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The impact of liquidity on the capital structure of construction companies

Rizki Nurul Laili[1,*], Sholatia Dalimunthe[1]
[1]Faculty of Economics, Universitas Negeri Jakarta, Indonesia

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Abstract
The purpose of this research is to examine the effect of liquidity on the capital structure of construction sub-sector companies listed on the Indonesia Stock Exchange. Data was collected using secondary data and library research. The population used in this study comprised all construction sub-sector companies listed on the Indonesia Stock Exchange from 2013–2020. In determining the sample, this research applied the purposive sampling method. This study used a sample of 10 construction sub-sector companies and managed and analyzed a total of 80 observational data using E-views software. The results indicate that liquidity has no significant effect on capital structure as measured by LTDAR. However, liquidity had a significant negative effect on capital structure as measured using DAR, DER, STDAR, LTDER, and STDER. The results support the pecking order theory, which states that liquidity and capital structure have a negative relationship.

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*Corresponding author: Rizki Nurul Laili
rizkinurullaili@gmail.com

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1. Introduction

Every company, regardless of its size, endeavors to develop and maintain its business continuity. Companies are required to determine what strategy they will use to respond to competition appropriately. Companies can do many things when faced with competition, such as innovating products, expanding target markets, actively promoting products, and improving the quality of human resources.

However, such actions require substantial capital or funds. The capital required for business development can be sourced from internal or external parties of the company. Internal sources of funds are funds obtained or generated from within the company. Internal funds can come from undistributed profits or profits. External sources of funds include the owner's equity participation or share issuance, bond sales, bank credit (Sansoethan & Suryono, 2016), and debt. The funding decision used by a company is reflected in the company's capital structure (Ahmad et al., 2017), which combines debt and capital (Firmanullah & Darsono, 2017). A company will produce an optimal capital structure if it chooses the right funding decisions.

A company's capital structure is influenced by several factors, one of which is liquidity, which is related to the cash position of a company. Specifically, liquidity indicates a company's ability to meet its short-term financial obligations by utilizing currently available assets. Companies must maintain a good level of liquidity to maintain credibility with creditors. An illiquid company is unhealthy (Dewi & Dana, 2017). Furthermore, the more liquid a company is, the easier it is for that company to obtain financial assistance from external parties. A company's expected ability to fulfill its short-term financial obligations naturally impacts its image and affects the interest of investors. Thus, companies with high liquidity increase in value, as reflected in rising stock prices.

Table 1. Average total debt of construction subsector companies

Year	Average total debt (in millions)
2013	IDR 4,344,190
2014	IDR 5,126,037
2015	IDR 7,055,065
2016	IDR 10,895,695
2017	IDR 17,064,612
2018	IDR 21,440,843
2019	IDR 22,689,464
2020	IDR 22,373,405

Based on Table 1 above, the average debt of construction sub-sector companies continues to increase every year. Meanwhile, the average liquidity of these companies (and, in turn, their abilities to meet short-term obligations) tends to decrease, which can be a concern for companies. The increasing average debt of companies creates the risk that they will not be able to pay off their debts.

Previous researchers have extensively researched the effect of liquidity on capital structure but have produced inconsistent results. Indira & Mustanda (2018), Afa & Hazmi (2021), Prastika & Candradewi (2019), Lianto et al. (2020), and Muslimah et al. (2020) found that liquidity has a significant negative effect on capital structure. Meanwhile, Wirawan (2017), Firmanullah & Darsono (2017), and Zulkarnain (2020) showed no significant relationship between liquidity and capital structure. Furthermore, results reported by Dharmadi & Putri (2018) and Irdiana (2016) showed that the level of liquidity has a significant positive effect on capital structure. However, previous research looked only at the capital structure of the overall results.

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Therefore, the novelty of the present study is that it represents the capital structure in terms of long-term, short-term, and total debt. Based on the background description and differences from previous studies, this study examines the relationship between liquidity variables and the capital structure of construction companies listed on the Indonesia Stock Exchange from 2013–2020.

The remained of this paper is structured as follows. Section 2 reviews the relevant theoretical concepts and explains how the hypothesis was developed. Section 3 describes the research method, data, sample, variables, and regression model. Section 4 presents and discusses the results. Finally, Section 5 summarizes the overall findings and explores the potential for future research.

