

# The Influence of the Tokyo 2020 Olympic Games on the Stocks of Japanese Firms that are Sponsored

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## ABSTRACT

With the 2020 Japan Olympic Games postponement, the 2021 Japan Winter Olympics has received increasing attention. The effect upon the stock market of domestic Japanese sponsors became uncertain because of the duration of the COVID-19 pandemic. This paper uses **event study** to analyze the influence of the Tokyo 2020 Olympic Games on the stocks of sponsored Japanese firms. The selected sample sponsors are Canon, Panasonic, Meiji, Toyota, Dai Nippon Printing, and Japanese airline. Measuring Abnormal and Cumulative abnormal returns are the primary methodologies to determine whether there is a positive and negative effect eventually upon the stock market. The findings found that most domestic Japanese sponsors have a negative effect on the stock market, which coronavirus pandemic is the main reason for the results. The minority of sponsors like Meiji and Dai Nippon Printing have a positive impact but at a slow rate. Therefore, the research results show that sponsoring the Olympic Games will not benefit enterprises, and they should be wary about sponsoring sports events.

**Keywords:** Tokyo 2020 Olympic games, stock market, Japanese firms

## 1. INTRODUCTION

The Summer Olympic Games are the world's most comprehensive sporting event. It is held every four years, having countries from worldwide participating, including Europe, Asia, Africa, America, and Oceania. Hosting the Olympic Games requires a considerable financial base, and corporate sponsorship has become the main element of finances and materials for the Games, according to Liu He's reports, he found that it accounts for approximately 30% of overall revenue [1]. The Olympic Games give sponsoring companies a positive public image while also advertising and promotion opportunities. The Olympic games are expected to boost country's economy and do honour the host country.

According to the official website of the Olympic Games, the Tokyo 2020 Games have 66 domestic sponsors. So, the Japanese government is expected to receive \$3.2 billion of sponsorship for the Tokyo Olympics, which is three times the previous record.

Unfortunately, due to the spread of COVID-19, the

Tokyo 2020 Olympics, which were initially scheduled for July 24, 2020, have been postponed to July 23, 2021. Furthermore, due to epidemic prevention and control, the stadium, now must hold without an audience. In Tianyi Lv's report, he found that Ticket sales for the Olympics and Paralympics were planned to total about 90 billion yen, but after announcing no audience for some events, ticket sales are expected to reach only a few billion yen, a loss of more than 80 billion yen [2]. So, for sponsors, will these unusual Games still be as lucrative as expected?

This paper mainly investigates whether and how the stocks of Japanese firms that are sponsored have been affected by the announcement of postponement and opening of Tokyo 2020 Olympic games.

The outline of the remaining paper is as follows. The next section describes the methodology. Section 3 presents and discusses the empirical results and section 4 concludes.

## 2. LITERATURE REVIEW

As early as the 1980s, people have begun to address sports sponsorship-related topics.

For example, in Meenaghan (1983) paper, he defined the sponsorship, classified the sponsorship goals, also provided the framework structure of sponsorship options and the measurement method of sponsorship results [3]. Kathleem Anne Farrell et al. indicate that in an efficient capital market, the net present value of all future expected earnings from an investment is included in the share price once the news comes out. Therefore, through the change of stock price on the stock market to study the influence of enterprise performance and efficiency brought by praise and help is based on the evidence [4].

By investigating the stock return changes before and after the announcement of sponsorship rights of the Atlanta Summer Olympic Games, Kathleem Anne Farrell found that the corporation value will not be improved by sponsoring the Olympic Games in marketing communication.

After the application of various models and methods, some scholars conclude that is entirely contrary to the previous scholars. Anthony D. Miyazaki et al. studied the stock market performance of the companies sponsoring the 1996 Atlanta Olympic Games using event research [5]. Unlike most scholars who criticize corporate sponsorship of the Olympic Games, they believe that the market recognizes sponsorship of the Olympic Games. Corporate involvement in sponsorship is valuable because the business may have positive cash flow in the future and the stock market will react positively.

Overall, we can see that the effect of sponsoring sports competitions is very. The different modeling could cause this, the number of sponsors, etc. The 2020 Olympics conducted in Tokyo due to the coronavirus has been postponed to 2021. Therefore, we want to use AR and CAR to measure whether a positive or negative effect on the stock market.

## 3. METHODOLOGY

We choose three types of partners. The first is Worldwide Olympic Partners that contains Panasonic 6752.T and TOYOTA 7203.T. The second is Tokyo 2020 Olympic Gold Partners that includes Canon Inc. 7751. T. and Meiji Co., Ltd 2269.T. The third is Tokyo 2020 Olympic Official Partners covers Dai Nippon Printing Co., Ltd 7912.T and Japan Airlines Co., Ltd. 9201.T. We use the AR of the sponsoring company Panasonic and the accumulated excess return CAR to obtain the sponsorship rights of the event and characterize the changes in the stock indicators of related companies at the opening of the event. We choose the 23rd of March as the day of the first event day, day 0, which is the date the IOC announced the postponement of the 2020 Olympic game.

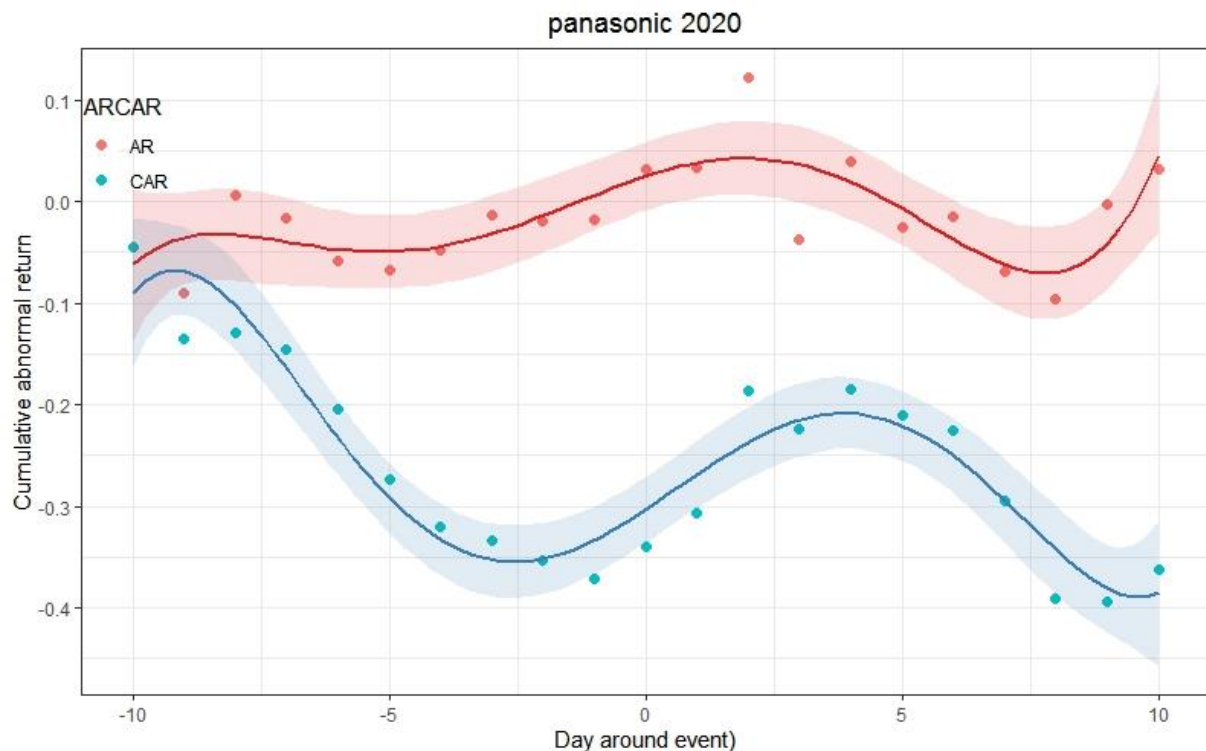
The data are collected form the Japanese stock market and the website finance yahoo.com. Due to the press conference has received extensive media attention and reports, the accuracy of the announcement date can be guaranteed. We define the estimation window as  $[-211, -11]$ . The event window is  $[-10, 10]$ . Therefore, the event window of this sponsor will be started from 23rd of March to 6th of April. If the day of the event happens to be a non-trading day, we will postpone the calculation to the first trading day. As the table 1.1 shows, 16th of July is a non-trading day, thus, we postpone it to the day 19th of July which is the trading-day.

