

Effect of Business Risk and Profitability on Capital Structure with Likuiditas As Moderation

Dwi Orbaningsih¹

¹Faculty of Economics and Business, Gajayana University, Malang, Indonesia

*Corresponding email: dwi.orbaningsih@unigamalang.ac.id

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ABSTRACT

The purpose of this study is to determine the effect of business risk and profitability on the capital structure with liquidity as a moderation variable. Quantitative methods were used in the study. The sample collection used purposive sampling of 11 companies listed on the IDX during 2017-2020. The analysis used moderation regression and classical assumption testing. The results showed that business risk and profitability affect the capital structure. Meanwhile, moderation variables are able to moderate the influence of business risk on the capital structure and are unable to moderate the effect of profitability on the capital structure.

Keywords:

Capital structure, business risk, profitability, liquidity, firm size

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1. Introduction

Today, competition in the business world is getting tougher. Companies develop strategies to be able to compete and survive in the business world. One of the strategies that companies can do is cost efficiency (Arianto et al., 2022; Fisher Ke et al., 2022; Ko et al., 2020). Cost efficiency is the company's ability to reduce the financing of a product but still maintain the quality of its products, so that the price of the product is lower (Huang & Ye, 2021; Zhou et al., 2021). Cost efficiency is closely related to company policy, such a company decision in determining capital structure (Ulbert et al., 2022). The capital structure is an important element for an enterprise (Avezum et al., 2022; Gyimah et al., 2021). If the capital structure of a company is optimal (Nicodano & Regis, 2019; Wu & Liu, 2022), investors will be interested in investing in the company. On the other hand, if the capital structure is not optimal, investors will not consider investing in the company.

The capital structure is a symbol of the company's financial proportion, between the capital owned from long-term liabilities and capital (shareholders equity) (Adusei & Sarpong-Danquah, 2021; Cenci & Kealhofer, 2022; Gale & Gottardi, 2020; Sikveland et al., 2022). The capital structure is a balance of the amount of permanent short-term debt, long-term debt, preferred shares and ordinary shares. Companies must be able to optimize their capital structure by balancing risk with return so as to maximize the stock price (Gyimah et al., 2021; Nicodano & Regis, 2019; Patel et al., 2022). There are several factors that influence capital structure, this study only discuss the factors of business risk, profitability and liquidity. Business risk is uncertainty related to special conditions that can result in the company's financial insecurity (Joni and Lina, 2010). Business risks affect the company's operational activities, the company's ability to repay its debts, and investors' interest in investing in the company (González L. et al., 2021; Hakim & Apriliani, 2020; Nejadmalayeri, 2021; Singhal et al., 1994). Some researchers have tested the effect of business risk on capital structure, but still show inconsistent results.

Capital Structure Theory

Capital structure theory is a reference in order to realize the optimal capital structure of a company (Gyimah et al., 2021). The capital structure can be said to be optimal, namely if a certain level of risk can provide maximum company value (Ardalan, 2017; Huang & Ye, 2021). The theory of capital structure consists of Traditional Approach, Modigliani and Miller (MM) Approach, Trade Off Theory, Miller Model with Corporate and Personal Taxes, Pecking Order Theory, and Asymmetry Theory: Information and Signaling.

The pecking order theory states that companies will prioritize using internal financing over external financing (Dierker et al., 2019; Yıldırım & Çelik, 2021). However, if external financing is needed, the company will tend to choose to issue securities with the least risk. The preference for funding order in pecking order theory starts from non-risky, minimally risky to high-risk funding. The pecking order theory explains that companies that have a high level of profit actually have a small level of debt. This implies the company's ability to meet investment needs using its internal funds.

Factors Affecting Capital Structure

The factors affecting the consideration of the company in the decision of the capital structure, are as follows.

