Valuation Analysis of E-Commerce Companies on the Indonesia Stock Exchange Before and After Initial Public Offering (IPO)

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This research aims to analyze and calculate the intrinsic value of e-commerce companies listed on the Indonesia Stock Exchange before and after their Initial Public Offering (IPO) using three valuation methods: the Discounted Cash Flow (DCF) method with the Free Cash Flow to Firm (FCFF) approach, the Relative Valuation method using the Price to Gross Merchandise Value (P/GMV) ratio, and the Customer-Based Valuation method with the Lifetime Value to Customer Acquisition Cost (LTV/CAC) ratio. The companies studied are PT Bukalapak.com Tbk (BUKA), PT GoTo Gojek Tokopedia Tbk (GOTO), and PT Global Digital Niaga Tbk (BELI). This type of research is comparative descriptive, comparing the results of the three valuation methods with the period before and after the IPO. The data used is from the financial statements for the period 2019-2023, serving as the basis for projections for 2024-2028, sourced from the official websites of each company. The research involves identifying data, calculating formulas, analyzing data, and drawing conclusions. The results show that BUKA and GOTO stocks were overvalued before the IPO and undervalued after the IPO, while BELI stocks were undervalued both before and after the IPO. The limitation of this research is the limited number of e-commerce companies listed on the IDX. Future research can expand research with other valuation methods.
Keywords: E-Commerce, Free Cash Flow to Firm, LTV/CAC, P/GMV.

1. Introduction

E-commerce companies in Indonesia are an integral part of the rapidly growing electronic commerce industry, contributing 75.6% to the digital economy's value in Indonesia, according to the report by Google, Temasek, and Bain & Company titled e-Conomy SEA 2023. As shown in Figure 1 below, it is explained that the Gross Merchandise Value (GMV) from the e-commerce sector in Indonesia is estimated to reach US$62 billion out of the total digital economy GMV of US$82 billion in that year (Katadata.co.id, 2023).

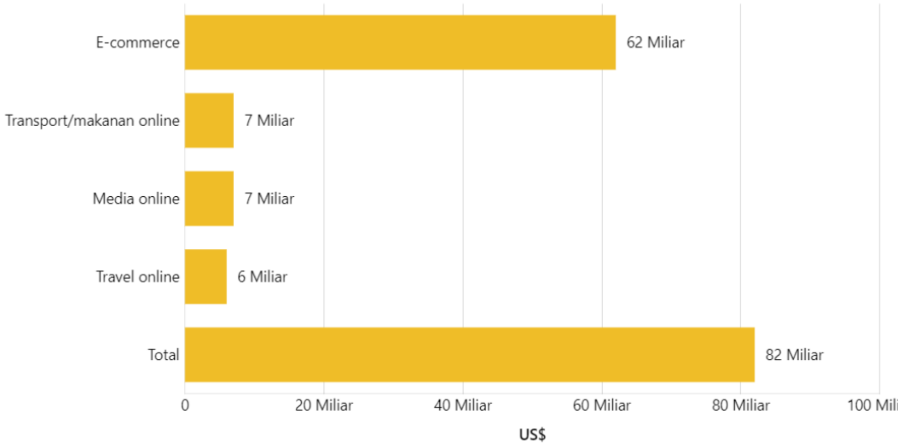

Figure 1. Projection of Gross Transaction Value/ GMV of Indonesia's Digital Economy by Sector (2023)

Source: www.databoks.katadata.co.id (2023)

E-commerce companies fall into the technology industry category with promising business prospects. During the Covid-19 pandemic, most people in Indonesia shopped online to avoid the spread of the virus, following the government's recommendation to limit social and economic activities across the country (snips.stockbit.com, 2023).

Based on population data from the Directorate General of Population and Civil Registration (Dukcapil) of the Ministry of Home Affairs, Indonesia's total population in December 2023 reached 280.73 million. With internet penetration in 2023 reaching 78.19% of the total population, the e-commerce sector has become an attractive area for both retail and institutional investors, both local and foreign, to invest in e-commerce company stocks on the Indonesian Stock Exchange (Katadata.co.id, 2023).

Below is the historical stock price of e-commerce companies before and one year after their IPO:

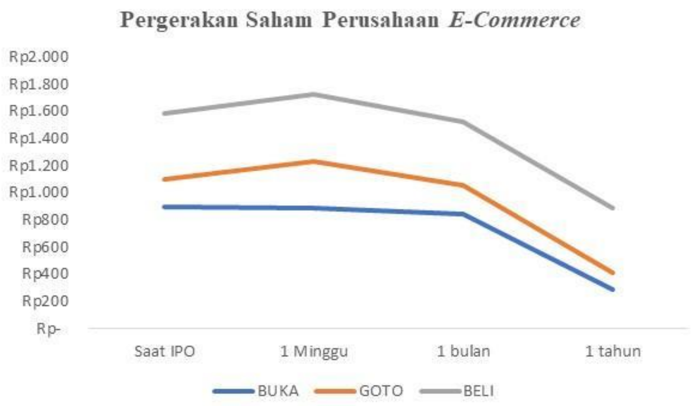

Figure 2 Comparison of Stock Prices Before and After IPO of E-Commerce Companies Listed on the IDX

Source: data processed by the author from www.finance.yahoo.com (2024)

Figure 2 above shows that the stock prices of the three e-commerce companies listed on the Indonesia Stock Exchange (IDX) tend to decline, especially for BUKA and GOTO, while BELI's stock price has increased compared to its IPO price, assuming a closing price with the same comparison period of 365 days after the IPO.

