JOURNAL LA BISECOMAN
VOL. 03, ISSUE 05 (197-211), 2022
DOI: 10.37899/journallabisecoman.v3i5.821

Analysis of Start-Up Share Valuation on the Indonesia Stock Exchange for the 2017-2022 Period Using the DFC GMV and Tobins'q Methods

Hartono[1]

[1]*Universitas Widya Dharma Pontianak*

**Corresponding Author: Hartono*
Email: hartono@widyadharma.ac.id

Article Info

Article history:
Received 7 August 2023
Received in revised form 13 September 2023
Accepted 21 September 2023

Keywords:
Startup Company
Ipo
Valution
Overvalued

Abstract

The phenomenon of the proliferation of startup companies in Indonesia that cannot be separated from the use of digital technology brings a fragrant aroma to venture capital investment companies. The number of startup companies that received the investment funds are bringing them to the Indonesian Stock Exchange by conducting an IPO even though the company has not been established for a long time. There is a correlation between the rapid growth of startups in Indonesia with "bubble.com" the phenomenon that occurred in Silicon Valley between the years 1999 and 2000. The surge in assets of startup companies is currently caused by stock valuation, which is based on a single valuation, without assessing assets, cash flows, or other aspects that affect the valuation value of a company. Recently, the stock price of startup companies began to fall, and is considered the same as the phenomenon "bubble.com" another indication is that there are mass layoffs of company employees; this condition also occurs in Silicon Valley. In this case, it is necessary to conduct an intrinsic assessment of startup shares empirically and in accordance with applicable valuation standards to see the condition of the company as a whole. The valuation methods used in this study are Gross Merchandise Value, Discounted Cash Flow and Tobins'q, it is expected that these three methods can represent the valuation analysis of the company so that investors know the intrinsic value of startup companies and are expected not to be Overvalued.

Introduction

The development of information and communication technology in the industrial era 4.0 is currently increasing rapidly, both globally and locally, which significantly affects people's lifestyles and in doing business. The accelerated growth of information and communication technology is able to increase trends that change conventional business models and encourage the establishment of new businesses (startups) that tend to take advantage of technological opportunities (Prastya, Nugraha and Wahyuhastuti, 2017).

A digital startup is a group of individuals who form an organization as a startup company that produces products in the field of technology (Yevgeniy Brikman, 2015). Another definition expressed by Eric Ries (2011), startup is a group of individuals who create and sell new products or services in uncertain market dynamics in search of the right business model, so that startups face changing market conditions with a very high level of uncertainty.

According to Google and Temasek's e-Conomy SEA 2017, from 2016 to the third quarter of 2017, the total investment for Southeast Asian digital startups reached US$ 12 billion. Of the total funds, as much as 34 percent or US$ 4.08 billion or the equivalent of Rp. 55 trillion went to Indonesia, and in 2018 Indonesia's digital economic market is estimated to reach $ 27 billion

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

or 40% of the total size of the economy among countries in Asia. Southeast. McKinsey & Company in its report entitled "Opening Indonesia's digital opportunities" states that Indonesia is ready for digitalization and economic growth can reach US$ 250 billion in 2025. The huge potential in the Digital Startup Industry has resulted in the proliferation of start-up business establishments with managerial systems that are immature with the hope of obtaining investment from venture capital and then being able to conduct an Initial Public Offering (IPO).

Before getting funding from investors or when going to do an IPO, a company needs to calculate the company's valuation. This valuation is a form of economic assessment of business activities with the aim of measuring how big the business potential of a startup is (Eka, 2019). Aileen Lee (2013) states that the company's valuation amount is divided into 6 categories, including:

Table 1. Company Category based on the amount of company valuation value

No	Category	Valuation Value
1	Cockroach	valuation is fairly small, has high fighting power so it is likened to a cockroach
2	Ponies	valuation valued at US$10 Million
3	Centaurs	valuation valued at US$100 Million
4	Unicorn	valuation valued at US$1 billion
5	Decacorn	valuation valued at US$10 billion
6	Hectacorn	valuation valued at US$100 billion

Source : Aileen Lee.2013

Literature Review

Development of startup companies in Indonesia

Theresa Anindha Prabaswara (2020) conducted research related to the development of startups in Indonesia, according to her, currently Indonesia has a total of 5 startup companies that already have Unicorn status and 1 startup with decacorn status. Here are some of these big startup companies:

Go-Jek (Decacorn with a valuation of US$ 11 billion). Gojek is a transportation, logistics and payment company founded in 2010 by Nadiem Makarim. This startup is one of the first transportation innovations in Indonesia that has brought many changes to society. With applications found in gadgets, Gojek provides digital-based transportation services for the community, its users can easily meet their needs with features such as food delivery services, motorbike or car transportation, goods delivery, even cleaning and massage services with its online payment system. itself, namely Gopay, which is a digital wallet.

Tokopedia (Unicorn with a valuation of US$7 billion). Tokopedia is an e-commerce startup founded in 2009. This online platform engages individuals and small to medium business owners in Indonesia to open and manage their online stores. In August 2017, Tokopedia received investment from Alibaba of US$1.1 trillion. With this investment, Alibaba gains a foothold in Indonesia's e-commerce landscape. This site provides easy buying and selling services for its users, Tokopedia is a service where sellers and buyers meet to make transactions. This platform also provides features that can help both sellers and buyers to transact safely, Tokopedia provides a joint ATM service that ensures that the goods ordered by the buyer arrive before the money is finally received by the seller, with this feature fraud against the buyer does not occur .

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Bukalapak (Unicorn with a valuation of US $ 2 billion). Bukalapak is an e-commerce platform that allows sellers and buyers to make secure online transactions in a simple way. This platform was founded by Achmad Zaky, Nugroho Herucahyono, and Muhamad Fajrin Rasyid in 2010. Initially, the presence of this platform was intended to develop small and medium businesses so they could sell their products online. At the end of 2015, Bukalapak had 510,000 small and medium enterprises in its network and counting.

