



P-ISSN: 1978-2853  
E-ISSN: 2302-8890

**MATRIK: JURNAL MANAJEMEN, STRATEGI BISNIS  
DAN KEWIRAUSAHAAN**

Homepage: <https://ojs.unud.ac.id/index.php/jmbk/index>

Vol. 16 No. 1, Februari (2022), 37-47



**Market Reaction As a Result of The Fed's Interest Rate Reduction  
Announcement**

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DOI : <https://doi.org/10.24843/MATRIK:JMBK.2022.v16.i01.p03>



**ABSTRAK**

Pengumuman penurunan suku bunga The Fed pada 31 Juli 2019 merupakan peristiwa langka sejak tahun 2008. Peristiwa penurunan suku bunga The Fed akan memberikan dampak besar pada perekonomian global dan kondisi pasar modal. Tujuan penelitian ini adalah untuk mengetahui ada atau tidak perbedaan rata-rata *abnormal return* di sekitar tanggal pengumuman penurunan suku bunga The Fed di kawasan Asia dan kawasan Eropa. Sampel penelitian ini adalah 18 indeks saham negara *emerging market* di kawasan Asia dan kawasan Eropa dengan teknik pengumpulan sampel menggunakan *purposive sampling*. Penelitian ini menggunakan teknik analisis *One Way Anova* dan *One Sample T-test*. Hasil penelitian menemukan bahwa tidak terdapat perbedaan rata-rata *abnormal return* sebelum dan sesudah pengumuman penurunan suku bunga The Fed. Kondisi ini menunjukkan pasar di kedua kawasan tidak bereaksi secara nyata dikarenakan pasar di kawasan Asia dan kawasan Eropa berada pada kondisi efisien dalam bentuk setengah kuat, atau pasar menyerap informasi secara cepat dan terefleksi pada harga saham sehingga tidak terdapat perbedaan rata-rata *abnormal return* di kedua kawasan. Tidak adanya perbedaan rata-rata *abnormal return* juga disebabkan oleh ketidakpastian ekonomi global membuat investor lebih hati-hati dalam mengambil keputusan investasi.

**Kata kunci:** informasi, pasar modal efisien, return

***Market Reaction as an Impact of the Fed Interest Rate Decrease  
Announcement***

**ABSTRACT**

*The announcement of the Fed's interest rate reduction on July 31, 2019, has been a rare event since 2008. The Fed's rate cut will have a major impact on the global economy and conditions in the capital market. The purpose of this study is to determine whether there is a difference in the average abnormal return around the date of the announcement of the Fed's interest rate hike in Asia and the European region. The sample of this study was 18 emerging market countries' index indices in Asia and Europe with sample collection techniques using purposive sampling. This study uses One Way Anova analysis techniques and One Sample T-test. The results found no difference in the average abnormal return before and after the announcement of the Fed's interest rate increase. This condition shows that markets in the two regions do not react significantly because markets in Asia and the European region are in an efficient condition in the form of half strong, where the market absorbs information quickly and is reflected in stock prices. Hence, there is no difference in the average abnormal return in both regions. The absence of a difference in the average abnormal return is also caused by the uncertainty of the global economy, making investors more careful in making investment decisions.*

**Keywords:** market efficiency, event study, abnormal return

## INTRODUCTION

The United States central bank, Federal Reserve, has just lowered its benchmark interest rate by 25 basis points (bps) to be in the range of 2 percent to 2.25 percent on Wednesday (31/7/2019) time local. The last time the Fed cut interest rates to near-zero was in 2008. The Fed's rate cut in 2008 was intended to save the ailing economy; the Fed's move was a precautionary measure to protect the United States from slowing growth in China and Europe.

The decline in US interest rates affects the global economy. Investors who invest their funds in the capital market will see this event as the information received by the market. Based on the concept of an efficient market, there is a process where the price reaches the equilibrium point in response to information from an event that enters the market so that the stock price can be *undervalued* or *overvalued* when the market reacts to information.

The market reaction that arises from an event indicates that the market is efficient in a semi-strong form. The efficiency of the semi-strong form is used to test the information content in an event (Tandelilin, 2010, bk. 224).

