Financial Performance and Stock Valuation of Tobacco Company in Indonesia Stock Exchange (IDX) Amidst the Hike of Excise Tax Rate Period 2017-2021

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ABSTRACT: In the tobacco sector, there was a consistent decline in the price of shares outstanding during 2017 - 2021. The consistent decline in stock prices in the market in the tobacco sector initiated the author to analyze the financial performance condition of all companies in the tobacco sector and the stock valuation of companies with the best financial performance compared to other companies. So, it can be concluded that the market price position is now undervalued or still in an overvalued position to be the basis for making investment decisions. In this study, the financial performance of tobacco companies will be analyzed using the method of the decree of the Ministry of State-Owned Enterprises (SOEs) or decree No. KEP-100 / MBU / 2002. This method will result in the health level status (Healthy, Less Healthy, Unhealthy) of each tobacco company each year in the period 2017 to 2021. Stock valuation in companies with the healthiest company predicate from the tobacco sector on the Indonesian stock exchange for the 2017-2021 period. The Stock Valuation that will be used is the absolute and relative method. In the absolute method, the researcher used the discounted cash flow (DCF) method and Dividend Discount Model (DDM). As for the relative method, the researcher used Price to Book Value (PBV), Price to Earnings Ratio (PER), and EV/EBITDA.

Based on PBV, PER, and EV/EBITDA, the intrinsic value of HMSP is Rp. 660.56, Rp. 1,093.53, and Rp. 1,104.57, respectively. DCF generates a result of IDR 1,301.35, and DDM gets IDR 1,375.53. Since only the PBV results reveal overvalued outcomes when compared to the market price, even though the share price is still Rp 915, it can be said that the market price of HMSP's shares is undervalued. As a result, the researcher suggests investing in HMSP shares. The suggestion is being made because there is a chance for investors to profit from capital gains and dividends because the market price of HMSP is still undervalued in comparison to its underlying worth.

KEYWORDS: Absolute valuation, Intrinsic value, Relative valuation, Stock valuation.

I. INTRODUCTION

Indonesia is the country with the fourth largest population ranking in the world. (Worldmaters) Based on the information obtained by the Directorate General of Population and Civil Registration (Dukcapil) of the Ministry of Home Affairs, the total population of Indonesia is 273.879.750 people as of December 31, 2021. When viewed by gender, 138.303.472 inhabitants (50.5%) of the population are male. The female population is 135,576,278, or (49.5%) of the total population. In addition to being ranked as the fourth largest population in the world, Indonesia is also one of the countries with the highest number of active smokers worldwide. Based on the Global Burden of Disease (GBD 2019) survey, Indonesia occupies the third position in the number of smokers over the age of 15, with 58 million male smokers and 3.5 million women, below China and India. Based on the table above, it can be seen that the cigarette consumption of the Indonesian people in 2020 was 322 billion cigarettes. Meanwhile, in the previous year, it was 356.5 billion sticks, which means that the number of cigarette consumption in Indonesia decreased by 9.7%. However, in 2019 the number of cigarette consumption in Indonesia increased from the previous year of 331.9 billion to 356.5 billion sticks. This is related to the excise rate on tobacco products which has not changed from the previous year. Then in 2020, the government announced an increase in excise rates on tobacco products to reduce the prevalence of cigarette consumption in Indonesia.

With a population of 273,879,750 people, being in third place in the number of active smokers with the age of 15 years in the world, and the average cigarette consumption (2015-2020) of 339.4 billion cigarettes per year, it can be concluded that this will provide a positive response in terms of sales and will provide stable profits even growing for cigarette manufacturers in Indonesia. In addition,

for this reason, Indonesia can also be said to be the correct country to invest in the tobacco sector because it has a large and growing market.
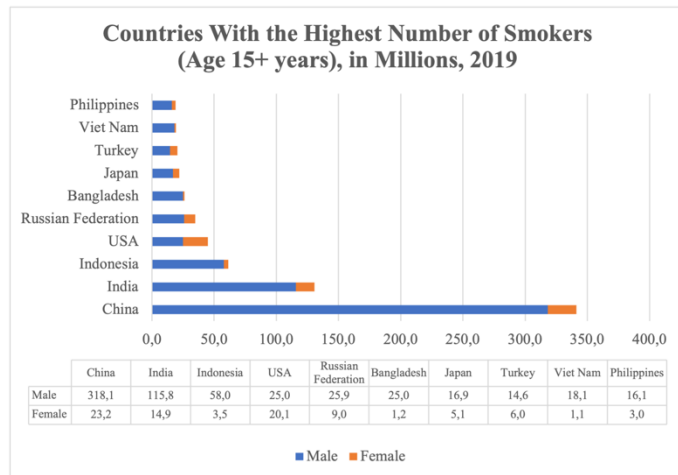

Figure 1.1 Countries with the Highest Number of Smokers (Age +15 years) in Million, 2019
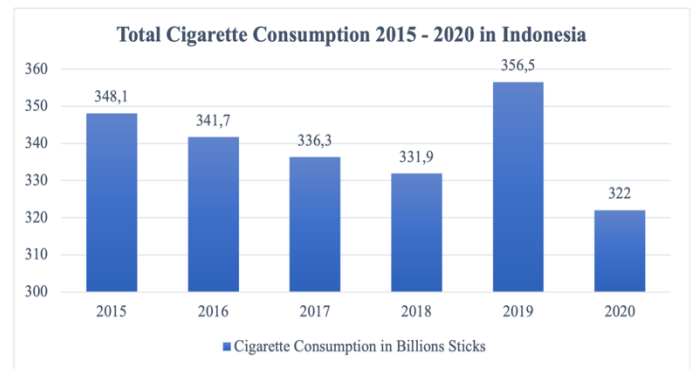**Source:** Global Burden of Disease, 2019

Figure 1.2 Total Cigarette Consumption 2015 – 2020 in Indonesia
Source: Ministry of Finance - Directorate General of Customs and Excise

a.   Company Profile

Cigarette sub-sector companies are manufacturing companies, namely tobacco processing industry companies. In Indonesia, there are four cigarette issuers listed on the Indonesia Stock Exchange (IDX), namely as follows: GGRM (PT Perusahaan Rokok Tjap Gudang Garam Tbk), HMSP (PT Hanjaya Mandala Sampoerna Tbk), WIIM (PT Wismilak Inti Makmur Tbk) and ITIC (PT Indonesian Tobacco Tbk).

