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Analysis of the Effect of Macroeconomics and Firm Value on Consumer Goods Stock Returns

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Abstract:- This study aimed to analyze the effect of Macroeconomics and Firm Value on Consumer Goods Stock Returns. The choice of shares in consumer goods was taken because at this time of the pandemic, people still need food, beverages and medicines or pharmaceuticals. The quantitative method was carried out using the Vector Error Correction Model (VECM) analysis model approach. The results of this study were to determine the effect of Macroeconomics (Inflation, Interest Rates and Exchange Rates) on consumer goods stock returns. To determine the effect of firm value (PER, PBV) on consumer goods stock returns. Short-term and long-term relationships could be seen from the results of the VECM analysis and investing in consumer goods companies' stocks can be an option.

Keywords:- *Inflation, Interest Rate, Exchange Rate, PER and PBV.*

I. INTRODUCTION

At the beginning of 2020, the world was shocked by an infectious disease, namely 2019-nCoV or what we call COVID-19. The first case was discovered in Wuhan, the capital of China's Hubei province in December 2019, and was identified by the WHO China State Office as pneumonia of unknown etiology. The COVID-19 outbreak has not only affected the health of the entire world, but also the world economy. many industries have had to stop production to comply with government regulations and protect their employees. As a result, economic activity is hampered. And in the long term, the COVID-19 outbreak will lead to business bankruptcy and layoffs on a large scale (Zhang et al., 2020).

As we know, the world economy was impacted when the COVID-19 outbreak occurred, and indirectly affected stock markets in the world. The development of the stock market from January 2, 2015 to December 31, 2020 can be seen in Figure 1.1. From the figure, it can be seen that there has been a significant decline after the COVID-19 outbreak. Recent research has shown that there is a significant influence between the stock market and the COVID-19 outbreak. From a graphic taken from Yahoo finance, the stock market in the United States fell -20% as well as the Nikkei, the Tokyo Stock Exchange. The impact of COVID-19 also affected the Composite Stock Exchange Index (CSPI) in Indonesia which experienced a significant decline.

source: Yahoo/Finance (2021)
Figure 1. Stock movements for the period January 2, 2015-December 31, 2020

The decline in the JCI as a result of COVID-19 has attracted investors' attention to analyze stocks that are suitable for investment. Stock return or Stock Return is very sensitive to changes in the business environment and the economy of a country. Therefore, investors need to be careful in investing in the capital market and need a lot of accurate information as a consideration in making choices (Pratama, Azizah & Nurlaily, 2019).

This kind of COVID-19 event creates uncertainty for investors to predict future outcomes. Investors cannot predict when uptrends and downtrends will come and end, what the costs will be, or how companies will counter adverse market moves caused by the impact of COVID-19.

One of the stock markets that has a significant contribution to the JCI is Consumer Goods. This is because all segments of society consume these goods every day in the form of fast food items, toiletries, beauty, medicines, snacks, etc.

The large intrinsic potential of the consumer goods industry during the COVID-19 pandemic is inversely proportional to the movement of shares in the consumer goods sector. This can be seen in Figure 1.2 which shows that the performance is lower than the JCI. From Figure 1.2 we can see that in the fourth quarter of 2020 when the JCI had positive growth, the movement of consumer goods stocks decreased. This stock movement is certainly interesting to study if it is related to the intrinsic price of this sector and its potential, in order to make it easier for investors to choose suitable stocks during the COVID-19 pandemic.

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Source: Yahoo/Finance (2021)

Figure 2. JCI vs Consumer Goods in the period 2 Jan 2015-31 Dec 2020

In this economic crisis situation, it is important to analyze the stock movement of the consumer goods sector. In the stock analysis approach, there are two methodologies that are commonly used to analyze stock returns, namely technical analysis and fundamental analysis. According to Halim A (2005) states that technical analysis is based on data on changes in stock prices in the past as an effort to estimate stock prices in the future.

In developing an investment strategy, it is important to consider macroeconomic factors, while the most important economic factor to consider is the market interest rate that will occur because interest rates have a significant relationship with capital market performance. The other factor is inflation, especially for long term investment. (Hartono J, 2017).

The company value that will be used is Price to Earning Ratio (PER), Price Book Value (PBV), as a ratio to see its effect on stock returns of consumer goods companies listed on the Indonesia Stock Exchange from 2015 to 2020 in the food and beverage subsector. and bevarages) and pharmaceuticals (pharmaceuticals).