2. Literature review and hypothesis development

2.1. Capital structure

A company's capital structure consists of several components, including external and internal capital. Funds originating from external sources include capital supplied by creditors; this capital is considered either short-term debt or long-term debt. Internal capital can be obtained from the company's retained earnings. A company's capital structure balances long-term debt and internal capital (Zulkarnain, 2020) and can be defined as a combination of debt, equity, and other sources the company uses to fund its business activities (Wardatuddihan et al., 2020).

The capital structure chosen by the company can be determined by using the debt-to equity ratio (DER) and debt to assets ratio (DAR). DER shows the comparison between the debt used by the company to finance its assets with its capital (Ahmad et al., 2017). A total debt value that exceeds a company's equity indicates a considerable risk (Ahmad et al., 2017). Significant debt increases interest costs and reduces the value of the company.

The debt to assets ratio shows how much the company's wealth is financed by debt (Jufrizen & Nasution, 2016). DAR is used to measure the extent to which the company's use of debt to finance its assets affects the management of its assets. The higher this ratio, the more significant the company's use of debt to finance its assets. A high DAR also makes it difficult it is for the company to obtain additional loans because potential lenders will fear that the company will not be able to repay its debts.

2.1. Liquidity

Corporate liquidity refers to the ability of a company to pay its immediate debts and meet its financial obligations when billed (Komariah & Nururahmatiah, 2020) using its current assets. Liquidity also measures a company's ability to meet financial obligations that must be repaid immediately and are due within one year (Marlina et al., 2020). Liquidity is also related to the company's ability to convert its assets into cash (Wardatuddihan et al., 2020). In carrying out its operations, a company strives to maintain sufficient liquidity to meet its financial obligations on time. Therefore, liquidity management is essential for every company.

If a company has enough assets to pay off its obligations but cannot immediately convert these assets into cash, the company can be said to be illiquid. A company that can meet its financial obligations on time is in a liquid state and has many opportunities to develop (Sari & Sedana, 2020). The more liquid a company is, the easier it is to borrow capital from creditors or investors (Nhung et al., 2017). This is because a company's liquidity ratio is correlated with its ability to meet its financial obligations.

2.3. Balancing theory

Balancing theory is one of the theories regarding capital structure and its relation to company liquidity. Balancing theory proposes that companies aim to balance the benefits and

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sacrifices of borrowing capital (Indira & Mustanda, 2018). If the benefits are more significant than the risks, the debt can be added; but if the sacrifices outweigh the benefits, then the debt should not be added. Companies that can meet their debt obligations quickly gain more trust from creditors (Dharmadi & Putri, 2018).

2.4. Pecking order theory

Pecking order theory, developed by Myers & Maljuf (1984), explains the priorities of managers in determining their funding sources and states that companies seek funding sources with minimal risk. According to this theory, internal funding sources in the form of retained earnings from the company are preferred. The next-best option is the issuance of new debt by the company. Finally, if the funds are insufficient, new equity is issued (Ahmad et al., 2017). Companies tend to fund investments with cash flows generated from internal and internal equity. Companies with substantial profits reduce the cost of debt by utilizing their internal funds for financial investments.

The order of use of funding sources according to the pecking order theory is as follows: internal funds, debt, and equity. Pecking order theory suggests that companies prioritize fund sources with the lowest cost and the least risk (Prastika & Candradewi, 2019). Businesses that follow this theory prioritize internal funding sources because this method does not incur other expenses and does not require the company to disclose any financial information (Ghasemi et al., 2016).

2.4. Hypothesis development

According to Jufrizen & Nasution (2016), liquidity is a benchmark that creditors use to assess the ability of prospective debtors to pay their debts. The higher a company's liquidity, the lower the capital structure originating from external funds. High liquidity indicates that a company has significant internal finances and can meet its short-term financial obligations (Septiani & Suaryana, 2018).

This relationship can be explained by pecking order theory, which states that companies with high levels of liquidity have substantial internal funds (Firmanullah & Darsono, 2017). According to pecking order theory, companies use internal funding sources to meet their financial needs before using external sources, thereby reducing the use of company debt (Muslimah et al., 2020). A decrease in total debt results in a smaller capital structure.

H1: Liquidity has a negative effect on capital structure.

3. Research methods

3.1. Data and samples

This study examines the influence of liquidity on capital structure. The population used in this study comprised all companies in the construction sub-sector listed on the Indonesia Stock Exchange from 2013–2020. In determining the sample, this research applied the purposive sampling method. The sample was determined based on research criteria to ensure the results align with the study objectives. The criteria used in the researchers are as follows: construction companies listed on the Indonesia Stock Exchange, construction companies that published their annual reports and financial statements for the period December 31, 2013–2020, construction company that perform financial reporting in rupiah currency, construction companies that fully display the data and information needed by researchers regarding the variables of interest in this study, and construction companies that do not have negative equity. More detailed sample criteria are presented in Table 2.