Gudang Garam (GGRM)

Gudang Garam is a leading kretek producer, the clove cigarette synonymous with Indonesia and the dominant cigarette category, drawing on its unique reputation as a significant spice trade center. Gudang Garam operates production facilities at two main sites, each with its primary and secondary kretek manufacturing operations. The first site is in the town of Kediri, where the Company was founded and home to Gudang Garam headquarters, a busy regional commercial center with a population of over 290,000. The second site, located in Gempol, East Java, is 50 kilometers away from Surabaya. Under reference GGRM on the Indonesian Stock Exchange (IDX), the Company's shares were traded from a low of Rp 29,925 to a high of Rp 47,250 per share during 2021. There were no changes to the issued and paid-up capital of the Company in 2021, and a dividend of Rp 2,600 per share was distributed from 2020 earnings, as approved at the Annual General Meeting of Shareholders held in July 2021.

Hanjaya Mandala Sampoerna (HMSP)

PT Hanjaya Mandala Sampoerna has been a significant part of Indonesia's tobacco industry for more than a century since its establishment in 1913, with Dji Sam Soe, known as the legendary "King of Kretek." For over a decade, the Company has been the market leader in Indonesia, with a 28.0% market share in the Indonesian cigarette market in 2021. Sampoerna is the pioneer in Indonesia's Machine-Made Kretek Low Tar (SKM LT) cigarette category by introducing Sampoerna A in 1989. The Company also produces some of the best-known kretek (clove) cigarette brand families, including Dji Sam Soe Magnum, Marlboro Filter Black, and Sampoerna Kretek. Sampoerna has been a subsidiary of PT Philip Morris Indonesia ("PMID") and an affiliate of Philip Morris International Inc. ("PMI") since 2005. PMI is a leading international tobacco company with the global brand Marlboro. The company's scope of activities consists of, among others, manufacturing, trading, and distributing cigarettes, including the distribution of Marlboro, the leading international cigarette brand manufactured by PMID.

Wismilak Inti Makmur (WIIM)

Wismilak Inti Makmur was established based on December 14, 1994. The Company's primary business activities, as stated in the Articles of Association, are as follows: Initiating and operating a business specializing in cigarette flavoring and manufacture of regular/mild cigarette filters, operating a business in the marketing and sales of flavored cigarette products and the manufacture of regular/mild cigarette filters following the applicable laws and regulations, investing in other companies with similar business activities to that of the company. Currently, the Company engages in the cigarette and cigarette filter industry, having commenced its commercial operations in 1962 on behalf of PT Gelora Djaja. Based in Surabaya, East Java Province, the Company owns three subsidiaries in the Wismilak Group, four production facilities in Surabaya and Bojonegoro, and four regional logistics centers in Medan, Jakarta, Solo, and Gresik. The Company also owns 21 distribution areas, one stock point, and 27 marketing agents across Indonesia. The Company's products include Hand-Rolled Cigarettes (HRC), Machine-Rolled Cigarettes (MRC), cigars, and cigarette filters. Most of these products are marketed in Indonesia alongside a smaller portion for export.

Indonesian Tobacco (ITIC)

Indonesian Tobacco is a manufacturing company that produces packaged cut tobacco (rolled cigarettes or tingwe tobacco or Roll-Your-Own tobacco) with state excise stamps, which has controlled almost 60% market share in the cut tobacco industry for the last two decades in the domestic tobacco market iris in Indonesia, especially the eastern part of Indonesia. With a track record of performance that prioritizes customers' satisfaction in consuming Roll-Your-Own tobacco and superior quality of the products, the Company's flagship sliced tobacco products, such as 'Sago Tree,' 'Flying Horse,' 'Grape Butterfly' and 'Lantern Candles' brands have accompanied loyal customers for more than 50 years. The Company was listed on the Indonesia Stock Exchange (IDX) on Thursday, July 4, 2019, with ticker code ITIC.

b.   Business Issue

Various indicators can cause the movement of stock prices. One indicator that affects the decline in the price of cigarette manufacturers in the period 2017-2022 is the government's policy that decides to increase the wise excise tax on cigarettes in Indonesia consistently every year, although with a different amount each year. Picture below describe the decrease of stock price in tobacco industry period 2017-2021.

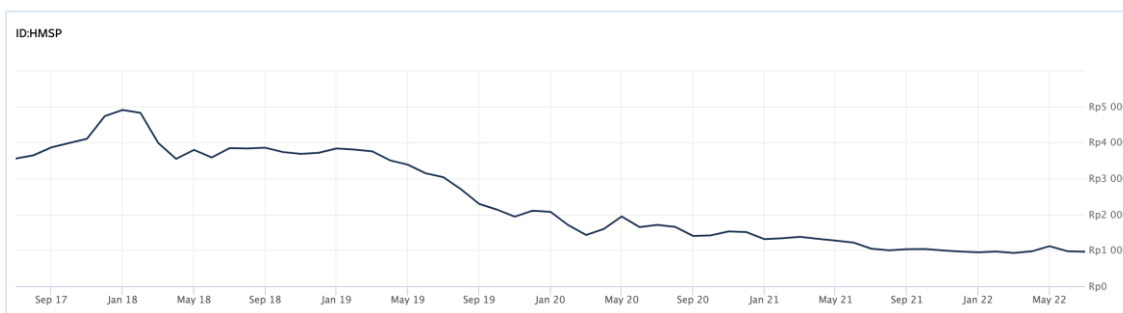**Figure 1.3** Historical Data on GGRM's stock price for the period 2017-2022

