JRSSEM 2025, Vol. 05, No. 05, December
E-ISSN: 2807 - 6311, P-ISSN: 2807 - 6494

Analysis of the Influence of Liquidity, Intellectual Capital, and Capital Structure on Financial Performance in Property Companies Listed on the Indonesia Stock Exchange

Putri Ningsih Pribadi, Wiliam Santoso, Christian Herdinata
Universitas Ciputra Surabaya, Indonesia
Email: pningsih@magister.ciputra.ac.id, wiliam.santoso@ciputra.ac.id, christian.herdinata@ciputra.ac.id

Abstract. This study aims to analyze the influence of liquidity, intellectual capital, and capital structure on the financial performance of property companies listed on the Indonesia Stock Exchange (IDX). The research uses a quantitative approach with financial data from property companies over a specific period. Liquidity is measured using the current ratio, intellectual capital is assessed through the Value Added Intellectual Coefficient (VAIC) method, and capital structure is evaluated using the debt-to-equity ratio. Financial performance is measured by return on assets (ROA). The data **are** analyzed using multiple regression analysis to determine the relationships between the variables. The findings suggest that liquidity has a positive and significant effect on financial performance, while intellectual capital and capital structure show mixed results, with intellectual capital having a significant positive impact and capital structure showing no significant effect. These results highlight the importance of liquidity management and intellectual capital in enhancing financial performance in the property sector. The study provides valuable insights for property companies and investors, emphasizing the need for efficient capital management and leveraging intellectual assets to improve profitability and competitiveness in the market.

Keywords: Liquidity; Intellectual Capital; Capital Structure; Financial Performance.

INTRODUCTION

Financial performance represents a company's financial information over a specific period, reflecting the results of its operational activities in generating profits and efficiently using its resources (Asutay & Ubaidillah, 2024; Farza et al., 2021; Lee, 2023). The appropriate approach for companies to measure performance is through financial analysis. Information about financial performance can assist investors in making informed decisions. Financial performance can be measured through capital structure, liquidity, and intellectual capital.

The property sector is a strategic sector in the Indonesian economy, closely linked to other sectors such as banking, construction, and the building materials industry. The development of this sector reflects the dynamics of national economic growth and serves as an indicator of labor absorption and the provision of housing and business space. However, the property sector is also highly sensitive to macroeconomic conditions, interest rate policies, and consumer purchasing power. During the 2020–2024 period, the property sector faced various challenges due to the COVID-19 pandemic, such as decreased demand, delayed development projects, and adjustments to corporate financial strategies.

The Housing Property Price Index (IHPP) is an indicator that describes property price movements from year to year. This index consists of two groups: the House Price Index and the Apartment Price Index. The House Price Index itself is composed of the Gated Cluster House Price Index, the Ungated Cluster House Price Index, and the Non-Cluster Price Index. Survey results show that, based on the 2024 IHPP, property price growth in March 2024 was

2.76 percent compared to March 2023. This growth slowed slightly compared to the previous year's growth of 2.84 percent.

Based on type, residential property prices increased by 2.97 percent in 2024, with price increases for gated clusters of 3.07 percent, unfenced clusters of 4.83 percent, and non-clustered properties of 1.03 percent. Meanwhile, apartment properties experienced a 1.03 percent price decrease. Residential property prices tend to increase year-on-year. Even during the COVID-19 pandemic in 2020 and 2021, property prices generally continued to rise. Developers' reasons for increasing prices include high demand for housing in line with annual population growth, as well as the younger generation's need for housing while housing supply is limited. Other contributing factors include rising land and material prices in 2024. The survey also showed that the average increase in land prices in project development areas within the survey coverage area was 5 percent in March 2024 compared to March 2023. This figure was calculated as an average without using weights. Using calculations from 2019, which was the period before the COVID-19 pandemic broke out, within a period of 5 years there was a significant increase of 10.90 percent in property prices by 2024. Specifically, house prices increased by 11.19 percent, while apartment prices increased by 5.52 percent.

Liquidity is a ratio used to measure a company's ability to pay its debts using its assets. According to Hanie and Saifi (2018), liquidity is used by management to assess how well a company can meet its external obligations when they fall due. A good level of liquidity indicates a company's financial health, maintains smooth operations, and instills confidence in creditors and investors. Conversely, low liquidity can pose a risk of default, negatively impacting the company's reputation and business continuity.

