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Impact of Accounts Receivable Write-Off Policy on Stock Fluctuations of State-Owned Bank Companies

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Article Info	Abstract
Keywords: <i>Market Reaction, Write-Off, Event Study, State-Owned Banks</i> Paper type: <i>Research Paper</i> *Corresponding author: email: rahmawati76455@gmail.com	<i>This study aims to examine the impact of the announcement of debt write-off policy on the abnormal returns of state-owned banking stocks. A quantitative method with an event study approach is employed to analyze market reactions to the announcement. The research sample consists of four state-owned banks listed on the Indonesia Stock Exchange, with stock price data collected from December 29, 2023, to November 19, 2024. The findings indicate a negative impact of the debt write-off policy announcement on the cumulative average abnormal return (CAAR), suggesting that investors perceive the policy as unfavorable. This reaction is associated with potential moral hazard in its implementation. The study underscores the importance of transparency and government assurances regarding financial performance in the context of such policies. It also recommends that financial practitioners consider the implications of policy announcements on stock market reactions. This research contributes to the understanding of market efficiency theory in responding to new information and provides insights for policymakers and investors. Future studies are encouraged to explore long-term impacts and incorporate qualitative approaches or additional variables, such as global economic events, to offer a more comprehensive analysis.</i>

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INTRODUCTION

The end of 2024 President Prabowo Subianto in Indonesia has taken a significant step by issuing a government regulation that aims to write-off receivables in priority sectors (Sekretariat Kabinet Republik Indonesia, 2024). The debt relief program is primarily focused on MSMEs in agriculture, plantations, livestock, marine and fisheries, as well as other sectors (Ibrahim, 2024). This policy serves as a legal basis for state-owned banks to implement receivable write-offs that have previously been challenging for them to undertake (Muhasan, 2017; Nuryuaningdiah, 2020; Renjaan, 2018; Susilo, 2024). Nevertheless, the implementation of a receivable write-off policy is expected to generate two divergent market responses in the capital market, stemming from contrasting viewpoints. Investors see the receivable write-off policy as both an opportunity to expand credit and a positive signal for borrowers with growth potential. However, others view it negatively due to concerns about reduced bank profitability (Setuningsih, 2024). Consequently, the implications of this policy will elicit divergent investor reactions, contingent upon their respective perspectives.

The efficient market hypothesis states that stock prices always incorporate the latest information (Fama, 1970; Fama et al., 1969). This implies that stock prices will fluctuate whenever there is new information or news, including announcements of debt policy. The efficient market hypothesis can be tested using an event study approach. Numerous event studies have been conducted on banking-related events such as regulatory changes, monetary policy shifts, management turnovers, mergers and acquisitions, and central bank actions, all of which have been shown to elicit market reactions (Bash, Al-Awadhi, et al., 2024; Bash & Al-Awadhi, 2023; Daouda Dala, 2021; Sethi & Krishnakumar, 2020; Yalla et al., 2020).

In India, event study methodology has been employed to examine the impact of high-ranking Reserve Bank of India officials' resignations on the financial sector, revealing a significant market reaction subsequent to such announcements (Bash, Faras, et al., 2024). In Europe, event study methodology has been used to examine the impact of stress test announcements on European banks, revealing market reactions both before and after such announcements (Floros et al., 2024). Concurrently, Turkish scholars have utilized event study analysis to investigate the market implications of the dismissal of senior officials from the Turkish Central Bank by Recep Tayyip Erdogan. The findings indicate a discernible investor response. Consequently, event study methodology has been widely adopted within the finance academia to evaluate the effects of diverse occurrences, notwithstanding variations in the specific events that induce market

fluctuations.

The efficient market hypothesis asserts that stock prices fully incorporate all available information at any given time. Consequently, stock prices are expected to exhibit immediate sensitivity to new information. This study aims to analyze investor responses to the announcement of receivable write-off. This research fills a gap in the literature by providing empirical evidence of market reactions to a novel policy event. Specifically, the study examines the market's response to a state-owned bank's receivable write-off announcement, a policy that has not been widely adopted in the past. The findings of this study contribute to the ongoing debate on the validity of the efficient market hypothesis.

The announcement of receivable write-off for SMEs is likely to polarize investor opinions. While some investors may be concerned about the potential negative impact on bank profitability, leading to a sell-off in the shares of state-owned banks, others may view this as a buying opportunity, anticipating a temporary decline in share prices due to short-term capital flight.