Figure 1.4 Historical data HMSP's stock price for the period 2017-2022

Figure 1.5 Historical Data WIIM's stock price for the period 2017-2022

Figure 1.6 Historical Data ITIC's stock price for the period 2019-2022

Source: wsj.com

The increase in cigarette excise will cause the cost of goods sold by cigarette companies to continue to increase and cause a decrease in the net profit value of cigarette companies. The government inaugurated the nominal amount of the increase in excise rates for cigarettes from 2018-2022 can be seen in the picture below.
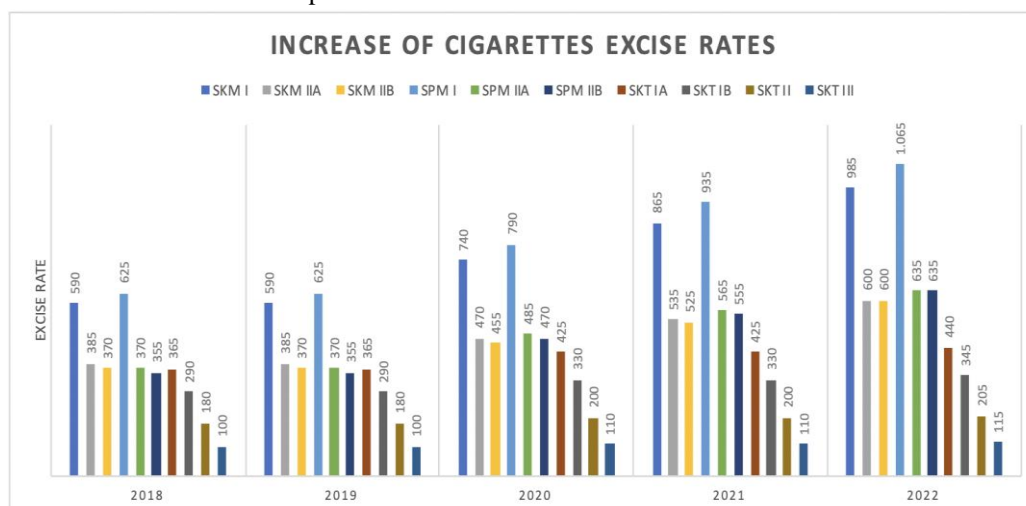
Figure 1.7 Increase in Excise Rates on Tobacco Products (CHT) for the 2018-2022 period in Indonesia

Source: Minister of Finance Regulation (PMK) 2018-2022

It can be seen from the historical picture of the stock price data of cigarette issuers above that the cigarette excise rate is inversely proportional to the share price of cigarette issuers. If the excise rate on cigarettes increases, the issuer's share price will decrease, especially GGRM and HMSP. Because the policy published by the Ministry of Finance provides higher rates for the SPM and SKM groups following figure I.7 above. Meanwhile, in the SKT group, the government does not increase the excise rate on tobacco products

significantly every year. The following is an analysis of historical data on the stock prices of cigarette issuers listed on the Indonesia Stock Exchange to able to see the comparison.

Table 1.1 Closing and Growth Stock of Tobacco Company

Tobacco Company	2017	2018	2019	2020	2021	Average
GGRM	83.800	83.625	53.000	41.000	30.600	
Growth		-0,21%	-36,62%	-22,64%	-25,37%	-21,21%
HMSP	4.730	3.710	2.100	1.505	965	
Growth		-21,56%	-43,40%	-28,33%	-35,88%	-32,29%
WIIM	268	141	168	540	428	
Growth		-47,39%	19,15%	221,43%	-20,74%	43,11%
ITIC	-	-	2.600	650	270	
Growth			-75,00%	-58,46%		66,73%

The table above determine the stock to be analyzed to determine its intrinsic value shows the growth of stock prices over the past five years. Most issuers experienced negative growth or experienced a decline in their share prices from year to year. From the comparison table, it can be seen that only WIIM got a positive average growth of 43.11%. Meanwhile, GGRM, HMSP, and ITIC received negative average growth of -21.21%, -32.29%, and -66.73%, respectively. This can happen because the government provides the highest tariff for the SPM cigarette group (Machine White Cigarettes), while the lowest rates are given to the SKT (Hand Kretek Cigarette) group. With the increase in the excise price of white cigarettes, the price of cigarettes will also increase so that consumers switch to SKT products to get cigarettes at a more affordable price.

II. BUSINESS ISSUE EXPOLARTION

This chapter will elaborate more on the business issue that currently happened in tobacco company's stock. First, the researcher analyzes the financial performance of all tobacco companies listed on IDX. After getting the results of the analysis, then the company with the best performance results in the 2017-2021 period was selected. Then after selecting the company with the best financial performance, the intrinsic value of its shares will be calculated using two methods, namely relative and absolute.

Financial Performance

Financial performance refers to a business or organization's success in meeting all its financial objectives, such as maximizing profits, increasing revenue, increasing earnings per share, and growing liquidity. (Eke, 2018). Financial performance assesses how well the business is doing in terms of its income, overall operating costs, debt structure, assets, and dividends. (Devi et al., 2020)

To determine the stock to be analyzed to determine its intrinsic value, the financial performance of tobacco companies will be analyzed using the method of the decree of the Ministry of State-Owned Enterprises (SOEs) or decree No. KEP-100 / MBU / 2002. This method will result in the health level status (Healthy, Less Healthy, Unhealthy) of each tobacco company each year in the period 2017 to 2021.

Stock Valuation

Stock valuation is a technique for determining a stock's intrinsic or theoretical value. The necessity of stock valuation arises from the fact that a stock's intrinsic worth is independent of its market price. An investor can decide if a stock is overvalued or undervalued at its current market price by understanding the intrinsic value of the stock. (Cfi.com) In general, stock valuation is a combination of art and science because it is a complex process. The readily available data that may be used to determine a stock's value may be too much for investors to handle.