The second event date started at the 23rd of July which is the opening ceremony of the 2021 Olympic game. We define the estimation window as  $[-211, -11]$ . The event window is  $[-10, 10]$ . Therefore, the event window of this sponsor will be started from 23rd of July to 10th of August. This event study will calculate the abnormal return to measure the performance of the sponsoring company in the stock market during the opening of the relevant event. Measured by AR (abnormal return) in period  $t$  and CAR (cumulative abnormal return) in a period. At period  $t$ , the abnormal retune is calculated by the formula  $AR_t = R_t - (\alpha + \beta R_{mt})$

$$CAR = \sum_{t=-T}^T AR_t \sim N(0, (T+T)\sigma_\epsilon^2 \dots (1)$$

**Table 1** Panasonic 2020

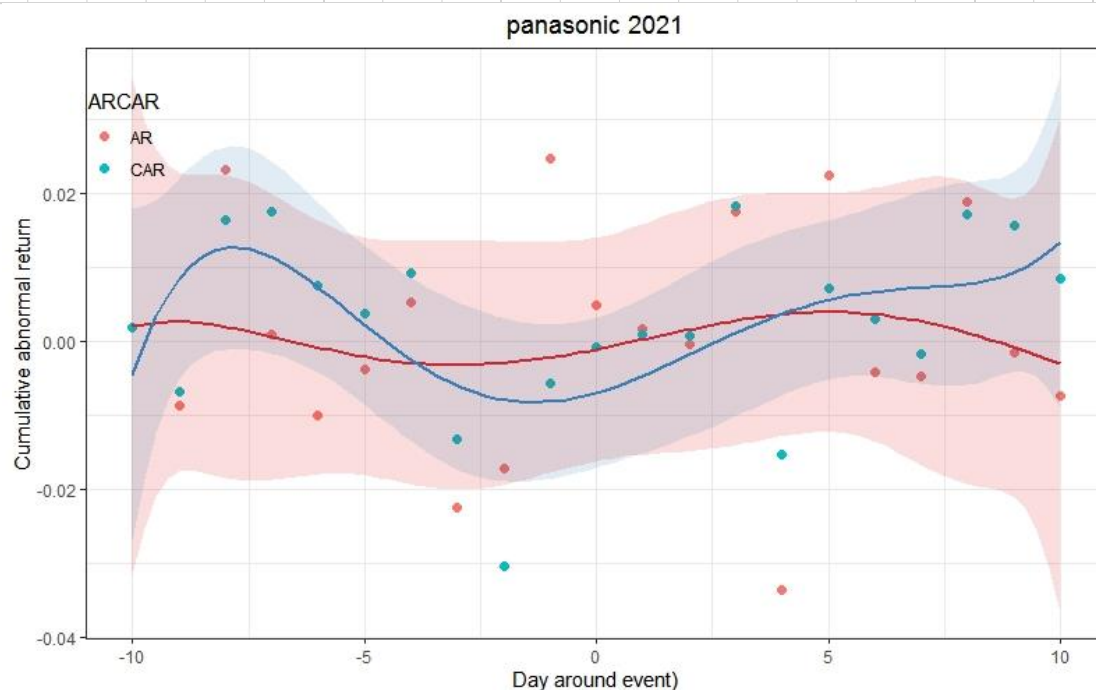
stock code	event date	trading date	stock price	index	individual stock return	market return	diff	predicted	AR	CAR										
6752	2020-03-21	2020-03-01	967.6	20749.75	-0.0434	0.00039	-10	0.00169	-0.04509	-0.04509										
6752	2020-03-21	2020-03-01	881.9	19698.76	-0.08857	0.00037	-9	0.001511	-0.09008	-0.13517										
6752	2020-03-21	2020-03-01	886	19867.12	0.004649	6.54E-05	-8	-0.00116	0.005811	-0.12936										
6752	2020-03-21	2020-03-01	874.8	19416.06	-0.01264	0.00067	-7	0.004142	-0.01678	-0.14614										
6752	2020-03-21	2020-03-01	824.7	18559.63	-0.05727	0.000378	-6	0.001584	-0.05885	-0.205										
6752	2020-03-21	2020-03-01	769.7	17431.05	-0.06669	0.000346	-5	0.001301	-0.06799	-0.27299										
6752	2020-03-21	2020-03-01	732.9	17002.04	-0.04781	0.000184	-4	-0.00012	-0.04769	-0.32068										
6752	2020-03-21	2020-03-01	725.8	17011.53	-0.00969	0.000558	-3	0.003161	-0.01285	-0.33353										
6752	2020-03-21	2020-03-01	711.2	16726.55	-0.02012	7.12E-05	-2	-0.00111	-0.019	-0.35253										
6752	2020-03-21	2020-03-01	700	16552.83	-0.01575	0.0005	-1	0.002649	-0.0184	-0.37093										
6752	2020-03-21	2020-03-01	720.6	16887.78	0.029429	2.24E-05	0	-0.00154	0.030967	-0.33996										
6752	2020-03-21	2020-03-01	752.6	18092.35	0.044407	0.001491	1	0.011346	0.033062	-0.3069										
6752	2020-03-21	2020-03-01	842.9	19546.63	0.119984	4.41E-05	2	-0.00135	0.121333	-0.18557										
6752	2020-03-21	2020-03-01	827.2	18664.6	-0.01863	0.002355	3	0.018922	-0.03755	-0.22312										
6752	2020-03-21	2020-03-01	859	19389.43	0.038443	0.000187	4	-9.8E-05	0.038541	-0.18457										
6752	2020-03-21	2020-03-01	837.9	19084.97	-0.02456	0.000296	5	0.000858	-0.02542	-0.21										
6752	2020-03-21	2020-03-01	825	18917.01	-0.0154	0.000128	6	-0.00061	-0.01479	-0.22478										
6752	2020-03-21	2020-04-01	806.1	18065.41	-0.02291	0.005454	7	0.046111	-0.06902	-0.2938										
6752	2020-03-21	2020-04-01	785.7	17818.72	-0.02531	0.008267	8	0.070785	-0.09609	-0.38989										
6752	2020-03-21	2020-04-01	782.4	17820.19	-0.0042	8.24E-05	9	-0.00101	-0.00319	-0.39308										
6752	2020-03-21	2020-04-01	811.5	18576.3	0.037193	0.000898	10	0.006143	0.03105	-0.36203										



**Figure 1** Panasonic 2020

The above figure 1 shows the AR and CAR of sponsor Panasonic during the 2020 Olympic games postponed. From figure 1, the AR sponsored by Panasonic fluctuates around 0, and more proportions are less than 0. Therefore, there is a significant effect act on the stock market. From the CAR row, the result is -0.36203, which is a negative number. This refers to that there's negative effect act on the stock during the deferred period. This indicates the

postponement of the Olympics has brought a particular blow to Panasonic's stock market. Also, the emergence and continued infection of the coronavirus pandemic is one of the causes that negatively impact the stocks. Thus, the expiations of the Olympic games would be pulled down. Graph shows that the CAR had a downward tendency which can be predicted there will be a rise in the stock deficit.

**Table 2** Panasonic 2021[illegible]

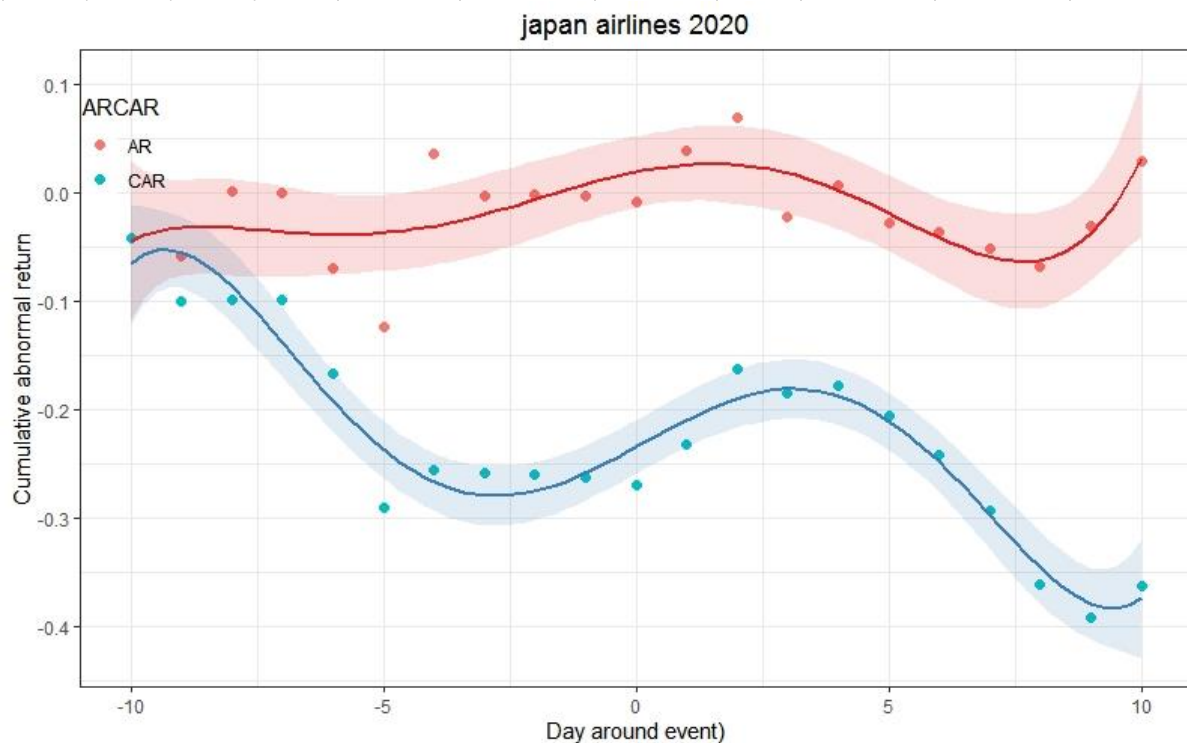
**Figure 2** Panasonic 2021

The above table 2 and figure 2 are the dates of Panasonic in 2021. From Figure 2, Panasonic's AR during the Olympic games, it can be seen that the AR sponsored by Panasonic fluctuates around 0. The proportions greater than 0 and less than 0 are similar since there's only one more AR less than 0. This does not mean that the Olympics is not conducive to the abnormal return of Panasonic. Therefore, there is no significant effect act on the market. From the CAR row, the result is 0.0084498, which is a positive number. This refers to that

there's positive effect act on the stock during the Olympic period. Compared with Panasonic 2020, the Olympic games do bring upward benefit to the local sponsor. Also, this is the first Olympic games conducted after the coronavirus pandemic, so people are looking forward and pay more attention to this international competition. Thus, this Olympic game generates expectations and has a particular impact on the company's stock price. In table 2, there is an upward tendency in the CAR which can be predicted that there will be a rise in the surplus of the Panasonic stock.