Table 2. Sampling criteria

Sample criteria	Number of companies
- Construction companies listed on the Indonesia Stock Exchange	23
- Construction companies that did not publish annual reports and financial reports every year from 2013–2020	(13)
- Construction companies that issued financial statements in a currency other than the rupiah	(0)
- Construction companies that have negative equity	(0)
- Final sample	10
- Observations	80

3.2. Research variables

3.2.1. Dependent variable

The dependent variable used in this study is capital structure. A company's capital structure indicates how it finances its assets through a combination of equity and debt (Jahfer & Madurasinghe, 2019). The proxies used for the capital structure variable were debt to equity ratio and debt to asset ratio, which were measured based on short-term, long-term, and total debt.

3.2.1. Independent variable

This study considered liquidity as the independent variable. Liquidity is a ratio that measures a company's ability to meet its short-term obligations (Septiani & Suaryana, 2018). In this study, the liquidity proxies used were the quick and current ratios.

3.2.1. Control variables

A control variable is a variable that is controlled or made constant so that the influence of the independent variable on the dependent variable is not influenced by unexamined external factors. Three control variables were considered in this study: size, profit, and NDTS.

Table 3. Variables

No	Variable	Definition	Formula
1	DAR	Debt to asset ratio	Total debt/total asset
2	DER	Debt to equity ratio	Total debt/total equity
3	LTDAR	Long-term debt to asset ratio	Long-term debt/total asset
4	STDAR	Short-term debt to asset ratio	Short-term debt/total asset
5	LTDER	Long-term debt to equity ratio	Long-term debt/total equity
6	STDER	Short-term debt to equity ratio	Short-term debt/total equity
7	CR	Current ratio	Current assets/current liability
8	QR	Quick ratio	(Current assets-inventory)/current liability
9	SIZE	The company's assets	Ln (Total assets)
10	PROF	Ratio of income before interest and taxes to total assets	Earnings before interest and tax/total assets
11	NDTS	Non-debt tax shield	Depreciation/total assets

3.3. Regression model

This study analyzed the effect of liquidity on capital structure based on panel data. Panel data combines cross-section and time series data (Marlina et al., 2020). The characteristics of cross-section data are that the data used consists of more than entities (individuals) or objects. In contrast, time series data, namely the data used, has more than one-time observation (period). The regression equation model for this research panel data is as follows:

$$CS = a_0 + \beta_1 LIQ_{it} + \beta_2 SIZE_{it} + \beta_3 PROF_{it} + \beta_4 NDTS_{it} + \varepsilon,$$

where:

α : Constant (intercept)
β : Regression coefficient
CS : Capital structure as measured by DER, DAR, STDER, LTDER, STDAR, and LTDAR
LIQ : Liquidity as measured by the quick ratio and current ratio
SIZE : Firm size
PROF : Profit
NDTS : Non-debt tax shield
i : Entity or object
t : Period (year)
ε : Random error

4. Results and discussion

4.1. Descriptive statistics

Descriptive statistical analysis was used to describe or describe the variables used in the study, which can be seen from the average value, standard deviation, maximum value, and minimum value of the sample of construction companies listed on the Indonesian Stock Exchange over eight years. Data was collected from 10 construction companies, each of which provided eight observation data, which was analyzed using e-views.

Table 4. Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev
QR	1.341	1.330	2.120	0.590	0.303
CR	1.450	1.425	2.370	0.670	0.295
DAR	0.630	0.655	0.970	0.410	0.142
DER	2.577	1.825	35.470	0.690	4.026
LTDAR	0.133	0.100	1.000	0.010	0.129
STDAR	0.509	0.505	0.960	0.210	0.139
LTDER	0.466	0.295	3.290	0.030	0.525
STDER	2.148	1.460	34.890	0.380	3.930
SIZE	29.704	29.460	32.450	27.730	1.317
PROF	0.056	0.060	0.350	-0.350	0.077
NDTS	0.012	0.010	0.040	0.000	0.011

4.2. Multicollinearity test

Table 5 shows the correlation matrix between the independent variables. The only case of high multicollinearity occurred between CR and QR.