There are two methods can be used to determine a stock's intrinsic value: absolute and relative. In this research, will discusses stock valuation in companies with the healthiest company predicate from the tobacco sector on the Indonesian stock exchange for the 2017-2021 period. The Stock Valuation that will be used is the absolute and relative method. In the absolute method, the researcher used

the discounted cash flow (DCF) method and Dividend Discount Model (DDM). As for the relative method, the researcher used Price to Book Value (PBV), Price to Earnings Ratio (PER), and EV/EBITDA.

Impact of Tobacco Products Excise Duty (CHT) on Tobacco Companies

Excise is a state levy imposed on goods with the properties or characteristics established in Law No. 11 of 1995. In Law No. 39 of 2007 article 2, goods categorized as excisable goods must have the following characteristics, namely: The consumption of such goods needs to be controlled, it needs supervision of the circulation of goods, the emergence of adverse effects on using these goods for users and people in their environment, for fairness and balance, it is necessary to impose state levies.

Excise on Tobacco Products (CHT) is one type of excise that applies in Indonesia. Excise duty on tobacco products (CHT) has always been a concern of the government because excise on tobacco products is one of the sources of domestic tax revenue that contributes quite a lot to state revenue. However, on the other hand, the government must also control cigarette consumption so that it does not increase significantly. Because if the level of cigarette consumption is excessive, it will cause many health problems, especially for those who consume cigarettes that are still under 15 years old. Therefore, to control the consumption and prevalence of the Indonesian people towards cigarettes, the government increased the excise rate on tobacco products to control tobacco consumption. According to the Head of the State Revenue Policy Center of the Fiscal Policy Agency (BKF), this policy aims to control the consumption of goods that negatively impact public health and the quality of human resources (HR).

Financial Performance Analysis

The method used in this study to analyze the financial performance of tobacco industry companies listed on the stock exchange is the decree of the Ministry of State-Owned Enterprises (SOEs) or decree No. KEP-100 / MBU / 2002. One of its objectives is to assess the financial, operational, and administrative health of non-financial SOEs. This research mainly considers the financial aspects of the three.

A scoring system based on eight financial ratios, including return on equity (ROE), return on investment (ROI), cash ratio, current ratio, collection periods, inventory turnover, total asset turnover (TATO), and equity to asset ratio, is introduced in the financial aspect. The non-financial company is divided by the scoring method into Infrastructure (Infra) and Non-Infrastructure (Non-Infra), each with a different weighting for the eight ratios shown in Table II.1 below. The maximum score that can obtain by Infra enterprise is 50, whereas non-Infra enterprises are 70. The tobacco companies discussed in this study are included in the non-infra category, so the weighting given to the financial ratio value uses non-infra weights.

Table II. 1 List of Financial Ratios Indicators and Weight

No.	Financial Indicators	Weight	
		Infra	Non-Infra
1	Return on Equity	15	20
2	Return on Investment	10	15
3	Cash Ratio	3	5
4	Current Ratio	4	5
5	Collection Period	4	5
6	Inventory Turnover	4	5
7	Total Asset Turnover	4	5
8	Equity to Asset Ratio	6	10
Total Score		**50**	**70**

Table II. 2 Health Level Assessment for Company

Rating	Scoring	Adjusted Score	Classification
AAA	TS > 95	TS > 66.5	
AA	$80 < TS \leq 95$	$56 < TS \leq 66.5$	**Healthy**
A	$65 < TS \leq 80$	$45.5 < TS \leq 56$	
BBB	$50 < TS \leq 65$	$35 < TS \leq 45.5$	
BB	$40 < TS \leq 50$	$28 < TS \leq 35$	**Less Healthy**
B	$30 < TS \leq 40$	$21 < TS \leq 28$	
CCC	$20 < TS \leq 30$	$14 < TS \leq 21$	
CC	TS $10 < \leq 20$	$7 < TS \leq 14$	**Unhealthy**
C	$TS \leq 10$	$TS \leq 7$	

Based on the financial performance assessment results of the four issuers carried out using the Ministry of State-Owned Enterprises (SOEs) decree No. KEP-100 / MBU / 2002, the issuer with the best financial performance status during the 2017-2022 period, is HMSP with the AAA category in the entire period compared to other issuers.

Table II. 3 Recapitulation Score of HMSP Financial Ratio in 2017-2021

Source: Researcher Analysis (2022)

Indicators	2017		2018		2019		2020		2021	
	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score
Return on Equity	37,14%	20,0	38,29%	20,0	38,46%	20,0	28,38%	20,0	24,45%	20,0
Return on Investment	49,73%	15,0	47,20%	15,0	44,30%	15,0	28,60%	15,0	23,63%	15,0
Cash Ratio	115,71%	5,0	176,44%	5,0	147,87%	5,0	94,39%	5,0	81,24%	5,0
Current Ratio	527%	5,0	430%	5,0	328%	5,0	245%	5,0	188%	5,0
Collection Periods	13,25	5,0	11,99	5,0	11,20	5,0	14,41	5,0	8,79	5,0
Inventory Turnover	66,39	4,5	51,92	5,0	56,36	5,0	71,45	4,5	65,64	4,5
Total Asset Turnover	289,91%	5,0	282,15%	5,0	254,35%	5,0	224,92%	5,0	239,27%	5,0
Equity to Asset Ratio	79,07%	7,5	75,87%	7,5	70,09%	7,5	60,88%	8,0	54,98%	8,5
Financial Total Score		**67,0**		**67,5**		**67,5**		**67,5**		**68,0**
Category		**AAA**		**AAA**		**AAA**		**AAA**		**AAA**
Status		**Healthy**		**Healthy**		**Healthy**		**Healthy**		**Healthy**

The score results obtained at HMSP issuers for the 2017-2021 period are healthy status in the entire period with category AAA, with the highest total financial score of 68 in 2021. Then it will be discussed in terms of external and internal analysis until the next chapter, the discussion of stock valuation from issuer Hanjaya Mandala Sampoerna uses relative valuation, namely Price to Book Value (PBV), Price per Earning Ratio (PER), and EV / EBITDA. Meanwhile, to get the intrinsic value of HMSP, the researcher uses the absolute valuation method, namely Discounted Cashflow and Dividend Discount Model.