Many previous studies have been conducted to see how investment generates a company's stock return which can be explained based on the influence of fundamental factors. Some researchers show interesting results because of the diversity of their research results. Anggun ABP & Joko (2012) which states that profitability and firm value affect Stock Return and PBV can provide an overview of the potential for stock movements and have a significant positive effect, Giovanni B (2013) which is combined with research from Anggun ABP & Joko (2012) and Utama AM & Wiksuana IG (2018) and Eka B & Indra S (2019) and the findings of Meiliana J & Baby AF (2015) and also Dedy NB (2020) which state that PBV does not have a significant negative effect on stock returns.

Risdiyanto (2016) and Yusril & Ervin M (2018) found PER has a significant positive effect on Stock Return, while according to Dedy N B (2020) found PER has a non-significantly negative effect. Research from Made A, Ida BAP & Luh GSA (2014), Meri A (2014), Alfi AS & Indra W (2018), Utama Am & Wiksuana IG (2018) and from Eka B & Indra Sakti (2019) that inflation has an effect significant positive on Stock Return.

Based on the description above, this research is important because it can provide one of the fundamental indicators to see the company's prospects before the COVID-19 pandemic and during the pandemic until the end of 2020 in the consumer goods sector, especially the food and beverage and pharmaceutical sub-sectors by looking at the inflation rate and company value obtained from the company's financial performance report for the 2015–2020 period.

II. LITERATURE REVIEW

A. Macroeconomics

Macroeconomics is a basic concept that can explain the following:

a) Factors causing unemployment in the economy and ways to overcome them.
b) Factors affecting the rate of product growth/national income.
c) Factors causing inflation and ways to overcome it.
d) Factors causing the rise and fall of interest rates.
e) Factors causing imbalance (deficit or surplus) in a country's balance of payments.
f) Factors affecting fluctuations in the domestic currency exchange rate against foreign currencies.

2) Inflation

Inflation is the tendency of prices to rise in general and continuously (Boediono, 2014).

3) Interest Rate (BI-Rate)

Interest for banks as financial intermediaries is the price of money in buying and selling transactions. The interest charged by the bank represents administrative costs, rental fees, reserves in case of bad loans, and inflation reserves (Huda et al, 2008).

4) Rupiah Exchange Rate (Exchange Rate)

According to Musdholifah & Tony (2007), the exchange rate is the comparison between the price of a country's currency with the currency of another country. For example, the rupiah exchange rate against the US dollar shows how many rupiahs are needed to be exchanged for one US dollar.

The use of foreign exchange or foreign currency as a means of payment in international trade is required because generally countries that carry out trading (trade) only want payment for the goods given to other countries using their country's currency, or the currency of other countries deemed necessary. which has been determined as a standard for example Yen, USD and so on, (Iskandar Putong I 2013:366).

B. Company Value

One of the main goals of a company is to maximize the value of the company, the value of the company is used as a measure of the company's success because increasing company value means increasing the prosperity of company owners or shareholders. The value of the company can be seen from the value of the shares of the company concerned, Harjito A and Martono (2010).

According to Husnan S and Enny Pudjiastuti (2012) the value of the company is as follows: "The value of the company is the price that prospective buyers are willing to pay if the company is sold. The higher the value of the company, the greater the prosperity received by the owner of the company.

The Purpose of Maximizing Company Value According to Made I Sudana (2011) theories in the financial sector have one focus, namely maximizing the prosperity of shareholders or company owners (wealth of the shareholders). This normative objective can be realized by maximizing the market value of the firm. For companies that have gone public, maximizing the value of the company is the same as maximizing the stock market price.

The Concept of Corporate Value According to Christawan and Tarigan (2007) several value concepts that explain the value of the company include the following:

a). The nominal value, which is the value that is formally listed in the company's articles of association, is explicitly stated in the company's balance sheet, and is also clearly written in the collective share certificate.

b). Market value or often called the exchange rate is the price that occurs from the bargaining process in the stock market. This value can only be determined if the company's shares are sold on the stock market.

c). Intrinsic value is a value that refers to the estimated real value of a company. The value of the company in the concept of intrinsic value is not just the price of a set of assets, but the value of the company as a business entity that has the ability to generate profits in the future.

d). Book value is the value of the company which is calculated on the basis of accounting concepts.

e). Liquidation value is the selling value of all company assets that must be met

f). The residual value is the share of the shareholders. The liquidation value can be calculated based on the performance balance prepared when a company will be liquidated.