Intellectual capital (IC) is an intangible asset that can add value to a company (Purwaningrat & Oktarini, 2020). IC is a positive interaction that encompasses employees, competencies, internal organizational factors, and external relationships (Handayani & Karnawati, 2020). In the increasingly competitive and project-based property industry, human resource capabilities, efficient internal processes, and strong external relationships are key to long-term success. Therefore, managing and developing IC are crucial factors in increasing a company's productivity and profitability.

Another factor influencing a company's performance is capital structure, a combination of debt and equity (Das & Swain, 2018). For a company, capital structure functions to develop and sustain its business and the actions taken in dealing with a business (Birru, 2016). Within the context of monitoring theory, capital structure also reflects a monitoring mechanism: the use of debt can increase passive market oversight through payment obligation pressure, while financing through equity allows for active monitoring by shareholders. Selecting the right capital structure will directly impact a company's financial stability and performance.

The selection of liquidity, capital structure, and intellectual capital variables in this study is based on their theoretical and empirical role in influencing a company's financial performance. Liquidity relates to short-term capacity, capital structure relates to long-term funding efficiency, and intellectual capital plays a role in long-term value creation. These three variables represent both tangible and intangible financial aspects of a company's operations, making it crucial to analyze them simultaneously.

Several studies (Hartoyo, 2018; Zakiyah, Salim, & Wahono, 2018; Rahayu, 2019) state that capital structure has a significant effect on financial performance. However, other studies

(Azzahra & Wibowo, 2019) found that capital structure has a negative but insignificant effect on financial performance. Smriti and Das (2018) found that intellectual capital has a positive and significant effect on financial performance, while Ozkan et al. (2017) stated that intellectual capital has a positive but insignificant effect on financial performance. According to Egbunike and Okerekeoti (2018), Maryadi and Dermawan (2019) found that liquidity has a positive and significant effect on financial performance, while William and Sanjaya (2017) stated that liquidity does not affect financial performance.

This study focuses on examining the influence of liquidity, intellectual capital, and capital structure on the financial performance of property companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2024. This research is expected to benefit companies in adopting appropriate policies to optimize financial performance, investors as a consideration when investing in the company, and serve as a reference for the relationship between variables that can improve overall financial performance.

MATERIALS AND METHOD

This quantitative research, using a clause-associative approach, aims to determine the relationship and influence between independent variables (liquidity, intellectual capital, and capital structure) on the dependent variable (financial performance). This study uses secondary data in the form of financial reports from property companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2024.

The sample selection method is purposive sampling with the sample selection criteria being: Companies that publish audited financial statements for the 2020-2024 financial year. Companies that have profits in 2020-2024. Have complete data regarding liquidity, intellectual capital, and capital structure. Based on these criteria, the number of samples used was 20 property companies, namely:

Table 1. Operational and Measurement Variables

Variables	Definition	Indicator	Source
Liquidity	Liquidity describes the time span required to convert assets into cash so that liabilities can be paid.	$CR = \frac{\text{Current Asset}}{\text{Current Liabilities}}$	Indri and Viriany, 2022
Intellectual capital	Intellectual capital is an intangible asset that can be of value to a company.	VAIC = VACA + VAHU + STVA 1. Calculating Value Added (VA) VA = comprehensive income + HC Information : VA = Value Added (amount of added value generated) HC = human capital cost (employee costs) 2. Calculating Value Added Capital Employed (VACA)	Sylvia, 2023

Variables	Definition	Indicator	Source
		$VACA = \frac{VA}{\text{Total Equity}}$ 3. Calculating Value Added Human Capital (VAHU) $VAHU = \frac{VA}{HC}$ 4. Calculating Structural Capital Value Added (STVA) $STVA = \frac{SC}{VA} = \frac{VA - HC}{VA}$	
Capital Structure	Capital structure is a foreign capital plan that includes the company's financial part of debt and equity in terms of financing an entity.	$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$	Eva, Elfina, and Sri., 2021
Financial performance	Financial performance functions as a tool to determine how the company is performing and the company's shortcomings so that they can be improved.	$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$	Indri and Viriany, 2022

