on the Indonesia Stock Exchange for the 2016 period. - 2023. The data obtained is in the form of company data published in the company's Financial Report for 2016-2023.

The type of research in this research is causal associative research. According to Sugiyono (2018), causal associative research is a type of research that aims to determine the causal relationship between 2 or more variables. According to Sugiyono (2018), associative

research can build theories that function to explain, predict and control a phenomenon. The type of data used in this research is quantitative research using a ratio scale. This research was carried out by building a hypothesis first, then measuring various variables with statistics, explaining the phenomenon in a more measurable way and producing conclusions that can be generalized.

This research was conducted on the Indonesian Stock Exchange in the 2016-2023 research period and focused on all pharmaceutical companies listed on the Indonesian Stock Exchange. The research period starts from January 2024.

### B. Operational Definition of Variables

In order to provide credibility to the research methodology and ensure the reproducibility of study results, it is very necessary to determine the variables operationally in the research. Sugiyono (2018) states that the operational definition of a research variable is an attribute or characteristic or value of an object or activity that has certain variations that have been determined by the researcher to be studied and then drawn conclusions. Definitions of research variables must be formulated to avoid errors in collecting data.

The variables in this research are divided into 2 parts, namely the independent variable and the dependent variable.

#### 1) Independent variable (independent).

Sugiyono (2018) states that independent variables are variables that influence or are the cause of changes or emergence of dependent (dependent) variables. The independent variables in this research are Research and Development (R&D) expenses as (X1), total asset turnover (TAT) as (X2), return on assets (ROA) as (X3), and debt to equity ratio (DER) as ( X4).

##### a) Research and Development expenses

The calculation is the total expenditure on research and development (R&D) expenses in the form of intangible assets (Padgett and Galan, 2010 in Arifin, 2011)

R&D = total intangible assets

##### b) Total Asset Turnover (TAT)

The total asset turnover ratio looks at the extent to which all assets owned by the company are effectively turned over (Fahmi, 2015).

$$TATO = \frac{\text{Net sales}}{\text{total assets}}$$

c) Return on Assets (ROA)

ROA is used to measure management's ability to obtain overall profitability and managerial efficiency (Brigham & Houston, 2011).

$$ROA = \frac{\text{Net profit}}{\text{Total assets}} \times 100\%$$

d) Debt Equity Ratio (DER)

Debt Equity Ratio is a ratio used to assess debt versus equity (Kasmir, 2017).

$$DER = \frac{\text{Total Amount of debt}}{\text{Total Equity}} \times 100\%$$

## 2) Dependent variable (dependent).

Sugiyono, (2018) states that the dependent variable is the variable that is influenced or is the result of the existence of the independent variable. The dependent variable is also often referred to as the

output, criterion and consequent variable. The dependent variable in this research is profit growth (Y). Profit growth is calculated using the following formula (Harahap, 2013):

$$\text{Profit Growth} = \frac{\text{Current Profit} - \text{Previous Profit}}{\text{Previous Profit}} \times 100\%$$

## C. Population, Sample and Sampling Technique

### 1. Population

According to Sugiyono (2018) population is a generalized area consisting of objects/subjects to which certain quantities and characteristics are applied which are determined by researchers to be studied and conclusions drawn. Meanwhile, according to Arikunto (2002), the population is the entire research subject and is divided into two parts based on its boundaries, namely:

- 1) Limited population, namely a population that has clear quantitative boundaries because it has limited characteristics.
- 2) Unlimited population, namely a population whose boundaries cannot be found so that it cannot be expressed in quantitative form.

Based on this explanation, the population in this study is a limited population, namely 12 pharmaceutical companies listed on the Indonesian Stock Exchange.

### 2. Sample

According to Sugiyono, (2018) the sample is part of the population which is the source of data in research, where the population is part of the number of characteristics possessed by the population. If the population is large, and it is impossible for researchers to study everything in the population, for example due to limited funds, energy and time, then researchers can use samples taken from the population (Sugiyono, 2018).

