

Research Article

Fair Value Valuation Analysis of Stock Prices Using The Discounted Cash Flow (DCF) Approach In Telecommunication Companies In Indonesia

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Abstract: PT Telkom Indonesia (Persero), Tbk (TLKM), PT XL Axiata, Tbk (EXCL), and PT Indosat, Tbk (ISAT) are three Indonesian telecommunications firms whose stocks will be valued using the Discounted Cash Flow technique from 2019 until 2023. According to the analysis, TLKM and EXCL stocks are undervalued, with market prices lower than their intrinsic values. This condition presents attractive investment opportunities for long-term investors, where potential gains may be realized if the companies' performance continues to improve and the market eventually appreciates the intrinsic value of the stocks. Conversely, ISAT stocks are identified as overvalued, with market prices exceeding their intrinsic values. This situation indicates excessive market expectations or the influence of certain external factors, making the decision to sell ISAT stocks a strategic move to realize capital gains before potential market corrections occur. These results emphasise how crucial it is to fully comprehend the internal and external aspects affecting company value before making any investing decisions. Investors are advised not to rely solely on valuation results but to also consider industry prospects, macroeconomic conditions, and company-specific issues to ensure more informed and strategic investment decisions. This study provides valuable insights for investors and market participants in identifying opportunities and risks in stock investments within the telecommunications sector.

Keywords: Discounted Cash Flow; Fundamental Analysis; Nvestment Strategy; Stock Valuation; Telecommunication Sector;

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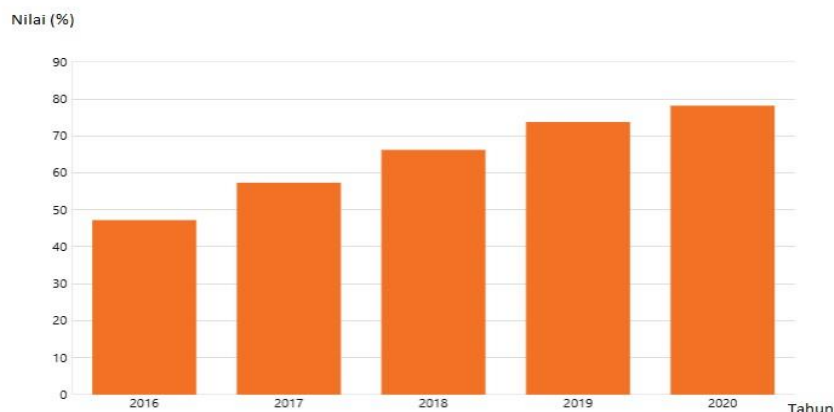
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1. Introduction

The number of digital platform users in Indonesia surged dramatically during the Covid-19 pandemic, reaching 170 million, or 61.8% of the total population. Digital media became an integral primary means of communication when the pandemic limited direct interaction between individuals (Heru Sudinta and Iwan Irwansyah, 2022). Given the importance of technology and telecommunications businesses in maintaining connectivity and increasing productivity in the commercial and education sectors, this situation offers substantial prospects for corporations listed on the IDX. The increase in distance learning and Work from Home (WFH) activities demonstrates the sector's significance (Mulyono, 2022).

In addition, according to BPS data, in Indonesia, 78.18% of households enjoyed internet connection in 2020. Compared to the previous year which was 73.75%, this figure shows a development of 4.43 percentage points.

Chart 1.1 Development of Households Using the Internet (2016-2020)



Source: Central Statistics Agency 2016-2020

A total of 18.83% of families in Indonesia own at least one computer, whether desktop, laptop, or tablet, in addition to internet access. Compared to 18.78% the previous year, this proportion represents a moderate increase. By 2024, it is estimated that there will be 221,563,479 internet users in Indonesia, out of a total population of 278,696,200, according to the Indonesian Internet Service Provider Association (APJII).

The Center for Budget Studies of the Secretary General of the Indonesian House of Representatives (DPR RI) stated that the Information and Communications (Infokom) sector is one of the sectors with a significant contribution to GDP, recording a high growth rate. In 2021, this sector ranked second in terms of growth after the health sector, contributing 4.41% to Indonesia's total GDP. Furthermore, in 2017, the Infokom sector absorbed approximately 9.78% of the workforce, or approximately 500,000 people. This figure continues to increase annually, reaching 1 million people in 2021. In the same year, tax revenue from this sector grew by 14.03% (yoy). This positive growth was driven by the need for digital transformation in various business sectors due to social restrictions.

Chart 1.2. GDP Growth in the Information and Telecommunications Sector



Source: Central Statistics Agency

By enabling taxpayers to pay taxes anytime and from any location without the need for complicated and time-consuming procedures, developments in the information technology industry also help the state generate revenue. The Directorate General of Taxes (DGT) has adopted various digital innovations to improve the quality of tax services and processes. These measures include the development of a Complaints Center, Call Center, Tax Information Media, and website, as well as the implementation of electronic systems such as Online Payments, e-SPT, e-Filing, and e-Registration. These efforts aim to simplify and increase the efficiency of tax services for taxpayers.

To accelerate the country's digital transition, the government is still working to improve the telecommunications industry. By 2045, the government has planned three stages of digital economic growth. To ensure public readiness, the first stage, called "preparation," begins with strengthening the digital foundation. The second stage, called transformation, aims to accelerate change to build smarter companies and societies. Finally, the third stage, often referred to as "direction," sets standards for future technical advancements.

In the 2025 State Budget Draft Law, the Ministry of Communication and Information (Kominfo) has budgeted 1.3 trillion for ICT implementation and 3.5 trillion for ICT infrastructure procurement, which covers 62% of the ministry's total spending.

Table 1. 1. Ministry of Communication and Information Technology Expenditure

LKPP	Nominal (billion rupiah)
2020	7.945,00
2021	23413,6
2022	21.380,70
2023	14.258,70
2034	14.553,90
2025	7.718,90

Source: Financial Note of the 2025 Draft State Budget

Although the 2025 spending figure is expected to decrease compared to the 2020-2024 budget, as the National Digital Transformation Acceleration Program is considered complete, the government still views the use of digital technology and telecommunications as crucial for economic growth. This situation has driven increased internet penetration across both urban and rural areas. Furthermore, the massive development of Base Transceiver Stations (BTS) by the government and telecommunications operators has significantly contributed to the growth of this sector. The greater the number of BTS available, the faster and more stable internet access becomes, making it easier for people to utilize digital services. These efforts not only expand connectivity but also stimulate innovation and the development of the digital economy in Indonesia.

By 2024, the Indonesia Stock Exchange had at least seven listed companies in the telecommunications industry, three of which were part of the LQ 45 index: PT XL Axiata Tbk (EXCL), PT Indosat Ooredoo Hutchison Tbk (ISAT), and PT Telkom Indonesia (Persero) Tbk (TLKM). Due to the rapid development of information and technology, businesses in the telecommunications subsector are currently quite significant. Therefore, these businesses require capital. Loans or capital markets are two ways to obtain this funding. Investors can assess business conditions in the capital market before purchasing shares. One way to do this is by examining the company's core components to obtain investment returns (Dina Aulia, 2022).

A country's economy is highly dependent on its capital markets. From a macroeconomic perspective, capital markets are a mechanism for supporting income distribution. Capital markets are a popular investment option for investors because they can generate returns that align with their unique risk tolerances. Meanwhile, capital markets provide another source of funding for issuers through the Initial Public Offering (IPO) procedure (Cahyadi Hadi, 2021).

Currently, more and more capital owners in Indonesia are choosing to invest in capital market instruments. Due to its ability to serve two primary purposes, the capital market is crucial to a country's economy: financial and economic. Based on its economic function, the capital market acts as a bridge between investors with excess funds and issuers who need funds. Investors can invest their funds through the capital market in the hope of earning a return, while issuers can use the funds obtained for growth or investment without waiting for funds to be collected from operations. Depending on the type of investment chosen, fund owners can earn returns through the financial function of the capital market (Darmadji and Fakhruddin, 2001).

Technological advancements have driven global economic growth, including in Indonesia. Capital markets have benefited from the rapid expansion of the digital economy, particularly due to the rise of e-commerce and the emergence of technology-based financial services (fintech), which have made investment access easier and more efficient.

According to Salim HS and Budi Sutrisno (2008), the term "capital investment" describes the channeling of funds by local and international investors through various accessible economic sectors in an effort to generate profits. Meanwhile, Fahmi (2012) explains that due to their ability to provide attractive returns, stocks have become the most popular financial product on the stock market. Stocks are a type of valuable asset that contains the company name, nominal value, and the rights and obligations of the holder.

Stock value is the market price of a stock over a specific period, depending on supply and demand mechanisms (Abdillah, 2020). Stock price indices are generally used by investors to indicate market movements when making investment choices. Whether the market is in a bullish or bearish phase, this indicator can capture these conditions. The LQ45 Index is one example. Among the investment sectors listed on the Indonesia Stock Exchange is the infrastructure sector, which includes the utilities, transportation, and telecommunications subsectors.

Investors generally use two approaches to stock price analysis: fundamental and technical (Wira, 2011). Tandelilin (2010) states that market value, book value, and intrinsic value are three categories of stock value that need to be considered. Investors will use this research to determine whether to buy, hold, or sell shares, based on the gap between market value and fundamental value. Husnan (2003) adds that the purpose of stock research is to determine intrinsic value, which is also influenced by macroeconomic factors such as exchange rates, inflation, and the BI rate.

Furthermore, Asnawi and Wijaya (2006) explain that estimating a stock's intrinsic value using fundamental company facts is known as stock valuation. A popular technique for determining whether a business is overvalued or undervalued is the Discounted Cash Flow (DCF) approach. This approach is applicable to both future forecasts and past analysis (Utama, 2018).