LITERATURE REVIEW

The Efficient Market Hypothesis

An efficient market is a market where security prices reflect all available information. (Fama, 1970). Fama classified the Efficient Market Hypothesis (EMH) and its empirical validation into three forms based on the information set employed: the weak form, which utilizes historical price data; the semi-strong form, which incorporates public information; and the strong form, which considers all available information, both public and private (Reilly et al., 2019). The weak form of the Efficient Market Hypothesis posits that current stock prices encapsulate all information obtainable from the historical record of market transactions, encompassing past prices, realized returns, trading volume, and additional market indicators like odd-lot trading (Bodie et al., 2013, 2024). The semi-strong form of the Efficient Market Hypothesis (EMH) asserts that any public announcement is immediately reflected in security prices, making current prices a perfect representation of all available public information. Public information encompasses all non-market information such as earnings and dividend announcements, financial ratios (Price-to-Earnings ratio, Dividend-yield ratio, Price Book Value Ratio), corporate actions like stock splits, and macroeconomic and political news. The strong form of the EMH goes further, stating that stock prices fully reflect all information, including private information.

Receivables write-off of the State-Owned Banks

Non-performing loans constitute a significant risk inherent in the banking business. When the prospects of recovery are deemed to be negligible, the only recourse

is to receivable write off. While private banks typically authorize write-offs through a general shareholders' meeting, state-owned banks adhere to a distinct mechanism (Budiman, 2015). Prior to the establishment of specific write-off policies, the regulation of debt forgiveness was governed by Law No. 49/Prp/1960 on the Panitia Urusan Piutang Negara (PUPN). However, the provisions of this law remained subject to ongoing debate regarding the mechanics of receivable write-offs (Muhasan, 2017; Nuryuaningdiah, 2020; Renjaan, 2018). PP 47/2024 on the receivable write-off provides a legal framework for the write-off of qualified micro, small, and medium-sized enterprise (MSME) loans.

METHODOLOGY

This study aims to investigate the effect of debt forgiveness policy announcements on abnormal returns. A quantitative event study is employed to achieve this objective. Event studies are specifically designed to analyze the impact of particular events on public company stock prices (Kliger & Gurevich, 2014; MacKinlay, 1997)

Data

For this research, the sampling technique employed is purposive sampling, with the following criteria: 1) The bank is listed on the Indonesia Stock Exchange; 2) It has been actively traded during the estimation and event windows; and 3) The sample includes state-owned banks, as PP 47/2024 on the receivable write-off primarily focuses on state-owned banks. Based on these criteria, four state-owned banks were selected: PT Bank Mandiri (Persero) Tbk (code:BMRI), PT Bank Rakyat Indonesia (Persero) Tbk (code:BBRI), PT Bank Negara Indonesia (Persero) Tbk (code:BBNI), and PT Bank Tabungan Negara (Persero) Tbk (code:BBTN).

The stock price data used in this study is the closing price data from the Indonesia Stock Exchange. The data sources are primary data obtained from the websites of the sampled companies and secondary data from third-party sources, specifically the stock prices from <https://www.investing.com>. The data used spans from December 29, 2023, to November 19, 2024, with an estimation period of 190 days. The event of signing PP 47/2024 on the receivable write-off is considered the event date on November 5, 2024. The observation period is set 10 days before and 10 days after the policy signing.

Model Development

By employing a well-specified market model within an event study framework, we are able to isolate the abnormal returns associated with the specific event (Kliger & Gurevich, 2014; MacKinlay, 1997). The reason for this is that the market model still offers the best results in accounting for abnormal returns (Castro-Iragorri, 2019). In this research we followed the event study testing steps of previous researchers (Bash, Al-Awadhi, et al., 2024; Mujadiddah et al., 2020).

We calculate the actual rate of return using the daily closing stock price of the company that is the research sample with the following formula (Apni Yunikartika Putri et al., 2024; Hishaly GH et al., 2024):

$$R(a)_t^i = \frac{P_t^i - P_{t-1}^i}{P_{t-1}^i} \quad (1)$$

Where:

$R(a)_t^i$ = is the return of stock i during period t.

P_t^i = is the price of stock i at time t

P_{t-1}^i = is the price of stock i at time t-1

Calculate the market return using the closing price of the composite stock price index (code:IHSG) for daily stocks with the following formulation:

$$R_t^m = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}} \quad (2)$$

Where:

R_t^m = is the market return on day t.