BUKA conducted its initial public offering (IPO) on August 6, 2021, at a price of IDR 850 and experienced a significant stock price decline of IDR 532, or -63%, one year after the IPO, with a closing price of IDR 318 on August 5, 2022. Similarly, GOTO's stock price, initially offered at IDR 338, saw a significant decline of IDR 239, or -71%, one year after the IPO, with a closing price of IDR 99 on April 11, 2023. In contrast, BELI's stock price increased compared to its IPO price, rising by IDR 216, or 86%, with a closing price of IDR 466 on November 8, 2023, while the price offered to investors at the IPO was IDR 250.

An Initial Public Offering (IPO) is the first public offering of shares to the public by a company following capital market regulations (OJK, 2010). During an IPO, the share price offered is determined by the issuer or the company conducting the public offering and the underwriter, known as the IPO Price. This IPO Price serves as the initial price in the capital market and will change in the secondary market based on the law of supply and demand (Nopriadi, 2016).

Generally, the price at the time of an Initial Public Offering (IPO) often experiences underpricing, a phenomenon supported by various studies. This underpricing can reduce a company's interest in selling their initial shares because the sale price does not reflect the true value of the shares. This challenges the market efficiency theory, which states that the market efficiently processes information related to the offered shares (Nopriadi, 2016).

Many investors are attracted to IPO stocks because of their low price in the primary market; however, the stock price after the IPO is often considered too high in the early trading in the secondary market due to more demand than supply. The overpricing of IPO stocks will gradually be corrected towards their true price under efficient market conditions. This causes IPO stock prices to appear to drop significantly after the IPO compared to private company stocks in the same industry and size. This phenomenon is known as long-run underperformance and also occurs with IPO stocks (Asmalidar, 2011).

The decline in stock prices previously explained in Figure 2 certainly has the potential to harm investors. This naturally raises the question of what the fair value or intrinsic value or valuation of the e-commerce company actually is. Investing in the stock market requires careful consideration to achieve the goal of making a profit. Fluctuations in stock prices due to increases or decreases in transactions and trading volumes result in increased information needed by investors for investment decisions (Fitriyana et al., 2020).

Based on previous research by Mazaka et al. (2023), the valuation of startup company stocks using the Price to Gross Merchandise Value (P/GMV) and Lifetime Value to Customer Acquisition Cost (LTV/CAC) methods categorized BUKA's stock as undervalued. This aligns with research conducted by Hartono (2023), which also found BUKA's stock to be undervalued, but differs from the valuation of its competitor GOTO, which was categorized as overvalued.

According to Halim et al. (2022), overvalued refers to a condition where the stock price in the market is considered too high because it exceeds its intrinsic value, while undervalued means the stock price is considered too low because it is below its intrinsic value, making it worth buying, especially at the IPO price. If the intrinsic value of the stock equals its market price, it is considered fairvalued.

Based on previous research conducted by Dalilah and Hendrawan (2021) showed that using the Discounted Cash Flow method with the Free Cash Flow to Firm (FCFF) approach is valid and reliable, providing different valuation values based on different growth assumptions.

This is consistent with Damodaran (2012:19), who explained that stock valuation can be done using the Discounted Cash Flow (DCF) method, which is a stock valuation method using the concept of the time value of money. One approach to the DCF method is using Free Cash Flow to Firm (FCFF), where discounted cash flows are used to assess a business's equity, evaluate the entire company, and value a small part of the company. Discounted Cash Flow aims to estimate the present value of expected future investment returns. This DCF method can be used to assess startup companies that are still generating negative cash flows using the discounted cash flow model (Damodaran, 2012: 1345).

However, according to research by Gupta and Sharma (2020), the DCF method, while traditional and commonly used, may not fully capture the value of companies with highly uncertain revenues, such as internet companies. An enhanced DCF model that considers non-financial factors provides a more accurate assessment.

