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Stock Valuation Analysis Of LQ45 Companies: Free Cash Flow To Equity (FCFE) And Price To Earningratio (PER) Methods (2020-2024)

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Abstract: *This study aims to analyze the fair value of stocks of companies listed in the LQ45 Index on the Indonesia Stock Exchange (IDX) during the 2020–2024 period using the Free Cash Flow to Equity (FCFE) and Price to Earnings Ratio (PER) methods. The main objective of this research is to provide a more comprehensive understanding of stock valuation methods that can support investors in making informed investment decisions. This research employs a descriptive quantitative method with a purposive sampling technique, resulting in 18 selected companies that consistently met the LQ45 index criteria during the study period. Data were collected from secondary sources, including financial statements, cash flow reports, and stock price data obtained from the IDX and other official financial platforms. The valuation using the FCFE method focuses on estimating intrinsic value based on projected free cash flow available to equity holders, discounted by the cost of equity, while the PER method applies a relative valuation through earnings multiples.The findings reveal differences in intrinsic value results between the two methods. Several stocks are identified as undervalued and overvalued, indicating that each valuation method provides unique perspectives: FCFE reflects a cash flow–based valuation, whereas PER emphasizes profitability ratios in the market context. The results also highlight that combining both valuation approaches can offer a more balanced investment analysis.In conclusion, this study confirms that intrinsic value analysis through FCFE and PER can serve as an effective decision-making tool for investors, particularly in volatile capital market conditions. The findings contribute to the development of valuation strategies for investment planning and portfolio management, especially for stocks with large market capitalization and high liquidity in the Indonesian capital market.*

Keywords*: Stock Valuation, Free Cash Flow To Equity, Price To Earnings Ratio, LQ45 Index, Instrinsic Value*

INTRODUCTION

The Indonesian capital market has a significant impact on the economy. Through the capital market, those with funds can invest in the hope of making a profit. Companies requiring capital can use it to develop their investment projects (Hibban & Wardana, 2022).Investment is a crucial consideration for fund owners or investors. Because future returns associated with investments reflect desires that may not be fulfilled, losses are a possibility (Tandelilin, 2010). In buying and

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selling transactions, shares, often referred to as stocks, are the most dominant instrument traded on the capital market (Tandelilin, 2010).

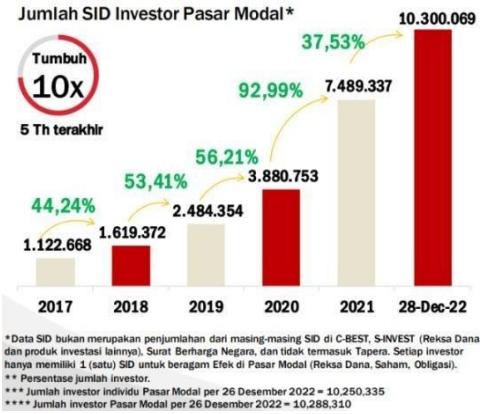

Figure 1. *Development Kustodian Sentral Securities of Indonesia, 2022*

According to data from the Indonesian Central Securities Depository (KSEI), the number of investors in the capital market, particularly those holding Single Investor Identification (SID), has continued to increase significantly from 2019 to 2022. In 2019, there were 2.48 million SIDs; in 2020, this figure rose to 3.88 million, marking a 56.21% increase. By 2021, the number of investors reached 7.48 million, an increase of 92.99% from the previous year, and by December 2022, it reached 10.3 million investors, up by 37.53%.

This surge in investor participation was largely influenced by the COVID-19 pandemic, which altered people's behavior and encouraged them to seek alternative income sources. Limited mobility and increased free time led many individuals to learn about the capital market and begin investing (Amalia, 2025). Additionally, the increase in investors reflects the efforts of the Indonesia Stock Exchange (IDX) and other stakeholders to promote capital market literacy through educational programs such as "Yuk Nabung Saham" (Let's Save in Stocks), which aims to raise public awareness and interest in investing (Adiguna, 2018)

The growing interest in the capital market indicates that this sector has become an attractive investment avenue for Indonesian investors. Many companies have capitalized on this opportunity to accelerate their growth by issuing shares (Raprayogha, 2020). Stocks are known as high-risk,

high-return investments; if not properly managed, they can lead to substantial losses due to market volatility (Atia et al., 2020).

