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Analysis of Sharia Stock Valuation Using The FCFE And Relative Valuation Methods Sector Listed on The Sharia Securities List

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Abstract: The objective of this study is to analyze the intrinsic value of sharia stocks in the property sector listed on the Sharia Securities List (DES), utilizing two distinct valuation methodologies: free cash flow to equity (FCFE) and relative valuation. The stocks selected for analysis include PT Metropolitan Kentjana Tbk (MKPI), PT Mega Manunggal Property Tbk (MMLP), and PT Pollux Properties Indonesia Tbk (POLL). In this study, the free cash flow to equity (FCFE) method was employed to ascertain the intrinsic value of the shares. This was achieved through the consideration of free cash flow, which was subsequently deducted to account for expenses pertaining to working capital and investment. In contrast, the relative valuation method involved the comparison of the intrinsic value of the shares with financial ratios such as the price-to-earnings ratio (PER) and the price-to-book value (PBV). The aforementioned approach was informed by a fundamental analysis, which involved the examination of macroeconomic conditions, industry conditions, and company conditions. The data was obtained from property companies listed on the Indonesia Sharia Stock Index (ISSI) for the period 2019-2022. The results indicated that the intrinsic value of MKPI stock, as determined by the FCFE method, was Rp. 24,134. This value suggests that the stock is overvalued, given that the market price was Rp. 27,200. The PER method yielded the following results: The intrinsic value of the stock is Rp. 59,461, indicating that it is undervalued. The PBV method yields an intrinsic value of IDR 7,515, indicating that the stock is overvalued. The MMLP Shares are valued using the FCFE method, which yields an intrinsic value of IDR 4,857, indicating that the stock is undervalued as the market price is IDR 298. The PER method yields an intrinsic value of IDR 686, indicating that the stock is undervalued. The intrinsic value of the stock is IDR 893, indicating that it is undervalued. The PBV method yields an intrinsic value of IDR 686, also indicating undervaluation. The POLL stock is undervalued according to the FCFE method, with an intrinsic value of IDR 251. This is due to the market price of IDR 147. Finally, the PER method yields an intrinsic value of IDR 109, indicating that the stock is undervalued. The intrinsic value of IDR 109 indicates that the stock is undervalued. The PBV method yields an intrinsic value of IDR 214, which also indicates undervaluation. In conclusion, the FCFE and Relative Valuation methods can be used to determine the fairness of Islamic stock prices in the property sector. The data was obtained from property companies listed on the Indonesia Sharia Stock Index (ISSI) for the period 2019-2022. The results indicated that the intrinsic value of MKPI stock,

as determined by the FCFE method, was Rp. 24,134. This value suggests that the stock is overvalued, given that the market price was Rp. 27,200. The PER method yielded the following results:

Keyword: Stock Valuation, Islamic Stock, Free Cash Flow to Equity (FCFE), Relative Valuation Property Sector, Shariah Listed Securities.

INTRODUCTION

Investment activities are defined as the placing of money or capital owned by investors in an investment instrument, with the objective of generating a financial return. This concept can be exemplified through the example of a property company, whose operations are defined as those engaged in land and housing construction. In general, property is a term used to describe the ownership of land or buildings. It can therefore be argued that property is not limited to structures that have stood for a long period, but also encompasses information about land and buildings situated on it.

Furthermore, property companies have favorable prospects for investment opportunities. This is due to the fact that property companies are one of the few investments that are immune to inflation. The price of property will continue to rise on an annual basis, and it will retain a high selling value in strategic locations.

In accordance with this, Erwin Karya, Director of Ray White Projects, Commercial and Cikarang, posited that prospective buyers may seize this opportunity to actualize their property purchases. After all, property is regarded as a secure investment, offering protection against the effects of high inflation. This is further reinforced by the exceptionally low mortgage interest rates, which have been described as the lowest in history. Furthermore, the intermediary function of banks is currently improving with longer mortgage terms of up to 25-30 years, depending on the age of the prospective debtor. This may be an opportune time for prospective property purchasers to consult with a property agent from Ray White. Ray White makes it easy for prospective purchasers by providing property area specialists and property agents who have good knowledge and listings in the area. Tarihoran posited that, according to a national survey, the level of financial literacy in the capital market is only 4.11%, while the level of financial inclusion in the capital market is 5.11%. In contrast, the Islamic capital market literacy rate is much lower at 0.87%, while the inclusion rate is 0.5%.

The public's limited knowledge about investment, particularly concerning fraudulent investments that continue to circulate among the public, may have a detrimental impact on the community and result in a reduction in the number of investors at a macro level. As of February 26, 2024, there were 3,200 complaints of illegal entities. This indicates that there are still numerous fraudulent investments in circulation within the community. Consequently, all financial services parties must enhance preventive consumer protection through comprehensive and equitable financial education.

Meanwhile, the Indonesia Stock Exchange (IDX) has observed that the total number of investors in all capital market instruments currently stands at 12.4 million individuals. This figure represents approximately 6.89% of the total productive population in Indonesia.

The growing number of Indonesian investors in the capital market is paralleled by an increase in the share prices and trading volume of shares traded on the Indonesia Stock Exchange. The energy sector is one of the sectors experiencing growth in share price and volume. Indonesia is a country rich in natural resources, one of which is minerals. The energy sector plays a pivotal role in supporting the wheels of economic growth in Indonesia.

Currently, there are five sharia stock indices in the Indonesian capital market: the Indonesian Sharia Stock Index (ISSI), the Jakarta Islamic Index (JII), the Jakarta Islamic

Index 70 (JII70), the IDX-MES BUMN 17, and the IDX Sharia Growth (IDXSHAGROW). These indices reflect the price movements of Islamic stocks that are selected based on certain criteria. The selection is made by the Financial Services Authority (OJK) using the Sharia Securities List (DES) as a reference in selecting these stocks.

As a potential investor, it is necessary to ascertain whether these stocks are still a worthwhile investment. Therefore, there is a need for a tool that can assist in assessing the fair price of a company's shares, thereby determining whether it is a prudent purchase.

Valuation is a crucial instrument for accurately assessing the fair price of a company's shares, taking into account the company's condition and the factors that influence its performance. Prior to making a decision, investors must have an understanding of the intrinsic value of the stock. If, over an extended period, the market is rational and irregularities in stock prices are eliminated through market mechanisms (arbitrage), then the value of the stock will eventually return to its fair value. Consequently, the outcomes of fundamental valuation can be employed as a reference point for more objective considerations in the process of making rational investment decisions.

The valuation of stocks is used to calculate the fair value or intrinsic value of a stock. The valuation of stock prices is necessary to ascertain the actual share price, thereby preventing the risk of mispricing (Handayani, F., Hakim, M. Z., & Abbas, 2021). The method employed to determine stock price valuation is the FCFE method. The valuation results will indicate whether the stock is fairly valued, undervalued, or overvalued. The condition of the stock is determined by comparing the actual value calculated to the market value.

It is therefore incumbent upon investors and potential investors to be conversant with FCFE, which enables them to measure and decide whether or not to invest. FCFE, or Free Cash Flow to Equity, represents a net cash flow for company equity. It is the basis for determining the estimated fair value of a stock. FCFE can be used in analysing stock price valuations with free cash flow to equity (Afriani, E., & Asma, 2019). In estimating the cash flow of a company that is able to create profits for shareholders, the company must first calculate working capital, capital expenditures, or company liabilities. (Damodaran, 2012). The results of the calculation of the intrinsic value of the FCFE method are then balanced with the market value of a stock to determine the condition of a company's shares.

Furthermore, a fair value calculation will be conducted using the relative valuation method, which will be compared with the market price as of December 31, 2023. To support the valuation, a qualitative analysis of the company's external and business environment will also be employed (Damodaran, 2012).

Rusdi's (2023) research indicates that the fair value of Ahan is undervalued when calculated using the FCFE method and overvalued when calculated using the relative valuation method. This suggests that investors may be inclined to invest in undervalued shares. (Pulungan, Rusdi Riduan. Batubara, Maryam & Rahmani, 2023)

Furthermore, research conducted by Yauwanta (2023) found that using the FCFE method the market is quite efficient (semi strong). However, it must be recognized that the closeness of the FCFE valuation value to the market price can also occur by chance. (Yauwanta, 2023) This means that the financial model using the FCFE method used in this study does not necessarily produce an efficient valuation value. Conversely, if the FCFE results are significantly different from the market price, it can be concluded that the market has not operated efficiently (there is a large distortion of the price from its fundamental value).

Furthermore, research conducted by Anselmo (2024) demonstrated that investors can employ the Price Earning Ratio (PER) method to perform stock price valuation, as the calculation error rate using the PER method is the lowest among the three methods evaluated

in this study. The smaller the value of the Root Mean Squared Error (RMSE), the smaller the deviation that occurs. (Anselmo et al., 2024)

Previous research has identified a research gap regarding the efficiency of the method used to calculate the fair value of a company's shares. To address this, researchers conducted a study, focusing on Islamic property companies listed on ISSI for the 2019-2022 period. The objective was to determine the most effective method for measuring the fairness limit of shares and to identify the most efficient between the FCFE method and the relative valuation method. It is well-known that an investor's interest in investing, particularly in property companies, is driven by the potential for investment value to appreciate over time. This can be observed in the growth of numerous investment companies. However, to ensure that the investment value remains relevant and reasonable, it is essential to conduct a comprehensive analysis, such as the fair limit measurement method. The fair value limit of shares, particularly those of property companies, is often measured using two methods: the FCFE and the Relative Valuation methods. This can be observed in previous research on the same case.