Relative valuation, particularly using the P/GMV ratio, is suitable for e-commerce companies because by looking at the GMV value, investors can get an idea of the business operations, as this value represents the total transactions occurring within a certain period (Hayes, 2021). Gross Merchandise Value is a valuation calculation method that considers the amount of goods sold in e-commerce over a specific period based on C2C (Customer-to-Customer) (Hayes, 2021). GMV calculation is done without accounting for costs and other expenses, so it needs to be complemented with other calculation methods. A combination of several methods, including customer-based valuation with the LTV/CAC ratio, offers a comprehensive approach to determining the fair value of an e-commerce company, ensuring a more accurate reflection of its intrinsic value.

Based on the phenomena presented, including a significant decline in e-commerce company stock prices after the IPO and previous research results indicating that the valuation of e-commerce company stock prices at IPO showed overvaluation that did not reflect their intrinsic value, the author needs to conduct further research with the title:

“Valuation Analysis of E-Commerce Companies on the Indonesia Stock Exchange Before and After Initial Public Offering (IPO) (IPO)"

This study aims to analyze the valuation of e-commerce companies listed on the Indonesia Stock Exchange (IDX) before and after their Initial Public Offering (IPO) and provide recommendations to investors on whether the company's stocks are worth buying, holding, or selling. The valuation is conducted using financial statements from 2019-2023 and three analysis methods: Discounted Cash Flow (FCFF), Relative Valuation (P/GMV), and Customer-Based Valuation (LTV/CAC). The research results are expected to contribute theoretically, serving as a reference for analyzing company valuations using these three methods, and providing insights for future researchers interested in the topic of e-commerce company valuation.

Practically, this study can enhance financial literacy among the public in understanding the potential and risks of investing in the capital market and assist investors in making investment decisions based on the intrinsic value of stocks. It also offers feedback to companies for understanding the fair value of their stocks to support effective business strategies. Additionally, this research provides strategic benefits for various parties. For investors, the findings can serve as a guide to maximizing profits from investments in e-commerce company stocks, as Alamsyah et al. (2019) suggest that investors will choose companies that offer them benefits. However, investors need to conduct more in-depth analysis before making investment decisions. Factors such as index value fluctuations and other factors that can affect investment performance need to be considered (Yunita et al., 2018). For companies, these findings can help understand market reactions post-IPO and provide input for corporate value management strategies.

2. Research Methodology

The research method used in this study is a quantitative method, which is based on the research objectives. This is a descriptive study aimed at determining the value of each variable (Salim et al.,2024), specifically understanding the comparative differences by comparing stock prices in the capital market with the intrinsic or fair value of the stocks using different methods: Discounted Cash Flow, Relative Valuation, and Customer Based Valuation.

Based on the research timeline, this study is a time series analysis. According to Riyanto et al. (2020), time series research involves collecting first, second, and subsequent data at different times but within the same population. This study requires financial data from before and after the IPO.

The research variable used in this study is the intrinsic value of shares based on the company’s fundamental value (the value of the company). Then the variables will be calculated using the DCF method with the FCFF approach and using the relative valuation method approaches (Susanto & Rahadian, 2021).

The primary valuation method referenced in this study is the Discounted Cash Flow method using Free Cash Flow to Firm (FCFF) before and after the IPO. The reason for using FCFF is that it is considered to produce a valuation close to the average market stock price, making FCFF a reliable tool for evaluating companies in the long term (Ivanovski et al., 2014).

The valuation results will be validated using 2 (two) other valuation methods: Relative Valuation and Customer Based Valuation. The Relative Valuation analysis uses the Price to Gross Merchandise Value (P/GMV) ratio approach, measuring how many times the company's market value compares to the GMV it generates before and after the IPO. Meanwhile, Customer Based Valuation (CBV) focuses on the value of customers as the company's main asset before and after the IPO.

The intrinsic or fair value of the stocks obtained from these fundamental estimates is then compared with the IPO price and the market price of each e-commerce company's stocks during the specified period in this study, which is the closing price at the end of December 2023. Based on these stock price conditions, the researcher can conclude whether the intrinsic value falls into the category of undervalued, overvalued, or fairvalued, and then provide recommendations on whether the stock should be bought, held, or sold to maximize profits.

The population in this study consists of e-commerce companies listed on the Indonesia Stock Exchange. According to Sugiyono (2018:117), a population is a generalization area consisting of objects or subjects with certain qualities and characteristics determined by the researcher to be studied so that conclusions can be drawn. The sample in this study uses a saturated sampling technique, which is used when the entire population is taken as the sample. This technique is often employed if the population is small (less than 30) or if the researcher wants to make generalizations with a very small error rate (Isynuwardhana, Deannes, and Putri, 2021).

This study uses secondary data derived from historical company data collected over the past five years for each valuation calculation, from 2019 to 2023. Secondary data includes prospectuses, annual reports, financial statements, and published public expose materials obtained from each e-commerce company's website, daily stock price data of the sample companies, the Composite Stock Price Index (IHSG), and the latest stock beta obtained from Yahoo Finance. It also includes Indonesian macroeconomic variables, such as the Bank Indonesia (BI) interest rate available at www.bi.go.id and the gross domestic product (GDP) growth rate available at www.bps.go.id, as well as other data related to Gross Merchandise Value (GMV) taken from katadata.co.id.

