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The Analysis Impact of Bad News and Good News to Stock Return of State-Owned Banks Sebsector in Indonesia Period 2018

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ABSTRACT: *This study aims to determine and analyze the impact of bad news and good news on changes in stock returns of the four state-owned banks of Indonesia, period 2018. The population of this study is consists of four state-owned banks in Indonesia. Using a saturated sampling technique obtained four sample companies. Event study used to examine abnormal return around good news and bad news press release (announcement) date. The analysis technique used is Statistics Descriptive, One Sample Kolmogorov-Smirnov, Paired Sample T-Test, and Wilcoxon Sign Rank Test. There is no significant difference between before and after the press release of bad news. From ninety-six press releases of good news, five press releases showed there is a significant differences between before and after the press release of good news.*

Keywords: *Bad News, Good News, Stock Return, Abnormal Return.*

ABSTRAK: Penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh berita baik (good news) dan berita buruk (bad news) terhadap perubahan pada return saham perbankan BUMN di Indonesia periode 2018. Populasi penelitian ini terdiri dari 4 perusahaan, dengan menggunakan teknik sampling jenuh diperoleh 4 perusahaan sampel. Studi peristiwa digunakan untuk mengukur abnormal return disekitar tanggal pengumuman rilisnya berita baik dan berita buruk. Teknik analisis yang digunakan adalah statistik deskriptif, one sample kolmogorov-smirnov, paired sample t-test, dan wilcoxon signed ranked test. Hasil yang diperoleh dari penelitian ini adalah tidak ada perbedaan yang signifikan antara sebelum dan sesudah perilisan berita buruk. Dari 96 press rilis berita baik, terdapat lima pengumuman atau press rilis yang menyatakan bahwa terdapat perbedaan yang signifikan antara sebelum dan sesudah perilisan berita baik.

Keywords: *Bad News, Good News, Stock Return, Abnormal Return.*

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INTRODUCTION

In investment activities, shareholders will receive returns in the form of capital gain or dividend. Stock return is return obtains from equity participation or ownership in a company. Securities return patterns explain that in daily, weekly, or even annual periods, there will be higher or lower stock returns than the general period. A study by Gibbons and Hess (1991) explains that stock returns on Monday will be higher than other days of the week on the New York Stock Exchange. Furthermore, the efficient market theory explains if there is new information enters the market, the stock price will be adjusted towards a new equilibrium. Before buying or selling their shares, the investor normally observes the stock price movement and considers how much return they will get or receive. Many factors can influence stock prices and stock returns.

Bad news publishes can worsen the reputation of the company, and inflicting the stock price. As a result, the stock price shrinks. Otherwise, good news publicized increase the stock price (Zulfikar, 2016). Research Li, et al. (2014) explains that there is immediate movement after the release of articles relating to companies on the China Securities Index (CHI 100). The company characteristics and the content of the news article created various impact of the media on the company. Then, Amit & Bammi's (2017) explains that the Indian Stock Market formed different reactions to good news and bad news, and the leverage effect in all periods also being reviewed.

Explanation by Sare (2013) on his research in the Ghana Stock Exchange explains that investors evaluate stock prices and whether stock prices will increase or decrease is depending on the type of announcement. Investors react to the announced news, investors have expectations that encourage stock price movements. Based on research by Stankeviciene & Akelaitis (2014) on the Lithuanian Stock Market, the types and categories of "public announcements" have different effects on stock prices. Through the research of Heston & Sinha (2017) on news published by Thompson Reuters, resulted that positive news increases stock returns while the negative news resulted in delayed reaction for quite a long time.

Referring to the research of Setiawan et al. (2013) on the Capital Market of Indonesian, there was a positive reaction over the announcement of CEO turnover. Aamir & Ali's (2011) study explains the dividend announcement in the oil, cement, and gas sectors listed on the Karachi Stock Exchange had a positive impact on the stock prices of companies and rival companies, both at the time of announcement and after the announcement. Through his research Dharmarathne (2013) adds that investors view dividend announcements as good news. Stock prices reacted positively after the dividend announcement on Sri Lankan Capital Market. Explanation by Nguyen (2015) through his research on companies listed in Vietnam that the impact of dividend announcements on stock returns is positive around the announcement date. According to Yulia & Artini (2015), there is a difference in the average abnormal return between before and after the dividend announcement which is considered as good news.

Research by Diaraya et al. (2017) conducted on the Indonesia Stock Exchange (IDX) also explains that the announcement of dividends will bring up information that enters the capital market or the condition of the Indonesian capital market has begun to lead to an efficient market in a semi-strong form.

Referring to research conducted by Isnurhadi et al. (2016) on the Indonesia Stock Exchange (IDX), there is a significant abnormal return after the announcement. Partial cash dividend payments have a significant effect on cumulative abnormal returns. Research conducted

by Savor (2012), on shares in the IBES (Institutional Broker Estimate System) answers that investors are less reacting to new information about the company and overreact to information about price movements caused by other factors such as (investor sentiment and liquidity).

Research by Braga & Gomes (2016) on the Stock Market of Portuguese that analysis of 12 acquisitions (takeover bids) states that the target companies showed positive abnormal returns. Meanwhile, companies that do acquisitions shows negative abnormal returns. The company reacts strongly to announcements earn abnormally higher earnings in the period closest to the time of the announcing of the news. According to a study by Beckmann & ChanghaJin (2013) based on a rating announcement by Moody's Investors Service, there was a negative abnormal return around the announcement of a decreasing of rating, and there is a positive abnormal return that occurs around the announcement of rating increasing. Daadaa's (2016) research on rating announcement on the Tunisian Stock Market states that declines or negative ratings are associates with negative abnormal returns. The study of Sugiana & Surya (2013) explains that at the Indonesian Stock Exchange's, the market reacted negatively before and after the event, both in developing and undeveloped company noticed from significant abnormal returns. Explanation by Atkins et al. (2018) on his research of the Stock Index of Americas, information according to the news sources can predict the changes in market volatility.

This study intended to examine whether there is an impact of bad news and good news on the stock return of the SOE banking subsector in 2018.

LITELATURE REVIEW

Abnormal Return

Abnormal return is the difference between investor expected return and the actual rate of return. Hartono (2017) stated the abnormal return occurs because the actual returns experience a gap that is too far apart from the investor's expected returns by observing existing risks. According to Bodie et al. (2014) abnormal return related to an event is the difference of the actual return to the benchmark.