Apart from the three startup companies above which eventually became big, there are many startup companies that have sprung up in Indonesia. Many have fallen, but many have also become the target of the Indonesia Stock Exchange, so that these startups can immediately conduct an IPO.

Table 2. Number of *Growth of Startup* Companies in Indonesia

Year	Number of local startups
>2007	35
2007-2012	206
2013-2018	992
2019	2074
2022	2347

Source :www.startupsparkling.com

Initial Public Offering

Based on Law no. 8 of 1995 concerning the Capital Market, public offerings are securities offering activities carried out by issuers to sell securities to the public based on the procedures regulated in this Law and its implementing regulations. With an IPO, companies can increase working capital for company growth, pay debts, make investments and make acquisitions. In addition, companies that have become public can obtain further funding, namely limited public offerings specifically for investors who already own company shares and private placements. Public companies whose shares are traded on the Exchange will gain trust and be better known among banking and financial institutions so that if a company needs a loan, the loan process will be made easier (gopublic.idx.co.id).

Startups that have just been built are usually still closed (closed companies). When it begins to develop and is ready to 'go public', it means that the startup is ready to sell shares to the public and become an investment opportunity for the general public. That way, external funding for the company can flow smoothly so that the startup has the potential to grow and develop.

The following are the requirements for an IPO startup: (1) The organizational structure of the company must be orderly and complete. A startup wishing to go IPO must have a clear leadership structure. It must be clearly stated, starting from the company with the legal status of PT, having an independent commissioner, having both committee and internal audits, and having a company secretary. For the startup itself, it must be clear, starting from the CEO and people in the Board of Directors, and so on; (2) Have real assets of at least 100 billion. Real assets with a minimum value of 100 billion is one of the main requirements for conducting an IPO. With such a large amount of assets, it can be a guarantee that these startups are able to manage their assets properly so that there is also a guarantee that they will also manage the capital that will be obtained from the IPO properly; (3) Accounting and financial requirements are met. Startups must have been running for at least one year and have accounting and financial calculations that are really neatly and well managed. Then, it must be proven that the

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

startup has not suffered any losses for the last 2 years; (4) The final requirement is the minimum limit for IPO shares offered. The minimum number is 150 million shares with a minimum number of shareholders of 500 people. Then the price per share is at least IDR 100 or better above that price.

The Effect of Information Asymmetry

Martha Nita Florentina (2014) reveals the information gap between companies and potential investors at the time of an IPO increases the probability for companies to carry out earnings management and is not detected by the market. Mingsheng Li, Zheng and Melancon (2005) researched that the effects of signaling, firm size, trade volume and share price affect stock performance after aftermarket liquidity. Early investors can obtain the same information as management and can take advantage of the information asymmetry that arises. They become parties who know, own, and control important information about the company in advance compared to other parties. In the end, they were able to commit fraud, one of which was using GMV as an indicator in evaluating startups. A high GMV does not necessarily indicate good company performance. This value only shows the transaction value of the gross circulation of goods sold by startups. New investors also have limited access to important information in the company's financial reports (Panda & Leepsa, 2017).

The Effect of Company Valuation Value on Stock Price during IPO

Company valuation is a complicated thing to do because there is subjectivity in the concept of "value" or the value itself. There are several variables that can determine or influence a company's valuation, such as the economic conditions of a country, the company's business development strategy, the nature and use of company assets, human resources, and market conditions in the company's business (Miciuła et al., 2020). According to Feldman (2005) the valuation process for startup companies is no different from the valuation of conventional companies. Whereas Pratama 2018 states that conventional company value calculations cannot be applied to startup companies, because several factors considered in conventional company assessments are not found in startup companies. The importance of calculating the valuation value of a company so that potential investors, whether from venture capital or from the issuance of initial shares, get a complete picture of the company's condition so that the investment value issued is commensurate in the end, not in an overvalued or undervalued condition.

There are many methods for calculating company valuation values, in this study 3 methods for calculating company valuation values were used, namely; (a) Discounted Cash Flow (DCF) Discounted Cash Flow (DCF) method is a stock valuation method that uses the concept of time value of money. According to Damodaran (2002), Discounted Cash Flow is a stock valuation method that uses Future Free Cash Flow (FFCF) and Discounted Weighted Average Cost of Capital (WACC) to obtain potential future value in investing. Damodaran (2002) also argues that this discounted cash flow is used to assess equity in a business, assess the company as a whole, and to value small parts of the company. Discounted Cash Flow aims to estimate the present value of the future expected return on investment; (b) Gross Merchandise Value is a method of calculating valuation value by taking into account the amount of goods sold on e-commerce within a certain period of time on a C2C (Customer-to-Customer) basis (Hayes, 2021). By looking at the GMV value, investors already have an idea related to the business being run by the company because this value represents the number of transactions that occur within a certain time span (Hayes, 2021). GMV calculations are carried out without including other costs and expenses, so this GMV calculation needs to be supplemented with other calculation methods.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

GMV = Total sales x Selling price

(c) Calculation of the Company's Valuation Value can be measured by the Tobins'Q Method. Tobins'Q is a measurement tool used to measure company performance regarding company value, which is able to provide an overview of management's ability to use company assets (Kurnia, 2017) which is formulated as follows (Irayanti et al., 2014):

$$Q=(MVS+D)/TA$$

Where MVS is the Equity Market Value obtained from the Final closing share price multiplied by the number of outstanding shares. Meanwhile, Debt is obtained from:

$$Debt = (AVCL-AVCA)+AVLTD$$

Where:

AVCL : Current liabilities of the company

AVCA : Current assets

AVLTD : Long-term liability

According to (Sudiyanto &; Puspitasari, 2010), the suspension of *Tobin's Q* ratio includes; (1) If the result of Tobin's Q > 1 means that the company's management is successful in managing the company's assets or assets. *Overvalued*; (2) If the result of Tobin's Q < 1 means that the company's management has failed in managing the company's assets or assets.*Undervalued*; (3) If the result of Tobins'Q = 1 means the company's management is stagnant in the management of company assets. *Average*

Hypothesis

H0 : There is no *overvalued valuation of the company* during the IPO

H1 : There is an overvalued valuation of the company during the IPO

Methods

Population and Sample

Population and Sample The population in this study are all digital startup companies listed on the Indonesia Stock Exchange (IDX). The sampling technique in this study was purposive sampling, where the research criteria used were: Digital startup company listed on the Indonesia Stock Exchange (IDX) for 2017-2022.

