

The “Christmas Effect” on defensive accelerated stocks

Meyni Christy Kuada

Corresponding author:

meynichristy@gmail.com

Sam Ratulangi University
Indonesia

Setiani Mamonto

Sam Ratulangi University
Indonesia

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ABSTRACT

The Christmas event in December 2022 is accompanied by an increase in inflation and also an increase in interest rates. The objective of this study is to examine the Christmas effect on optimal returns for investors. To analyze this phenomenon, this study carries out several stages, which are testing the market efficiency and estimating whether there are abnormal returns or not throughout the Christmas period. The consumer non-cyclical sector stocks in the accelerating trading board are used as the sample. The observation period is from 28 November 2022 to 20 January 2023 and is divided into two sub-periods. This study finds that market condition is inefficient before the Christmas event, resulting in higher abnormal returns and risks.

Keywords: Christmas; abnormal returns; defensive stock
JEL Classification: G11; G12; G14

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1. Introduction

Optimal return is the main goal of investors in stock investment (Anwar, 2020). However, investors also need to consider risk factors and uncertainties of the market conditions (Sulistiyowati et al., 2022). The consumer non-cyclical sector is a sector that attracts investors because it is defensive or tends to be stable in changing economic conditions (Ihsannuddin et al., 2022; Oktasya & Firmansyah, 2022; Kepramareni et al., 2023).

Hinawati (2016) shows that Eid al-Fitr has varied impact on abnormal returns. In addition, Firlianti and Mildawati (2021) also find that stock returns tend to be dominated by the same value on the events of Indonesian holidays. This study observes that the Christmas event in

December 2022 is accompanied by an increase in inflation of 5.51% and also an increase in interest rates from 5.25% to 5.50%. Figure 1 shows the movement pattern of stock returns in the period before and after Christmas. Based on this phenomenon, the objective of this study is to analyze the behavior of returns from defensive stocks, especially on the accelerated trading board at the Christmas event.

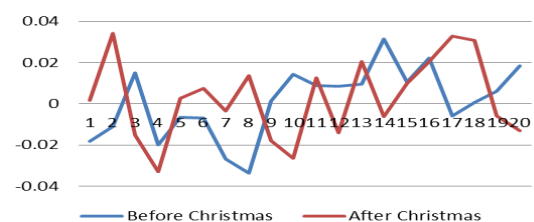


Figure 1. Returns around Christmas

2. Literature review

Market efficiency

Kiky (2018) finds that not all economic events affect market efficiency. However, Pontoh and Budiarmo (2022), and Budiarmo and Pontoh (2023) prove that market conditions in which stock prices fluctuate due to relevant information on economic events are called efficient markets. Juliana et al. (2023) find that stock movements in Indonesia tend to be more efficient in the period from 2017 to 2020.

H1: The stock returns is efficient

Holiday effect and risk-return

Consistent with Niar (2015), the findings of Mallisa et al. (2022), and Modeong et al. (2022) also show that risk has a positive impact on returns. These findings imply that an increase in risk will have an impact on an increase in returns so that the higher the risk, the higher the return. However, the risk-return relationship is also determined by the period of an event. For example, Sandi (2015) proves that the holiday effect has a varied impact on stock returns. This condition is consistent with findings from Hinawati (2016), and Firlianti and Mildawati (2021). These results imply that risk (especially market risk) will vary in a certain period.

H2: Christmas generates abnormal return

3. Research method

The sample of this study is the consumer non-cyclical sector stocks in the accelerating trading board. The observation period for this study is 28 November 2022 to 20 January 2023. The observation period is divided into two sub-periods, which are: (1) 28 November 2022 to 23 December 2022; and (2) 26 December 2022 to 20 January 2023. Following Budiarmo and Pontoh (2023), this study uses the capital asset pricing model (CAPM) in determining abnormal returns (AR) and systematic risk (SR) with the following formula.

$$R_{it} - RF_t = \alpha_{it} + \beta_{it}(RM_t - RF_t) + \varepsilon_{it}$$

R_{it} and RM_t are the rates of return of an asset and market return which is calculated as the difference between the current price and the previous price and then divided by the previous price. RF_t is the rate of return on risk-free assets, which is the interest rate of the Central Bank of Indonesia. In addition, following Budiarmo and Pontoh (2022), this study uses the runs test to detect the market efficiency with the following formula.

$$z = \frac{U - \mu}{\sigma}$$

U and μ are the number and expected number of runs while σ is the expected deviation number of runs. As complementary, this study estimates the risk-return trade-off through the Treynor ratio using the following formula.

$$TR = \frac{R_{it} - RF_t}{\beta_{it}}$$

4. Result and discussion

Table 1 shows that the mean return (Mean-A) of sub-period 1 is 0.0009 while sub-period 2 is 0.0026. Those results indicate that the average return in sub-period 2 is higher than in sub-period 1. In addition, the geometric mean (Mean-G) of sub-period 1 is 0.0008 (or 0.08%) while in sub-period 2 it is 0.0024 (or 0.24%) thus indicating that the return growth in sub-period 2 is better than sub-period 1.

