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RESEARCH ARTICLE

Stock Valuation of Pt. Adhi Commuter Properti Tbk (ADCP) as a Transit-Oriented Development Property Developer

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ABSTRACT

Amid global economic uncertainty in 2023, Indonesia focuses on innovative solutions for urban expansion challenges. The government addresses limited urban land and traffic congestion with new LRT infrastructures and Transit-oriented Development (TOD) residences. Bank Indonesia's efforts to stabilize the reverse repo rate support stability and growth, which could boost housing loan demand and benefit property industries. PT. Adhi Commuter Properti tbk. (ADCP) positions itself to take advantage of rising urban property demand. However, the company lost more than half of its market share after it went public (IPO). The researcher tried to analyze ADCP's value using DCF, Relative Valuation, and NAV methods to reveal potential undervaluation. This research utilizes secondary data gathered to learn the subject. The data is derived from a comprehensive review of prior research books, related journals, and company financial reports sourced from the Indonesian Stock Exchange (IDX) website and the company's official website. The data obtained is subjected to quantitative analysis to derive meaningful results.

Keywords: Discounted cash flow, NAV and property or real estate industry, relative valuation, stock valuation.

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1. Introduction

The global economic outlook for 2023 is uncertain, with potential growth declines after a three-year recovery from COVID-19. Many economies, including China, anticipate a decrease from 3.4% in 2022 to 2.8% in 2023 due to factors like inflation and the effects of Russia's invasion of Ukraine (International Monetary Fund, 2023). In contrast, Indonesia's economy shows promise, projecting a growth rate of 4.5%–5.3% in 2023 and further acceleration to 4.7%–5.5% in 2024, according to Bank Indonesia's Communication Department (2022). Bank Indonesia's policies focus on rupiah stabilization and inflation control to fortify economic resilience.

With over half of its population in urban areas, Jakarta, as the capital city of Indonesia, is rapidly urbanizing, leading to the need for residential development. Limited land availability prompts developers like PT. Adhi Commuter Properti (ADCP) will focus on vertical property development, especially Transit-Oriented Development (TOD) near LRT stations, addressing the challenges of rising house prices and traffic congestion. As 2023 unfolds with threats of recession and interest rate hikes, the property sector faces a crucial test. ADCP, recognizing industry competition, emphasizes innovation. Despite challenges, ADCP's 2022 (PT. Adhi Commuter Properti Tbk (ADCP), 2022) annual report highlights significant growth, reinforcing the belief in the demand for urban properties and national recovery momentum. Established in 2015 as a Transit-Oriented Development (TOD) division, ADCP later became a subsidiary of PT. Adhi Karya (Persero) tbk (ADHI) in 2018. With an equity of Rp. 1.1 trillion ADCP diversified into non-construction operations, focusing on property, hospitality, and support. Leveraging its TOD approach, ADCP strategically develops real estate around LRT stations, offering convenient connectivity for urban residents. ADCP's vision emphasizes being a trusted, transportation-and-service-based area developer. Its three main business units include property, hospitality, and supporting facilities. Residential projects around Greater Jakarta provide easy access to LRT stations, catering to modern urban lifestyles.

ADCP went public in February 2022 and shortly after faced a significant drop in its stock price from Rp 130 to Rp 60 per share by July 5, 2023. Economic recovery challenges, slow property sector growth, and high interest rates contributed to this decline. ADCP anticipates a positive impact from the recently launched LRT, enhancing financial performance. Moreover, social restrictions had positively impacted the Indonesian property market, with increased demand in Q4 2022.

The research aims to answer key questions about ADCP:

1. How is the financial performance of ADCP?
2. What is ADCP's intrinsic value using the DCF method?
3. What are the most sensitive variables in the DCF method?
4. What is the probability distribution of the DCF method?
5. What is ADCP's intrinsic value using Relative Valuation?
6. What is ADCP's intrinsic value using Net Asset Valuation (NAV)?

Objectives include evaluating past and predicted financial performance, proposing an implementation plan for management, and determining the intrinsic value of ADCP's stock for informed investment decisions. The study focuses on ADCP's financial reports from 2018 to Q2 2023, using DCF, Relative Valuation, and NAV methods. The data was limited to the post-IPO in 2022 and the specific focus on Transit-oriented Development, aiming for a comprehensive analysis within the specified scope.