The announcement of the Fed's rate cut on July 31, 2019, can signal information for investors worldwide. This information causes a market reaction seen from the presence or absence of *abnormal returns* around the announcement. The *abnormal returns* around the announcement date indicate that the market reacts to the event. *Abnormal return* is the difference between *realized* expected return and return. The results of Wardhani's research (2013) based on the t-test calculation show an *abnormal return* on several days around the date of the event. Abnormal returns can signify that the market responded to this event as good information because the announcement of a decrease in FED funds interest rates is seen as a positive signal by stock investors. Investors believe that lower interest rates will initiate the desired expansionary economic activity.

Young and Bacon (2012) found a significant positive market reaction before the announcement of the decline and around the day of the announcement. Another empirical analysis shows that the stock prices of the largest companies react in the first minute after the news release. The WSE index reacts similarly to good and bad news about the US economy (Gurgul and Wójtowicz, 2014).

The Fed's rate cut announcement was seen as a positive signal by bank stock investors who believed that lower interest rates would initiate the desired expansionary economic activity. Not all countries in the world are affected by the Fed's policies. The results of previous studies indicate that several types of announcements depend on the country because the same type of action has different effects depending on the state of the crisis (Grace et al., 2017).

Different conditions of a country or a particular industrial company can affect an event. The study found that the European region and the UK both showed the effects of the financial crisis, but behavior in New Zealand and Australia did not change. The pre-crisis reaction was significantly negative; the UK and the euro area responded to both the expected and surprising components of change to be positive during the crisis. The opposite response occurred; New Zealand and Australian stocks remained negative during the crisis (Wang and Mayes, 2012).

A study conducted by Bi-Huei and Chen (2018) on the market reaction to changes in oil prices in Taiwan found *abnormal returns* a significant positive. The drop in oil prices for transportation companies is considered good news. As a result, on days of falling oil prices, investors take an optimistic attitude and follow the actions of other investors to create a herding effect. Significant positive abnormal returns also occur in airlines and container companies. The same study results show significant stock price reactions to uncertain government policy events related to primary uranium (Ferguson and Lam, 2016).

Announcements or events that major impact the economy, such as monetary policy, will affect all aspects, including the capital market. Abdioglu and Aytakin (2016) show that the Monetary Policy Committee's decisions for 2008 as the year of the global financial crisis and 2012 as another year impact the stock prices of Turkish bank deposits listed in Istanbul Stock Exchange.

The results of the same study revealed by Fausch and Sigonius (2018) about the impact of monetary policy on stock prices provide empirical evidence that unconventional monetary policy has a significant impact on stock returns. The policies made by the Fed can not only affect its own country, namely the United States. However, other countries may also be affected, especially those with political and economic ties to America.

Research by Wang and Zhu (2013) shows that international stock returns co-movement plays an important role in explaining international stock market reactions to Fed policy shocks. The research results by Chen (2012) found that the response of the stock index of airlines, gambling, hotels, and travel and recreation to the surprise component of the FFTR (Federal Fund Rate Target) was very significant. It is therefore important to distinguish between anticipated and unanticipated Fed policy actions. Failure to differentiate the actions of the Fed could create a significant bias in empirical estimates of the reaction of the US hospitality index to changes in monetary policy.

Based on different findings from several previous studies and the fact that the Fed has not carried out interest rate cuts from 2008 to July 31, 2019 (almost 11 years), it is deemed necessary to conduct further research on the market reaction to the decline. On July 31, 2019, the Fed's interest rate by testing whether there was a difference in the average *abnormal return* around the announcement date of the Fed's interest rate cut on stock indexes in Asia and the European Region.

## RESEARCH METHODS

The scope of this research is to examine the speed of market reaction around events by looking at changes in the stock price index around (ten days before July 31, 2019, and ten days after July 31, 2019) the date of the announcement of the Fed's interest rate cut in the Asian and European capital markets. This research was done because the Fed's rate cut affected the global market.

The population in this study is the stock index in Asia and Europe. This study used 18 stock indices from the Asian region and 18 stock indexes in the European region as samples, using a purposive *sampling method*.

This study carried out the data collection process using non-participant observation methods. The observations carried out only observe and retrieve data already available on the stock exchanges of *emerging market countries* in Asia and Europe and several other sites,

namely finance.yahoo.com and www.investing.com. Testing the research hypothesis using the *One Way ANOVA* to test the difference in abnormal returns before and after the announcement of the Fed's interest rate cut. Based on the abnormal return test results, the reaction speed of investors in receiving the information will be known.