In the stock valuation process, investors are generally faced with three decision options: buy, hold, or sell. These decisions can be based on the results of fundamental or technical analysis. Husnan (2003) states that the goal of stock analysis is to determine the fair value of a stock by comparing it to market prices during the relevant period. Global economic factors, including inflation, the BI rate, and currency exchange rates, also impact investment decisions.

Asnawi and Wijaya (2006) explain that the technique for determining a stock's intrinsic value using core company data is known as stock valuation. The Discounted Cash Flow (DCF) methodology is one such technique. The purpose of stock valuation using this approach is to determine whether the stock is overpriced or underpriced. The DCF method can be applied to make projections for future periods and to evaluate previous periods. Thus, DCF allows for stock price forecasting and assessing whether previous market expectations are reflected at a reasonable level (Utama, 2018).

This assessment provides an overview of the stock's fair value, which is then compared to the market price to guide investors' decisions to buy, sell, or hold the stock. Therefore, investors can assess a stock's intrinsic value before investing by conducting valuation research or fundamental analysis using the company's financial data (Tandelilin, 2010). Fundamental analysis is conducted through comparisons between variables, and from these comparisons, investment decisions can be determined (Thomsett, 1998). Fundamental analysis is a way to select stocks, to determine when to buy them when momentum is needed (O'Niel, 1999).

In a study (Dwiyono, 2021) applying the DDM technique, the fair value of company shares on the LQ45 index for 2014-2018 was examined in this study. According to the study, fundamental analysis can be applied using the DDM and the constant growth method, by comparing the intrinsic value of the stock to its fair price to find overpriced and underpriced equity. Four (4) of the eleven (11) companies used as the study sample were determined to be overpriced, while seven (7) were determined to be underpriced. For businesses listed on the LQ45 index between 2010 and 2014, Hasanah and Rusliati (2017) studied intrinsic value analysis using the DDM and Price to Book Value (PBV) techniques. The results showed that the DDM approach was more appropriate than PBV because the average RMSE of the intrinsic score obtained by DDM was lower than that of PBV.

2. Proposed Method

Research Design

This study employed a descriptive study with a quantitative approach. Descriptive techniques, which involve classifying, comparing, and calculating numerical data using relevant formulas, attempt to demonstrate the characteristics of phenomena that emerged during the study period and investigate the causes of these phenomena (Travers in Umar, 2011).

The data used in this study comes from www.idx.co.id, the official website of the Indonesia Stock Exchange (IDX). Based on the telecommunications company's financial statements for 2019–2023, the intrinsic value analysis in this study uses a DCF valuation approach.

Data Collection Methods

The following is the data collection strategy that will be implemented in this study: (1) Data Types and Sources, to complement the currently available primary data and enrich the writing material, this study uses a literature review method for data collection, with secondary data collected from external sources, including previous research projects, publications from the Central Statistics Agency (BPS) and the Financial Services Authority (OJK), and print and online media articles. (2) Data Period, the data range utilized covers 2019 to 2023.

Data Analysis Methods

The data analysis in this study was conducted using a quantitative approach, presented in numerical form, and then processed through calculations based on formulas established in the theory. The steps involved were: (1) Collecting company financial data, such as dividends, EPS, and PER, sourced from the financial reports of public companies on the Indonesia Stock Exchange. (2) Analyzing the average Dividend Payout Ratio (DPR), EPS growth, and average PER. Based on the data obtained, the DPR can be calculated by separating dividends from EPS, the average EPS growth range, and the average PER. (3) Analyze Future Value EPS, predict EPS for the next 5 (five) years at the limits below: (a) If the increase in EPS is > 0.15 , that means the number is set at 0.15. (b) If the increase in EPS < 0.15 , which means the number is set at 0.10.

$$\text{Future Value} = \text{EPS tahun terakhir} \times (1 + \text{pertumbuhan EPS})$$

(4) Analyze the Future Value of share prices, calculate the Future Value of fifth year EPS and multiply it by the average PER to analyze the expected share price at the end of the next five years. Here are the limitations on average PER: (a) If the average PER is > 20 , the number 17 is assigned (b) If the average PER < 20 , the number 12 is set (5) Analyze accumulated dividends, evaluate accumulated dividends for the next five years by calculating the Future Value EPS multiplied by the average DPR. (6) Analyzing the total future value, to determine the total future value, the stock price at the end of the fifth year is added to the accumulated dividends over the five years. (7) Analyzing the rate of return. the CAPM method is used in this study to determine the rate of return. (8) Analyzing present value (fair value), fair value analysis of shares is performed by determining the present value of the total share price. (9) Comparing telecommunications companies used as test samples

Table 2.1. Operational Definition of Variables

No	Variabel	Defenisi	Pengukuran	Skala Ukur
1	PER	The measure used to assess the affordability of a stock based on the business's capacity to generate profits is PER.	Share Price / <i>Earnings per share</i>	Ratio
2	EPS	How much of the business's profits are distributed to each share of common stock outstanding	Net Profit / <i>Shares Issued</i>	Ratio
3	DPS	The distribution of the issuing company's profits to shares is determined by the company's overall profitability.	Dividends / <i>Share</i>	Nominal
4	DPR	The portion of a business's net profit that is paid as dividends to shareholders.	Amount of Dividends Distributed / Net Profit (EAT)	Percentage

Company Profil

PT Telekomunikasi Indonesia Persero (TLKM)

PT Telkom Indonesia (Persero) Tbk, formerly known as PT Telekomunikasi Indonesia Tbk, is a corporation that provides telecommunications and network infrastructure services. Its business activities are divided into several segments: (1) For businesses and organizations, the Corporate Segment offers a variety of telecommunications services, such as contact centers, broadband access, satellite services, line leasing, interconnection, information technology solutions, and data and internet services. (2) Through its IndiHome offering, the Residential Segment provides internet and data access, fixed line telephone services, and television subscriptions to residential customers. (3) For individual consumers, the Individual Segment provides mobile telecommunications services, including fixed wireless and wireless alternatives. (4) The Other Segment includes building management services.

In addition, Telkom also markets postpaid mobile phone services under the kartuHalo brand, along with prepaid services including simPATI, Kartu As, and Loop. The corporation is also developing an electronic money service under the T-cash brand.

Table 2.2 TLKM Profit and Loss Report

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Revenues		116,333,000.0	128,256,000.0	130,784,000.0	135,567,000.0	136,462,000.0	143,210,000.0	147,306,000.0	149,216,000.0
		5,728,000.0	8,762,000.0	10,126,000.0	8,342,000.0	7,447,000.0	8,527,000.0	8,438,000.0	8,969,000.0
Total Revenues		122,061,000.0	137,018,000.0	140,910,000.0	143,909,000.0	143,909,000.0	151,737,000.0	155,744,000.0	158,185,000.0
Cost Of Goods Sold		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Profit		122,061,000.0	137,018,000.0	140,910,000.0	143,909,000.0	143,909,000.0	151,737,000.0	155,744,000.0	158,185,000.0
Selling General & Admin Exp.									
R & D Exp.		0.0	0.0	0.0	0.0	0.0	82,000.0	108,000.0	0.0
Depreciation & Amort.		18,532,000.0	20,446,000.0	21,406,000.0	23,178,000.0	28,892,000.0	31,816,000.0	33,255,000.0	32,663,000.0
Other Operating Expense/(Income)		5,687,000.0	40,910,000.0	48,824,000.0	47,303,000.0	39,999,000.0	43,396,000.0	43,732,000.0	46,081,000.0
Operating Expense, Total		82,814,000.0	93,136,000.0	102,133,000.0	101,429,000.0	100,318,000.0	104,224,000.0	116,419,000.0	113,765,000.0
Operating Income		39,247,000.0	43,882,000.0	38,777,000.0	42,480,000.0	43,591,000.0	47,513,000.0	39,325,000.0	44,420,000.0
Interest Expense		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest and Invest. Income		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Interest Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Currency Exchange Gains (Loss)		52,000.0	-51,000.0	-68,000.0	86,000.0	86,000.0	-50,000.0	-256,000.0	36,000.0
Other Non-Operating Inc. (Exp.)		1,006,000.0	1,274,000.0	2,440,000.0	4,486,000.0	4,730,000.0	3,685,000.0	3,242,000.0	3,590,000.0
EBT Excl Unusual Items		38,189,000.0	42,659,000.0	36,405,000.0	37,908,000.0	38,775,000.0	43,678,000.0	36,339,000.0	40,794,000.0
Impairment of Goodwill		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gain (Loss) On Sale Of Assets		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asset Writtedown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Legal Settlements		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Unusual Items		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT Incl Unusual Items		38,189,000.0	42,659,000.0	36,405,000.0	37,908,000.0	38,775,000.0	43,678,000.0	36,339,000.0	40,794,000.0
Income Tax Expense		9,017,000.0	9,958,000.0	9,426,000.0	10,316,000.0	9,212,000.0	9,730,000.0	8,659,000.0	8,586,000.0
Earnings from Cont. Ops.		29,172,000.0	32,701,000.0	26,979,000.0	27,592,000.0	29,563,000.0	33,948,000.0	27,680,000.0	32,208,000.0
Extraord. Item & Account. Change		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Int. in Earnings		9,820,000.0	10,556,000.0	8,947,000.0	8,929,000.0	8,759,000.0	9,188,000.0	6,927,000.0	7,648,000.0
Net Income		19,352,000.0	22,145,000.0	18,032,000.0	18,663,000.0	20,804,000.0	24,760,000.0	20,753,000.0	24,560,000.0