**Table 3 Japan Airlines 2020**

stock code	event date	rating date	stock price	index	individual return	rat	market return rate	dif	predicted_return	AR	CAR
9201	2020-03-23	2020-03-06	2521.5	20749.75	-0.043074004		0.0003905	-10	-0.001324467	-0.041749537	-0.041749537
9201	2020-03-23	2020-03-09	2372	19698.75977	-0.059290105		0.000370164	-9	-0.001354872	-0.057935233	-0.09968477
9201	2020-03-23	2020-03-10	2370.5	19867.11914	-0.000632378		6.538E-05	-8	-0.00181056	0.001178183	-0.098506587
9201	2020-03-23	2020-03-11	2369	19416.06055	-0.000632778		0.000669998	-7	-0.000906584	0.000273806	-0.098232781
9201	2020-03-23	2020-03-12	2202.5	18559.63086	-0.07028282		0.000378463	-6	-0.001342463	-0.068940357	-0.167173138
9201	2020-03-23	2020-03-13	1927	17431.05078	-0.125085131		0.000346126	-5	-0.001390811	-0.123694319	-0.290867457
9201	2020-03-23	2020-03-16	1992.5	17002.03906	0.033990659		0.000184065	-4	-0.001633112	0.035623771	-0.255243686
9201	2020-03-23	2020-03-17	1984	17011.5293	-0.004265997		0.000558182	-3	-0.001073761	-0.003192236	-0.258435922
9201	2020-03-23	2020-03-18	1978.5	16726.55078	-0.002772177		7.12334E-05	-2	-0.001801809	-0.000970369	-0.259406291
9201	2020-03-23	2020-03-19	1971	16552.83008	-0.003790751		0.000499834	-1	-0.001160999	-0.002629751	-0.262036042
9201	2020-03-23	2020-03-23	1951.5	16887.7793	-0.009893455		2.24374E-05	0	-0.001874765	-0.00801869	-0.270054733
9201	2020-03-23	2020-03-24	2027	18092.34961	0.038688189		0.001491217	1	0.000321239	0.038366949	-0.231687783
9201	2020-03-23	2020-03-25	2163	19546.63086	0.067094228		4.40673E-05	2	-0.001842426	0.068936653	-0.16275113
9201	2020-03-23	2020-03-26	2118.5	18664.59961	-0.020573278		0.002354879	3	0.001612518	-0.022185795	-0.184936925
9201	2020-03-23	2020-03-27	2130.5	19389.42969	0.005664385		0.00018669	4	-0.001629187	0.007293572	-0.177643353
9201	2020-03-23	2020-03-30	2069	19084.9707	-0.028866463		0.00029564	5	-0.001466293	-0.02740017	-0.205043523
9201	2020-03-23	2020-03-31	1990	18917.00977	-0.038182697		0.000128456	6	-0.001716254	-0.036466443	-0.241509966
9201	2020-03-23	2020-04-01	1899	18065.41016	-0.045728643		0.00545432	7	0.006246557	-0.0519752	-0.293485166
9201	2020-03-23	2020-04-02	1790.5	17818.7207	-0.057135334		0.008267114	8	0.010452024	-0.067587359	-0.361072525
9201	2020-03-23	2020-04-03	1733	17820.18945	-0.032113935		8.24272E-05	9	-0.001785073	-0.030328862	-0.391401387
9201	2020-03-23	2020-04-06	1782	18576.30078	0.028274668		0.000898182	10	-0.000565421	0.028840089	-0.362561298

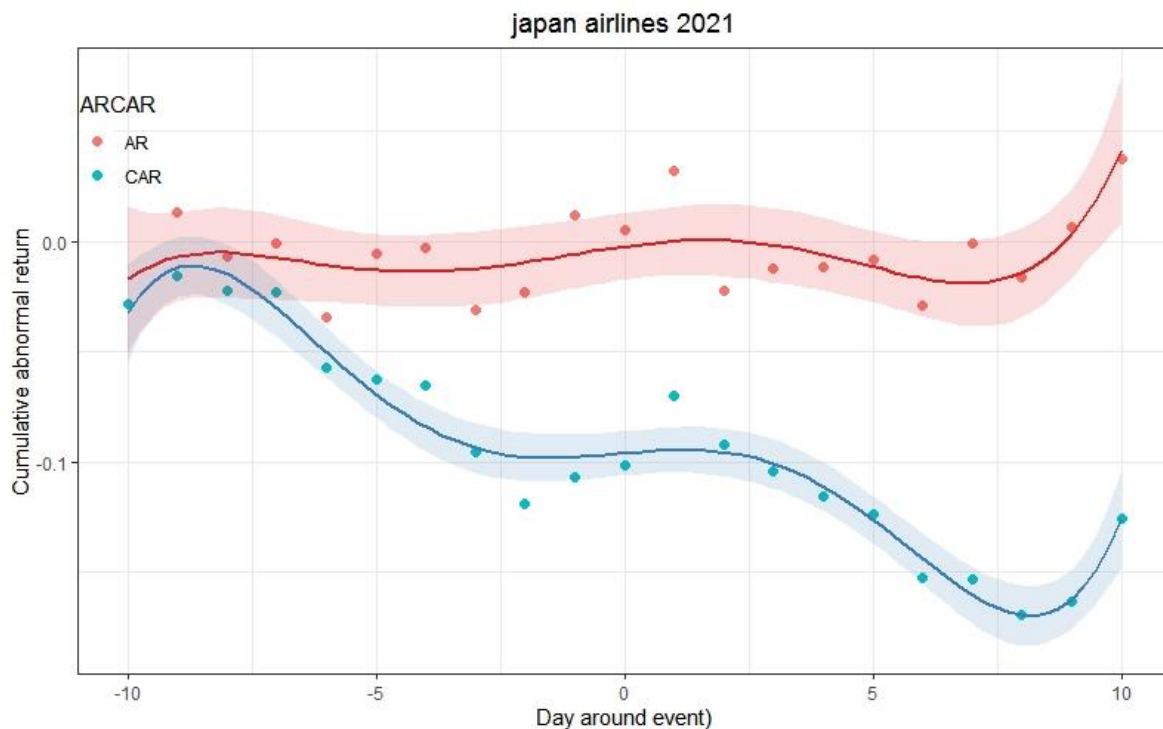
**Figure 3 Japan Airlines 2020**

The above figures 3 show the AR and CAR of sponsor Japan Airline during the 2020 Olympic games, which has been postponed. From table 3, the AR sponsored by Panasonic fluctuates around 0. The proportions of AR less than 0 are more than the AR greater than 0. This means that the postponement of the Olympic games held in Tokyo is conducive to the abnormal return of Panasonic. Therefore, there is a significant effect act on the stock market. From the CAR row, the last result is -0.362561298, which is a negative number. This refers to

that there's negative effect act on the stock during the deferred period. This refers to that the postponement of the Olympics has brought a certain strike to Panasonic's Japan Airline market. Also, due to the coronavirus pandemic, less people traveled around which can be one of the reasons that lead to the negative impact on the stocks. Graph 6 shows that the CAR had a downward tendency which can be predicted there will be a rise in the stock deficit.

**Table 4** Japan Airlines 2021

stock code	event date	rating date	stock price	index	individual return rat	market return rate	dif	redicted_retur	AR	CAR
9201	2021-07-23	2021-07-08	2452	28118.0293	-0.026984127	0.000703934	-10	0.00160591	-0.02859004	-0.02859004
9201	2021-07-23	2021-07-09	2483	27940.41992	0.012642741	0.001874256	-9	-0.0003417	0.012984475	-0.015605566
9201	2021-07-23	2021-07-12	2471	28569.01953	-0.004832863	0.000526689	-8	0.00190088	-0.006733747	-0.022339313
9201	2021-07-23	2021-07-13	2474	28718.24023	0.001214083	0.000390189	-7	0.00212805	-0.000913963	-0.023253276
9201	2021-07-23	2021-07-14	2395	28608.49023	-0.031932094	0.00036019	-6	0.00217797	-0.034110065	-0.057363341
9201	2021-07-23	2021-07-15	2384	28279.08984	-0.004592902	0.001305808	-5	0.00060428	-0.005197177	-0.062560518
9201	2021-07-23	2021-07-16	2381	28003.08008	-0.001258389	0.000926817	-4	0.00123499	-0.002493381	-0.0650539
9201	2021-07-23	2021-07-19	2313	27652.74023	-0.028559429	0.000394697	-3	0.00212054	-0.030679973	-0.095733872
9201	2021-07-23	2021-07-20	2251	27388.16016	-0.026805015	0.003832718	-2	-0.003601	-0.023204013	-0.118937885
9201	2021-07-23	2021-07-21	2281	27548	0.01332741	0.000901442	-1	0.00127722	0.012050189	-0.106887696
9201	2021-07-23	2021-07-26	2298	27833.28906	0.007452872	0.000304008	0	0.00227147	0.005181404	-0.101706292
9201	2021-07-23	2021-07-27	2374	27970.2207	0.033072237	0.001066583	1	0.00100239	0.032069844	-0.069636449
9201	2021-07-23	2021-07-28	2325	27581.66016	-0.02064027	0.00049005	2	0.00196186	-0.022602128	-0.092238576
9201	2021-07-23	2021-07-29	2303	27782.41992	-0.009462366	5.04081E-05	3	0.00269351	-0.012155874	-0.104394451
9201	2021-07-23	2021-07-30	2283	27283.58984	-0.008684325	8.87029E-05	4	0.00262978	-0.011314104	-0.115708554
9201	2021-07-23	2021-08-02	2264	27781.01953	-0.008322383	0.001907825	5	-0.0003976	-0.007924784	-0.123633338
9201	2021-07-23	2021-08-03	2197	27641.83008	-0.02959364	0.002027119	6	-0.0005961	-0.028997511	-0.152630849
9201	2021-07-23	2021-08-04	2201	27584.08008	0.001820665	8.77367E-05	7	0.00263139	-0.000810722	-0.153441571
9201	2021-07-23	2021-08-05	2163	27728.11914	-0.01726488	0.002339862	8	-0.0011166	-0.016148285	-0.169589856
9201	2021-07-23	2021-08-06	2178	27820.03906	0.006934813	0.001354063	9	0.00052397	0.006410843	-0.163179014
9201	2021-07-23	2021-08-10	2259	27888.15039	0.037190083	0.001971069	10	-0.0005028	0.037692932	-0.125486081