The Company Values that will be used are:

a). *Price Earning Ratio (PER)*

Price To Earning Ratio, or abbreviated P/E Ratio is the main tool for calculating the stock price of a company compared to the company's income. PER is a function of changes in expected future earnings capabilities.

b). Price to Book Value (PBV)

Price to Book Value (PBV) or in Indonesian called the Price to Book Value Ratio is an investment valuation ratio that is often used by investors to compare the market value of a company's stock with its book value.

C. Stocks

The definition of shares according to Sunariyah (2011) what is meant by shares are as follows: "Securities issued by a company in the form of a limited liability company (PT) or commonly called issuers. Shares state that the owner of the share is also a partial owner of the company."

A share has a value or price and can be divided into 3 (three), namely:

1). Nominal Price

The price reflected in the share certificate determined by the issuer to value each share issued, the amount of the nominal price gives the stock importance because the minimum dividend is usually determined based on the nominal value.

2). Prime Price

This price is at the time the share price is listed on the stock exchange. The stock price in the primary market is usually determined by the underwriter (under writer) and the issuer, thus it will be known how much the issuer's stock price will be sold to the public in order to determine the initial price.

3). Market price

If the initial price is the selling price of the issuance agreement to investors, then the market price is the selling price from one investor to another, this price occurs after the shares are listed on the stock exchange, the transaction here no longer involves the issuer of the underwriter. referred to as the price in the secondary market

4). *Stocks return*

Stock returns in general can be defined as the results obtained by investors from the investments made and can be seen as a value addition (gain) or even a reduction in value (loss) where these two concepts are based on the condition of the ups and downs of the value of the investments made by investors. the. So that investors often have to make predictions and monitor the possibility of the return to be obtained.

D. Signaling theory

Signal theory explains the reasons for companies to provide financial statement information to external parties related to the existence of information asymmetry between the company's management and outside parties. The company management has more information and knows the company's prospects in the future. The information can be in the form of financial reports, company policy information or other information that is carried out voluntarily by the company's management. Signal theory suggests how a company should provide signals to users of financial statements. This signal is in the form of information about what has been done by management to realize the owner's wishes. Signals can be in the form of promotions or other information stating that the company is better than other companies (Meythi and Hartono, 2012).

E. Agency throty

Agency Theory (Agency Theory) Jensen and Meckling (1976) state that agency theory describes shareholders as principals and management as agents. Management is a party

contracted by shareholders to work in the interests of shareholders. For this reason, management is given some power to make decisions in the best interests of shareholders. Therefore, management is obliged to account for all its efforts to shareholders. Because the unit of analysis in agency theory is the contract that underlies the relationship between the principal and the agent, the determination of the most efficient contract that underlies the relationship between the principal and agent.

F. Conceptual framework

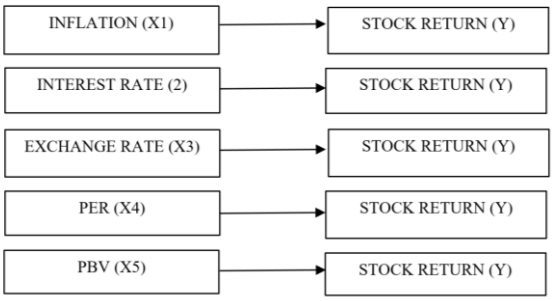

Figure 3. Conceptual Framework

The arrow image in the research model connects one variable to another, explaining the conceptual hypothesis formed and proving that each component in the Macroeconomic and Firm Value categories has an influence on stock returns on the Indonesia Stock Exchange for the 2015-2020 period.

The relationship between each of the variables formed (Inflation, Interest Rates, Exchange Rates, PER, PBV) and Stock Returns are both components for calculating the results of software eviews versions 11 seen the results of the independent variables that affect Stock Return in In the short term and long term, the company's shares can be selected as investment options.