$IHSG_t$ = is the market return on day t

$IHSG_{t-1}$ = is the prior day's Stock Price Index.

Calculating the expected return using the market model with an estimation window of 190 days with the observation period is 10 days before and after the announcement. The calculation of the estimation window considers the first trading day in the event year. The formulation used for this calculation is as follows:

$$E(a)_t^i = \alpha_i + \beta_i R_t^m \quad (3)$$

Where:

$E(a)_t^i$ = expected return of stock i in period t

$\alpha_i \beta_i$ = the estimated model parameters

Calculate the abnormal return using the following formulation:

$$AR_t^i = R(a)_t^i - E(a)_t^i \quad (4)$$

Where:

AR_t^i = abnormal return of company i in period t

Calculating the value of CAR (Cumulative Abnormal Return) is a concept used in event studies to measure the impact of a specific event on the value of a company's shares. CAR is calculated by summing the abnormal return (AR) over a certain period of time, known as the event window. CAR can be calculated using the following formula:

$$CAR_{(t_1, t_2)} = \sum_{t=t_1}^{t_2} AR_{it} \quad (5)$$

Where:

CAR = is the summation of the ARs during the event window. If we have an event window from day t1 to t2.

The final stage in decision making about investor response to the impact of the receivables write-off policy is to look at the movement of the CAAR (Cumulative Average Abnormal Return) value. CAAR is the basis for determining whether an announcement is considered good by investors so that the direction of the CAAR line will show a positive trend resulting in CAAR tending to increase, but if information is considered bad by investors, the CAAR value shows a negative value and the CAAR line will tend to decrease (Kliger & Gurevich, 2014). The CAAR value is calculated using the following formula:

$$CAR_{(t_1, t_2)} = \sum_{t=t_1}^{t_2} AR_{it}$$

RESULTS AND DISCUSSION

Table 1 shows the descriptive statistics of abnormal returns before the announcement of receivables write-off. PT Bank Syariah Indonesia Tbk experienced interesting abnormal return fluctuations. Before the announcement, the company recorded the lowest abnormal return decline on day 10 (22 October 2024), but recorded the highest abnormal return increase on day 8 (24 October 2024). In general, both PT Bank Syariah Indonesia Tbk and PT Bank Tabungan Negara Indonesia Tbk showed negative abnormal returns compared to other companies during the period of observation.

Table 1.
Descriptive Statistics of Abnormal Return Before Announcement

	N	Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
BBRI	11		-0.020083	0.019400	0.000944	0.011425964
BBNI	11		-0.031137	0.024125	0.001188	0.015006115
BMRI	11		-0.021060	0.022901	0.001106	0.014606169
BBTN	11		-0.020162	0.023286	-0.003122	0.014418376
BRIS	11		-0.031981	0.034183	-0.000903	0.019741993
Valid N	11					

(listwise)

source: processed data

Table 2 shows the descriptive statistics of abnormal returns after the announcement of receivables write-off. PT Bank Syariah Indonesia Tbk and PT Bank Tabungan Negara Indonesia Tbk show different abnormal return performance after the announcement. PT Bank Syariah Indonesia Tbk experienced the lowest abnormal return decline on day 10 (19 November 2024), while PT Bank Tabungan Negara Indonesia Tbk recorded the highest abnormal return increase on day 2 (7 November 2024). In general, all companies in the sample show negative abnormal returns after the announcement of receivables write-off.

Table 2.
Statistic Descriptive Abnormal Return After Announcement

	N	Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
BBRI	11		-0.020066	0.021630	-0.000769	0.012772
BBNI	11		-0.030746	0.016678	-0.002943	0.016175
BMRI	11		-0.032865	0.022901	-0.002052	0.018207
BBTN	11		-0.020822	0.035518	-0.002050	0.017947
BRIS	11		-0.040425	0.008679	-0.002529	0.014336
Valid N	11					