1. Number of Sales; A company with relatively stable sales means that it has a relatively stable cash flow, so it can use more debt than a company with unstable sales.
2. Asset structure; Companies that have large amounts of fixed assets can use large amounts of debt, this is because from the scale of large companies it will be easier to get access to sources of funds compared to small companies. Then the size of fixed assets can be used as collateral or collateral for the company's debts. Indeed, the use of large amounts of debt will cause financial risk to increase, while large amounts of fixed assets will certainly increase business risk and ultimately mean that total risk will also increase.
3. The company's growth; The faster the company's growth, the greater the need for funds for expansion financing. The greater the need for future financing, the greater the company's desire to withhold profits. So a growing company should not distribute profits as dividends but rather be used for investment financing. This growth potential can be measured by the magnitude of research and development costs.
4. Profitability; The profitability of the previous period is an important factor in determining the capital structure. With a large retained earnings, companies will prefer to use retained earnings before using debt. This is in accordance with pecking order theory which states that managers prefer to use financing from first, retained earnings, then debt, and finally the sale of new shares.
5. Variable profit and tax protection; This variable is closely related to the stability of the sales. If the variability or volatility of a small company's profits then the company has a greater ability to bear the fixed burden of debt. There is a tendency that the use of debt will provide benefits in the form of tax protection.
6. Firm's Size; Large companies that are well-established will find it easier to obtain capital in the capital market than small companies. Because of this ease of access, the company has greater flexibility as well. Empirical evidence suggests that the scale of a company is positively related to the ratio between debt to equity book value and debt to book value of equity ratio.
7. Internal conditions of the company and macroeconomics; Companies need to wait for the right moment to sell stocks and bonds. In general, the most appropriate condition for selling bonds or stocks is when the market interest rate is low and the market is bullish.
8. Business risks; In a company, business risk will increase if the use of debt is high. This will later have an impact on increasing the possibility of bankruptcy. Investors will always consider the risks and benefits of an investment they make. One of these risks is fluctuations in stock prices. The higher the fluctuation in the stock price to the general stock price on the Indonesia Stock Exchange, the higher the risk that will be faced by investors.

Business Risk

Risk can be interpreted as the potential for an event to occur that can cause losses. But in investment analysis, risk is defined as the possibility that the result of money earned is not as expected (Amaliyah et al., 2019; Nejadmalayeri, 2021). Business risk is one of the risks faced by the company when carrying out operating activities, it is the possibility of the company that unable to fund its operational activities. The company's business risks affect the continuity of the business and the company's ability to pay its debts. The level of risk of the company's business also affects the attention of investors to invest in the company and affects the company's ability to obtain funds in carrying out its operational activities.

Companies with high business risk tend to avoid funding by using debt compared to companies with lower business risk. High corporate risk generally prioritizes the use of internal funds over the use of debt or the issuance of shares. The higher the business risk, the lower the capital structure. Sawitri and Lestari (2015) find that hypothesis testing carried out between business risk variables and capital structure can lead to the conclusion that business risk has an insignificant positive influence on the capital structure. Business risk has an insignificant influence on the capital structure because low risk will result in the company's management not considering business risks in determining the amount of debt. If the variability of income is high, the company's business risk will be high so that the profit generated tends to fluctuate. In the presence of high business risks, companies tend not to reduce debt, but still use debt to meet their fund needs.

While the research of Primantara and Dewi (2016) conclude that business risks have a negative and significant influence on the capital structure. This is because the company must take into account its business risks because it is a potential factor that threatens the survival of the company. Companies with high business risks will find it difficult to determine profit targets. This is due to the fact that profits tend to fluctuate. Companies that have high business risks will tend to use a low debt ratio, because the level of income uncertainty is getting higher which can affect the company's ability to recover its debts.

Business risk represents the level of risk from the operational activities of a company that does not use funding through debt. Companies with a high level of business risk will tend to use small amounts of debt because debt can cause the company's financial situation to improve.

Profitability

In general, every company aims to make a profit. The management of the company is required to be able to achieve the targets that have been planned (Djolafo, 2022; Petchsakulwong & Jansakul, 2018; Pisz et al., 2019). According to Kasmir (2014) definition of profitability ratio is a ratio to assess the company's ability to make a profit. This ratio also gives a measure of the level of effectiveness of the management of an enterprise. It is indicated by the profit generated from sales and investment income. It is in essence that the use of this ratio indicates the efficiency of the enterprise.