Hirschey (2003) explained abnormal returns are estimated using market adjusted returns are computed by subtracting the observed return on each market index for day t, R_{mt}, from the rate of return of the common stock of the jth firm on day t.

Abnormal returns estimation using market adjusted model are:

$$AR_{jt} = R_{jt} - R_{mt} \quad \text{.....(1)}$$

Hirschey (2003) stated mean adjusted returns are computed by subtracting the arithmetic mean return of the common stock of the jth firm computed over the estimation period $\bar{R}_j$, from its return on day t. Estimation of abnormal returns using mean adjusted returns are:

$$AR_{jt} = R_{jt} - \bar{R}_j \quad \text{.....(2)}$$

P.Werner (2010) explained market model uses statistical model approach, which relates the return of security i, R_i. to the return of the market m, R_m. In ordinary least square regression (OLS) of the time series daily stock returns on daily market returns during the pre-event estimation window, it estimates the statistical parameters α_i (= *regression intercept*) and β_i (=*regression slope*):

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \quad \text{.....(3)}$$

Whereas $\varepsilon_{i,t}$ represents the predicted error firm i on day t that by construction must have an expected value of zero and constant variance over time.

Those regression coefficient estimates specific to firm i are then used to determine the abnormal return for firm i on day t, $AR_{i,t}$ as the difference between the actual $R_{i,t}$ and the predicted stock returns $\hat{R}_{i,t}$, in the event and post-event window:

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}) \quad \text{.....(4)}$$

Where α_i and β_i are the OLS estimates over the pre-event estimation period.

Good News and Bad News

Depken (2001) classifies factors that can be considered good news and bad news, including 1) bad news: change in management, destruction of capital, litigation or new government regulation, decreases the expected return of the firm and hence lowers the price of the stock; 2) good news: higher than expected profit, product innovation, increase market share, or deregulation, increases the expected future returns. Good news considered can increase the stock price oppositely bad news published causes a decrease in the stock price.

Meanwhile, according to Setiawan et al. (2013), CEO turnover is consider as positive information or news. Information announced by particular companies to the public generally will be absorbs by investors, and from the analysis, investors will decide to buy or sell their shares. News that always comes randomly will affect trading activities in the market. Theoretically, the appearance of bad news will cause the relevant stock prices to fall. Good news results lead to an increase in share prices (Zulfikar, 2016).

Research Framework

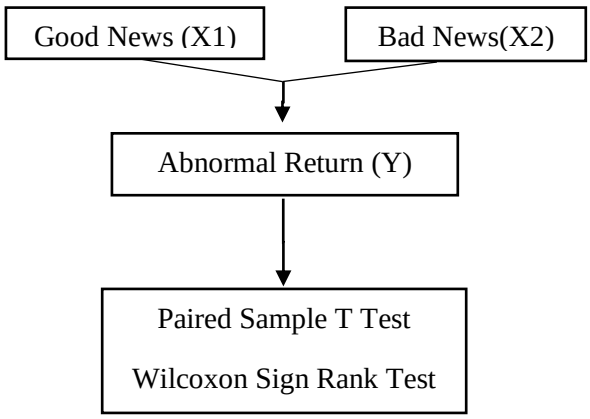


Figure 1. Research Framework of the Impact of Bad News and Good News on Abnormal Return of SOE Banking Subsector

Source: Concepts developed by the researcher

Hypothesis

H1: There is a significant difference in abnormal return of state-owned banks subsector between before and after the release of bad news.

H2: There is a significant difference in abnormal return of state-owned banks subsector between before and after the release of good news.

METODOLOGY

Data

The data used is secondary data with the documentation method as a method used to collect the data. Secondary data used are news published by state-owned banks (SOE) in one year (2018 period), the date of release, and stock returns of SOE Bank sub-sector (BMRI, BTN, BNI, BRI) in daily data of one year period. Data obtained from the official website Indonesian Stock Exchange, and the annual report of state-owned banks (SOE). The population of this study is State-Owned Enterprises (SOE) banks in Indonesia consists of four banks as a sample: Bank Nasional Indonesia (BNI), Bank Mandiri (BMRI), Bank Rakyat Indonesia (BRI), and Bank Tabungan Negara (BTN).

Table 1. List of Samples of SOE Subsector

No.	Kode Saham	Nama Emiten
1.	BBTN	Bank Tabungan Negara (Persero) Tbk
2.	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
3.	BMRI	Bank Mandiri (Persero) Tbk.
4.	BBNI	Bank Negara Indonesia (Persero) Tbk.

Sumber: Processed by Author, September 2019

Measurement of Abnormal Return

Abnormal returns measured using the event study method with observation periods starting from seven days before and seven days after the press release of good news and bad news.

Realized return can be calculated by the formula:

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \quad \text{.....(5)}$$

R_{it} is stock return i on day t. P_{it} is the stock closing price i on day t. P_{it-1} is the closing stock price of i on day t-1 or the day before.

Abnormal returns using the market adjusted model are calculated using the formula:

$$AR_{jt} = R_{jt} - R_{mt} \quad \text{.....(6)}$$

AR_{jt} is the abnormal return of stock j on day *t*, R_{jt} is the return of ordinary shares company j on day t, R_{mt} is the market return on day *t*.

The analysis techniques used to analyze data are descriptive statistics, normality test, paired sample t-test, and Wilcoxon sign rank test.