From the various problems identified above, the author is interested in conducting further research into the topic in question. This will be carried out in the form of a more complex and in-depth study, which will be entitled "An Analysis of Sharia Stock Valuation Using the FCFE and Relative Valuation Methods in the Property Sector Listed on the Sharia Securities List." The objectives that the author wishes to achieve in conducting this research are as follows: The objective of this study is to analyze the intrinsic value of the shares of PT Metropolitan Kentjana Tbk, PT Mega Manunggal Property Tbk, and PT Pollux Properties Indonesia Tbk based on two valuation methods: the free cash flow to equity method and the relative valuation method. The objective of this analysis is to determine whether the share price of MKPI (PT Metropolitan Kentjana, Tbk) is fairly valued. A similar analysis will be conducted for MMLP (PT. Mega Manunggal Property, Tbk) and POLL (PT. Pollux Properties Indonesia, Tbk).

METHOD

The researcher employs the descriptive method to analyze the data obtained. This method involves the collection, interpretation, and analysis of data in accordance with the specific needs of the analysis, based on the identified problems. The data is then compared with relevant theories, allowing for the drawing of conclusions that can be used to solve the identified problems. The research was conducted using the fundamental analysis method with a top-down analysis approach.

This approach commences with an analysis of macroeconomic conditions, an analysis of industry conditions, and an analysis of the company. Subsequently, the company's equity value is obtained, which is then distributed in proportion to the number of shares available. This research was conducted through internet media that has presented data on property companies listed on the Indonesian Sharia Stock Index (ISSI). A total of two companies demonstrated an increase in stock prices, while one company recorded the highest decline in stock values over the course of a single year. The study spanned a period of four months, beginning in April and May of 2024.

The population under study is the area that the researcher wishes to examine. As explained by Sugiyono in his book, a population is a generalised area comprising objects or subjects that possess certain qualities and characteristics as defined by the researchers, who then draw conclusions based on their findings. The population under study in this instance is the stocks in the coal mining sector listed on the Indonesian Sharia Stock Index (ISSI). The sample is a subset of the population that the researcher wishes to examine. As outlined by Sugiyono in his book, the sample is a subset of the population in terms of both number and

characteristics. Therefore, the sample must be drawn from the existing population using specific methods that take into account existing considerations. In this sampling technique, the author employs the purposive sampling technique. According to Sugiyono, purposive sampling is a sampling technique with certain considerations. The sample that the researcher will use has provisions, namely a total of 18 (eighteen) public companies. From this figure, one stock issuer that experienced a significant decline in price over an extended period and two largest stock issuers that experienced a notable increase in price over an extended period were selected. This resulted in a total of three companies whose data was collected over a two-year period, from 2019 to 2022.

The data collection technique is the method or process employed to gather the requisite data. The data collection model is the approach taken to the data source in order to ensure that the data collected accurately reflects the population. The data obtained in a study must be empirical data that meets valid and reliable criteria. In valuing the share price of PT Metropolitan Kentjana Tbk, PT Mega Manunggal Property Tbk, and PT Pollux Properties Indonesia Tbk, the Free Cash Flow To Equity and Relative Valuation methods were employed.

RESULTS AND DISCUSSION

Data Analysis With FCFE

Furthermore, the calculation of free cash flow to equity over the next five years (2024-2028) allows for the present-valuation of the company's equity value, which is then compared to the current market value. In this case, the FCFE value is compared to the stock market price as of December 31, 2023 to determine whether it is overvalued or undervalued.

A. Calculating the Cost of Equity

The discount rate that is relevant in determining the fair value of the company's shares is the cost of equity capital, which is determined by the capital asset pricing model (CAPM) using the following equation:

The K_e is equal to R_f plus β_i , where R_f is the risk-free rate and β_i is the beta coefficient. The K_e is then subtracted from R_m , which is the market rate.

The risk-free rate (R_f) is the interest rate for instruments that are considered to have no possibility of default. In Indonesia, the risk-free instruments that can be chosen are the Bank Indonesia interest rate (BI rate) and government bonds (SUN). For this study, the risk-free instrument used is based on IDR-denominated government securities (SUN) with a maximum duration of 10 years and a yield rate of 6.00%. In this study, the implemented risk-free interest rate is 6.00%, which will be used as the risk-free return rate (R_f).

$(R_m - R_f)$ represents the difference between the risk-free investment interest rate and the return on equity investment. The determination of the equity market risk premium incorporates country-specific risk premiums, such as stock price volatility, to produce the base equity market risk premium. Including these risks results in a discount rate that accommodates short-term changes in sentiment in emerging market securities. For this valuation, a market risk of 6.00% was used.

Beta (β) is a factor that covers the systematic risk of an equity. It indicates the extent to which the investment instrument is risky relative to the portfolio. To obtain the appropriate beta factor, which will be used in the calculation of the fair market value of the object of this study, the beta value of each company studied will be employed.

Table 1. Company Beta

Stock Code	Beta
MKPI	0,037

MMLP	0,315
POLL	-1,25

Source: Yahoo Finance

Based on MKPI's beta value of 0.037, using the CAPM (Capital Asset Pricing Model), the cost of capital on MKPI's equity is 5.96%, as shown in the calculation in the table below:

Table 2. CAPM (*Capital Asset Pricing Model*) MKPI

CAPM	
Risk-Free Rate	6,00%
Beta	0,0375
Market Return	5,00%
r /Ke	5,96%

Based on MMLP's beta value of 0.315, using the CAPM (Capital Asset Pricing Model), MMLP's cost of capital on equity is 5.69%, as shown in the calculation in the table below.

Table 3. CAPM (*Capital Asset Pricing Model*) MMLP

CAPM	
Risk-Free Rate	6,00%
Beta	0,315
Market Return	5,00%
r /Ke	5,69%

Based on POLL's beta value of -1.25, using the CAPM (Capital Asset Pricing Model), the cost of capital on POLL's equity is 7.25%, as shown in the calculation in the table below.

Table 4. CAPM (*Capital Asset Pricing Model*) POLL

CAPM	
Risk-Free Rate	6,00%
Beta	-1,25
Market Return	5,00%
r /Ke	7,25%

b. Calculating Free Cash Flow to Equity

The next valuation method used is to calculate Free Cash Flow to Equity. In this method, the valuation is carried out by discounting the Cash Flow to Equity, which is the remaining cash flow that can be received by shareholders after the company fulfills all obligations to pay expenses, taxes, interest, loan principal and capital expenditures and changes in working capital. Free Cash Flow to Equity is calculated by making adjustments to net income with the following formula:

$$\text{CFE} = \text{NI} - \text{Net CapEx} - \Delta\text{NCWC} + \text{Net Debt}$$

1) PT Metropolitan Kentjana Tbk

a) FCFE Calculation of MKPI Shares

Net Income (NI) is obtained by Pretax Income reduced by Income Tax Provision and then summed up with Minority Interest. As in the table below:

Table 5. MKPI Stock Net Income Calculation (in Billion Rupiah)

Year	<i>Pretax Income</i> (1)	<i>Income Tax Provision</i> (2)	<i>Minoriti Interest</i> (3)	<i>Net Income</i> (1-2+3)
2020	195.121.154	-35.992.762	159.834	231.273.750
2021	301.932.238	-22.737.480	82.897	324.752.615
2022	695.741.419	-5.594.311	24.394	701.360.124
2023	858.919.213	-14.471.949	8.781	844.438.483

Source. MKPI Stock Financial Statements processed data

Net capital expenditures (Net Capex) is calculated by reducing capital expenditures by depreciation. As in the table below:

Table 6. NetCapex Calculation of MKPI Shares (in Billion Rupiah)

Year	<i>Capital Expenditure</i> (1)	<i>Depreciation</i> (2)	<i>NetCapex</i> (1-2)
2020	-745.970.175	240.534.378	-986.504.553
2021	-465.874.629	345.680.342	-811.554.971
2022	-233.116.177	730.891.898	-964.008.075
2023	-162.696.406	861.439.444	-1.024.135.850

Source. MKPI Stock Financial Statements processed data

ΔNCWC or change in working capital is obtained from the difference between noncash current assets and nondebt current liabilities. Noncash current assets are current assets minus cash and securities. While nondebt current liabilities is the reduction of debts that have interest on current liabilities. The calculation is as in the table below

Table 7. MKPI Stock ΔNCWC Calculation (in Billion Rupiah)

Year	<i>Change in Current Assets</i> (1)	<i>Change in Current Liabilities</i> (2)	<i>Change in NCWC</i> (1-2)
2020	149.045.976	121.953.707	27.092.269
2021	152.045.976	119.953.707	32.092.269
2022	292.251.584	69.722.630	222.528.954
2023	434.863.188	43.887.677	390.975.511

Source. MKPI Stock Financial Statements processed data

Net Debt is calculated by calculating the difference between new debt received and debt payments made by the Company. The net debt calculation can be seen in the table below:

Table 8. MKPI Stock Net Debt Calculation (in Billion Rupiah)

Year	<i>Current Year Net Debt</i> (1)	<i>Prior Year Net Debt</i> (2)	<i>Change in Net Debt</i> (1-2)
2020	1.444.290.832	1.480.368.843	- 36.078.011
2021	1.444.450.425	1.444.290.832	159.593
2022	790.760.100	1.444.450.425	- 653.690.325
2023	161.916.284	790.760.100	- 628.843.816

Source. MKPI Stock Financial Statements processed data

After the Net Income, Net Capital Expenditures, Changes in Net Working Capital and Net Debt data are obtained, Free Cash Flow to Equity MKPI shares can be calculated as in the table below:

Table 9. FCFE Calculation of MKPI Shares (in Billion Rupiah)

Year	Net Income (1)	Net CapEx (2)	ΔNCWC (3)	Net Debt (4)	FCFE (1-2-3+4)
2020	231.273.750	-986.504.553	27.092.269	- 36.078.011	1.154.608.023
2021	324.752.615	-811.554.971	32.092.269	159.593	1.104.374.910
2022	701.360.124	-964.008.075	222.528.954	- 653.690.325	789.148.920
2023	844.438.483	-1.024.135.850	390.975.511	- 628.843.816	848.755.006

Source. MKPI Stock Financial Statements processed data

It can be seen from the Free Cash Flow to Equity calculation data above, the capital reinvested by the MKPI company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years.

b) FCFE Projection of MKPI Shares

The approach in calculating the Free Cash Flow to Equity projection is to calculate the projection of each component of Free Cash Flow to Equity as can be seen from the components of Net Income, Changes in Non Cash Working Capital, Capital Expenditures and Net Debt.

Net Income projection of MKPI shares by averaging the Company's growth over the last four years will get an average growth of 25.12%. By using this growth ratio, the projected net income of the MKPI Company will be obtained as in the table below:

Tabel 10. MKPI Stock Net Income Projection (in Billion Rupiah)

Year	Net Income
2024	657.915.529
2025	680.284.657
2026	738.986.972
2027	776.500.614
2028	820.775.233

Source. MKPI Stock Financial Statements processed data

MKPI stock NCWC projection, According to Damodaran, non-cash working capital can be estimated by making non-cash working capital a percentage of operating income. Based on historical data, MKPI Company's non-cash working capital as a percentage of revenue can be seen in the table below:

Tabel 11. NCWC as a Percentage of MKPI Share Revenue (in Billion Rupiah)

Year	Revenue	NCWC	%NCWC
2020	1.219.793.949	27.092.269	2,22%
2021	1.318.001.428	32.092.269	2,43%
2022	1.950.931.780	222.528.954	11,41%
2023	2.327.212.740	390.975.511	16,80%

By averaging the historical data, the average non-cash working capital as a percentage of operating income is 8.22%. The next step is to make a projection of the MKPI Company's operating income. Projections are made by looking at historical operating income growth data.

According to Damodaran, operating income tends to be more consistent and easy to predict because it is not too influenced by accounting methods so historical data is sufficient to predict operating income. Business income growth data can be seen in the table below:

**Table 12. MKPI Share Revenue Growth
(in Billion Rupiah)**

Year	Revenue	Revenue Growth
2020	1.219.793.949	-
2021	1.318.001.428	8,05%
2022	1.950.931.780	48,02%
2023	2.327.212.740	19,29%

By averaging the growth in business income above, the average growth in business income is 25.12% Using the average growth of 25.12% and the percentage of non-cash working capital to income of 8.22%, the projected business income and changes in non-cash working capital can be seen in the table below:

**Table 13. Projected Change in NCWC of MKPI Shares
(in Billion Rupiah)**

Year	Revenue	NCWC
2024	2.401.683.548	197.312.863
2025	2.483.340.788	204.021.501
2026	2.697.630.279	221.626.682
2027	2.834.571.714	232.877.251
2028	2.996.193.716	246.155.478

Projected Capital Expenditures (CapEx) of the company, MKPI. A company's Capital Expenditures is an expenditure that tends to be volatile in nature so it must be normalized first. Damodaran suggests normalizing capital expenditures by making it a percentage of operating profit after tax. The historical net capital expenditures data of MKPI Company can be seen in the table below:

Table 14. NetCapex Calculation of MKPI Shares (in Billion Rupiah)

Year	Capital Expenditure (1)	Depreciation (2)	NetCapex (1-2)
2020	-745.970.175	240.534.378	-986.504.553
2021	-465.874.629	345.680.342	-811.554.971
2022	-233.116.177	730.891.898	-964.008.075
2023	-162.696.406	861.439.444	-1.024.135.850

After averaging, the average amount of Capital Expenditure is -28.86%, and the average Depreciation is 30.11% Projected Capital Expenditure, Depreciation and net capital expenditures can be seen in the table below:

Table 15. NetCapex Projection of MKPI Shares (in Billion Rupiah)

Year	Capital Expenditure	Depreciation	NetCapex
2024	-693.140.780	723.066.116	-1.416.206.896
2025	-716.707.567	747.650.364	-1.464.357.931
2026	-778.552.844	812.165.720	-1.590.718.564
2027	-818.074.992	853.394.179	-1.671.469.171
2028	-864.720.105	902.053.126	-1.766.773.232

Projected Net Debt of MKPI Shares, Net Debt is calculated by calculating the difference between new debt received and debt payments made by the Company. The net debt calculation can be seen in the table below:

Table 16. MKPI Stock Net Debt Calculation (in Billion Rupiah)

Year	Current Year Net Debt (1)	Prior Year Net Debt (2)	Change in Net Debt (1-2)
2020	1.444.290.832	1.480.368.843	- 36.078.011
2021	1.444.450.425	1.444.290.832	159.593
2022	790.760.100	1.444.450.425	- 653.690.325
2023	161.916.284	790.760.100	- 628.843.816

The historical Net Debt data of the MKPI company after averaging it is obtained is - 15.87%. Then the projection of MKPI company net debt can be seen in the table below:

Table 17. MKPI Stock Net Debt Projection (in Billion Rupiah)

Year	Revenue	Net Debt
2024	2.401.683.548	-381.108.177
2025	2.483.340.788	-394.065.855
2026	2.697.630.279	-428.070.117
2027	2.834.571.714	-449.800.499
2028	2.996.193.716	-475.447.286

Projected Free Cash Flow to Equity MKPI Shares, After the Net Income, Net Capital Expenditures, Changes in Net Working Capital and Net Debt data projections are obtained, the Projected Free Cash Flow to Equity MKPI Shares can be calculated as in the table below:

Table 18. FCFE Projection of MKPI Shares (in Billion Rupiah)

Year	Net Income (1)	Net CapEx (2)	ΔNCWC (3)	Net Debt (4)	FCFE (1-2-3+4)
2024	657.915.529	-1.416.206.896	197.312.863	-381.108.177	1.495.701.385
2025	680.284.657	-1.464.357.931	204.021.501	-394.065.855	1.546.555.232
2026	738.986.972	-1.590.718.564	221.626.682	-428.070.117	1.680.008.738
2027	776.500.614	-1.671.469.171	232.877.251	-449.800.499	1.765.292.036
2028	820.775.233	-1.766.773.232	246.155.478	-475.447.286	1.865.945.701

It can be seen from the calculation data of the Free Cash Flow to Equity Projection above, the capital reinvested by the MKPI company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years. the Company's growth is projected to be maintained in the next few years.

c) Terminal Value of MKPI Shares

Terminal value is calculated using the two stage discounted FCFE Model which assumes that the cash flow to be received by shareholders will continue to grow forever with a fixed growth rate.

Terminal value is calculated using the Gordon growth model as follows:

$$\text{Terminal Value}_t = (\text{Cash Flow}_{t+1} \times (1+g_{\text{stable}})) / (r-g_{\text{stable}})$$

To determine the value of the present value of the terminal value (steady state), the value of the stable growth of MKPI, MMLP and POLL companies is needed. The International Monetary Fund (IMF) report as of 2024 predicts economic growth in Indonesia in 2024 of 5.30% which is used as a basic estimate then for cash flow used is the FCFE projection for the last year.

By using existing data, the terminal value is :

$$\begin{aligned} \text{Terminal Value } t &= (1,865,945,701 \times (1+5.30\%))/(5.96\% - 5.30\%) \\ &= 296.356.01.965 \end{aligned}$$

d) Equity Value of MKPI Shares

After the FCFE and terminal value projections are known, the company value can be obtained by calculating the present value of free cash flow to equity and the projected terminal value. To calculate this, a two-stage discounted FCFE model approach is used.

By using the two stage discounted FCFE model formula, the net cash flow from equity is discounted using a discount rate in the form of cost of equity, the calculation results can be seen in the table below:

**Table 19. Calculation Result of Equity Value of MKPI Shares
(in Billion Rupiah)**

Year	FCFE	Terminal Value	Total NPV
		296.356.01.965	228.839.387.747
2024	1.495.701.385		
2025	1.546.555.232		
2026	1.680.008.738		
2027	1.765.292.036		
2028	1.865.945.701		

From the results of these calculations, the equity value of MKPI Company using the *two stage discounted FCFE model* is **228,839,387,747**.