Research conducted by Hardanti and Gunawan (2010) found the result that profitability negatively affects the capital structure. The higher the profit obtained by the company, the smaller the need for funds, especially from investors, both in the short and long term. Companies with a high level of profitability tend to use internal funds for their operating and investment purposes. Companies with greater levels of profit have larger internal funding sources and have a need to finance investments through smaller external funding due to the high rate of return that funds can be obtained from retained earnings. While in the study of Maryanti (2016) found the result that variable X1 (profitability) had no significant effect on the capital structure. The insignificant results of this study are due to a decrease in the number of profits of several companies every year. In short, the profitability ratio can be summed up as the ratio used to assess or show the success of the company in making a profit.

Liquidity

Liquidity is the ability of a company to meet its short-term debt obligations. Short-term debt is debt whose term is less than one year. Liquidity is the ability of a company in terms of fulfilling financial obligations that are immediately disbursed or that have matured. Linking the amount of cash and other current assets to short-term maturity can provide an easy-to-use measure of liquidity. So it can be concluded that liquidity is the ability of a company to meet its short-term financial obligations that have matured. Study of Kartika and Dana (2014) shows the results that variable liquidity has a significant positive effect on the capital structure of Food and Beverages companies on the Indonesia Stock Exchange for the period 2010-2013. This shows that if the higher the liquidity, the capital structure will also increase.

While in the study of Hardanti and Gunawan (2010) shows the result that liquidity negatively affects the capital structure. This shows that companies using their current assets can fulfill the company's obligations in the short term than long-term debt, so the greater the level of liquidity of the company, the smaller the company's capital structure, which means the smaller the use of debt (external funds). The availability of cash and other current assets owned by the company other than inventory turned out to be able to be used to cover the company's short-term debt. The closure of short-term debt resulted in a decrease in the proportion of overall debt in the capital structure.

Previous research on the effect of business risk and profitability on capital structure showed inconsistent results. Therefore, further research is needed on the effect of business risk and profitability on the capital structure by adding liquidity as a moderation variable.

Conceptual Framework

The conceptual framework in this study explains the influence of independent variables, business risk (X1) and profitability (X2) on the dependent variable, capital structure (Y) with moderation variables, namely liquidity (X3). In this study, the first hypothesis test the effect of business risk (X1) on the capital structure (Y). The second hypothesis test the effect of profitability (X2) on the capital structure (Y). In the third and fourth hypotheses test the liquidity variable (X3) moderating the influence of the business risk variable (X1) or profitability variable (X2) on the capital structure (Y). Meanwhile, the fifth hypothesis test the effect of business risk (X1) and profitability (X2) simultaneously on the capital structure (Y). Kerangka konseptual penelitian ini ditunjukkan pada figure 2

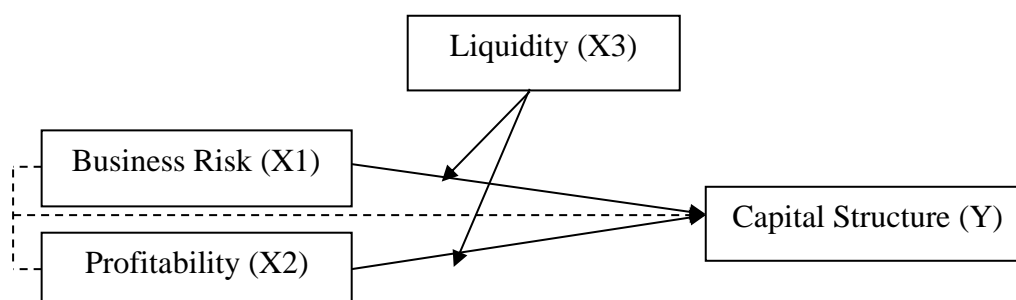


Figure 1. Conceptual Framework

Research Hypothesis

1. Business Risk effect on Capital Structure

Study of Sawitri and Lestari (2015) found that business risk had an insignificant positive effect on the capital structure. While Primantara and Dewi (2016) found that business risk has a negative and significant influence on the capital structure. On the other hand Wiagustini and Pertamawati (2015) found that business risk has a positive and significant effect on the capital structure. Based on such studies the first hypothesis in the study is determined as follows.