RESULT
Normality Test

Table 2. Normality Test of Good News and Bad News Nasional Indonesia Bank (BNI) One Sample Kolmogorov Smirnov Test

Pair	Variable	Sig	Result
Pair 1-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 2-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
29 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 3-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
31 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 4-	Abnormal Return Before (Pre)	0,005	Data is not normally distributed
5 February 2018	Abnormal Return After (Post)	0,107	Data is normally distributed
Pair 5-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
13 February 2018	Abnormal Return After (Post)	0,074	Data is normally distributed
Pair 6-	Abnormal Return Before (Pre)	0,160	Data is normally distributed
21 February 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 7-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
2 March2018	Abnormal Return After (Post)	0,085	Data is normally distributed
Pair 8-	Abnormal Return Before (Pre)	0,188	Data is normally distributed
11 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 9-	Abnormal Return Before (Pre)	0,165	Data is normally distributed
13 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 10-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
20 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 11-	Abnormal Return Before (Pre)	0,200	Data is normally distributed

21 March 2018	Abnormal Return After (Post)	0,180	Data is normally distributed
Pair 12-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
23 March 2018	Abnormal Return After (Post)	0,144	Data is normally distributed
Pair 13-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
29 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 14-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
6 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 15-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 16-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
20 April 2018	Abnormal Return After (Post)	0,085	Data is normally distributed
Pair 17-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
23 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 18-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 19-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
27 April 2018	Abnormal Return After (Post)	0,188	Data is normally distributed
Pair 20-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
7 May 2018	Abnormal Return After (Post)	0,188	Data is normally distributed
Pair 21-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
8 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 22-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
14 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 23-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
17 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 24-	Abnormal Return Before (Pre)	0,062	Data is normally distributed
28 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Pair 25	Abnormal Return Before (Pre)	0,200	Data is normally distributed
-5 June 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 26-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
6 July 2018	Abnormal Return After (Post)	0,113	Data is normally distributed
Pair 27-	Abnormal Return Before (Pre)	0,113	Data is normally distributed
18 July 2018	Abnormal Return After (Post)	0,184	Data is normally distributed
Pair 28-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
19 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 29-	Abnormal Return Before (Pre)	0,130	Data is normally distributed
2 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 30-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
7 August 2018	Abnormal Return After (Post)	0,048	Data is not normally distributed
Pair 31-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
13 August 2018	Abnormal Return After (Post)	0,049	Data is not normally distributed
Pair 32-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
15 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 33-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
30 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 34-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 35-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
2 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 36-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
15 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 36-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
16 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Pair 37-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
20 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Source: The data is processed by the author, January 2020

Based on the normality test conducted on all pairs of abnormal returns of the bad news, and abnormal returns of the good news, published by Nasional Indonesia Bank (BNI) have shown from thirty-seven pairs of data, thirty-four from all data resulted in the distribution of the abnormal returns is normal.

But three pairs of data have confirmed that the distribution of abnormal returns is non-normal because the significance value is less (smaller) than the significance level [Sig.(2-tailed) $\leq \alpha_{0,05}$]. The news content of the abnormal returns that non normally distributed are: on February 5, 2018 "the signing of a cooperation agreement between Bank BNI and BPJS TK"; on August 7, 2018 "launching the IPC Smart Card"; and lastly on August 13, 2018 "the MoU and PKS between VNI and ASDP".

Table 3. Normality Test of Good News and Bad News Mandiri Bank

One Sample Kolmogorov Smirnov Test

Pair	Variable	Sig	Result
Pair 38-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
6 February 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 39-	Abnormal Return Before (Pre)	0,065	Data is normally distributed
2 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 40-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
19 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 41-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
21 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 42-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
29 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 43-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
9 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 44-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Pair 45-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
23 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 46	Abnormal Return Before (Pre)	0,200	Data is normally distributed
24 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 47-	Abnormal Return Before (Pre)	0,152	Data is normally distributed
9 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 48-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
19 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 49-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
27 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 50-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
15 August 2018	Abnormal Return After (Post)	0,129	Data is normally distributed
Pair 51-	Abnormal Return Before (Pre)	0,032	Data is not normally distributed
27 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 52-	Abnormal Return Before (Pre)	0,129	Data is normally distributed
29 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 53-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
30 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 54-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
24 September 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 55-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 September 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 56-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
4 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 57-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
8 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Pair 58-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
10 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 59-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
17 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 60-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
24 October 2018	Abnormal Return After (Post)	0,152	Data is normally distributed
Pair 61-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
21 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 62-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
24 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 63-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 Juli 2018	Abnormal Return After (Post)	0,170	Data is normally distributed

Source: The data is processed by the author, January 2020

Based on the abnormal returns of all pairs of bad news and all pairs of good news published by Mandiri Bank, analyzed using a normality test give result there is abnormal return data that not normally distributed because the significant value is less than the significance level [Sig.(2-tailed) $\leq \alpha_{0,05}$]. The news is "Mandiri in cooperation with the banking services of PT. Amartha Mikro Fintek and PT. Lunaria Annua Technology (Coin Works)" on 27 August 2018.

Table 4. Normality Test of *Good News* and *Bad News* Rakyat Indonesia Bank (BRI) One Sample Kolmogorov Smirnov Test

Pair	Variable	Sig	Result
Pair 64-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
17 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 65-	Abnormal Return Before (Pre)	0,010	Data is not normally distributed
24 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 66-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
30 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 67-	Abnormal Return Before (Pre)	0,200	Data is normally distributed

31 January 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 68-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
22 February 2018	Abnormal Return After (Post)	0,119	Data is normally distributed
Pair 69-	Abnormal Return Before (Pre)	0,163	Data is normally distributed
28 February 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 70-	Abnormal Return Before (Pre)	0,144	Data is normally distributed
4 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 71-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
5 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair March -	Abnormal Return Before (Pre)	0,200	Data is normally distributed
11 March 2018	Abnormal Return After (Post)	0,132	Data is normally distributed
Pair 73-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
22 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 74-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
27 March 2018	Abnormal Return After (Post)	0,147	Data is normally distributed
Pair 75-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
28 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 76-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 April 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 77-	Abnormal Return Before (Pre)	0,001	Data is not normally distributed
2 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 78-	Abnormal Return Before (Pre)	0,075	Data is normally distributed
3 May 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 79-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
8 June 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 80-	Abnormal Return Before (Pre)	0,200	Data is normally distributed

29 June 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 81-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
23 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 82-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
31 Jul2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 83-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
30 August 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 84-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
6 September 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 85-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
18 September 2018	Abnormal Return After (Post)	0,178	Data is normally distributed
Pair 86-	Abnormal Return Before (Pre)	0,107	Data is normally distributed
28 September 2018	Abnormal Return After (Post)	0,174	Data is normally distributed
Pair 87-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
24 October 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 88-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
22 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 89-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
27 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 90-	Abnormal Return Before (Pre)	0,132	Data is normally distributed
29 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 91-	Abnormal Return Before (Pre)	0,185	Data is normally distributed
30 November 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 92-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
7 December 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 93-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
11 December 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Pair 94-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
13 March 2018	Abnormal Return After (Post)	0,192	Data is normally distributed
Pair 95-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
14 March 2018	Abnormal Return After (Post)	0,192	Data is normally distributed
Pair 96-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 March 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Source: The data is processed by the author, January 2020

Based on the normality test of all pairs of abnormal returns of the bad news and the good news published by Bank Rakyat Indonesia (BRI) there is data that not normally distributed because the significant value is less than the significance level [Sig.(2-tailed) $\leq \alpha_{0,05}$]. The news is "BRI in cooperation with the BPD Jateng (Coin Works)" on 2 May 2018.