Table 5. Correlation matrix

	CR	QR	SIZE	PROF	NDTS
CR	1		-	-	-
QR	0.944	1			
SIZE	-0.420	-0.564	1	-	-
PROF	0.417	0.377	-0.049**	1	-
NDTS	0.012**	0.086*	-0.584	-0.208	1

*** p<0.01, ** p<0.05, * p<0.1 indicate statistical significance at the 1%, 5%, and 10% level, respectively (two-tailed)

4.3. Regression

A t-test was used to determine the effect of liquidity on capital structure. Liquidity was measured using the current ratio, and capital structure was measured using DAR, DER,

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LTDAR, STDAR, LTDER, and STDER. The control variables of size, profit, and NDTS were also considered. Table 6 shows the results of the regressions.

Table 6. Current ratio regressions on capital structure

Variables	(1) DAR	(2) DER	(3) LTDAR	(4) STDAR	(5) LTDER	(6) STDER
C	1.174 0.002***	19.396 0.203	-0.379 0.432	2.308 0.000***	-1.379 0.426	22.640 0.121
CR	-0.239 0.000***	-5.198 0.004***	-0.044 0.430	-0.237 0.000***	-0.584 0.005***	-4.871 0.007***
SIZE	-0.004 0.722	-0.260 0.563	0.021 0.146	-0.046 0.001***	0.097 0.062*	-0.437 0.331
PROF	-0.160 0.086*	-8.835 0.147	0.026 0.893	-0.160 0.133	0.062 0.928	-8.665 0.154
NDTS	-5.461 0.000***	-83.185 0.130	-3.690 0.036**	-6.727 0.000***	-15.026 0.018**	-75.658 0.166
Adjusted R^2	0.535	0.174	0.187	0.434	0.366	0.137
F-statistics	23.715	5.160	5.552	16.158	12.413	4.140
Prob (F-stat)	0.000	0.001	0.006	0.000	0.000	0.004
Observation	80	80	80	80	80	80
Model	REM	CEM	CEM	REM	CEM	CEM

*** p<0.01, ** p<0.05, * p<0.1 indicate statistical significance at the 1%, 5%, and 10% level, respectively (two-tailed)

The results show that the significance value of the current ratio variable to the debt to asset ratio is 0.000, with a negative regression coefficient of -0.239. The significance value between the current ratio variable and the debt-to equity ratio is 0.004, with a negative regression coefficient of -5.198. The significance value obtained between the current ratio variable and the short-term debt to asset ratio is 0.000, with a negative regression coefficient of -0.237. The significance value between the current ratio and long-term debt to equity ratio is 0.005, with a negative regression coefficient of -0.584. Finally, the significance value obtained between the variable current ratio and the short-term debt to equity ratio is 0.007, with a negative regression coefficient of -4.871.

Overall, the results of the five regression models show a significance value of < 0.01, with a negative regression coefficient. This means that liquidity has a negative effect on the capital structure. Meanwhile, the significance value obtained between the current ratio variable and the long-term debt to asset ratio is 0.430, with a negative regression coefficient of -0.044. The significance value is 0.430 > alpha 0.1, meaning that the current ratio has no significant effect on the long-term debt to asset ratio. Thus, liquidity with a proxy current ratio has no significant effect on the ratio of debt to long-term assets.

4.4. Discussion

This study hypothesized that liquidity has a significant negative effect on capital structure. According to the results, liquidity, when measured by the current ratio, has a partial negative and significant impact on capital structure as proxied by the debt to asset ratio, debt to equity ratio, short-term debt to asset ratio, long-term debt to equity ratio, short-term debt to equity ratio, and long-term debt to asset ratio among construction companies listed on the Indonesia Stock Exchange from 2013–2020.

They are referring to the theory of Brigham & Houston (2012), which states that liquidity affects capital structure. The negative relationship between liquidity and capital structure is in line with pecking order theory, which suggests that companies with high liquidity tend to avoid debt financing because companies with high liquidity have large internal funds. As such, these companies prefer to use these internal funds instead of external funds for investments. This study's results support the research by Ahmad et al. (2017) and Septiani & Suaryana (2018) shows that liquidity has a negative and significant effect on capital structure.

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Meanwhile, the results when liquidity was measured by the current ratio partially show no effect on capital structure (measured as long-term debt to asset ratio) in construction companies listed on the Indonesia Stock Exchange from 2013–2020. Liquidity does not significantly affect the capital structure because an increase in liquidity does not decrease the capital structure of the investigated companies.