2. Literature Review

The transformation of Jakarta into a metropolitan city, with its consequential surge in urbanization and business growth, has significantly impacted the demand for housing, particularly in proximity to the city (Rahadi *et al.*, 2013). In addressing urbanization challenges in Jakarta, the government introduced the Light Rail Transit (LRT) infrastructure in 2015 (Pramudita & Nataadmadja, 2022). This development, integrated with Transit-Oriented Development (TOD) residential areas, aims to create an efficient city by strategically placing developments around transit networks. The research suggests that the location, particularly proximity to efficient public transportation like LRT stations, significantly influences property demand and prices. Companies with properties near LRT stations, including ADCP, may experience increased valuation due to this positive impact. This phenomenon presents both challenges and opportunities for property developers like ADCP, influencing their valuation.

Dubreuille *et al*. (2016) research on “Real Options: An Alternative Valuation Model for the U.S. REIT Market” outlines three theoretical models for real estate valuation: Discounted Cash Flow (DCF), Relative Valuation, and Net Asset Value (NAV). These models form the backbone of the approach taken to calculate the intrinsic value of PT. Adhi Commuter Properti tbk. and serve as the theoretical underpinning for this research.

This study examines the following methods: Absolute Valuation using Discounted Cash Flow (DCF) complemented with sensitivity analysis and Monte Carlo simulation, Relative Valuation, and Net Asset Value (NAV), which is explained below:

a) *Discounted Cash Flow:* According to Damodaran (2006), DCF is a method emphasizing the present value of expected future cash flows. Recognizing the time value of money, this approach provides a nuanced understanding of the intrinsic value of an investment, aiding investors in making informed decisions based on anticipated returns over time.

b) *Relative Valuation:* Relative valuation estimates asset value by comparing it to similar assets in the same industry. This method, outlined by Damodaran (2006), involves comparing underlying assets with those of other companies to gauge the market's willingness to pay for such assets. While quicker and simpler, it may overlook variables like growth rate and cash flow projections.

c) *Net Asset Value (NAV):* NAV involves adjusting assets and liabilities to estimate intrinsic market value. For property companies like ADCP, revaluing landbanks is common to reflect current market values. The study by Morri and Benedetto (2009) emphasizes the importance of incorporating a discount to NAV to accurately represent market perception and aid investors in decision-making.

3. Method

3.1. Research Design

This research design serves as a comprehensive guideline for investors aiming to assess the value proposition of ADCP and make informed investment decisions. The research design is meticulously structured to align with the study objectives. The conceptual framework, depicted in Fig. 1, outlines the sequential processes employed in this research.

3.2. Data Collection Method

This research employed secondary data, primarily sourced from ADCP annual and financial reports. The dataset spans from the 2022 ADCP annual reports to financial reports from F2018 up to Q2 2023.

3.3. Data Analysis Method

To achieve comprehensive results, this research utilized three primary valuation methods:

3.3.1. Discounted Cash Flow

WACC Calculation: Determination of the weighted average cost of capital using market value of equity, book value of debt, tax rate, cost of equity, cost of debt after tax, and total value.

$$WACC = \left(\frac{E}{V} \times Re\right) + \left(\frac{D}{V} \times Rd \times (1 - T)\right)$$

where
E – market value of equity
D – book value of debt
T – tax rate
Re – cost of equity

