



## **CAPM ANALYSIS: HEALTH SECTOR STOCKS AS A GROWING SECTOR DURING THE PANDEMIC**

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### **ABSTRACT**

Covid-19 pandemic has changed people's behavior, from initially spending a lot of money to being more active in saving. This pandemic has also increased public interest in investing in line with the desire for financial well-being. Based on KSEI data, this increase in the number of investors is six times higher than at the end of 2017. Capital Asset Pricing Model (CAPM) is a model that can be used to see the expected return in a balanced market. The main objective of CAPM is to assist investors in making optimal stock choices while avoiding risk. This research aims to examine CAPM approach in making investment choices in the health sector. This research uses a quantitative descriptive method. The data used in this research is secondary data in the form of financial reports of health sector companies listed on Indonesia Stock Exchange for the period March 2020 to February 2022. Based on the research results, 18 health sector stocks have a positive average return, 17 stocks are included in the category of efficient stock, and 1 stock is included in the category of inefficient stock.

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### **Keywords:**

Beta, CAPM, Investment Decision, Stock

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## INTRODUCTION

Covid-19 pandemic has changed people's behavior, from initially spending a lot of money to being more active in saving. This pandemic has also increased public interest in investing along with the desire for financial prosperity. Based on survey data conducted by Schroders Indonesia globally, investment optimism has increased with the expected average annual return over the next five years estimated at 11.3% for 2021, an increase from last year's prediction of 10.9% (Al Faruq, 2021).

Capital market investors have a big role in the Indonesian economy, especially during the Covid-19 pandemic. One of the roles of investors in the capital market is as part of a provider of funds for the development of various infrastructures in the country (Azfar, 2021). The purpose of establishing an Indonesian capital market is to connect investors with companies that need funding.

Investors will consider the potential returns and risks before deciding on the type of investment. Investors can accept different risks by expecting a rate of return commensurate with the risk taken. Because these two aspects are related, they are considered when making investment decisions (Turlinda and Hasnawati, 2021). This statement is also in accordance with the axiom of financial management which is essentially a special basic principle in managing company finances, namely the "risk return trade-off" where there is a relationship between the risk taken and the return to be obtained. The higher the risk on an asset, the asset will generate a high return as well.

One of the methods that can help investors determine investment in the capital market is by using balance models in determining the risk and expected rate of return of an asset. Capital Asset Pricing Model (CAPM) is one model that can relate the expected rate of return of a risky asset to the risk of that asset in a balanced market condition (Tandelilin, 2010). The purpose of CAPM is to assist investors in stock selection and reduce investment risk. Investors can use CAPM to characterize complex market situations, reduce investment risk, and predict the expected rate of return.

Health is the most important factor for human life because it is related to welfare which is the ideals of the Indonesian people. The health sector in Indonesia has adopted a grand strategy to provide essential health services to 270.2 million Indonesians (BPS, 2020).

Central Bureau of Statistics also known in Indonesia as BPS (Badan Pusat Statistik) reported Indonesia's economic growth in 11 business fields where the health service sector and social activities grew positively from the third quarter of 2019 to the fourth quarter of 2021. The highest increase occurred in the fourth quarter of 2020 by 16.54%. According to the Head of BPS Suhariyanto, this growth was due to the fact that during the Covid-19 pandemic there was a change in health awareness behavior in the community so that various health-related products such as drugs, hand sanitizers and so on increased (Julita, 2021).

Based on this background, the researcher wants to analyze CAPM method on health sector stocks during the pandemic.

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\* *CAPM Analysis: Health Sector Stocks as a Growing Sector during the Pandemic*

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## LITERATURE REVIEW

### Investment

Investment is a commitment to an amount of cash or other resources made now with the hope of obtaining some return in the future (Tandelilin, 2010). Investments are made because an investor wants to get profits in the future, besides that investment is made to improve the welfare of investors, because investment provides an option for investors to allocate their funds at the right time.