The data analysis technique used in this study was multiple linear regression analysis, as this study involved testing more than one independent variable for its effect on a single dependent variable. The regression model used is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Information:
Y = Financial performance (ROA)
X_1 = Liquidity (CR)
X_2 = Intellectual Capital (VAIC)
X_3 = Capital Structure (DER)
β_0 = constant
$\beta_1 - \beta_3$ = regression coefficient
ϵ = *error*
This study uses several classical assumption tests to ensure the reliability of the

regression model. The normality test, conducted using the Kolmogorov-Smirnov (KS) test, ensures that the data is normally distributed by comparing the sample data's empirical distribution with the theoretical normal distribution; a p-value greater than the significance level indicates normality. The multicollinearity test examines correlations between independent variables using tolerance values and the Variance Inflation Factor (VIF), where a low tolerance value or high VIF indicates multicollinearity, with cutoff values set at 0.10 for tolerance or a VIF above 10. The heteroscedasticity test, using the Glejser test, checks for variance differences in residuals; a p-value less than 0.05 suggests heteroscedasticity. The autocorrelation test, performed using the Durbin-Watson test, assesses the relationship between values at different time periods, with DW values between -2 and +2 indicating no autocorrelation. Finally, the mean difference test, using a paired-sample t-test, compares data from the COVID-19 period (2020-2021) with the post-COVID-19 period (2022-2024) to address any potential bias across the periods.

In this study, hypothesis testing was carried out through: F test to test the influence of independent variables simultaneously on the dependent variable. The t-test to test the influence of each independent variable partially on financial performance. The coefficient of determination (R^2) measures how much variation in the dependent variable can be explained by the independent variable.

RESULTS AND DISCUSSION

Classical Assumption Test

The normality test results showed a value for the unstandardized residual of 0.144 with a significance probability of 0.146 (>0.05). Therefore, the normality test results indicate that the data are normally distributed.

The results of the multicollinearity test show that the Tolerance value is greater than 0.1 and the VIF value is less than 10. Hence, the regression model equation does not have multicollinearity problems between independent variables. The results of the heteroscedasticity test using the Glejser Test and the processed results show that the significance value for the three independent variables is greater than 0.05. Therefore, it can be concluded that the data is free from indications of heteroscedasticity. The results of the autocorrelation test obtained a Durbin Watson value of 0.955, it can be concluded that the results are DW between -2 and +2, so that no autocorrelation occurs.

Multiple Linear Regression Analysis Test

Multiple linear regression analysis is used to determine the magnitude of the influence of independent variables, namely liquidity, intellectual capital, and capital structure in predicting the dependent variable, namely financial performance, and also to determine the positive or negative relationship between the independent variables and the dependent variable.

The results of the multiple linear regression analysis obtained using SPSS are as follows:

1. X_1 (liquidity) has a regression coefficient value of 0.005 and has a positive effect on financial performance.
2. X_2 (intellectual capital) has a regression coefficient value of 0.009 and has a positive effect on financial performance.
3. X_3 (capital structure) has a regression coefficient value of -0.022 and has a negative effect on financial performance.

The multiple linear regression equation in this study can be concluded as follows:

ROA = 0.004 + 0.005CR + 0.009VAIC – 0.022 DER + e

Mean Difference Test

This study was divided into two periods: the period during the COVID-19 pandemic (2020-2021) and the period after the COVID-19 pandemic (2022-2024). The results of the t-test for mean differences. The results of the t-test can be seen in the significance figure of 0.136 (> 0.05), so it can be concluded that there is no significant difference in financial performance in property companies during the COVID-19 pandemic or after the COVID-19 pandemic.

Hypothesis Testing

Simultaneous Test (F Test)

The F-test was conducted to determine the joint influence of independent variables on the dependent variable. The significance level used was 5%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.127	3	.042	129.132	<,001[b]
	Residual	.031	96	.000		
	Total	.158	99			

a. Dependent Variable: Y_ROA

b. Predictors: (Constant), X3_DER, X2_VAIC, X1_CURRENT RATIO

Figure 1. Simultaneous Test Results
Source: Data processed using SPSS *software,* 2025

Based on table 6, the significance value of the calculated F is <0.001 (<0.05), which means that liquidity, intellectual capital, and capital structure have a significant effect on financial performance.

Partial test (t-test)

The t-test was conducted to determine the partial influence of the independent variable on the dependent variable. The significance level used was 5%.