However, several companies with high liquidity have increased the composition of debt in their capital structures. With that, these companies' abilities to fulfill their obligations do not affect the extent to which assets are financed by long-term debt. Furthermore, the insignificant effect between liquidity and capital structure shows that construction companies on the Indonesia Stock Exchange, when determining their capital structure policies using the LTDAR ratio, do not consider liquidity. Resultantly, an increase or decrease in liquidity does not affect these companies' capital structures. These results support the research conducted by Komariah & Nururahmatiah (2020) and Wirawan (2017) shows that liquidity has no significant effect on capital structure.

4.5. Robustness test

The robustness test results support the primary analysis. Liquidity, when measured using the quick ratio, significantly negatively affects capital structure as measured using DAR, DER, STDAR, LTDER, and STDER but not as measured using LTDAR. These results support the main analysis in which liquidity is measured using the current ratio.

Table 7. Quick ratio regressions on capital structure

Variables	(1) DAR	(2) DER	(3) LTDAR	(4) STDAR	(5) LTDER	(6) STDER
C	1.588	22.389	-0.238	2.675	-0.764	26.287
	0.000***	0.198	0.659	0.000***	0.697	0.130
QR	-0.240	-4.721	-0.059	-0.242	-0.575	-4.398
	0.000***	0.017**	0.332	0.000***	0.010***	0.025**
SIZE	-0.019	-0.398	0.017	-0.059	0.074	-0.562
	0.128	0.436	0.295	0.000***	0.202	0.271
PROF	-0.189	-10.318	0.034	-0.183	-0.054	-10.083
	0.038**	0.093*	0.857	0.077*	0.938	0.100*
NDTS	-5.883	-85.597	-3.860	-7.263	-15.65	-77.714
	0.000***	0.131	0.030**	0.000***	0.016**	0.168
Adjusted R^2	0.534	0.146	0.191	0.455	0.354	0.110
F-statistics	23.664	4.366	5.656	17.494	11.829	3.448
Prob (F-stat)	0.000	0.003	0.000	0.000	0.000	0.012
Observation	80	80	80	80	80	80
Model	REM	CEM	CEM	REM	CEM	CEM

*** p<0.01, ** p<0.05, * p<0.1 indicate statistical significance at the 1%, 5%, and 10% level, respectively (two-tailed)

5. Conclusion

This study aimed to determine the effect of liquidity on the capital structures of construction companies listed on the Indonesia Stock Exchange from 2013–2020. Based on the results, the effect of liquidity, as measured by the current ratio, has a partial negative significant impact on capital structure, as proxied by the debt to asset ratio, debt to equity ratio, short-term debt to asset ratio, long-term debt to asset ratio. -term debt to equity ratio and short-term to equity ratio. These outcomes are in line with pecking order theory. Meanwhile, the results of research on liquidity, as measured by the current ratio to capital structure (long-term debt to asset ratio), show no significant relationship between the independent and dependent variables. Furthermore, the results of the robustness test performed using the liquidity variable (quick ratio) support the main analysis.

In future work, researchers can expand the scope of the study by considering other

independent variables that are thought to significantly influence the capital structure. Future work could also utilize other research subjects and longer research periods.

References

Afa, A. & Hazmi, S. (2021). Pengaruh likuiditas, risiko bisnis, dan struktur aktiva terhadap struktur modal. *Jurnal Al-Qardh*, *6*(1), 30–44.

Ahmad, G. N., Lestari, R., & Dalimunthe, S. (2017). Analysis of effect of profitability, assets structure, size of companies, and liquidity to capital structures in mining companies listed in Indonesia stock exchange period 2012 - 2015. *Jurnal Riset Manajemen Sains Indonesia*, *8*(2), 339–354.

Brigham, E. F., & Houston, J. F. (2012). *Dasar-dasar manajemen keuangan, diterjemahkan oleh Ali Akbar Yulianto.* (ke-11). Salemba Empat.

Dewi, N. K. T. S., & Dana, I. M. (2017). Pengaruh growth opportunity , likuiditas , non-debt tax shield dan fixed asset ratio terhadap struktur modal. *E-Jurnal Manajemen Unud*, *6*(2), 772–801.

Dharmadi, I. K. Y., & Putri, I. G. A. M. A. D. (2018). Pengaruh struktur aset, profitabilitas, operating leverage dan likuiditas terhadap struktur modal perusahaan consumer goods di bei. *E-Jurnal Akuntansi*, *24*(3), 1858–1879.

Firmanullah, N., & Darsono. (2017). Faktor-faktor yang mempengaruhi struktur modal di perusahaan indonesia (pada perusahaan manufaktur yang terdaftar di bei tahun 2011-2014). *Diponegoro Journal of Accounting*, *6*(3), 1–9.