H1 : Business risk has a positive and significant effect on the capital structure.

2. Profitability Effect on Capital Structure

Study of Kartika and Dana (2014) found that profitability has a negative and significant influence on the capital structure. While Maryanti (2016) found the result that profitability has no significant effect on the capital structure. Based on the study the second hypothesis in the study was determined as follows.

H2 : Profitability negatively and significantly affects the capital structure.

3. Business Risk Effect on Liquidity Moderated Capital Structure

Study of Kartika and Dana (2014) found that liquidity has a positive and significant effect on the capital structure. While Widayanti et al. (2016) found the result that liquidity has a significant negative effect on the capital structure. On the other hand Prasetyo (2013) found that liquidity partially affects business risk. Based on the study the third hypothesis in the study was determined as follows.

H3 : Liquidity moderates the business risk effect on the capital structure.

4. Liquidity Moderates the Profitability Effect on Capital Structure

Study of Kartika and Dana (2014) found that liquidity has a positive and significant effect on the capital structure. While Widayanti et al. (2016) found the result that liquidity has a significant negative effect on the capital structure. According to Wibowo and Wartini (2012) found the result that liquidity has no significant effect on profitability. Based on the study, the fourth hypothesis in the study was determined as follows.

H4 : Liquidity moderates the profitability effect on the capital structure.

The purpose of this study is to answer the following questions.

1. Does business risk affect the capital structure?
2. Does profitability affect the capital structure?
3. Does liquidity moderate the business risk effect on the capital structure?
4. Does liquidity moderate the profitability effect on the capital structure?

2. Methods

This research used data obtained from the financial statements of transportation companies listed on the IDX for the period 2017-2020. The data source of this study uses secondary data, which is accessed through www.idx.co.id and analyzed with a moderation regression analysis model. Data collection techniques were carried out by the method of documentation. Data was collected by accessing the company's financial statements for the 2017-2020 period published on the IDX through www.idx.co.id. The population in this study is all transportation companies listed on the IDX for the 2017-2020 period, which is 35 companies. This sample used a population research approach because it uses the entire population of transportation companies listed on the IDX for the 2017-2020 period, which were 35 companies. The sampling technique used the purposive sampling method, the sample is determined by certain criteria, namely:

1. Transportation companies listed on the IDX for the period 2017-2020
2. Transportation companies that publish annual financial statements consecutively in the 2017-2020 research period on the IDX.
3. Transportation companies that earned a profit in the period 2017-2020

**Table 1. Sample of Transportation Companies Listed on the IDX
 for the 2017-2020 Period**

No	Code	Company Name	No	Code	Company Name
1	ASSA	Adi Sarana Armada Tbk	7	SHIP	Sillo Maritime Perdana Tbk
2	BIRD	Blue Bird Tbk	8	SMDR	Samudera Indonesia Tbk
3	BULL	Buana Listya Tama Tbk	9	SOCI	Soechi Lines Tbk
4	CASS	Cardig Aero Services Tbk	10	TMAS	Pelayaran Tempuran Emas Tbk
5	HITS	Humpuss Intermoda	11	TPMA	Trans Power Marine Tbk
6	NELY	Pelayaran Nelly Dwi Putri Tbk			

Source:Indonesia Stock Exchange

Operational Definition and Variable Measurement

1. Dependent Variables

Dependent variables are bound variables that are affected due to the presence of free variables. The dependent variable used in this study is the capital structure symbolized by "Y". In this study, the capital structure was measured by the Debt to Equity Ratio (DER). DER is a ratio that measures the comparison between a company's long-term debt and its own capital. Formula DER as follows.

$$DER = (\text{Total Long-Term Debt}) / (\text{Total Equity}) \times 100\%$$

2. Independent Variables

An independent variable is a free variable that affects a dependent variable, so it affect some changes to the dependent variable. The independent variables used in this study are business risk (X1) and profitability (X2).