G. Hypothesis

H1 : There is an effect of Inflation on Consumer Goods Stock Return in 2015 – 2020.
H2 : There is an effect of interest rates on consumer goods stock returns in 2015 – 2020.
H3 : There is an effect of Exchange Rate on the Stock Return of consumer goods in 2015 – 2020.
H4 : There is an effect of Price Earning Ratio (PER) on the Stock Return of consumer goods in 2015 – 2020.
H5 : There is an effect of Price to Book Value (PBV) on the Stock Return of consumer goods in 2015 – 2020.

III. RESEARCH METHODOLOGY

A. *Location and Research Design*

This research took the object of research on companies that were permanently listed in the index in the stock index in the period January 1, 2015-December 31, 2020.

B. *Research Design*

The type of research used in this research was quantitative research.

C. *Definition and Operational Variables*

Dependent Variable In this study, the dependent variable is stock return.

Independent Variables In this study, there are five independent variables, namely Inflation (X1), Interest Rates (X2), Exchange Rates (X3), Price To Earning Ratio (PER) (X4), Price Book Value (PBV) (X5).

D. *Population and sample*

The population of this study are all companies listed on the Indonesia Stock Exchange (IDX) which are the Consumer Goods sector.

Sampling in this study using purposive sampling method. The criteria for taking the sample of this research are:

a). A consumer goods company listed on the Indonesia Stock Exchange
b). Food and beverage and pharmaceutical sub-sector companies.
c). Companies that publish financial statements for the 2015-2020 period
d). Companies that have IPOs for more than 10 years.

E. *Data Collection Method*

Impuls Response Function, Analisis Variance Decomposition. In this study, the researcher collected data using secondary data obtained through literature studies which were obtained through articles, journals, books and published Annual Financial Reports.

The data is collected by documentation, namely by collecting the company's annual financial report documents from the IDX website (https://www.idx.co.id) and Yahoo Finance (https://finance.yahoo.com).

As for testing the data that has been obtained, the data is processed by Testing and analyzing the description of the panel data. Data Stationarity Test, Optimal Lag Length Test, VAR Model Stability, Granger Causality Analysis, Cointegration Test, VECM Empirical Model, Impulse Response Function Analysis, Analysis Variance Decomposition.

IV. RESULT AND DISCUSSION

A. OVERVIEW OF THE RESEARCH OBJECT

This study used the shares of companies listed on the Indonesia Stock Exchange as the object of research. Where the stocks that were used as the population in this study are stocks that are included in the Consumer Goods group and listed on the Indonesia Stock Exchange during the 2015-2020 period. The number of companies collected was 57 companies. The sampling technique used in this research was purposive sampling. So that companies which had criteria from sampling as many as 18 companies are:

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Table 1. List of Consumer Goods Companies Conducted Research

NO	PERUSAHAAN *SECTOR CONSUMER GOODS*	KODE SAHAM
1	PT. FKS Food Sejahtera, Tbk	AISA
2	PT. Bumi Tekno KulturaUnggul. Tbk	BUDI
3	PT. Wilmar Cahaya Indonesia, Tbk	CEKA
4	PT. Delta Djakarta, Tbk	DLTA
5	PT. Indofood CBP Sukses Makmur, Tbk	ICBP
6	PT. Indofood Sukses Makmur, Tbk	INDF
7	PT. Multi Bintang Indonesia, Tbk	MLBI
8	PT. Mayora Indah, Tbk	MYOR
9	PT. Nippon Indosari Corpindo, Tbk	ROTI
10	PT. Sekar Laut, Tbk	SKLT
11	PT. Tunas BaruLampung, Tbk	TBLA
12	PT. Kimia Farma, Tbk	KAEF
13	PT. Kalbe Farma, Tbk	KLBF
14	PT. Merck, Tbk	MERK
15	PT. Pyridam Farma, Tbk	PYFA
16	PT.Industri Jamu dan Farmasi Sido Muncul, Tbk	SIDO
17	PT. Tempo Scan Pacific, Tbk	TSPC
18	PT. Sekar Bumi, TBK	SKBM

After obtaining the research sample, then proceed with the process of compiling data by entering all research samples and inputting data for each variable of Stock Return, Inflation, Interest Rates, Exchange Rates, PER, PBV during the period 2017-2020 by using software eviews versions 11 .

B. Stationary Test Data

Stationarity data is needed to influence the results of the VECM estimation test. According to Winarno (2015) in Afandi (2015), the regression equation with non-stationary variables will produce something called spurious regression. In this study, to be able to detect whether or not each variable is stationary, the ADF (Augmented Dickey Fuller) test is carried out.