Source: Bloomberg Terminal

Table .3 TLKM Financial Position Report

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
ASSETS									
Cash And Equivalents		29,767,000.0	25,145,000.0	17,439,000.0	18,242,000.0	20,589,000.0	38,312,000.0	31,948,000.0	29,008,000.0
Short Term Investments		1,471,000.0	2,173,000.0	828,000.0	271,000.0	1,197,000.0	420,000.0	934,000.0	1,420,000.0
Total Cash & ST Investments		31,238,000.0	27,318,000.0	18,267,000.0	18,513,000.0	21,786,000.0	38,732,000.0	32,882,000.0	30,428,000.0
Accounts & Notes Receivable		7,363,000.0	9,222,000.0	11,414,000.0	11,797,000.0	11,339,000.0	8,510,000.0	8,634,000.0	10,667,000.0
Total Receivables		7,363,000.0	9,222,000.0	11,414,000.0	11,797,000.0	11,339,000.0	8,510,000.0	8,634,000.0	10,667,000.0
Inventories		584,000.0	631,000.0	717,000.0	585,000.0	983,000.0	779,000.0	1,144,000.0	997,000.0
Prepaid Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Restricted Cash		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Current Assets		8,516,000.0	10,390,000.0	12,870,000.0	10,827,000.0	12,395,000.0	13,256,000.0	12,397,000.0	13,521,000.0
Total Current Assets		47,701,000.0	47,561,000.0	43,268,000.0	41,722,000.0	46,503,000.0	61,277,000.0	55,057,000.0	55,613,000.0
Net Property, Plant & Equipment		114,498,000.0	130,171,000.0	143,248,000.0	156,973,000.0	179,489,000.0	183,495,000.0	193,665,000.0	203,339,000.0
Long-term Investments		1,847,000.0	2,148,000.0	732,000.0	1,057,000.0	4,045,000.0	13,661,000.0	8,530,000.0	8,053,000.0
Deferred Charges, LT		769,000.0	2,804,000.0	2,504,000.0	2,898,000.0	3,578,000.0	3,824,000.0	4,117,000.0	4,170,000.0
Other Long-Term Assets		14,796,000.0	15,800,000.0	16,444,000.0	18,558,000.0	13,328,000.0	14,927,000.0	13,823,000.0	15,867,000.0
Total Assets		179,611,000.0	198,484,000.0	206,196,000.0	221,208,000.0	246,943,000.0	277,184,000.0	275,192,000.0	287,042,000.0
LIABILITIES									
Accrued Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short-term Borrowings		5,432,000.0	7,498,000.0	10,339,000.0	18,215,000.0	24,680,000.0	22,333,000.0	21,974,000.0	25,501,000.0
Accounts Payable		13,518,000.0	15,574,000.0	14,766,000.0	13,897,000.0	16,999,000.0	17,170,000.0	18,457,000.0	18,608,000.0
Curr. Income Taxes Payable		20,812,000.0	22,304,000.0	21,156,000.0	26,257,000.0	27,414,000.0	29,628,000.0	29,957,000.0	27,459,000.0
Other Current Liabilities		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Current Liabilities		39,762,000.0	45,376,000.0	46,261,000.0	58,369,000.0	69,093,000.0	69,131,000.0	70,388,000.0	71,568,000.0
Long-Term Debt		26,367,000.0	27,974,000.0	33,748,000.0	33,869,000.0	40,782,000.0	46,745,000.0	41,067,000.0	42,623,000.0
Unearned Revenue, Non-Current		425,000.0	524,000.0	652,000.0	803,000.0	1,004,000.0	1,283,000.0	1,561,000.0	2,591,000.0
Other Non-Current Liabilities		7,513,000.0	12,480,000.0	8,232,000.0	10,917,000.0	15,175,000.0	14,626,000.0	12,914,000.0	13,698,000.0
Total Liabilities		74,067,000.0	86,354,000.0	88,893,000.0	103,958,000.0	126,054,000.0	131,785,000.0	125,930,000.0	130,480,000.0
Pref. Stock, Non-Redeem.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Pref. Equity		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Interest		21,160,000.0	19,417,000.0	18,393,000.0	17,689,000.0	18,362,000.0	23,753,000.0	20,004,000.0	20,818,000.0
Additional Paid In Capital		9,971,000.0	9,971,000.0	7,408,000.0	7,664,000.0	7,664,000.0	7,664,000.0	7,664,000.0	7,664,000.0
Retained Earnings		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Treasury Stock		2,541,000.0	2,541,000.0	0.0	0.0	0.0	0.0	0.0	0.0
Comprehensive Inc. and Other		71,872,000.0	80,201,000.0	91,502,000.0	91,897,000.0	94,863,000.0	113,982,000.0	121,594,000.0	128,080,000.0
Total Common Equity		105,544,000.0	112,130,000.0	117,303,000.0	117,250,000.0	120,889,000.0	145,399,000.0	149,262,000.0	156,562,000.0
Total Equity		105,544,000.0	112,130,000.0	117,303,000.0	117,250,000.0	120,889,000.0	145,399,000.0	149,262,000.0	156,562,000.0
Total Liabilities And Equity		179,611,000.0	198,484,000.0	206,196,000.0	221,208,000.0	246,943,000.0	277,184,000.0	275,192,000.0	287,042,000.0

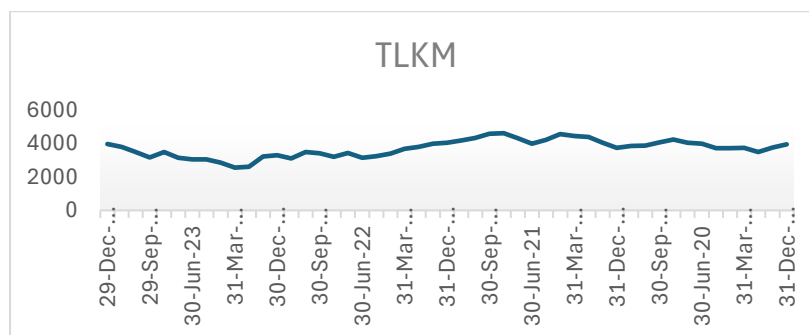
Source: Bloomberg Terminal

Table 2.4 TLKM Cash Flow Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Net Income		19,352,000.0	22,145,000.0	18,032,000.0	18,663,000.0	20,804,000.0	24,760,000.0	20,753,000.0	24,560,000.0
Depreciation & Amort., Total		18,532,000.0	20,446,000.0	21,406,000.0	23,178,000.0	28,892,000.0	31,816,000.0	33,255,000.0	32,663,000.0
Other Non-Cash Adj		0	0	0	0	0	0	0	0
Changes in Non-Cash Capital		0	0	0	0	0	0	0	0
Cash from Ops.		37,884,000.0	42,591,000.0	39,438,000.0	41,841,000.0	49,696,000.0	56,576,000.0	54,008,000.0	57,223,000.0
Capital Expenditure		(26,787,000.0)	(32,784,000.0)	(31,862,000.0)	(35,218,000.0)	(29,560,000.0)	(29,712,000.0)	(35,138,000.0)	(33,601,000.0)
Sale of Property, Plant, and Equipment		765,000.0	1,367,000.0	629,000.0	1,496,000.0	236,000.0	756,000.0	526,000.0	100,000.0
Cash Acquisitions		(43,000.0)	(269,000.0)	(337,000.0)	0	(2,809,000.0)	(6,358,000.0)	(1,401,000.0)	(340,000.0)
Proceeds from Investments		0	0	171,000.0	1,147,000.0	0	0	0	0
Divestitures		0	0	0	395,000.0	0	0	0	0
Invest. in Marketable & Equity Secur.		0	0	0	0	0	0	0	0
Other Investing Activities		(1,515,000.0)	(1,349,000.0)	(3,700,000.0)	(3,622,000.0)	(3,128,000.0)	(2,389,000.0)	(3,254,000.0)	(3,082,000.0)
Cash from Investing		(27,580,000.0)	(33,035,000.0)	(35,099,000.0)	(35,802,000.0)	(35,261,000.0)	(37,703,000.0)	(39,267,000.0)	(36,923,000.0)
Net Short Term Debt Issued/Repaid		0	0	0	0	0	0	0	0
Long-Term Debt Issued		7,479,000.0	12,169,000.0	35,364,000.0	26,524,000.0	24,469,000.0	46,612,000.0	35,958,000.0	38,834,000.0
Long-Term Debt Repaid		(10,555,000.0)	(9,289,000.0)	(27,113,000.0)	(18,983,000.0)	(29,182,000.0)	(48,176,000.0)	(51,200,000.0)	(41,925,000.0)
Total Debt Issued/Repaid		(3,076,000.0)	2,880,000.0	8,251,000.0	7,541,000.0	(4,713,000.0)	(1,564,000.0)	(15,242,000.0)	(3,091,000.0)
Dividends Paid		(11,213,000.0)	(11,627,000.0)	(16,609,000.0)	(16,229,000.0)	(15,262,000.0)	(16,643,000.0)	(14,856,000.0)	(16,603,000.0)
Total Dividends Paid		(11,213,000.0)	(11,627,000.0)	(16,609,000.0)	(16,229,000.0)	(15,262,000.0)	(16,643,000.0)	(14,856,000.0)	(16,603,000.0)
Increase in Capital Stocks		3,259,000.0	0	0	0	0	0	0	0
Decrease in Capital Stocks		0	0	0	0	0	0	0	0
Special Dividend Paid		0	0	0	0	0	0	0	0
Incr (Decr) in Deposits		0	0	0	0	0	0	0	0
Incr (Decr) Insurance Reserves		0	0	0	0	0	0	0	0
Other Financing Activities		(6,994,000.0)	(12,273,000.0)	(9,929,000.0)	(9,667,000.0)	(7,739,000.0)	5,279,000.0	(10,369,000.0)	(6,918,000.0)
Cash from Financing		(16,024,000.0)	(21,020,000.0)	(18,287,000.0)	(18,355,000.0)	(27,714,000.0)	(12,928,000.0)	(40,467,000.0)	(26,612,000.0)
Net Change in Cash		(7,720,000.0)	(11,464,000.0)	(13,948,000.0)	(12,316,000.0)	(13,279,000.0)	5,945,000.0	(25,726,000.0)	(6,312,000.0)