(listwise)

source: processed data

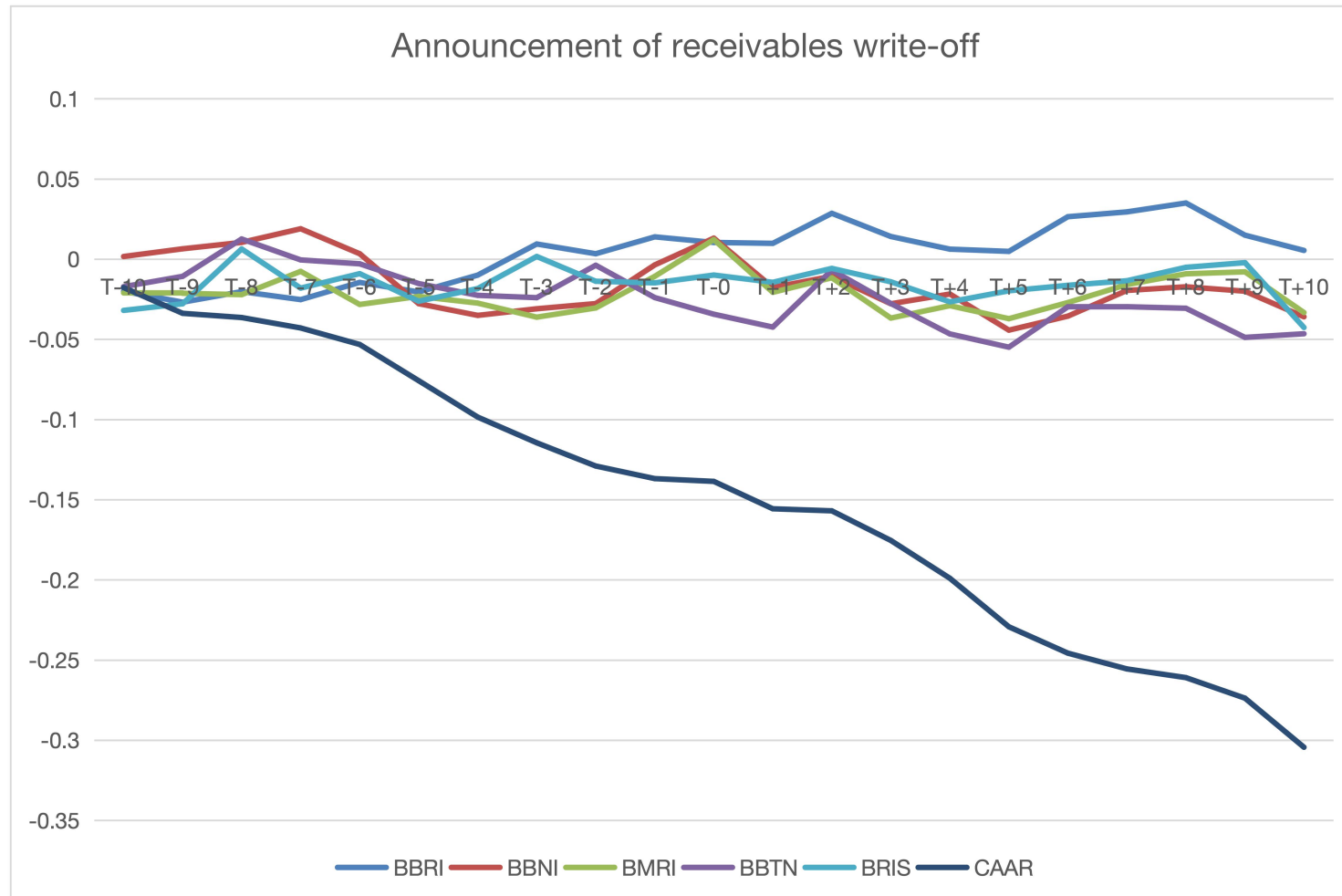
The cumulative abnormal return (CAR) analysis in Table 3 shows investors' negative response to the announcement of receivables write-off issued by President Prabowo Subianto on 5 November 2024 (t0). However, only PT Bank Rakyat Indonesia (BRI) recorded a positive CAR value. The CAAR graph in Figure 1 reinforces this finding, by showing a significant downward trend after the announcement. Potential moral hazard may occur in the receivables write-off policy, namely the use of policies to cover the risk of non-performing loans, technical guidance on the implementation of the policy is still under review by the relevant banks, and the uninformed form of supervision on debtor selection are factors that may explain the negative response of investors. This finding is consistent with previous research, such as the study of Elliott & Shaw (1988), which examined the impact of receivables write-off announcements with a decrease in stock prices will show a negative trend after the announcement.