Data Types and Sources

Types and Sources of Data Quantitative data types are the types of data used in this study, where the data used is secondary data in the form of numbers that are processed statistically so that they can be interpreted. This study uses the annual financial report data source for digital startup companies listed on the Indonesia Stock Exchange (IDX) for 2017-2022. Data sources other than financial reports are data sourced from national and international journals as well as data on related websites.

Data Collection Methods

The documentation method is the method used in this study, the documentation method is the method applied by collecting, recording and reviewing company financial report secondary data from the Indonesian Stock Exchange (IDX) website and the official website of each company. The data required is financial information from the financial reports of digital startup companies that are included in the sample based on the research variables

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Methods of Analysis and Research Models

The method used is Discounted Cash Flow, Gross Merchandise Value and Tobins'Q.

Results and Discussion

In Indonesia for the 2016-2022 period a sample of 10 start-up companies that have been listed on the Indonesian Capital Market was taken, with several of them being startups in the Unicorn category.

Table 3. List of Stock Prices and IPO Year of Startup Companies Listed on IDX

No	Company Name	IPO Year	Stock Price At IPO
1	PT. Kioson Commercial Indonesia Tbk	2017	Rp.300,-per sheet
2	PT. Mcash Integrasi Tbk	2017	Rp. 1.385,- per sheet
3	PT. NFC Indonesia Tbk	2018	Rp. 1.850,- per share
4	PT. Yelooo Integra Datanet Tbk	2018	Rp.375,- per share
5	PT. Nusantara Voucher Distribution	2018	Rp. 2.950,- per share
6	PT. Hensel Davest Indonesia Tbk	2019	Rp.525,- per sheet
7	PT. Telefast Indonesia Tbk	2019	Rp.180,- per share
8	PT. Digital Mediatama Maxima Tbk	2019	Rp.230,- per sheet
9	PT.Bukalapak.com Tbk	2021	Rp.850,- per sheet
10	PT. GOTO Gojek Tokopedia Tbk	2022	Rp.338,- per sheet

Source :www.idx.co.id

This table provides a list of 10 start-up companies in Indonesia that were listed on the Indonesian Capital Market. It includes the company names, IPO (Initial Public Offering) years, and stock prices at IPO.

Calculation of Gross Merchandise Value Model

Table 4.Calculation of Gross Merchandise Value Model

Nama Perusahaan	Tahun Ipo	Harga Per Lbr Saham Ketika Ipo	Jumlah Saham Beredar Ketika Ipo	Nilai Valuasi Pasar	Gross Merchandise Value	Overvalued
PT. Kioson Komersial Tbk	2017	Rp. 300	150.000.000	Rp. 45.000.000.000	1.130.076.421.407	
PT. Mcash Integrasi Tbk	2017	Rp. 1. 385	216.983.300	Rp. 300.521.870.500	1.371.065.340.519	
PT.NFC Indonesia Tbk	2018	Rp. 1. 850	166.667.500	Rp. 308.334.875.000	2.489.674.657.427	
PT. Yelooo Integra Datanet Tbk	2018	Rp. 375	130.000.000	Rp. 48.750.000.000	27.409.937.674	OVERVALUED
PT. Distribusi Voucher Nusantara	2018	Rp. 2.950	214.285.700	Rp. 632.142.815.000	1.487.298.121.359	
PT. Hensel Davest Indonesia Tbk	2019	Rp. 525	381.170.000	Rp. 200.114.250.000	9.629.825.396.769	

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

PT. Telefast Indonesia Tbk	2019	Rp. 180	416.666.500	Rp. 74.999.970.000	666.605.561.999	
PT. Digital Mediatama Maxima Tbk	2019	Rp. 230	2.692.307.700	Rp. 619.230.771.000	211.001.743.239	OVERVALUED
PT. Bukalapak.com Tbk	2021	Rp. 850	25.765.504.800	Rp. 21.900.679.080.000	1.869.122.325.000	OVERVALUED
PT. GOTO Gojek Tokepedia Tbk	2022	Rp. 338	40.615.056.000	Rp. 13.727.888.928.000	7.968.891.000.000	OVERVALUED

Source: Data processed

Gross merchandise value (GMV) estimates for the selected startups are summarized in the table below. Included are such details as the company's name, the year of its initial public offering (IPO), the stock price at the time of its IPO, the number of shares issued during the IPO, the market valuation, the gross merchandise value (GMV), and an evaluation of the company's potential overvaluation.

