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Effect of Capital Structure, Asset Growth, Liquidity and Company Size on Business Risk

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Abstract:

This study examines the effect of capital structure (DER), asset growth (Growth), liquidity (LDR) and firm size on business risk. This study uses quantitative methods with a research sample of 26 Banking companies listed on the Indonesia Stock Exchange during the period of 2014 to 2020. The results of this study indicate that the capital structure (DER) has no effect on business risk, meaning that the higher the capital structure, the higher the capital structure will not affect business risk. Asset growth (Growth) has no effect on business risk, meaning that when the company experiences asset growth, it will not affect the company's business risk. Liquidity (LDR) has no effect on business risk, meaning that an increase or decrease in liquidity will not affect business risk. Company size (firm size) can affect the company's business risk, meaning that the larger the size of the company, the greater the business risk.

Keywords: Capital structure, asset growth, liquidity, company size and business risk

1. Preliminary

Each bank has different characteristics so that its management is adjusted to the characteristics of the bank concerned. The main role of banks is to shift funds from surplus financing to deficit financing in addition to providing other financial services. The bank is a financial intermediary, so, in this case, the factor of trust in customers is the main factor in running the banking business.

Banking risk is the risk experienced by the banking business world as a form of various financial decisions. Banks must be able to provide deposit guarantees, ease of withdrawal of adjusted funds, ease of channeling credit, and low loan interest as well as fast and accurate calculations. The banking risk experienced is being involved in foreign exchange transactions with the exchange rate crisis that hit Asia in 1997 which caused banks to experience problems, especially national private banking (Fahmi, 2010: 100).

Capital structure is defined as the level of profit required to maintain the market price of the company. Capital structure must be known to increase the desired minimum return, make capital budgeting decisions, help determine the optimal capital structure and make decisions about leasing, financing for repayment of receivables, and managing working capital. The cost of capital is calculated as a weighted average of the various components of the model such as debt, preferred stock, common stock, and retained earnings.

Company size is an entity established to produce goods and services and it can determine the appropriate amount of funds used in the design of the company's size and growth rate. The age and size of the company help facilitate access to the capital market.

Liquidity is the company's ability to meet its short-term obligations that have matured. Liquidity is very important in carrying out business activities, especially during difficult times, such as when the business is closed due to a strike, or when operations suffer losses due to an economic recession or drastic increase in raw material prices or the like. If liquidity is not sufficient to cover losses, it can lead to serious financial difficulties. Poor liquidity is analogous to someone suffering from a high fever; it is a symptom of an underlying problem.

Creditors need to analyze liquidity. If the company has a poor liquidity position, this creates bad credit risk, so there is a possibility that the company will not be able to pay interest and principal on time.

The year-end liquidity ratio is static. Therefore, management needs to look at the expected cash flows in the future. If the expected future cash outflows are relatively higher than the expected future cash inflows, the company's liquidity position will deteriorate.

Growth assets (*growth assets*) are assets that are used for activities to evaluate the company's ability to use assets efficiently in obtaining income. The low total asset turnover ratio may be due to many factors, and it is, therefore, necessary to identify the underlying reasons.

Some financial assets are not owned separately but as part of the Business. Therefore, the analysis of return risk is not only limited to one asset. The benefits of diversification need to be considered. So, what matters is the return of the portfolio, not the return of a single asset, and the risk of the Business.

The phenomenon that occurs is that Bank BRI Risk Management Maintains Reserves during the Pandemic at PT Bank Rakyat Indonesia (Persero) Tbk (BBRI) and shows its commitment to produce and save MSMEs.

BRI continues to ensure that the company's credit risk management is carried out in a measurable manner so that the company's performance and debtor's ability to repay loans are maintained. Measurable credit risk management is still carried out even though during the pandemic the majority of BRI debtors from the MSME segment experienced difficulties. BRI consistently increases the reserve ratio and capital adequacy ratio. So that the company can maintain its ability to face various potential risks in the future. (CNBC, 2021)

Research by Prasetyo (2013) and Kwan (2004) states that liquidity has a positive effect on business risk. Then Wulandari's research (2020) states that company size has a negative effect on business risk. Research by Barry, *et al* (2008) and Distiguin (2011) states that firm size has a negative and significant effect on business risk.