3. Results

3.1. Valuation Analysis - DCF - FCFF Method

The valuation results using the Discounted Cash Flow method with the Free Cash Flow to Firm (FCFF) approach were conducted by projecting FCFF after determining basic assumptions based on historical financial data. Table 1 below explains the Financial

Statements used as a reference for calculating FCFF projections both before and after the IPO.

Table 1 Reference to Historical Financial Data

Company Code	Stock Listing Date	Financial Report before IPO	Financial Report After IPO
BUKA	06-Aug-21	31-Dec-20	31-Dec-23
GOTO	11-Apr-22	31-Dec-21	31-Dec-23
BELI	08-Nov-22	31-Dec-21	31-Dec-23

Source: Prospectus & Financial Report processed by the author (2024)

The valuation calculation using the Discounted Cash Flow method with the Free Cash Flow to Firm (FCFF) approach will use three scenarios: pessimistic, moderate, and optimistic, both before and after the IPO for each company under study.

This is because future cash flow projections are greatly influenced by various variables such as income growth, operational costs, investment, and interest rates. In addition, uncertainties in the macroeconomy (e.g. regulatory changes, inflation, and market fluctuations) as well as micro conditions (e.g. industry competition and company strategy) can influence final results. This pessimistic scenario is expected to anticipate the worst situation with the assumption that the company's performance is lower than expectations. Meanwhile, the moderate scenario represents the most realistic conditions or is based on average assumptions, and the optimistic scenario is assumed to be able to accommodate the best potential if the company can achieve results that are higher than expectations. On this basis, valuation with three scenarios not only provides more comprehensive insights but also enhances the reliability of the valuation analysis using the Discounted Cash Flow method with the Free Cash Flow to Firm (FCFF) approach.

Table 2 Comparison of Intrinsic Value of BUKA

			Before IPO		
Company Code	Stock Listing Date	Scheme	IPO Price	Intrinsic Value of Shares	Result
BUKA	06-Aug-21	Pessimistic	850	387	overvalued
		Moderate	850	533	overvalued
		Optimistic	850	705	overvalued

			After IPO		
Company Code	Stock Listing Date	Scheme	Closing Price Dec 2023	Intrinsic Value of Shares	Result
BUKA	06-Aug-21	Pessimistic	216	313	undervalued
		Moderate	216	293	undervalued
		Optimistic	216	261	undervalued

Source: data processed by the author (2024)

The valuation of BUKA using the DCF method with the FCFF approach shows that before the IPO, the stock price of IDR 850 per share was considered overvalued in all scenarios. In the pessimistic scenario, the intrinsic value was IDR 387, while in the moderate scenario it was IDR 533, and in the optimistic scenario it was IDR 705. This aligns with the findings of Hartono (2022) using the same method, the Discounted Cash Flow Model, where BUKA's valuation at the IPO was categorized as overvalued because the Equity Per Share was valued at IDR 247, which was lower than the IPO price.

After the IPO, with a closing price of IDR 216 per share in December 2023, the valuation became undervalued in all scenarios. In the pessimistic scenario, the intrinsic value was IDR 313, while in the moderate scenario it was IDR 293, and in the optimistic scenario it was IDR 261. This difference reflects overly high market expectations before the IPO and a post-IPO price decline that opens up investment opportunities, especially when using the moderate or optimistic scenarios, which indicate the company's fundamentals are still promising.

Table 3 Comparison of GOTO Intrinsic Value

			Before IPO		
Company Code	Stock Listing Date	Scheme	IPO Price	Intrinsic Value of Shares	Result
GOTO	11-Apr-22	Pessimistic	338	54	overvalued
		Moderate	338	71	overvalued
		Optimistic	338	98	overvalued

			After IPO		
Company Code	Stock Listing Date	Scheme	Closing Price Dec 2023	Intrinsic Value of Shares	Result
GOTO	11-Apr-22	Pessimistic	86	88	undervalued
		Moderate	86	132	undervalued
		Optimistic	86	198	undervalued

Source: data processed by the author (2024)

The valuation of GOTO using the DCF method with the FCFF approach shows that before the IPO, the stock price of IDR 338 per share was considered overvalued in all scenarios. In the pessimistic scenario, the intrinsic value was IDR 54, in the moderate scenario it was IDR 71, and in the optimistic scenario it was IDR 98, indicating that market expectations were too high compared to future cash flow projections. This aligns with the findings of Hartono (2022) using the same method, Discounted Cash Flow, where GOTO's valuation was deemed overvalued with Equity Per Share valued at IDR 100, which was lower than the IPO price. However, after the IPO, with a closing price of IDR 86 per share in December 2023, the stock became undervalued in all scenarios. In the pessimistic scenario, the intrinsic value was IDR 88, almost matching the market price, while the intrinsic value for the moderate scenario was IDR 132, and in the optimistic scenario, it was IDR 198. The difference in valuation results before and after the IPO reflects a market price correction post-IPO, creating investment opportunities for long-term investors, especially if the company can realize its optimistic projections.