Tobins'Q Model Calculation

Table 5. Tobins'Q Model Calculation

NAMA PERUSHAAN	NILAI VALUASI PASAR	SHORT TERM DEBT	TAXES PAYBLE	Accounting value of the firm's Current Lia bilities	Accounting value of the firm's Long Term Debt.
PT. Ki oson Komersial Indoneisa Tbk	Rp. 45.000.000.000	Rp. 151.952.146.676	Rp. 3.644.022.220	Rp. 155.596.168.896	Rp. 10.781.488.317
PT. Mcash Integritas Tbk	Rp. 300.521.870.500	Rp. 125.836.212.696	Rp. 1.085.016.299	Rp. 126.921.228.995	Rp. 17.466.820.076
PT. NFC Indonesia Tbk	Rp. 308.334.875.000	Rp. 64.437.778.246	Rp. 6.791.496.376	Rp. 71.229.274.622	Rp. 36.512.017.761
PT. Yelooo Integra Datanet Tbk	Rp. 48.750.000.000	Rp. 2.521.967.469	Rp. 1.043.846.768	Rp. 3.565.815.007	Rp. 302.605.023
PT. Distribusi Voucher Nusantara	Rp. 632.142.815.000	Rp. 88.641.761.465	Rp. 5.703.069.736	Rp. 94. 344.831.201	Rp. 2.594.477.085
PT. Hensel Davest Indonesia Tbk	Rp. 200.114.250.000	Rp. 1.666.086.250	Rp. 1.244.257.691	Rp. 2.910.343.941	Rp. 423.434.529
PT. Telefast Indonesia Tbk	Rp.74.999.970.000	Rp. 71.423.858.282	Rp. 4.712.885.408	Rp. 76.136.743.690	Rp. 1.179.316.910
PT. Digital Mediatama Maxima Tbk	Rp. 619.230.771.000	Rp. 25.832.383.474	Rp. 1.421.232.037	Rp. 27.253.615.511	Rp. 616.074.000
PT. Bukalapak.com Tbk	Rp. 21.900.679.080.000	Rp. 151.057.741.000	Rp. 10.932.901.000	Rp. 161.990.642.000	Rp. 112.476.566.000
PT. GOTO Gojek Tokepedia Tbk	Rp. 13.727.888.928.000	Rp.134.521.000.000	Rp. 355.217.000.000	Rp. 6.489.738.000.000	Rp. 3.332.906.000.000

Source : Data processed

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Tobin's Q model calculation for a typical set of businesses is shown in the above table. The components of this collection of data include the company's name, its market value, its short-term debt, its tax liability, the accounting value of the company's present commitments, and the accounting value of the company's long-term debt. In addition, it calculates Tobin's Q to show whether the company is expensive.

Table 6. Tobins'Q Model Calculation

NAMA PERUSHAAN	CASH	ACCRECEIVABLE	IVENTORY	Accounting value of the firm's Current Assets	DEBT= (AVCL-AVCA)+AVLTD	ASET TETAP	TOBINS'Q= (MVS + D)TA	OVERVALUED
PT. Kioson Komersial Indoneisa Tbk	Rp. 39.335.780.409	Rp. 75.137.103.257	Rp.63679.626.666	Rp. 178.152.510.332	(Rp. 11.774.853.119)	Rp. 30.797.253.382	1,08	
PT. Mcash Integritas Tbk	Rp. 117.507.273.488	Rp. 53.393.682.701	Rp. 235.792.017.738	Rp. 406.692.973.927	(Rp. 262.304.924.856)	Rp. 41.931.947.548	0,91	OVERVALUED
PT. NFC Indonesia Tbk	Rp. 42.884.849.640	Rp. 123.294.448.688	Rp. 42.503.692.863	Rp. 208.682.631.191	(Rp. 100.941.338.808)	Rp. 12.541.497.548	16,54	
PT. Yelooo Integra Datanet Tbk	Rp. 11.044.162.321	Rp. 1.260.597.694	Rp. 0	Rp. 12.304.760.015	(Rp. 8.436.340.985)	Rp. 39.450.130.536	1,02	
PT. Distribusi Voucher Nusantara	Rp. 370.398.474.417	Rp. 103.350.027.063	Rp. 79.356.058.183	Rp. 553.104.559.663	(Rp. 456.165.251.377)	Rp. 19.649.943.973	8,96	
PT. Hensel Davest Indonesia Tbk	Rp. 71.719.025.341	Rp. 103.500.884.548	Rp. 97.732.426.555	Rp. 272.952.336.444	(Rp. 269.618.557.974)	Rp. 89.547.066.947	-0,78	OVERVALUED
PT. Telefast Indonesia Tbk	Rp. 25.257.090.666	Rp. 36.474.112.514	Rp. 78.338.758.268	Rp. 140.069.961.448	(Rp. 62.753.900.848)	Rp. 7. 261.633.743	1,69	
PT. Digital Mediatama Maxima Tbk	Rp. 441.271.519.945	Rp. 66.296.130.418	Rp. 78.713.584.612	Rp. 586.281.234.975	(Rp. 558.411.545.464)	Rp. 13.971.220.135	4,35	
PT. Bukalapak.com Tbk	Rp. 24.700.386.748.000	Rp. 108.470.806.000	Rp. 1.272.646.000	Rp. 24.810.130.200.000	(Rp. 24.535.662.992.000)	Rp. 766.784.811.000	-3,44	OVERVALUED
PT. GOTO Gojek Tokepedia Tbk	Rp. 31.616.987.000.000	Rp. 1.843.378.000.000	Rp. 54.052.000.000	Rp. 33.514.417.000.000	(Rp. 23.691.773.000.000)	Rp. 119.338.390.000.000	-0,08	OVERVALUED

Source: Data processed

Information on cash on hand, accounts receivable, inventory, the book value of the company's current assets, debt, fixed assets, Tobin's Q, and whether or not the company is overpriced are all included in the table provided as a supplement to the Tobin's Q model calculation.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Discounted Cash Flow Calculation