III. BUSINESS SOLUTION

In this final project, the analysis is carried out from the point of view of investors who want to know about HMSP and find out what capital gains are likely to be obtained by shareholders. To find this out, the authors calculate the company's valuation using variables and assumptions correlated with the company's performance in the future. The stock valuation in this research uses two types of valuation. These are the relative valuation model and the absolute valuation model.

a. Relative Valuation

Relative Valuation is a method used to assess a business by comparing the analyzed company value with competing companies or other companies in the industry to determine the value of a company's financial value. This method is an alternative to determining the intrinsic value of a company. Usually, investors use relative valuation when determining the purchase or sale of stock.

Price to Book Value (PBV)

Book Value provides an estimate of the value of a company if it is required to be liquidated. This Book Value is the value of the company's assets listed in the financial statements or Balance Sheet and is calculated by subtracting the company's liabilities from its assets. In other words, this Price to Book Value Ratio can show what shareholders will get after the company pays all its debts.

Table III. 1 Price Book Value Comparison

PBV	2017	2018	2019	2020	2021	2022F
HMSP	16,13	12,20	6,85	5,79	3,85	3,53
GGRM	3,82	3,56	2,00	1,35	0,99	
WIIM	0,58	0,29	0,34	0,96	0,68	
ITIC	-	-	2,68	0,64	0,23	
Industry Average	9,98	7,88	4,42	3,57	2,42	-32%
Target Price/ Share (IDR)						660,56

Source: Researcher Analysis

According to table III. 1, the PBV value resulting from the calculation of the target price/share based on the industry average is IDR 660.56. When compared to the HMSP market price of IDR 915, the target price/share is based on calculations including overvalue.

Price Earnings Ratio (PER)

PER is a ratio in fundamental analysis that describes how much an investor values/ appreciates a stock in terms of its earnings per share/earnings per share. To measure whether a stock is cheap or expensive, it is necessary to compare it with companies in the same industry. The PER value of a stock that is small compared to its industry indicates that the stock is still trading at a low price or undervalue.

Table III. 2 Price Earnings Ratio Comparison

PER	2017	2018	2019	2020	2021	2022F
HMSP	43,42	31,88	17,80	20,40	15,73	10,97
GGRM	20,79	20,65	9,37	10,31	10,50	
WIIM	13,86	5,79	12,90	6,57	5,08	
ITIC	-	-	-	29,10	4,03	
Industry Average	32,11	26,26	13,59	15,36	13,12	20%
Target Price/ Share (IDR)						1.093,53

Source: Researcher Analysis

According to table III. 2, the PER value resulting from the calculation of the target price/share based on the industry average is IDR 1.093,53. When compared to the HMSP market price of IDR 915, the target price/share is based on calculations including undervalue.

EV/ EBITDA

EV to EBITDA stands for an enterprise value to EBITDA (earnings before interest tax, depreciation, and amortization) and is a valuation ratio used to assess the low cost of a company based on its ability to generate operating profit or operating cash. A small EV/EBITDA ratio indicates that the company is still cheap at a market price. The high and low EV/EBITDA ratio is determined by comparing it with the EV/EBITDA of other companies or the EV/EBITDA of the appropriate sector/market for comparison. The high and low EV/EBITDA ratio differs from industry to industry.

Table III. 3 EV/ EBITDA Comparison

EV/ EBITDA	2017	2018	2019	2020	2021	2022F
HMSP	31,93	23,31	12,27	13,58	9,70	6,64
GGRM	13,30	13,16	6,57	6,27	6,33	
WIIM	6,07	2,11	1,61	2,72	1,47	
ITIC	-	-	23,00	7,89	4,72	
Industry Average	22,62	18,23	9,42	9,92	8,02	21%
Target Price/ Share (IDR)						1.104,57

Source: Researcher Analysis

According to table III. 3, the EV/ EBITDA value resulting from the calculation of the target price/share based on the industry average is IDR 1.104,57. When compared to the HMSP market price of IDR 915, the target price/share is based on calculations including undervalue.

b. Absolute Valuation

The method for conducting business valuation usually uses the DCF analysis method to determine the price of a company's financial performance. The author will probably make future revenue and income projections useful for DCF analysis. Previously, the author looked for the cost of debt and cost of equity to analyze WACC. The data needed for WACC will be searched through company reports, moody's rating, Damodaran Rating, and Pefindo. The following is the data needed for WACC calculations.

Table III. 4 The Variable of WACC Calculation

No.	Variables	Value	Remark	Source
1.	Risk-Free Rate	7,23%	Indonesia 10Y Bond Yield	phei.co.id
2.	Beta Stock	0,938	Pefindo June 30, 2022	Pefindo.com
3.	Country Default Spread	1,88%	Country Risk Premium January 2022	Damodaran
4.	Market/ Equity Risk Premium	6,12%	Equity Risk Premium January 2022	Damodaran
5.	Company Default Spread	0.67%	HMSP Interest Coverage	Damodaran
6.	Tax Rate	22%	Corporate Tax Rate	Financial Statement

Cost of Debt

Cost of Debt = Risk-Free Rate + Country Default Spread + Company Default Spread

$\qquad$ = 7.23% + 1.88% + 0.67%

Cost of Debt = 9.78%

Cost of Equity

Concerning Damodaran's country default spread and risk premium, Indonesia's equity risk premium is 6.12%. The beta used for HMSP shares uses the beta obtained from Pefindo, which was updated on June 30, 2022, which is 0,938. Then the value of the cost of equity is:

Cost of Equity = Risk Free Rate + (Beta x Equity Risk Premium)

Cost of Equity = 12,97%

WACC (Weighted Average Cost of Capital)

Based on the value of Cost of Debt, Cost Equity, and several other variables above, if inputted into the WACC equation:

WACC = (We x CoE) + (Wd x CoD) x (1-t)

Then the WACC calculation will be like this:

Variables	Value
Firm's Debt (IDR mil)	346.954
Firm's Equity (IDR mil)	29.191.406
Total Debt + Equity (IDR mil)	29.538.360
Wd	1,17%
We	98,83%
Cost of Debt	9,78%
Cost of Equity	12,97%
Tax Rate	22%
WACC	12,91%

Income Statement Projection

An income statement is a report that shows a company's profitability based on a period. Estimating the company's future income statement is needed to be the basis for calculating discounted cash flows. The assumptions used in this research are based on historical revenue from 2017-2021. The assumptions for the calculation for future growth are:

Table III. 6 Assumption in Income Statement Projection

Account	12M 2022 F	12M 2023 F	12M 2024 F	12M 2025 F	12M 2026 F
Revenue					
SKM	6,00%	6,00%	6,00%	6,00%	6,00%
SKT	8,00%	8,00%	8,00%	8,00%	8,00%
SPM	2,00%	2,00%	2,00%	2,00%	2,00%
COGS					
Production Cost	2,00%	2,00%	2,00%	2,00%	2,00%
Excise Tax	6,00%	6,00%	6,00%	6,00%	6,00%
Purchase of Merchandise Invent	2,00%	2,00%	2,00%	2,00%	2,00%
Selling Expenses	6,27%	6,27%	6,27%	6,27%	6,27%
G & A Expenses	2,17%	2,17%	2,17%	2,17%	2,17%
Finance Income	0,83%	0,83%	0,83%	0,83%	0,83%
Finance Cost	0,05%	0,05%	0,05%	0,05%	0,05%
Others Income/ Expense	0,04%	0,04%	0,04%	0,04%	0,04%
Tax Expense	22%	22%	22%	22%	22%

Source: Author's Analysis

The table above shows the growth rate used for income statement projection. For revenue and COGS accounts, the forecast uses year-over-year revenue growth from the company and the portion of COGS to the revenue. The author considers using the median because the value of HMSP revenue has fluctuated in the 2017-2021 period so that it can produce a precise value for the projected Income Statement. Furthermore, other accounts also use the year-over-year growth rate because the growth assumptions obtained when using the 2017-2021 average or median are not too much different in percentage.

Balance Sheet Projection

The balance sheet provides information about the company's condition based on its assets, liability, and equity. Projections from the HMSP balance sheet are needed to conduct stock valuation in the future. Some of the projected accounts are Cash and Cash Equivalent, Trade Receivables, Other Receivables, Inventories, Investment in Associates, Investment Properties, Property, Plant, and Equipment, Land for Development, Trade Payables, Tax Payable, Retain Earnings, Etc.

The assumptions used for forecasting on the balance sheet are based on historical performance results. Forecasting the historical trends and median growth are primarily used for forecasting specifically for the balance sheet.

Discounted Cash Flow

Discounted cash flow (DCF) is an investment valuation method used to estimate an investment's value based on future cash flows. DCF analysis projects the money that will be generated in the future and helps help investors make decisions both for company acquisitions, stock investments, and others. Variables needed to make DCF analysis such as EBIT, EBITDA, and NOPAT. EBIT is obtained by subtracting gross profit from all operating expenses and depreciation. Then EBITDA is obtained by adding back the depreciation value to EBIT. And finally, NOPAT can be calculated through the deduction between operating profit and tax Flow to Firm (FCFF) shows the value of cash flows from operations available after deducting depreciation, expenses, taxes, Capex, working capital, etc. The formula for FCFF is:

$$FCFF = EBIT - Tax + Depreciation - Working\ Capital - Capex$$

Table III. 9 Assumptions used for Discounted Cashflow Analysis

Assumptions	
Tax Rate	22%
Discount Rate	12,91%
Growth Rate	3,75%
EV/EBITDA	10,85x
Current Price	IDR 915
Shares Outstanding	116.318.076.900
Debt	IDR 346.954.000000
Cash	IDR 17.843.656.000.000
Capex	IDR 412.270.000.000

The table above shows the assumptions used to perform discounted cash flow analysis. Starting with the tax rate value obtained from the historical financial statements section of the financial report notes, then the discount rate value obtained from the WACC calculation. The growth rate assumption in this analysis is obtained from the average growth contribution of excise revenue from tobacco products to State Revenue or Indonesian GDP. For other assumptions, they are assumptions obtained from the latest annual financial statements at the end of the 2021 fiscal year.

From the table below, we can see that assuming DCF for five years starting in 2022 to 2026, the terminal value generated from the assumptions previously mentioned using the FCFF method that HMSP will receive is approximately IDR 100 trillion.

Table III. 10 Calculations of the FCFF from HMSP

Discounted Cash Flow (in IDR)	Entry	2022	2023	2024	2025	2026	Exit
Time Periods		*0*	*1*	*2*	*3*	*4*	
EBIT		8.848.392.925.015	12.105.421.253.153	14.044.116.178.078	16.149.197.078.153	18.433.883.126.545	
Less: Cash Taxes		1.946.646.443.503	2.663.192.675.694	3.089.705.559.177	3.552.823.357.194	4.055.454.287.840	
Plus: D&A		1.217.536.337.520	1.256.100.662.270	1.295.886.475.938	1.336.932.468.042	1.379.278.553.557	
Less: Capex		1.408.804.706.704	1.453.427.278.158	1.499.463.227.828	1.546.957.323.147	1.595.955.749.514	
Less: Changes in NWC		613.173.341.049	632.595.033.136	652.631.889.155	673.303.393.849	694.629.649.119	
Unlevered FCF		6.097.304.771.279	8.612.306.928.435	10.098.201.977.856	11.713.045.472.006	13.467.121.993.628	
(Entry)/Exit	(88.934.338.363.500)						183.771.761.677.196
Transaction CF	-	6.097.304.771.279	8.612.306.928.435	10.098.201.977.856	11.713.045.472.006	13.467.121.993.628	183.771.761.677.196
Transaction CF	(88.934.338.363.500)	6.097.304.771.279	8.612.306.928.435	10.098.201.977.856	11.713.045.472.006	13.467.121.993.628	183.771.761.677.196

Source: Researcher Analysis

After calculating FCFF, the author must do FCFE or Free Cash Flow to Equity. This step is helpful to find out the comparison between the existing market value and the company's intrinsic value, in this case, HMSP. FCFE is done by knowing the enterprise value in the market by knowing the market cap plus debt and minus cash. In this calculation, the value assumption used for the share price per share of HMSP is Rp 915. After that, the author analyzes the enterprise value of intrinsic value by calculating the NPV of the cash flow generated from the FCFF results in table III.10, then added with the assumption of cash held and then subtracted by the assumption of company debt.