Table 5. Normality Test of *Good News* and *Bad News* Tabungan Nasional Bank (BTN) One Sample Kolmogorov Smirnov Test

Pair	Variable	Sig	Result
Pair 97-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
13 February 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 98-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
29 June 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 99-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed
Pair 100-	Abnormal Return Before (Pre)	0,200	Data is normally distributed
26 July 2018	Abnormal Return After (Post)	0,200	Data is normally distributed

Source: The data is processed by the author, January 2020

Hypotheses testing of all the abnormal returns before (pre), and abnormal return after (post) of all pairs of bad news and good news published by Bank Tabungan Nasional (BTN), or four news in total affirmed all pairs of data are normally distributed because variables showed Asymp. Sig. (2-tailed) more than a significant level.

Paired Sample T-Test

Table 6. Paired Sample T Test Good News Bank BNI

Pair	Sig. (2-tailed)	Pair	Sig. (2-tailed)
Pair 1-26 January 2018	0,995	**Pair 18-27 April 2018**	0,581
Pair 2-29 January 2018	0,331	**Pair 19-7 May 2018**	0,082
Pair 3-31 January 2018	0,842	**Pair 20-8 May 2018**	0,037
Pair 4-13 February 2018	0,728	**Pair 21-14 May 2018**	0,249
Pair 5-21 February 2018	0,176	**Pair 22-17 May 2018**	0,974
Pair 6-2 March 2018	0,597	**Pair 23-28 May 2018**	0,763
Pair 7-11 March 2018	0,551	**Pair 24-5 June 2018**	0,092
Pair 8-13 March 2018	0,999	**Pair 25-6 July 2018**	0,691
Pair 9-20 March 2018	0,182	**Pair 26-18 July 2018**	0,559
Pair 10-21 March 2018	0,606	**Pair 27-19 July 2018**	0,800
Pair 11-23 March 2018	0,976	**Pair 28-2 August 2018**	0,485
Pair 12-29 March 2018	0,599	**Pair 29-15 August 2018**	0,533
Pair 13-6 April 2018	0,049	**Pair 30-30 August 2018**	0,280
Pair 14-18 April 2018	0,713	**Pair 31-18 October 2018**	0,197
Pair 15-20 April 2018	0,610	**Pair 32-2 November 2018**	0,951
Pair 16-23 April 2018	0,318	**Pair 33-15 November 2018**	0,668
Pair 17-26 April 2018	0,044	**Pair 34-16 November 2018**	0,186
Pair 18-27 April 2018	0,581		

Source: The data is processed by the author, January 2020

Paired Sample T-Test used to analyze abnormal returns that previously tested using a normality test, and the data must have a normal distribution. Abnormal returns around the publishing date (day) of thirty-one good news that have a normal distribution analyzed using Paired Sample T-Test. There is three good news that affirmed that H2 or alternative hypothesis were accepted. In other words, there are significant differences in abnormal returns between before and after the press release of good news. While the rest of abnormal returns rejected hypothesis 2 and affirmed there are no significant differences in abnormal returns before and after the press release of bad news.

News that showed there are significant differences in abnormal returns between before and after the press release of good news are: "signing MoU, BNI, and UGM strengthen the cooperation" on April 6, 2018; "signing a cooperation agreement between BNI, PI and PTPN 3" on April 26, 2018; "BNI customer award" on May 8, 2018.

Table 7. Paired Sample T Test Good News Bank Mandiri

Pair	Sig. (2-tailed)	Pair	Sig. (2-tailed)
Pair 35-6 February 2018	0,382	**Pair 47-15 August 2018**	0,791
Pair 36-2 March 2018	0,259	**Pair 48-29 August 2018**	0,812
Pair 37-19 March 2018	0,619	**Pair 49-30 August 2018**	0,899
Pair 38-21 March 2018	0,395	**Pair 50-24 September 2018**	0,334
Pair 39-29 March 2018	0,766	**Pair 51-26 September 2018**	0,834
Pair 40-9 April 2018	0,110	**Pair 52-4 October 2018**	0,289
Pair 41-18 April 2018	0,740	**Pair 53-8 October 2018**	0,277
Pair 42-23 April 2018	0,474	**Pair 54-10 October 2018**	0,767
Pair 43-24 April 2018	0,096	**Pair 55-17 October 2018**	0,529
Pair 44-9 May 2018	0,618	**Pair 56-17 October 2018**	0,096
Pair 45-19 July 2018	0,418	**Pair 55-21 November 2018**	0,727
Pair 46-27 July 2018	0,297	**Pair 56-24 November 2018**	0,309

Source: The data is processed by the author, January 2020

Twenty-four good news published by Mandiri Bank that has a normal distribution tested and showed that hypothesis 2 rejected or there is no difference in abnormal return between before and after the press release of good news because of Asymp. Sig. (2-tailed) more than a significant level.

Table 8. Paired Sample T Test Bad News Bank Mandiri

Pair	Sig. (2-tailed)
Pair 44-18 July 2018	0,438

Source: The data is processed by the author, January 2020

Paired sample t-test on one bad news published by Mandiri bank that previously was tested and have a normal distribution, showed that hypothesis 1 rejected, there is no difference in

abnormal returns between before and after the press release of bad news because of Asymp. Sig. (2-tailed) more than a significant level.