**Figure 4** Japan Airlines 2021

The above table 4 and figure 4 are the dates of Japan Airline in 2021. From the figure 8, Japan Airline AR during the Olympic games, the AR of the stocks fluctuate around 0. The proportions less than 0 are more than AR less than 0. This shows that the Olympic game is not conducive to the abnormal return of Japan Airline. Therefore, there is no significant effect act on the market. From the CAR row, the result is -0.125486081, which is a negative number. This refers to that there's negative effect act on the stock during the Olympic period.

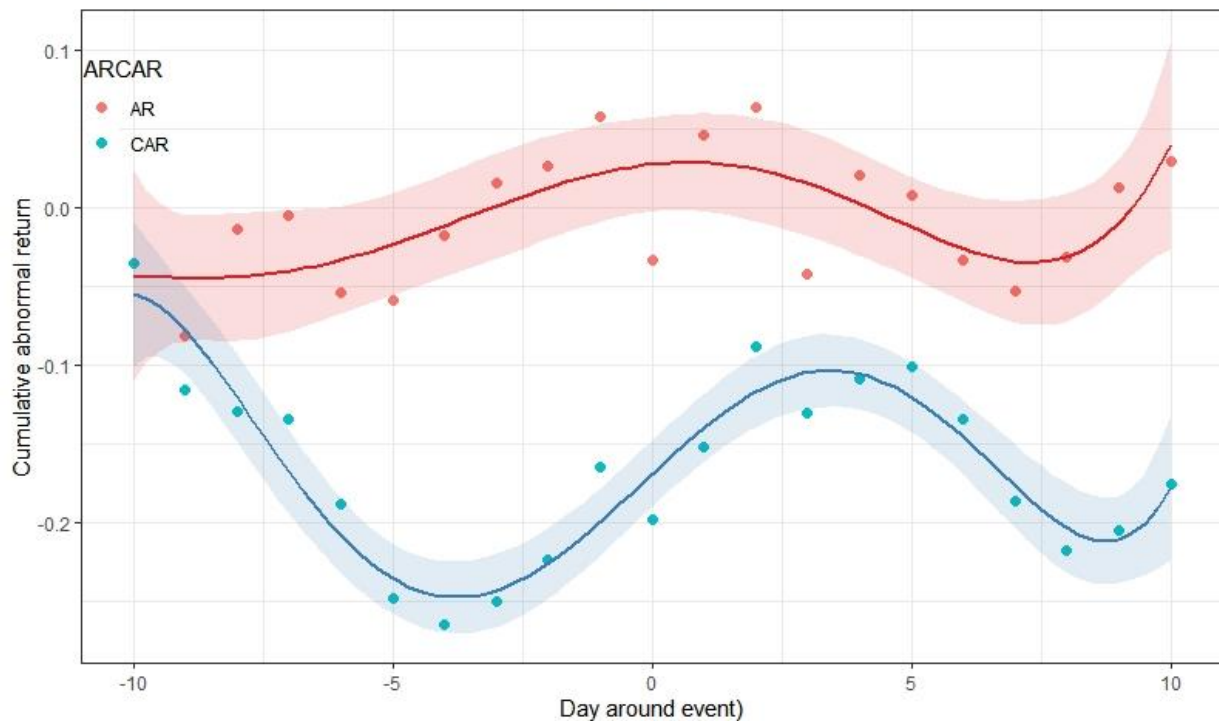
Comparing with the result of Japan Airline 2020, the Olympic games did not bring upward benefit to the local airline. This could be due to the coronavirus pandemic, since Olympic games won't reduce the risk of travelling and infected by the virus. Thus, although the Olympic game does bring some rotation of the Japan Airline, the process will be slower than other sponsors. In the figure 4, there is an upward tendency in the CAR which can be predicted the stock of Japan Airline will be slowly improved.



**Table 5 Canon 2020**

stock code	event date	trading date	stock price	index	individual return	market return	dif	predicted	AR	CAR
7751	2020-03-21	2020-03-09	2661.5	20749.75	-0.03534	0.00039	-10	-0.00044	-0.03489	-0.03489
7751	2020-03-21	2020-03-09	2444.5	19698.76	-0.08153	0.00037	-9	-0.00044	-0.08109	-0.11599
7751	2020-03-21	2020-03-10	2410.5	19867.12	-0.01391	6.54E-05	-8	-0.00042	-0.01349	-0.12948
7751	2020-03-21	2020-03-11	2397	19416.06	-0.0056	0.00067	-7	-0.00047	-0.00513	-0.13461
7751	2020-03-21	2020-03-12	2266.5	18559.63	-0.05444	0.000378	-6	-0.00044	-0.054	-0.18861
7751	2020-03-21	2020-03-13	2131.5	17431.05	-0.05956	0.000346	-5	-0.00044	-0.05912	-0.24773
7751	2020-03-21	2020-03-16	2093.5	17002.04	-0.01783	0.000184	-4	-0.00043	-0.0174	-0.26513
7751	2020-03-21	2020-03-17	2125	17011.53	0.015047	0.000558	-3	-0.00046	0.015505	-0.24963
7751	2020-03-21	2020-03-18	2180	16726.55	0.025882	7.12E-05	-2	-0.00042	0.026299	-0.22333
7751	2020-03-21	2020-03-19	2306.5	16552.83	0.058028	0.0005	-1	-0.00045	0.058481	-0.16485
7751	2020-03-21	2020-03-20	2229	16887.78	-0.0336	2.24E-05	0	-0.00041	-0.03319	-0.19804
7751	2020-03-21	2020-03-24	2331	18092.35	0.04576	0.001491	1	-0.00054	0.046301	-0.15174
7751	2020-03-21	2020-03-25	2479	19546.63	0.063492	4.41E-05	2	-0.00041	0.063906	-0.08783
7751	2020-03-21	2020-03-26	2373.5	18664.6	-0.04256	0.002355	3	-0.00062	-0.04194	-0.12977
7751	2020-03-21	2020-03-27	2422	19389.43	0.020434	0.000187	4	-0.00043	0.02086	-0.10891
7751	2020-03-21	2020-03-30	2441	19084.97	0.007845	0.000296	5	-0.00044	0.008281	-0.10063
7751	2020-03-21	2020-03-31	2359	18917.01	-0.03359	0.000128	6	-0.00042	-0.03317	-0.1338
7751	2020-03-21	2020-04-01	2232.5	18065.41	-0.05362	0.005454	7	-0.00089	-0.05274	-0.18654
7751	2020-03-21	2020-04-02	2160	17818.72	-0.03247	0.008267	8	-0.00113	-0.03134	-0.21789
7751	2020-03-21	2020-04-03	2187	17820.19	0.0125	8.24E-05	9	-0.00042	0.012917	-0.20497
7751	2020-03-21	2020-04-06	2250.5	18576.3	0.029035	0.000898	10	-0.00049	0.029524	-0.17545