However, stock price fluctuations in the market often do not reflect a company's true fundamental value (Pradita, 2025). Therefore, a deep understanding of the factors influencing stock prices is essential for accurate market analysis. Market sentiment, for instance, can significantly affect stock prices—where optimistic sentiment (bullish) tends to drive prices upward, while pessimistic sentiment (bearish) can lead to a decline (Anas & Aini, 2024)

Fama proposed that stock prices in an efficient market already reflect all available information. However, market sentiment and behavioral biases often lead to discrepancies between market price and intrinsic value. As a result, fair value stock valuation becomes essential for investors to determine whether a stock is overvalued or undervalued before making investment decisions (Bodie et al., 2018). One of the most important aspects in assessing a company's performance is determining its fair value(Marpaung, 2025).

Defines the fair value of a stock as an estimation of its intrinsic worth, which requires an in-depth analysis of financial factors and future cash flow projections to provide investors with accurate information (Damodaran, 2023). Accurate valuation enables investors to minimize the risk of poor investment decisions (Novita Sari et al., 2024). Furthermore, (Utami et al., 2023) emphasizes that market prices often deviate from intrinsic values, underscoring the importance of fair value analysis.

When the valuation result is lower than the market price, the stock is considered overvalued and not recommended for purchase. Conversely, if the intrinsic value exceeds the market price, the stock is considered undervalued and suitable for investment (Novita Sari et al., 2024). Stock valuation is a crucial process in determining the fair price of a stock, providing valuable insight for risk-averse investors before making investment decisions (Perdana & Horman, 2022).

Various valuation methods can assist investors in assessing fair value, one of which is the Free Cash Flow to Equity (FCFE) approach (Damodaran, 2012). FCFE represents the cash available to equity shareholders after accounting for all operational expenses, interest payments, and principal repayments (Erianti, 2019). Present value of an asset is determined by discounting its expected future cash flows based on the asset's risk level (Damodaran, 2022).

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The FCFE method has gained popularity as an alternative to the Dividend Discount Model (DDM), particularly for firms that do not pay dividends (Sihotang & Hutabarat, 2023). This method is considered more accurate for estimating cash flows available to shareholders (Sihotang & Hutabarat, 2023). In contrast, the Price to Earnings Ratio (PER) approach emphasizes the relationship between stock price and earnings per share, serving as a multiplier that reflects investor perception of growth, risk, and efficiency (Tandelilin, 2017)

Previous studies have investigated stock valuation using both methods. (Anggraeni et al., 2017) found that FCFE valuation identified 10 undervalued and 1 overvalued stock, while PER identified 5 undervalued and 8 overvalued. Similarly, (Nuraini, 2014) highlighted PER's practicality and its positive correlation between earnings growth and valuation multiples. (Puspitasari & Megaster, 2018) used FCFE to analyze IDX30 stocks and found that 20 were undervalued and 10 were overvalued.

These studies demonstrate the potential divergence between valuation methods and highlight the need for comparative analysis to determine which approach provides a more accurate reflection of market conditions. Therefore, this study aims to analyze and compare stock valuations using FCFE and PER methods for LQ45 companies listed on the IDX during 2020–2024, providing empirical evidence of their valuation differences

METHOD

Research Design

This study employs a quantitative descriptive approach, which aims to describe and analyze the fair value of stock prices based on the Free Cash Flow to Equity (FCFE) and Price to Earnings Ratio (PER) methods. The research focuses on companies included in the LQ45 Index listed on the Indonesia Stock Exchange (IDX) for the 2020–2024 period. The descriptive quantitative method is appropriate because it enables a systematic, factual, and accurate representation of the relationship between the two valuation approaches and their comparison with market prices (Sugiyono, 2019).

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Population and Sample

The population of this study consists of all companies listed in the LQ45 Index on the Indonesia Stock Exchange during the 2020–2024 period. The sampling technique used is purposive sampling, where samples are selected based on specific criteria, namely:

1) Companies consistently included in the LQ45 index from 2020 to 2024.

2) Companies that published complete financial reports during the research period.