Table 3.
Abnormal Return and Cumulative Abnormal Return of state-owned banks

Days	BBRI		BBNI		BMRI		BBTN		BRIS	
	AR	CAR	AR	CAR	AR	CAR	AR	CAR	AR	CAR
t-10	-0.020083	-0.020083	0.001635	0.001635	-0.021060	-0.021060	-0.017206	-0.017206	-0.031981	-0.031981
t-9	-0.006770	-0.026853	0.004799	0.006434	-0.000238	-0.021298	0.006473	-0.010733	0.004130	-0.027851
t-8	0.006589	-0.020264	0.003991	0.010425	-0.000866	-0.022164	0.023286	0.012552	0.034183	0.006332
t-7	-0.004992	-0.025256	0.008510	0.018935	0.014527	-0.007637	-0.013048	-0.000495	-0.024405	-0.018073
t-6	0.010744	-0.014512	-0.015578	0.003357	-0.020637	-0.028274	-0.002441	-0.002937	0.009009	-0.009064
t-5	-0.005970	-0.020482	-0.031137	-0.027780	0.005036	-0.023239	-0.012308	-0.015244	-0.017183	-0.026247
t-4	0.010506	-0.009976	-0.007311	-0.035091	-0.004200	-0.027439	-0.007352	-0.022596	0.007898	-0.018350
t-3	0.019400	0.009424	0.004139	-0.030952	-0.008753	-0.036192	-0.001436	-0.024031	0.020001	0.001651
t-2	-0.006074	0.003350	0.003222	-0.027729	0.005745	-0.030448	0.020208	-0.003824	-0.015459	-0.013808
t-1	0.010531	0.013881	0.024125	-0.003604	0.019712	-0.010736	-0.020162	-0.023986	-0.001002	-0.014810
t0	-0.003496	0.010385	0.016678	0.013073	0.022901	0.012165	-0.010358	-0.034344	0.004872	-0.009938
t+1	-0.000565	0.009820	-0.030746	-0.017673	-0.032865	-0.020701	-0.008044	-0.042387	-0.004526	-0.014463
t+2	0.018739	0.028559	0.006979	-0.010694	0.009061	-0.011640	0.035518	-0.006869	0.008679	-0.005784
t+3	-0.014461	0.014098	-0.017153	-0.027847	-0.025118	-0.036758	-0.020822	-0.027691	-0.008369	-0.014153
t+4	-0.007881	0.006217	0.006085	-0.021762	0.007739	-0.029019	-0.018955	-0.046646	-0.012489	-0.026642
t+5	-0.001394	0.004823	-0.022531	-0.044293	-0.008126	-0.037146	-0.008272	-0.054918	0.006883	-0.019759
t+6	0.021630	0.026453	0.008736	-0.035557	0.010079	-0.027066	0.025217	-0.029701	0.003416	-0.016343
t+7	0.002998	0.029451	0.016012	-0.019545	0.011166	-0.015900	0.000023	-0.029678	0.002858	-0.013485
t+8	0.005553	0.035004	0.002314	-0.017231	0.006731	-0.009170	-0.000954	-0.0306325	0.008382	-0.0051032
t+9	-0.020066	0.014938	-0.002786	-0.020017	0.001244	-0.007926	-0.018177	-0.0488096	0.002896	-0.0022074
t+10	-0.009521	0.005417	-0.015963	-0.035980	-0.025387	-0.0333129	0.002277	-0.0465324	-0.040425	-0.0426324

Sumber : data olahan

Figure 1.
Average Abnormal Return and Cumulative Average Abnormal Return



Sumber : data olahan

CONCLUSION

This study uses the event study method to analyse the impact of the announcement of the write-off of receivables issued by President Prabowo Subianto on the abnormal stock returns of state-owned banks (BUMN). The results showed a downward trend in cumulative average abnormal return (CAAR) after the announcement, indicating that the market responded negatively to the policy. This finding suggests that the receivable write-off is perceived as a negative signal by investors.

Based on the findings of this study, we suggest that the government improve transparency in providing information related to the financial performance of companies affected by the receivables write-off policy. In addition, companies need to provide a faster and more transparent response to government policies to prevent moral hazard. The results of this study can also be an input for financial practitioners to always consider the impact of government policies on financial markets, considering that the market will always react to the latest information.

This study has several limitations. First, this study only analyses the short-term impact of receivables write-off announcements on stock market returns. Future research can examine the long-term impact. Second, this research approach is quantitative. To gain a deeper understanding, future research can incorporate a qualitative approach. Finally, this study has not considered external factors such as global economic events. Future research could include additional variables to provide a more comprehensive picture.

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