**canon2020**



**Figure 5 Canon 2020**

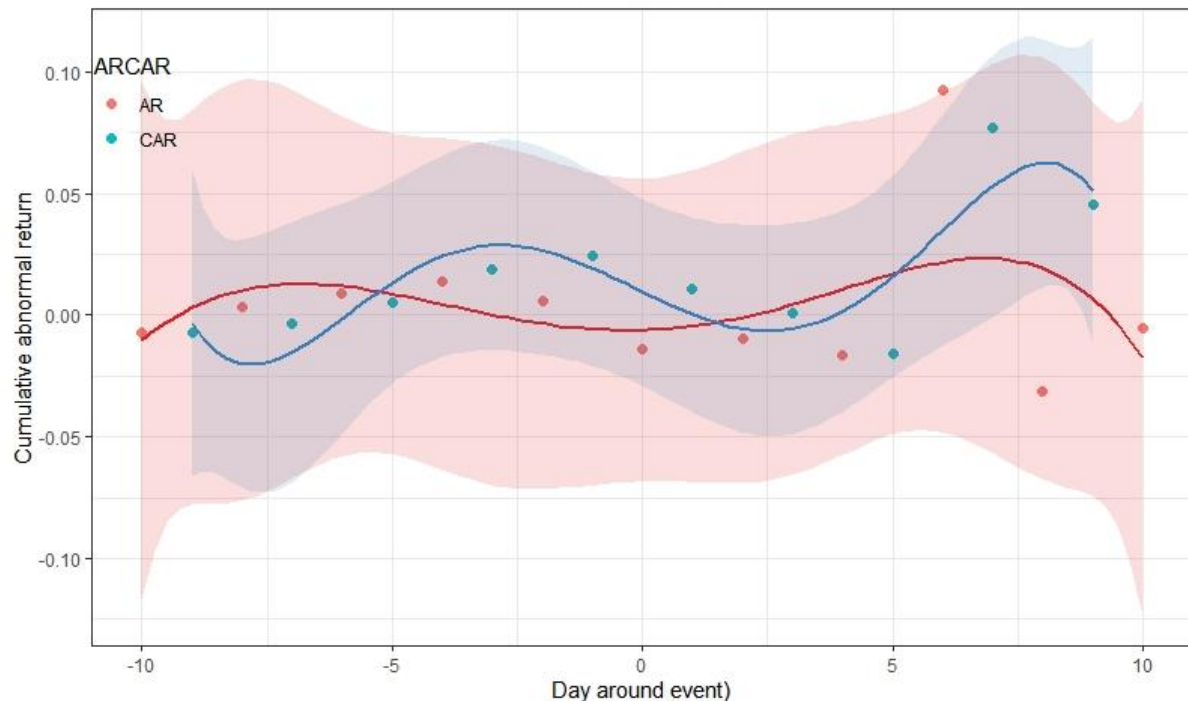
The figure 5 shows the data from Canon 2020 when the Olympic has postponed to next year, the AR shows in the table are fluctuates between 0.04 and -0.02. The amount of data greater than 0 are similar with the amount that less than 0. There are 3 more negative data are shown in the table. Yet the data still shows a normal return of Canon. As a result, there is no significant effect in Canon. The CAR data shows a more obvious result while all the

figure is negative. At last, the data responses with -0.17545, showing there's a negative effect act on the stock in 2020. To conclude, in 2020 Canon has a downward trend on their market because of the postponed of the Olympic. Couple of reasons could explain the drawbacks. Not only because of the delay of Olympics, the Covid-19 might also play an important role in the defect.

**Table 6 Canon 2021**

stock code	event date	trading date	stock price	index	individual r	market ret	dif	predicted	AR	CAR
7751	2021-07-21	2021-07-01	2465	28118.03	-0.00484	0.000704	-10	0.002177	-0.00702	-0.00702
7751	2021-07-21	2021-07-05	2477	27940.42	0.004868	0.001874	-9	0.00136	0.003508	-0.00351
7751	2021-07-21	2021-07-12	2505	28569.02	0.011304	0.000527	-8	0.002301	0.009003	0.005489
7751	2021-07-21	2021-07-19	2545	28718.24	0.015968	0.00039	-7	0.002396	0.013572	0.019061
7751	2021-07-21	2021-07-14	2565.5	28608.49	0.008055	0.00036	-6	0.002417	0.005638	0.024699
7751	2021-07-21	2021-07-15	2534.5	28279.09	-0.01208	0.001306	-5	0.001757	-0.01384	0.010858
7751	2021-07-21	2021-07-16	2514.5	28003.08	-0.00789	0.000927	-4	0.002022	-0.00991	0.000946
7751	2021-07-21	2021-07-19	2479	27652.74	-0.01412	0.000395	-3	0.002393	-0.01651	-0.01557
7751	2021-07-21	2021-07-20	2708	27388.16	0.092376	0.003833	-2	-7.2E-06	0.092383	0.076818
7751	2021-07-21	2021-07-21	2628.5	27548	-0.02936	0.000901	-1	0.002039	-0.0314	0.045421
7751	2021-07-21	2021-07-20	2620.5	27833.29	-0.00304	0.000304	0	0.002456	-0.0055	0.039921
7751	2021-07-21	2021-07-21	2639.5	27970.22	0.007251	0.001067	1	0.001924	0.005326	0.045247
7751	2021-07-21	2021-07-21	2594.5	27581.66	-0.01705	0.00049	2	0.002327	-0.01938	0.025872
7751	2021-07-21	2021-07-29	2501	27782.42	-0.03604	5.04E-05	3	0.002634	-0.03867	-0.0128
7751	2021-07-21	2021-07-30	2496.5	27283.59	-0.0018	8.87E-05	4	0.002607	-0.00441	-0.01721
7751	2021-07-21	2021-08-01	2582	27781.02	0.034248	0.001908	5	0.001337	0.032911	0.015706
7751	2021-07-21	2021-08-01	2617.5	27641.83	0.013749	0.002027	6	0.001253	0.012496	0.028202
7751	2021-07-21	2021-08-01	2626.5	27584.08	0.003438	8.77E-05	7	0.002607	0.000831	0.029033
7751	2021-07-21	2021-08-01	2625	27728.12	-0.00057	0.00234	8	0.001035	-0.00161	0.027426
7751	2021-07-21	2021-08-01	2620.5	27820.04	-0.00171	0.001354	9	0.001723	-0.00344	0.023989
7751	2021-07-21	2021-08-10	2615	27888.15	-0.0021	0.001971	10	0.001293	-0.00339	0.020597

**canon2021**



**Figure 6 Canon 2021**

On the contrary, the data from Canon in 2021, when the Olympic had conducted, shows a different view. The AR are also float around 0, 12 of them are negative while 9 of others are positive. The data shows no abnormal return. In conclusion there's still no significant effect in Canon in 2021. However, the CAR data shows a different

result. In 2021, most of the CAR of Canon are more than 0, and the last figure is 0.020597, which means there is a positive effect on Canon's stock in 2021. Comparing with the result in Canon in 2020, the upwards tendency proves that the Olympic Games do bring some upward effect to the factor, leads to this upward tendency.



Table 7 Meiji 2020

stock code	event date	trading date	stock price	index	individual r	market ret	dif	predicted	AR	CAR
2269	2020-03-2	2020-03-06	6660	20749.75	0.001504	0.00039	-10	-0.00082	0.00232	0.00232
2269	2020-03-2	2020-03-09	6580	19698.76	-0.01201	0.00037	-9	-0.00084	-0.01117	-0.00885
2269	2020-03-2	2020-03-10	6620	19867.12	0.006079	6.54E-05	-8	-0.00125	0.007325	-0.00152
2269	2020-03-2	2020-03-11	6700	19416.06	0.012085	0.00067	-7	-0.00045	0.012532	0.011008
2269	2020-03-2	2020-03-12	6640	18559.63	-0.00896	0.000378	-6	-0.00083	-0.00812	0.002885
2269	2020-03-2	2020-03-13	6350	17431.05	-0.04367	0.000346	-5	-0.00088	-0.0428	-0.03991
2269	2020-03-2	2020-03-16	6250	17002.04	-0.01575	0.000184	-4	-0.00109	-0.01466	-0.05457
2269	2020-03-2	2020-03-17	6590	17011.53	0.0544	0.000558	-3	-0.00059	0.054995	0.000421
2269	2020-03-2	2020-03-18	6890	16726.55	0.045524	7.12E-05	-2	-0.00124	0.046762	0.047183
2269	2020-03-2	2020-03-19	7030	16552.83	0.020319	0.0005	-1	-0.00067	0.020991	0.068174
2269	2020-03-2	2020-03-23	7010	16887.78	-0.00284	2.24E-05	0	-0.0013	-0.00154	0.066632
2269	2020-03-2	2020-03-24	6970	18092.35	-0.00571	0.001491	1	0.000638	-0.00634	0.060288
2269	2020-03-2	2020-03-25	7140	19546.63	0.02439	4.41E-05	2	-0.00127	0.025664	0.085953
2269	2020-03-2	2020-03-26	7400	18664.6	0.036415	0.002355	3	0.001779	0.034636	0.120588
2269	2020-03-2	2020-03-27	7660	19389.43	0.035135	0.000187	4	-0.00109	0.036221	0.156809
2269	2020-03-2	2020-03-30	7760	19084.97	0.013055	0.000296	5	-0.00094	0.013997	0.170806
2269	2020-03-2	2020-03-31	7680	18917.01	-0.01031	0.000128	6	-0.00116	-0.00915	0.161659
2269	2020-03-2	2020-04-01	7430	18065.41	-0.03255	0.005454	7	0.005873	-0.03843	0.123234
2269	2020-03-2	2020-04-02	7440	17818.72	0.001346	0.008267	8	0.009589	-0.00824	0.11499
2269	2020-03-2	2020-04-03	7510	17820.19	0.009409	8.24E-05	9	-0.00122	0.010632	0.125622
2269	2020-03-2	2020-04-06	7700	18576.3	0.0253	0.000898	10	-0.00015	0.025445	0.151067