Table 9. Paired Sample T Test Bad News Bank BRI

Pair	Sig. (2-tailed)	Pair	Sig. (2-tailed)
Pair 57-17 January 2018	0,615	**Pair 76-29 June 2018**	0,040
Pair 59-30 January 2018	0,078	**Pair 77-23 July 2018**	0,503
Pair 60-31 January 2018	0,992	**Pair 78-31 July 2018**	0,317
Pair 61-22 February 2018	0,672	**Pair 79-30 August 2018**	0,188
Pair 62-28 February 2018	0,487	**Pair 80-6 September 2018**	0,072
Pair 63-4 March 2018	0,732	**Pair 81-18 September 2018**	0,545
Pair 64-5 March 2018	0,919	**Pair 82-28 September 2018**	0,359
Pair 65-11 March 2018	0,637	**Pair 83-24 October 2018**	0,456
Pair 70-27 March 2018	0,382	**Pair 84-22 November 2018**	0,951
Pair 71-28 March 2018	0,663	**Pair 85-27 November 2018**	0,487
Pair 72-18 April 2018	0,799	**Pair 86-29 November 2018**	0,208
Pair 74-3 May 2018	0,188	**Pair 87-7 December 2018**	0,644
Pair 75-8 June 2018	0,354	**Pair 88-11 December 2018**	0,075

Source: The data is processed by the author, January 2020

The result on Paired Sample T-Test of twenty-six good news that has a normal distribution showed there is one good news that stated the alternative hypothesis (H2) was accepted. There are significant differences in abnormal returns between before and after the release of good news, with the news content is: "BRI establishing a strategic partnership with a subsidiary of Pelindo III" published on 29 June 2018. While the rest rejected hypothesis 2 and affirmed there is no significant difference in abnormal return between before and after the press release of good news.

Table 10. Paired Sample T Test Bad News Bank BRI

Pair	Sig. (2-tailed)
Pair 66-13 March 2018	0,489
Pair 67-14 March 2018	0,633

Pair 68-22 March 2018	0,489
Pair 69-26 March 2018	0,763

Source: The data is processed by the author, January 2020

There is four bad news published by Rakyat Indonesia Bank that already tested using a normality test before and have a normal distribution. Paired Sample T-Test showed hypothesis 1 rejected, or there is no difference in abnormal returns between before and after the press release of the bad news because of Asymp. Sig. (2-tailed) more than a significant level.

Table 11. Paired Sample T Test Good News Bank BTN

Pair	Sig. (2-tailed)
Pair 97-13 February 2018	0,326
Pair 98-29 June 2018	0,436
Pair 99-26 July 2018	0,259
Pair 100-25 October 2018	0,348

Source: The data is processed by the author, January 2020

In total, there are four good news announced by Tabungan National Bank (BTN) that has a normal distribution. Explained that hypothesis 2 rejected, and there is no difference in abnormal returns between abnormal return before and after the press release of good news because of Asymp. Sig. (2-tailed) more than a significant level.

Wilcoxon Sign Rank Test

Table 12. Wilcoxon Sign Rank Test

Pair	Variable	Z	Asymp.Sig (2-tailed)
Pair 4-5 February 2018	Abnormal Return Before (Pre)	-2,028	0,043
	Abnormal Return After (Post)		
Pair 28-7 August 2018	Abnormal Return Before (Pre)	-1,183	0,237
	Abnormal Return After (Post)		
Pair 29-13 August 2018	Abnormal Return Before (Pre)	0,000	1,000
	Abnormal Return After (Post)		
Pair 47-27 August 2018	Abnormal Return Before (Pre)	-0,169	0,866

	Abnormal Return After (Post)		
Pair 58-24 January 2018	Abnormal Return Before (Pre)	-1,859	0,063
	Abnormal Return After (Post)		
Pair 73-2 May 2018	Abnormal Return Before (Pre)	-0,338	0,735
	Abnormal Return After (Post)		

Source: The data is processed by the author, January 2020

Abnormal return before (pre) and abnormal return after (post) that is not normally distributed is tested using the Wilcoxon Signed Rank Test. All of the abnormal returns that not normally distributed come from the good news. In total there is six news, with the news content is: "launching IPC Smart Card" on August 7, 2018; "MoU and a cooperation agreement between VNI and ASDP" on August 13, 2018; "Mandiri in cooperation with banking services of PT. Amartha Mikro Fintek and PT. Lunaria Annua Technology (Coin Works)" on August 27, 2018; "Bank BRI penetrated all high time and made a profit of Rp. 29.04 trillion throughout 2017, and issuing special edition cards " on January 24, 2018; and the last "BRI Establishes Cooperation with Central Java BPD" May 2, 2018.

Five news from all news stated the alternative hypothesis (H2) is rejected or there is no significant abnormal return difference between before and after the release of good news articles. Meanwhile, one of the good news with the content: "the signing of a cooperation agreement between Bank BNI and BPJS TK" on February 5, 2018; stated that the alternative hypothesis (H2) was accepted or there is a significant difference in abnormal return between before and after the release of good news articles (good news).

Discussion

Before and After the Release of Good News in BNI Bank

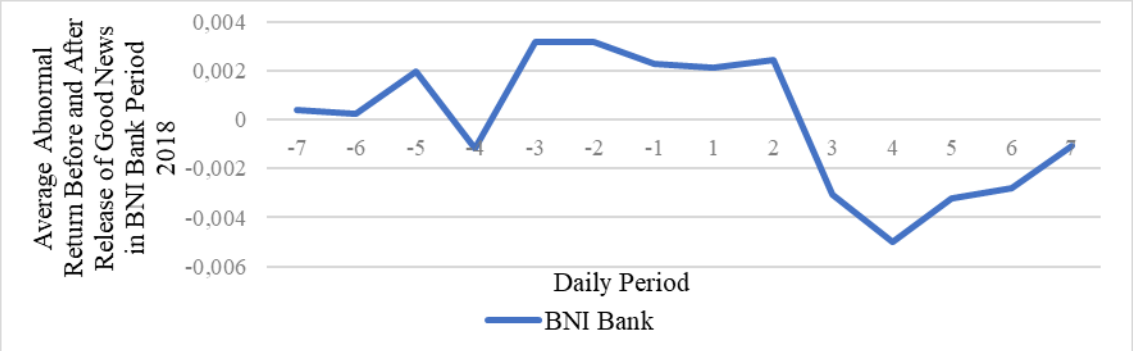


Figure 2. Graph of Average Abnormal Rerturns Before and After Release of Good News in BNI Bank Period 2018

Source: The data is processed by the author, January 2020

Before the news release, abnormal returns fluctuated with an upward trend, where H-4 was the lowest percentage of abnormal returns with a value of -0.12%. Meanwhile, abnormal returns after announcements or news releases experience downward fluctuations or continue to decline after the release of good news. The lowest point after the release of good news is at H4 of -

0.005001 or -0.5%. Overall the average abnormal return percentage is 0.1433%. Abnormal returns after (post) average percentage is -0.00151 or -0.15%.