Given that MKPI Company is currently still developing its business where high growth is expected in the following years, the calculation of equity value using the *two stage discounted FCFE model* is considered more appropriate.

a) Value per Share of MKPI

By using the number of shares outstanding and the equity value that has been obtained, the value per share can be calculated using the formula:

$$\begin{aligned} \text{Price Per Share} &= \frac{\text{Value Of Equity}}{\text{Number Of Share}} \times 100 \\ \text{Price Per Share} &= \frac{228.839.387.747}{948.194.000} \times 100 \\ &= \text{IDR } 24,134 \text{ per share.} \end{aligned}$$

From these calculations, the intrinsic value per share of MKPI is Rp.24,134 per share, while the nominal value of shares at the close of stock trading in December 2023 is Rp.27,700 per share. So it can be said that the nominal value of this share is *overvalued* against its intrinsic value.

2) PT Mega Manunggal Property Tbk

a) FCFE Calculation of MMLP Shares

Net Income (NI) is obtained by *Pretax Income* less *Income Tax Provision* and then summed up with *Minority Interest*. As in the table below:

Table 20. MMLP Share Net Income Calculation (in Billion Rupiah)

Year	Pretax Income (1)	Income Tax Provision (2)	Minority Interest (3)	Net Income (1-2+3)
2020	-89.016.678	61.873	-62.780.129	- 151.858.680
2021	362.170.803	-4.092	-167.409.305	194.765.590
2022	194.459.968	-86.206	-87.318.453	107.227.721
2023	114.205.173	851.604	-21.029.755	92.323.814

Net capital expenditures (Net Capex) is calculated by reducing *capital expenditures* by depreciation. As in the table below:

Table 21. NetCapex Calculation of MMLP Shares (in Billion Rupiah)

Year	Capital Expenditure (1)	Depreciation (2)	NetCapex (1-2)
2020	-5.719.106	-7.479.088	1.759.982
2021	-304.293	410.984.612	- 411.288.905
2022	-4.150.867	263.017.249	- 267.168.116
2023	-2.802.481	249.718.183	- 252.520.664

Δ NCWC or change in working capital is obtained from the difference between *noncash current assets* and *nondebt current liabilities*. *Noncash current assets* are current assets minus cash and securities. While *nondebt current liabilities* is the reduction of debts that have interest on current liabilities. The calculation is as in the table below.

Table 22. MMLP Stock Δ NCWC Calculation (in Billion Rupiah)

Year	Change in Current Assets (1)	Change in Current Liabilities (2)	Change in NCWC (1-2)
2020	27.298.474	37.037.690	- 9.739.216
2021	- 474.690.308	- 104.826.783	- 369.863.525
2022	559.267.082	166.160.599	393.106.483
2023	- 953.581.462	369.979.218	- 1.323.560.680

Net Debt is calculated by calculating the difference between new debt received and debt payments made by the Company. The *net debt* calculation can be seen in the table below:

Table 23. MMLP Stock Net Debt Calculation (in Billion Rupiah)

Year	Current Year Net Debt (1)	Prior Year Net Debt (2)	Change in Net Debt (1-2)
2020	- 288.831.163	- 56.785.157	- 232.046.006
2021	179.615.386	- 288.831.163	468.446.549
2022	13.714.220	179.615.386	- 165.901.166
2023	1.604.788.979	13.714.220	1.591.074.759

After the data on *Net Income*, *Net Capital Expenditures*, *Changes in Net Working Capital* and *Net Debt* are obtained, *Free Cash Flow to Equity* MMLP shares can be calculated as in the table below:

Table 24. FCFE Calculation of MMLP Shares (in Billion Rupiah)

Year	Net Income (1)	Net CapEx (2)	Δ NCWC (3)	Net Debt (4)	FCFE (1-2-3+4)
2020	- 151.858.680	1.759.982	- 9.739.216	- 232.046.006	- 375.925.452
2021	194.765.590	- 411.288.905	- 369.863.525	468.446.549	1.444.364.569
2022	107.227.721	- 267.168.116	393.106.483	- 165.901.166	- 184.611.812
2023	92.323.814	- 252.520.664	- 1.323.560.680	1.591.074.759	3.259.479.917

It can be seen from the *Free Cash Flow to Equity* calculation data above, the capital reinvested by the MMLP company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years.

b) FCFE projection of MMLP Shares

The approach in calculating the projection of *Free Cash Flow to Equity* is to calculate the projection of each component of *Free Cash Flow to Equity* as can be seen from the components of *Net Income*, *Changes in Non Cash Working Capital*, *Capital Expenditures* and *Net Debt*.

The projected *Net Income* of MMLP shares by averaging the Company's growth over the last four years will get an average growth of 4.56%. By using this growth ratio, the projected net income of MMLP Company will be obtained as in the table below:

Table 25. MMLP Stock Net Income Projection (in Billion Rupiah)

Year	Net Income
2024	252.739.899
2025	261.333.055
2026	270.682.584
2027	279.865.608
2028	289.539.790

Source. Researcher processed results

NCWC projection of MMLP shares, According to Damodaran, *non-cash working capital* can be estimated by making *non-cash working capital* as a percentage of operating income. Based on historical data, MMLP's *non-cash working capital* as a percentage of revenue can be seen in the table below:

Table 26. NCWC as a Percentage of MMLP Share Revenue (in Billion Rupiah)

Year	Revenue	NCWC	%NCWC
2020	336.776.801	- 9.739.216	-2,89%
2021	316.572.333	- 369.863.525	-116,83%
2022	334.523.481	393.106.483	117,51%
2023	348.348.965	- 1.323.560.680	-379,95%

Source. Company Financial Statements data processed by researchers

By averaging the historical data, the average *non-cash working capital* as a percentage of operating income is -95.54%. The next step is to make a projection of the MMLP Company's operating income. Projections are made by looking at historical operating income growth data.

According to Damodaran, business income tends to be more consistent and predictable because it is less influenced by accounting methods so historical data is sufficient to predict business income. Business income growth data can be seen in the table below:

Table 27. MMLP Share Revenue Growth (in Billion Rupiah)

Year	Revenue	Revenue Growth
2020	336.776.801	-
2021	316.572.333	-6,00%
2022	334.523.481	5,67%
2023	348.348.965	4,13%

Source. Company financial statements data processed by researchers

By averaging the growth in business income above, the average growth in business income is 4.90% Using the average growth of 4.90% and the percentage of *non-cash working capital* to income of -95.54%, the projected business income and changes in *non-cash working capital* can be seen in the table below:

Table 28. Projected Change in NCWC of MKPI Shares (in Billion Rupiah)

Year	Revenue	NCWC
2024	365.423.920	- 349.131.359
2025	383.335.834	- 366.244.664
2026	402.125.733	- 384.196.808
2027	421.836.653	- 403.028.910
2028	442.513.740	- 422.784.101

Source. Data processed by researchers

MMLP stock Capital Expenditures (CapEx) projection. A company's *Capital Expenditures* is an expenditure that tends to be volatile in nature so it must be normalized first. Damodaran suggests normalizing *capital expenditures* by making it a percentage of operating profit after tax. The historical *net capital expenditures* of MMLP can be seen in the table below:

Table 29. NetCapex Calculation of MMLP Shares (in Billion Rupiah)

Year	Capital Expenditure (1)	Depreciation (2)	NetCapex (1-2)
2020	-5.719.106	-7.479.088	1.759.982
2021	-304.293	410.984.612	- 411.288.905
2022	-4.150.867	263.017.249	- 267.168.116
2023	-2.802.481	249.718.183	- 252.520.664

Source. MMLP Stock Financial Statements processed data

After averaging, the average amount of *Capital Expenditure* is -0.96%, and the average *Depreciation* is 69.48% Projected *Capital Expenditure*, *Depreciation* and *net capital expenditures* can be seen in the table below:

Table 30. Projected NetCapex of MMLP Shares (in Billion Rupiah)

Year	Capital Expenditure	Depreciation	NetCapex
2024	- 3.507.744	253.890.297	- 257.398.042
2025	- 3.679.683	266.335.190	- 270.014.872
2026	- 3.860.049	279.390.091	- 283.250.139
2027	- 4.049.256	293.084.901	- 297.134.157
2028	- 4.247.738	307.450.988	- 311.698.725

Source. MMLP Stock Financial Statements processed data

Projected *Net Debt* of MMLP Shares, *Net Debt* is calculated by calculating the difference between new debt received and debt payments made by the Company. The *net debt* calculation can be seen in the table below:

Table 31. MMLP Stock Net Debt Calculation (in Billion Rupiah)

Year	Current Year Net Debt (1)	Prior Year Net Debt (2)	Change in Net Debt (1-2)
2020	- 288.831.163	- 56.785.157	- 232.046.006
2021	179.615.386	- 288.831.163	468.446.549
2022	13.714.220	179.615.386	- 165.901.166
2023	1.604.788.979	13.714.220	1.591.074.759

Source. MMLP Stock Financial Report processed

The historical *Net Debt* data of MMLP company after averaging is 121.56%. Then the projection of MMLP's *net debt* can be seen in the table below:

Table 32. MMLP Stock *Net Debt* Projection (in Billion Rupiah)