meiji2020

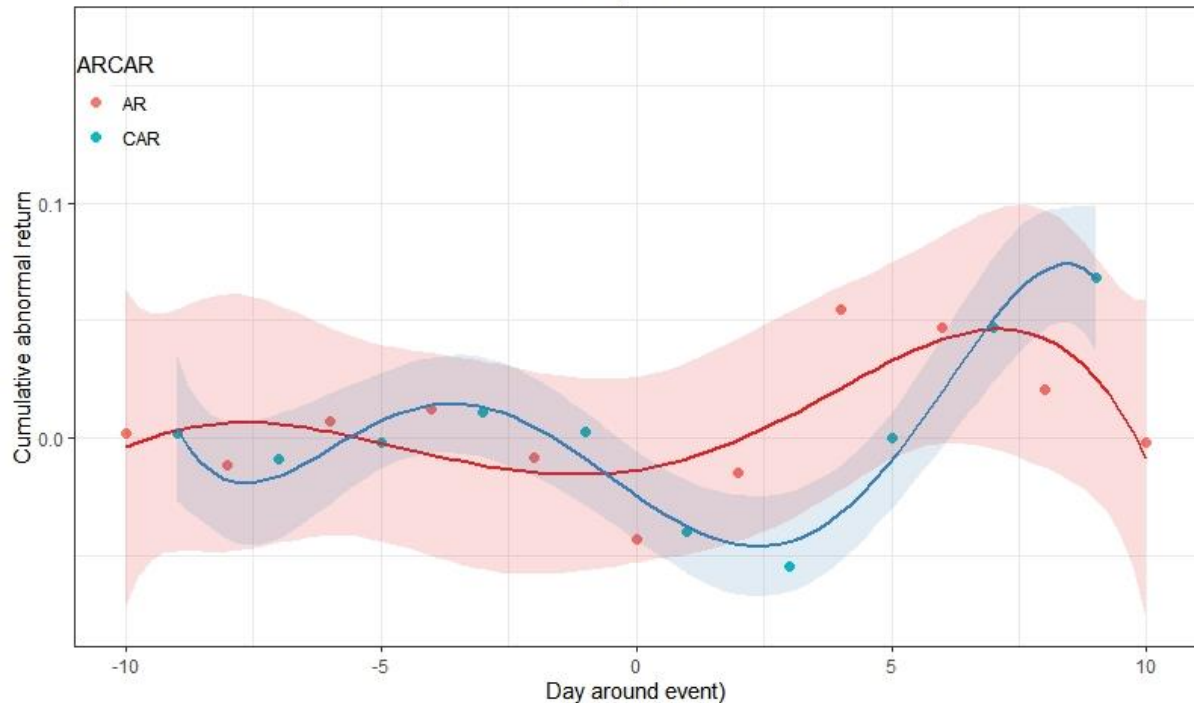


Figure 7 Meiji2020

Next comes to the stock of Meiji in 2020 with the postponed Olympic game. During the period, 12 of the AR show on the table are positive, while the other 8 of them are negative. Yet, all the data are around 0. As a result, there isn't any significant effect in Meiji in 2020, and the data shows the normal return of this company. Coming the next is the CAR row. On that row, the data that over 0 is far more than data less than 0. Only 4 figures

are smaller than 0. At last, the number stop at 0.151067, which is positive, means that the postponed Olympic game did not bring any negative effect on Meiji company's stock market. The Covid-19 didn't bring a horrible effect in this kind of domestic company and Meiji as an example still run well although the Olympic has delayed.

Table 8 Meiji 2021

stock code	event date	trading date	stock price	index	individual r	market return	dif	predicted	AR	CAR
2269	2021-07-21	2021-07-08	6690	28118.03	-0.00446	0.000704	-10	-0.00083	-0.00363	-0.00363
2269	2021-07-21	2021-07-09	6710	27940.42	0.00299	0.001874	-9	-0.00074	0.003734	0.000101
2269	2021-07-21	2021-07-12	6800	28569.02	0.013413	0.000527	-8	-0.00084	0.014256	0.014357
2269	2021-07-21	2021-07-13	6870	28718.24	0.010294	0.00039	-7	-0.00085	0.011147	0.025504
2269	2021-07-21	2021-07-14	6990	28608.49	0.017467	0.00036	-6	-0.00086	0.018323	0.043827
2269	2021-07-21	2021-07-15	6830	28279.09	-0.02289	0.001306	-5	-0.00079	-0.0221	0.021723
2269	2021-07-21	2021-07-16	6790	28003.08	-0.00586	0.000927	-4	-0.00081	-0.00504	0.016681
2269	2021-07-21	2021-07-19	6820	27652.74	0.004418	0.000395	-3	-0.00085	0.005271	0.021952
2269	2021-07-21	2021-07-20	6930	27388.16	0.016129	0.003833	-2	-0.0006	0.016731	0.038683
2269	2021-07-21	2021-07-21	6900	27548	-0.00433	0.000901	-1	-0.00082	-0.00351	0.03517
2269	2021-07-21	2021-07-26	6930	27833.29	0.004348	0.000304	0	-0.00086	0.005207	0.040378
2269	2021-07-21	2021-07-27	6920	27970.22	-0.00144	0.001067	1	-0.0008	-0.00064	0.039738
2269	2021-07-21	2021-07-28	6940	27581.66	0.00289	0.00049	2	-0.00085	0.003736	0.043475
2269	2021-07-21	2021-07-29	6820	27782.42	-0.01729	5.04E-05	3	-0.00088	-0.01641	0.027062
2269	2021-07-21	2021-07-30	6780	27283.59	-0.00587	8.87E-05	4	-0.00088	-0.00499	0.022072
2269	2021-07-21	2021-08-02	6990	27781.02	0.030973	0.001908	5	-0.00074	0.031716	0.053788
2269	2021-07-21	2021-08-03	6970	27641.83	-0.00286	0.002027	6	-0.00073	-0.00213	0.05166
2269	2021-07-21	2021-08-04	6870	27584.08	-0.01435	8.77E-05	7	-0.00088	-0.01347	0.038189
2269	2021-07-21	2021-08-05	6930	27728.12	0.008734	0.00234	8	-0.00071	0.009444	0.047633
2269	2021-07-21	2021-08-06	6900	27820.04	-0.00433	0.001354	9	-0.00078	-0.00355	0.044087
2269	2021-07-21	2021-08-10	6910	27888.15	0.001449	0.001971	10	-0.00074	0.002187	0.046274

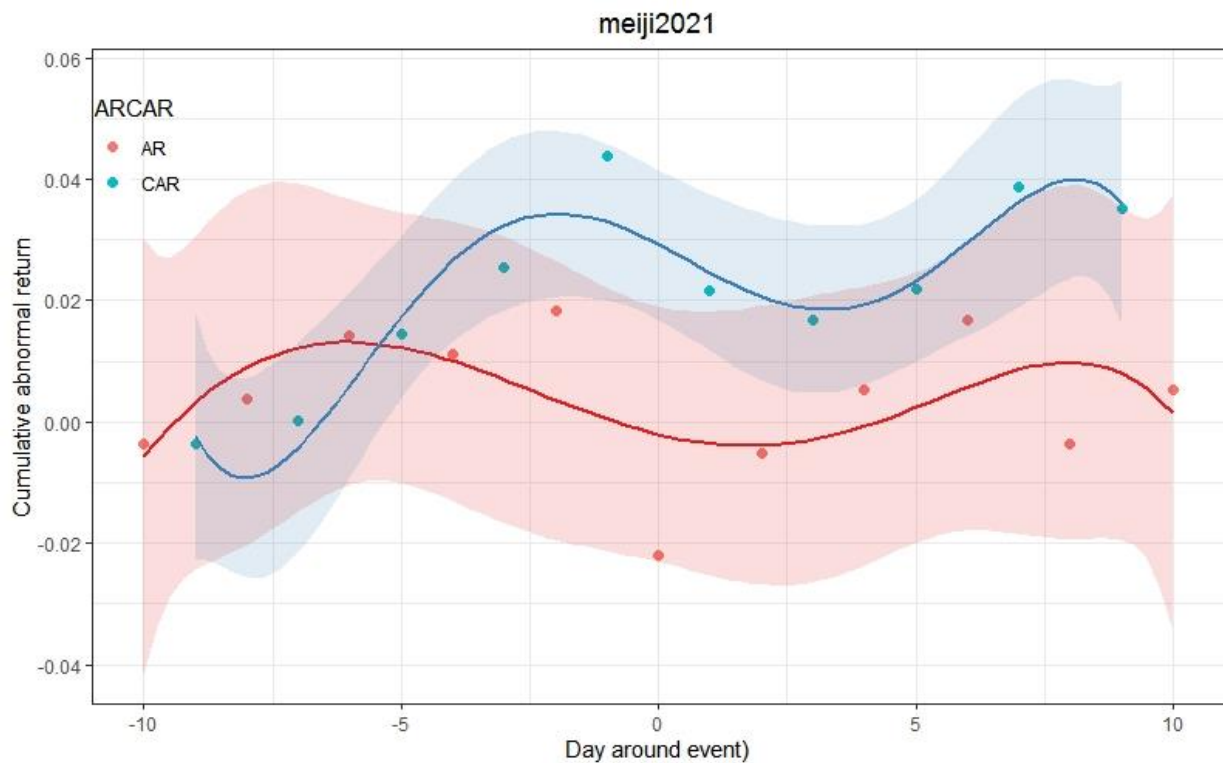


Figure 8 Meiji 2021

Similar in 2021, when the Olympic game conducted on time, the Meiji company as one of the most important domestic sponsorships is also affected by the game. AR on the table showing that the sponsored by Meiji are fluctuate between 0.1 and -0.1, 11 of them are positive. Only 10 of them are negative. Yet the figure 15 still shows Meiji has a normal return. Therefore, the Olympic game did not have a significant effect in Meiji's stocks. Speaking of the CAR, shows on the table 16, the only

negative data are shown in the first day. All the other data are positive. At last, the number stop at 0.046274, which means there is a positive effect act on the stock in 2020. It is showed that the Olympic game do bring some benefit to Meiji on their market that leads to an upward tendency. Compare with the data shows in 2020, the stock in Meiji shows a general improve, which means that the Olympic game do brings benefit to the company who sponsor it.