Based on the results of the stationarity test that has been carried out in Table 2. it can be seen that all variables are stationary at the 1st Deferent level, namely the variables of Inflation, Interest Rates, Exchange Rates, PER, PBV and Stock Returns.

Table 2. Data Stationarity Test Results

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-21.4649	0.0000	6	420
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-19.3126	0.0000	6	420
ADF - Fisher Chi-square	148.027	0.0000	6	420
PP - Fisher Chi-square	145.058	0.0000	6	420

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

From the data from the stationary test, the data are all stationary because the value is below 0.05

C. Optimal Lag Length Test

Determination of the optimal lag in this study is based on the criteria of sequential modified LR test statistics (LR).

Table 3. Optimal Lag Length Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-860.9147	NA	1624.378	24.42013	24.61134	24.49617
1	-478.8052	688.8734*	0.095099*	14.67057*	16.00906*	15.20284*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

D. VAR . Stability Test

A VAR system is said to be stable if all its roots have a modulus < 1.

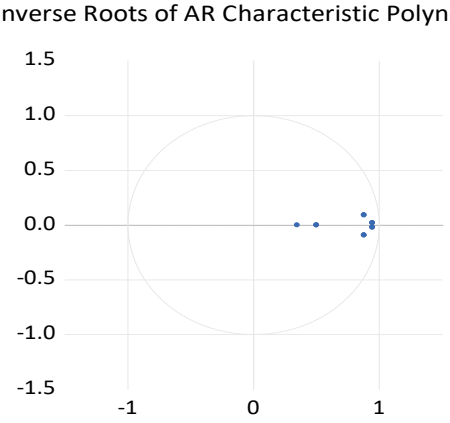
Table 4. Roots of Characteristic Polynomial Result

Root	Modulus
0.946619 - 0.019927i	0.946829
0.946619 + 0.019927i	0.946829
0.879568 - 0.091879i	0.884354
0.879568 + 0.091879i	0.884354
0.501066	0.501066
0.346086	0.346086

No root lies outside the unit circle.
VAR satisfies the stability condition.

Based on the VAR stability test shown in Table 4. It can be concluded that the estimated stability of the VAR that will be used for the IRF and FEVD analysis has been stable because the modulus range < 1 satisfies the stability condition.

Figure 4. AR *Roots Graph Result*



Modulus value < 1, and nothing outside the circle, the data is stable for the long term.

E. Cointegration Result

Table 5. Cointegration Result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.561324	121.2427	95.75366	0.0003
At most 1	0.359100	63.56310	69.81889	0.1425
At most 2	0.218183	32.42138	47.85613	0.5889
At most 3	0.124145	15.19200	29.79707	0.7675
At most 4	0.064794	5.913151	15.49471	0.7058
At most 5	0.017334	1.223995	3.841465	0.2686

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.561324	57.67956	40.07757	0.0002
At most 1	0.359100	31.14172	33.87687	0.1025
At most 2	0.218183	17.22938	27.58434	0.5603
At most 3	0.124145	9.278847	21.13162	0.8093
At most 4	0.064794	4.689157	14.26460	0.7804
At most 5	0.017334	1.223995	3.841465	0.2686

F. Granger Causality Test

From the results at Table 6, those who have a causal relationship are those who have a probability value that is smaller than alpha 0.05. so that later Ho will be rejected, which means one variable will affect other variables. Reciprocity or causality is explained in the discussion.

G. VCEM Model

In the pre-estimation stage the Vector Error Correction Model (VECM) has been passed, namely the data stationarity test, determination of lag length, cointegration test and VAR stability, where the data used in this study is stable, the modulus range with an average value < 1 and VECM is used.