Source: Bloomberg Terminal

Chart 2.1 TLKM Stock Price Movement 2019 – 2023



Source: Bloomberg Terminal

PT XL Axiata, Tbk (EXCL)

The company, then named PT Grahametropolitan Lestari, began operations as a trading and general services entity on October 6, 1989. The company entered the telecommunications industry in 1996 after obtaining a license to operate GSM 900 services and formally launching GSM services. As a result, XL Axiata emerged as the first private company in Indonesia to provide cellular services. Through a work agreement in collaboration with the Rajawali group and three foreign investors (NYNEX, AIF, and Mitsui), the company's name was later changed to PT Excelcomindo Pratama. The Jakarta Stock Exchange (BEJ), now known as the Indonesia Stock Exchange (IDX), is where the company listed its shares, and conducted an IPO in September 2005. TM International Sdn. Bhd. ("TMI") controlled 100% of the company's shares through TM International (I) Limited, and at that time, the company was owned by Indocel Holding Sdn. Bhd. Currently, Axiata Investments (Indonesia) Sdn. Bhd. is the name of the company. TMI and PT Excelcomindo Pratama Tbk changed their names to Axiata Group Berhad ("Axiata") and PT XL Axiata Tbk respectively in 2009 to foster cooperation. The majority of XL Axiata's shares are now owned by Axiata Investments (Indonesia) Sdn. Bhd. (66.25%), treasury shares (0.43%), and public shares (33.32%). Therefore, XL Axiata is a division of Asia's largest telecommunications conglomerate, Axiata Group ("Group"). CelcomDigi (Malaysia), Dialogue (Sri Lanka), Robi (Bangladesh), Smart (Cambodia), and Ncell (Nepal) are some of the group's other subsidiaries and affiliated businesses. XL Axiata, as one of Indonesia's leading cellular companies, offers an extensive network and services across the region, serving retail and corporate clients with business solutions. These offerings include data, voice, SMS, and additional value-added cellular services. Through GSM 900/DCS 1800 and IMT-2000/3G technology, XL Axiata is the first

operator in Indonesia to offer 4.5G Ready services using the 1,800 MHz spectrum. Other licenses held by XL Axiata include Closed Leased Line (CLLS) Network Operations, Internet Service Provider (ISP) Operations, Internet Interconnection Services, Public VoIP Services, and Content Provisioning Services. In addition, in August 2018, obtaining the Operational Eligibility Certificate (SKLO) for 5G, XL Axiata continues to improve its products and provide high-quality data services for its consumers.

Table 2.5 EXCL Income Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Revenues		21,341,425.0	22,875,662.0	22,938,812.0	25,132,628.0	26,009,095.0	26,754,050.0	29,141,994.0	32,322,651.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Revenues		21,341,425.0	22,875,662.0	22,938,812.0	25,132,628.0	26,009,095.0	26,754,050.0	29,141,994.0	32,322,651.0
Cost Of Goods Sold		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Profit		21,341,425.0	22,875,662.0	22,938,812.0	25,132,628.0	26,009,095.0	26,754,050.0	29,141,994.0	32,322,651.0
Selling General & Admin Exp.									
R & D Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depreciation & Amort.		8,046,040.0	6,951,035.0	11,621,320.0	7,363,195.0	12,432,846.0	9,956,227.0	10,570,361.0	11,349,235.0
Other Operating Expense/(Income)		8,380,610.0	11,179,868.0	2,421,268.0	1,914,297.0	1,560,744.0	1,536,159.0	2,911,619.0	3,265,791.0
Operating Expense, Total		19,719,488.0	22,875,662.0	25,608,629.0	21,903,652.0	23,342,480.0	22,774,154.0	25,072,914.0	27,613,883.0
Operating Income		1,621,937.0	0.0	-2,669,817.0	3,228,976.0	2,666,615.0	3,979,896.0	4,069,080.0	4,708,768.0
Interest Expense		1,606,528.0	0.0	1,563,013.0	2,111,720.0	3,512,672.0	2,349,015.0	2,740,729.0	2,898,754.0
Interest and Invest. Income		260,869.0	0.0	0.0	7,053.0	0.0	0.0	0.0	0.0
Net Interest Exp.		1,345,659.0	0.0	1,563,013.0	2,104,667.0	3,512,672.0	2,349,015.0	2,740,729.0	2,898,754.0
Currency Exchange Gains (Loss)		-350,987.0	0.0	467,762.0	-45,513.0	-7,883.0	-9,506.0	61,295.0	-12,977.0
Other Non-Operating Inc. (Exp.)		180,815.0	0.0	-304,312.0	18,652.0	-984,385.0	-67,153.0	-78,900.0	132,622.0
EBT Excl Unusual Items		446,450.0	0.0	-4,396,280.0	1,151,170.0	146,211.0	1,707,540.0	1,345,956.0	1,690,369.0
Impairment of Goodwill		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gain (Loss) On Sale Of Assets		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asset Writedown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Legal Settlements		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Unusual Items		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT Incl Unusual Items		446,450.0	0.0	-4,396,280.0	1,151,170.0	146,211.0	1,707,540.0	1,345,956.0	1,690,369.0
Income Tax Expense		-189,935.0	0.0	-1,099,390.0	431,538.0	-225,387.0	419,733.0	231,842.0	420,069.0
Earnings from Cont. Ops.		636,385.0	0.0	-3,296,890.0	719,632.0	371,598.0	1,287,807.0	1,114,114.0	1,270,300.0
Extraord. Item & Account. Change		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Int. In Earnings		0.0	0.0	0.0	0.0	0.0	0.0	11,748.0	13,335.0
Net Income		636,385.0	0.0	-3,296,890.0	719,632.0	371,598.0	1,287,807.0	1,102,866.0	1,256,965.0

Source: Bloomberg Terminal

Table 2.6 EXCL Financial Position Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
ASSETS									
Cash And Equivalents		1,399,910.0	0.0	1,047,115.0	1,603,445.0	2,965,589.0	2,664,387.0	5,184,113.0	966,027.0
Short Term Investments		0.0	0.0	0.0	0.0	0.0	63,275.0	52,169.0	51,122.0
Total Cash & ST Investments		1,399,910.0	0.0	1,047,115.0	1,603,445.0	2,965,589.0	2,727,662.0	5,236,282.0	1,017,149.0
Accounts & Notes Receivable		636,527.0	0.0	569,240.0	662,944.0	450,362.0	524,505.0	738,169.0	1,385,785.0
Total Receivables		636,527.0	0.0	569,240.0	662,944.0	450,362.0	524,505.0	738,169.0	1,385,785.0
Inventories		161,078.0	0.0	189,063.0	74,608.0	143,377.0	156,440.0	408,178.0	377,884.0
Prepaid Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Restricted Cash		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Current Assets		4,609,348.0	0.0	5,253,734.0	4,804,651.0	4,011,795.0	4,324,584.0	4,025,729.0	4,392,693.0
Total Current Assets		6,806,863.0	0.0	7,058,652.0	7,145,648.0	7,571,123.0	7,733,191.0	10,408,358.0	7,173,511.0
Net Property, Plant & Equipment		33,182,920.0	34,933,877.0	36,759,530.0	42,081,680.0	47,162,250.0	51,912,214.0	60,481,577.0	63,896,924.0
Long-term Investments		0.0	0.0	0.0	0.0	0.0	48,690.0	0.0	0.0
Deferred Charges, LT		0.0	0.0	283,836.0	0.0	85,330.0	0.0	5,779.0	6,873.0
Other Long-Term Assets		14,906,503.0	0.0	13,511,936.0	13,497,914.0	12,926,094.0	13,059,187.0	16,390,014.0	16,617,246.0
Total Assets		54,896,286.0	34,933,877.0	57,613,954.0	62,725,242.0	67,744,797.0	72,753,282.0	87,285,728.0	87,694,554.0
LIABILITIES									
Accrued Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short-term Borrowings		3,972,581.0	0.0	2,577,975.0	7,459,004.0	6,242,067.0	6,276,412.0	10,918,758.0	6,876,690.0
Accounts Payable		6,502,815.0	0.0	9,105,808.0	8,042,098.0	7,312,893.0	10,571,959.0	11,337,283.0	9,382,500.0
Curr. Income Taxes Payable		4,001,642.0	0.0	4,049,511.0	5,791,582.0	5,302,066.0	4,105,550.0	4,114,837.0	3,914,194.0
Other Current Liabilities		0.0	3,609,955.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Current Liabilities		14,477,038.0	3,609,955.0	15,733,294.0	21,292,684.0	18,857,026.0	20,953,921.0	26,370,878.0	20,173,384.0
Long-Term Debt		14,393,989.0	0.0	20,492,883.0	19,470,185.0	27,385,652.0	29,372,236.0	33,041,015.0	39,041,344.0
Unearned Revenue, Non-Current		3,164,729.0	0.0	2,318,880.0	1,896,104.0	1,473,231.0	1,050,356.0	627,481.0	211,840.0
Other Non-Current Liabilities		1,651,385.0	0.0	725,699.0	944,303.0	891,522.0	1,288,034.0	1,492,738.0	1,797,969.0
Total Liabilities		33,687,141.0	3,609,955.0	39,270,856.0	43,603,276.0	48,607,431.0	52,664,537.0	61,532,112.0	61,224,537.0
Pref. Stock, Non-Redeem.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Pref. Equity		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Interest		0.0	0.0	0.0	0.0	0.0	0.0	131,080.0	144,415.0
Additional Paid In Capital		13,207,544.0	0.0	13,218,167.0	13,271,178.0	13,302,721.0	13,288,782.0	18,227,339.0	18,227,339.0
Retained Earnings		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Treasury Stock		0.0	0.0	0.0	0.0	134,445.0	134,445.0	134,445.0	134,445.0
Comprehensive Inc. and Other		8,001,601.0	8,405,044.0	5,124,931.0	5,850,788.0	5,700,200.0	6,665,518.0	7,260,752.0	7,963,818.0
Total Common Equity		21,209,145.0	8,405,044.0	18,343,098.0	19,121,966.0	19,137,366.0	20,088,745.0	25,753,616.0	26,470,017.0
Total Equity		21,209,145.0	8,405,044.0	18,343,098.0	19,121,966.0	19,137,366.0	20,088,745.0	25,753,616.0	26,470,017.0
Total Liabilities And Equity		54,896,286.0	12,014,999.0	57,613,954.0	62,725,242.0	67,744,797.0	72,753,282.0	87,285,728.0	87,694,554.0