**Table 2:** Research Sample Data

No	Code	Names of Company
1	KLBF	PT. Kalbe Farma Tbk
2	CARE	PT. Metro Healthcare Indonesia Tbk
3	SIDO	PT. Industri Jamu dan dan Farmasi Sido Muncul Tbk
4	SCPI	PT. Organon Pharma Indonesia Tbk
5	SAME	PT. Sarana Meditama Metropolitan Tbk
6	HEAL	PT. Medikaloka Hermina Tbk
7	MIKA	PT. Mitra Keluarga Karyasehat Tbk
8	DVLA	PT. Darya-Varia Laboratoria Tbk
9	INAF	PT. Indofarma Tbk.
10	MERK	PT. Merck Tbk.

11	PYFA	PT. Pyridam Farma Tbk
12	TSPC	PT. Tempo Scan Pacific Tbk.

Source: www.britama.com, 2024

### 3. Sampling technique

Sampling technique is the method or technique used to draw samples. In this research, the sampling technique used was purposive sampling, namely drawing samples based on certain criteria.

The criteria in this research are as follows:

- 1) The company publishes financial reports that are published continuously from the company's annual report from 2016 - 2022.
- 2) Pharmaceutical companies listed on the Indonesian Stock Exchange that were delisted during 2016 — 2022.

### D. Data collection technique

The data used by researchers is secondary data, namely company annual reports for all companies in the research sample. The data source was obtained from the Indonesian Stock Exchange www.britama.com and the website of each sample company. Research data is presented in time series (between times) and cross sections (between companies).

In accordance with the problems raised, the collection method

The data in this research are as follows:

1. Literature study, namely research carried out by collecting and studying reference literature from journals, papers, books and other sources that are appropriate or relevant to the problem being studied which is useful for developing theories in research.
2. Documentation Study, is a way of collecting existing data and then recording it. Annual report data (Financial Reports) for Pharmaceutical companies on the Indonesia Stock Exchange (BEI) can be obtained via the website www.britama.com.

### E. Data analysis technique

This research uses multiple linear regression analysis methods and data processing is carried out through the Eviews application.

#### 1. Descriptive statistics

According to Sugiyono (2018), descriptive statistics functions as a way of describing or depicting data that has been collected as it is without making generally accepted conclusions. Descriptive statistics only calculates the mean, standard deviation, variance, maximum or minimum value of a variable without carrying out

significance tests or error levels because researchers do not make conclusions that apply generally and only want to describe sample data.

#### 2. Classic Assumption Test

Before carrying out a hypothesis test, the classical assumption test is prioritized to ensure that the data obtained meets the requirements for a regression test. According to Gujarati & Porter (2009), the regression equation that must meet classical assumptions is found in similarities using the ordinary least squares (OLS) method. In panel data regression analysis, the estimation model for the common effect model and fixed effect model uses OLS, while for the random effect model uses generalized least squares (GLS).

#### 3. Model Significance Testing

Before selecting the model to be used, estimates using panel data are needed for the three models, namely CEM, FEM and REM. The Chow test, Hausman test and Lagrange multiplier test were carried out to determine the selection of the best model for estimating panel data.

#### 4. Panel Data Regression Analysis

This research uses panel data regression analysis. Panel data is a combination of time series data with cross sections. In other words, panel data is data obtained from cross section data that is repeatedly observed on the same object unit at different times. In this way, we will obtain a picture of the behavior of several objects over several periods of time (Tarigan, 2012).

According to Gujarati (2012), panel data regression analysis has advantages compared to cross section and time series data, including:

1. Panel data is able to deal with individual heterogeneity explicitly by providing subject-specific variables because it includes micro units such as individuals, companies, states and others.
2. Combining observations between time series data and cross sections can provide more information, more variation, less collinearity between variables, more degrees of freedom and more efficiency.
3. Panel data is most suitable for studying the dynamics of change, such as unemployment rates, job mobility and so on.
4. Panel data is best for detecting and measuring impacts that simply cannot be seen in pure time series data or pure cross section data.

5. Panel data is useful for making it easier to study complex behavioral models.
6. The high number of data observations can minimize the bias that can occur if we regress individuals or companies into large aggregations.