Table 6. Granger Causity Test Results

Pairwise Granger Causality Tests
Date: 07/25/21 Time: 22:49
Sample: 1 72
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
INF does not Granger Cause DRS	71	2.31447	0.1328
DRS does not Granger Cause INF		2.49690	0.1187
DSB does not Granger Cause DRS	71	0.16040	0.6900
DRS does not Granger Cause DSB		6.80477	0.0112
KURS does not Granger Cause DRS	71	3.48363	0.0663
DRS does not Granger Cause KURS		6.34821	0.0141
PER does not Granger Cause DRS	71	0.49662	0.4834
DRS does not Granger Cause PER		5.85587	0.0182
PBV does not Granger Cause DRS	71	1.16824	0.2836
DRS does not Granger Cause PBV		0.50339	0.4804
DSB does not Granger Cause INF	71	0.00368	0.9518
INF does not Granger Cause DSB		4.63875	0.0348
KURS does not Granger Cause INF	71	3.35605	0.0713
INF does not Granger Cause KURS		0.48401	0.4890
PER does not Granger Cause INF	71	1.00173	0.3204
INF does not Granger Cause PER		3.79736	0.0555
PBV does not Granger Cause INF	71	1.54712	0.2178
INF does not Granger Cause PBV		0.01490	0.9032
KURS does not Granger Cause DSB	71	2.02080	0.1597
DSB does not Granger Cause KURS		0.56034	0.4567
PER does not Granger Cause DSB	71	1.20255	0.2767
DSB does not Granger Cause PER		0.55009	0.4608
PBV does not Granger Cause DSB	71	2.09082	0.1528
DSB does not Granger Cause PBV		0.16865	0.6826
PER does not Granger Cause KURS	71	0.00114	0.9732
KURS does not Granger Cause PER		4.11468	0.0464
PBV does not Granger Cause KURS	71	3.25113	0.0758
KURS does not Granger Cause PBV		2.60614	0.1111
PBV does not Granger Cause PER	71	1.32482	0.2538
PER does not Granger Cause PBV		0.02168	0.8834

Table 7. Short Term Relationship

VARIABLE	COEFICIENT	t STATISTIC	REMAKS
CointEq1	-0.811626	[-4.01306]	Significant (-)
D(DRS(-1))	0.010638	[0.07464]	Significant (+)
D(DSB(-1))	-0.001355	[-1.13712]	Significant (-)
D(INF(-1))	-0.000175	[-0.27597]	Significant (-)
D(KURS(-1))	0.0000000711	[0.011590]	Significant (+)
D(PBV(-1))	0.000158	[0.55894]	Significant (+)
D(PER(-1))	0.0000655	[1.18140]	Significant (+)
C	-0.000269	[-0.10473]	Significant (-)

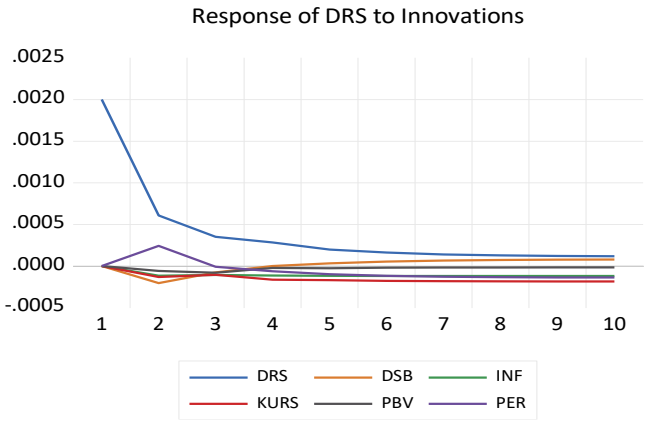
Table 8. Long Term Relationship

VARIABLE	COEFICIENT	t STATISTIC	REMAKS
DRS(-1)	1.000000		
DSB(-1)	-0.000173	[-0.95653]	Significant (-)
INF(-1)	0.000239	[1.28154]	Significant (+)
KURS(-1)	0.000000607	[1.70968]	Significant (+)
PBV(-1)	0.0000539	[0.75552]	Significant (+)
PER(-1)	0.0000146	[1.12902]	Significant (+)

H. . **Impuls Response Function (IRF)**

IRF results can be seen at:

Figure 5. IRF

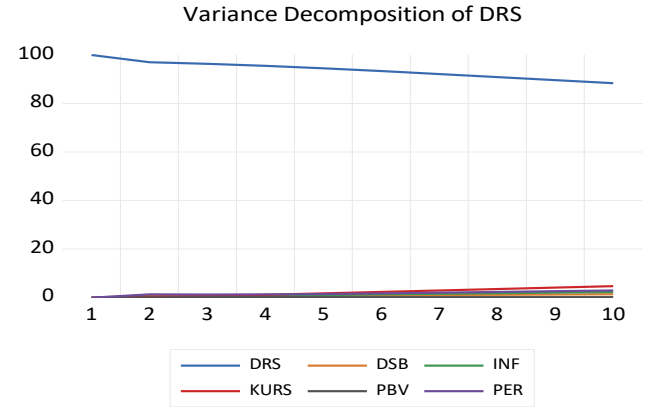


The IRF analysis here is used to show the response of Inflation, Interest Rates, Exchange Rates, PER, PBV to Stock Return shocks.