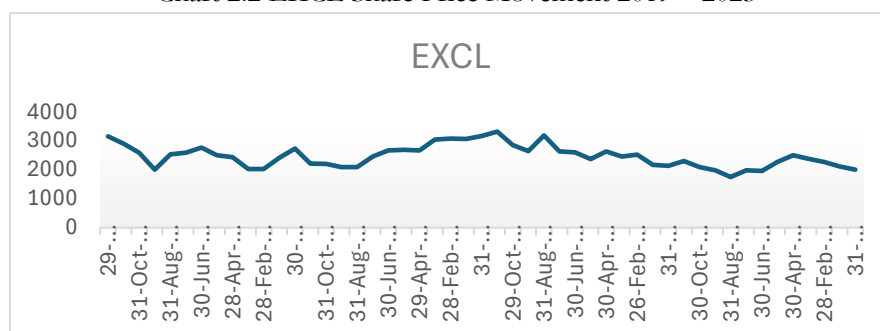
Source: Bloomberg Terminal

Table 2.7 EXCL Cash Flow Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Net Income		375,516.0	0	(3,296,890.0)	712,579.0	371,598.0	1,287,807.0	1,102,366.0	1,256,965.0
Depreciation & Amort., Total		8,046,040.0	0	11,621,320.0	7,363,195.0	12,454,688.0	9,960,259.0	10,589,535.0	11,596,598.0
Other Non-Cash Adj		0	0	0	0	0	0	0	0
Changes in Non-Cash Capital		0	0	0	0	0	0	0	0
Cash from Ops.		8,421,556.0	0	8,324,430.0	8,075,774.0	12,826,286.0	11,248,066.0	11,691,901.0	12,853,563.0
Capital Expenditure		(5,584,443.0)	0	(6,273,753.0)	(9,096,137.0)	(7,766,226.0)	(7,292,595.0)	(8,831,071.0)	(10,424,633.0)
Sale of Property, Plant, and Equipment		128,199.0	0	19,406.0	355,437.0	2,067,796.0	29,289.0	196,722.0	23,043.0
Cash Acquisitions		0	0	0	0	0	0	0	0
Proceeds from Investments		0	0	0	0	0	0	0	0
Divestitures		0	0	0	0	0	0	0	0
Invest. in Marketable & Equity Secur.		(314,481.0)	0	0	0	0	0	0	0
Other Investing Activities		1,921,571.0	(17,234.0)	50,995.0	48,287.0	200,483.0	332,343.0	(2,967,354.0)	0
Cash from Investing		(3,849,154.0)	(17,234.0)	(6,203,352.0)	(8,692,413.0)	(5,497,947.0)	(6,930,963.0)	(11,601,703.0)	(10,401,590.0)
Net Short Term Debt Issued/Repaid		0	0	0	0	0	0	0	0
Long-Term Debt Issued		1,730,409.0	0	5,494,750.0	1,545,550.0	1,997,000.0	2,497,750.0	7,455,318.0	3,477,945.0
Long-Term Debt Repaid		(7,969,458.0)	0	(9,234,727.0)	(3,716,659.0)	(10,019,674.0)	(5,254,699.0)	(9,949,113.0)	(9,992,711.0)
Total Debt Issued/Repaid		(6,239,049.0)	0	(3,739,977.0)	(2,171,109.0)	(8,022,674.0)	(2,756,949.0)	(2,493,795.0)	(6,514,766.0)
Dividends Paid		0	0	0	0	(213,024.0)	(338,182.0)	(544,078.0)	(549,023.0)
Total Dividends Paid		0	0	0	0	(213,024.0)	(338,182.0)	(544,078.0)	(549,023.0)
Increase in Capital Stocks		2,206,818.0	0	0	0	0	0	4,938,556.0	0
Decrease in Capital Stocks		0	0	0	0	(134,445.0)	0	0	0
Special Dividend Paid		0	0	0	0	0	0	0	0
Incr (Decr) in Deposits		0	0	0	0	0	0	0	0
Incr (Decr) Insurance Reserves		0	0	0	0	0	0	0	0
Other Financing Activities		(6,271.0)	0	13,704.0	(22,193.0)	1,925,544.0	399.0	364,846.0	39,689.0
Cash from Financing		(4,038,502.0)	0	(3,726,273.0)	(2,193,302.0)	(6,444,599.0)	(3,094,732.0)	2,265,529.0	(7,024,100.0)
Net Change in Cash		533,900.0	(17,234.0)	(1,605,195.0)	(2,809,941.0)	883,740.0	1,222,371.0	2,355,727.0	(4,572,127.0)

Source: Bloomberg Terminal

Chart 2.2 EXCL Share Price Movement 2019 – 2023



Source: Bloomberg Terminal

PT Indosat, TBK (ISAT)

On November 20, 1967, the government established PT Indosat Tbk (ISAT), a multinational corporation focused on investment and providing global telecommunications services. To access the Intelsat Indian Ocean Region satellite, the International Telecommunications Satellite Organization (Intelsat) built, relocated, and operated a ground station in Indonesia in September 1969, marking the start of commercial operations. In addition to fixed telecommunications and internet services, the company now provides prepaid and postpaid cellular services under the Indosat Mobile and IM3 brands.

Table 2.8 ISAT Income Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Revenues		29,184,624.0	29,926,098.0	23,139,551.0	26,117,533.0	27,925,661.0	31,388,311.0	46,752,319.0	51,228,782.0
		0.0	0.0	1,845,088.0	0.0	0.0	0.0	0.0	0.0
Total Revenues		29,184,624.0	29,926,098.0	24,984,639.0	26,117,533.0	27,925,661.0	31,388,311.0	46,752,319.0	51,228,782.0
Cost Of Goods Sold		11,918,821.0	12,644,541.0	12,043,307.0	12,342,653.0	12,165,540.0	13,580,102.0	21,149,374.0	21,084,880.0
Gross Profit		17,265,803.0	17,281,557.0	12,941,332.0	13,774,880.0	15,760,121.0	17,808,209.0	25,602,945.0	30,143,902.0
Selling General & Admin Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R & D Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depreciation & Amort.		8,972,570.0	8,852,812.0	8,107,983.0	9,428,776.0	9,870,365.0	10,062,973.0	13,618,355.0	14,621,163.0
Other Operating Expense/(Income)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating Expense, Total		13,319,408.0	13,269,468.0	13,498,235.0	9,695,859.0	13,471,875.0	7,512,048.0	15,034,698.0	19,642,835.0
Operating Income		3,946,395.0	4,012,089.0	-556,903.0	4,079,021.0	2,288,246.0	10,296,161.0	10,568,247.0	10,501,067.0
Interest Expense		2,250,705.0	2,115,655.0	2,115,734.0	2,674,766.0	3,032,305.0	2,986,558.0	4,337,560.0	4,718,315.0
Interest and Invest. Income		111,474.0	64,643.0	35,907.0	81,401.0	191,254.0	151,967.0	117,626.0	330,998.0
Net Interest Exp.		2,139,231.0	2,051,012.0	2,079,827.0	2,593,365.0	2,841,051.0	2,834,591.0	4,219,934.0	4,387,317.0
Currency Exchange Gains (Loss)		-267,963.0	-23,595.0	149,894.0	-75,010.0	49,994.0	9,579.0	-166,646.0	103,866.0
Other Non-Operating Inc. (Exp.)		168,390.0	-20,397.0	-158,988.0	-107,926.0	-194,512.0	-206,950.0	-138,456.0	-252,697.0
EBT Excl Unusual Items		1,906,737.0	2,005,069.0	-2,627,636.0	1,668,592.0	-408,287.0	7,658,941.0	6,653,415.0	6,262,581.0
Impairment of Goodwill		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gain (Loss) On Sale Of Assets		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asset Writedown		0.0	0.0	0.0	-534,697.0	0.0	541,294.0	0.0	0.0
Legal Settlements		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Unusual Items		0.0	0.0	0.0	1,069,394.0	0.0	-1,082,588.0	0.0	0.0
EBT Incl Unusual Items		1,906,737.0	2,005,069.0	-2,627,636.0	2,203,280.0	-408,287.0	7,117,647.0	6,653,415.0	6,262,581.0
Income Tax Expense		519,608.0	638,497.0	-578,484.0	-43,181.0	30,619.0	646,853.0	1,165,586.0	1,155,842.0
Earnings from Cont. Ops.		1,387,129.0	1,366,572.0	-2,049,152.0	2,246,470.0	-438,906.0	6,470,794.0	5,487,829.0	5,106,739.0
Extraord. Item & Account. Change		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Int. in Earnings		170,613.0	166,146.0	318,784.0	61,381.0	86,539.0	109,248.0	646,788.0	269,349.0
Net Income		1,216,516.0	1,200,426.0	-2,367,936.0	2,185,089.0	-325,465.0	6,361,346.0	4,841,041.0	4,837,390.0