3. Business Risk

The first independent variable used in this study was business risk symbolized by "X1". Business risk can be measured by EBIT (Standard Deviation Earning Before Interest and Taxes = standard deviation of profit before interest and taxes), formulated by:

$$\text{Risk} = \text{EBIT} / (\text{Total Asset}) \times 100\%$$

4. Profitability

The second independent variable used in this study is profitability symbolized by "X2". In this study ROA was proxied to measure profitability. Because with ROA, it can be known the company's ability to use all assets owned to obtain profit after tax. This ratio is important for management as material for evaluating the effectiveness of company asset management. ROA is formulated as follow:

$$\text{ROA} = \text{EAT} / (\text{Total Asset}) \times 100\%$$

5. Moderation Variables

Moderation variables are other independent variables that are incorporated into the model, because they can strengthen or weaken the relationship between dependent variables and independent variables. The moderation variable in this study is liquidity symbolized by "X3". In this study, the Current Ratio was used to proxise liquidity. Current ratio is the level of a company's ability to use current assets to pay all its current liabilities. Current Ratio is formulated as follows:

$$\text{Current Ratio} = (\text{Current Assets}) / (\text{Current Liabilities})$$

Data Analysis Techniques

Moderation Regression Analysis

In this study, the data analysis technique used was Moderation Regression Analysis. In testing and explaining whether independent variables affect dependent variables with moderation variables, you can use the regression equation formulated as follows.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_1.X_3 + \beta_5X_2.X_3 + e$$

Information:

Y	= Capital Structure
β_0	= Constant
$\beta_1 \dots \beta_5$	= Regression Coefficient
X1	= Business Risk
X2	= Profitability
X3	= Liquidity
e	= Disruptor variables

3. Results

Moderation regression produces the regression equation as follows.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_1.X_3 + \beta_5X_2.X_3 + e$$

$$Y = -0,718 + 2,745X_1 + -2,212X_2 + 0,782X_3 + -3,033X_1.X_3 + 1,706X_2.X_3$$

1. The business risk variable with a significant value of 0.001 is smaller than 0.05, so that the business risk variable affects the capital structure. Meanwhile, the regression coefficient that has been standardized on the business risk variable has a positive sign of 2,745. This means that if the business risk variable is increased by 1 unit, the capital structure will increase by 2,745 units.
2. The profitability variable with a significant value of 0.002 is smaller than 0.05, so the profitability variable affects the capital structure. Meanwhile, the regression coefficient that has been standardized on the profitability variable is negatively marked at 2.212. This means that if the profitability variable is increased by 1 unit, the capital structure will decrease by 2,212 units.
3. Liquidity variables with a significant value of 0.125 greater than 0.05, so the liquidity variable has no effect on the capital structure. This means that any increase or decrease in liquidity does not affect the capital structure.
4. The moderation variable (X1X3) with a significant value of 0.037 is smaller than 0.05, so the moderation variable (X1X3) is able to moderate the influence of business risk on the capital structure. Meanwhile, the regression coefficient that has been standardized over the moderation variable (X1X3) is marked negative 3.033. This shows that the moderation variable (X1X3) is negatively related to the capital structure variable. This means that if the value of the moderation variable (X1X3) is increased by 1 unit, then the value of the capital structure variable will decrease by 3,033 units.
5. A moderation variable (X2X3) with a significant value of 0.163 greater than 0.05, so the moderation variable (X2X3) is not able to moderate the effect of profitability on the capital structure. This means that any increase or decrease in the moderation variable (X2X3) does not affect the capital structure.
6. The R-square value of 0.654 indicates that a change in the capital structure of 65.4% is affected by business risk, profitability and liquidity. The remaining 34.6% is influenced by other variables.