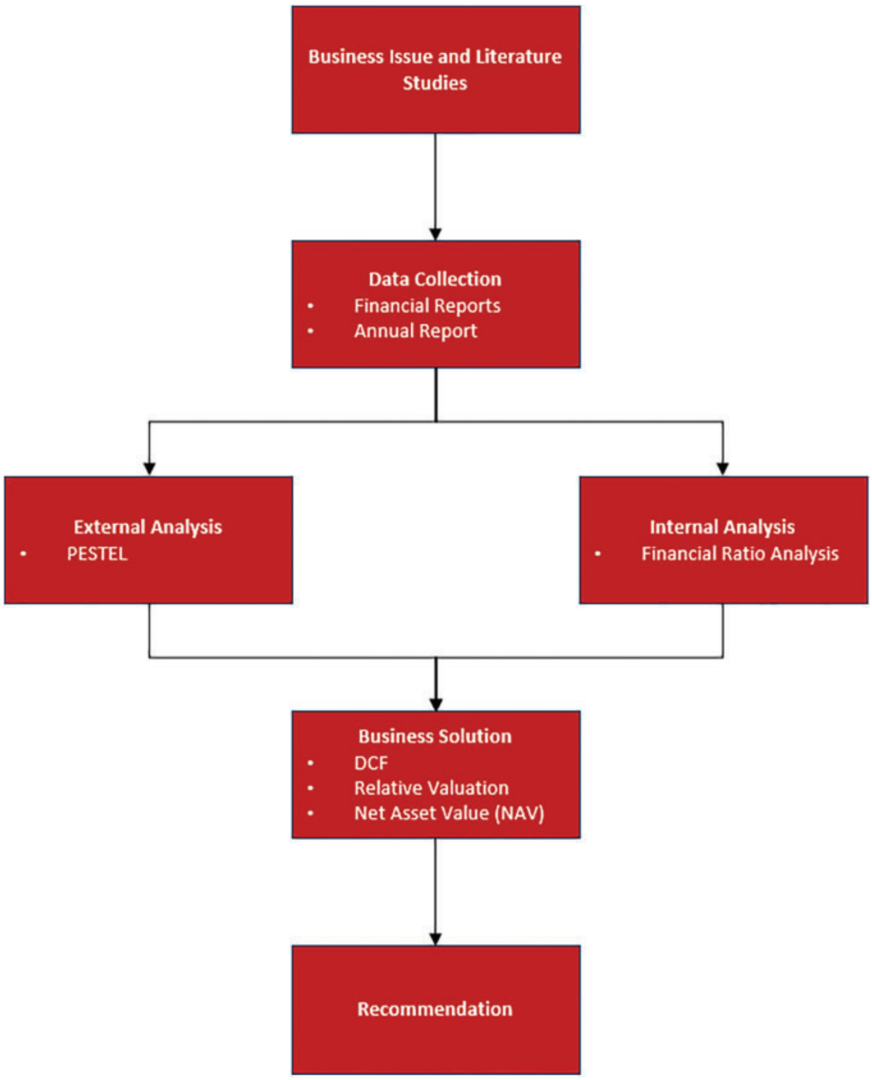

Fig. 1. Conceptual framework.

Rd – cost of debt (after tax)
V E + D – total value

Cash Flow Projection: Utilization of Free Cash Flow to Firm (FCFF) formula involving NOPAT, D&A, CAPEX, and Net WC.

$$FCFF = NOPAT + D\&A - CAPEX - NET\ WC$$

where
NOPAT – Net Operating Profit
D&A – Depreciation and Amortization expense
CAPEX – Capital Expenditure
Net WC – Changes in Net Working Capital

Intrinsic Value Determination: Application of DCF formula to assess intrinsic value, followed by sensitivity analysis and Monte Carlo simulation for variable impact assessment.

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_n}{(1+r)^n} + \ldots$$

where
CF_1 – cash flow for year one
CF_2 – cash flow for year two
CF_n – cash flow for additional year
r – discount rate

3.3.2. *Relative Valuation*

Selection of Comparable Companies: Identification of comparable companies in the TOD real estate development sector.

Use of Relative Ratios: Application of price-earnings ratio (P/E) and price-to-book value ratio (PBV) for performance evaluation against industry benchmarks.

$$Price\ to\ Earnings\ Ratio = \frac{Market\ Price\ per\ Share}{Earnings\ per\ shares}$$

$$Price\ to\ Book\ Value\ Ratio = \frac{Market\ Price\ per\ Shares}{Book\ Value\ per\ Shares}$$

3.3.3. *Net Asset Value (NAV)*

Evaluation of assets and liabilities: This involves considering current market values, factors like property appreciation, and market conditions.

Discount to NAV Evaluation: Assessment of discount to NAV using market sentiment, economic conditions, and industry trends.

$$Unlevered\ Discount = \frac{NAV - Market\ Value}{Nav + Debt}$$

Intrinsic Value per Share: Calculation of intrinsic value per share for comparison with the current market price.

$$NAV\ per\ share = \frac{Market\ Value\ of\ Properties + Other\ asstes - Total\ Liabilities}{Outstanding\ Number\ of\ shares}$$

4. Results and Discussion

The purpose of this research is to analyze the valuation of ADCP stock after the LRT commences. The research seeks to provide a nuanced understanding of how the integration of the LRT system may contribute to ADCP's overall financial performance and market positioning. By adopting a holistic approach, the study aims to offer insights that extend beyond traditional valuation metrics, contributing to a comprehensive evaluation of the company's prospects in the dynamic post-LRT landscape.

