

Effect of Business Risk, Profitability, Asset Structure, Liquidity and Technology Big Data on Capital Structure in Industrial Sector Companies Which are Listed on The Stock Exchange Indonesia 2016-2021

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Abstract:

This study aims to examine the effect of business risk, profitability, asset structure, liquidity and big data technology on capital structure. In this study using a population of 54 industrial sector companies listed on the Indonesia Stock Exchange in 2016-2021, the method used was purposive sampling, with a total sample of 9 companies. The technique used is panel data regression using EViews 12. Data analysis shows that bussines risk has a negative effect on capital structure, profitability has a positive effect on capital structure, asset structure has no effect on capital structure, liquidity has a negative effect on capital structure, big data technology has no effect on capital structure.

Keywords: *Business risk, Profitability, Asset structure, Liquidty, Big data technology, Capital structure.*

Introduction

The rapid development in the world of industrial sector companies is one of the efforts to anticipate increasingly fierce competition in the global market, as is currently being carried out by both large and small companies. So that business people are required to be more creative and have a more competitive advantage than other business people. One of the most important issues in the company, which is related to the fulfillment of the funds needed by the company. Large and small companies that compete in industrial sector companies will need funds to develop their companies, so this can affect the sources of operational funds in a company, basically the main goal of companies is to get the maximum possible profit. An indicator that can provide an assessment for companies whose managers manage them well will be seen in how the company manages its capital structure (Marlina et al., 2020).

The capital structure of several companies varies each year. A low capital structure can be seen in 2016 and 2017 at the company PT Multifiling Mitra Indonesia (MFMI) and in 2020

and 2021 at the company PT Supreme Cable Manufacturing & Commerce (SCCO) this shows that the company adheres to the Pecking Order Theory because these companies tend to reduce debt. According to Brigham & Houston (2011: 188) argue that, capital structure can be influenced by several factors when making decisions including sales stability, asset structure, operating leverage, company size, company level, growth rate, profitability, taxes, control, management attitude, company internal condition and financial flexibility the variables used in this research are business risk, profitability, asset structure and liquidity. Where these four variables are variables that affect the capital structure.

The first variable is business risk which is the uncertainty in the company's estimated operating income in the future. Business risk represents the risk level of the company's operations in the future that do not use debt (Ambarwati, 2010:11). In this case, the company must be wise in using the level of debt that will be used in its operations, because the capital structure investors can find out the balance between risk and return.

The second variable is profitability which is the ability of a company to achieve profit or profit and can be a measure of the level of effectiveness of a company's management, which is indicated by the profit generated by the company from sales and investment income (Kasmir, 2011:196).

The third variable in this study is the asset structure which shows that the balance or ratio of current assets to fixed assets (Bambang Riyanto, 2011:22). Fixed assets owned by a company will be used to carry out operational activities in the company. Bambang Riyanto (2011: 298) states that if most of the capital owned by a company is embedded in fixed assets, the company will prioritize the use of its own capital, and external capital is only a complement. Companies with larger current assets will prioritize the use of short-term debt. So, the higher the asset structure which is the ratio between current assets and fixed assets, the higher the company's capital structure will be.

The fourth variable in this study is liquidity, which is the company's ability to meet its short-term financial obligations in a timely manner, as indicated by the size of current assets, namely assets that are easily converted into cash, assets that are easily converted include, cash, trade receivables. and supplies, and securities (Sirait Pirmatua, 2017:141).

Based on previous research with inconsistent results, further research was carried out on the effect of business risk, profitability, asset structure, liquidity on the company's capital structure referring to Astuti, (2021). The difference between this research and previous research is the addition of one independent variable of big data technology. Big data technology is the newest technology that is currently considered effective for processing data, both structured and unstructured, has a very large volume, variety and velocity which is used as a competitive advantage for companies (Rahman, 2017). The big data technology variable has a positive effect on the company's capital structure because big data technology can improve the company's capital structure by increasing the company's market capabilities. The second difference is that this study uses a sample of industrial sector companies listed on the Indonesia Stock Exchange and uses the more recent year, starting from 2016-2021. The most recent period was chosen in order to provide a different picture of the company's capital structure.