**RESULTS AND DISCUSSION**

Descriptive statistical analysis was conducted to obtain a general description of the sample used in the study. The description of the sample consists of the number of samples, the highest value, the lowest value of the average *abnormal return* before and after the announcement of the Fed's interest rate cut in the two regions, namely the Asian region and the European Region.

**Table 1. Descriptive Statistical Analysis**

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper		
Before	Asia	13	-0.0003	0.00239	0.0006	-0.0018	0.0011	-0.0021	0.0497
	Europe	5	-0.0001	0.00173	0.0007	-0.0022	0.0021	-0.00179	0.00211
	Total	18	-0.0003	0.00218	0.0005	-0.0013	0.0008	-0.0021	0.0497
After	Asia	13	-0.0026	0.00135	0.0013	Bound	0.0003 - 0.0073	0.0076	-0.0052
	Europe	5	0.0027	0.00623	-0.1295	-0.0145	0.0025	0.0020	-0.0034
	Total	18	0.00523	0.0012	-0.0059	-0.0007	-0.0145	0.0076	Source

: Processed Data, 2021

average *abnormal return* lowestThe announcement of the Fed's rate cut in Asia by - 0.00210 was Pakistan. Before the Fed's rate cut, the highest value in Asia was Turkey at 0.0497. In the European region, the lowest average *abnormal return* was in Russia at - 0.00179, and the highest average *abnormal return* was in Czechoslovakia at 0.00211.

There was a slight difference in the average *abnormal return* after the announcement of the Fed's rate cut. Before the announcement, Turkey had the highest average *abnormal return* among countries in the Asian region. However, after the Fed's rate cut, the highest average abnormal return in Asia was 0.0076, achieved by Egypt and India, and an average abnormal return of 0.0076. The lowest return was in Qatar at -0.0073. Unlike the Asian region, in the European region, Czechoslovakia had the highest average *abnormal return* of 0.0020, and Greece had the lowest average *abnormal return* after the Fed's interest rate of - 0.0145.

Levene Statistics is used to check the homogeneity of variance whether all variants are the same. If the value of Sig. > 0.05, then the variance is the same, and hypothesis testing using ANOVA can be continued. If the value of Sig. <0.05 means the variance is not the same, and the hypothesis test cannot be continued with ANOVA.

**Table 2. Test of Homogeneity of Variances**

	Levene Statistics	df1	df2	Significance
Before	0.102	1	16	0.754
After	0.367	1	16	0.553

Source: Processed Data, 2021

The *Test of Homogeneity of Variances* shows the value of Sig. before the announcement, which is 0.754 > 0.05, the average *abnormal return* in the two regions, namely Asia and Europe, has no different variance. The *Test of Homogeneity of Variances*

also showed the same results after the announcement with Sig.  $0.553 > 0.05$  means that the average *abnormal return* after the announcement has a variant that is not different in the two regions to be continued to the Anova test stage. The Anova test aims to answer whether there is a difference in the average *abnormal return* before and after announcing the increased Fed interest rates in Asia and Europe.

**Table 3. ANOVA**

		Sum of Squares	df	Mean Squares	F	Sig.
Before	Between Groups	0.000	1	0.000	0.035	0.855
	Within Groups	0.000	16	0.000		
	Total	0.000	17			
After	Between Groups	0.000	1	0.000	0.868	0.365
	Within Groups	0.000	16	0.000		
	Total	0.000	17			

Source: Data Processed, 2021

In this study, the results of the ANOVA test showed the value of Sig. before the announcement was  $0.855 > 0.05$  and the value after the announcement was Sig. is  $0.365 > 0.05$ . Both values of Sig.  $> 0.05$ , which means the test results reject the hypothesis that there is a difference in the average abnormal return before and after the announcement of the Fed's interest rate cut in Asia and the European region. So, there is no difference in the average *abnormal return* before and after the announcement. Fed rate cuts in Asia and Europe.