4.1. External Analysis

The external analysis (Table I) begins with an examination of the macroeconomic conditions, focusing on Indonesia's economic outlook. Following the president's declaration that the COVID-19 pandemic is over, the country is optimistic about economic growth. Projections by Bank Indonesia suggest an increase in economic growth between 5.0%–5.8% in 2027, supported by global economic recovery, increased investments, and household consumption. Notably, policies such as the relaxation of Loan to Value (LTV) for properties aim to stimulate demand in the real estate sector (BI Economic Report, 2023), especially after the impact of the COVID-19 pandemic. The GDP growth generated by real estate activities in Indonesia has seen a positive trend, indicating potential opportunities for property developers.

The positive economic outlook and supportive government policies create a favorable environment for ADCP. The company can capitalize on the growing real estate activities, especially in the context of increased development in various cities and planned capital cities. The focus should be on aligning strategies with the government's initiatives and leveraging opportunities arising from economic growth.

TABLE I: PESTEL Analysis

Variables	Variable descriptions
Political	Political stability and government policies play a crucial role in Indonesia's economic stability. The upcoming presidential election in 2024 introduces a level of uncertainty. However, current policies, such as infrastructure development and housing initiatives, are supportive of the property industry.
Economic	Bank Indonesia's efforts to maintain low inflation, low tax rates, and prevent recession contribute to economic stability. However, challenges such as limited consumer buying power and oversupply in the apartment market need careful consideration.
Social	Changes in lifestyles, especially in Jakarta, impact the commercial aspects. The launch of the LRT and ADCP's Transit-Oriented Development (TOD) apartments near LRT stations position the company well to address the demand for urban housing.
Technological	Adopting green building methods and incorporating technology for energy efficiency aligns with environmental concerns. ADCP should continue to innovate in construction practices to meet changing technological and environmental standards.
Environmental	Environmental sustainability is important. ADCP can gain support and trust by promoting green operations and carefully planning the development of residential areas to preserve the environment.
Legal	Compliance with laws and regulations is crucial in property development. ADCP should work closely with legal teams to navigate high-risk, high-reward activities and ensure adherence to existing legal frameworks.

4.2. Internal Analysis

The internal analysis reveals areas of financial stability and efficiency for ADCP. Despite challenges in liquidity and high debt levels, the company's focus on TOD and positive profitability ratios position it as a competitive player in the industry.

4.2.1. Liquidity Ratio

ADCP's liquidity ratios (Fig. 2) including Cash Ratio (1.15%) and Quick Ratio (5.18%) suggest challenges in meeting short-term liabilities. The Debt Equity Ratio (153%) indicates a higher proportion of liabilities compared to assets.

4.2.2. Solvency Ratio

The Solvency Ratio (Fig. 3) with an Interest Coverage of 10.14× suggests the company can cover its interest obligations. However, the Debt-to-assets ratio (0.6) implies a reliance on assets to fund operations.

4.2.3. Profitability Ratio

ADCP's profitability ratios (Fig. 4), including Gross Profit Margin (25.87%), Operating Profit Margin (17.69%), and Net Profit Margin (9.84%), indicate positive but moderate profitability.

4.3. Valuation Results

4.3.1. Discounted Cash Flow

WACC Calculation: The Weighted Average Cost of Capital (WACC) is a critical element in the Absolute Valuation method. It is calculated by combining the cost of equity and the cost of debt, considering their respective weights in the company's capital structure. The cost of equity is determined using the risk-free rate, Indonesia's risk premium, and the company's beta. ADCP's beta, a measure of its risk-reward profile, is found to be 1.03, indicating it is theoretically 3% more volatile than the IDX Index. The WACC is calculated as 11.55%, influencing subsequent valuation calculations. Details are presented in Table II.

Cash Flow Projection: The Free Cash Flow to Firm (FCFF) model is employed to project the cash available after accounting for various factors such as operating expenses, taxes, and capital expenditures. This projection is crucial in determining the enterprise value of the company. The assumption used for the company's growth rate

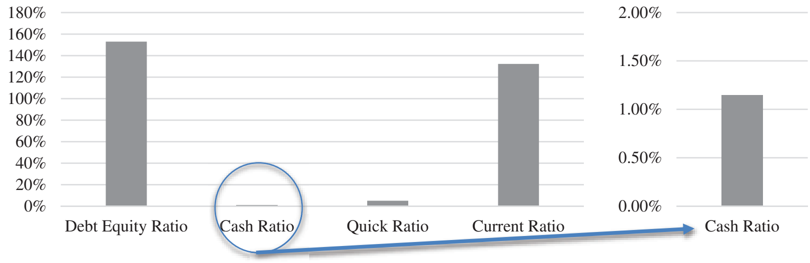

Fig. 2. ADCP's liquidity ratio.