Before and After the Release of Good News in Mandiri Bank

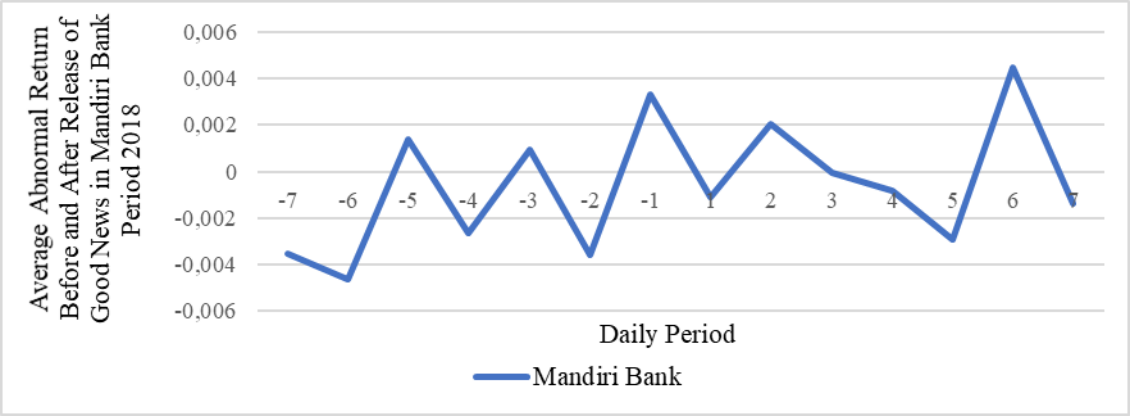


Figure 3. Graph of Average Abnormal Rerturns Before and After Release of Good News in Mandiri Bank Period 2018

Source: The data is processed by the author, January 2020

Overall, the graph shows an upward fluctuated trend in the time of the release of good news. After the release of the announcement or good news, the chart showed an upward trend even though it had hit its lowest point on H5. The value average abnormal return before (pre) when compared with the average abnormal return after (post) the release of good news, then the abnormal return showed difference at 0.00129607 (abnormal return is higher after the release of good news). Hypothesis 2 rejected, or there is no difference in abnormal returns before and after the press release of good news because of Asymp. Sig. (2-tailed) more than a significant level.

Before and After the Release of Bad News in Mandiri Bank

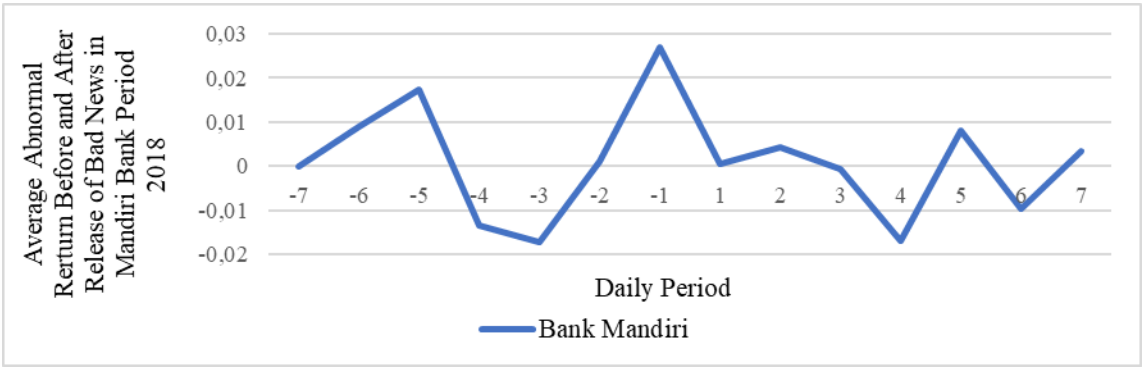


Figure 4. Graph of Average Abnormal Rerturns Before and After Release of Bad News in Mandiri Bank Period 2018

Source: The data is processed by the author, January 2020

The graph shows a fluctuating trend, but the trend increases before the release of bad news and decreases after the release of announcements or bad news. The average abnormal return before (pre) release of the bad news, when compared with the average abnormal return after

(post) release of the bad news, then it showed a difference of 0.004937 (decreasing 0.5% after the release of bad news).

Before and After the Release of Good News in BRI Bank

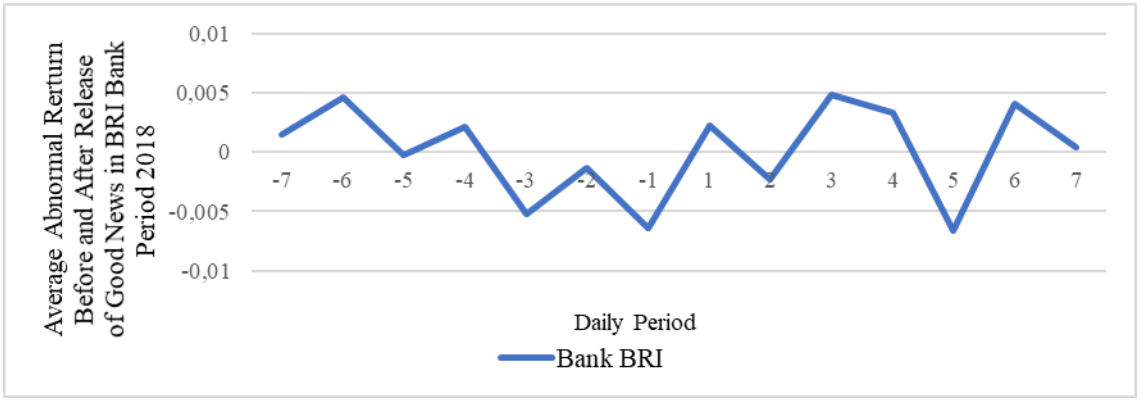


Figure 5. Graph of Average Abnormal Rerturns Before and After Release of Good News in BRI Bank Period 2018

Source: The data is processed by the author, January 2020

Overall, the graph shows a downward trend before the announcement and an upward trend after the release of good news. The average abnormal return before (pre) releases of good news when compared with the average abnormal return after (post) the release of good news, then abnormal return showed difference by 0.001579 or by 0.16% (increasing of 0.16% after the release of good news).