Year	Revenue	<i>Net Debt</i>
2024	365.423.920	444.197.121
2025	383.335.834	465.970.247
2026	402.125.733	488.810.621
2027	421.836.653	512.770.558
2028	442.513.740	537.904.934

Source. MMLP Stock Financial Statements processed data

MMLP Stock *Free Cash Flow to Equity* Projection, After the *Net Income*, *Net Capital Expenditures*, *Changes in Net Working Capital* and *Net Debt* data projections are obtained, the MKPI Stock *Free Cash Flow to Equity* Projection can be calculated as in the table below:

Table 33. FCFE Projection of MMLP Shares (in Billion Rupiah)

Year	<i>Net Income</i> (1)	<i>Net CapEx</i> (2)	Δ NCWC (3)	<i>Net Debt</i> (4)	FCFE (1-2-3+4)
2024	252.739.899	- 257.398.042	- 349.131.359	444.197.121	1.307.633.888
2025	261.333.055	- 270.014.872	- 366.244.664	465.970.247	1.371.729.928
2026	270.682.584	- 283.250.139	- 384.196.808	488.810.621	1.438.967.751
2027	279.865.608	- 297.134.157	- 403.028.910	512.770.558	1.509.501.358
2028	289.539.790	- 311.698.725	- 422.784.101	537.904.934	1.583.492.298

Source. MMLP Stock Financial Report processed

It can be seen from the calculation data of the *Free Cash Flow to Equity* Projection above, the capital reinvested by the MMLP company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years. the Company's growth is projected to be maintained in the next few years.

c) Terminal Value MMLP Shares

Terminal value is calculated using the *two stage discounted FCFE Model* which assumes that the cash flows to be received by shareholders will continue to grow forever at a fixed growth rate.

Terminal value is calculated using the *Gordon growth model* as follows:

$$\text{Terminal Value}_t = \frac{\text{Cash Flow}_{t+1} \times (1+g_{\text{stable}})}{r-g_{\text{stable}}}$$

To determine the value of the *present value* of the *terminal value* (*steady state*), the value of the *stable growth* of MKPI, MMLP and POLL companies is needed. The *International Monetary Fund (IMF)* report as of 2024 predicts economic growth in Indonesia in 2024 of 5.30% which is used as a basic estimate then for *cash flow* used is the FCFE projection for the last year.

Using the existing data, the *terminal value* is :

$$\begin{aligned} \text{Terminal Value } t &= \frac{1.583.492.298 \times (1+5,30\%)}{5,69\% - 5,30\%} \\ &= 433.095.425.830 \end{aligned}$$

d) Equity Value of MMLP Shares

After the *FCFE* and *terminal value* projections are known, the company value can be obtained by calculating the present value of *free cash flow to equity* and the projected *terminal value*. To calculate this, a *two-stage discounted FCFE model* approach is used.

By using the *two stage discounted FCFE* formula, the net cash flow from equity is discounted using the discount rate in the form of *cost of equity*, the calculation results can be seen in the table below:

Table 34. MMLP Equity Value Calculation Result (in Billion Rupiah)

Year	FCFE	Terminal Value	Total NPV
		433.095.425.830	334.581.419.723
2024	1.307.633.888		
2025	1.371.729.928		
2026	1.438.967.751		
2027	1.509.501.358		
2028	1.583.492.298		

Source. MMLP Company Financial Statements processed data

From the results of these calculations, the equity value of MMLP Company using the *two stage discounted FCFE model* is **334,581,419,723**.

Given that MMLP Company is still developing its business where high growth is expected in the following years, the calculation of equity value using the *two stage discounted FCFE model* is considered more appropriate.

e) Value per Share of MMLP

By using the number of shares outstanding and the equity value that has been obtained, the value per share can be calculated using the formula:

$$\text{Price Per Share} = \frac{\text{Value Of Equity}}{\text{Number Of Share}} \times 100$$

$$\text{Price Per Share} = \frac{334.581.419.723}{6.889.134.608} \times 100$$

$$= \text{IDR 4,857 per share.}$$

From this calculation, the intrinsic value per share of MMLP is Rp.4,857 per share, while the nominal value of shares at the close of stock trading in December 2023 is Rp.298 per share. So it can be said that the nominal value of this share is still *undervalued* against its intrinsic value.

1) PT Pollux Propertis Indonesia

a) FCFE Calculation of POLL Shares

Net Income (NI) is obtained by *Pretax Income* less *Income Tax Provision* and then summed up with *Minority Interest*. As in the table below:

Table 35. POLL Stock Net Income Calculation (in Billions Rupiah)

Year	Pretax Income (1)	Income Tax Provision (2)	Minority Interest (3)	Net Income (1-2+3)
2020	93.725.065	7.164.375	-56.205.872	30.354.818
2021	-130.439.909	6.076.601	25.918.966	- 110.597.544
2022	478.829.826	10.103.599	9.682.146	478.408.373
2023	31.008.840	-498.105	28.475.716	59.982.661

Source. POLL Stock Financial Statements processed data

Net capital expenditures (*Net Capex*) is calculated by reducing *capital expenditures* by depreciation. As in the table below:

Table 36. NetCapex Calculation of POLL Shares (in Billion Rupiah)

Year	Capital Expenditure (1)	Depreciation (2)	NetCapex (1-2)
2020	-101.907.427	138.143.273	- 240.050.700
2021	-23.199.893	-45.525.799	22.325.906
2022	-1.778.234	562.181.344	- 563.959.578
2023	-16.269.640	80.714.298	- 96.983.938

Source. POLL Stock Financial Statements processed data

Δ NCWC or change in working capital is obtained from the difference between *noncash current assets* and *nondebt current liabilities*. *Noncash current assets* are current assets minus cash and securities. While *nondebt current liabilities* is the reduction of debts that have interest on current liabilities. The calculation is as in the table below.

Table 37. Calculation of Δ NCWC of POLL Shares (in Billion Rupiah)

Year	Change in Current Assets (1)	Change in Current Liabilities (2)	Change in NCWC (1-2)
2020	166.883.114	103.893.572	62.989.542
2021	- 49.781.156	- 63.635.537	13.854.381
2022	- 1.163.232.985	- 1.551.781.943	388.548.958
2023	102.024.930	- 871.437.925	973.462.855

Source. POLL Stock Financial Statements processed data

Net Debt is calculated by calculating the difference between new debt received and debt payments made by the Company. The *net debt* calculation can be seen in the table below:

Table 38. POLL Stock *Net Debt* Calculation (in Billions Rupiah)

Year	Current Year Net Debt (1)	Prior Year Net Debt (2)	Change in Net Debt (1-2)
2020	5.508.964.194	4.560.368.843	948.595.351
2021	5.531.006.372	5.508.964.194	22.042.178
2022	3.104.740.258	5.531.006.372	- 2.426.266.114
2023	2.499.916.284	3.104.740.258	- 604.823.974

Source. POLL Stock Financial Report processed

After *Net Income*, *Net Capital Expenditures*, *Changes in Net Working Capital* and *Net Debt* data are obtained, *Free Cash Flow to Equity* POLL Shares can be calculated as in the table below:

Table 39. FCFE Calculation of POLL Shares (in Billion Rupiah)

Year	Net Income (1)	Net CapEx (2)	Δ NCWC (3)	Net Debt (4)	FCFE (1-2-3+4)
2020	30.354.818	- 240.050.700	62.989.542	948.595.351	- 375.925.452
2021	- 110.597.544	22.325.906	13.854.381	22.042.178	1.444.364.569
2022	478.408.373	- 563.959.578	388.548.958	- 2.426.266.114	- 184.611.812
2023	59.982.661	- 96.983.938	973.462.855	- 604.823.974	3.259.479.917

Source. POLL Stock Financial Report processed

It can be seen from the *Free Cash Flow to Equity* calculation data above, the capital reinvested by the POLL company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years.

b) FCFE projection of POLL Shares

The approach in calculating the projection of *Free Cash Flow to Equity* is to calculate the projection of each component of *Free Cash Flow to Equity* as can be seen from the components of *Net Income*, *Changes in Non Cash Working Capital*, *Capital Expenditures* and *Net Debt*.

The projected *Net Income* of POLL shares by averaging the growth of the Company over the last four years will get an average growth of 46.46%. By using this growth ratio, the projected net income of POLL Company will be obtained as in the table below:

Table 40. POLL Stock Net Income Projection (in Billion Rupiah)

Year	Net Income
2024	72.784.383
2025	75.259.052
2026	67.496.841
2027	66.661.232
2028	64.849.828

Source. Researcher processed results

POLL stock NCWC projection, According to Damodaran, *non-cash working capital* can be estimated by making *non-cash working capital* a percentage of operating income. Based on historical data, the *non-cash working capital* of POLL Company as a percentage of revenue can be seen in the table below:

Table 41. NCWC as a Percentage of MKPI Share Revenue (in Billion Rupiah)

Year	Revenue	NCWC	%NCWC
2020	501.177.068	62.989.542	12,57%
2021	405.660.306	13.854.381	3,42%
2022	339.337.344	388.548.958	114,50%
2023	211.943.420	973.462.855	459,30%

Source. Company Financial Statements data processed by researchers

By averaging the historical data, the average *non-cash working capital* as a percentage of operating income is 147.45%. The next step is to make projections of POLL Company's operating income. Projections are made by looking at historical operating income growth data.