In order to achieve the research objectives and test the hypothesis, this research uses Eviews 10 software. In this research, the estimation model used is Ordinary Least Square (OLS) and the regression evaluation includes the goodness of the regression line (R-squared), the model feasibility test (F Test ) and test the significance of the dependent variable (t test). With the dependent variable being profit growth and the independent variables, namely research and development expenses, sales and salaries in 12 pharmaceutical companies in 2016-2023.

## RESULTS AND DISCUSSION

### 1. The Effect of Research and Development Expenses on Profit Growth

Based on the results of data testing in this study, it was found that  $H_0$  was rejected, which means that research and development expenses had a positive and significant effect on profit growth with the acquisition of prob. equal to  $0.0410 < 0.05$ . The results of this research support the previous theory, Wang, *et al.*, (2019) stated that research and development expenses are an important element in increasing profitability and creating competitive advantages in various business ventures. This is reinforced by Hasanah (2018) who explains that when a company completes research and development projects effectively and earlier than competitors, it is more likely for the company to gain market share, thereby increasing the opportunity to increase profit growth. The results of this research are in line with previous research, Loppies, *et al.*, (2024) which concluded that R&D expenses have a positive and significant effect on company profit growth.

Several things are behind R&D having a positive impact on company profit growth, including that research and development (R&D) expenses play an important role in increasing company profit growth by encouraging innovation and competitive advantage. Through R&D investments, companies can create new products or improve existing products, meet unmet market needs, and attract more customers. These innovative products and quality improvements allow companies to charge premium prices, increase revenues, and expand market share.

Additionally, effective R&D helps companies improve operational efficiency and reduce long-term production costs. Innovations in production processes or technology can optimize resource use, reduce waste and increase productivity. This better efficiency lowers operational costs and increases profit margins. Thus, investment in R&D not only drives revenue growth through new products but also increases profitability through cost reduction, creating a strong foundation for sustainable profit growth.

### 2. The Effect of Total Asset Turnover (TAT) on Profit Growth

Based on the results of data testing in this study, the conclusion  $H_0$  was accepted, which means that Total Asset Turnover (TAT) has no effect on profit growth with the acquisition of prob. equal to  $0.4240 > 0.05$ .

The results of this research do not support previous theories, Brigham & Houston (2011), Sudana (2015) and Sartono (2016) which generally state that total asset turnover (TAT) measures the effectiveness of using all assets in generating sales for the company. A company can optimize the use of its assets to increase its sales, so that more sales occur, the company's profits will increase. However, the results of this research are in line with previous research, Putri and Sitohang (2019) which concluded that total asset turnover (TAT) has a negative and insignificant effect on profit growth.

Several reasons behind TAT not having an effect on company profit growth include, high total asset turnover (TAT) shows efficiency in generating sales from existing assets, but does not always contribute to increasing company profit growth. One reason is low profit margins. If high sales are not accompanied by healthy profit margins, the increase in sales will not result in significant net profits. For example, if a company must offer deep discounts or faces high production costs, increased sales may simply cover operating costs without increasing profits.

In addition, a high TAT can occur due to depreciated or obsolete assets, which, although generating sales, do not support efficiency in the long term. Assets that need replacement or major repairs can increase costs in the future, reducing the profits generated. Also, high sales of low quality or loose credit sales can lead to an increase in bad debts, hurting cash flow and profitability. So, although a high TAT indicates efficient use of

assets, other factors such as operational costs and sales quality must also be considered to ensure sustainable profit growth.

### 3. The Effect of Return on Assets (ROA) on Profit Growth

Based on the results of testing the data in this study, it was concluded that  $H_0$  was rejected, which means that return on assets (ROA) has a positive and significant effect on profit growth with the acquisition of prob. equal to  $0.0037 > 0.05$ .

The results of this research support the previous theory, Kasmir (2016) stated that return on assets is a ratio that shows the results (profit) on the number of assets used in the company. Furthermore, Ang (2010) states that companies with high ROA values are able to generate greater profit levels compared to companies with low ROA. The results of this research are in line with previous research, Septiyarina (2022), Agustinus (2021), and Putri and Sitohang (2019) which concluded that return on assets (ROA) has a positive and significant effect on company profit growth.