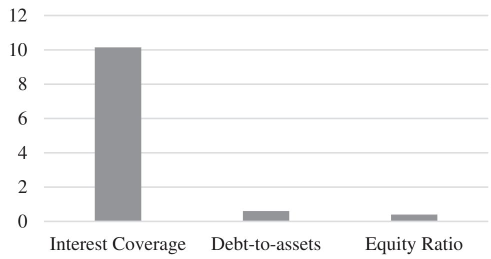

Fig. 3. ADCP's solvency ratio.

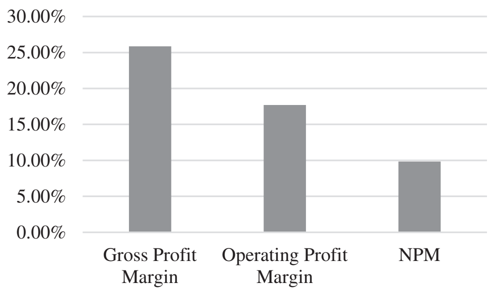

Fig. 4. ADCP's profitability ratio.

TABLE II: WACC Calculation

Variable	Value
Market value of equity	1,333,333 million IDR
Book value of debt	1,306,766 million IDR
Capital: Equity + Debt	2,640,099 million IDR
Weight of equity	50.50%
Weight of debt	49.50%
Cost of equity	14.46%
Risk free rate	6.33%
Beta	1.03
Equity risk premium	7.89%
Cost of debt after tax	8.58%
Cost of debt before tax	11%
Tax rate	22%
WACC	11.55%

derived from its annual growth rate from 2022 to 2023. While the assumption used for the terminal rate was determined from Indonesia's average GDP growth rate from the past five years. Detailed calculations are in Table III.

Intrinsic Value Determination: The Discounted Cash Flow approach involves deriving the intrinsic value of the company by summing all discounted cash flows from the base year to the terminal value. The calculated intrinsic

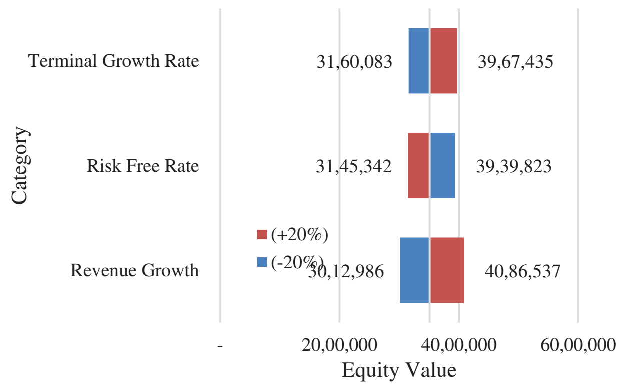

Fig. 5. Sensitivity analysis.

value per share is Rp 159, indicating that the stock may be undervalued compared to the market price of Rp 60 as of July 5th, 2023. Details are presented in Table IV.

To complement the DCF result, this research used sensitivity analysis and Monte Carlo simulation. This combined approach enhanced the valuation model's reliability, providing valuable insights into potential uncertainties and risks. The integration of sensitivity analysis and Monte Carlo simulation fortified the research's analytical depth, contributing to a more informed decision-making framework.

Sensitivity Analysis: Recognizing the inherent uncertainties, a sensitivity analysis is conducted to understand how changes in key variables, including revenue growth, terminal growth rate, and risk-free rate, affect ADCP's stock price (Vipond, 2023). The most sensitive variable is identified as Revenue Growth, followed by Terminal Growth Rate and Risk-Free Rate (Fig. 5). Details are presented in Table V.

Monte Carlo Simulation: To further understand uncertainties and potential outcomes, a Monte Carlo Simulation is employed, considering variables such as revenue growth, risk-free rate, and terminal growth. The simulation (Fig. 6) generates 1000 outcomes that were 100% above the market price, which suggests that ADCP's stock is consistently undervalued, providing insights into the range of possible scenarios for its share value.