Source: Bloomberg Terminal

Table 2.9 ISAT Financial Position Report

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
ASSETS									
Cash And Equivalents		1,850,425.0	1,674,745.0	1,045,041.0	5,881,174.0	1,782,246.0	3,789,006.0	9,507,880.0	5,189,573.0
Short Term Investments		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Cash & ST Investments		1,850,425.0	1,674,745.0	1,045,041.0	5,881,174.0	1,782,246.0	3,789,006.0	9,507,880.0	5,189,573.0
Accounts & Notes Receivable		2,707,279.0	3,845,943.0	2,926,078.0	2,993,746.0	2,556,760.0	2,027,161.0	2,332,767.0	3,139,479.0
Total Receivables		2,707,279.0	3,845,943.0	2,926,078.0	2,993,746.0	2,556,760.0	2,027,161.0	2,332,767.0	3,139,479.0
Inventories		79,272.0	87,820.0	47,889.0	29,406.0	39,813.0	18,110.0	73,277.0	226,428.0
Prepaid Exp.		137,043.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Restricted Cash		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Current Assets		3,436,565.0	3,870,763.0	3,887,517.0	3,540,469.0	5,216,132.0	5,665,162.0	6,769,191.0	6,924,179.0
Total Current Assets		6,210,524.0	9,479,271.0	7,906,525.0	12,444,795.0	9,594,951.0	11,499,439.0	18,683,115.0	15,479,659.0
Net Property, Plant & Equipment		39,078,409.0	35,891,716.0	36,899,330.0	42,753,285.0	46,522,054.0	45,515,184.0	69,182,066.0	72,860,819.0
Long-term Investments		25,469.0	10,740.0	328,113.0	318,727.0	365,825.0	692,471.0	641,145.0	821,307.0
Deferred Charges, LT		215,971.0	368,605.0	1,249,018.0	1,295,455.0	1,348,036.0	850,394.0	531,869.0	849,458.0
Other Long-Term Assets		3,445,374.0	4,910,708.0	6,756,601.0	6,000,738.0	4,947,874.0	4,839,660.0	24,619,151.0	24,711,006.0
Total Assets		50,975,747.0	50,661,040.0	53,139,587.0	62,813,000.0	62,778,740.0	63,397,148.0	113,657,346.0	114,722,249.0
LIABILITIES									
Accrued Exp.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short-term Borrowings		8,366,117.0	5,177,565.0	7,059,588.0	7,528,865.0	4,653,593.0	10,748,308.0	11,374,998.0	9,456,967.0
Accounts Payable		845,063.0	872,419.0	802,933.0	607,185.0	657,184.0	981,761.0	849,574.0	745,799.0
Curr. Income Taxes Payable		9,875,412.0	10,150,473.0	13,177,844.0	13,993,390.0	17,347,317.0	16,928,083.0	23,649,502.0	23,931,577.0
Other Current Liabilities		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Current Liabilities		19,086,592.0	16,200,457.0	21,040,365.0	22,129,440.0	22,658,094.0	28,658,152.0	35,874,074.0	34,134,343.0
Long-Term Debt		15,308,622.0	17,458,187.0	17,885,923.0	22,579,563.0	23,166,724.0	23,115,965.0	44,608,893.0	44,414,075.0
Unearned Revenue, Non-Current		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Non-Current Liabilities		2,266,371.0	2,186,862.0	2,077,052.0	4,396,804.0	4,040,526.0	1,320,229.0	1,805,789.0	2,465,039.0
Total Liabilities		36,661,585.0	35,845,506.0	41,003,340.0	49,105,807.0	49,865,344.0	53,094,346.0	82,288,756.0	81,013,457.0
Pref. Stock, Non-Redeem.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Pref. Equity		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority Interest		826,916.0	818,558.0	962,143.0	983,923.0	1,042,914.0	1,122,347.0	3,025,594.0	2,962,891.0
Additional Paid In Capital		2,089,980.0	2,089,980.0	2,089,980.0	2,089,980.0	2,089,980.0	2,089,980.0	18,519,788.0	18,519,788.0
Retained Earnings		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Treasury Stock		0.0	0.0	0.0	0.0	0.0	0.0	123.0	123.0
Comprehensive Inc. and Other		11,260,223.0	11,906,996.0	9,084,124.0	10,633,290.0	9,780,502.0	7,090,475.0	9,823,085.0	12,225,990.0
Total Common Equity		14,177,119.0	14,815,534.0	12,136,247.0	13,707,193.0	12,913,396.0	10,302,802.0	31,368,590.0	33,708,792.0
Total Equity		14,177,119.0	14,815,534.0	12,136,247.0	13,707,193.0	12,913,396.0	10,302,802.0	31,368,590.0	33,708,792.0
Total Liabilities And Equity		50,838,704.0	50,661,040.0	53,139,587.0	62,813,000.0	62,778,740.0	63,397,148.0	113,657,346.0	114,722,249.0

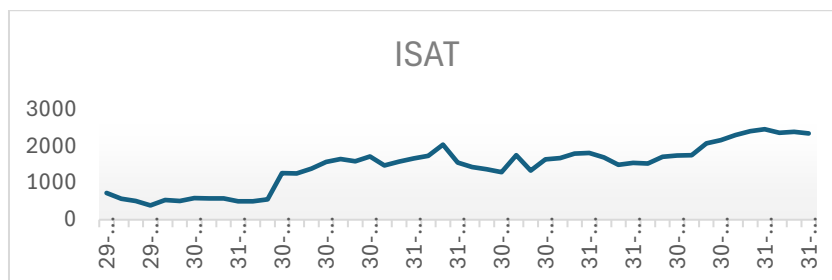
Source: Bloomberg Terminal

Table 2.10 ISAT Cash Flow Statement

For the Fiscal Period Ending	Yearly	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Net Income		1,105,042.0	1,135,783.0	(2,403,843.0)	1,568,991.0	(716,719.0)	6,750,873.0	4,723,415.0	4,506,392.0
Depreciation & Amort., Total		8,972,570.0	8,852,812.0	8,249,033.0	9,569,826.0	10,011,415.0	10,204,023.0	13,703,158.0	14,621,163.0
Other Non-Cash Adj		0	0	0	0	0	0	0	0
Changes in Non-Cash Capital		0	0	0	0	0	0	0	0
Cash from Ops.		10,077,612.0	9,988,595.0	5,845,190.0	11,138,817.0	9,294,696.0	16,954,896.0	18,426,573.0	19,127,555.0
Capital Expenditure		(7,207,477.0)	(5,831,242.0)	(5,458,311.0)	(10,582,150.0)	(7,351,586.0)	(9,395,238.0)	(10,350,352.0)	(11,759,661.0)
Sale of Property, Plant, and Equipment		43,954.0	108,748.0	8,546.0	102,759.0	44,806.0	13,990.0	0	2,133,439.0
Cash Acquisitions		0	0	0	0	0	0	0	0
Proceeds from Investments		0	0	12,318.0	0	0	4,842.0	0	0
Divestitures		0	0	0	0	0	0	3,781,033.0	0
Invest. in Marketable & Equity Secur.		0	0	0	0	0	0	(101,415.0)	0
Other Investing Activities		(177,092.0)	(1,088,135.0)	(137,903.0)	1,457,487.0	17,643.0	7,905,864.0	2,418,845.0	(1,166,864.0)
Cash from Investing		(7,340,615.0)	(6,810,629.0)	(5,575,350.0)	(9,021,904.0)	(7,289,137.0)	(1,470,542.0)	(4,251,889.0)	(10,793,086.0)
Net Short Term Debt Issued/Repaid		(1,050,000.0)	(400,000.0)	550,000.0	(800.0)	0	400,000.0	(1,060,000.0)	0
Long-Term Debt Issued		8,130,000.0	12,146,290.0	10,339,000.0	12,951,000.0	520,800.0	3,675,000.0	14,730,000.0	2,904,504.0
Long-Term Debt Repaid		(11,205,915.0)	(13,347,559.0)	(9,787,894.0)	(14,886,108.0)	(8,676,064.0)	(5,118,982.0)	(17,783,888.0)	(11,640,909.0)
Total Debt Issued/Repaid		(4,125,915.0)	(1,601,269.0)	1,101,106.0	(1,935,908.0)	(8,155,264.0)	(1,043,982.0)	(4,113,888.0)	(8,736,405.0)
Dividends Paid		0	(386,788.0)	(396,677.0)	0	0	(9,498,715.0)	(2,000,022.0)	(2,061,404.0)
Total Dividends Paid		0	(386,788.0)	(396,677.0)	0	0	(9,498,715.0)	(2,000,022.0)	(2,061,404.0)
Increase in Capital Stocks		0	0	0	0	0	0	0	0
Decrease in Capital Stocks		0	0	0	0	0	0	(123.0)	0
Special Dividend Paid		0	0	0	0	0	0	0	0
Incr (Decr) in Deposits		0	0	0	0	0	0	0	0
Incr (Decr) Insurance Reserves		0	0	0	0	0	0	0	0
Other Financing Activities		(107,135.0)	(124,346.0)	(44,161.0)	5,066,653.0	(28,762.0)	2,786,703.0	168,510.0	(429,794.0)
Cash from Financing		(4,233,050.0)	(2,112,403.0)	660,268.0	3,130,745.0	(8,184,026.0)	(7,755,994.0)	(5,945,523.0)	(11,227,603.0)
Net Change in Cash		(1,496,053.0)	1,065,563.0	930,108.0	5,247,658.0	(6,178,467.0)	7,728,360.0	8,229,161.0	(2,893,134.0)

Source: Bloomberg Terminal

Chart 2.3 ISAT Share Price Movement 2019 – 2023



Source: Bloomberg Terminal

3. Results and Discussion

Stock Valuation at PT Telekom Indonesia (Persero), Tbk

This description presents the procedures for stock evaluation using the Discounted Cash Flow (DCF) approach:

Dividend, EPS, and PER Data

Obtaining information from the company to be valued, such as dividends, EPS, and PER, is essential before the valuation process begins. The Bloomberg Terminal provides access to company financial reports that provide this information. Information regarding PT Telkom Indonesia (Persero), Tbk for the past five years is shown below.