Based on the results of the t-test in table 4, the following conclusions can be drawn:

1. X_1 (liquidity) produces a significance value of <0.001 (<0.05) so it is proven that liquidity has a significant effect on financial performance.
2. X_2 (intellectual capital) produces a significance value of <0.001 (<0.05) so it is proven that intellectual capital has a significant effect on financial performance.
3. X_3 (capital structure) produces a significance value of <0.001 (<0.05) so it is proven that capital structure has a significant effect on financial performance.

Coefficient of Determination (R^2)

This test is conducted to measure the strength of the independent variables, namely liquidity, intellectual capital, and capital structure, in revealing the dependent variable, namely financial performance. The coefficient of determination value is located in the Adjusted R

Square column at 0.795 which explains that all independent variables, namely liquidity, intellectual capital, and capital structure, have an influence on the financial performance variable of 79.5% and the remaining 20.5% is influenced by other factors.

The effect of liquidity on financial performance

The research results show that liquidity (current *ratio)* has a significant and positive effect on financial performance (*return on assets)*. This means that the greater a company's ability to meet its short-term obligations using its existing current assets, the better its financial performance. Theoretically, a high *current ratio* indicates that a company has sufficient cash to maintain smooth operational activities. In the context of property companies, liquidity is crucial because this industry requires substantial working capital for project completion and phased construction financing. This result is not in line with research from Ananda & Viriany (2022) And Fortunata & Rasyid (2023) which states that liquidity has no significant impact on financial performance, although it does have a positive effect. This is relevant to the property sector's financial pressures during the 2020-2024 period due to the COVID-19 pandemic. Companies with strong liquidity tend to be better able to maintain profitability.

Thus, the first hypothesis (H1) is accepted: Liquidity has a significant effect on financial performance.

The influence of intellectual capital on financial performance

The results of the study show that intellectual capital (VAIC) has a significant and positive influence on financial performance (ROA), which means that the higher the added value generated by human capital, structural capital, and capital employed, the higher the company's level of profitability.

In the project-based property industry, human resource capabilities, internal process efficiency, and organizational structure effectiveness are crucial for a company's success in managing projects, marketing units, and establishing external relationships with contractors, banks, and consumers.

These results are in line with research by Valentina & Septina (2019) and Smriti & Das (2018) which found that intellectual capital is able to improve financial performance because company activities depend not only on physical assets but also on the quality of human resources and internal processes.

Thus, the first hypothesis (H2) is accepted: Intellectual capital has a significant effect on financial performance

The influence of capital structure on financial performance

The research results show that capital structure (DER) has a significant and negative impact on financial performance. This indicates that the higher a company's debt, the lower its ROA.

In the property industry, excessive debt can increase interest expenses and financial risks for companies. When sales revenue is unstable, particularly during the COVID-19 pandemic, companies with high debt levels tend to experience declining profitability.

These results align with Fajaryani and Suryani (2018), who demonstrated that capital structure has a significant negative impact on financial performance. Excessive debt usage reduces asset management effectiveness because a significant portion of profits is used to pay long-term liabilities.

The first hypothesis (H3) is accepted: Capital structure has a significant effect on financial performance

Test of the difference in average financial performance between the period during COVID-19 and post COVID-19 pandemic

This study also examined the average difference between financial performance divided into two periods: the period during the COVID-19 pandemic (2020-2021) and the post-COVID-19 pandemic period (2022-2024). The results of the mean difference test showed a significance value of 0.136 (>0.05), indicating no significant difference in the financial performance of property companies between the COVID-19 pandemic period (2020-2021) and the post-pandemic period (2022-2024). This could occur because property prices continued to increase despite the pandemic, according to data from the Housing Property Price Index (IHPP), which shows a 2.76 percent increase in property prices in 2024 compared to 2023. Many property companies have implemented credit restructuring so that profitability does not decline drastically even during the pandemic.

CONCLUSION

This research demonstrates that liquidity, intellectual capital, and capital structure each significantly influence the financial performance of 20 property companies listed on the Indonesia Stock Exchange (IDX) from 2020–2024, with increased liquidity and intellectual capital enhancing performance, while a reduced capital structure also improves it; simultaneously, these variables exert a joint significant effect. The findings align with stakeholder theory, emphasizing effective asset management, human capital development (e.g., through employee training), and funding strategies to boost stakeholder-perceived value, while noting that financial performance remained stable during and post-COVID-19, reflecting companies' resilience. Limitations include reliance on only three independent variables, a narrow five-year sample of property firms, and omission of macroeconomic factors. For future research, scholars should incorporate additional variables like company size, sales growth, or EBITDA, and expand the sample to other sectors such as construction or banking to enhance generalizability.