Table 9 Toyota 2020

stock code	event date	trading date	stock price	index	individual return	market return	dif	predicted	AR	CAR
7203	2020-03-21	2020-03-06	6794	20749.75	-0.03054	0.00039	-10	0.000454	-0.03099	-0.03099
7203	2020-03-21	2020-03-09	6495	19698.76	-0.04401	0.00037	-9	0.000445	-0.04445	-0.07545
7203	2020-03-21	2020-03-10	6600	19867.12	0.016166	6.54E-05	-8	0.000315	0.015851	-0.05959
7203	2020-03-21	2020-03-11	6535	19416.06	-0.00985	0.00067	-7	0.000574	-0.01042	-0.07002
7203	2020-03-21	2020-03-12	6309	18559.63	-0.03458	0.000378	-6	0.000449	-0.03503	-0.10505
7203	2020-03-21	2020-03-13	6084	17431.05	-0.03566	0.000346	-5	0.000435	-0.0361	-0.14115
7203	2020-03-21	2020-03-16	5941	17002.04	-0.0235	0.000184	-4	0.000366	-0.02387	-0.16502
7203	2020-03-21	2020-03-17	6360	17011.53	0.070527	0.000558	-3	0.000526	0.070001	-0.09502
7203	2020-03-21	2020-03-18	6317	16726.55	-0.00676	7.12E-05	-2	0.000318	-0.00708	-0.10209
7203	2020-03-21	2020-03-19	6395	16552.83	0.012348	0.0005	-1	0.000501	0.011847	-0.09025
7203	2020-03-21	2020-03-23	6172	16887.78	-0.03487	2.24E-05	0	0.000297	-0.03517	-0.12541
7203	2020-03-21	2020-03-24	6253	18092.35	0.013124	0.001491	1	0.000925	0.012199	-0.11322
7203	2020-03-21	2020-03-25	6919	19546.63	0.106509	4.41E-05	2	0.000306	0.106203	-0.00701
7203	2020-03-21	2020-03-26	6718	18664.6	-0.02905	0.002355	3	0.001294	-0.03034	-0.03736
7203	2020-03-21	2020-03-27	7029	19389.43	0.046294	0.000187	4	0.000367	0.045927	0.00857
7203	2020-03-21	2020-03-30	6797	19084.97	-0.03301	0.000296	5	0.000413	-0.03342	-0.02485
7203	2020-03-21	2020-03-31	6501	18917.01	-0.04355	0.000128	6	0.000342	-0.04389	-0.06874
7203	2020-03-21	2020-04-01	6331	18065.41	-0.02615	0.005454	7	0.002619	-0.02877	-0.09751
7203	2020-03-21	2020-04-02	6287	17818.72	-0.00695	0.008267	8	0.003821	-0.01077	-0.10828
7203	2020-03-21	2020-04-03	6195	17820.19	-0.01463	8.24E-05	9	0.000322	-0.01496	-0.12324
7203	2020-03-21	2020-04-06	6580	18576.3	0.062147	0.000898	10	0.000671	0.061476	-0.06176

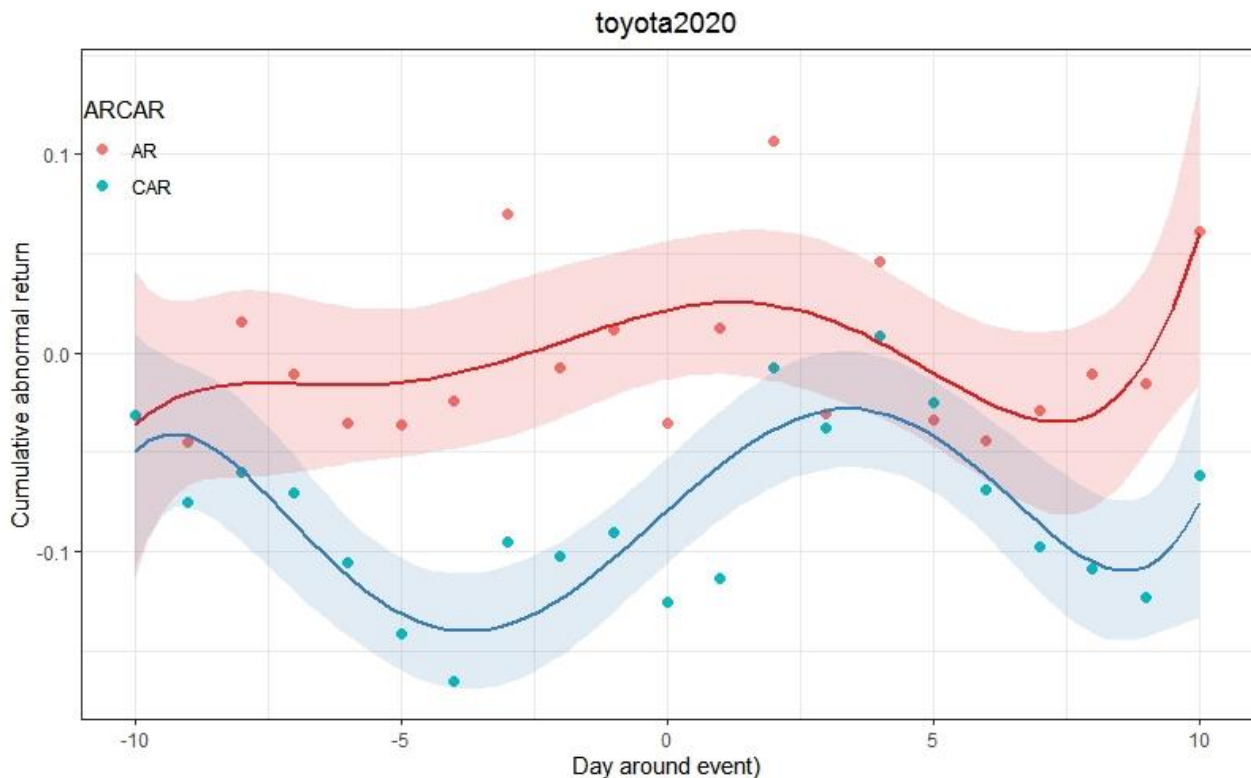


Figure 9 Toyota 2020

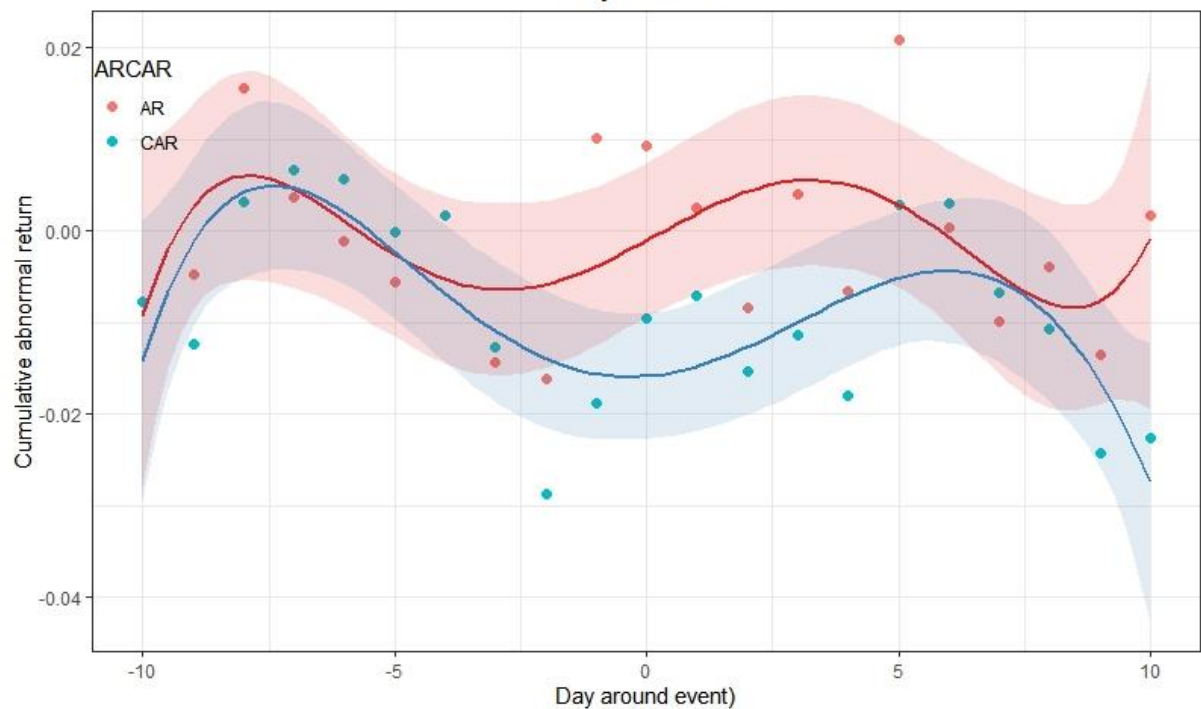
The above figure shows the sponsor Toyota's AR and CAR performance during the announcement of postponement Tokyo 2020 Olympics. As can be seen from the table, From the CAR line, the result is -0.0617593452, which is a negative number. This refers to

the delay for the stock of Toyota is a negative impact. Since the Tokyo Olympics announced the postponement, Toyota investors have become less and less optimistic about how much the Olympics will bring to the brand itself.