Table 4 Comparison of Intrinsic Value of BELI

			Before IPO		
Company Code	Stock Listing Date	Scheme	IPO Price	Intrinsic Value of Shares	Result
BELI	08-Nov-22	Pessimistic	250	347	undervalued
		Moderate	250	571	undervalued
		Optimistic	250	730	undervalued

			After IPO		
Company Code	Stock Listing Date	Scheme	Closing Price Dec 2023	Intrinsic Value of Shares	Result
BELI	08-Nov-22	Pessimistic	482	398	overvalued
		Moderate	482	480	overvalued
		Optimistic	482	487	undervalued

Source: data processed by the author (2024)

The valuation of BELI using the DCF method with the FCFF approach shows that before the IPO, the stock price of IDR 250 per share was considered undervalued in all scenarios. In the pessimistic scenario, the intrinsic value was IDR 347, while in the moderate scenario, it was IDR 571, and in the optimistic scenario, it was IDR 730, reflecting significant growth potential based on future cash flow projections. However, after the IPO, with a closing price of IDR 482 per share in December 2023, the stock became overvalued in the pessimistic scenario, where the intrinsic value was IDR 398. In the moderate scenario, the intrinsic value of IDR 480 was almost equal to the market price, making it fair-valued, but it was undervalued in the optimistic scenario with an intrinsic value of IDR 487. This change indicates that even though the stock price increased post-IPO, the realization of fundamentals must align with the optimistic scenario to support the current market valuation. Investors need to be cautious if market expectations are not met in the long term.

3.2. Relative Valution Method (P/GMV) Analysis

The author then conducted testing by performing a valuation using the Relative Valuation method with the Price to Gross Merchandise Value (P/GMV) ratio. The Gross Merchandise Value data for the revenue segment in e-commerce sales was obtained from each company's website, which was the subject of this research, both in the Annual Reports and during the Annual Public Exposures.

Table 5 Summary of P/GMV Valuation Values Before IPO

Company Code	IPO Price (IDR)	Outstanding Shares (in billions)	Market Capitalization (in billions)	Gross Merchandise Value (in billion IDR)	Average Industry P/GMV Ratio	P/GMV Ratio	Intrinsic Value of Shares	Result
BUKA	850	103	87.602	62.200	1,60	1,41	966	undervalued
GOTO	338	1.184	400.315	230.599	1,60	1,74	118	overvalued
BELI	250	118	29.618	23.261	1,60	1,27	82	overvalued

Source: data processed by the author (2024)

Table 6 Summary of P/GMV Valuation Values After IPO

Company Code	Closing Price Dec 2023 (IDR)	Outstanding Shares (in billions)	Market Capitalization (in billions)	Gross Merchandise Value (in billion IDR)	Average Industry P/GMV Ratio	P/GMV Ratio	Intrinsic Value of Shares	Result
BUKA	216	103	22.269	86.840	1,60	0,26	1.348	undervalued
GOTO	86	1.201	103.321	248.836	1,60	0,42	331	undervalued
BELI	482	120	58.209	57.279	1,60	1,02	759	undervalued

Source: data processed by the author (2024)

The valuation analysis of e-commerce companies using the P/GMV ratio, as shown in Table 5 and Table 6, indicates that before the IPO, BUKA's stock appeared undervalued with a P/GMV of 1.41, below the industry average of 1.60. It was concluded that its IPO price of IDR 850 per share was below its intrinsic value of IDR 966. This valuation result for BUKA before the IPO aligns with the findings of Mazaka et al. (2023), who used the same valuation method with the P/GMV approach, indicating BUKA was undervalued. This contrasts with the research by Hartono (2022), which used a similar method, the Gross Merchandise Value Model, and found BUKA's valuation at the IPO to be overvalued. After the IPO, BUKA's stock price dropped significantly to IDR 216 per share, reducing its P/GMV to 0.26, further reinforcing the stock's undervaluation with an intrinsic value that increased to IDR 1.348.

Meanwhile, GOTO's valuation before the IPO was considered overvalued with a P/GMV of 1.74, above the industry average, and an intrinsic value of IDR 118. This aligns with the findings of Hartono (2022), who used a similar method, the Gross Merchandise Value Model, indicating GOTO's valuation at the IPO was overvalued. However, after the IPO, GOTO's stock price dropped from IDR 338 to IDR 86 at the closing price at the end of December 2023, with its valuation still higher than the market price, where the intrinsic value was IDR 331, indicating the stock was actually undervalued.