I.Variance Decomposition

Variance Decompotition aims to measure the contribution or composition of the influence of each independent variable on the dependent variable. Results can be seen in the table:

Figure 6. Variance Decomposition



J. Discussion

From the results of this study indicate:

1. Stationarity test of stationary data at the 1st Difference level.
2. Test The lag length is 1.
3. Stability test VAR model is stable because the range of modulus <1 and AR Root Graph results, all data are in the inverse Roots characteristic Polynomial and concluded that the VAR model is in a stable condition.

4. Cointegration Test

The purpose of the cointegration test in this study is to determine whether the group of non-stationary variables at the 1st Difference level meets the requirements of the integration process, namely where all variables are stationary at the same degree, namely degree 1.

5. Granger Causality Test

The results of this test are to see whether two variables have a reciprocal relationship or not. In other words, does one variable have a significant causal relationship with other variables.

6. VECM Test Results

VECM test results obtained short and long-term relationship between the variables used.

7. Impulse Response Function (IRF) Test Results

Impulse Response Function (IRF) analysis will explain the impact of shock on one variable on another variable, which in this analysis is not only in the short term but can be analyzed for several future horizons as long term information.

Graph of Combined IRF Stock Return data (figure 3)

a). From the combined graph for each independent variable and dependent variable, it can be seen as a whole that from the beginning of the 1st year to the 2nd year, stock returns (DRS) experienced a sharp decline from 0.0020 to 0.005 and period 3 fell again to 0.0004 then headed to the 4th and 5th periods fell to 0.0003 and then gradually decreased until the 10th year period.

b). The PER variable from period 1 to 2 increased by 0.00005 then a shock fell to period 3 to 0.0000 and then sloping down to period 10.

c). For the variable Interest Rate (DSB) and PBV for the 1st to 2nd period, it decreased below 0 and in the 3rd year it started to increase to 0.000001 and sloped down to 10th period.

d). For Variables Exchange Rate (EXCHANGE) and Inflation (INF) from the beginning of the period 1 to 10 the value is below 0.0000.

8. *Variance Decomposition* (VD)

The amount of contribution or composition of the influence of each independent variable on the dependent variable can be measured using VD. Variance Variance Decompotition of each independent variable is described as its contribution to the dependent variable:

a). The Dependent Stock Return (DRS) variable from period 1 (0.002002) to 10 (0.002309) experienced a slight slight decrease

b). For Interest Rate Variables (DSB), Inflation (INF), PBV contributions are not significant
c). For the Exchange Rate Variable (Exchange Rate), Inflation (INF), PBV has a significant contribution (+) from periods 1 to 4 and then increases slightly to period 10.
d). The combined graph as in Variance Decompotition of Stock Returns can be used to compare the contribution of each variable to stock returns.

V. CONCLUSION AND SUGGESTION

A. Conclusion

From the results of the discussion of this study it can be concluded that:

1. There is an Inflation Effect on Consumer Goods Stock Returns in 2015 – 2020.
2. There is no influence of interest rates on consumer goods stock returns in 2015 – 2020.
3. There is an effect of Exchange Rate on the Stock Return of consumer goods in 2015 – 2020.
4. There is an effect of Price Earning Ratio (PER) on the Stock Return of consumer goods in 2015 – 2020
5. There is an effect of Price to Book Value (PBV) on the Stock Return of consumer goods in 2015 – 2020.

B. Suggestion

Based on the results and conclusions of the research that have been described, the researchers can provide various suggestions as follows:

1. Subsequent research uses a larger and more diverse sample size, not only in the food and beverage and pharmaceutical sub-sectors for comparison in research in making investment portfolios.
2. For investors, this finding is expected to further improve the quality of decision making in choosing consumer goods stocks.
3. For the government, in this case the OJK and the IDX as regulators of the Indonesian capital market, this research should further enhance its capabilities in an effort to increase market (investor) confidence in the stock exchange due to the economic crisis during the pandemic.

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