### Capital Market

Capital market is a market for long-term financial instruments (Keown et al., 2014). Capital market is a market that brings together those who offer funds and those who need long-term funds, such as stocks and bonds.

Indonesia Stock Exchange also known in Indonesia as BEI (Bursa Efek Indonesia) an institution that provides system facilities to bring together sellers and buyers of long-term securities between various companies with the aim of trading company securities listed on BEI.

### Capital Asset Pricing Model (CAPM)

CAPM is a model that relates the expected rate of return of a risky asset with the risk of that asset in a balanced market condition (Tandelilin, 2010).

CAPM is the equation of the expected rate of return on a stock with a risk-free rate plus a risk premium for the stock's systematic risk (Keown et al., 2014).

CAPM relates the expected rate of return of a security to a relevant measure of risk (Jones 2014).

## METHODOLOGY

This research is a descriptive quantitative, which explains the analysis of Capital Asset Pricing Model (CAPM) in making investment decisions on health sector stocks for the period March 2020 to February 2022. The research utilizes the financial statements of companies on health sector which are listed on BEI and have audited financial statements for the period March 2020 to February 2022. The research was conducted on 18 stocks of the health sector listed on BEI for the period March 2020 to February 2022.

The object in this research is a company that is included on health sector stocks category on BEI with a research period from March 2020 to February 2022. Sampling in this research was carried out using a purposive sampling method with the aim of obtaining samples according to the research objectives. Purposive sampling method is a sampling method based on certain considerations. The criteria for companies that will be sampled in this research are as follows:

1. Health sector companies listed on Indonesia Stock Exchange during the period March 2020 – February 2022.
2. Health sector companies that have never been delisted from Indonesia Stock Exchange during the period March 2020 – February 2022.

## RESULT AND DISCUSSION

### Analysis of Descriptive Statistics

Descriptive statistical analysis is used to provide an overview of the variables tested in this research by displaying a

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histogram (describing the frequency distribution of the data) and several basic statistical calculations, such as the average, maximum, minimum, etc (Winarno, 2017). Statistical measures used in this analysis are the average (mean), median, maximum value (max), minimum value (min) and the standard deviation of each variable proxied by Ri (Average rate of return on individual stock), Rm (Market rate of return), Rf (Risk-free rate of return), Beta, and CAPM (Expected rate of return) on health sector companies listed on BEI for the period March 2020 – February 2022. The following is an explanation of the research data statistics in the table 1:

**Table 1 Descriptive Statistics**

	BI 7 Days Repo Rate	IHSG	Ri	$\beta_i$	CAPM
Mean	0,037708	5.776,825	0,038023	0,3708876	0,009000
Median	0,035000	5.982,280	0,032635	0,2718235	0,007434
Maximum	0,045000	6.888,170	0,102130	1,7358225	0,030551
Minimum	0,035000	4.538,930	0,004400	-0,5670082	-0,005811
Standard Deviation	0,003605	6.971,888	0,025729	0,6088490	0,009613
Observatio ns	24	24	18	18	18

Source: Eviews 10 (2022)

## Analysis of Capital Asset Pricing Model (CAPM) Method

### Individual Stock Returns Analysis Results

Monthly closing prices for health sector stocks from March 2020 to February 2022 are used in this research to calculate stock returns. Closing price data is sourced from Yahoo Finance. The calculation of individual stock returns from 18 health sector stocks used as research samples produces the following results:

**Table 2 Health sector stocks that have positive returns**

No	Health Company Name	Stock Code	Ri
1	Pyridam Farm a Tbk	PYFA	0,10213
2	Itam a Ranoraya Tbk	IRRA	0,07001
3	Sarana Meditam a Metropolitan T	SAME	0,06813
4	Indofarm a Tbk	INAF	0,05909
5	Prodia Widyahusada Tbk	PRDA	0,05833
6	Kimia Farm a Tbk	KAEF	0,04606
7	Medikaloka Hermina Tbk	HEAL	0,04422
8	Sejahteraraya Anugrahjaya Tbk	SRAJ	0,04056
9	Merck Tbk	MERK	0,04054
10	Industri Jamu dan Farmasi Sido	SIDO	0,02473
11	Metro Healthcare Indonesia Tbk	CARE	0,02465
12	Siloam International Hospitals	SILO	0,02256
13	Tempo Scan Pacific Tbk	TSPC	0,02148
14	Kalbe Farm a Tbk	KLBF	0,01563
15	Darya-Varia Laboratoria Tbk	DVLA	0,01508
16	Royal Prim a Tbk	PRIM	0,01472
17	Phapros Tbk	PEHA	0,01209
18	Mitra Keluarga Karyasehat Tbk	MIKA	0,00440

Source: BEI, Author's Calculation (2022)

Based on table 2, there are 18 stocks in the health sector with positive returns. This shows that health sector stocks provide benefits for investors during the research period. Pyridam Farma Tbk (PYFA) stock have the largest average rate of return for individual stock, which is 0.10213 or 10.213%. The average rate of return of 10.213% means that the rate of return obtained by investors is 10.213% per month as long as investors invest in the research period.

### Risk-Free Rate Analysis Results

Risk-free assets are types of investments that have no risk because they are guaranteed by the government. The risk-free asset used in this research is BI 7 Days (Reverse) Repo Rate for the period March 2020 to February 2022. BI7DRR is the Bank Indonesia interest rate that has been in effect since August 19, 2016 which was previously referred to as the BI Rate. Information is obtained from the Bank Indonesia website which can be accessed at [www.bi.go.id](http://www.bi.go.id). The

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BI7DRR for the period March 2020 to February 2022 is as follows:

**Table 3 Risk-free rate from March 2020 to February 2022**

No	Month	BI7DRR	No	Month	BI7DRR
1	March 2020	4,5%	13	March 2021	3,5%
2	April 2020	4,5%	14	April 2021	3,5%
3	May 2020	4,5%	15	May 2021	3,5%
4	June 2020	4,5%	16	June 2021	3,5%
5	July 2020	4%	17	July 2021	3,5%
6	August 2020	4%	18	August 2021	3,5%
7	September 2020	4%	19	September 2021	3,5%
8	October 2020	4%	20	October 2021	3,5%
9	November 2020	3,75%	21	November 2021	3,5%
10	December 2020	3,75%	22	December 2021	3,5%
11	January 2021	3,75%	23	January 2022	3,5%
12	February 2021	3,5%	24	February 2022	3,5%
Mean		0,0377			
Risk free per month		0,003142			

Source: BI, Author's Calculation (2022)

Based on table 3, the lowest BI7DRR interest rate in the study period was 0.035 or 3.5%. The lowest interest rate will occur between February 2021 and February 2022 with a maximum BI7DRR interest rate of 0.045 or 4.5% occurring between March 2020 and May 2020.

The average interest rate during March 2020 to February 2022 is 3.77% or 0.0377. This value is then divided by the number of months in a year, resulting in a risk-free rate of return (Rf) per month which is 0.3142 % or equal to 0.003142.

### Market Returns Analysis Results

Investors will receive market returns determined by changes in the price index over a certain period of time. Jakarta Composite Index also known in Indonesia as IHSG (Indeks Harga Saham Gabungan) is used in this research to calculate the market rate of return. IHSG movement from March 2020 to February 2022 is shown in table 4 below:

**Table 4 Market rate of return from March 2020 to February 2022**

No	Month	IHSG	Rm	No	Month	IHSG	Rm
1	March 2020	4.538,93	-	13	March 2021	5.985,52	-0,04106
2	April 2020	4.716,40	0,03910	14	April 2021	5.995,62	0,00169
3	May 2020	4.753,61	0,00789	15	May 2021	5.947,46	-0,00803
4	June 2020	4.905,39	0,03193	16	June 2021	5.985,49	0,00639
5	July 2020	5.149,63	0,04979	17	July 2021	6.070,04	0,01413
6	August 2020	5.238,49	0,01726	18	August 2021	6.150,30	0,01322
7	September 2020	4.870,04	-0,07033	19	September 2021	6.286,94	0,02222
8	October 2020	5.128,23	0,05302	20	October 2021	6.591,35	0,04842
9	November 2020	5.612,42	0,09442	21	November 2021	6.533,93	-0,00871
10	December 2020	5.979,07	0,06533	22	December 2021	6.581,48	0,00728
11	January 2021	5.862,35	-0,01952	23	January 2022	6.631,15	0,00755
12	February 2021	6.241,80	0,06473	24	February 2022	6.888,17	0,03876
Total E(Rm)						0,0377	0,003142

Source: Yahoo Finance, Author's Calculation (2022)

During the research period, the market rate of return was higher than the risk-free rate of return ( $0.01893 > 0.003142$ ) which indicates that the stock performance in the research period was good.

### Levered Beta Analysis Results

Levered beta is a measure of a company's systematic risk. The risk that impacts the entire market as a whole is known as systematic risk. Levered beta takes into account the risk of debt and its effect on the company's financial performance. Investors should consider risk when making portfolio management decisions. Since there is only systematic risk in the CAPM method, investors should consider this by paying attention to the amount of the projected rate of return and changes in stock prices affected by beta.

**Table 5 Health sector stocks that have a levered beta of more than 1**

No	Health Company Name	Stock Code	$\beta$
1	Indofarm a Tbk	INAF	3,0800680
2	Kimia Farm a Tbk	KAEF	2,9137783
3	Phapros Tbk	PEHA	1,8074874
4	Merck Tbk	MERK	1,4098969
5	Itam a Ranoraya Tbk	IRRA	1,3902651
6	Sejahteraraya Anugrahjaya Tbk	SRAJ	1,3407895

Source: Author's Calculation (2022)

Table 5 shows that 6 stocks have a levered beta of more than 1. Indofarma Tbk (INAF) stock have the highest levered beta, which is 3.0800680. Stocks with a beta value greater than 1 are considered aggressive stocks. If the market experiences an increase or decrease of 5%, INAF's stock will increase by 3.0800680 times from 5% and decrease by 3.0800680 times from 5%. The stocks listed below have a levered beta of less than 1:

**Table 6 Health sector stocks that have a levered beta of less than 1**

No	Health Company Name	Stock Code	$\beta$
1	Pyridam Farm a Tbk	PYFA	0,9196722
2	Tempo Scan Pacific Tbk	TSPC	0,6883433
3	Sarana Meditam a Metropolitan T	SAME	0,6643660
4	Industri Jam u dan Farm asi Sido	SIDO	0,3140213
5	Kalbe Farm a Tbk	KLBF	0,2708085
6	Darya-Varia Laboratoria Tbk	DVLA	0,0475038
7	Mitra Keluarga Karyasehat Tbk	MIKA	0,0083659

Source: Author's Calculation (2022)

Table 6 shows that 7 stocks have a levered beta value of less than one. The stock value will increase if the market

risers, but the increase will always be smaller than the market increase because the beta is positive and smaller than 1. As for beta equal to 1, the return on the stock or portfolio will fluctuate by the same amount as the market return. for every one percent fluctuation in market returns. The following stocks have a levered beta of less than 0:

**Table 7 Health sector stocks that have a levered beta of less than 0**

No	Health Company Name	Stock Code	$\beta$
1	Medikaloka Hermina Tbk	HEAL	-0,0932101
2	RoyalPrim a Tbk	PRIM	-0,1847379
3	Metro Healthcare Indonesia Tbk	CARE	-0,2855630
4	Prodia Widyahusada Tbk Siloam	PRDA	-0,3322627
5	International Hospitals	SILO	-0,6973026

Source: Author's Calculation (2022)

Based on table 7, five stocks have a levered beta of less than 0. Siloam International Hospitals (SILO) stock have the lowest beta value of -0.6973026. When the beta value of the stock is less than 1 and has a negative beta, the movement will be opposite to the market movement.