**Table 4. Results of One-Sample t-Test *Abnormal Return* in Asia**

Event Window	Average Abnormal Return per Day	Sig. (2-tailed)	Description
-10	0.00094	0.637	Not Significant
-9	-0.00139	0.685	Not Significant
-8	0.00390	0.012	Significant
-7	-0.00002	0.992	Not Significant
-6	0.00295	0.119	Not Significant
-5	-0.00149	0.383	Not Significant
-4	0.00014	0.945	Not Significant
-3	-0.00342	0.056	Significant
-2	-0.00322	0.078	Not Significant
-1	-0.00150	0.341	Not Significant
0	-0.00210	0.263	Not Significant
+1	-0.00216	0.367	Not Significant
+2	-0.00665	0.020	Significant
+3	-0.01684	0.000	Significant
+4	-0.00427	0.117	Not Significant
+5	0.00271	0.463	Not Significant
+6	0.00521	0.123	Not Significant
+7	0.00046	0.902	Not Significant
+8	-0.00928	0.012	Significant
+9	0.00242	0.472	Not Significant
+10	0.00202	0.495	Not Significant

Source: Processed Data, 2021

This study also tested the market reaction speed by seeing how quickly the market reacted to the Fed's rate cut in Asia and the European region. Testing the speed of market reaction is carried out using *One-Sample t-Test*. The market reaction speed is seen from the significant value of *abnormal returns* in each region per day. It is known how many days are significant and insignificant in each region.

The results of the One-Sample t-Test in the Asian region based on Table 4, in the Asian region, *abnormal returns* on the eighth day before the event (-8), the second day after the event (+2), the third day after the event (+3), and the eighth day after the event (+8).

**Table 5. Results of One-Sample t-Test *Abnormal Return* in Europe**

Event Window	Average Abnormal Return per Day	Sig. (2-tailed)	Information
-10	-0.00113	0.825	Not Significant
-9	0.00225	0.350	Not Significant
-8	0.00661	0.223	Not Significant
-7	-0.00232	0.542	Not Significant
-6	-0.00011	0.959	Not Significant
-5	-0.00116	0.551	Not Significant
-4	0.00015	0.970	Not Significant
-3	-0.00075	0.773	Not Significant
-2	-0.00070	0.749	Not Significant
-1	-0.00376	0.076	Not Significant
0	0.00201	0.358	Not Significant
+1	-0.00645	0.062	Not Significant
+2	-0.01075	0.024	Significant
+3	-0.01721	0.060	Not Significant
+4	-0.00059	0.887	Not Significant
+5	-0.00233	0.542	Not Significant
+6	0.00575	0.012	Significant
+7	-0.00317	0.539	Not Significant
+8	0.00016	0.974	Not Significant
+9	-0.00017	0.980	Not Significant
+10	-0.01738	0.013	Significant

Source: Processed Data, 2021

Results in *the One-Sample t-Test* test in the European region, as shown in Table 5, shows that there are only a few days of *abnormal returns* of significant stock index. *Abnormal returns* in the European region are only significant on the second day after the event (+2), the sixth day after the event (+6), and the eighth day after the event (+8).

The one-sample t-test shows that capital markets in Asia and Europe react quickly to announcements, indicated by the test results, which tend to be insignificant in both regions.

Test results that are not significant indicate no *abnormal return* due to the announcement of the Fed's interest rate cut. The absence of *abnormal returns* indicates the market reacts quickly; namely, the information generated from the announcement is quickly disseminated and reflected in stock prices. The results of this study are the same as those of Caporale et al. (2019) on the Ukrainian stock market, which found no *abnormal returns* around the day of the event. Overall, it seems that the stock market is absorbing new information more quickly. Information absorbed quickly shows that the market is in an efficient condition in a semi-strong form.

The different tests using One Way Anova before announcing the Fed's interest rate hike in Asia and Europe showed insignificant results. Insignificant results indicate no difference in *abnormal returns* before and after the announcement of the Fed's interest rate hike in Asia and Europe. The same results were found by Habib et al. (2016), which states that credit rating announcements do not significantly impact *abnormalities* of the bank sample. Another study with similar results found by Erer & Erer (2017) found that interest rate decisions made by CBRT and FED did not have a significant effect on stock market volatility. This situation means that market participants and investors expect to appreciate interest rate decisions.