Based on the background described above, a study will be proposed with the title "The Effect of Business Risk, Profitability, Asset Structure, Liquidity and Big Data

Technology on Capital Structure in Industrial Sector Companies Listed on the Indonesia Stock Exchange in 2016-2021”.

Literature Review

Pecking Order Theory

Pecking order theory explains that a high level of profitability will affect a low level of debt, therefore companies that have high profitability will have many sources of funds. Based on this theory, there is a hierarchy in the use of sources of funds or capital, that is, companies use internal or internal funds, if the company uses internal funds inadequately, funding will be taken from using the debt itself and the last option namely companies issuing shares (Apsari et al., 2018).

Resources Based View

Resource based theory (RBV) is a business management tool that can be used to determine the strategic resources available to a company. The basic principle of the application of resources in the company lies mainly in the application of the valuable resources that exist in the company. The concept of resource based theory (RBV), which is the focus of attention is the problem of internal resources. According to Barner (2011) the success of a company is determined by internal resources which are grouped into 3 categories:

1. Physical resources, including all factories, equipment, locations, technology, and raw materials.
2. Human resources, including all employees, training, experience, intelligence, knowledge, skills and abilities they have.
3. Company resources, including corporate structures, planning processes, information systems, patents, trademarks, copyrights, databases and so on.

For companies that implement RBV, they must be able to manage these internal resources, through various strategies that make them able to compete for a long time (Rahadian, 2017).

Relationship Between Variables

Effect of Business Risk on Capital Structure

Business risk is an uncertainty that will be experienced by a company in carrying out activities on the company's business activities. If the company's business risk is lower, it will be able to make the capital structure in the company more optimal. On the other hand, the higher the business risk in the company, the less optimal the company's capital structure will be (Pradana & Kiswanto, 2013). In previous research conducted by Khoiriyah & Rasyid, (2020) it shows that business risk has a negative effect on capital structure, because companies with high risk do not necessarily prefer internal funding over external, and vice versa, companies with low risk will not necessarily be more prefers debt financing to finance its operating and investment activities. This is adjusted to the condition of the company which is faced with a decision that requires the company to use debt.

H1 : Business risk has a negative effect on capital structure.

Effect of Profitability on Capital Structure

Profitability shows the company's ability to earn profits by using company-owned sources, such as sales, total assets, and own capital. Based on the pecking order theory, companies with high levels of profitability actually have low levels of debt, because companies with high profitability have abundant internal funding sources (Khoiriyah & Rasyid, 2020). In previous research conducted by Khoiriyah & Rasyid (2020) show that profitability has a positive effect on capital structure, because the higher the profitability, the greater the retained earnings but this will be offset by high debt because the company's prospects are considered very good.

H2 : Profitability has a positive effect on capital structure.

Effect of Asset Structure on Capital Structure

Asset structure (tangibility of assets) is the ratio of fixed assets to total assets. The asset structure explains that if a company has assets that can be provided as collateral, then the company will tend to use a lot of debt. If the company has larger fixed assets, the company will be more inclined to use external funds or long-term debt, compared to companies using their own internal funds (Setiawati, 2020). In previous research conducted by Rico Andika & Sedana, (2019) showed that asset structure has a positive effect on capital structure, because the higher the asset structure owned by the company, in this case the number of tangible fixed assets owned, the company's capital structure increases and vice versa so that will make it easier for companies to obtain funds in the form of debt from external parties because fixed assets can be used as collateral for the company to pay debts and get loans to overcome the company's financial difficulties.

H3 : Asset Structure has a positive effect on capital structure.