Several things are behind ROA having a positive impact on company profit growth, including return on assets (ROA) measuring a company's efficiency in generating profits from the assets it owns. A high ROA shows that the company is able to maximize the use of assets to generate profits. These profits play a positive role in increasing profit growth. High operational efficiency means that every asset owned contributes optimally to revenue. By streamlining expenses and increasing asset productivity, companies can reduce operational costs and increase profit margins.

Additionally, a high ROA reflects effective asset management, which increases its attractiveness to investors. Investors tend to be attracted to companies that are able to generate high profits with the assets they own, because this shows the potential for better returns on investors' investments. Thus, companies with high ROA can more easily access capital for expansion and innovation, which will ultimately encourage continued profit growth. The combination of operational efficiency and investor confidence creates a positive situation that supports sustainable profit growth.

### 4. The Effect of Debt Equity Ratio (DER) on Profit Growth

Based on the results of data testing in this study, it was concluded that  $H_0$  was rejected, which means that the debt equity ratio (DER) had a negative and significant effect on profit growth with the acquisition of prob. equal to  $0.0172 < 0.05$ . The results of this research support previous theories, Agustina and Silvia, (2012), and Gunawan and Wahyuni, (2013) which state that a low debt to equity ratio (DER) means that fewer company assets are financed by debt, and the smaller the interest burden. that must be paid, so that company profits will increase. The size of the debt equity ratio will affect the company's level of profit achievement. The higher the debt equity ratio indicates the greater the company's burden on external parties and this suppresses the company's profit growth. The results of this research are in line with previous research, Widiana (2021) and Ardyanti, *et al.*, (2022) which concluded that the debt equity ratio (DER) has a negative and significant effect on company profit growth.

Several reasons behind DER having a negative impact on company profit growth include a high debt to equity ratio (DER) indicating that the company uses more debt than equity in its capital structure, which can have a negative effect on company profit growth. One of the main reasons is increasing interest costs. High interest expenses resulting from large debts reduce the net profits available to reinvest in the business. Large expenditures on interest payments also limit a company's ability to fund expansion, innovation, or other growth initiatives.

In addition, high DER increases the company's financial risk. When the debt load is large, the company is more vulnerable to economic fluctuations and changes in interest rates. The obligation to pay debts on time can force companies to cut costs or even sell assets. This can certainly hinder the company's operations and growth strategy in the long term. These risks also make the company less attractive to investors, who may seek opportunities with lower risk and the potential for more stable returns. Overall, high DER adds financial pressure which can suppress company profit growth.

### 5. The Influence of Research and Development (R&D) Expenses, Total Asset Turnover (TAT), Return on Assets (ROA), and Debt to Equity Ratio (DER) on Profit Growth

Based on the research results above, the F test results obtained were 2.2508 with a probability value of  $0.0107 < 0.05$ . It can be said that the



variables research and development (R&D) expenses, Total Asset Turnover (TAT), Return on Assets (ROA), and Debt to Equity Ratio (DER) jointly influences the profit growth variable. Furthermore, referring to the R Square value in the results of the simultaneous coefficient of determination (R<sup>2</sup>) test, the result was 0.2967, it can be concluded that the variables research and development (R&D) expenses, Total Asset Turnover (TAT), Return on Assets (ROA), and Debt to Equity Ratio (DER) influences profit growth by 29.67 percent and the remaining 70.33 percent is influenced by other variables not examined in this research. This means that it is necessary to relate to more variables and the variables that most influence profit growth. Apart from that, the calculated F probability value is  $0.0107 < 0.05$ , then H<sub>5</sub> is accepted. So, even though the total contribution of these three variables is 29.67 percent, it is enough to prove significantly that the variables research and development (R&D) expenses, Total Asset Turnover (TAT), Return on Assets (ROA), and Debt to Equity Ratio (DER) together can increase the company's profit growth significantly.