Ghasemi, Razak, M. H. A., & Nazrul. (2016). The impact of liquidity on the capital structure: evidence from malaysia. *International Journal of Economics and Finance*, *8*(10), 130–139.

Indira, A., & Mustanda, I. K. (2018). Pengaruh likuiditas, profitabilitas, pertumbuhan penjualan, dan struktur aset terhadap struktur modal. *E-Jurnal Manajemen Unud*, *7*(7), 3471–3501.

Irdiana, S. (2016). Analisis faktor-faktor yang mempengaruhi struktur modal pada perusahaan katagori saham blue chips di bursa efek indonesia periode tahun 2011-2014. *Jurnal Penelitian Ilmu Ekonomi*, *6*(1), 15–26.

Jahfer, A., & Madurasinghe, S. I. (2019). Liquidity and capital structure: special reference to manufacturing sector in the Colombo stock market. *Journal of Management*, *14*(2), 69–77.

Jufrizen, & Nasution, M. F. (2016). Pengaruh return on assets, total assets turnover, quick ratio, dan inventory turnover terhadap debt to assets ratio pada perusahaan jasa sub sektor perdagangan besar barang produksi yang terdaftar di bursa efek indonesia. *Jurnal Riset Akuntansi & Bisnis*, *16*(1), 45–70.

Komariah, N., & Nururahmatiah, N. (2020). Pengaruh struktur aktiva dan likuiditas terhadap struktur modal. *Jurnal Akuntansi Dan Bisnis*, *5*(2), 112–122.

Lianto, V., Sinaga, A. N., Susanti, E., Yaputra, C., & Veronica. (2020). Analisis profitabilitas, ukuran perusahaan, struktur aset, likuditas, dan risiko bisnis terhadap struktur modal perusahaan manufaktur di indonesia. *Journal of Economic, Business and Accounting*, *3*(2), 15–38.

Marlina, M., Pinem, D., & Hidayat, N. F. (2020). Effect of liquidity, profitability, and sales growth on capital structure. *International Humanities and Applied Science Journal*, *3*(2), 1–10.

Muslimah, D. N., Suhendro, S., & Masitoh, E. (2020). Faktor-faktor yang mempengaruhi struktur modal pada perusahaan property dan real estate yang terdaftar di BEI. *Jurnal*

Ilmiah Universitas Batanghari Jambi, *20*(1), 195–200.
Nhung, N.T.P., Lien, N.P. & Hang, D.T.T. (2017). Analyze the determinants of capital structure for vietnamese real estate listed companies. *International Journal of Economics and Financial Issues*, *7*(4), 270–282.
Prastika, N. P. Y., & Candradewi, M. R. (2019). Pengaruh profitabilitas, struktur aktiva, dan likuiditas terhadap struktur modal perusahaan subsektor konstruksi bangunan di BEI. *E-Jurnal Manajemen Universitas Udayana*, *8*(7), 4444–4473.
Sansoethan, D. K., & Suryono, B. (2016). Faktor-faktor yang mempengaruhi struktur modal pada perusahaan makanan dan minuman. *Jurnal Ilmu Dan Riset Akuntansi*, *5*(1), 1–20.
Sari, I. A. G. D. M., & Sedana, I. B. P. (2020). Profitability and liquidity on firm value and capital structure as intervening variable. *International Research Journal of Management, IT and Social Sciences*, *7*(1), 116–127.
Septiani, N. P. N., & Suaryana, I. G. N. A. (2018). Pengaruh profitabilitas, ukuran perusahaan, struktur aset, risiko bisnis dan likuiditas pada struktur modal. *E-Jurnal Akuntansi*, *22*(3), 1682–1710.
Wardatuddihan, R., Akhmadi, A., & Khaerunisa, E. (2020). Pengaruh likuiditas terhadap struktur modal dengan profitabilitas sebagai variabel intervening. *Tirtayasa Ekonomika*, *15*(2), 299–320.
Wirawan, P. A. (2017). Pengaruh struktur aktiva, profitabilitas, ukuran perusahaan, dan likuiditas terhadap struktur modal pada perusahaan sektor barang konsumsi yang terdaftar di bursa efek indonesia periode tahun 2014- 2015. *Jurnal Pendidikan Ekonomi Undiksha*, *9*(1), 1–10.
Zulkarnain, M. (2020). Pengaruh likuiditas dan profitabilitas terhadap struktur modal. *Forum Ekonomi*, *22*(1), 49–54.