Table 7. Discounted Cash Flow Model Calculation

NAMA PERUSHAAN	Cash from Operations	Investing Cash Flow	Free Cah Flow	Cost Of Equitty (%)	Cost of Debt (%)	WACC(%)
PT. Ki oson Komersial Indoneisa Tbk	(Rp. 44.290.345.985)	Rp. 34.867.865.151	(Rp.9.422.480.834)	7.86	2,33%	7,7
PT. Mcash Integritas Tbk	Rp.679.757.814.860	Rp. 79.067.415.894	Rp.758.825.230.754	10.67	1,42%	9,65
PT. NFC Indonesia Tbk	Rp. 1.821.143.990.230	Rp. 195.518.001.007	Rp.2.016.661.991.237	4.46	0,14%	5,21
PT. Yelooo Integra Datanet Tbk	Rp. (23.123.790.567)	Rp.71.625.227.061	Rp. 48.501.436.494	3.57	0,14%	2,69
PT. Distribusi Voucher Nusantara	Rp. 465.837.338.596	Rp. 117.540.071.065	Rp.583.377.409.661	8.50	10,58 %	8,38
PT. Hensel Davest Indonesia Tbk	Rp. 9.186.301.657.753	Rp.10.029.143.009	Rp. 9.196.330.800.762	4.02	3,58%	4,76
PT. Telefast Indonesia Tbk	Rp. 367.272.816.953	Rp. 37.368.490.266	Rp. 404.641.307.219	7.86	5,19%	7,43
PT. Digital Mediatama Maxima Tbk	(Rp. 82.131.543.072)	Rp. 179.312.542.641	Rp. 97.180.999.569	15.47	0,01%	14,44
PT. Bukalapak.com Tbk	(Rp. 26.516.018.281.000)	Rp. 659.000.686.000	(Rp. 25.857.017.595.000)	10.21	0,23%	9,85
PT. GOTO Gojek Tokepedia Tbk	(24.456.212.000.000)	Rp. 35.117.000.000	(Rp.24.421.095.000.000)	17.23	0,40%	18,52

Source: Data processed

The discounted cash flow (DCF) estimate for the selected businesses is listed in the table. Cash flow from operations, cash flow from investments, free cash flow, equity cost, debt cost, and weighted average cost of capital (WACC) are only few of the financial measures included in the offered data.

Table 8. Discounted Cash Flow Model Calculation

NAMA PERUSHAAN	FcF1	Terminal Value	Present Value of Terminal Value	Enterprise Value	Net Debt	Equity Value	Dilluted Share Outstanding	Equity Value Per Share	Harga Saham Ketika IPO	Over valued
PT. Ki oson Komersial Indoneisa Tbk	(Rp. 9.837.069.991)	(Rp. 2.980.930.300)	(Rp. 342.635.667)	(Rp. 12.403.411.134)	Rp. 123.397.854.584	Rp. 135.801.265.718	150.000.000	Rp. 905	Rp.300	
PT. Mcash Integritas Tbk	Rp. 792.213.540.	Rp. 150.897.817.	Rp. 14.168.809.	Rp. 909.723.04	Rp. 25.795.759.	Rp. 883.927.288.	216.983.300	Rp. 4.074	Rp. 1.385	

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

	907	316	138	8.070	284	786				
PT. NFC Indonesia Tbk	Rp.2.105.395.118.851	Rp. 2.599.253.233.150	Rp. 418.559.296.804	Rp. 4.615.915.224.387	Rp. 58.065.306.367	Rp. 4.557.849.918.020	166.667.500	Rp. 27.347	Rp. 1.850	
PT. Yelooo Integra Datanet Tbk	Rp. 50.635.499.700	Rp. (29.611.403.333)	(Rp. 8.024.770.551)	Rp. 18.890.033.161	(Rp. 8.219.590.059)	Rp. 27.109.623.220	130.000.000	Rp. 209	Rp. 375	Over valued
PT. Distribusi Voucher Nusantara	Rp. 609.046.015.686	Rp. 153.026.637.107	Rp. 16.314.140.417	Rp. 736.404.046.768	(Rp. 279.162.235.867)	Rp. 1.015.566.282.635	214.285.700	Rp. 4.739	Rp. 2.950	
PT. Hensel Davest Indonesia Tbk	Rp. 9.600.969.355.996	Rp. 26.669.359.322.210	Rp. 4.630.097.104.550	Rp. 35.865.690.122.972	(Rp. 69.629.504.562)	Rp. 35.935.319.627.534	381.170.000	Rp. 94.276	Rp. 525	
PT. Telefast Indonesia Tbk	Rp. 422.445.524.737	Rp. 139.420.965.260	Rp.16.538.667.291	Rp. 544.062.272.579	Rp. 47.346.084.526	Rp. 496.716.187.953	416.666.500	Rp. 1.192	Rp.180	
PT. Digital Mediatama Maxima Tbk	Rp. 101.456.963.550	Rp. 10.105.275.254	Rp.654.486.739	Rp. 107.286.274.823	(Rp. 414.823.062.471)	Rp. 522.109.337.294	2.692.307.700	Rp. 194	Rp. 230	Over valued
PT. Bukalapak.com Tbk	(Rp. 26.944.726.369.180)	(Rp. 4.953.160.801.684)	(Rp.456.512.516.284)	(Rp. 30.810.178.396.684)	(Rp. 24.436.852.441.000)	Rp. 6.373.325.955.684	25.765.504.800	Rp. 247	Rp. 850	
PT. GOTO Gojek Tokepedia Tbk	(Rp. 25.495.623.180.000)	(Rp.1.805.639.035.411)	(Rp. 92.501.999.765)	(Rp. 26.226.734.035.411)	(Rp. 22.149.560.000.000)	Rp. 4.077.174.035.411	40.615.056.000	Rp. 100	Rp. 338	Over valued

Source : Data processed

More details about the discounted cash flow (DCF) analysis are included in the accompanying table. Free Cash Flow in Year 1 (FCF1), Terminal Value (TV), Present Value of TV (PV), Enterprise Value (EV), Net Debt (ND), Equity Value (EV), Fully Diluted Shares Outstanding (DSO), EV Per Share (EV/Share), IPO Stock Price (STP), and an Evaluation of Whether the Company Is Overpriced are all included.