Effect of Liquidity on Capital Structure

Liquidity is one of the factors taken into account in making capital structure decisions. Company liquidity is the ability of a company to meet its short-term obligations. This ability becomes the ability of a company to continue in its operational field when the company is required to pay off all its obligations which will result in reducing its operational funds (Wulandari et al., 2018). In previous research conducted by Paramitha & Putra, (2020) stated that liquidity has a negative effect on capital structure. This is because companies that have high liquidity will tend not to use debt financing, because in this theory companies tend to prefer internal funding rather than using external funds because internal sources of funds are considered safer than using external funds. Internal funding will be able to reduce the cost of capital for the company.

H4 : Liquidity has a negative effect on capital structure.

Effect of Big Data Technology on Capital Structure

According to the resource based view (RBV) theory, a company can achieve its competitive advantage by increasing its internal capabilities, one of which is by using big data technology. Big data technology is a renewable technology that has very large content characteristics (volume), very fast data changes (velocity), and has many types of data (variety) (Kubina et al., 2015). In a previous study conducted by Suoniemi et al. (2020) show

that big data technology has a positive effect on capital structure, this is because big data technology can improve a company's capital structure by increasing the company's market capabilities.

H5 : Big Data Technology has a positive effect on capital structure.

Research Method

Operational Definition and Variabel Measurement

Dependent Variable

The dependent variable is the variable that is explained or that can be influenced by other variables. The dependent variable in this study is capital structure which is proxied by DER.

Capital Structure

The capital structure variable in this study is proxied by the debt to equity ratio (DER). Debt to equity ratio (DER) is the ratio used to measure the use of total money against shareholder's equity owned by the company. DER is formulated as follows:

$$\text{Debt to Equity Ratio (DER)} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

Source: Kasmir (2017)

Independent Variable

The independent variable is the variable that is suspected of being the cause of the dependent variable or the influence of the dependent variable. The independent variables in this study are business risk, profitability, asset structure, liquidity and big data technology.

Business Risk

The business risk variable in this study is measured using the basic earning power ratio (BEPR), which compares earnings before interest and taxes with total assets, so that the distribution can be seen from the size of the business risk which is determined by the total assets owned by the company. Ratri & Ari (2017) Business risk is that companies that have a high level of business risk will tend to use a low debt ratio, because it can cause a higher level of income uncertainty which can affect a company's ability to repay debt. Then it is formulated as follows:

$$\text{Basic Earning Power Ratio (BEPR)} = \frac{\text{Earnings Before Interest and Tax (EBIT)}}{\text{Total Assets}} \times 100\%$$

Source: Ratri & Ari (2017)

Profitability

The profitability variable in this study is measured using the return on equity (ROE) ratio which compares net profit after tax to total assets (Sirait Pirmatua, 2017). Return on equity (ROE) is the ratio used to measure a company's effectiveness in generating profits by utilizing assets owned by ROE, so it is formulated as follows:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit After Tax}}{\text{Total Equity}} \times 100\%$$

Source: Sirait Pirmatua (2017)

Asset Structure

In this study, the asset structure is calculated by comparing current assets with fixed assets owned by industrial sector companies from 2016-2021 which are listed on the Indonesia Stock Exchange (Lukman Syamsuddin, 2012). Asset structure can be calculated using the following formula:

$$\text{Asset Structure} = \frac{\text{Fixed Assets}}{\text{Total Assets}} \times 100\%$$

Source: Lukman Syamsuddin (2012)

Liquidity

The liquidity ratio is an indicator of a company's ability to pay all short-term obligations at maturity using available current assets (Sirait Pirmatua, 2017). The liquidity ratio that is used is the current ratio (CR), which is the ratio between current assets and current liabilities, CR can be formulated as follows:

$$\text{Current Ratio} = \frac{\text{Current Liabilities}}{\text{Current Asset}} \times 100\%$$

Soure: Sirait Pirmatua (2017)