## CONCLUSIONS

Based on the results of data analysis along with hypothesis testing that has been described and explained in the initial study, conclusions are finally drawn, namely:

1. Research and development (R&D) expenses have a positive and significant effect on profit growth in pharmaceutical companies listed on the IDX in 2016-2023 (H<sub>1</sub> is accepted).
2. Total asset turnover (TAT) has no effect on profit growth in pharmaceutical companies listed on the IDX in 2016-2023 (H<sub>2</sub> is rejected).
3. Return on assets (ROA) has a positive and significant effect on profit growth in pharmaceutical companies listed on the IDX in 2016-2023 (H<sub>3</sub> is accepted).
4. Debt to equity ratio (DER) has a negative and significant effect on profit growth in pharmaceutical companies listed on the IDX in 2016-2023 (H<sub>4</sub> is accepted).
4. Research and development (R&D) expenses, total asset turnover (TAT), return on assets (ROA), debt to equity ratio (DER) have a significant effect on profit growth in pharmaceutical companies listed on the BEI in 2016-2023 (H<sub>5</sub> is accepted).

## REFERENCES

1. Afrilliansyah, W., Mardani, R. M., & Rahman, F. "Analisis Rasio Profitabilitas Dan

- Kebijakan Dividen Dalam Memprediksi Pertumbuhan Laba Pada Perusahaan Perbankan Yang Terdaftar di BEI Tahun 2016-2019." *E-Jurnal Riset Manajemen*, (2020): 101–113.
2. Agustina, & Silvia. "Pengaruh Rasio Keuangan Terhadap Perubahan Laba Pada Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia." *Jurnal Wira Ekonomi Mikroskil*, 2.2 (2012).
3. Agustina, D. N., & Mulyadi, M. "Pengaruh debt to equity ratio, total asset turnover, current ratio, dan net profit margin terhadap pertumbuhan laba pada perusahaan manufaktur di Bursa Efek Indonesia." *Advance*, 6.2 (2019): 106–115.
4. Agustinus, E. "Pengaruh Return on Asset (ROA) dan Debt to Equity Ratio (DER) Terhadap Pertumbuhan Laba Pada Perusahaan Sub Sektor Makanan Dan Minuman Yang Tercatat Di BEI Periode 2015-2019." *Jurnal Arastirma*, 1.2 (2021): 239–248.
5. Ang, J. S., Cole, R. A., & Lawson, D. "The role of owner in capital structure decisions: An analysis of single-owner corporations." *Journal of Entrepreneurial Finance*, 14.1 (2010): 1–36.
6. Ardhianto, W. N. "Buku Sakti Pengantar Akuntansi." *Jakarta: Anak Hebat Indonesia*, (2019).
7. Ardyanti, N. M. R., Sukadana, I. W., & Tahu, G. P. "Pengaruh Current Ratio, Debt To Equity Ratio dan Total Asset Turnover Terhadap Pertumbuhan Laba pada Perusahaan Otomotif yang Terdaftar di Bursa Efek Indonesia Tahun 2015-2019." *EMAS*, 3.10 (2022): 126–136.
8. Arifin. "Metode Penelitian Kualitatif, Kuantitatif, dan R&D." *Bandung: Alfabeta*, (2011).
9. Arikunto, S. "Metodologi Penelitian Suatu Pendekatan Proposal." *Jakarta: PT. Rineka Cipta*, (2002).
10. Baharuddin, D., & Ansar, I. A. "Pengaruh Kompetensi, Independensi dan Fee Audit terhadap kualitas audit pada KAP di Makassar." *Jurnal Telaah Dan Riset Akuntansi*, 8.1 (2019): 1–8.
11. Basuki, T. A., & Yuliadi, I. "Electronic Data Processing (SPSS 15 dan Eviews 7)." *Sleman: Danisa Media*, (2015).
12. Brigham, E. F., & Houston, J. F. "Dasar-Dasar Manajemen Keuangan." *Jakarta: Salemba Empat*, (2011).