Table III. 11 Calculations of Enterprise Value and Intrinsic Value

Intrinsic Value		Market Value	
Enterprise Value	133.874.170.327.247	Market Cap	106.431.040.363.500
Plus: Cash	17.843.656.000.000	Plus: Debt	346.954.000.000
Less: Debt	346.954.000.000	Less: Cash	17.843.656.000.000
Equity Value	151.370.872.327.247	Enterprise Value	88.934.338.363.500
Equity Value/Share	1.301,35	Equity Value/Share	915,00

Rate of Return	
Target Price Upside	42%
Internal Rate of Return (IRR)	24%

Market Value vs. Intrinsic Value	
Market Value	915,00
Upside/ Downside	386,35
Intrinsic Value	1.301,35

The calculation in Table III.6 is the last calculation in the discounted cash flow analysis method to determine the company's intrinsic value. The calculation is obtained by adding the enterprise value with the assumption that the debt owned by the company then reduces the cash owned by the company, and the calculation gets the equity value which is then divided by the total existing shares. Through these calculations, the intrinsic value of HMSP is IDR 1.301,35/share.

From these calculations, it can be concluded that through DCF calculations, the condition of the market value of HMSP, which is used as the calculation assumption, is IDR 915/ share, and the intrinsic value of HMSP obtained from the calculation is IDR 1.301,35/ share. This shows potential upside; the difference is IDR 386,35 from the market price. The IRR obtained from the calculation is 42%.

Risk Assessment

Risk assessment is needed to find out what variables affect the intrinsic value. The intrinsic value itself is an indicator that shows whether the stock is undervalued or overvalued in investment decision. This risk assessment is divided into three analyses, namely Sensitivity Analysis, Scenario Analysis, and Monte Carlo Analysis.

Sensitivity Analysis

Sensitivity Analysis is used to determine what variables can affect the intrinsic value. A method commonly used in sensitivity analysis is tornado diagrams. Tornado diagrams show sensitivity to Intrinsic value based on several variables, with patterns in the form of diagrams that form like tornadoes. Sensitivity analysis uses 20% swing for independent variables. The independent variables in this project are Sales of SKM, Sales of SKT, Sales of SPM, Production Cost, Excise Tax Expense, Purchase of Merchandise Inventory, Risk Free Rates, Tax Rate.
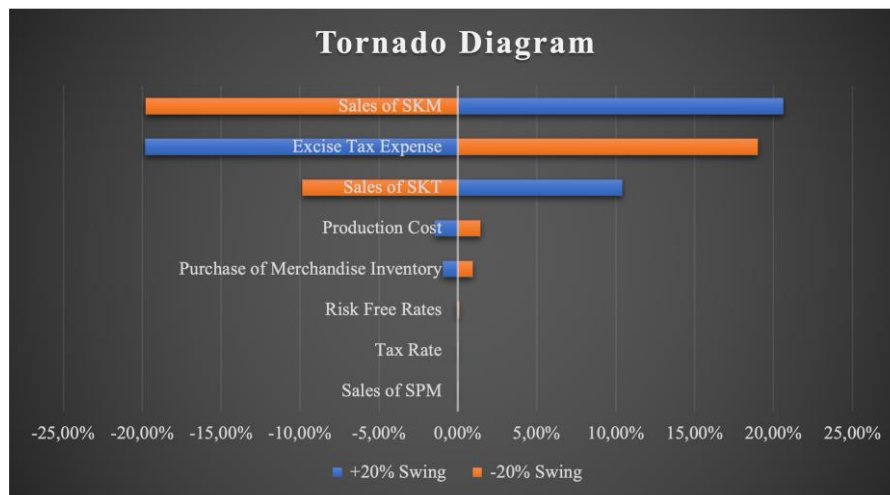

Figure III. 4 Tornado Diagram of Intrinsic Value
Source: Researcher Analysis

The tornado diagram above shows that there are 3 top variables that greatly affect intrinsic value if there is a change from the independent variable. The top 3 variables are obtained based on absolute values that exceed 20 percent, namely aggregate swings. Independent variables are sales of SKM with a sensitivity of 40,40%, Excise Tax Expense with a sensitivity of 38,80% and Sales of SKT with a sensitivity of 20,25%.

Scenario Analysis

Scenario analysis is used to determine changes in Intrinsic value based on the three scenarios formed. These three scenarios consist of worst-case scenarios, basic scenarios, and best-case scenarios. Considerations in these three scenarios are only based on assumptions, which can give the investment an idea of the risks faced. Scenario analysis using the top three variables has the highest sensitivity based on analysis sensitivity.

Table III. 12 Scenario Analysis of Intrinsic Value HMSP

Variable	Worst Case	Base Case	Best Case
Sales of SKM	4,80%	6,00%	7,20%
Excise Tax Expense	7,20%	6,00%	4,80%
Sales of SKT	6,40%	8,00%	9,60%
Intrinsic Value/Share	IDR 658,10	IDR 1.301,35	IDR 1.952,30

Source: Researcher Analysis

The table above shows that the worst-case scenario intrinsic value produced is IDR 658,10. In the base case scenario shows that the intrinsic value produced is IDR 1.301,35 and in the best-case scenario intrinsic value generated amounting to IDR 1.952,30. The three things mentioned above must be considered in calculating the valuation of this HMSP stock, because these three things can have a significant effect on the intrinsic value of the company.