Before and After the Release of Bad News in BRI Bank

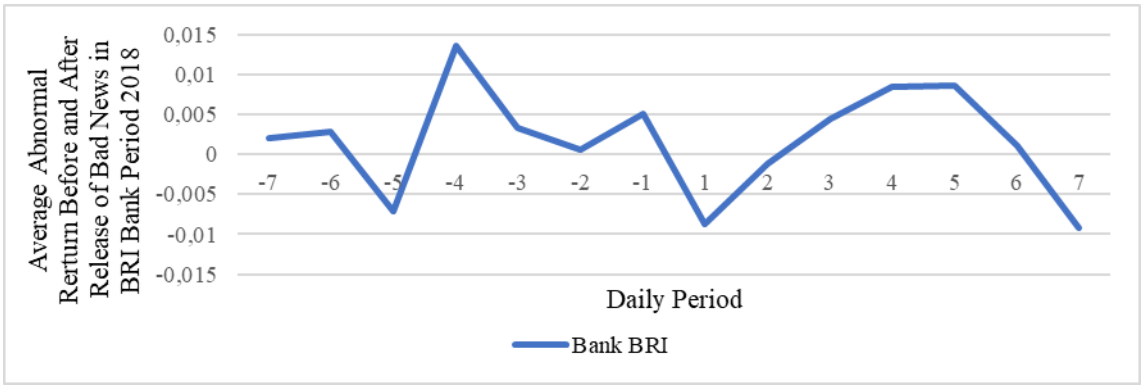


Figure 6. Graph of Average Abnormal Rerturns Before and After Release of Bad News in BRI Bank Period 2018

Source: The data is processed by the author, January 2020

The graph shows a fluctuating trend before the release of bad news and an upward trend after the release of bad news. Average abnormal return before release has a percentage of 0.074%. The abnormal returns after (post) have a value of of-0.062%. Average abnormal return before the release of bad news when compared with the average abnormal return after the release

of bad news, the abnormal return showed difference by 0.001357 or 0.136% (decreased after the release of bad news).

Before and After the Release of Good News in BTN Bank

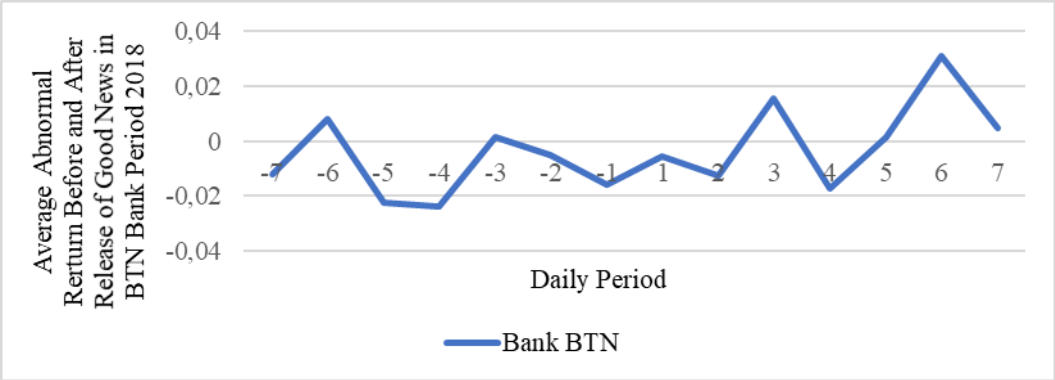
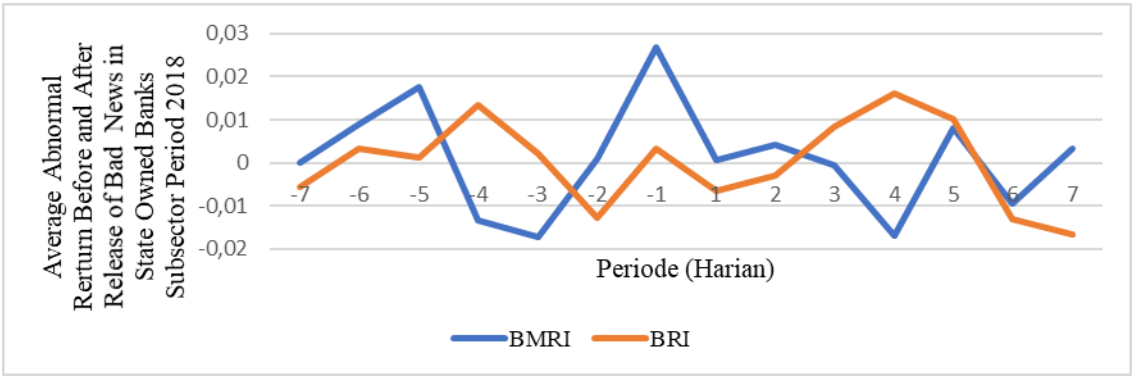


Figure 7. Graph of Average Abnormal Rerturns Before and After Release of Good News in BTN Bank Period 2018

Source: The data is processed by the author, January 2020

Before the release of good news, abnormal returns fluctuated downward (decreased) with an average abnormal return before (pre) by -0.01058093 or 1%. After the release of good news, abnormal returns fluctuate upward, with the average abnormal is 0.00246321 or 0.25%. Average abnormal return before (pre) when compared with the average abnormal return after (post) the release of good news, then abnormal return shows a difference of 0.01304414 or 1.3% (an increase of 1.3% after the announcement of good news).

Average Abnormal Return Before and After Release of Bad News in SEO Banking Subsector Period 2018



Gambar 8. Graph of Average Abnormal Rerturns Before and After Release of Bad News in State Owned Banks Subsector Period 2018

Source: The data is processed by the author, January 2020

Before the release of bad news by Mandiri bank, abnormal returns fluctuated upward (positively) with average abnormal returns before (pre) is 0.003411 or 0.34%. Meanwhile, the abnormal returns after (post) fluctuate with average abnormal returns after (post) is -0.00153 or -0.153%. The graph shows a fluctuated trend, which shows an upward trend before the release of

bad news and a downward trend after the release of bad news. The value average abnormal return before (pre) when compared with the average abnormal return after (post) release of bad news, then the abnormal return showed difference at 0.004937 (decreasing 0.5% after the release of bad news).