Based on this background with previous researchers there are still differences, it is necessary to review the effect of capital structure, asset growth, liquidity, business risk and company size. This study aims to examine and find empirical evidence regarding the effect of capital structure, asset growth, liquidity and firm size on business risk comprehensively.

2. Literature Review

2.1. Agency Theory

Jensen and Meckling (1976) define an agency relationship as a contract which states that one or more persons interest the principal by delegating authority to requesting another person (the agent) to perform certain services. If a person or several people (called the principal) employs one or more people (called agents) to carry out their duties, then an agency relationship will occur.

2.2. Capital Structure

Long-term funds are used by the company. The main objective of making capital structure decisions is to maximize the market value of the company through the right combination of long-term funding sources. This combination of long-term funding sources, known as the optimal capital structure, will minimize the overall cost of capital. However, there are parties who argue that there is an optimal capital structure. The disclaimer focuses on whether in fact a company can affect its valuation and cost of capital by changing the composition of the capital employed. With an optimal capital structure, calculated using the formula:

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

2.2.1. Asset Growth

Asset growth can be a decision in investment that comes from the company in terms of funds. Some financial assets are not separately owned. Therefore, risk-return analysis is not limited to just one asset. The risks and benefits of diversification need to be considered. So, the formula for Asset Growth according to Cooper *et al* (2008) is:

$$\text{Asset growth} = \frac{\text{Total Assets (t)} - \text{Total Assets (t-1)}}{\text{Total Assets (t-1)}}$$

2.2.2. Liquidity

Liquidity is the company's ability to meet its short-term obligations that have matured. Liquidity is very important in carrying out business activities, especially during difficult times, such as when a business closes due to a strike, or when operations suffer losses due to an economic recession or rising raw material prices or drastic increases. If liquidity is not sufficient to cover losses, it can lead to serious financial difficulties. Poor liquidity is analogous to someone who has a high fever – it is a symptom of an underlying problem. The Liquidity Formula is as follows:

$$\text{Liquidity} = \frac{\text{Current Assets} \times 100\%}{\text{Current liabilities}}$$

2.2.3. Business Risk

Business risk is the variability of the expected return on a particular investment. Risk, along with the concept of return, is a major consideration in making investment and financing decisions.

The level of business risk of a company can also be seen by calculating the Degree of Operating Leverage (DOL) with the following formula According to Gitman (2015: 568):

$$\text{DOL} = \frac{\Delta \text{EBIT}}{\Delta \text{Sales}}$$

2.2.4. FirmSize

Firm size is an entity established to produce goods and services and it can determine the appropriate amount of funds used in the design of the company's size and growth rate. The age and size of the company help facilitate access to the capital market. Referring to the research of Jogiyanto (2013), the size of this company can be measured on a scale that can be divided by the company by means of total assets obtained directly from the company's balance sheet:

Firm Size = Log Total assets

2.3. Framework

2.3.1. Effect of Capital Structure on Business Risk

This study uses the Debt to Equity Ratio (DER) to find the optimal capital structure. A capital structure, in which the use of sources of funds comes from total debt, creates a fixed burden for the company, such as interest expense, so that the company faces business risk for a number of funds originating from outside the company. In this case, the capital structure is a good part of the business in creating a shareholder welfare plan. This proves that the Capital Structure has a negative effect on the company's business risk.

2.3.2. The Effect of Asset Growth on Business Risk

Asset growth has a positive impact on Business Risk because risk consists of two components, namely diversified and non-diversified risk. Verifiable risk, sometimes called controllable risk or unsystematic risk, represents a subset of a particular security risk; this type of risk is unique. Business risk, liquidity risk, and risk of negligence are risks that are included in the diversified risk group. Undiversified risk is sometimes called uncontrollable risk or systematic risk. The calculation of asset growth can be done by using the percentage change in assets in a given year with asset growth in the previous year.