4.3.2. Relative Valuation

Selection of Comparable Companies: Relative valuation emerges as a complementary method in this research, offering an alternative perspective on company valuation with those of its direct competitors in the TOD real estate development sector and the industry average.

TABLE III: Cash Flow Projection Calculation Using FCFF

	2023	2024	2025	2026	2027	2028	
	Base year	1	2	3	4	5	Terminal year
Revenue growth rate	36.66%	30.03%	23.41%	16.78%	10.16%	3.53%	3.53%
Ebit	27,664	35,973					
Tax rate	22%	22%	22%	22%	22%	22%	
Ebit after tax = nopat = ebit (1 − t)	21,578	28,059	34,627	40,438	44,546	46,119	
Less net capital spending	10,990	14,291	17,636	20,596	22,688	23,489	
Less change in net working capital	203,077	264,069	325,884	380,884	419,235	434,043	
Free cash flow to the firm	213,665	277,837	342,875	400,420	441,093	456,673	5,897,177
Weighted average cost of capital		11.55%	11.55%	11.55%	11.55%	11.55%	11.55%
Present value of fcff		249,071	275,551	288,479	284,879	264,404	3,414,344

TABLE IV: Intrinsic Value Determination

Variable	Value
Sum of PV	4,776,728 million IDR
Less debt	(1,306,766) million IDR
Add cash & cash equiv.	58,308 million IDR
Value of equity	3,528,270 million IDR
No. of shares outstanding	22,222 million IDR
Estimated intrinsic value per share	159 million IDR
Share price (as of 5th July 2023)	60 million IDR
Price as a % of intrinsic value	38%

TABLE V: Sensitivity Analysis

	Swing − 20%	Swing + 20%
Revenue growth	−14.60%	15.82%
Risk free rate	11.66%	−10.85%
Terminal growth	−10.44%	12.45%

TABLE VI: Relative Valuation

Ticker	Price/Book	Price/ Earnings
ADCP	0.54	64.52
URBN	0.20	(11.22)
PPRO	0.68	(79.37)
MTLA	0.61	21.79
Industry average	1.09	159.66

TABLE VII: ADCP Total NAV

Total value	Rp 29,798,484,738,000
Total value after tax (5%)	Rp 28,308,560,501,100
−Debt	Rp 3,798,306,492,866
+Cash	Rp 29,154,609,494
Total Nav	Rp 24,539,408,617,728

1. PT. Urban Jakarta Propertindo Tbk
2. Metropolitan Land Tbk
3. PT. PP Properti Tbk
4. Average property industry

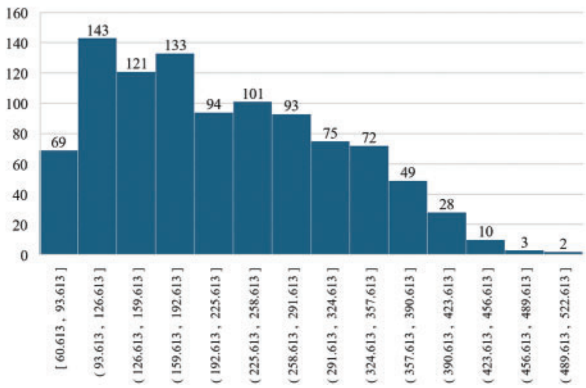

Fig. 6. Monte Carlo simulation.

Use of Relative Ratios: Application of price-earnings ratio (P/E) and price-to-book value ratio (PBV) against four competitors and average property industry in general is presented in Table VI. The analysis reveals that ADCP is undervalued in the market with a PBV ratio of 0.54 and a P/E ratio of 64.52, both considerably lower than the industry averages of 1.09 and 159.66, respectively. This undervaluation positions ADCP favorably against its competitors, presenting an attractive investment opportunity.

4.3.3. Net Asset Value (NAV)

Evaluation of assets and liabilities: NAV was used as method for valuation the company's assets and liabilities to estimate the intrinsic market value. Details are presented in Table VIII.

Discount to NAV: Market's perception of the company's value after considering potential opportunities and market sentiment.

$$Unlevered\ Discount = \frac{24,539,408,617,728 - 1,333,333,332}{24,539,408,617,728 + 3,798,306,492,866}$$

$$Unlevered\ Discount = 82\%$$

Intrinsic Value per Share: Perceived value of the company's share after considering the Discount to NAV.