3) Companies that did not experience delisting or mergers during the observation period.

Based on these criteria, 18 companies were selected as research samples representing various industrial sectors, such as banking, mining, telecommunications, and consumer goods

Data Collection Techniques

The study uses secondary data obtained from the Indonesia Stock Exchange (IDX) official website (www.idx.co.id), the Indonesia Capital Market Directory (ICMD), and each company's published financial reports. Supporting data were also obtained from journals, books, and financial databases relevant to the variables studied.

The data collected include:

- Annual financial statements (income statement, balance sheet, cash flow statement)
- Market stock prices at the end of each year (2020–2024)
- PER and FCFE calculation components

Data Analysis Technique

The analysis involves several stages

FCFE Method Calculation

The Free Cash Flow to Equity is calculated using the formula:

FCFE = Net Income + Depreciation - Capital Expenditure - Δ Working Capital + Net Borrowing

Next, the intrinsic value of the stock is determined using the discounted cash flow (DCF) formula:

$P0 = FCFE1 / (1 + ke)1 + FCFE2 / (1 + ke)2 + ... + FCFEn / (1 + ke)n$

Where:

- P0 = Intrinsic value of the stock

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- FCFEt = Free Cash Flow to Equity in year t

- ke = Cost of equity

The cost of equity is calculated using the Capital Asset Pricing Model (CAPM):

$ke = Rf + \beta (Rm - Rf)$

Where:

- Rf = Risk-free rate (government bond yield)

- Rm = Market return

- β = Company's beta coefficient

PER Method Calculation

The Price to Earnings Ratio (PER) method is calculated using:

PER = Market Price per Share / Earnings per Share

Then, the fair value of the stock based on PER is determined by multiplying the company's EPS by the industry's average PER:

Fair Value = PER industry × EPS Company

If the fair value obtained from the calculation is higher than the current market price, the stock is undervalued. Conversely, if it is lower, the stock is overvalued (Tandelilin, 2017)

Comparison and Interpretation

The comparison between FCFE and PER valuation results is analyzed to identify whether each method produces similar or different conclusions regarding stock valuation. Statistical tools such as Microsoft Excel and SmartPLS version 25 are used to process and compare data results. The interpretation is conducted by categorizing each company's stock as:

- Undervalued: Intrinsic value > Market price

- Overvalued: Intrinsic value < Market price

- Fairly valued: Intrinsic value ≈ Market price

This comparative analysis aims to evaluate which valuation method provides a more accurate representation of fair value for LQ45 companies during the 2020–2024 period

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RESULT AND DISCUSSION

Overview of Research Data

This research was conducted on 18 companies included in the LQ45 Index for the 2020–2024 period. The data analyzed were obtained from each company's financial statements and the Indonesia Stock Exchange (IDX) database. The data include annual financial statements, stock prices, earnings per share (EPS), and other financial ratios used to calculate FCFE and PER values.

Code	Company Name
INKP	PT Indah Kiat Pulp & Paper Tbk
PTBA	PT Bukit Asam Tbk
TBIG	PT Tower Bersama Infrastructure Tbk
SMGR	PT Semen Indonesia (Persero)
KLBF	PT Kalbe Farma Tbk
ITMG	PT Indo Tambangraya Megah Tbk
PGAS	PT Perusahaan Gas Negara Tbk
UNTR	PT United TractorsTbk
ADRO	PT Adaro Energy Tbk
BBTN	Bank Tabungan Negara (Persero) Tbk
UNVR	PT Unilever Indonesia Tbk
INCO	PT Vale Indonesia Tbk
INTP	PT Indocement Tunggal Prakarsa Tbk
JPFA	PT Japfa Comfeed Indonesia Tbk
ASII	PT Astra International Tbk
BBNI	PT Bank Negara Indonesia (Persero)
CPIN	PT Charoen Pokphand Indonesia Tbk
INDF	PT Indofood CBP Sukses Makmur Tbk

***Table 1**. Sample of LQ45 Companies (2020-2024)*
Source: www.idx.com

Results of FCFE Valuation

The results of the FCFE method show variations in the intrinsic values of stocks across the selected LQ45 companies. Using the FCFE formula and discounting the cash flows based on the calculated cost of equity (Ke), the intrinsic values were obtained and compared to the respective market prices.