### Unlevered Beta Analysis Results

Unlevered beta or asset beta can be found by removing levered beta debt securities. Debt securities can be calculated by multiplying the debt-to-equity ratio by (1-tax) and adding 1 to that value.

**Table 8 Health sector stocks that have an unlevered beta of more then 1**

No	Health Company Name	Stock Code	$\beta$
1	Kimia Farma Tbk	KAEF	1,735822469
2	Indofarma Tbk	INAF	1,400455251
3	Merck Tbk	MERK	1,045031906

Source: Author's Calculation (2022)

Table 8 shows that 3 stocks have an unlevered beta value of more than 1. Kimia Farma Tbk (KAEF) stock have the highest unlevered beta, which is 1.735822469. Stocks with a beta value greater than 1 are considered aggressive stocks. If the market experiences an increase or decrease of 5%, then KAEF's stock will increase by 1.735822469 times from 5% and decrease by 1.735822469 times from 5%. The stocks listed below have an unlevered beta of less than 1:

**Table 9 Health sector stocks that have an unlevered beta of less then 1**

No	Health Company Name	Stock Code	$\beta$
1	Itama Ranoraya Tbk	IRRA	0,842968436
2	Phapros Tbk	PEHA	0,803250846
3	Tempo Scan Pacific Tbk	TSPC	0,51812627
4	Pyridam Farma Tbk	PYFA	0,480404576
5	Sarana Meditam a Metropolitan T	SAME	0,381587942
6	Industri Jamu dan Farmasi Sido	SIDO	0,274710723
7	Sejahteraraya Anugrahjaya Tbk	SRAJ	0,26893627
8	Kalbe Farma Tbk	KLBF	0,231228893
9	Darya-Varia Laboratoria Tbk	DVLA	0,034794076
10	Mitra Keluarga Karyasehat Tbk	MIKA	0,007444904

Source: Author's Calculation (2022)

Table 9 shows that 10 stocks have an unlevered beta value of less than one. The stock value will increase if the market rises but the increase will always

be smaller than the market increase because the beta is positive and smaller than 1. every one percent fluctuation in market returns. The following stocks have an unlevered beta of less than 0:

**Table 10 Health sector stocks that have an unlevered beta of less then 0**

No	Health Company Name	Stock Code	$\beta$
1	Medikaloka Hermina Tbk	HEAL	-0,058779413
2	Royal Prima Tbk	PRIM	-0,169522642
3	Metro Healthcare Indonesia Tbk	CARE	-0,272387738
4	Prodia Widyahusada Tbk	PRDA	-0,281600455
5	Siloam International Hospitals	SILO	-0,567008188

Source: Author's Calculation (2022)

Based on table 13, five stocks have an unlevered beta value of less than 0. Siloam International Hospitals (SILO) stock have the lowest unlevered beta value, which is -0.567008188. When the beta value of the stock is less than 1 and has a negative beta, the movement will be opposite to the market movement.

### Expected Rate of Return Analysis Results

There are 15 health sector stocks with positive return expectations. Kimia Farma Tbk (KAEF) stock have the largest rate of return which is 0.03055 or 3.055%. Because KAEF stock has the largest beta, KAEF stock has the highest expected rate of return as well.

Siloam International Hospitals (SILO) stock have the lowest return which is -0.00581 or -0.581%. Because SILO stock has the lowest beta, SILO stock has the lowest expected rate of return as well.

This is consistent with the CAPM method because it assumes a positive and directly proportional relationship

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between the expected rate of return and risk.

It can be concluded that the average expected rate of return is positive for health sector stocks during the research period, which is 0.9% per month.