4. Discussion

Partial Testing

The following are the results of the SPSS output testing variables that are suspected to affect the capital structure.

a. Results Test of First Hypothesis

The business risk variable t-test result of 0.001 was smaller than the alpha of 0.05. The significant value of the t-test shows that the business risk variable has a positive and significant effect on the capital structure. Meanwhile, the regression coefficient that has been standardized has a positive sign of 2.745. This means that if the business risk variable is increased by 1 unit, the capital structure variable will increase by 2,745 units. On the other hand, if the business risk variable is reduced by 1 unit, the capital structure variable will decrease by 2,745 units. So the first hypothesis (H1) stating that business risk has a positive and significant effect on the capital structure is accepted.

The results of this study are in line with the research conducted Wiagustini and Pertamawati (2015) which found that business risk had a positive and significant effect on the capital structure. However, this research is not in line with the research conducted by Sawitri and Lestari (2015) which found that business risk had a positive and insignificant effect on the capital structure. As well as research conducted Primantara and Dewi (2016) which found the result that business risk had a negative and significant influence on the capital structure.

Business risk is one of the things that companies face related to company uncertainty that may be experienced in their business activities (Saidi, 2004). The company's business risks will affect the company's business continuity and the company's ability to pay its debts. The level of business risk of the company will also affect the interest of financiers to invest funds in the company. From the results of this study, it shows that companies that have high business risks will tend to use external funding both in the form of debt and by issuing shares. This is because investors think that high-risk companies will provide high returns as well.

b. Results Test of Second Hypothesis

The significant value of the variable t-test profitability of 0.002 is smaller than the alpha of 0.05. The significant value of the t-test shows that the profitability variable has a negative and significant effect on the capital structure. Meanwhile, the regression coefficient that has been standardized has a negative sign of 2.212. This means that if the profitability variable is increased by 1 unit, then the capital structure variable will decrease by 2,212 units. Conversely, if the profitability variable is decreased by 1 unit, the capital structure variable will increase by 2,212 units. So the second hypothesis (H2) stating that profitability has a negative and significant effect on the capital structure is accepted. The results of this study are in line with the research conducted by Kartika and Dana (2014) which found that profitability had a negative and significant influence on the capital structure. However, this research is not in line with the research conducted by Maryanti (2016) which found the result that profitability had no significant effect on the capital structure.

Profitability is the company's ability to make a profit over a certain period. This can be seen by looking at the amount of Return On Assets of the company. The greater the ROA value, the better the company's performance. An increase in ROA will increase retained earnings, so the company does not require external funding. This is in accordance with the pecking order theory where companies that have a high level of profit tend to have a small level of debt. In other words, the company has a preferential order in the use of funds. The order of preference starts from funds sourced from retained earnings, debt and finally the issuance of new equity, meaning that it starts from the source of funds at the lowest cost (Myers dan Majluf, 1984).

c. Results Test of Third Hypothesis

A significant t-test of the moderation variable, i.e. liquidity moderates business risk to the capital structure by 0.037 less than the alpha of 0.05. The significant value of the t-test shows that liquidity variables are able to moderate the influence of business risk on the capital structure. Thus the third hypothesis (H3) which states that liquidity moderates the influence of business risk on the capital structure is accepted.

Liquidity reflects the availability of funds owned by the company to meet all maturing debts. The high level of liquidity reflects that the company has high internal funds which causes

the company to be able to pay its maturing obligations and the total debt owned becomes smaller and smaller. Thus, the business risks that will be faced by the company become lighter. Because of the high business risk will affect the company and the company's ability to pay its debts. The larger the internal funds owned by the company, the company will tend to have small debts. This is in accordance with the pecking order theory where companies tend to use a funding preference order starting from funds sourced internally and then funds coming from external.

d. Results Test of Fourth Hypothesis

A significant t-test of the moderation variable, i.e. liquidity moderates profitability to the capital structure by 0.163 greater than the alpha of 0.05. The significant value of the t-test indicates that liquidity variables are not able to moderate the effect of profitability on the capital structure. Therefore it can be said that the liquidity variable is not a moderation variable. So the fourth hypothesis (H4) which states that liquidity moderates the effect of profitability on the capital structure is rejected.