According to Damodaran, business income tends to be more consistent and predictable because it is less influenced by accounting methods so historical data is sufficient to predict business income. Business income growth data can be seen in the table below:

Table 42. POLL Stock Income Growth (in Billion Rupiah)

Year	Revenue	Revenue Growth
2020	501.177.068	-
2021	405.660.306	-19,06%
2022	339.337.344	-16,35%
2023	211.943.420	-37,54%

Source. Company financial statements data processed by researchers

By averaging the growth in business income above, the average growth in business income is -24.32% Using the average growth of -24.32% and the percentage of *non-cash working capital* to income of 147.45%, the projected business income and changes in *non-cash working capital* can be seen in the table below:

Table 43. Projected Change in NCWC POLL Shares (in Billion Rupiah)

Year	Revenue	NCWC
2024	160.405.958	236.514.186
2025	121.400.661	179.001.945
2026	91.880.132	135.474.734
2027	69.537.995	102.531.867
2028	52.628.710	477.599.589

Source. Data processed by researchers

Capital Expenditures (CapEx) projection of POLL stock. A company's *Capital Expenditures* is an expenditure that tends to be volatile in nature so it must be normalized first. Damodaran suggests normalizing *capital expenditures* by making it a percentage of operating profit after tax. The historical *net capital expenditures* data of POLL Company can be seen in the table below:

Table 44. NetCapex Calculation of POLL Shares (in Billion Rupiah)

Year	Capital Expenditure (1)	Depreciation (2)	NetCapex (1-2)
2020	- 3.507.744	253.890.297	- 257.398.042
2021	- 3.679.683	266.335.190	- 270.014.872
2022	- 3.860.049	279.390.091	- 283.250.139
2023	- 4.049.256	293.084.901	- 297.134.157

Source. POLL Stock Financial Statements processed data

After averaging, the average amount of *Capital Expenditure* is -8.56%, and the average *Depreciation* is 55.02% Projected *Capital Expenditure*, *Depreciation* and *net capital expenditures* can be seen in the table below:

Table 45. POLL Stock NetCapex Projection (in Billion Rupiah)

Year	Capital Expenditure	Depreciation	NetCapex
2024	- 13.736.003	88.261.138	- 101.997.142
2025	- 10.395.873	66.799.019	- 77.194.891
2026	- 7.867.948	50.555.759	- 58.423.708
2027	- 5.954.730	38.262.311	- 44.217.041
2028	- 4.506.741	28.958.213	- 33.464.954

Source. POLL Stock Financial Statements processed data

Projected *Net Debt* of POLL Shares, *Net Debt* is calculated by calculating the difference between new debt received and debt payments made by the Company. The *net debt* calculation can be seen in the table below:

Table 46. POLL Stock Net Debt Calculation (in Billions Rupiah)

Year	Current Year Net Debt (1)	Prior Year Net Debt (2)	Change in Net Debt (1-2)
2020	5.508.964.194	4.560.368.843	948.595.351
2021	5.531.006.372	5.508.964.194	22.042.178
2022	3.104.740.258	5.531.006.372	- 2.426.266.114
2023	2.499.916.284	3.104.740.258	- 604.823.974

Source. POLL Stock Financial Report processed

The historical *Net Debt* data of the POLL company after averaging it is found to be - 201.42%. Then the projected *net debt* of POLL company can be seen in the table below:

Table 47. Projected Net Debt of POLL Shares (in Billion Rupiah)

Year	Revenue	Net Debt
2024	160.405.958	- 323.083.484
2025	121.400.661	- 244.520.522
2026	91.880.132	- 185.061.412
2027	69.537.995	- 140.060.744
2028	52.628.710	- 106.002.714

Source. POLL Stock Financial Statements processed data

POLL Stock *Free Cash Flow to Equity Projection*, After the *Net Income*, *Net Capital Expenditures*, *Changes in Net Working Capital* and *Net Debt* data projections are obtained, the POLL Stock *Free Cash Flow to Equity Projection* can be calculated as in the table below:

Table 48. Projected FCFE of POLL Shares (in Billion Rupiah)

Year	Net Income (1)	Net CapEx (2)	ΔNCWC (3)	Net Debt (4)	FCFE (1-2-3+4)
2024	72.784.383	- 101.997.142	236.514.186	- 323.083.484	- 404.222.926
2025	75.259.052	- 77.194.891	179.001.945	- 244.520.522	- 305.929.599
2026	67.496.841	- 58.423.708	135.474.734	- 185.061.412	- 231.537.881
2027	66.661.232	- 44.217.041	102.531.867	- 140.060.744	- 175.235.710
2028	64.849.828	- 33.464.954	77.599.589	- 106.002.714	- 132.624.319

Source. POLL Stock Financial Report processed

It can be seen from the calculation data of the *Free Cash Flow to Equity Projection* above, the capital reinvested by the POLL company each year experiences significant fluctuations, along with the economic turmoil that has occurred in recent years. the Company's growth is projected to be maintained in the next few years.

c) Terminal Value of POLL Shares

Terminal value is calculated using the *two stage discounted FCFE Model* which assumes that the cash flows to be received by shareholders will continue to grow forever at a fixed growth rate.

Terminal value is calculated using the *Gordon growth model* as follows:

$$\text{Terminal Value}_t = \frac{\text{Cash Flow}_{t+1} \times (1+g_{\text{stable}})}{r-g_{\text{stable}}}$$

To determine the value of the *present value* of the *terminal value* (*steady state*), the value of the *stable growth* of MKPI, MMLP and POLL companies is needed. The *International Monetary Fund (IMF)* report as of 2024 predicts economic growth in Indonesia in 2024 of 5.30% which is used as a basic estimate then for *cash flow* used is the FCFE projection for the last year.

Using the existing data, the *terminal value* is :

$$\begin{aligned} \text{Terminal Value } t &= \frac{-132.634.319 \times (1+5,30\%)}{7,25\% - 5,30\%} \\ &= -7.161.713.250 \end{aligned}$$

d) Equity Value of POLL Shares

After the *FCFE* and *terminal value* projections are known, the company value can be obtained by calculating the present value of *free cash flow to equity* and the projected *terminal value*. To calculate this, a *two-stage discounted FCFE model* approach is used.

By using the *two stage discounted FCFE* formula, the net cash flow from equity is discounted using the discount rate in the form of *cost of equity*, the calculation results can be seen in the table below:

Table 49. Calculation Result of Equity Value of POLL Shares (in Billion Rupiah)

Year	FCFE	Terminal Value	Total NPV
		-7.161.713.250	-6.103.422.766
2024	- 404.222.926		
2025	- 305.929.599		

2026	- 231.537.881		
2027	- 175.235.710		
2028	- 132.624.319		

Source. POLL Company Financial Statements data processed

From the results of these calculations, the equity value of POLL Company using the *two stage discounted FCFE model* is **-6,103,422,766**.

Given that POLL Company is still developing its business where high growth is expected in the following years, the calculation of equity value using the *two stage discounted FCFE model* is considered more appropriate.

e) Value Per Share POLL

By using the number of shares outstanding and the equity value that has been obtained, the value per share can be calculated using the formula:

$$\begin{aligned} \text{Price Per Share} &= \frac{\text{Value Of Equity}}{\text{Number Of Share}} \times 100 \\ \text{Price Per Share} &= \frac{-6.103.422.766}{8.318.823.600} \times 100 \\ &= \text{IDR 73 per share.} \end{aligned}$$

From these calculations, the intrinsic value per share of POLL is Rp.73 per share, while the nominal value of shares at the close of stock trading in December 2023 is Rp.147 per share. So it can be said that the nominal value of this stock is still *overvalued* against its intrinsic value.

1. Valuation Analysis with Relative Valuation

The next model used to evaluate is *relative valuation*. In this model, the calculation of the share price uses the *Price Earning Ratio* (PER), and *Price to Book Value* (PBV) of the Coal sub-sector listed in the Index (DES).

a. PER (Price Earning Ratio)

Price earning ratio is the ratio between stock price per share and earnings per share. Where the value of the company's equity is represented by the company's ability to generate net income per share.

$$\text{PER} = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

The average value of *Price Earning Ratio* of Property sector stocks listed in DES based on the calculation is obtained at 66.77. The table below shows the calculation of the *Price Earning Ratio* of the Coal industry in 2023.