The standard deviation (SD) indicates that the two sub-periods have the same value indicating that market stability in those periods is the same. The coefficient of variation (CV) shows that the distribution of SD in sub-period 2 has better conditions than in sub-period 1. However, the skewness of sub-period 1 is -0.36 and sub-period 2 is 0.01 indicating an average return is higher in sub-period 1

even though the peak (kurtosis) of the two sub-periods is the same or platykurtic.

Based on CAPM, this study finds that the TR of sub-period 1 is 0.0011 and sub-period 2 is 0.0038, indicating a better risk-return tradeoff in sub-period 2. This condition confirmed that sub-period 2 has a lower SR than sub-period 1. However, the results of the analysis also show that sub-period 1 has a higher AR than sub-period 2, thus indicating that the Christmas event has an impact on generating abnormal returns.

Table 1. Descriptive statistics

	Sub-period 1	Sub-period 2
Mean-A	0.0009	0.0026
Mean-G	0.0008	0.0024
SD	0.02	0.02
CV	18.92	7.55
Skewness	-0.36	0.01
Kurtosis	-0.36	-0.80
TR	0.0011	0.0038
AR	0.0025	0.0023
SR	0.8390	0.6765

This study continued the analysis with the runs test to confirm the previous AR results. Table 2 presents the results of the runs test on returns from sub-period 1 and sub-period 2. The results show that the movement of returns in sub-period 2 is more efficient than in sub-period 1. Consistent with the findings from Pontoh and Budiarmo (2022), Budiarmo and Pontoh (2023), and Juliana et al. (2023), the results of this study imply that economic information in sub-period 2 makes stock returns more efficient.

Table 2. Runs test

	Number of runs		Sig.
	Obs.	Exp.	
Sub-period 1	6	10.9	0.023
Sub-period 2	13	11	0.358

Further confirmation, this study conducts the mean difference test. In the beginning, this study conducts a normality

test for returns in sub-period 1 and sub-period 2. Figure 2 shows the result of the normality test for returns in sub-period 1. The results of the analysis show that the Kolmogorov-Smirnov value is 0.122 and it is insignificant in 1%, 5%, and 10%. Based on these results, it can be concluded that the returns in sub-period 1 are normally distributed.

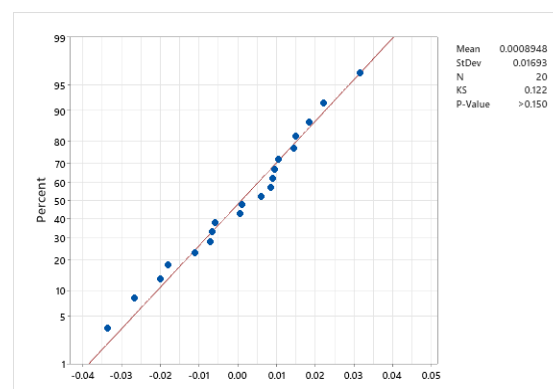


Figure 2. Normality test sub-period 1

Furthermore, Figure 3 shows that the Kolmogorov-Smirnov value is 0.090 and is insignificant at 1%, 5%, and 10%. On this result, it concluded that the returns in sub-period 2 are also normally distributed.

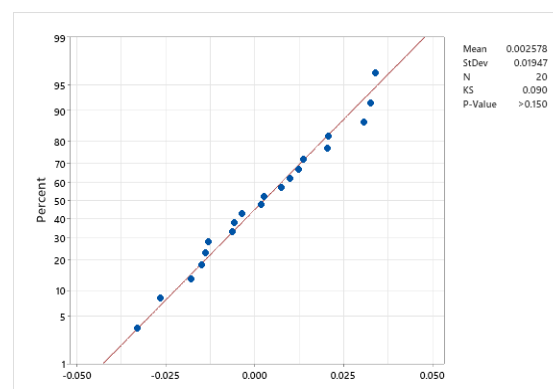


Figure 3. Normality test sub-period 2

Table 3 shows the results of the mean difference test. The results of the analysis show that the returns from sub-period 1 to sub-period 2 have significance above 1%, 5%, and 10%. These results indicate that the returns from the two sub-periods have no significant difference.

Table 3. Mean difference test

	Mean	t	Sig.
Sub-period 1 & Sub-period 2	-0.002	-0.276	0.786

Based on the results of the analysis, this study rejects H1 for sub-period 1. This result implies that the Christmas event in sub-period 1 can provide abnormal returns with a high enough risk that H2 can be accepted. In the case of sub-period 2, this study accepts H1 and rejects H2, thus implying that the market is in an efficient condition and does not generate high abnormal returns but provides lower risks.

5. Conclusion

Conditions of inflation and interest rates tend to provide uncertain conditions in the capital market. In addition, holiday events such as Christmas tend to result in their own complexity if investors have certain perceptions in compiling investment portfolios. This study finds that fluctuations in inflation and rising interest rates tend to have a better and more efficient impact on the capital market, especially during the period 26 December 2022 to 20 January 2023. However, this study also finds that the Christmas event temporarily generates abnormal returns for investors throughout the period 28 November 2022 to 23 December 2022.

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