5. Conclusion

Based on the results of the analysis and testing of data on the effect of business risk and profitability on the capital structure with liquidity as a moderation variable in transportation companies listed on the Indonesia Stock Exchange for the 2017-2020 period, the following conclusions were obtained.

- a. Business risk has a positive and significant effect on the capital structure.
- b. Profitability negatively and significantly affects the capital structure.
- c. Liquidity is able to moderate the effect of business risk on the capital structure.
- d. Liquidity is unable to moderate the effect of profitability on the capital structure.

6. References

- Adusei, M., & Sarpong-Danquah, B. (2021). Institutional quality and the capital structure of microfinance institutions: The moderating role of board gender diversity. *Journal of Institutional Economics*, 17(4), 641–661. <https://doi.org/10.1017/S1744137421000023>
- Amaliyah, A. R., Apriyanto, G., & Sihwahjoeni, S. (2019). Finance and Management Scholar at Riphah International University Islamabad, Pakistan, Faculty of Management Sciences. *Research Journal of Finance and Accounting*, 10(4), 99–104. <https://doi.org/10.7176/RJFA>
- Ardalan, K. (2017). Capital structure theory: Reconsidered. *Research in International Business and Finance*, 39, 696–710. <https://doi.org/10.1016/j.ribaf.2015.11.010>
- Arianto, D., Marpaung, E., Malisan, J., Humang, W. P., Puriningsih, F. S., Mutharuddin, Mardiana, T. S., Siahaan, W. J., Pairunan, T., & Kurniawan, A. (2022). Cost Efficiency and CO2 Emission Reduction in Short Sea Shipping: Evidence from Ciwandan Port–Panjang Port Routes, Indonesia. *Sustainability (Switzerland)*, 14(10). <https://doi.org/10.3390/su14106016>
- Avezum, L., Huizinga, H., & Raes, L. (2022). The impact of bank regulation on firms' capital structure: Evidence from multinationals. *Journal of Banking and Finance*, 138, 106459. <https://doi.org/10.1016/j.jbankfin.2022.106459>
- Cenci, S., & Kealhofer, S. (2022). A causal approach to test empirical capital structure regularities. *The Journal of Finance and Data Science*, 8, 214–232. <https://doi.org/10.1016/j.jfds.2022.09.002>
- Dierker, M., Lee, I., & Seo, S. W. (2019). Risk changes and external financing activities: Tests of the dynamic trade-off theory of capital structure. *Journal of Empirical Finance*, 52(March), 178–200. <https://doi.org/10.1016/j.jempfin.2019.03.004>
- Djolafo, S. (2022). The Effect of Profitability, Leverage, Corporate Social Responsibility and Executive Character on Tax Avoidance on Manufacturing Companies Listed on the Indonesia Stock Exchange Period 2016-2020. *Economics, Business, Accounting & Society Review*, 1(1), 1–8. <https://doi.org/10.55980/ebsar.v1i1.3>
- Fisher Ke, J. yu, Otto, J., & Han, C. (2022). Customer-Country diversification and inventory efficiency: Comparative evidence from the manufacturing sector during the pre-pandemic and the COVID-19 pandemic periods. *Journal of Business Research*, 148(April), 292–303. <https://doi.org/10.1016/j.jbusres.2022.04.066>
- Gale, D., & Gottardi, P. (2020). A general equilibrium theory of banks' capital structure. *Journal of Economic Theory*, 186, 104995. <https://doi.org/10.1016/j.jet.2020.104995>