Big Data Technology

Big data technology in this study is proxied by the ratio of intangible asset investment in software, the software ratio is calculated by dividing the investment in software by the company's total assets (Wijayanto et al., 2019). The ratio that is often used by companies and investors to analyze financial statements is (BDA) big data analysis:

$$\text{BDA} = \frac{\text{Intangible Asset}}{\text{Total Asset}} \times 100\%$$

Soure: Wijayanto et al. (2019)

Data Types and Sources

The type of data used in this research is secondary data. Data processed and presented by other parties or data obtained indirectly. The data used is published financial statement data from industrial sector companies for 2016-2021 listed on the Indonesia Stock Exchange sourced from financial report data obtained from the internet site (www.idx.co.id) and also through the website of each company (Sugiyono, 2013).

Population and Sample

The population of this research is the company industrial sector listed on the Exchange Indonesian securities for the period 2016-2021. Technique sampling using purposive sampling is the method of determining the sample through predetermined criteria. Sample calculation based on the criteria that has been determined in this study is as follows:

1. industrial sector companies listed on the Indonesia Stock Exchange on years 2016-2021 which can be accessed (not undesconstruction) when data collection is carried out.
2. Companies that do not publish financial reports in full for the period 2016-2021 and presents reports in rupiah currency.
3. Companies that do not pay dividends continuously in period from 2016-2021.
4. Companies that do not earn profits continuously in the period 2016-2021.

Data Analysis

The data analysis used in this study refers to quantitative method analysis is to approach the analysis with mathematical or statistical calculations. Analysis in the study using the Eviews 12 program. The analytical method is used in this study is used in this study is descriptive statistical analysis, data analysis estimation model, classical assumption model, classical assumption test, coefficient of determination test, F statistic test, test statistic t.

Results and Discussion

The object of this research includes all industrial sector companies registered on the Indonesia Stock Exchange which issued periodical financial reports 2016-2021. The research sample was obtained after carrying out the retrieval procedure with purposive sampling and as many as 9 companies meet the criteria determined.

Table 1. Sample Selection Criteria

No	Criteria	2016	2017	2018	2019	2020	2021
1	industrial sector companies listed on the Indonesia Stock Exchange on years 2016-2021 which can be accessed (not undesconstruction) when data collection is carried out.	39	40	45	49	49	54

2	Companies that do not publish financial reports in full for the period 2016-2021 and presents reports in rupiah currency.	(2)	(2)	(2)	(2)	(2)	(2)
3	Companies that do not pay dividends continuously in period from 2016-2021.	(18)	(17)	(24)	(26)	(29)	(38)
4	Companies that do not earn profits continuously in the period 2016-2021.	(10)	(12)	(10)	(14)	(11)	(7)
	Total object of research	9	9	9	9	9	9
	Amount	54					

Source: Astuti, (2021)

Descriptive Statistical Analysis

Descriptive statistics are used to provide a descriptive picture of the top data seen from the minimum, maximum, mean, range and standard deviation. The results of descriptive statistical processing can be seen in table 2:

Table 2. Result of descriptive statistical analysis

	N	Maximum	Minimum	Median	Mean	Std.Dev
Capital Structure	54	1,98	0,06	0,60	0,66	0,34
Business Risk	54	0,33	0,00	0,09	0,11	0,05
Profitability	54	0,56	0,01	0,12	0,14	0,08
Asset Structure	54	0,81	0,10	0,34	0,34	0,18
Liquidity	54	6,82	1,14	1,85	2,10	1.02
Big Data Technology	54	0,04	0,00	0,00	0,00	0,01
Observations	54					

Source: Processing Eviews data12 (2023)

Panel Data Regression Analysis Model Selection

Chow Test

Table 3. Chow Test

Effect Test	Statistic	d.f	Prob
Cross-section F	0,611453	(8,40)	0,7628
Cross-section Chi-square	6,230081	8	0,6215

Source: Processing Eviews data12 (2023)

The results of the chow in the table 3 above show the probability value of cross section $F = 0,7628 > 0,05$ then H_0 is accepted and H_1 is rejected, meaning that the model chosen is the common effect model to estimate on panel data.