**Table 11 Expected rate of return**

No	Stock Code	Rf	Beta	E(Rm)	$E(R_m) - R_f$	$\beta^* \frac{E(R_m) - R_f}{E(R_m) - R_f}$	E(Ri)
1	KAEF	0,003142	1,735822	0,01893	0,01579	0,027408	0,03055
2	INAF	0,003142	1,400455	0,01893	0,01579	0,022113	0,02526
3	MERK	0,003142	1,045544	0,01893	0,01579	0,016509	0,01965
4	IRRA	0,003142	0,842968	0,01893	0,01579	0,01331	0,01645
5	PEHA	0,003142	0,803251	0,01893	0,01579	0,012683	0,01583
6	TSPC	0,003142	0,518126	0,01893	0,01579	0,008181	0,01132
7	PYFA	0,003142	0,480405	0,01893	0,01579	0,007586	0,01073
8	SAME	0,003142	0,381588	0,01893	0,01579	0,006025	0,00917
9	SIDO	0,003142	0,274711	0,01893	0,01579	0,004338	0,00748
10	SRAJ	0,003142	0,268936	0,01893	0,01579	0,004246	0,00739
11	KLBF	0,003142	0,231229	0,01893	0,01579	0,003651	0,00679
12	DVLA	0,003142	0,034794	0,01893	0,01579	0,000549	0,00369
13	MIKA	0,003142	0,007445	0,01893	0,01579	0,000118	0,00326
14	HEAL	0,003142	-0,05878	0,01893	0,01579	-0,00093	0,00221
15	PRIM	0,003142	-0,16952	0,01893	0,01579	-0,00268	0,00047
16	CARE	0,003142	-0,27239	0,01893	0,01579	-0,0043	-0,00116
17	PRDA	0,003142	-0,2816	0,01893	0,01579	-0,00445	-0,00130
18	SILO	0,003142	-0,56701	0,01893	0,01579	-0,00895	-0,00581
Total							0,16198
Mean							0,00900

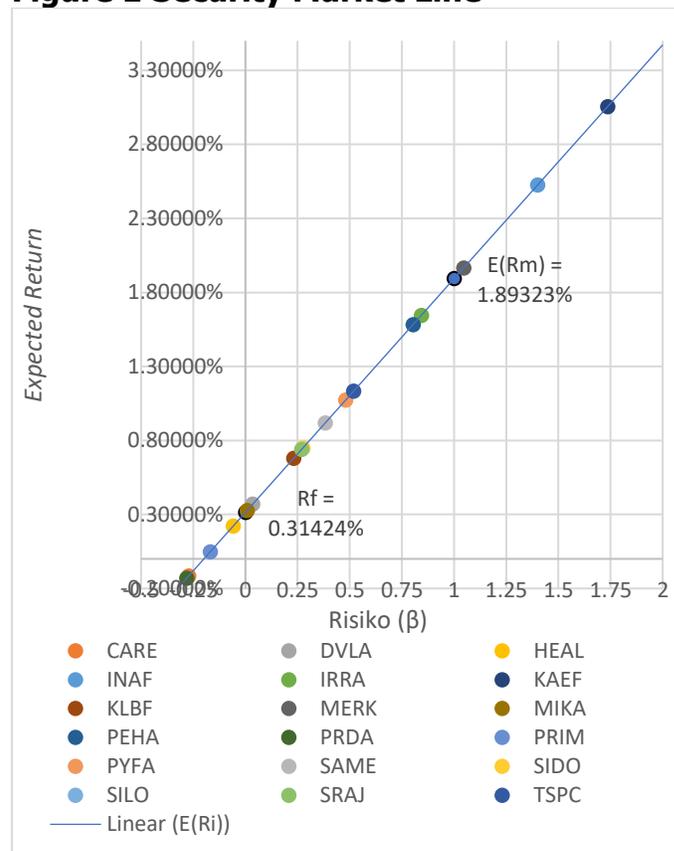
Source: Author's Calculation (2022)

### Security Market Line (SML)

Security Market Line (SML) is a graphical representation of the CAPM model. SML shows the relationship between the magnitude of systematic risk with the expected rate of return by investors. The following is an SML graphic image of 18 stocks of the health sector companies that are used as research samples.