- González L., A. C., Rodríguez, Y. E., Gómez, J. M., Chávez, H., & Chea, J. (2021). Family business risk-taking and financial performance: Is it easier said than done? *Journal of Family Business Strategy*, 12(4). <https://doi.org/10.1016/j.jfbs.2021.100435>
- Gyimah, D., Kwansa, N. A., Kyiu, A. K., & Sikochi, A. (Siko). (2021). Multinationality and capital structure dynamics: A corporate governance explanation. *International Review of Financial Analysis*, 76(April), 101758. <https://doi.org/10.1016/j.irfa.2021.101758>
- Hakim, M. Z., & Apriliani, D. (2020). Effect of Profitability, Liquidity, Sales Growth, Business Risk, and Asset Structure on Capital Structure. *Jurnal Akademi Akuntansi*, 3(2), 224–243. <https://doi.org/10.22219/jaa.v3i2.12115>
- Huang, H., & Ye, Y. (2021). Rethinking capital structure decision and corporate social responsibility in response to COVID-19. *Accounting and Finance*, 61(3), 4757–4788. <https://doi.org/10.1111/acfi.12740>
- Ko, W. L., Kim, S. Y., Lee, J. H., & Song, T. H. (2020). The effects of strategic alliance emphasis and marketing efficiency on firm value under different technological environments. *Journal of Business Research*, 120(April 2019), 453–461. <https://doi.org/10.1016/j.jbusres.2020.02.019>
- Nejadmalayeri, A. (2021). Asset liquidity, business risk, and beta. *Global Finance Journal*, 48(April 2020), 100560. <https://doi.org/10.1016/j.gfj.2020.100560>
- Nicodano, G., & Regis, L. (2019). A trade-off theory of ownership and capital structure. *Journal of Financial Economics*, 131(3), 715–735. <https://doi.org/10.1016/j.jfineco.2018.09.001>
- Patel, A., Sorokina, N., & Thornton, J. H. (2022). Liquidity and bank capital structure. *Journal of Financial Stability*, 62(April 2021), 101038. <https://doi.org/10.1016/j.jfs.2022.101038>
- Petchsakulwong, P., & Jansakul, N. (2018). Board of directors and profitability ratio of Thai non-life insurers. *Kasetsart Journal of Social Sciences*, 39(1), 122–128. <https://doi.org/10.1016/j.kjss.2017.11.005>
- Pisz, I., Chwastyk, A., & Łapuńska, I. (2019). Assessing the profitability of investment projects using ordered fuzzy numbers. *Logforum*, 15(3), 377–389. <https://doi.org/10.17270/J.LOG.2019.342>
- Sikveland, M., Xie, J., & Zhang, D. (2022). Determinants of capital structure in the hospitality industry: Impact of clustering and seasonality on debt and liquidity. *International Journal of Hospitality Management*, 102(November 2021), 103172. <https://doi.org/10.1016/j.ijhm.2022.103172>
- Singhal, V. R., Raturi, A. S., & Bryant, J. (1994). On incorporating business risk into continuous review inventory models. *European Journal of Operational Research*, 75(1), 136–150. [https://doi.org/10.1016/0377-2217\(94\)90190-2](https://doi.org/10.1016/0377-2217(94)90190-2)
- Ulbert, J., Takács, A., & Csapi, V. (2022). Golden ratio-based capital structure as a tool for boosting firm's financial performance and market acceptance. *Heliyon*, 8(6). <https://doi.org/10.1016/j.heliyon.2022.e09671>
- Wu, K., & Liu, J. (2022). Purifying political ecology: How anti-corruption campaign affects capital structure decisions? *Pacific Basin Finance Journal*, 75(April), 101845. <https://doi.org/10.1016/j.pacfin.2022.101845>
- Yıldırım, D., & Çelik, A. K. (2021). Testing the pecking order theory of capital structure: Evidence from Turkey using panel quantile regression approach. *Borsa Istanbul Review*, 21(4), 317–331. <https://doi.org/10.1016/j.bir.2020.11.002>
- Zhou, D., Kautonen, M., Dai, W., & Zhang, H. (2021). Exploring how digitalization influences incumbents in financial services: The role of entrepreneurial orientation, firm assets, and organizational legitimacy. *Technological Forecasting and Social Change*, 173(August), 121120. <https://doi.org/10.1016/j.techfore.2021.121120>