13. Cahyati, D. A., & Hartikayanti, H. N. "Pengaruh debt to equity ratio dan debt to asset ratio terhadap pertumbuhan laba pada perusahaan papan utama di industri property dan real estate yang terdaftar di BEI periode tahun 2017-2021." *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 5.6 (2023): 2682–2690.
14. Dianitha, K. A., Masitoh, E., & Siddi, P. "Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba Pada Perusahaan Makanan Dan Minuman di BEI." *Berkala Akuntansi Dan Keuangan Indonesia*, (2020).
15. Erdogan, M., & Yamaltdinova, A. "A panel study of the impact of R&D on financial performance: Evidence from an emerging market." *Procedia Computer Science*, 158 (2019): 541-545.
16. Estininghadi, S. "Pengaruh Current Ratio, Debt Equity Ratio, Total Assets Turn Over dan Net Profit Margin Terhadap Pertumbuhan Laba." *JAD: Jurnal Riset Akuntansi & Keuangan Dewantara*, 2.1 (2019): 1-10.
17. Fahmi, I. "Analisis Laporan Keuangan." *Bandung: Alfabeta*, (2015).
18. Fahmi, I. "Manajemen Sumber Daya Manusia Teori dan Aplikasi." *Bandung: Alfabeta*, (2016).
19. Field, A. "Discovering Statistics Using SPSS." *London: Sage Publications Ltd*, (2009).
20. Ghozali, I. "Aplikasi Analisis Multivariate Dengan Program IBM SPSS 23 (Edisi 8)." *Semarang: Badan Penerbit Universitas Diponegoro*, (2017).
21. Ghozali, I. "Aplikasi Analisis Multivariate dengan Program IBM SPSS 21 Update PLS Regresi." *Semarang: Badan Penerbit Universitas Diponegoro*, (2013).
22. Gujarati, D. N., & Porter, D. C. "Basic Econometrics." *5th edition, McGraw-Hill, New York*, (2009).
23. Gujarati, N. D. "Dasar-Dasar Ekonometrika." *Jakarta: Salemba*, (2012).
24. Gunawan, A., & Wahyuni, S. F. "Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba Pada Perusahaan Perdagangan di Indonesia." *Jurnal Manajemen Dan Bisnis*, 13.1 (2013): 63-84.
25. Handayani, R. "Metodologi Penelitian Sosial." *Yogyakarta: Trussmedia. Grafika*, (2020).
26. Hanna, Y., & Firnanti, F. "Faktor-Faktor yang memengaruhi Return Saham." *Jurnal Bisnis dan Akuntansi*, 21.1a-1 (Nov 2019).
27. Harahap, S. S. "Analisis Kritis Atas Laporan Keuangan." *PT Raja Grafindo Persada, Jakarta*, (2013).
28. Harmasanto, D. H., & Setiawan, R. "Pengeluaran R&D dan Kinerja Perusahaan Manufaktur Di Bursa Efek Indonesia Yang Dimoderasi Oleh Usia Perusahaan." *Jurnal Riset Akuntansi Dan Bisnis Airlangga*, 4.2 (2019).
29. Hasanah, A. F., Jubaedah, S., & Astuti, A. D. "Penentuan Pertumbuhan Laba Perusahaan Property Dan Real Estate Di Bursa Efek Indonesia." *Jurnal Kajian Akuntansi*, 2.2 (2018): 134–144.
30. Irawan, A. F., & Sitohang, S. "Pengaruh current ratio, net profit margin, gross profit margin, dan total asset turnover terhadap pertumbuhan laba pada UD Prima Mebel di Surabaya." *Jurnal Ilmu Dan Riset Manajemen (JIRM)*, 7.10 (2018).
31. Juhro, S. M., & Trisnanto, B. "Paradigma dan Model Pertumbuhan Ekonomi Endogen Indonesia (Endogenous Paradigm and Growth Model for Indonesian Economy)." (2018).
32. Kasmir. "Analisis Laporan Keuangan." *Jakarta: Rajagrafindo Persada*, (2008).
33. Kasmir. "Bank dan Lembaga Keuangan Lainnya." *Edisi Revisi, Cetakan keempatbelas, Jakarta: RajaGrafindo Persada*, (2014).
34. Kasmir. "Analisis Laporan Keuangan." *Jakarta: Raja Grafindo Persada*, (2016).
35. Kasmir. "Analisis Laporan Keuangan." *Jakarta: Rajawali*, (2017).
36. Kusmawati. "Elevansi Transparansi: Perlakuan Akuntansi Aset Biologis Berbasis Nilai AL-Siddiq (Studi Pada PT PP 39 London Sumatera Indonesia Tbk)." *Skripsi, Universitas Islam Negeri Alauddin Makassar*, (2020).
37. Loppies, L. S., Wenno, M., Regar, E., Arifin, H. M., & Faisal, M. "Pengaruh Return on Assets, Pengeluaran R&D, dan Peran Marketing Performance Terhadap Pertumbuhan Laba Pada Perusahaan Manufaktur di Kota Surabaya Jawa Timur." *Jurnal Akuntansi Dan Keuangan West Science*, 3.02 (2024): 127-138.
38. Ningsih, S. R., & Utiyati, S. "Pengaruh Current Ratio, Debt to Asset Ratio, dan Net Profit Margin Terhadap Pertumbuhan Laba." *Jurnal Ilmu dan Riset Manajemen (JIRM)*, 9.6 (2020).
39. Panjaitan, R. Y. "Pengaruh Current Ratio, Debt to Equity Ratio, Net Profit Margin dan Return on Asset Terhadap Pertumbuhan Laba