Lagrange Multiplier Test

Table 4. Lagrange Multiplier Test

Test Hypothesis

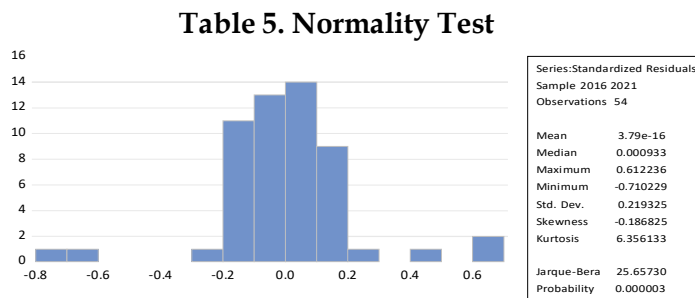
	Cross-Section	Time	Both
Breusch-Pagan	2,150146 (0,1426)	1,954755 (0,1621)	4,104901 (0,0428)

Source: Processing Eviews data12 (2023)

The results of the multiplier lagrange test in table 4 above it can be seen that if the Breusch-pagan probability value is $0,0428 < 0,05$ the the ranom effect is better than the common effect. With this it can be concluded that the model the best in this study is the random effect model.

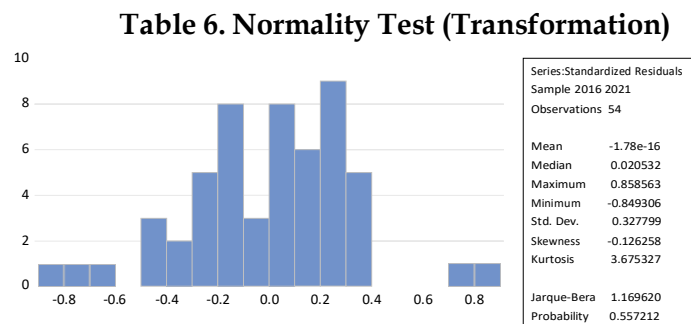
Classical Assumption test results

Normality Test



Source: Processing Eviews data12 (2023)

Based on table 5 it is known that the probability value is $0,000003 < 0,05$ means that the data is not normally distributed. Ways to deal with data not normal, namely by using a logarithmic transformation (Ismanto &February, 2021;34).



Source: Processing Eviews data12 (2023)

From table 6 we can see that the probability value is $0,557212$, this probability value is $> 0,05$ so it can be seen that the residual normally distributed. In the next test using variables which has been transformed.

Multicollinearity Test

Table 7. Multicollinearity Test

<i>Correlation</i>					
	Business Risk	Profitability	Asset Structure	Liquidity	Big Data Technology

Capital Structure	1,000000	0,904780	-0,045787	-0,233812	-0,214833
Business Risk	0,904780	1,000000	-0,093815	-0,236252	-0,175007
Profitability	-0,045787	-0,903815	1,000000	0,070047	-0,248520
Asset Structure	-0,233812	-0,236252	0,070047	1,000000	-0,276819
Liquidity	-0,214833	-0,175007	-0,248520	-0,276819	1,000000
Big Data Technology					

Source: Processing Eviews data12 (2023)

Based on the table 7 it can be concluded that if between variables independent has a correlation value below 10. This can show that if there is no correlation between high independent variabel above 10. The result of the correlation between X_1 and other X are obtained the results are below 10. So, it can be concluded that there is no multicollinearity between independent variabel.