Based on the results of previous research, it can be seen that the higher the systematic risk/beta ( $\beta$ ) the greater the expected rate of return  $E(R_i)$ . This is in accordance with the axiom of financial management (risk return trade-off) where there is a relationship between the risk taken and the return to be obtained. This is illustrated by the following SML graph:

**Figure 1 Security Market Line**



Source: Author's Calculation (2022)

### Efficient stock and Investment Decision

Efficient stocks are stocks whose returns more than expectations while inefficient stocks are stocks whose returns are less than expectations.

**Table 12 Efficient stock**

No	Health Company Name	Stock Code	Ri	E(R)	Ri - E(R)	Evaluation
1	Pyridam Farma Tbk	PYFA	0,10213	0,01073	0,09140	Efficient
2	Prodia Widyahusada Tbk	PRDA	0,05833	-0,00130	0,05963	Efficient
3	Sarana Meditama Metropolitan T	SAME	0,06813	0,00917	0,05896	Efficient
4	Irama Ranoraya Tbk	IRRA	0,07001	0,01645	0,05356	Efficient
5	Medikaloka Hermina Tbk	HEAL	0,04422	0,00221	0,04201	Efficient
6	Indofarma Tbk	INAF	0,05909	0,02526	0,03383	Efficient
7	Sejahteraraya Anugrahajaya Tbk Siloam	SRAJ	0,04056	0,00739	0,03317	Efficient
8	International Hospitals	SILO	0,02256	-0,00581	0,02837	Efficient
9	Metro Healthcare Indonesia Tbk	CARE	0,02465	-0,00116	0,02581	Efficient
10	Merck Tbk	MERK	0,04054	0,01965	0,02089	Efficient
11	Industri Jamu dan Farmasi Sido	SIDO	0,02473	0,00748	0,01725	Efficient
12	Kimia Farma Tbk	KAEF	0,04606	0,03055	0,01551	Efficient
13	Royal Prima Tbk	PRIM	0,01472	0,00047	0,01425	Efficient
14	Darya-Varia Laboratoria Tbk	DVLA	0,01508	0,00369	0,01139	Efficient
15	Tempo Scan Pacific Tbk	TSPC	0,02148	0,01132	0,01016	Efficient
16	Kalbe Farma Tbk	KLBF	0,01563	0,00679	0,00884	Efficient
17	Mitra Keluarga Karyasehat Tbk	MIKA	0,00440	0,00326	0,00114	Efficient
18	Phapros Tbk	PEHA	0,01209	0,01583	-0,00374	Not Efficient

Source: Author's Calculation (2022)

Based on table 12, 17 of the 18 research samples of health sector stocks are efficient stocks. The biggest difference between returns and expectations is seen in Pyridam Farma Tbk (PYFA) stock which is 0.09140 or 9.140%. This shows that the stock owned by Pyridam Farma Tbk (PYFA) can generate a profit of 9.140% of the return expected by investors. When making investment decisions investors should consider buying efficient stocks.

Phapros Tbk (PEHA) is the only health sector stock that is not efficient. The stock investment decision taken is to think not to buy the stock. However, if the investor already owns the stock then it is better to sell the stock because the stock is ineffective or bad.

## CONCLUSION

The results of this research can be summarized as follows based on the

analysis and discussion carried out in the previous chapter:

1. 18 stocks in the health sector have a positive average return.
2. There are 3 stocks with an unlevered beta of more than 1, 10 stocks with an unlevered beta of less than 1, and 5 stocks with an unlevered beta of less than 0. The research sample is 18 stocks of the health sector which have an average unlevered beta which is 0.3708876. This shows that the risk in health sector stocks is not too high.
3. There are 15 stocks with a positive expected rate of return. Kimia Farma Tbk (KAEF) stock have the largest expected rate of return which is 0.03055 or 3.055%. Meanwhile, stock of Siloam International Hospitals (SILO) have the lowest rate of return, which is -0.00581 or -0.581%.
4. 17 stocks were efficient stocks and 1 stock was inefficient. When the stock return more than the expected rate of return, the stock is considered efficient.

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