Comparison of 3 Methods

Tabel 9. Perbandingan Tiga Model Perhitungan Nilai Valuasi Perusahaan

NAMA PERUSAHAAN	Gross Merchandise Value	TOBINS'Q = (MVS + D)/TA	Equity Value Per Share
PT. Ki oson Komersial Indoneisa Tbk			
PT. Mcash Integritas Tbk		OVERVALUED	
PT. NFC Indonesia Tbk			
PT. Yelooo Integra Datanet Tbk	OVERVALUED		OVERVALUED
PT. Distribusi Voucher Nusantara			
PT. Hensel Davest Indonesia Tbk		OVERVALUED	
PT. Telefast Indonesia Tbk			
PT. Digital Mediatama Maxima Tbk	OVERVALUED		OVERVALUED
PT. Bukalapak.com Tbk	OVERVALUED	OVERVALUED	
PT. GOTO Gojek Tokepedia Tbk	OVERVALUED	OVERVALUED	OVERVALUED

This table provides a comparison of the results obtained from the Gross Merchandise Value model, Tobin's Q model, and the Equity Value Per Share for the selected start-up companies.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Gross Merchandise Value (GMV) Model Analysis

When determining the value of a company for an IPO, the Gross Merchandise Value (GMV) methodology is often used. GMV stands for "gross market value," which is calculated by multiplying the IPO share price by the total number of outstanding shares of a company. According to Damodaran (2016), this model provides a straightforward means of gauging investor sentiment and valuation of a company at the time of its first public offering.

Several interesting findings emerge from applying the GMV model to the selected start-up enterprises registered on the Indonesia Stock Exchange (IDX) between 2017 and 2022. During their respective Initial Public Offerings (IPOs), PT. Kioson Komersial Tbk, PT. Mcash Integrasi Tbk, PT. NFC Indonesia Tbk, and PT. Distribusi Voucher Nusantara were each given Gross Merchandise Value (GMV) values that were relatively high. As highlighted by Lerner et al. (2015), the predicted growth potential and market prospects of these startups impacted their respective valuations.

While the GMV methodology is useful for determining fair market value, it does have significant limitations. One notable limitation of this strategy is that it places too much weight on the share price and the number of shares issued at the time of the company's initial public offering (IPO), thereby ignoring other important aspects that affect a company's intrinsic value. According to Aswath Damodaran (2020), a comprehensive evaluation is impossible with this model since it ignores fundamental financial elements including cash flows, assets, and obligations. Therefore, relying too much on the GMV model might cause an inflated or deflated valuation of early-stage investments.

Notable results from the analysis of the GMV model include the detection of some companies that may be deemed "overvalued." This indicates that the market prices of these firms at the time of their first public offerings (IPOs) were higher than the values anticipated by the Gross Merchandise Value (GMV) model. Since overvaluation may lead to unrealistic expectations and inflated stock prices, it can cause market bubbles and subsequent corrections, which can cause anxiety (Shleifer & Vishny, 2014). When dealing with shares that are widely believed to be expensive, investors and market participants should use extreme caution.

Gross Merchandise Value (GMV) estimates are very sensitive to current market conditions. If the market perceives a company to be promising, investors may bid up its stock price beyond its intrinsic worth (Liu & Ritter, 2011). Media coverage, investor enthusiasm, and anticipated industry developments are just a few of the potential elements that might affect market sentiment and GMV values. Investors who want to make educated decisions in the ever-changing world of start-up investing must have a deep understanding of the complex link between market sentiment and Gross Merchandise Value (GMV).

Tobin's Q Model Analysis

Established in the financial markets, the Tobin's Q model compares the market value of a company's assets to their replacement cost to determine the company's market worth. Tobin's Q, which is the ratio of asset market value to replacement cost, is being calculated for this research. Tobin (1969) suggests that if the ratio is more than 1, the market values a firm's assets at more than their replacement cost. This might signal that the company is overpriced.

Several interesting trends emerge from an investigation of the use of Tobin's Q model on selected start-ups listed on the Indonesia Stock Exchange (IDX) between 2017 and 2022. Tobin's Q values greater than 1 are common among successful businesses such as PT. NFC Indonesia Tbk and PT. Distribusi Voucher Nusantara. This indicates that their assets are worth much more than their replacement cost, as determined by the market. Foresights into future

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

profitability and market domination may have contributed to investors' high valuations of these firms, but the implication is the same: these businesses have enormous potential for growth.

Tobin's Q is a widely-used index for gauging market sentiment and assessing the attractiveness of investment opportunities. According to Cetorelli and Strahan (2006), if Tobin's Q is greater than 1, investors may be more willing to assign a higher value to a company's assets in light of their optimism on the company's prospects for future earnings and market expansion. However, given that the market's expectations may not always align with actual performance, it is important to recognize that high Tobin's Q values may also be connected to increased risk.

Through studying the Tobin's Q model, scholars have been able to pinpoint a subset of companies that may be "overvalued." Because of this discrepancy between asset and liability values, Tobin's Q predicts that these companies' market valuations are far higher than they really are. Investors stand to lose money if the market becomes overvalued, as Shiller (2015) argues. This is because market inefficiencies and corrections are likely to result. When dealing with overvalued shares, investors and market participants should exercise caution and do thorough research.

Tobin's Q is a methodology that quantifies how the market values a company's growth potential relative to its peers. Tobin (1969) argues that enterprises with Tobin's Q values over 1 are generally seen as influential organizations within their respective sectors or as catalysts for substantial change, and as a result, attract more attention from investors. It is important to separate healthy optimism from reckless speculation, however. Companies' Tobin's Q scores should be carefully analyzed by market participants, with the existence of strong fundamentals and long-lasting competitive advantages included in (Bhagat & Welch, 1995).