Montecarlo Simulation

Monte Carlo Simulation is an analysis that allows to take risks in quantitative analysis and decision making. The basis of the Monte Carlo simulation is an unexpected experiment using random sampling. In the Monte Carlo simulation in this project, 1.000 simulations are used, and it is assumed to give a normal distribution. The intrinsic value results from Monte Carlo will later be obtained based on the influence of the variables randomly and assessed randomly. The following is one of the results of the intrinsic value using Monte Carlo Simulation.

Table III. 13 Monte Carlo Simulation Result

Descriptive Statistics	
Min	(13.831,39)
Max	13.675,89
Mean	1.521,62
Standard Deviation	3.114,26
Median	1.555,04
Kurtosis	0,95
Skewness	(0,18)
Prob Intrinsic Value < 915	42,28%

Source: Author's Analysis

Monte Carlo Simulation produces an intrinsic value based on its median value of IDR 1.555,04. The results of the Monte Carlo simulation will not differ much from the median value above. Hence, it can be concluded that the intrinsic value results that will be produced by this Monte Carlo simulation range in the median value above. Here is the probability distribution of the montecarlo simulation.
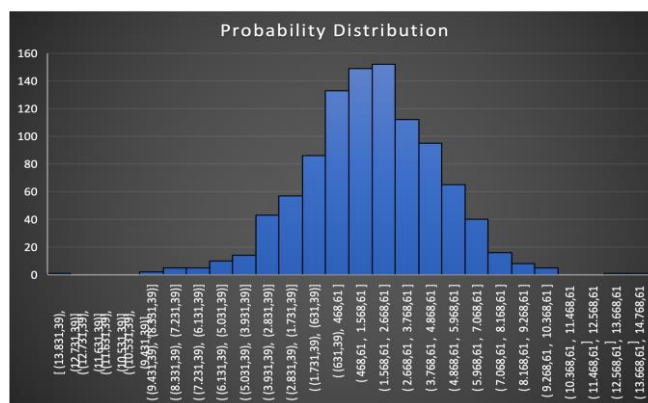

Figure III. 5 Probability Distribution of Intrinsic Value
Source: Researcher Analysis

The statistics description from the simulation shows that the probability of Intrinsic value less than 915 is around 42,28% which means that from 1000 simulations, there is a 57,72% simulation that generates the intrinsic value more than 915.

Dividend Discounted Model

In the strictest, the only cash flow you receive when you buy shares in an Initial Public Offering company is a dividend. The dividend Discounted Model is one of many models for valuing the stock price by the dividend. In this research, Discounted dividend model that will use is the Gordon Growth Model. The Gordon growth model can be used to value a firm in a steady state with dividends growing at a rate that can be sustained forever.

The Gordon growth model relates the value of a stock to its expected dividend in the following time period, the cost of equity, and the expected growth rate in dividends.

$$Value\ per\ shares\ of\ Stock = \frac{Expected\ dividends\ pershare\ next\ year}{Cost\ of\ Equity - Expected\ Growth\ rate}$$

The return on equity (ROE) that we assume in perpetuity should reflect not what the company may have made last year nor what it is expected to make next year but, rather, a longer-term estimate. The estimate of ROE matters because the payout ratio in stable growth has to be consistent: Payout ratio = g/ROE. However, in HMSP issuers, the company consistently pays overall net income to investors from historical data. Hence, the calculation of growth in this study uses growth from net income from the forecasted income statement HMSP, which is 8%. This growth value is not too high, so it is not too sensitive to the calculation results. The cost of equity has to be consistent with the firm being mature. If beta is being used, it should be close to 1. The cost of equity value used in this DDM calculation uses the cost equity calculated earlier, which is 12.97%.

Divided HMSP for 2022	Rp 63,30
Expected Dividend per share next year	Rp 65,30
Cost of Equity	12,97%
Expected Growth Rate	8%

$Value\ per\ shares\ of\ Stock = IDR\ 1.375,53$

Based on calculations using the Dividend Discounted Model method, the HMSP issuer is IDR 1.375,53. Furthermore, compared to the HMSP market price of Rp 915, the value per share of stock from HMSP includes undervalue.

IV. CONCLUSION & RECOMMENDATION

a. Conclusion

The financial performance of the tobacco company on 2017-2022 based on decree no. KEP-100 / MBU / 2002 can be concluded that the company with the highest score is HMSP. The issuer consistently received the highest AAA rating or rating and indicated that the company was financially performing well. Then in the second position, namely the GGRM issuer, followed by WIIM and ITIC. Based on calculations, the value of PBV, PER and EV/EBITDA compared to Market price IDR 915: Price Book Value (PBV) of HMSP is IDR 660,56 or overvalued. Price Earnings Ratio (PER) of HMSP is IDR 1.093,53 or undervalued. EV/EBITDA of HMSP shows that its stock is IDR 1.104,57 or undervalued. Meanwhile, the results of calculating the intrinsic value of HMSP stocks using the absolute method result: Discounted Cashflow IDR 1.301,35 (Undervalued), and Dividend Discount Model IDR 1.375,53 (Undervalued). After getting the calculation results of the intrinsic value of HMSP using the absolute method, namely the discounted cashflow, Rp 1.301,35 per share and the Dividend Discount Model, which is Rp 1.375,53. Then, the results of these calculations can be compared with the market price of HMSP, which is Rp 915 (Market price on August 3, 2022). Based on the market price, it can be concluded that the market price of HMSP shares is undervalued because the intrinsic value is above the market price.

b. Recommendation

Based on the results obtained from the Relative method (PBV, PER & EV/EBITDA) and the Absolute method (Discounted Cashflow & Dividend Discount Model) in calculating the intrinsic value of HMSP issuers, the researcher recommends not buying HMSP shares. The reason behind the recommendation is that the market price of HMSP is still in an overvalued position compared to its intrinsic value. Hence, there is no potential capital gain or benefit that will be received by investors when buying

these shares. The decision was also supported by the government's policy on excise on tobacco products to reduce the general prevalence of smoking. This policy resulted in the nominal cost of goods sold by tobacco companies continuing to increase and net profit consistently decreasing from 2017-2021.

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