Table 50. Price Earning Ratio Calculation Results Property Industry

SHARE CODE	PER
APLN	2,43
ASRI	5,08
BEST	4,12
IF	2,73
BSDE	11,77
CTRA	11,72
DILD	11,83

DMAS	6,49
DUTI	8,23
EMDE	-1,47
FMII	118,08
GMTD	185,06
INPP	76,76
JRPT	9,62
KIJA	9,12
LPCK	13,34
MKPI	30,54
MMLP	22,27
MTLA	7,45
MTSM	-2,4
NZIA	-19,76
OMRE	-8,83
PLIN	15,41
POLL	80,18
PUDP	525,69
PWON	10,39
RTDX	12,59
RISE	833,4
SMDM	8,93
SMRA	12,39
Average	66,772

Source. www.idx.com data processed

1) MKPI Stock PER Calculation

$$PER = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

$$PER = \frac{27.200}{890,53}$$

$$PER = 30.5$$

2) MMLP Stock PER Calculation

$$PER = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

$$PER = \frac{298}{13,37}$$

$$PER = 22.3$$

3) POLL Stock PER Calculation

$$PER = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

$$PER = \frac{147}{1,63}$$

$$PER = 89.7$$

Then, after obtaining Industry PER, PER value in 2023 and EPS value in 2023, the data can be processed to obtain the fair value of shares in each sample stock. To find the intrinsic value, namely: *Intrinsic Value* = Industry PER x EPS

Table 51. Intrinsic Value Calculation Results of MKPI, MMLP and POLL stocks

Stock Code	Industry PER (1)	PER 2023	EPS (2)	Intrinsic Value (3=1x2)
MKPI	66,77	30,05	890,53	59.461
MMLP	66,77	22,3	13,37	893
POLL	66,77	89,7	1,63	109

Source. Data processed

From the data above, it is known that the intrinsik value of MKPI shares using the PER calculation is Rp. 59,461 when compared to the market price at the close of December 2023, which is Rp. 27,200, the shares are still Undervalued. Then, the intrinsic value of MMLP shares using the PER calculation is Rp. 893 when compared to the market price at the close of December 2023, which is Rp. 298, so the shares are still *Undervalued*. Furthermore, the intrinsic value of POLL shares using the PER calculation is Rp. 109 when compared to the market price at the close of December 2023, which is Rp. 147, so the shares are *Overvalued*.

b. PVB (*Price to Book Value*)

Price to book value is the ratio between the market price per share and the book value of equity per share. *Price to book value* is obtained using the following equation;

$$PBV = \frac{\text{Market Value Per Share}}{\text{Book Value Per Share}}$$

The average *price to book value* of Property sector stocks listed on DES based on the calculation is 1.04. The table below shows the calculation of the *Price to book value* of the Property industry in 2023.

Table 52. Price to book value calculation results Property Industry

SHARE CODE	PBV
APLN	0,2
ASRI	0,29
BEST	0,3
IF	-0,08
BSDE	0,55
CTRA	0,96
DILD	0,31
DMAS	1,34
DUTI	0,75
EMDE	0,29
FMII	3,06
GMTD	3,48
INPP	1,36
JRPT	1,04
KIJA	0,51
LPCK	0,32
MKPI	3,76
MMLP	0,45
MTLA	0,6
MTSM	0,6
NZIA	0,36
OMRE	0,41
PLIN	0,88
POLL	0,71
PUDP	0,37
PWON	0,96
RDTX	1,33
RISE	4,47
SMDM	0,3
SMRA	0,77

Average	1,04
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Source. www.idx.com data processed

1) MKPI Stock PBV Calculation

$$PBV = \frac{\text{Market Value Per Share}}{\text{Book Value Per Share}}$$

$$PBV = \frac{27.200}{7.225}$$

$$PBV = 3.76$$

2) PBV Calculation of MMLP Shares

$$PBV = \frac{\text{Market Value Per Share}}{\text{Book Value Per Share}}$$

$$PBV = \frac{298}{659,27}$$

$$PBV = 0.45$$

3) PBV Calculation of POLL Shares

$$PBV = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

$$PBV = \frac{147}{205,72}$$

$$PBV = -0.71$$

Then, after obtaining the sector PBV and the PBV value in 2023, the data can be processed to obtain the fair value of shares in each sample stock. To find the intrinsic value, namely: *Intrinsic Value* = (PBV sector / PBV stock) x stock price.

Table 53. Intrinsic Value Calculation Results of MKPI, MMLP and POLL stocks

Stock Code	Industry PBV (1)	PBV 2023	Share Price	Intrinsic Value (3=(1/2)x3)
MKPI	1,04	3,76	27.200	7.515
MMLP	1,04	0,45	298	686
POLL	1,04	0,71	147	214

Source. Data processed

From the data above, it is known that the intriknsik value of MKPI shares using the PBV calculation is Rp. 7,515 when compared to the market price at the close of December 2023, which is Rp. 27,200, the shares are *Overvalued*. Then, the intrinsic value of MMLP shares using the PBV calculation is Rp. 686 when compared to the market price at the close of December 2023, which is Rp. 298, so the shares are still Undervalued. Furthermore, the intrinsic value of POLL shares using the PBV calculation is Rp. 214 when compared to the market price at the close of December 2023, which is Rp. 141, so the shares are still *Undervalued*.

Discussion

1. Intrinsic value of shares with FCFE method

Based on the calculations that have been carried out by researchers, the intrinsic value of sharia stocks in the coal sector using the *Free Cash Flow to Equity* method is as follows:

Table 54. Intrinsic Value of MKPI, MMLP and POLL shares with FCFE method

Stock Code	FCFE
MKPI	Rp. 24,134
MMLP	Rp. 4,857
POLL	Rp. 251

Source. Data processed

From the table above, it is known that the intrinsic value of PT Metropolitan Kentjana Tbk (MKPI) shares is Rp. 24,134 per share. Furthermore, the shares of PT Mega Manunggal Property Tbk (MMLP) where the intrinsic value is Rp. 4,857 per share, and then the shares of PT Pollux Properties Indonesia Tbk (POLL) with an intrinsic value of Rp. 251 per share.

2. Intrinsic Value of Shares with *Relative Valuation Method*

Based on the calculations that have been carried out by researchers, the intrinsic value of sharia stocks in the Property sector using the *Relative Valuation* method is as follows:

Table 55. Intrinsic Value of MKPI, MMLP and POLL shares with *Relative Valuation* method

Stock Code	PER	PBV
MKPI	Rp. 59,461	Rp. 7,515
MMLP	Rp. 893	Rp. 686
POLL	Rp. 109	Rp. 214

Source. Data processed

From the table above, it is known that the intrinsic value of PT Metropolitan Kentjana Tbk (MKPI) shares calculated with the P / E Ratio is Rp. 59,461 per share. Furthermore, the shares of PT Mega Manunggal Property Tbk (MMLP) where the intrinsic value is calculated with a P / E Ratio of Rp. 893 per share, and then the shares of PT Pollux Properties Indonesia Tbk (POLL) calculated with a P / E Ratio intrinsic value of Rp. 109 per share.

Then when calculated with PBV (*Price to Book Value*) from the table above, it is known that the intrinsic value of PT Metropolitan Kentjana Tbk (MKPI) shares is Rp. 7,515 per share. Furthermore, the shares of PT Mega Manunggal Property Tbk (MMLP) where the intrinsic value is Rp. 686 per share, and then the shares of PT Pollux Properties Indonesia Tbk (POLL) where the intrinsic value is Rp. 214 per share.

3. *Overvalued/Undervalued Stock Price using FCFE method*

The results of research based on the *Free Cash Flow to Equity* method found that:

MKPI shares, by comparing against the closing price as of December 31, 2023 of Rp. 27,200, the *Free Cash Flow to Equity* method gives an indication of an intrinsic value of Rp. 24,134 *Overvalued* from the market price.

MMLP shares, by comparing against the closing price as of December 31, 2023 of Rp. 298, the calculation of the *Free Cash Flow to Equity* method gives an indication of the intrinsic value of Rp. 4,857 *Undervalued* from the market price.

POLL shares, by comparing to the closing price as of December 31, 2023 IDR 147, the calculation using the *Free Cash Flow to Equity* method indicates an intrinsic value of IDR 251 *Undervalued* from the market price.

In stock investment, making a decision to buy a stock for long-term / *longterm* goals, the fundamental analysis method with the FCFE (*Free Cash Flow to Equity*) approach is a better analysis, because it can describe the state of the company 2-5 years ahead by analyzing the company's previous condition.

Table 56. Calculation Results with FCFE Method for MKPI, MMLP and POLL shares

Stock Code	FCFE	Market Price	Description
MKPI	Rp. 24,134	Rp. 27,200	<i>Overvalued</i>
MMLP	Rp. 4,857	Rp. 298	<i>Undervalued</i>
POLL	Rp. 251	IDR 147	<i>Undervalued</i>

Source. Data processed

4. Overvalued/Undervalued Stock Prices Using the *Relative Valuation* Method

The research results based on the *Relative Valuation* method found that:

a. Calculation with P/E Ratio

Table 57. Calculation Results with P/E Ratio of MKPI, MMLP and POLL Shares

Stock Code	P/E Ratio	Market Price	Description
MKPI	Rp. 59,461	Rp. 27,200	<i>Undervalued</i>
MMLP	Rp. 893	Rp. 298	<i>Undervalued</i>
POLL	Rp. 109	IDR 147	<i>Overvalued</i>

Source. Data processed

MKPI shares, by comparing to the closing price as of December 31, 2023 IDR 27,200, the *Relative Valuation* method with the calculation of the P / E Ratio gives an indication that the intrinsic value of IDR 59,461 is *undervalued* from the market price.

MMLP shares, by comparing to the closing price as of December 31, 2023 of Rp. 298, the *Relative Valuation* method with the calculation of the P / E Ratio indicates that the intrinsic value of Rp. 893 is still *undervalued* from the market price.