Table 3.1. Summary of Financial Data of PT Telkom Indonesia (Persero), Tbk
Dalam Juta IDR

	2019	2020	2021	2022	2023
Revenue	135.567.000	136.462.000	143.210.000	147.306.000	149.216.000
Operating Expense	93.087.000	92.871.000	95.697.000	107.981.000	104.796.000
Net Income	18.663.000	20.804.000	24.760.000	20.753.000	24.560.000
EPS	188	210	250	209	248
Dividen Per Share	154	168	150	168	179
Dividen Payout Ratio %	104	100	60	80	72
Total Asset	221.208.000	246.943.000	277.184.000	275.192.000	287.042.000
Total Liabilities	103.958.000	126.054.000	131.785.000	125.930.000	130.480.000
Total Equity	117.250.000	120.889.000	145.399.000	149.262.000	156.562.000

Table 3.2. Financial Data Growth of PT Telkom Indonesia (Persero), Tbk

Growth yoy %	2019	2020	2021	2022	2023	Average	CAGR
Revenue		0,66%	4,94%	2,86%	1,30%	2,44%	2,43%
Operating Expense		-0,23%	3,04%	12,84%	-2,95%	3,17%	3,01%
Net Income		11,47%	19,02%	-16,18%	18,34%	8,16%	7,11%
EPS		11,47%	19,01%	-16,18%	18,34%	8,16%	7,10%
Dividen Per Share		9,04%	-10,73%	11,76%	6,51%	4,14%	3,75%
Dividen Payout Ratio %						83	
Total Asset		11,63%	12,25%	-0,72%	4,31%	6,87%	6,73%
Total Liabilities		21,25%	4,55%	-4,44%	3,61%	6,24%	5,85%
Total Equity		3,10%	20,27%	2,66%	4,89%	7,73%	7,50%

Average DPR, EPS Growth, PER

The following table shows the average DPR, EPS Growth and PER

Table3.3. Average DPR, EPS Growth, PER

Date	EPS	P/E	Dividen	Dividen Payout Ratio %	EPS Growth
31-Dec-2019	188	21,07	154,07	103,56	
31-Dec-2020	210	15,76	168,00	100,00	11,47%
31-Dec-2021	250	16,16	149,97	60,00	19,01%
30-Dec-2022	209	17,90	167,60	80,00	-16,18%
29-Dec-2023	248	16,53	178,50	72,00	18,34%
Average	221,15	17,49	163,63	83,11	8,16%

If EPS growth is less than 15%, then the EPS growth used is 10%. If the average P/E is less than 20, then the average P/E used is 12. Meanwhile, the average DPR is 83.11%

Future Value Calculation

Next, predict EPS for the next 5 years, with a projected growth rate of 10% per year, as follows:

Table 3. 4. EPS Projection

2024	2025	2026	2027	2028
272,71	299,98	329,98	362,98	399,28

Calculating the Future Value of Stock Prices

The stock price formula is:

$$\text{Stock Price} = \text{P/E} \times \text{EPS}$$

Assuming a P/E of 12x and EPS for 2028 of 399.28, the future value of the stock price is 4,791.30.

Calculation of Accumulated Dividends

Next, the cumulative dividends are calculated for the next five years. The DPR is multiplied by the Future EPS Value to determine the dividend. The anticipated dividends for the next five years, assuming a DPR of 83.11%, are as follows.

Table 3.5. Dividend Projections

2024	2025	2026	2027	2028
226,65	249,32	274,25	301,68	331,84

Total dividends received were 1,383.74

Calculating the Total Future Value

The total future value of a stock is calculated by combining the future value of the stock price and the cumulative dividends received. Mathematically, it is written as follows:

$$\text{Future Value Total} = \text{Future Value of Stock Price} + \text{Accumulated Dividends}$$

$$\text{Future Value Total} = 4,791.30 + 1,383.74$$

$$\text{Future Value Total} = 6,175.07$$

Determining the Return/Discount Rate

To determine the discount rate, the CAPM formula is used as follows:

$$r = r_{\text{free risk}} \times \beta (r_{\text{market}} - r_{\text{free risk}})$$

r : Expected return (predicted return) of the asset

r : Risk-free rate (safe return)

β : Stock beta

r : Market expected return

$(r_{\text{market}} - r_{\text{free risk}})$: Market risk premium, which is the disparity between the estimated market return and the risk-free rate.

In this calculation, $r_{\text{free risk}}$ uses the average yield on 10-year Indonesian government bonds, calculated from 2019 to 2023 at 6.88%. Meanwhile, r_{market} is calculated using the JCI return for the 2019-2023 period, which is 11.32%. Stock beta is calculated using Microsoft Excel by regressing stock price movements against the JCI for the 2019-2023 period. After regression, the stock beta value is 0.54.

By using the CAPM formula above and the data assumptions mentioned above, the discount rate is 9.27%.

Calculating Present Value

The present value formula is as follows:

$$PV = \frac{FV}{(1+r)^n}$$

$$PV = \frac{6.175,07}{(1+9,27\%)^5}$$

$$PV = 3.963,91$$

Meanwhile, TLKM's stock market price on November 5, 2024, was undervalued at 2,770. Given the potential profit from projected future stock price growth, it is prudent for investors to purchase the stock in such a case.

Stock Valuation at PT XL Axiata, Tbk

The following explains the procedure for conducting stock valuations using Discounted Cash Flows (DCF):

Dividend, EPS, and PER Data

It is crucial to gather various information from the company being valued, including dividends, EPS, and PER, before conducting a valuation. The company's financial statements, which can be accessed through Bloomberg Terminal, provide this information. The following is data from PT XL Axiata, Tbk for the past five years.

Table 3.6. Summary of Financial Data of PT XL Axiata, Tbk

Dalam Juta IDR	2019	2020	2021	2022	2023
Revenue	25.132.628	26.009.095	26.754.050	29.141.994	32.322.651
Operating Expense	22.106.595	23.342.480	23.004.479	25.065.840	27.599.735
Net Income	712.579	371.598	1.287.807	1.109.440	1.271.113
EPS	67	35	121	105	98
Dividen Per Share	20	32	51	42	42
Dividen Payout Ratio %	30	91	42	50	50
Total Asset	62.725.242	67.744.797	72.753.282	87.277.780	87.688.084
Total Liabilities	43.603.276	48.607.431	52.664.537	61.503.554	61.183.308
Total Equity	19.121.966	19.137.366	20.088.745	25.774.226	26.504.776

Table 3.7. Financial Data Growth of PT XL Axiata, Tbk

Growth yoy %	2019	2020	2021	2022	2023	Average	CAGR
Revenue		3,49%	2,86%	8,93%	10,91%	6,55%	6,49%
Operating Expense		5,59%	-1,45%	8,96%	10,11%	5,80%	5,71%
Net Income		-47,85%	246,56%	-13,85%	14,57%	49,86%	15,57%
EPS		-47,76%	245,71%	-13,22%	-6,67%	44,52%	9,97%
Dividen Per Share		58,50%	60,88%	-17,65%	0,00%	25,43%	20,38%
Dividen Payout Ratio %						53	
Total Asset		8,00%	7,39%	19,96%	0,47%	8,96%	8,74%
Total Liabilities		11,48%	8,35%	16,78%	-0,52%	9,02%	8,84%
Total Equity		0,08%	4,97%	28,30%	2,83%	9,05%	8,50%

Average DPR, EPS Growth, PER

The following table shows the average DPR, EPS Growth, and PER.

Table 3.8. Average DPR, EPS Growth, and PER

Date	EPS	P/E	Dividen	Dividen Payout Ratio %	EPS Growth
31-Dec-2019	67	47,50	20,00	30,00	
31-Dec-2020	35	79,96	31,70	91,33	-47,76%
31-Dec-2021	121	26,27	51,00	42,47	245,71%
30-Dec-2022	105	20,63	42,00	49,73	-13,22%
29-Dec-2023	98	22,29	42,00	49,73	-6,67%
Average	85,20	39,33	37,34	52,65	44,52%

If EPS growth is greater than 15%, the EPS growth used is 15%. The average P/E ratio is greater than 20, so the average P/E ratio is 17. Meanwhile, the average DPR is 52.65%.

Future Value Calculation

Next, predict EPS for the next five years, with a projected growth of 15% each year as follows:

Table 3.9. EPS Projection

2024	2025	2026	2027	2028
112,70	129,61	149,05	171,40	197,11

Calculating the Future Value of the Stock Price

The stock exchange rate formula is:

$$\text{Stock Price} = \text{P/E} \times \text{EPS}$$

Using the assumption of a P/E of 17x and a 2028 EPS of 197.11, the Future Value of the stock price is 3,350.92.

Calculating Accumulated Dividends

The next step is to estimate the total dividends received over the next five years. Dividends are calculated by multiplying the Future Value EPS by the DPR. Assuming a DPR of 52.65%, the following is the estimated dividends received during that period.

Table 3.10. Dividend Projection

2024	2025	2026	2027	2028
59,34	68,24	78,48	90,25	103,78

Calculating the Total Future Value

The total future value of a stock is calculated by adding the Future Value of the Stock Price and Dividends. Mathematically, it is written as follows:

$$\text{Future Value Total} = \text{Future Value of Stock Price} + \text{Accumulated Dividends}$$

$$\text{Future Value Total} = 3,350.92 + 400.9$$

$$\text{Future Value Total} = 3,751.01$$

Determining the Return/Discount Rate

To determine the discount rate, the CAPM formula is used as follows:

$$r = r_{\text{free risk}} \times \beta (r_{\text{market}} - r_{\text{free risk}})$$

r : Expected return of the asset

r : Risk-free rate: Risk-free rate (safe return)

β : Stock beta

r : Market expected return

$(r_{\text{market}} - r_{\text{free risk}})$: Market risk premium, the distance between expected market returns and safe returns.