The analysis indicates a substantial discount to NAV at 82%, emphasizing external factors such as market sentiment, economic conditions, and the positive impact of the LRT commencement on the company's revenue. The

TABLE VIII: Evaluation of NAV

Location	Project	Total land bank (ha)	Sales value of taxable object (Rp)	Market price per sqm (Rp)	Total NAV (Rp)
Jakarta	Lrt City Tebet	0.7	32,000,000	32,000,000	224,000,000
	Lrt City Ciracas	6.2	6,963,000	22,523,191	1,396,437,842,000
	Grandhika Jakarta	0.2	49,863,000	134,580,237	269,160,474,000
Semarang	Grandhika Semarang	0.2	4,155,000	12,751,695	25,503,390,000
Medan	Grandhika Medan	0.3	49,375,000	109,118,750	327,356,250,000
Bogor	Lrt City Sentul	14.8	2,013,000	16,740,088	2,477,533,024,000
	Pt. Mega Graha Citra Perkasa	0.6	3,745,000	17,659,091	105,954,546,000
	Adhi City Sentul	54	537,000	23,525,000	12,703,500.000.000
	Adhi City Sentul 2	31.6	537,000	25,333,333	8.005,333,228,000
Bekasi	Lrt City Jatibening	6	2,013,000	24,324,324	1,459,459,440,000
	Lrt City Bekasi Timur Green Avenue	2	537,000	16,652,789	333,055.,780.000
	Lrt City Bekasi Timur Eastern Green	1.4	4,605,000	21,382,513	299,355,182,000
Banten	Cisauk Point	1.7	3,100,000	14,768,867	251,070,739.,000
	OASE PARK	5.3	2,176,000	11,300,000	598,900,000,000
Cikunir	Lrt City Cikunir	4.1	1,573,000	13,382,513	548,683,033,000
Cibubur	Lrt City Cibubur	4.5	3,658,481	17,181,818	773,181,810,000

TABLE IX: NAV Per Share

Discount to NAV (82%)	Rp 4,443,809,462,052
Share Outstanding	22,222,222,200
Nav per share	Rp 200
Current price	Rp 60
Current MOS (margin of safety)	70%

intrinsic value per share, calculated at Rp 200 (Table IX), signifies undervaluation, with a Margin of Safety at 70%, providing investors with a buffer against market fluctuations.

- *Intrinsic Value Using Relative Valuation:* The Relative Valuation, using P/E and PBV measures, indicates that ADCP's stock is lower than the sector average. The company's strong value proposition in the property industry is expected to drive its potential and enhance its P/E Ratio.
- *Intrinsic Value Using Net Asset Valuation (NAV):* The method suggests hidden value within ADCP, which the company can leverage. Optimizing landbanks through the development of commercial or residential TOD projects could contribute to a robust financial outlook.

5. Conclusion and Recommendation

5.1. Conclusion

The conclusions that can be drawn to answer research questions based on the results of the analysis are as follows:

- *Financial Performance of ADCP:* the company demonstrates strong financial performance, with continuous growth supported by Transit-Oriented Development (TOD) projects and a solidifying position in the market, as indicated by three valuation methods (DCF, Relative Valuation, and NAV).
- *Intrinsic Value Using DCF Method:* This suggests that ADCP's intrinsic value is significantly higher than its current stock price of Rp. 60, with the present value representing only 38% of the estimated intrinsic value.
- *Most Sensitive Variables in DCF Method:* The sensitivity analysis reveals that the three variables examined exhibit relatively low sensitivity. A swing of +20% and −20% in these variables influences changes of less than 20%.
- *Probability Distribution of DCF Method:* The Monte Carlo simulation consistently shows values of 100% above the market price in all 1000 simulated outcomes. This reaffirms the undervaluation of ADCP's stock.

5.2. Recommendation

The recommendation that the researcher can provide based on the results of the analysis found in this study were:

1. For management, it suggests enhancing marketing, implementing strategic financial management, and integrating ESG principles to boost ADCP's performance. Focus on operational efficiency, forge strategic partnerships, and plan for future development phases.
2. For investors, it recommends buying or holding ADCP's stock for its consistently undervalued status, with strategic recommendations for management reinforcing the investment proposition.
3. For future studies, it recommends conducting a thorough analysis of ADCP's valuation five years after it went IPO in the stock exchange and waiting until the completion of new LRT/MRT routes to get additional data and insights.

Conflict of Interest

The authors declare that they do not have any conflict of interest.

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