POLL shares, by comparing to the closing price as of December 31, 2023 of IDR 147, the *Relative Valuation* method with the calculation of the P / E Ratio indicates that the intrinsic value of IDR 109 is *overvalued* from its market price.

b. Calculation with PBV (*Price to Book Value*)

Table 58. Calculation Results with PBV of MKPI, MMLP and POLL Shares

Stock Code	PBV	Market Price	Description
MKPI	Rp. 7,515	Rp. 27,200	<i>Overvalued</i>
MMLP	Rp. 686	Rp. 298	<i>Overvalued</i>
POLL	Rp. 214	IDR 147	<i>Overvalued</i>

Source. Data processed

MKPI shares, by comparing against the closing price as of December 31, 2023 IDR 27,200, the *Relative Valuation* method with PBV calculation gives an indication of an intrinsic value of IDR 7,515 *overvalued* from the market price.

MMLP shares, by comparing against the closing price as of December 31, 2023 of Rp. 298, the *Relative Valuation* method with PBV calculation gives an indication of an intrinsic value of Rp. 686 *Undervalued* from the market price.

POLL shares, by comparing against the closing price as of December 31, 2023 of IDR 147, the *Relative Valuation* method with PBV calculation gives an indication of an intrinsic value of IDR 214 *Undervalued* from the market price.

In analyzing the value of stock valuations in accordance with sharia principles, the fundamental analysis method with the *Relative Valuation* method is a better analysis in reflecting the value of a stock, whether the stock valuation is cheap or expensive. then this *relative valuation* method is suitable for making investment decisions in the short term because the financial statements of the company every month, quarter, or year always fluctuate so when making a decision to buy shares must be adjusted to the circumstances experienced by the related company.

CONCLUSION

This study found that the Free Cash Flow to Equity (FCFE) and Relative Valuation methods provide different results in assessing the fairness of Islamic stock prices in the property sector. The calculation results show that the shares of PT Metropolitan Kentjana Tbk (MKPI) are overvalued with the FCFE method, but undervalued with the PER method and overvalued with the PBV method. Shares of PT Mega Manunggal Property Tbk (MMLP) and

PT Pollux Properties Indonesia Tbk (POLL) are undervalued by all methods used. FCFE provides a more accurate indication in the long term because it considers future cash flows, while Relative Valuation provides a view of how the market values stocks based on current financial ratios.

REFERENCES

- Achsien, I. (2013). *Investasi Syariah di Pasar Modal: Menggagas Konsep dan Praktek Manajemen Portofolio Syariah, Cet. Kedua*. Gramedia Pustaka Utama.
- Afriani, E., & Asma, R. (2019). Analisis Valuasi Harga Saham dengan Price Earning Ratio, Free Cash Flow to Equity dan Free Cash Flow to Firm Pada Perusahaan Manufaktur. *Jurnal Sains Manajemen Dan Kewirausahaan*, 3(2), 111–123.
- Al-Zuhaili. (2002). *Transaksi Keuangan Kontemporer*. Damaskus-Suriah, Dar Al-Fikr, edisi pertama.
- Anastasia, N. (2013). Analisis Faktor Fundamental dan Risiko Sistematis Terhadap Harga Saham Properti Di BEJ. *Jurnal Akuntansi & Keuangan Vol. 5, No. 2, Nopember 2013: 123 – 132*. <https://doi.org/10.9744/jak.5.2.pp.%20123-132>
- Anoraga, Panji dan Pakarti, P. (2013). *Pengantar Pasar Modal, Edisi Revisi*. Asdi Mahasatya.
- Astuti, L. P. (2013). Penilaian Harga Wajar Saham Pt.Kimia Farma (Persero) Tbk Dan Pt. Indofarma (Persero) Tbk Menjelang Akuisisi,. *Jurnal Mix, Volume Iii, No. 2, Juni 2013*.
- Brown, R. and. (2016). *Investment Analysis and Portofolio Management*. Mason OH: Thomson (South Western).
- Budiman, Rahmat & Darmawan, A. (2018). Analisis Fundamental Harga Saham Perusahaan Dengan Menggunakan Metode Discounted Cash Flow Dan Price Earning Ratio. *Jurnal Administrasi Bisnis (Jab)/Vol. 63 No. 1 Oktober 2018*.
- Damodaran. (2012). *Damodaran On Valuation: Security Analysis For Investment And Corporate Finance*. John Wiley & Sons Inc.
- Dewan Syariah Nasional MUI. (2014). *Himpunan Fatwa Keuangan Syariah*,. Erlangga.
- Fahmi, I. (2015). *Pengantar Teori Portofolio dan Analisis Investasi*. Penerbit Alfabeta.
- Fakhruddin, A. T. dan H. M. (2011). *Pasar Modal di Indonesia*,. Salemba Empat.
- Gampito, G., & Melia, Y. (2022). Pengaruh Inflasi dan Nilai Tukar Rupiah Terhadap Harga Saham Perusahaan Property Efek Syariah. *I-Finance: A Research Journal on Islamic Finance*, 8(1), 34–48. <https://doi.org/10.19109/ifinance.v8i1.12558>
- H, Ismik Kurniaty. Hidayat, Raden Rustam dan Endang, M. G. (2016). *Analisis Fundamental Untuk Menilai Kewajaran Harga Saham Dengan Dividend Discount Model (Ddm) Dan Price Earning Ratio (Per) Sebagai Dasar Pengambilan Keputusan Investasi (Studi Pada Subsektor Perbankan Yang*.
- Hadi, N. (2018). *Pasar Modal. Edisi Pertama*.
- Hartono, J. (2015). *Teori Portofolio dan Analisis Investasi (10th ed.)*. BPFE.
- Hartono, J. (2013). *Teori Portofolio dan Analisis Investasi*.
- Hermuningsih, S. (2012). *Pengantar Pasar Modal Indonesia*,. Yogyakarta UPP STIEM YKPN, 2012.
- Indriwan, N. & N. (2023). Analisis Fundamental Untuk Menilai Kewajaran Harga Saham Pada Perusahaan Sektor Energi Yang Terdaftar Di Bei. *Journal Of Young Entrepreneurs, Vol. 1, No. 1, Januari 2023, Pages 112-126 E-Issn 2964-8521*.
- Inggrid, T. (2019). *Bisnis dan Investasi Sistem Syari'ah*.
- Manan, A. (2014). *Aspek Hukum dalam Penyelenggaraan Investasi di Pasar Modal Syariah Indonesia*,. Kencana.
- Martono, H. dan. (2017). *Manajemen Keuangan*,. Ekonisia.

- Muhammad Syafi'i Antonio. (2011). *Bank Syariah dari Teori ke Praktik*,. Mulkan dan Herawati. (2018). Valuation Pada Initial Public Offering (Ipo) Bank Brisyariah". *Jurnal SWOT Vol 8, No. 3 2018*.
- Mulyadi. (2016). *Akuntansi Manajemen Edisi Ketiga*.
- Musdalifa, Sri Mintari, M. N. (2015). *Fundamental, Teknikal, Perilaku Investor, dan Return Saham*.
- Prasetyo, A. H. (2011). *Valuasi Perusahaan*.
- Prowanta, E., & Herlianto, D. (2020). *Manajemen Investasi dan Portofolio*. Gosyen Publishing.
- Pulungan, Rusdi Riduan. Batubara, Maryam & Rahmani, N. A. B. (2023). Analisis Valuasi Saham Syariah Sektor Batubara Menggunakan Metode Fcfe Dan Relative Valuation Dimasa Pandemi Covid-19 Yang Terdaftar Di Issi. *Jurnal Akuntansi Dan Pajak, Issn 1412-629x L E-Issn 2579-3055*.
- Radwan, Samir Abdel Hamid, D. (1996). "Pasar Surat Berharga dan Perannya dalam Pembiayaan Pembangunan. *Kairo : Al- Eqtisadiyah", International Institute of Islamic Thought, 1996*).
- Rusdin. (2018). *Pasar Modal: Teori, Masalah, dan Kebijakan dalam Praktek*,.
- Sari, D. R. dan H. P. (2020). Valuasi Harga Wajar Saham Menggunakan Metode Dividend Discount Model Dan Price To Book Value Ratio (Studi Empiris Pada Perusahaan Sub Sektor Property Dan Real Estate Yang Terdaftar Di Bursa Efek Indonesia Pada Tahun 2016-2019). *Sekolah Tinggi Ilmu Ekonomi Indonesia – 2020*.
- Sunariyah. (2013). *Pengantar Pengetahuan Pasar Modal*.
- Suteja, J., & Gunardi, A. (2016). *Manajemen Investasi dan Porofolio*. Refika Aditama.
- Sutrisno. (2018). *Manajemen Keuangan*.
- Tandelilin, E. (2017). *Pasar Modal Manajemen Portofolio & Investasi*. PT Kanisus.
- Wira, D. (2014). *Analisis Fundamental Saham*.
- Yauwanta, Y. S. (2023). *Analisis Fundamental Untuk Memperoleh Nilai Wajar Saham Smdr Dengan Metode Free Cash Flow To Equity Dan Price Earning Ratio*. CAKRAWALA – Repositori IMWI |.
- Yuliana, I. (2010). *Investasi Produk Keuangan Syariah*,. UIN-MALIKI PRESS..