Before the release of bad news by BRI bank, abnormal returns fluctuated with an average abnormal return before (pre) 0,00074 or 0.074%. Meanwhile, the abnormal return after (post) has positive fluctuation until day 5 (h5) after the news published. Average abnormal return after (post) is -0,00062 or equal to -0,062%. The average abnormal return before (pre) releases of bad news when compared with the average abnormal return after (post) the release of bad news, showed there is a difference of abnormal return with percentage 0.001579 or by 0.16% (increasing of 0.16% after the release of good news).

The greatest in changes of abnormal returns between before and after the announcement of bad news experienced by Mandiri Bank, amounted 0.04937 or 0.5%. While the bank that experienced the lowest percentage in the change of abnormal returns is BRI Bank, with a percentage of 0.136%.

Meanwhile, the four bad news (6) that were studied rejected hypothesis 1, which means that there was no significant abnormal return between before and after the release of bad news.

Average Abnormal Return Before and After Release of Bad News in SEO Banking Subsector Period 2018

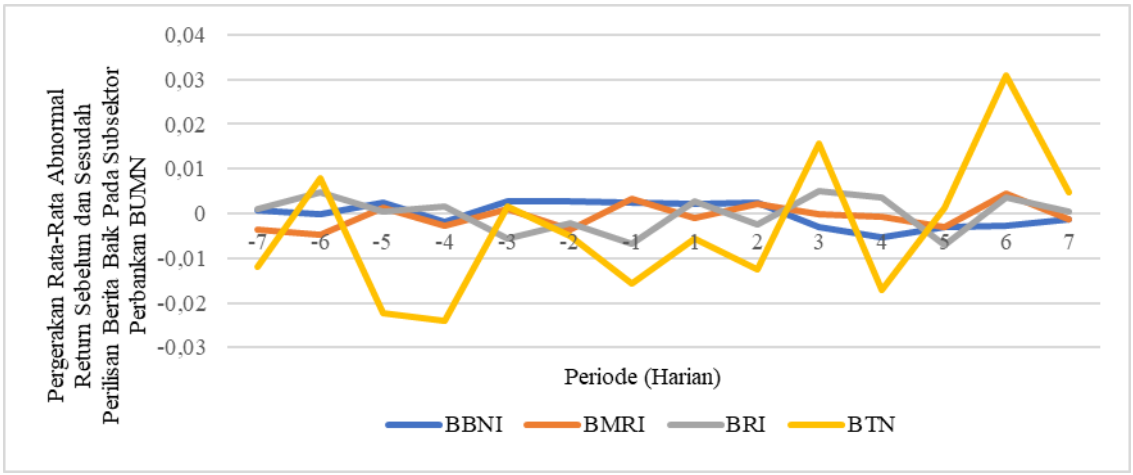


Figure 9. Graph of Average Abnormal Rerturns Before and After Release of Good News in State Owned Banks Subsector Period 2018

Source: The data is processed by the author, January 2020

Before the good news release of BNI Bank, abnormal returns fluctuated with an upward trend. Meanwhile, abnormal returns after news releases experience negative fluctuations or continue to decline after the release of good news. The average abnormal return before (pre) releases of good news when compared with the average abnormal return after (post) the release of good news, then abnormal return showed difference by 0.001579 or by 0.16% (increasing of 0.16% after the release of good news).

The graph shows an upward fluctuated trend in the release of good news by Mandiri Bank. After the release of the good news, the graph showed an upward trend even though it had hit its

lowest point on H5. The value average abnormal return before (pre) when compared with the average abnormal return after (post) the release of good news, then the abnormal return showed difference at 0.00129607 (abnormal return is higher after the release of good news).

Before the good news release by BRI Bank, the graph shows a downward trend and after the release of good news, it showed an upward trend. The average abnormal return before (pre) releases of good news when compared with the average abnormal return after (post) the release of good news, then abnormal return showed difference by 0.001579 or by 0.16% (increasing of 0.16% after the release of good news).

Before the release of good news of BTN bank, abnormal returns fluctuated downward (decreased), and after the release of good news abnormal return fluctuated upward. Average abnormal return before (pre) when compared with the average abnormal return after (post) the release of good news, then abnormal return shows a difference of 0.01304414 or 1.3% (an increase of 1.3% after the announcement of good news).

In the SOE banking subsector in 2018, the bank that experienced the greatest change in abnormal return between before and after the announcement of the good news was Bank BTN with a percentage of 1.3%. Meanwhile, the bank that had the lowest change in abnormal return percentage between before and after the announcement of good news was Bank Mandiri with a percentage of -0.0012 or -0.12%.

Four of ninety-four good news supports hypothesis 2 or that there are significant differences between abnormal returns before and after the release of good news. According to Yulia & Artini (2015) there is a difference in the average abnormal return between before and after the dividend announcement which is considered as good news. Research by Braga & Gomes (2016) answered that in this research on the Stock Market of Portuguese, the analysis of 12 acquisitions (takeover bids) stated that the target companies showed positive abnormal returns. Through the research of Heston & Sinha (2017), they explain based on news published by Thompson Reuters that positive news increases stock returns while the negative news resulted in delayed reaction for quite a long time. According to a study by Beckmann & ChanghaJin (2013) based on a rating announcement by Moody's Investors Service, there was a negative abnormal return around the decreasing of rating, and a positive abnormal return occurring around increasing of rating announcement. Referring to the research of Setiawan et al. (2013) on the Capital Market of Indonesian, there was a positive reaction to the announcement of CEO turnover.

CONCLUSION

Based on the analysis that has been done to observe whether there is an impact of good news and bad news on the stock returns of the SOE banking sub-sector in 2018, it can be concluded that based on ninety-six (96) good news published by four state-owned banks, there is only five good news that showed a significant difference in abnormal return between before and after the release of good news. While the rest showed that there is no significant difference in abnormal returns between before and after the release of good news articles. Meanwhile, four (4) bad news published by four state-owned banks stated that there is no significant difference in abnormal returns between before and after the release of bad news articles.

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