REFERENCES

Ananda, IC, & Viriany. (2022). *Factors influencing financial performance in manufacturing companies on the IDX* .

Asutay, M., & Ubaidillah. (2024). Examining the impact of intellectual capital performance on financial performance in islamic banks. *Journal of the Knowledge Economy*, *15*(1), 1231–1263.

Azzahra, S. & Wibowo, N. (2019). The effect of firm size and leverage ratio on financial performance in mining companies. *Jurnal Wira Ekonomi Mikroskil* , 9 (1), 13-20.

Birru, M. W. (2016). The Impact of capital structure on financial performance of commercial banks in Ethiopia. *Global Journal of Management and Business Research: C Finance* . 16(8), 43-52.

Das, C. P., & Swain, R. K. (2018). Influence of capital structure on financial performance. *Journal of Management* . 4(1), 161-171.

Dermawan, ES, & Maryadi, A. (2019). The Influence of Company Size, Financial Leverage and Liquidity on Financial Performance. *Journal of Accounting Paradigms* , 572-579.

Egbunike, C.F., & Okerekeoti, C.U. (2018). Macroeconomic Factors, firm Characteristics and Financial Performance. *Asian Journal of Accounting Research, III* , 142-168.

Farza, K., Ftiti, Z., Hlioui, Z., Louhichi, W., & Omri, A. (2021). Does it pay to go green? The environmental innovation effect on corporate financial performance. *Journal of Environmental Management*, *300*, 113695.

Fortunata, G., & Rasyid, R. (2023). *Factors influencing financial performance in consumer goods companies* .

Handayani, S., & Karnawati, Y. (2020). Achieving Competitive Advantage Through Intellectual Capital. *Advances in Economics, Business and Management Research* , *127* , 54–58. https://doi.org/https://dx.doi.org/10.2991/aebmr.k.200309.013

Hanie, U., & Saifi, M. (2018). The Effect of Liquidity Ratio and Leverage Ratio on Stock Prices. *Journal of Business Administration* , 95-102.

Hartoyo, H. (2018). The Relationship between Current Ratio, Capital Structure, and Company Size and the Financial Performance of Mining Companies Listed on the Indonesian Stock Exchange (BEI) for the 2014-2016 Period. *Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship,* 8(1), 81-97. DOI: http://dx.doi.org/10.30588/jmp.v.8il.375

Ozkan, N., Cakan, S., & Kayacan, M. (2017). Intellectual capital and financial performance: a study of the Turkish Banking Sector. *Borsa Istanbul Review.* 17(3), 190-198.

Purwaningrat, PA, & Oktarini, LN (2020). Is Firm Size Effective in Moderating the Relationship Between Intellectual Capital and Corporate Financial Performance? *Juima: Journal of Management Science* , *10* (1), 11–21. https://doi.org/https://doi.org/10.36733/juima.v10i1.1067

Rahayu, DP (2019). The Effect of Company Size, Capital Structure, and Liquidity on Financial Performance of Food and Beverage Companies Listed on the Indonesia Stock Exchange (IDX) in 2013-2017. *Jakk (Journal of Accounting) And Contemporary Finance)Volume 2 No. 1* . DOI: http://dx.doi.org/10.30596%2Fjakk.v2i1.5705

Smriti, N. & Das, N. (2018). The impact of intellectual capital on firm performance: a study of Indian firms Listed in Cospi. *Journal of Intellectual Capital* . 19(5), 935-964.

Valentina, L., & Septin, F. (2019). *The influence of intellectual capital, leverage, and company size on the financial performance of the banking sector* .

William, J., & Sanjaya, R. (2017). Factors Affecting Company Performance In Companies Listed on the Indonesia Stock Exchange. *Journal of Business and Accounting* , 152-162.

Zakiyah, EN, Salim, MA, & Wahono, B. (2018). The Effect of Capital Structure and Company Size on Financial Performance (Case Study of Food and Beverage Companies Listed on the Indonesia Stock Exchange 2014-2017). *Journal Scientific Management Research* , *7* (9). http://riset.unisma.ac.id/index.php/jrm/article/view/1239/0