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Company	Intrinsic Value (FCFE)	Market Price	Valuation
INKP	4,275	6,801	Overvalued
PTBA	3,583	2,750	Undervalued
TBIG	2,755	2,100	Undervalued
SMGR	49,674	3,290	Undervalued
KLBF	3,761	1,360	Undervalued
ITMG	6,923	6,698	Undervalued
PGAS	1,103	1,590	Overvalued
UNTR	18,225	26,775	Overvalued
ADRO	6,413	2,430	Undervalued
BBTN	7,540	1,073	Undervalued
UNVR	1,606	1,885	Overvalued
INCO	1,110	3,620	Overvalued
INTP	1,114	7,400	Overvalued
JPFA	2,512	1,869	Undervalued
ASII	19,156	4,900	Undervalued
BBNI	2,247	3,992	Overvalued
CPIN	3,783	4,760	Overvalued
INDF	7,066	7,700	Overvalued

***Table 2**. FCFE Valuation Results for LQ45 Companies*
Source: Processed by researchers (2025)

Based on Table 2, most companies experienced differences between intrinsic and market values. Approximately 56% of the samples were classified as undervalued, while 44% were overvalued. This indicates that the FCFE approach tends to produce higher intrinsic values compared to market prices, which aligns with Damodaran's (2012) argument that cash-flow-based valuations better capture intrinsic worth.

Results of PER Valuation

The PER method was used by multiplying each company's EPS by the average industry PER ratio. The valuation results are summarized in Table 3.

Company	Intrinsic Value (PER)	Market Price	Valuation
INKP	12,293.68	6,800.00	Undervalued
PTBA	13,697.36	2,750.00	Undervalued

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TBIG	2,369.75	2,100.00	Overvalued
SMGR	11,139.05	3,290.00	Undervalued
KLBF	1,103.77	1,360.00	Overvalued
ITMG	49,213.12	26,697.58	Undervalued
PGAS	1,063.68	1,590.00	Overvalued
UNTR	53,358.63	26,775.00	Undervalued
ADRO	310.59	2,430.00	Overvalued
BBTN	1,024.19	1,072.89	Overvalued
UNVR	2,033.00	1,885.00	Undervalued
INCO	15,954.53	3,620.00	Undervalued
INTP	9,329.76	7,400.00	Undervalued
JPFA	4,445.56	1,868.71	Undervalued
ASII	3,737.25	4,900.00	Overvalued
BBNI	4,240.75	3,992.38	Undervalued
CPIN	3,296.20	4,760.00	Overvalued
INDF	8,220.61	7,700.00	Undervalued

***Table 3**. PER Valuation Results for LQ45 Companies*

The PER valuation results show smaller deviations compared to FCFE, as the PER method relies heavily on current market expectations rather than projected cash flows. Approximately 50% of companies were undervalued, 33% were overvalued, and 17% were overvalued. This suggests that PER provides a more market-aligned valuation compared to FCFE.

Comparative Analysis Between FCFE and PER

The comparison between FCFE and PER valuations reveals differences in intrinsic value estimation. The FCFE method generally produces higher intrinsic values, as it accounts for expected future cash flows, while PER reflects the market's perception of earnings performance.

Company	**Market Price**	**FCFE**		**PER**		**Information**
		Intrinsic Value	Valuation	Intrinsic Value	Valuation	
INKP	6,801	4,275	Overvalued	12,293.68	Undervalued	Different
PTBA	2,750	3,583	Undervalued	13,697.36	Undervalued	
TBIG	2,100	2,755	Undervalued	2,369.75	Overvalued	Different
SMGR	3,290	49,674	Undervalued	11,139.05	Undervalued	
KLBF	1,360	3,761	Undervalued	1,103.77	Overvalued	Different