2.3.3. Effect of Liquidity on Business Risk

Liquidity Relationship can affect Business Risk. Liquidity is minimized through the owners of current assets in a larger number than the ownership of non-current assets. However, the level of income will decrease because the income from current assets (e.g. short-term securities) is lower than the level of income from productive fixed assets. Likewise, too high liquidity may indicate that management is not aggressive in seeking the required investment opportunities at all. Maintaining the right balance between liquidity and earnings is critical to the overall financial health of a company.

2.3.4. Firm Size on Business Risk

Firm size (*FirmSize*) is to help facilitate access to the capital market in planning the determination of the right amount of funds used by the company, namely designing the size of the company and its growth rate.

The insignificant size of the company in influencing the banking business risk shows that the size of the company does not necessarily affect the magnitude of the business risk.

Based on the description above, it can be made a theoretical framework that affects Business Risk as follows:

2.4. Hypothesis

- H1 : Capital Structure (DER) has a negative effect on Business Risk (DOL)
- H2: Asset Growth Affects Business Risk (DOL)
- H3 : Liquidity (LDR) has a positive effect on Business Risk (DOL)
- H4 : Company size(*firm size*) has a negative effect on Business Risk (DOL)

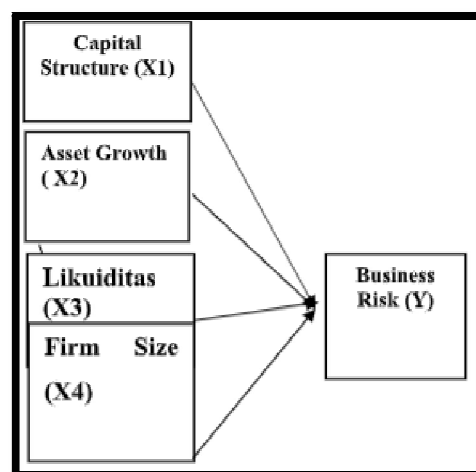


Figure 1 Thinking Framework

3. Research Methods

The population of this research are conventional banking companies listed on the Indonesia Stock Exchange in 2014-2020. The sampling method used in this research is *purposive sampling method*. The no. of Banks that meet the requirements as a sample of this research is 26.

$$\text{MODEL I: } = \alpha + \beta_1 \text{ DER} + \beta_2 \text{ Growth} + \beta_3 \text{ Liquid} + \beta_5 \text{ Firm_Size} * \text{DER} + \beta_6 \text{ Firm_size} * \text{Growth} + \beta_7 \text{ Firm_size} * \text{Liquid} + \epsilon$$

Where : Constant
 α : Regression coefficient
 β : Capital Structure
 DER : Asset Growth
 Growth : Liquidity
 C 4 : SizeCompany
 SIZE : Business risk
 DOL : Error

4. Research Results and Discussion

4.1. Descriptive Statistics

The descriptive statistics are presented below:

	DOL	DER	GRO	LIK	SIZE
Mean	1.888802	8.778442	0.993094	6.883551	13.83100
Median	0.198431	5.269113	0.083530	0.903335	13.96831
Maximum	260.8302	656.8379	104.7699	278.8942	15.30122
Minimum	-0.599645	0.060728	-0.902013	0.000142	12.09731
Std. Dev.	19.37000	48.39260	7.935091	30.30898	0.756702
Skewness	13.23851	13.30423	12.43732	7.157978	-0.384668
Kurtosis	177.4224	178.6727	162.5732	56.45351	2.430310
Jarque-Bera	236025.3	239397.5	197791.2	23221.86	6.949545
Probability	0.000000	0.000000	0.000000	0.000000	0.030969
Sum	343.7619	1597.676	180.7431	1252.806	2517.241
Sum Sq. Dev.	67910.64	423873.7	11396.79	166272.8	103.6403
Observations	182	182	182	182	182

Table 1: Descriptive Analysis
 Source: Eviews (Data Processed by Researchers, 2021)

Descriptive statistics show each variable, obtained as many as 182 samples of index company data for the banking sector listed on the Indonesia Stock Exchange in 2014-2020 which will be explained as follows:

The results of the descriptive statistical test show that the value of the capital structure has a value between 0.060728 and 656.8379. The lowest value is 0.060728 and the highest value is 656.8379. The average capital structure is 8.778442 and the standard deviation is 48.39260. A standard deviation, that is greater than the mean, indicates good data variation and the data is heterogeneous or diverse. The results of the descriptive statistical test show that the value of asset growth has a value between -0.902013 and 10.69236. The lowest value is -0.902013 and the highest value is 10.69236. The average asset growth is 0.0993094 and the standard deviation is 7.935091. The standard deviation is smaller than the mean which indicates good data variation and the data is not heterogeneous or diverse. The results of the descriptive statistical test show that the liquidity value has a value between 0.000142 and 215.5442. The lowest value is 0.000142 and the highest value is 278.942. The average liquidity is 6.88351 and the standard deviation is 30.303898. A standard deviation that is greater than the mean indicates good data variation and the data is heterogeneous or diverse. Descriptive statistical test results show that the value of business risk has a range of values between -0.599645 and 260.8302. The lowest value is -0.599645 and the highest value is 260.8302. The average business risk is 2.166306 and the standard deviation is 20.91860. A standard deviation, that is greater than the mean, indicates good data variation and the data is heterogeneous or diverse. The results of the descriptive statistical test show that the value of firm size has a range between 12.15977 and 15.30122. The lowest value is 12.09731 and the highest value is 15.30122. Average company size is 13.83100 and the standard deviation is 0.757198. A standard deviation that is greater than the mean indicates good data variation and the data is heterogeneous or diverse.

4.2. Panel DataRegression Model

The research data was processed using the E-Views version 11.0 program. The panel data regression models are as follows: Common Effect Model, Fixed Effect Model and Random Effect Model.

The Common Effecti model is described as follows:

Dependent Variable: DOL Method: Least Squares Panel Date: 27/02/22 Time: 11:10 Sample : 2014 2020 Period Includes: 7 Cross Sections Include : 26 Total Panel Observations (Balanced): 182				
Variable	Coefficient	Std. Error	t-Stats	Prob .
C	32.69971	26.88092	1.216466	0.2254
DER	-0.001078	0.030018	-0.035915	0.9714
GRO	-0.048154	0.182804	-0.263419	0.7925
LIKE	-0.020579	0.048360	-0.425542	0.6710
SIZE	-2.213287	1.937824	-1.142151	0.2549
R-squared	0.008094	Average Dependent var		1.888802
Adjusted R-squared	-0.014322	SD Dependent Var		19.37000
SE from regression	19.50822	Akaike info criterion		8.806637
Total population squared	67360.97	Schwarz Criteria		8.894659
Possibility log	-796.4039	The Hannan-Quinn Creature.		8.842319
F-statistics	0.361078	Durbin-Watson stats		2.264106
Prob(F-statistics)	0.836066			

Table 3: Common Effect Model

The Fixed Effect Model is explained as follows:

Dependent Variable: DOL Method: Least Square Panel Date: 27/02/22 Time: 10:56 Example: 2014 2020 Period Includes: 7 Cross Sections Included : 26 Total Panel Data Observations (Balanced): 182				
Variable	Coefficient	Std. error	t-Stats	Prob .
C	489.0937	102.5515	4.769249	0.0000
DER	0.007850	0.030614	0.256412	0.7980
GRO	0.022784	0.184074	0.123779	0.9017
LIKE	-0.017139	0.054230	-0.316038	0.7524
SIZE	-35.22367	7.416574	-4.749319	0.0000
Effect Specifications				
Cross Section fixed (dummy variable)				
R-squared	0.253719	Average Dependent var		1.888802
R-squared adjustment	0.111336	SD Dependent Variables		19.37000
SE from regression	18.25990	Akaike info criterion		8.796836
Total population squared	50680.44	Schwarz Criteria		9.324969
Possibility log	-770.5121	Hannan-Quinn Criterion.		9.010934
F-statistics	1.781949	Durbin-Watson stats		2.514362
Prob(F-statistics)	0.013758			

Table 4: Fixed Effect Model

Source: Eviews, Data Processed, 2021

Description: *** Statistically Supported at Alpha 1%**Alpha 5% and *Alpha 10%

The Random Effect model described is as follows:

Dependent Variable: DOL
 Method: Panel EGLS (Cross-section random effects)
 Date: 02/27/22 Time: 10:53
 Sample: 2014 2020
 Periods included: 7
 Cross-sections included: 26
 Total panel (balanced) observations: 182
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	42.56335	29.05933	1.464705	0.1448
DER	-0.000607	0.028658	-0.021166	0.9831
GRO	-0.048704	0.174161	-0.279648	0.7801
LIK	-0.022381	0.047159	-0.474596	0.6357
SIZE	-2.925805	2.095526	-1.396215	0.1644
Effects Specification				
		S.D.	Rho	
Cross-section random		4.204549	0.0504	
Idiosyncratic random		18.25990	0.9496	
Weighted Statistics				
R-squared	0.010830	Mean dependent var	1.613040	
Adjusted R-squared	-0.011525	S.D. dependent var	18.99440	
S.E. of regression	19.10353	Sum squared resid	64595.27	
F-statistic	0.484454	Durbin-Watson stat	2.348667	
Prob(F-statistic)	0.747137			
Unweighted Statistics				
R-squared	0.007335	Mean dependent var	1.888802	
Sum squared resid	67412.51	Durbin-Watson stat	2.250514	

Table 5: Random Effect Model

4.3. Model Testing

4.3.1. Chow Test

The chi-square prob value for the Chow test results in table 6 is $0.0013 < 0.05$ so that the Fixed Effect better than Common Effect.

The results of the Chow test are described as follows:

Redundant Fixed Effects Tests			
Equation: Untitled			
Test Cross-Section Fixed Effects			
Effects Test	Prob	df	Prob.
Cross-section F	2.001120	(25,152)	0.0058
Cross-section Chi-square	51.783682	25	0.0013

Table 6: Chow Test

4.3.2. Hausman Test

Hausman's test is described as follows:

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test Cross-Section Random Effects			
Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	20.733134	4	0.0004

Table 7: Hausman Test

Since the Chow and Hausman tests yield the same conclusion, namely that the model chosen is the Fixed Effect Model, there is no need to do the Lagrange Multiplier test and the next analysis will be based on the Fixed Effect model.

4.3.4. Multicollinearity Test

The multicollinearity test is described as follows:

	DER	GRO	LIK	SIZE
DER	1	-0.0079374...	0.03099931...	0.04638632...
GRO	-0.0079374...	1	-0.0220413...	-0.0112964...
LIK	0.03099931...	-0.0220413...	1	-0.1391704...
SIZE	0.04638632...	-0.0112964...	-0.1391704...	1

Table 8: Multicollinearity Test

Based on the output table above, the value of the correlation coefficient between the independent variables is < 0.8 which indicates that there is no multicollinearity between independent variables.

4.3.5. Heteroscedasticity Test

Heteroscedasticity test is described as follows:

Parameter	Unweighted Fixed Effect Model	Weighted Fixed Effect Model
Statistical t probability	1 variable < 0.05	0 variables < 0.05
R-Squared	0.111336	-0.001229
F-Statistic Probability	0.013758	0.484696

Table 9: Heteroscedasticity Test

Based on table 9 the selected model is the Unweighted Fixed Effect Model as presented in the *Fixed Effect Model*, therefore the next analysis is based on the Fixed Effect model in table 4.

5. Hypothesis Testing Analysis

Variable	Coefficient	Std. Error	t-Stats	Problem.	Hypothesis
DER	0.007850	0.030614	0.256412	0.7980	Rejected
GRO	0.022784	0.184074	0.123779	0.9017	Rejected
LIKE	-0.017139	0.054230	-0.316038	0.7524	Rejected
SIZE	-35.22367	7.416574	-4.749319	0.0000	Accepted

Table 10: T. Statistic Test

5.1. Multiple Regression Analysis

- The constant value is 489.0937, when the Independent DER, growth, liquidity and Company Size do not change (value 0); the Earnings Management value is 489.0937.
- The DER coefficient is positive at 0.007850, meaning that if the other independent variables are constant, an increase in DER of 1 unit will increase business risk by 0.007850, and vice versa.
- asset growth coefficient is positive, meaning that if the other independent variables are constant, an increase in asset growth of 1 unit will increase business risk by 0.022784, and vice versa.
- The liquidity coefficient is negative, meaning that if the other independent variables are constant, an increase of 1 unit of liquidity will reduce business risk by 0.017139, and vice versa.
- The coefficient of firm size is negative, meaning that if the other independent variables are constant, an increase of 1 unit of firm size will reduce business risk by 35,22367, and vice versa.