- Pada Perusahaan Consumer Goods yang Terdaftar di Bursa Efek Indonesia Periode 2013-2016." *Jurnal Manajemen*, 4.1 (2018): 61-72.
40. Pazarzi, G., & Sorros, J. "The Effect of R&D Expenses on Earnings and Market Value." *SPOUDAI-Journal of Economics and Business*, 68.2/3 (2018): 39-47.
  41. Prananto, F. K. P. "Pengaruh Pengeluaran Research and Development dan Beban Periklanan Terhadap Nilai Perusahaan Di Sektor Manufaktur Yang Terdaftar Di BEI Tahun 2014-2018." *Doctoral dissertation, Universitas Atma Jaya Yogyakarta*, (2020).
  42. Putri, T. M., & Sitohang, S. "Pengaruh Current Ratio, Total Asset Turnover dan Return on Asset Terhadap Pertumbuhan Laba." *Jurnal Ilmu dan Riset Manajemen (JIRM)*, 8.6 (2019).
  43. Rahman, M. M., & Howlader, M. S. "The Impact of Research and Development Expenditure on Firm Performance and Firm Value: Evidence from a South Asian Emerging Economy." *Journal of Applied Accounting Research*, 23.4 (2022): 825-845.
  44. Romer, P. M. "Looting: The Economic Underworld of Bankruptcy for Profit." (1993).
  45. Safitri, A. M., & Mukaram, M. "Pengaruh ROA, ROE, dan NPM Terhadap Pertumbuhan Laba Pada Perusahaan Sektor Industri Barang Konsumsi Yang Terdaftar di Bursa Efek Indonesia." *Jurnal Riset Bisnis Dan Investasi*, 4.1 (2018): 25.
  46. Sartono, A. "Manajemen Keuangan Teori dan Aplikasi." *Edisi 4, Yogyakarta: BPFE*, (2016).
  47. Septiyarina, P. "Pengaruh Current Ratio, Total Asset Turnover, dan Return on Assets Terhadap Pertumbuhan Laba." *Jurnal Cendekia Keuangan*, 1.1 (2022): 57-69.
  48. Sihombing, H. "Pengaruh Current Ratio dan Debt to Equity Ratio Terhadap Pertumbuhan Laba Pada Perusahaan Properti dan Real Estate Yang Terdaftar di Bursa Efek Indonesia Periode 2010-2014." (2018).
  49. Simanjuntak, A. "Analisis Faktor-Faktor yang Memengaruhi Return Saham Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2012-2016." *Jurnal Ilmiah Methonomi*, 4.1 (2018).
  50. Sipahutar, C. R. H. "Pengaruh Rasio Keuangan terhadap Pertumbuhan Laba pada Perusahaan Sub Sektor Makanan dan Minuman yang Terdaftar di Bursa Efek Indonesia Periode 2020-2022." (2024).
  51. Siregar, I. G., Hamdani, & Melyanti, I. "Determinan Pertumbuhan Laba Dengan Menggunakan Rasio CAMEL Pada Perbankan Syariah di Indonesia Tahun 2012-2016." *Competitive Jurnal Akuntansi Dan Keuangan*, 1.1 (2019): 90-101.
  52. Sudana, I. M. "Manajemen Keuangan Perusahaan." *Jakarta: Erlangga*, (2011).
  53. Sugiyono. "Metode Penelitian Kombinasi (Mixed Methods)." *Bandung: CV Alfabeta*, (2018).
  54. Sugiyono. "Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D." *Bandung: Alfabeta*, (2010).
  55. Suharli, M., & Arisandi, A. "Pengaruh Pemilihan Metode Akuntansi Atas Biaya Research and Development (R&D) Terhadap Price Earnings Ratio (Studi Empirik Pada Perusahaan Sektor Industri Periode 2002-2005)." *Journal of Applied Finance and Accounting*, 1.2 (2009): 368-390.
  56. Sutojo, S. "Manajemen Pemasaran." *Jakarta: Damar Mulia Pustaka*, (2019).
  57. Suyono, S., Yusrizal, Y., & Solekhatun, S. "Analisis Pengaruh Current Ratio, Total Debt to Equity Ratio, Inventory Turnover, Total Asset Turnover, Receivable Turnover dan Size Perusahaan Terhadap Pertumbuhan Laba Pada Perusahaan Food and Beverage Yang Terdaftar di Bursa Efek Indonesia Periode 2013." *Bilancia: Jurnal Ilmiah Akuntansi*, 3.4 (2019): 389-405.
  58. Syafaat, F. "Pengaruh CAR, ROA, BOPO, dan NIM Terhadap Pertumbuhan Laba pada Bank BUMN." *Akuntansi Dan Manajemen*, 16.1 (2021): 37-53.
  59. Tandelilin, E. "Portofolio dan Investasi Teori dan Aplikasi." *Edisi Pertama, Yogyakarta: Kanisius*, (2001).
  60. Tarigan, R. "Ekonomi Regional Teori dan Aplikasi." *Jakarta: Bumi Aksara*, (2012).
  61. Umar, H. "Metode Penelitian Untuk Skripsi dan Tesis Bisnis." *Jakarta: Rajawali Persada*, (2011).
  62. Veny, M., & Destriana, N. "Faktor-Faktor Yang Memengaruhi Return Saham Pada Perusahaan Non Keuangan." *Jurnal Bisnis dan Akuntansi*, 21 (2019): 39-48.
  63. Wahyuni, T., Ayem, S., & Suyanto, S. "Pengaruh Quick Ratio, Debt to Equity Ratio, Inventory Turnover dan Net Profit Margin Terhadap Pertumbuhan Laba Pada Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia Tahun 2011-2015." *Jurnal Akuntansi Dewantara*, 1.2 (2017): 123-124.
  64. Wang, M., Waqas, B. K., & Sadia, A. "The Value Relevance of R&D and Free Cash Flow