Discounted Cash Flow (DCF) Model Analysis

One of the most important tools in financial analysis is the discounted cash flow (DCF) model, which determines a company's intrinsic value by discounting its expected future cash flows to the present. The underlying principle of this notion is that the value of money now is greater than its worth in the future. To do this, one must first predict future cash flows (from both operational and finance activities) and then apply a discount rate to bring them to the present (Damodaran, 2016).

When the discounted cash flow (DCF) model is applied to a subset of the start-ups listed on the Indonesia Stock Exchange (IDX) between 2017 and 2022, a number of interesting trends emerge. The DCF valuations of PT. Hensel Davest Indonesia Tbk and PT. Digital Mediatama Maxima Tbk were seen to be much higher than usual. Copeland et al. (2014) conclude that this remark is indicative of the model's confidence in its ability to predict future cash flows, and hence growth and profitability.

When doing a discounted cash flow (DCF) analysis, the discount rate, also known as the cost of capital, plays a pivotal role. Changes in the discount rate may have a considerable impact on the DCF value. Brealey et al. (2017) state that a higher discount rate indicates a higher sense of risk, which in turn reduces the current value of future cash flows. A lower discount rate is indicative of decreased risk, and hence greater values. Careful thought must be paid to the sensitivity of DCF values to changes in discount rates.

The DCF analysis may help identify circumstances when a company's market value is higher than its estimated intrinsic value. When discount rates are artificially low or when investors have unrealistically high expectations for future cash flows, overvaluation may occur (Shiller, 2015). When stock prices rise beyond their intrinsic value, investors run the risk of

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

experiencing market corrections as the prevailing attitude adjusts to reflect more realistic expectations.

The success of discounted cash flow (DCF) models relies heavily on the accuracy of cash flow forecasts, which may be challenging, especially for young businesses operating in unstable markets. While conservative assessments may overestimate a company's potential, optimistic ones may lead to inflated valuations (Damodaran, 2020). The assumptions used in discounted cash flow (DCF) models should thus be carefully examined.

Comparative Analysis

The purpose of doing a comparative analysis is to get a more in-depth knowledge of the strengths and weaknesses of other firms by comparing their financial performance and worth. Investors, analysts, and other stakeholders would be foolish not to put this instrument to good use in helping them arrive at sound decisions. The purpose of this study is to evaluate and compare selected start-ups trading on the Indonesia Stock Exchange (IDX) from 2017 through 2022. Financial metrics and value approaches of several types will be used to complete the assessment.

Gross Merchandise Value (GMV), Tobin's Q, and Discounted Cash Flow (DCF) models were employed in this study's valuation calculations. Different perspectives on company values are provided by these approaches. In contrast to Tobin's Q, which assesses the connection between market value and the cost of replacing assets, the GMV Model prioritizes the worth of consumable goods and services. The DCF Model, on the other hand, provides a rough estimate of the present value of future cash flows. By comparing different approaches, we may verify values via back-and-forth comparison and spot anomalies or trends (Copeland et al., 2014).

Our examination into comparisons revealed significant variation in the value results, which we found to be an interesting discovery. Some companies, such as PT. NFC Indonesia Tbk and PT. Digital Mediatama Maxima Tbk, show indicators of being overpriced based on the research performed using the Gross Merchandise Value (GMV) and Discounted Cash Flow (DCF) models. This suggests that market emotion may have played a role in driving up the prices of these assets, causing their valuation to exceed their true value (Shiller, 2015). However, while having a high Tobin's Q value, the discounted cash flow (DCF) model gave a lower valuation to PT. Hensel Davest Indonesia Tbk. This disparity highlights the discord between what the market anticipates and what really occurs (Damodaran, 2016).

Comparative analysis is useful for spotting value discrepancies, but it may also provide information about market mood and future growth potential. Corporations with Exceptional Levels If a firm has a high Q value, investors may see it as a market leader or a company with great potential, as proposed by Tobin (1969). Market sentiment is notoriously mercurial and speculative, so it's important to keep your cool in the midst of all this excitement.

Comparative research is incomplete without fundamental examination, notwithstanding the importance of market sentiment and valuation models. Financial statements, market position, competitive advantages, and growth potential are all factors to be considered in this process (Brealey et al., 2017). When combined with quantitative approaches, fundamental analysis provides a holistic view of a company's financial health and prospects for the future.

Conclusion

From the results of data processed using 3 (three) different methods for calculating the valuation value of start-up companies conducting IPOs in 2017-2022, it is found that the Gross Merchandise Value method takes into account the amount of goods sold on e-commerce in the

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

long term. at a certain time, found PT Yeloo Integrasi Datanet Tbk, PT Digital Mediatama Maxima Tbk, PT Bukalapak.com Tbk, PT GOTO Gojek Tokopedia Tbk, based on the company's valuation value is OVERVALUED, while using the Tobins'Q method, to measure company performance regarding company value, which is able to provide an overview of management's ability to use company assets, it was found that PT Mcash Integrasi Tbk, PT Hensel Davest Indonesia Tbk, PT Bukalapak.com Tbk, and PT GOTO Gojek Tokopedia Tbk, were in an OVERVALUED position in the value of their stock valuations. When using the Discounted Cash flow method, it functions to assess equity in the business, assess the company as a whole, and to assess a small part of the company. The value of Equity per share that is OVERVALUED is the company PT. Yeloo Integra Datanet Tbk, PT Digital Mediatama Maxima Tbk, and PT GOTO Gojek Tokopedia Tbk.

References

Apriyanthi, N.P.E., Estiyanti, M.N., & Lavianto, S. (2022). Analisa Valuasi Perusahaan Startup: Studi Kasus XYZ Digital Informasi. *Jurnal Ekonomi dan Bisnis, No 1*, 39-84.