5.2. F Statistic Test

Based on the results of the Fixed Effect Model test, the F statistic value is 1.781949 with a probability of 0.013758 < 0.05, it can be concluded that all independent variables, namely DER, growth, liquidity and size together affect business risk so that the model is declared 'suitable'.

5.3. Coefficient of Determination

Based on the results of the Fixed Effect Model testing, the R Square value for business risk is 0.253719 or 25.3%. The results of this study indicate that 25.3% of business risk is influenced by variables of capital structure, growth and liquidity and the remaining 25.3% (100%-25.3% = 74.7%) is influenced by variables outside the study.

5.4. Effect of Capital Structure on Business Risk Variables

In proving the first hypothesis, the results of this study indicate that the capital structure has no effect on business risk, meaning that the more capital structure increases, the less it will affect business risk. The results of this study are not in accordance with previous research (Afzal & Rohman, 2012) which states that the capital structure simultaneously has a significant positive effect on business risk.

Capital structure is described as the company's ability to finance its debt using its equity. Regardless of the company's capital obtained from debt funding, it does not affect the amount of Business Risk.

5.5. The Effect of Asset Growth on Business Risk Variables

In proving the second hypothesis, the results of the study show that asset growth has no effect on business risk, meaning that the more asset growth increases, the business risk looks good. The results of the study are not in accordance with previous researchers (Saputri, 2019) who stated that simultaneous asset growth had a significant effect on business risk.

Asset growth does not affect the ease of obtaining funds. This is because creditors tend to see the company's sales growth as one of the things that need to be considered in providing loans. Banks with relatively unstable income levels and with a tendency to fluctuate, usually cash flow will be unstable as well and this can reduce creditor confidence in providing loans.

5.6. Effect of Liquidity on Business Risk Variables

In proving the third hypothesis, the research results show that liquidity has no effect on business risk, meaning that the more liquidity increases, the smaller the effect on business risk. The results of this study are in accordance with previous researchers (Kwan, 2004) which stated that liquidity simultaneously had a significant positive effect on business risk.

5.7. The Influence of Firm Size on Business Risk

In proving the fourth hypothesis, the results of the study show that company size has a significant impact on business risk, meaning that the larger the company size, the greater the business risk. The results of the study are not in accordance with previous research; Hendro AdiParsetyo (2014) stated that company size has no significant effect on business risk.

The size of the profit depends on the size of the company. The bigger the company, the more superior a company is in taking advantage of profitable business opportunities.

6. Conclusion

Based on the results of research and discussion, the following conclusions can be drawn:

- Capital structure has no effect on business risk.
- Asset growth has no effect on business risk.
- Liquidity has no effect on business risk.
- Company size affects business risk.

6.1. Suggestion

After conducting the research, there are many limitations that the researcher can conclude, including:

- This study uses a sample of only 26 banking companies with a period of 7 years and for further researchers it is expected to use a sample of more than 26 companies and increase the time period in order to better know and disclose existing business risks.
- This study uses the variables of capital structure, asset growth, liquidity, business risk and company size, it is hoped that further researchers can add other variables.

Based on the research results and the model findings that have been carried out in this study, the researchers have several suggestions as follows:

- This research has provided empirical evidence that supports the theory put forward by previous experts and researchers who have studied the Business Risk phenomenon, so it is important for banking sector practitioners to be more careful, especially in determining Company Size.
- Investors should look at the position of the financial statements, especially on the size of the company obtained by the company.
- For further researchers, it is recommended to change and add different sample variables by influencing business risk so that the authors get better research results.

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