Panel Data Regression Test

Table 8. Random Effect Model

Variable	Coefficient
C	0,901057
Capital Structure	-9,789055
Business Risk	7,022545

Profitability	0,084781
Asset Structure	-0,083775
Liquidity	-1,601965
Big Data Technology	

Source: Processing Eviews data12 (2023)

Based on table 8 in the panel data regression equation is formed are as follows:

$$Y=0,901057 - 9,789055 X1 + 7,022545 X2 + 0,084781 X3 - 0,083775 X4 - 1,601965 X5$$

The equation in the above model is explained as follows:

1. The constant value has a coefficient of 0,901057, meaning that if the independent variable is constant or equal to (0), the capital structure has a tendency to grow by 0,901507.
2. The business risk variable has a coefficient of -9,789055, meaning that if business risk increases by 1%, the capital structure has a tendency to decrease by -9,789055.
3. The profitability variable has a coefficient of 7,022545, meaning that if the independent profitability variable increases by 1%, the capital structure has a tendency to grow by 7,022545.
4. The asset structure variable has a coefficient of 0,084781, meaning that if the independent variable increases by 1%, the capital structure has a tendency to grow by 0,084781.
5. The liquidity variable has a coefficient of -0,083775, meaning that if the independent variable increases by 1%, the capital structure has a tendency to decrease by -0,083775.
6. The big data technology variable has a coefficient of -1,601965, meaning that if the independent variable increases by 1%, the capital structure has a tendency to decrease by -1,601965.

Hypothesis Test

Coefficient of Determination (R²)

Table 9. Coefficient of Determination (R²)

	Mark
Adjusted R-squared	0,555522

Source: Processing Eviews data12 (2023)

From the test results of the coefficient of determination in table 9, the Adjusted R-squared value is 0,5555. The results of the Adjusted R-squared value in this study indicate that the variables of business risk (X1), profitability (X2), asset structure (X3), liquidity (X4), big data technology (X5) are able to explain the effect of the dependent variable, namely capital structure of 55,55% while the remaining 44,45% is influenced by factors outside the study.

Simultaneously Test (F test)

Table 10. F- Test Result

	Mark
F-statistic	14,24817

Prob(F-statistic)	0,000000
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Source: Processing Eviews data12 (2023). The F-statistic prob value is 0.00 <0.05 and the calculated F-statistic value is 14,2 > 2,40 F table. This shows that the independent variables of business risk, profitability, asset structure, liquidity and big data technology can simultaneously affect the dependent variable of the company's capital structure which is proxied by DER.

Partial Correlation Test (t-Test)

Table 11. t- Test Result

Hypothesis	Coefficient	t-statistic	Prob	Information
Business risk has a negative effect on capital structure	-9,789055	-7,468356	0,0000	Accepted
Profitability has a positive effect on capital structure	7,022545	7,607457	0,0000	Accepted
Asset structure has a positive effect on capital structure	0,084781	0,465511	0,6437	Rejected
Liquidity has a negative effect on capital structure	-0,083775	-2,382432	0,0212	Accepted
Big data technology has a positive effect on capital structure	-1,601965	-0,484833	0,6300	Rejected

Source: Processing Eviews data12 (2023)

Discussion

Effect of Business Risk on Capital Structure

The results of testing the first hypothesis (H1) which has been carried out gives a probability value of 0,0000 < 0,05 and a t-statistic value of -7,468356 which means that business risk has a negative effect on capital structure. This means that an increase in business risk causes a decrease in the capital structure acquired by the company, or vice versa, a decrease in business risk can cause an increase in capital structure.

The results of this study are in line with research conducted by Dewi, (2016), Ratri & Christianti, (2017), and Raju Maulana, (2019) who argue from the results of their research that business risk has a negative effect on capital structure. The results of this study are not in line with research conducted by Rahmadiani, (2020) who argues from the results of his research that business risk has a positive effect on capital structure, as well as research from Sawitri (2018) that business risk has no effect on capital structure.

Effect of Profitability on Capital Structure

The results of testing the second hypothesis (H2) which has been carried out gives a probability value of 0,0000 < 0,05 and a t-statistic value of 7,607457 which means that profitability has a positive effect on capital structure. This means that an increase in profitability causes a decrease in the company's capital structure obtained by the company, or vice versa, a decrease in profitability can cause an increase in the capital structure.