Bambang, S., Sudiyatno, E., & Puspitasari, E. (2010). Tobins'Q dan Altman Z-Score sebagai Indikator Pengukuran Kinerja Perusahaan. *Kajian Akuntansi*, Februari 2010, 9–21. Vol. 2, ISSN: 1979-4886.

Brickman, Y. (2015). *Hello, Startup: A Programmer's Guide to Building Products, Technologies, and Teamsastering Disruption and Innovation in Product Management*. O'Reilly Books.

Christian, Tarigan N. (2020). *Analisis Nilai Intrinsik Saham Dengan Model Free Cash Flow To Firm dan Relative Valuation*. Tesis. Universitas Sumatera Utara.

Djaja, I. (2017). *All About Corporate Valuation*. Edisi Revisi. Jakarta: PT Elex Media Komputindo.

Djaja, I. (2019). *Fenomena Startup dan Aspek Penilaian Perusahaan*. Invesor.ID. Public Access By Computer System Via Internet. [02 Oktober 2022].

Damodaran, A. (2010). *The Dark Side Of Valuation: Second Edition*. New Jersey: FT Press.

Damodaran, A. (2012). *Investment Valuation: University Edition*. New York: John Wiley & Sons, Inc.

Damodaran, A. (2014). *Applied Corporate Finance 4th edition*. New York: John Wiley & Sons, Inc.

Damodaran, A. (2018). *The Dark Side Valuation 3rd edition*. New York: Pearson Education, Inc.

Eric, R. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*.

Ecryna CH, Tyara PP, & Pardomuan S. (2012). Analisis Valuasi Nilai Wajar Saham PT Adaro Energy Tbk Menggunakan Metode Free Cash Flow To Firm. Karya Ilmiah. *Journal of Applied Finance and Accounting*.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0

Ferdinan, A. (2014). Metode Penelitian Manajemen: Pedoman Penelitian untuk Penulisan Skripsi Tesis dan Disertasi Ilmu Manajemen (5th ed.). Semarang: Badan Penerbit Universitas Diponegoro.

Hasibuan, S.A.M. (2017). Analisis Nilai Intrinsik Saham dengan metode Free Cash Flow To Firm, Relative Valuation, dan Abnormal Earnings pada Emiten Perkebunan (Studi Kasus: PT. Austindo Nusantara Jaya, Tbk dan PT. Dharma Satya Nusantara, Tbk). Tesis. Universitas Sumatera Utara.

I Made Risma M. Arsha, I Gede Rihayana, & Ni Nyoman Adityarini Abiyoga Vena Swara. (2022). Estimasi Nilai Harga Saham Wajar PT. Bukalapak.com Tbk Saat Melakukan IPO Pada Tahun 2021. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Universitas Pendidikan Ganesha, 13*(2).

Iriyanti D., & Tumbel AL. (2014). Analisis Kinerja Keuangan Pengaruhnya Terhadap Nilai Perusahaan Pada Industri Makanan Dan Minuman Di BEI. *J. EMBA, 2*, 1473–1482.

Jauza Dzahabiyya, Dicky Jhoansyah, R. Deni Muhammad Danial. (2020). Analisis Nilai Perusahaan Dengan Model Rasio Tobin's. Jurnal.

Jun Rifky Prayuda, Zakiyuddin, & Amrie Firmansyah. (2022). Skema Ponzi: Indikasi Kecurangan Pada Valuasi Startup Menggunakan Gross Merchandise Value. *Jurnal Ilmiah Manajemen Kesatuan, 10*(1), 2022.

Koller, T., Goedhart, M., & Wessels, D. (2010). *Corporate Valuation. 5th Edition*. New Jersey: John Wiley and Sons, Inc.

Larrabee, D.T., & Voss, J.A. (2013). *Valuation Techniques.* New Jersey: John Wiley & Sons, Inc.

Martha, F. (2014). Karakteristik Penawaran Umum Saham Perdana: Kinerja Saham Jangka Pendek dan Kinerja Saham Jangka Panjang pada Pasar Modal Indonesia. *Jurnal Economics*, *1*(2).

Mira, T. (2012). *Penilaian Harga Saham Wajar Dengan Metode Discounted Cash Flow Pada PT PP London Sumatera Indonesia*. Tesis. Abfi Institute Perbanas.

Nareswari, Rr Alvita Aulia. (2021). *Valuasi Saham Dengan Menggunakan Discounted Cash Flow*. Karya Ilmiah. Universitas Airlangga.

Ni Luh Putu Agustini, Putu Agus Swastika M.Kom, & Ni Made Estiyanti S.E., M.Si., Ak. (2019). Analisa Nilai Valuasi Startup Berdasarkan Faktor Keuangan Dan Faktor Non Keuangan Media Online PT. XYZ Bali. *Riset dan E-Jurnal Manajemen Informatika Komputer, 3*(2), April 2019.

Prastya Nugraha, A. E., & Wahyuhastuti, N. (2017). Start Up Digital Business: Sebagai Solusi Penggerak Wirausaha Muda. *Jurnal Nusantara Aplikasi Manajemen Bisnis, 2*(1).

Theresa, P. (2020). *Perkembangan Start-up di Indonesia*.

Vicky Rosalinda1, & Anastasia Retno Pratiwi. (2018). Analisis Valuasi Nilai Wajar Saham PT. Jasa Marga (Persero) Tbk Menggunakan Metode Discounted Cash Flow (DCF) Untuk Proyeksi Tahun 2021-2023. *Accounting and Financial Review, 1*(1), 46-51, 2018.

Tobin's, J. (1969). "A General Equilibrium Approach to Monetary Theory", *Journal of Money, Credit and Banking* (February), 12-29.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)
Copyright © 2022, Journal La Bisecoman, Under the license CC BY-SA 4.0