The results of other studies that support the results of this study through a univariate test show that a *sovereign rating* does not cause a significant bank stock price reaction. At the same time, a negative event is associated with a negative stock price effect on domestic banks (Hu, 2017).

Research on market reactions as a result of the announcement of the Fed's interest rate cut is an *event study* with the aim of testing market response and *abnormal returns*. Empirically, the form of testing commonly used in event studies is *abnormal returns* around the event date. The results of this study differ from the theory, which states that information arising from an event, be it *corporate action* or socio-economic events, can contain information that can affect stock prices in the capital market (Jones, 2016, bk. 320). Market reactions can occur if an announcement contains information that is important for investors, which can cause changes in stock prices and cause *abnormal returns*.

The absence of differences in abnormal *returns* in the test results can mean that the market does not react significantly. Not significantly reacting means significant abnormal returns on certain days (-8, +2, +3, and +8) only in the Asian region during the 20-day event window. In Europe, there are also significant abnormal returns on certain days (+2, +6, and +8) during the 20-day event window. The overall test shows that the results are not significant because the number of significant days is less than insignificant days when viewed per day.

Based on the research results by Pratiwi & Wirakusuma (2018), the market reaction after the announcement of the Fed's rate increase on March 22, 2018, did not show any difference in *abnormal returns* before and after the announcement of the increase in the Fed Funds Rate. In this study, there is no difference in the average *abnormal return* before and after the announcement of the Fed's rate hike in Asia and Europe due to several factors. First is the speed of market reaction in both regions. Based on the theory, if the market is efficient in a semi-strong form, no investor or group of investors can use the published information to obtain *abnormal returns* in the long term (Hartono, 2017: 609). The study results using a *one-sample t-test* to see the market reaction speed show that the capital markets in the Asian and European regions are the same, namely efficient in a semi-strong form.

Investors in both regions cannot use information from the announcement of the Fed's rate cut to obtain *abnormal returns* because the information is reflected very quickly into stock prices. The one-sample t-test in Asia also showed an *abnormal return* on H-8 before the announcement day, not caused by the announcement of the Fed's interest rate hike, but a side effect of the trade war between China and America.

According to Jones (2016, bk. 320), one of the requirements for an efficient market is that all market participants can obtain information at the same time in a fairly cheap and easy way. As of July 31, 2019, all market participants can get the same information because information regarding the announcement of the Fed's rate cut is widely available in the market. For example, information regarding the improving condition of the American economy will encourage the Fed's interest rate cuts to be more quickly analyzed by investors for making investment decisions.

The second factor is the uncertainty of the global economy and the effects of the trade war between China and America; apart from making the market *risk-off*, the side effect of this global economic uncertainty also makes investors take a *wait and see*. Investors are more careful and analyze what will happen in the future.

Investors are watching how countries and governments respond to the impact of the Fed's rate hike announcement. Suppose investors see that the state and government can withstand the effects of the Fed's interest rate hike and the effects of the trade war so that economic fundamentals remain stable. In that case, investors see this as a consideration to remain calm and not cause an overreaction.

The third factor, the object of this research, is the stock index in emerging market countries. The stock index is a statistical measure of changes in price movements of a group of stocks. Index movements represent part of the overall market movement. The Fed's rate cut may not affect all sectors, but the Fed's rate hike affects certain sectors, such as the banking sector, which will directly influence interest rates. Companies' stock prices in different industries seem to react heterogeneously to interest rate announcements (Vithessonthi & Techarongrojwong, 2013).

## CONCLUSION

Based on the One Way Anova test, it was found that there was no difference in the average *abnormal return* before and after the announcement of the Fed's interest rate cut in Asia and Europe. The results of this study indicate that the market does not react significantly to the announcement of the Fed's interest rate cut. The capital markets in Asia and the European region are efficient in a semi-strong form. The market absorbs information quickly, and stock prices show no difference in *abnormal returns* before and after the announcement of the Fed's interest rate cut in the two regions. The absence of significant differences in *abnormal returns* in the two regions also shows that investors are very careful in making investment decisions in uncertain global economic conditions.

For investors, this research is expected to illustrate that an event will be interrelated, having a global impact. Investors can see an event that can affect other events in making investment decisions. The investment decisions taken are right, and the market is not only information efficient, but the market can also be decision efficient.

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