On the other hand, BELI's stock initially showed an overvalued valuation with a P/GMV of 1.27, where the IPO price of IDR 250 per share was still higher than its intrinsic value of IDR 82. However, after the IPO, the closing price at the end of December 2023 for BELI increased to IDR 482, with a P/GMV of 1.02, close to the industry average, reinforcing that the stock was undervalued, with the intrinsic value rising to IDR 759. This P/GMV ratio analysis indicates that despite stock price fluctuations, all three e-commerce companies have potential for value increase in the future, although before the IPO, both GOTO and BELI required more attention as their IPO prices were higher than their intrinsic values (overvalued).

3.3. Customer-Based Valuation Method (LTV/CAC) Analysis

Based on the valuation results of e-commerce companies using the Customer-Based Valuation method with the LTV/CAC ratio, it was found that before the IPO, as shown in Table 7, BUKA and GOTO stocks were overvalued due to negative LTV/CAC ratios of -0.7 for BUKA and -2.3 for GOTO. This indicates that customer acquisition costs (CAC) were much higher than the customer lifetime value (LTV), meaning the companies were spending more to acquire customers than they could earn from them. On the other hand, BELI showed a positive ratio of 2.5, indicating that the company was undervalued and had better long-term profitability potential compared to BUKA and GOTO.

Table 8 shows changes in valuation results after the IPO, with GOTO and BELI showing positive LTV/CAC ratios of 2.6 and 3.5, respectively, indicating they are undervalued. This means that the customer value has exceeded acquisition costs, reflecting improved cost management and increased customer profitability. Meanwhile, BUKA still shows a negative ratio of -1.6, meaning it remains overvalued as customer acquisition costs still exceed potential long-term revenue from customers. This contrasts with the findings of Mazaka et al. (2023), who used the same valuation method with the LTV/CAC approach and found BUKA to be undervalued compared to the closing price on October 28, 2021.

The research results using this Customer-Based Valuation approach indicate that, after the IPO, GOTO and BELI have better long-term growth potential compared to BUKA, which may need new strategies to improve the effectiveness of its customer acquisition costs.

Table 7 Summary of LTV/CAC Valuation Values Before IPO

Company Code	IPO Price (IDR)	Outstanding Shares (in billions)	Market Capitalization (in billions)	LTV	CAC	LTV/CAC	Intrinsic Value of Shares	Result
BUKA	850	103	87.602	-44.729	65.964	-0,7	- 576	overvalued
GOTO	338	1.184	400.315	-95.311	41.800	-2,3	-771	overvalued
BELI	250	118	29.618	522.396	210.000	2,5	622	undervalued

Source: data processed by the author (2024)

Table 8 Summary of LTV/CAC Valuation Values after IPO

Company Code	Closing Price Dec 2023 (IDR)	Outstanding Shares (in billions)	Market Capitalization (in billions)	LTV	CAC	LTV/CAC	Intrinsic Value of Shares	Result
BUKA	216	103	22.269	-4.499	2.900	-1,6	-335	overvalued
GOTO	86	1.201	103.321	144.118	55.157	2,6	225	undervalued
BELI	482	120	58.209	848.299	240.204	3,5	1.702	undervalued

Source: data processed by the author (2024)

4. Discussion

4.1. PT Bukalapak.com Tbk (BUKA) Valuation Results

The valuation analysis of BUKA before its IPO, based on Table 9, shows varying conclusions depending on the valuation method used. The Discounted Cash Flow - Free Cash Flow to Firm (DCF-FCFF) method indicates that the IPO price of IDR 850 per share is overvalued in all scenarios: pessimistic, moderate, and optimistic. The calculated intrinsic values of IDR 387, IDR 533, and IDR 705, respectively, are all lower than the IPO price. This reflects that the assumptions of future cash growth, even in the optimistic scenario, do not sufficiently support the IPO price, indicating overly high market expectations for BUKA's prospects.

The Relative Valuation method with the Price to Gross Merchandise Value (P/GMV) ratio offers a more optimistic view, suggesting that the IPO price is undervalued with an intrinsic value of IDR 966. This approach focuses on trading activity (GMV) on the e-commerce platform, highlighting growth potential based on transaction volume. However, the weakness of this method is that it does not account for profitability, making it more suitable for companies focused on market expansion rather than operational efficiency.

Conversely, the Customer Based Valuation method with Lifetime Value to Customer Acquisition Cost (LTV/CAC) yields a negative result of IDR 576, indicating that the IPO price is overvalued. This negative ratio signifies that customer acquisition costs (CAC) exceed the lifetime value (LTV), reflecting an inefficient business model. This presents a serious risk for investors, particularly concerning future business sustainability if the company cannot improve customer acquisition efficiency.

Overall, the combined analysis of these three methods suggests that BUKA's stock before the IPO is considered high-risk, especially for investors focused on business fundamentals like profitability and efficiency. While the P/GMV method offers optimism regarding growth, the cash and customer-based approaches show less favorable valuations. Therefore, investors need to exercise caution and consider the assumptions and prospects for the company to improve efficiency and profitability before deciding to invest.