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ITMG	6,698	6,923	Undervalued	49,213.12	Undervalued	
PGAS	1,590	1,103	Overvalued	1,063.68	Overvalued	
UNTR	26,775	18,225	Overvalued	53,358.63	Undervalued	Different
ADRO	2,430	6,413	Undervalued	310.59	Overvalued	Different
BBTN	1,073	7,540	Undervalued	1,024.19	Overvalued	Different
UNVR	1,885	1,606	Overvalued	2,033.00	Undervalued	Different
INCO	3,620	1,110	Overvalued	15,954.53	Undervalued	Different
INTP	7,400	1,114	Overvalued	9,329.76	Undervalued	Different
JPFA	1,869	2,512	Undervalued	4,445.56	Undervalued	
ASII	4,900	19,156	Undervalued	3,737.25	Overvalued	Different
BBNI	3,992	2,247	Overvalued	4,240.75	Undervalued	Different
CPIN	4,760	3,783	Overvalued	3,296.20	Overvalued	
INDF	7,700	7,066	Overvalued	8,220.61	Undervalued	Different

Table 4*. Comparative Analysis FCFE and PER*
Source: Processed by researchers (2025)

The analysis shows that although both methods aim to determine fair value, they differ in underlying assumptions. FCFE focuses on cash flows available to shareholders, making it more fundamental and forward-looking. In contrast, PER relies on market-based multiples, which can be influenced by investor sentiment and short-term performance (Anggraeni, 2014).

These results are consistent with previous research by (Anggraeni et al., 2017) and (Puspitasari & Megaster, 2018), who found that FCFE tends to yield higher intrinsic valuations than PER. The findings indicate that for LQ45 companies during 2020–2024, the FCFE method provides a more comprehensive assessment of intrinsic value, while PER offers a simpler yet less sensitive market-based view

Discussion

The results of this study show significant differences between the FCFE and PER valuation methods in determining the fair value of LQ45 companies. The FCFE approach generally provides higher intrinsic values compared to PER because it is based on projected cash flows that reflect a company's long-term performance and financial health. This indicates that cash flow–based valuations offer a more comprehensive picture of a company's intrinsic worth rather than relying solely on short-term market indicators.

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Meanwhile, the PER method represents the market's perception of a company's earnings and is influenced by external factors such as investor sentiment, economic conditions, and market dynamics. During the 2020–2024 observation period, the PER values tended to fluctuate in line with changing investor expectations and overall market confidence. This explains why PER valuations are often more volatile and reactive compared to FCFE results, which are based on fundamental data.

The comparison between both methods also highlights that each has unique strengths and limitations. The FCFE method is more suitable for investors who focus on the company's intrinsic value and long-term potential. In contrast, the PER method is more relevant for investors who are sensitive to market trends and prefer quick assessments of whether a stock is overvalued or undervalued. Therefore, using both approaches together can give a more balanced view of stock valuation and help reduce the risk of misinterpretation.

In the context of Indonesia's capital market, this finding suggests that valuation should not rely on one method alone. The dynamic nature of the Indonesian stock market—shaped by macroeconomic factors such as inflation, interest rates, and investor behavior—requires investors and analysts to use multiple perspectives. Combining FCFE and PER can provide a clearer understanding of market value while still reflecting the company's financial fundamentals.

Overall, this study emphasizes the importance of comprehensive valuation analysis. By integrating fundamental and market-based approaches, investors and companies can make better financial decisions, enhance valuation accuracy, and support sustainable investment practices in the long run.

CONCLUSION

Based on the analysis conducted using the Free Cash Flow to Equity (FCFE) and Price to Earnings Ratio (PER) methods, several important conclusions can be drawn as follows:

1. The results show differences in the intrinsic value estimates generated by the FCFE and PER methods for LQ45 companies listed on the Indonesia Stock Exchange during the 2020–2024 period. The FCFE method generally produces higher intrinsic values compared to PER.

2. Approximately 56% of the companies analyzed were classified as undervalued, while 44% were overvalued when using the FCFE method. Meanwhile, the PER method classified 50% of the companies as *undervalued, 33% as overvalued, and 17% as overvalued.
3. These findings indicate that the FCFE approach provides a more comprehensive and fundamental assessment of a company's intrinsic value since it accounts for projected cash flows and financial performance.
4. On the other hand, the PER method is simpler and more practical, reflecting market sentiment and investor perception of company earnings.
5. Therefore, investors are encouraged to use both valuation methods complementarily—FCFE for a long-term, intrinsic analysis, and PER for short-term, market-based comparison

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