- in an Efficient Investment Setup: Evidence from Chinese A-Listed Firms." *Asian Journal of Accounting*, 4.1 (2019).
65. Wardana, W. "Strategi Pemasaran." *Yogyakarta: Deepublish*, (2018).
66. Wernerfelt, B. "A Resource-Based View of the Firm." *Strategic Management Journal*, (1984).
67. Widiana, V. "Pengaruh Current Ratio dan Debt Equity Ratio Terhadap Pertumbuhan Laba pada Perusahaan Industri Barang Konsumsi yang Terdaftar di Bursa Efek Indonesia Periode 2017-2019." *Doctoral dissertation, Universitas Muhammadiyah Surakarta*, (2021).
68. Widiyanti, M. "Pengaruh Net Profit Margin, Return on Assets dan Debt to Equity Ratio Terhadap Pertumbuhan Laba pada Perusahaan LQ-45." *Jurnal Riset Akuntansi dan Keuangan*, 7.3 (2019)

**Source of support:** This is a TETFUND Sponsored Institutional Based Research (IBRs) 2022; **Conflict of interest:** Nil.

**Cite this article as:**

Nasution, M.K., Erlina, E. and Bukit, R.B. "The Effect of Research and Development Expenses, Total Asset Turnover, Return on Asset, and Debt to Equity Ratio on Profit Growth in Pharmacy Companies Listed on the Indonesian Stock Exchange Period 2016 – 2023." *Sarcouncil Journal of Economics and Business Management* 3.7 (2024): pp 6-17.