Table 9 Summary of BUKA Valuation Results Before IPO

No.	Valuation Methods	Scheme	IPO Price (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	850	387	overvalued	Overvalued
		Moderate		533	overvalued	
		Optimistic		705	overvalued	
2.	P/GMV	-		966	undervalued	
3.	LTV/CAC	-		-576	overvalued	

Source: data processed by the author (2024)

The valuation analysis of BUKA after its IPO, based on Table 10, shows a significant change in the perception of the stock's intrinsic value compared to the closing price at the end of December 2023 of IDR 216. According to the Discounted Cash Flow - Free Cash Flow to

Firm (DCF-FCFF) method, the results indicate that BUKA's stock is undervalued in all scenarios: pessimistic, moderate, and optimistic. The intrinsic values are IDR 313, IDR 293, and IDR 261, respectively, all higher than the market price at that time. This suggests that the market may have underestimated BUKA's long-term prospects, despite challenges in achieving optimal growth.

The Relative Valuation method with Price to Gross Merchandise Value (P/GMV) supports the conclusion that BUKA's stock is undervalued, with an intrinsic value of IDR 1.348 significantly higher than the closing price at the end of December 2023. This assessment reflects that the high trading activity (GMV) on BUKA's e-commerce platform provides significant growth potential. However, the weakness of this method remains the same, as it does not consider the company's operational efficiency or profitability, thus offering an optimistic but not comprehensive view.

On the other hand, the Customer Based Valuation method with Lifetime Value to Customer Acquisition Cost (LTV/CAC) yields a negative result of IDR 335, indicating that BUKA's stock is overvalued based on this ratio. The high customer acquisition cost (CAC) compared to the lifetime value (LTV) suggests that the company's operational efficiency remains a significant challenge. This ratio reflects the risk to business sustainability if the company cannot manage customer acquisition expenses more efficiently in the future. Overall, the combined analysis of these three methods provides different perspectives depending on the approach used. The DCF-FCFF and P/GMV methods offer an optimistic view that BUKA's stock is undervalued after the IPO, reflecting investment opportunities for investors who believe in long-term growth. However, the results from the LTV/CAC method highlight the need for caution, as low business efficiency could hinder sustainability. Investors are advised to consider growth prospects, operational cost efficiency, and the company's business strategy before making investment decisions.

Table 10 Summary of BUKA Valuation Results After IPO

No.	Valuation Methods	Scheme	Closing Price Dec 2023 (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	216	313	undervalued	Undervalued
		Moderate		293	undervalued	
		Optimistic		261	undervalued	
2.	P/GMV	-		1.348	undervalued	
3.	LTV/CAC	-		-335	overvalued	

Source: data processed by the author (2024)

4.2. PT GoTo Gojek Tokopedia Tbk (GOTO) Valuation Results

The valuation results for GOTO before the IPO in Table 11 indicate that the IPO price of IDR 338 per share is considered overvalued across all scenarios. Using the Discounted Cash Flow (FCFF) method, the intrinsic value ranges from IDR 54 in the pessimistic scenario to IDR 98 in the optimistic scenario, significantly lower than the IPO price. This suggests that market expectations for GOTO's growth are not supported by its fundamental financial performance.

The Relative Valuation method with P/GMV yields an intrinsic value of IDR 118, further confirming that GOTO's valuation is overvalued. Despite GOTO's large transaction volumes, its profitability is not strong enough to justify such a high valuation. Meanwhile, the Customer-Based Valuation method with LTV/CAC results in a negative value of IDR 771, highlighting inefficiencies in GOTO's business model in generating customer value relative to its acquisition costs. Overall, the three valuation methods indicate that GOTO's IPO price does not align with its intrinsic value. Investors should carefully consider these risks, particularly if the company's operational performance fails to meet the high expectations reflected in its IPO price.

Table 11 Summary of GOTO Valuation Results Before IPO

No.	Valuation Methods	Scheme	IPO Price (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	338	54	overvalued	Overvalued
		Moderate		71	overvalued	
		Optimistic		98	overvalued	
2.	P/GMV	-		118	overvalued	
3.	LTV/CAC	-		-771	overvalued	

Source: data processed by the author (2024)

The valuation results for GOTO after its IPO, as shown in Table 12, indicate that the closing price in December 2023 of IDR 86 is considered undervalued in all three scenarios. The valuation using the Discounted Cash Flow (FCFF) method shows an intrinsic value ranging from IDR 88 to IDR 198 for pessimistic to optimistic scenarios, suggesting potential price increases if the company's performance continues to improve. The Relative Valuation method with P/GMV yields an intrinsic value of IDR 331, indicating that GOTO's market capitalization is not yet fully reflected in the stock price. Meanwhile, the Customer Based Valuation method with LTV/CAC produces an intrinsic value of IDR 225, suggesting that effective customer acquisition costs can support long-term value growth. Overall, all three methods confirm that GOTO is undervalued compared to the closing price at the end of December 2023. This presents an opportunity for investors to gain profits if the company successfully improves its fundamentals and optimizes market potential.