The results of this study are in line with research conducted by Ashry & Fitra, (2019), Khoiriyah, (2020), and Astuti (2021), who argue that profitability has a positive effect on

capital structure. In contrast to the inconsistent research conducted by Qosidah et al. (2017) argues that profitability has a negative effect on capital structure, and research from Nataliana (2021) argues that profitability has no effect on capital structure.

Effect of Asset Structure on Capital Structure

The results of testing the third hypothesis (H3) which has been carried out gives a probability value of $0,6437 > 0,05$ and a t-statistic value of $0,465511$ which means that asset structure has no effect on capital structure. This means that an increase in the asset structure can lead to an increase in the capital structure obtained by the company, or vice versa, a decrease in the asset structure can cause a decrease in the capital structure.

The results of this study are in line with research conducted by Lianto et al. (2020), Wulandari et al. (2018), and Rico Andika, (2019) argue that asset structure has no effect on capital structure. The results of this study are not in line with research conducted by Astuti, (2021) who argues that asset structure has a positive effect on capital structure, as well as research from Nataliana (2021) argues that asset structure has a negative effect on capital structure.

Effect of Liquidity on Capital Structure

The results of testing the fourth hypothesis (H4) which has been carried out gives a probability value of $0,0212 < 0,05$ and a t-statistic value of $-2,382432$ which means that liquidity has a negative effect on capital structure. This means that an increase in liquidity causes a decrease in the capital structure obtained by the company, or vice versa, a decrease in liquidity can cause an increase in the capital structure.

The results of this study are in line with research from Deviani, (2018), Paramitha & Putra, (2020) and Setiawati, (2020), who argue that liquidity has a negative effect on capital structure. The results of this study are not in line with the research conducted by Wulandari et al. (2018), argues that liquidity has a positive effect on capital structure, while the results of Zulkarnain research (2020) argue that liquidity has no effect on capital structure.

Effect of Big Data Technology on Capital Structure

The results of the test, the fifth hypothesis (H5) that has been carried out gives a probability value of $0,6300 > 0,05$ and a t-statistic value of $-0,484833$ which means that big data technology has no effect on capital structure. This means that an increase in big data technology causes a decrease in the level of capital structure obtained by companies, or vice versa, a decrease in big data technology causes an increase in capital structure.

This research is in line with research conducted by Ferraris et al. (2019), Nicholas (2020) and Suoniemi et al. (2021) which states that big data technology has no effect on capital structure. The results of this study are not in line with the research conducted by Akter et al. (2016) who argue that big data technology has a positive effect on capital structure, as well as research by Muchlis et al. (2021) which states that big data technology has a negative effect on capital structure.

Conclusions and Recommendations

Conclusion

This study aims to determine the effect of business risk, profitability, asset structure, liquidity and big data technology on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange in 2016-2021. It can be concluded as follows:

1. Business risk has a negative effect on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange.
2. Profitability has a positive effect on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange.
3. Asset structure has no effect on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange.
4. Liquidity has a negative effect on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange.
5. Big data technology has no effect on the capital structure of industrial sector companies listed on the Indonesia Stock Exchange.

Research Limitations

The limitations of this study are that it can only explain 55,55% of the factors that influence a company's capital structure as measured by the debt to equity ratio using independent variables such as business risk, profitability, asset structure, liquidity and big data technology, while the remaining 44,45 % influenced by factors outside the study.

Suggestion

Based on the limitations of this study, it is hoped that further research can add other independent variables which are expected to affect capital structure such as the tax shield. Tax shield is a group that determines the capital structure that can reduce or increase debt. In further research it is also recommended to use different sizes for the profitability variable in order to obtain varied results from other points of view, for example by using return on assets (ROA). Further research is also expected to broaden the scope of research objects, not only in industrial sector companies, but also in company sectors listed on the Indonesia Stock Exchange, in order to further clarify the overall picture of the company's capital structure (Siskawati & Suryono, 2020).

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