In this calculation, $r_{\text{free risk}}$ uses the average yield on 10-year Indonesian government bonds, calculated from 2019 to 2023 at 6.88%. Meanwhile, r_{market} is calculated using the Jakarta Composite Index (JCI) return for the 2019-2023 period, which is 11.32%. Stock beta is calculated using Microsoft Excel by regressing stock price movements against the JCI during the 2019-2023 period, after the regression, the stock beta value is 0.01.

Using the CAPM formula above and the aforementioned data assumptions, the discount rate is 6.91%.

Stock Valuation at PT Indosat Tbk

The following explains the procedure for conducting stock valuation using DCF:

Dividend, EPS, and PER Data

It is crucial to collect various dividend statistics, EPS, and PER values from the company being analyzed before conducting a valuation. Business financial records, which can be accessed through Bloomberg Terminal, provide this information. The following is data for PT Indosat Tbk for the past five years.

Table 3.11. Summary of Financial Data of PT Indosat, Tbk

Dalam Juta IDR

	2019	2020	2021	2022	2023
Revenue	26.117.533	27.925.661	31.388.311	46.752.319	51.228.782
Operating Expense	9.695.859	13.471.875	7.512.048	15.034.698	19.642.835
Net Income	1.568.991	(716.719)	6.750.873	4.723.415	4.506.392
EPS	72	(33)	311	146	140
Dividen Per Share	-	207	292	64	64
Dividen Payout Ratio %	-	-	104	44	44
Total Asset	62.813.000	62.778.740	63.397.148	113.657.346	114.722.249
Total Liabilities	49.105.807	49.865.344	53.094.346	82.288.756	81.013.457
Total Equity	13.707.193	12.913.396	10.302.802	31.368.590	33.708.792

Table 3.12. Financial Data Growth of PT Indosat, Tbk

	2019	2020	2021	2022	2023	Average	CAGR
Revenue		6,92%	12,40%	48,95%	9,57%	19,46%	18,34%
Operating Expense		38,94%	-44,24%	100,14%	30,65%	31,37%	19,30%
Net Income		-145,68%	-1041,91%	-30,03%	-4,59%	-305,56%	30,18%
EPS		-145,68%	-1041,89%	-52,84%	-4,59%	-311,25%	17,95%
Dividen Per Share		#DIV/0!	41,06%	-78,11%	0,00%	#DIV/0!	#DIV/0!
Dividen Payout Ratio %						38	
Total Asset		-0,05%	0,99%	79,28%	0,94%	20,29%	16,25%
Total Liabilities		1,55%	6,48%	54,99%	-1,55%	15,36%	13,33%
Total Equity		-5,79%	-20,22%	204,47%	7,46%	46,48%	25,23%

Average DPR, EPS Growth, PER

The following table shows the average DPR, EPS Growth, and PER.

Table 3.13. Average DPR, EPS Growth, and PER

Date	EPS	P/E	Dividen	Dividen Payout Ratio %	EPS Growth
31-Dec-2019	72	10,08	-	-	
31-Dec-2020	(33)	20,53	207,03	-	-145,68%
31-Dec-2021	311	4,99	292,05	103,69	-1041,89%
30-Dec-2022	146	10,54	63,93	43,65	-52,84%
29-Dec-2023	140	19,78	63,93	43,65	-4,59%
Average	127,20	13,18	125,39	38,20	-311,25%

If EPS Growth is less than 15%, then the EPS Growth used is 10%. The average P/E is less than 20, so the average P/E is 12. Meanwhile, the average DPR is 38.20%.

Future Value Calculation

Next, predict EPS for the next five years, with a projected growth of 10% each year as follows:

Table 3.14. EPS Projection

2024	2025	2026	2027	2028
153,70	169,07	185,98	204,58	225,04

Calculating the Future Value of the Stock Price

The stock exchange formula is:

$$\text{Stock Price} = \text{P/E} \times \text{EPS}$$

Using the assumption of a P/E of 12x and an EPS of 225.04 for 2028, the Future Value of the stock exchange is 2,700.44.

Calculating Accumulated Dividends

Next, the cumulative dividends are calculated for the next five years. The Future Value EPS is multiplied by the DPR to determine the dividend. The following dividends are estimated to be paid over the next five years, assuming a DPR of 38.20%.

Table 3.15. Dividend Projection

2024	2025	2026	2027	2028
58,71	64,58	71,04	78,14	85,96

The total dividends received were 358.43.

Calculating the Total Future Value

The total future value of a stock is obtained by adding the future value of the stock to the total dividends received. Mathematically, it is written as follows:

Future Value Total = FV of Stock + Accumulated Profit Distribution

Future Value Total = 2,700.44 + 358.43

Future Value Total = 3,058.87

Determining the Return/Discount Rate

To determine the discount rate, the CAPM formula is used as follows:

$$r = r_{\text{free risk}} \times \beta (r_{\text{market}} - r_{\text{free risk}})$$

r: Expected return (projected investment return) of the asset

r: Risk-free rate (risk-free return)

β: Stock beta

r: Market expected return

(r: Market – r: Risk-free): Market risk premium (equity risk premium), which is the distance between the expected market return and the risk-free rate.

In this calculation, the risk-free r is calculated using the average yield on 10-year Indonesian government bonds, calculated from 2019 to 2023 at 6.88%. Meanwhile, the market r is calculated using the Jakarta Composite Index (JCI) return for the 2019-2023 period, which is 11.32%. The stock beta is calculated using Microsoft Excel by regressing stock price movements against the JCI during the 2019-2023 period. After the regression, the stock beta value is 0.63.

Using the CAPM formula above and the aforementioned data assumptions, the discount rate is 9.66%.

Calculating Present Value

The present value formula is as follows:

$$PV = \frac{FV}{(1+r)^n}$$

$$PV = \frac{3.058,87}{(1+9,66\%)^5}$$

$$PV = 1.928,63$$

Meanwhile, ISAT's stock market price on November 5, 2024, was overvalued at 2,390. Under such conditions, investors are advised not to purchase the stock, as the price is considered too high, making the opportunity to profit from future price appreciation relatively small.

4. Conclusions

After reviewing the calculations in Chapter IV, the following conclusions were reached: (1) From the stock valuation analysis using the Discounted Cash Flow (DCF) approach for PT Telkom Indonesia (Persero) Tbk and PT XL Axiata Tbk from 2019 to 2023, it was found that the stock market price is below its fair value. This condition indicates that **TLKM and EXCL** shares are undervalued, meaning the price reflected in the market is lower than their intrinsic value. This situation presents an attractive opportunity for investors, especially those seeking long-term investment potential. Providing investors with the opportunity to acquire assets with high future profit potential at a lower price, undervalued stocks are often considered fantastic opportunities. If the company's performance continues to improve over time and the market eventually recognizes the stock's inherent value, the stock price can rise significantly, providing the best returns for investors. However, before purchasing, investors should thoroughly examine the reasons for the undervaluation, including market conditions, specific business issues, or short-term negative sentiment. Understanding the causes of undervaluation can help investors ensure that their investment choices are based on strong fundamentals, not mere market speculation. Companies should focus on improving and streamlining their operations. Furthermore, they need to maintain revenue growth through service diversification and 5G monetization. Telkom needs to transform from a traditional telecommunications company to a digital technology company. The focus should not only be on data services, but also on AI, cloud, data centers, IoT, digital financial services, and the entertainment ecosystem. This will ensure more sustainable long-term growth. (2) Based on the stock valuation using the Discounted Cash Flow (DCF) technique for PT Indosat, Tbk during the 2019–2023 period, it was found that the stock market price was consistently above its fair value. This condition indicates that ISAT shares are classified as expensive (overvalued), where the price reflected in the market exceeds their intrinsic value. This situation indicates that market expectations regarding the company's performance may be too high or that external factors are influencing stock price appreciation. Investors make a strategic choice to sell ISAT shares in such a situation. Offering to sell shares at a price higher than their fair value provides an opportunity for investors to realize profits (capital gains) before potential price adjustments in the market that could reduce the investment value. However, consideration of the company's prospects, telecommunications industry trends, and macroeconomic conditions remain important for investors. With a more in-depth analysis, investors can ensure this selling decision aligns with their long-term investment goals. If the company's performance improves, the shares can be reanalyzed to determine whether they are overvalued or undervalued for purchase.

Referring to these conclusions, the author offers the following suggestions: (1) The primary factor to consider when investing is the potential for future profits. These profits depend heavily on the timing of stock purchases, not just the time of sale. By purchasing shares at the right price, investors have the opportunity to achieve optimal profits. Conversely, if purchases are made at an inappropriate price, while profits can still be realized, the value may not be optimal. In the telecommunications sector, which continues to evolve with the adoption of new technologies such as 5G and IoT, buying at the right time is crucial to capitalizing on potential growth. (2) Given the current challenging global economic climate, telecommunications companies may consider offering more shares to the public. This action could increase investor confidence in the implementation of good corporate governance standards. Furthermore, acquiring public shares could help companies raise additional funds needed to fund technological advancements, infrastructure development initiatives, or service expansion to meet the needs of the modern digital market. Looking ahead, 5G deployment is expected to accelerate significantly over the next 2–3 years, accompanied by increased demand for high-speed data services, cloud computing, and IoT device connectivity. This will open up opportunities for telecommunications companies to increase revenue through digital services and network infrastructure. Furthermore, expansion into satellite technology and the integration of artificial intelligence (AI) into telecommunications services are projected to be new growth catalysts. Therefore, investors who are able to enter while valuations are still relatively low could potentially reap significant gains when the adoption trend of these technologies peaks. (3) As a suggestion for future researchers who wish to conduct stock valuation studies in the telecommunications sector, it is recommended to collect specific company data, particularly regarding future growth strategies. This data can be obtained through direct interviews with company stakeholders, such as management or the finance department. This direct information will help strengthen assumptions in the forecasting process, resulting in more accurate valuation results and relevance to the dynamics of the telecommunications industry in Indonesia.

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