Table 12 Summary of GOTO Valuation Results After IPO

No.	Valuation Methods	Scheme	Closing Price Dec 2023 (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	86	88	undervalued	Undervalued
		Moderate		132	undervalued	
		Optimistic		198	undervalued	
2.	P/GMV	-		331	undervalued	
3.	LTV/CAC	-		225	undervalued	

Source: data processed by the author (2024)

4.3. PT Global Digital Niaga Tbk (BELI) Valuation Results

Table 13 shows that the valuation results for BELI before the IPO are varied but generally tend toward being undervalued. The Discounted Cash Flow (FCFF) method produces intrinsic values ranging from IDR 347 in the pessimistic scenario to IDR 730 in the optimistic scenario, with all intrinsic values exceeding the IPO price of IDR 250 per share. This indicates significant financial growth potential if moderate or optimistic scenarios are realized.

The Relative Valuation method using P/GMV shows overvalued results, with an intrinsic value of IDR 82, suggesting that transaction volume-based valuation does not fully reflect the company's profit potential. Conversely, the LTV/CAC method yields an intrinsic value of IDR 622, which is substantially higher than the IPO price, demonstrating the efficiency of the business model in creating long-term customer value. Overall, BELI's valuation before the IPO reflects substantial growth potential based on most of the valuation methods used in this study. However, the differing results from the P/GMV method highlight the need for investors to carefully assess the company's profitability margins and operational efficiency.

Table 13 Summary of BELI Valuation Results Before IPO

No.	Valuation Methods	Scheme	IPO Price (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	250	347	undervalued	Undervalued
		Moderate		571	undervalued	
		Optimistic		730	undervalued	
2.	P/GMV	-		82	overvalued	
3.	LTV/CAC	-		622	undervalued	

Source: data processed by the author (2024)

The valuation of BELI after the IPO in Table 14 shows varied results depending on the method and scenario applied. With a closing price of IDR 482 in December 2023, the Discounted Cash Flow (FCFF) method delivers results close to fair value in the moderate scenario at IDR 480 and the optimistic scenario at IDR 487, categorizing the stock as undervalued. However, in the pessimistic scenario, the intrinsic value of IDR 398 indicates that the stock is slightly overvalued but still close to its fundamental value. This highlights the importance of achieving growth expectations to maintain attractive valuations.

The Relative Valuation method using P/GMV generates an intrinsic value of IDR 759 significantly above the December 2023 closing price, indicating that BELI is undervalued. This underscores BELI's strong potential based on high transaction volumes, though profitability remains a factor requiring attention to sustain this valuation. Meanwhile, the LTV/CAC method yields an intrinsic value of IDR 1.702 the highest compared to the market price. This reflects BELI's efficiency in maximizing long-term customer value, which stands as a critical strength supporting its future growth prospects.

Overall, BELI's valuation post-IPO is generally deemed undervalued based on most of the valuation methods used. However, the DCF-FCFF method's pessimistic and moderate scenarios emphasize the importance of achieving operational performance aligned with expectations to maintain investment appeal.

Table 14 Summary of BELI Valuation Results After IPO

No.	Valuation Methods	Scheme	Closing Price Dec 2023 (IDR)	Intrinsic Value (IDR)	Result	Conclusion
1.	Discounted Cash Flow - FCFF	Pessimistic	482	398	overvalued	Undervalued
		Moderate		480	overvalued	
		Optimistic		487	undervalued	
2.	P/GMV	-		759	undervalued	
3.	LTV/CAC	-		1.702	undervalued	

Source: data processed by the author (2024)

5. Conclusion

Based on the research conducted using the Discounted Cash Flow method with the Free Cash Flow to Firm (FCFF) approach before and after the IPO, and validating the valuation with the Relative Valuation method using the Price to Gross Merchandise Value (P/GMV) ratio and the Customer Based Valuation method using the Lifetime Value to Customer Acquisition Cost (LTV/CAC) ratio, the author recommends investing in BELI, which has shown undervalued valuation results both before and after the IPO. Additionally, BELI is the only issuer that experienced an increase in stock price after the IPO. Furthermore, the author recommends holding BUKA and GOTO until the target price exceeds their intrinsic value after the IPO, even though the valuation of these two stocks was considered overvalued before the IPO. This study focuses only on quantitative data from financial statements without in-depth qualitative analysis, such as business strategy or evaluation of the company's revenue model. Moreover, assumptions such as revenue growth and BETA are assumed to be the same for the period before and after the IPO, which may reduce the accuracy of the results. The author suggests that future research should integrate more comprehensive qualitative analysis and establish more accurate assumptions according to the company's conditions and strategies.

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