**Table 10** Toyota 2021

stock code	event date	trading date	stock price	index	individual r	market ret	dif	predicted	AR	CAR
7203	2021-07-21	2021-07-08	9675	28118.03	-0.00606	0.000704	-10	0.001645	-0.00771	-0.00771
7203	2021-07-21	2021-07-09	9650	27940.42	-0.00258	0.001874	-9	0.002151	-0.00473	-0.01244
7203	2021-07-21	2021-07-12	9815	28569.02	0.017098	0.000527	-8	0.001568	0.015531	0.00309
7203	2021-07-21	2021-07-13	9865	28718.24	0.005094	0.00039	-7	0.001509	0.003585	0.006675
7203	2021-07-21	2021-07-14	9869	28608.49	0.000405	0.00036	-6	0.001496	-0.00109	0.005585
7203	2021-07-21	2021-07-15	9832	28279.09	-0.00375	0.001306	-5	0.001905	-0.00565	-6.9E-05
7203	2021-07-21	2021-07-16	9866	28003.08	0.003458	0.000927	-4	0.001741	0.001717	0.001648
7203	2021-07-21	2021-07-19	9740	27652.74	-0.01277	0.000395	-3	0.001511	-0.01428	-0.01263
7203	2021-07-21	2021-07-20	9612	27388.16	-0.01314	0.003833	-2	0.002998	-0.01614	-0.02877
7203	2021-07-21	2021-07-21	9725	27548	0.011756	0.000901	-1	0.00173	0.010026	-0.01875
7203	2021-07-21	2021-07-26	9829	27833.29	0.010694	0.000304	0	0.001472	0.009223	-0.00952
7203	2021-07-21	2021-07-27	9871	27970.22	0.004273	0.001067	1	0.001801	0.002472	-0.00705
7203	2021-07-21	2021-07-28	9804	27581.66	-0.00679	0.00049	2	0.001552	-0.00834	-0.01539
7203	2021-07-21	2021-07-29	9856	27782.42	0.005304	5.04E-05	3	0.001362	0.003942	-0.01145
7203	2021-07-21	2021-07-30	9805	27283.59	-0.00517	8.87E-05	4	0.001378	-0.00655	-0.018
7203	2021-07-21	2021-08-02	10030	27781.02	0.022947	0.001908	5	0.002165	0.020782	0.002778
7203	2021-07-21	2021-08-03	10055	27641.83	0.002493	0.002027	6	0.002217	0.000276	0.003054
7203	2021-07-21	2021-08-04	9970	27584.08	-0.00845	8.77E-05	7	0.001378	-0.00983	-0.00678
7203	2021-07-21	2021-08-05	9954	27728.12	-0.0016	0.00234	8	0.002352	-0.00396	-0.01073
7203	2021-07-21	2021-08-06	9838	27820.04	-0.01165	0.001354	9	0.001926	-0.01358	-0.02431
7203	2021-07-21	2021-08-10	9876	27888.15	0.003863	0.001971	10	0.002193	0.00167	-0.02264

toyota2021



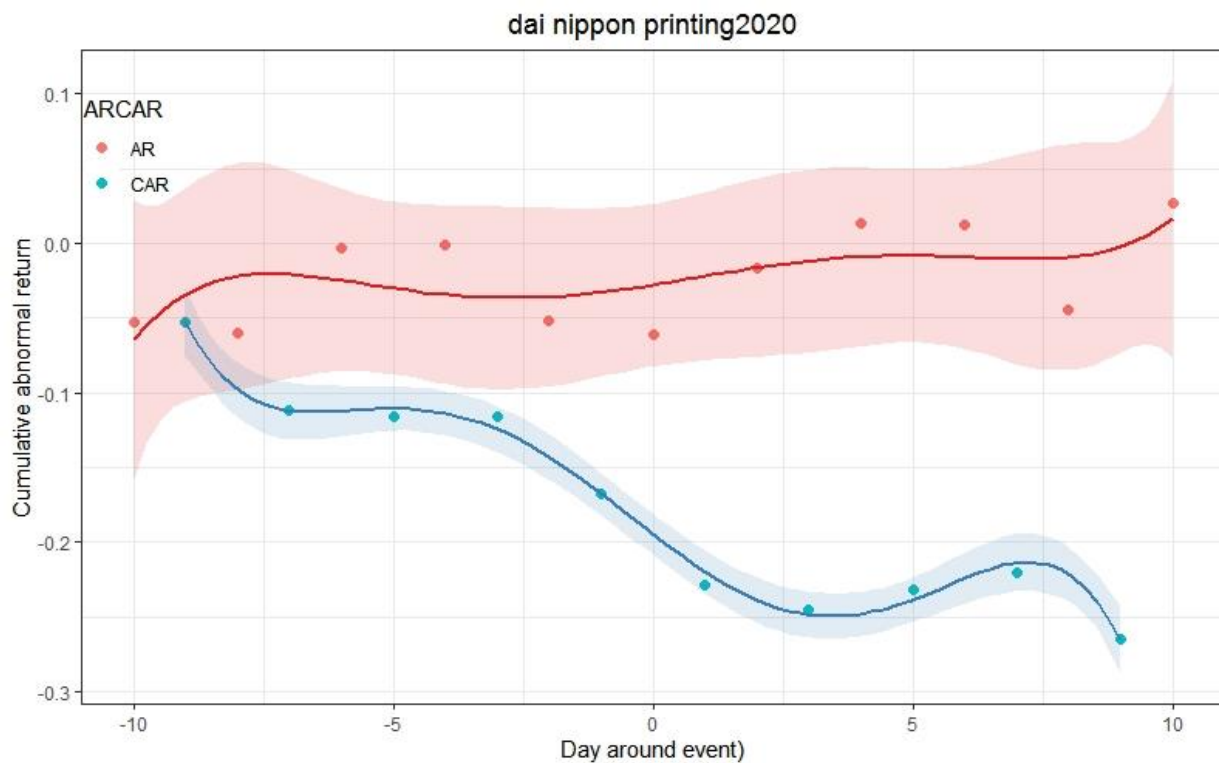
**Figure 10** Toyota 2021

The table 10 and figure 10 above shows Toyota's figures for 2021. It can be seen from the AR line that the AR sponsored by Toyota fluctuates around 0, and the proportion of positive and negative numbers is almost the same. This means that the Olympics is beneficial to normal return of Toyota. Therefore, it has a significant

impact on the market. From the CAR row, the data of the last CAR is -0.022644184. This is a number less than 0. This refers to actions that have a negative impact on stock of Toyota during the Olympics. At the same time, the rest of Toyota's stock is expected to continue its downward trend as CAR data shows a downward trend.

**Table 11 Dai Nippon Printing 2020**

stock code	event date	rating date	stock price	index	individual return rate	market return rate	dif	predicted_return	AR	CAR
7912	2020-03-23	2020-03-06	2443	20749.75	-0.051998448	0.0003905	-10	0.000298276	-0.052296724	-0.052296724
7912	2020-03-23	2020-03-09	2298	19698.75977	-0.059353254	0.000370164	-9	0.00029742	-0.059650674	-0.111947398
7912	2020-03-23	2020-03-10	2291	19867.11914	-0.003046127	6.538E-05	-8	0.000284592	-0.003330719	-0.115278117
7912	2020-03-23	2020-03-11	2290	19416.06055	-0.000436491	0.000669998	-7	0.00031004	-0.00074653	-0.116024648
7912	2020-03-23	2020-03-12	2172	18559.63086	-0.051528384	0.000378463	-6	0.000297769	-0.051826154	-0.167850801
7912	2020-03-23	2020-03-13	2041	17431.05078	-0.060313076	0.000346126	-5	0.000296408	-0.060609484	-0.228460285
7912	2020-03-23	2020-03-16	2008	17002.03906	-0.016168545	0.000184065	-4	0.000289587	-0.016458132	-0.244918417
7912	2020-03-23	2020-03-17	2035	17011.5293	0.013446215	0.000558182	-3	0.000305334	0.013140882	-0.231777536
7912	2020-03-23	2020-03-18	2060	16726.55078	0.012285012	7.12334E-05	-2	0.000284839	0.012000174	-0.219777362
7912	2020-03-23	2020-03-19	1969	16552.83008	-0.044174757	0.000499834	-1	0.000302878	-0.044477635	-0.264254997
7912	2020-03-23	2020-03-23	2023	16887.7793	0.027425089	2.24374E-05	0	0.000282785	0.027142304	-0.237112693
7912	2020-03-23	2020-03-24	2043	18092.34961	0.009886307	0.001491217	1	0.000344604	0.009541704	-0.227570989
7912	2020-03-23	2020-03-25	2246	19546.63086	0.099363681	4.40673E-05	2	0.000283695	0.099079986	-0.128491003
7912	2020-03-23	2020-03-26	2239	18664.59961	-0.003116652	0.002354879	3	0.000380954	-0.003497606	-0.131988609
7912	2020-03-23	2020-03-27	2460	19389.42969	0.098704779	0.00018669	4	0.000289698	0.098415081	-0.033573528
7912	2020-03-23	2020-03-30	2470	19084.9707	0.004065041	0.00029564	5	0.000294284	0.003770757	-0.029802771
7912	2020-03-23	2020-03-31	2301	18917.00977	-0.068421053	0.000128456	6	0.000287247	-0.0687083	-0.098511071
7912	2020-03-23	2020-04-01	2216	18065.41016	-0.036940461	0.00545432	7	0.000511405	-0.037451866	-0.135962936
7912	2020-03-23	2020-04-02	2176	17818.7207	-0.018050542	0.008267114	8	0.000629791	-0.018680333	-0.154643269
7912	2020-03-23	2020-04-03	2145	17820.18945	-0.014246324	8.24272E-05	9	0.00028531	-0.014531633	-0.169174902
7912	2020-03-23	2020-04-06	2258	18576.30078	0.052680653	0.000898182	10	0.000319644	0.052361009	-0.116813893

**Figure 11 Dai Nippon Printing 2020**

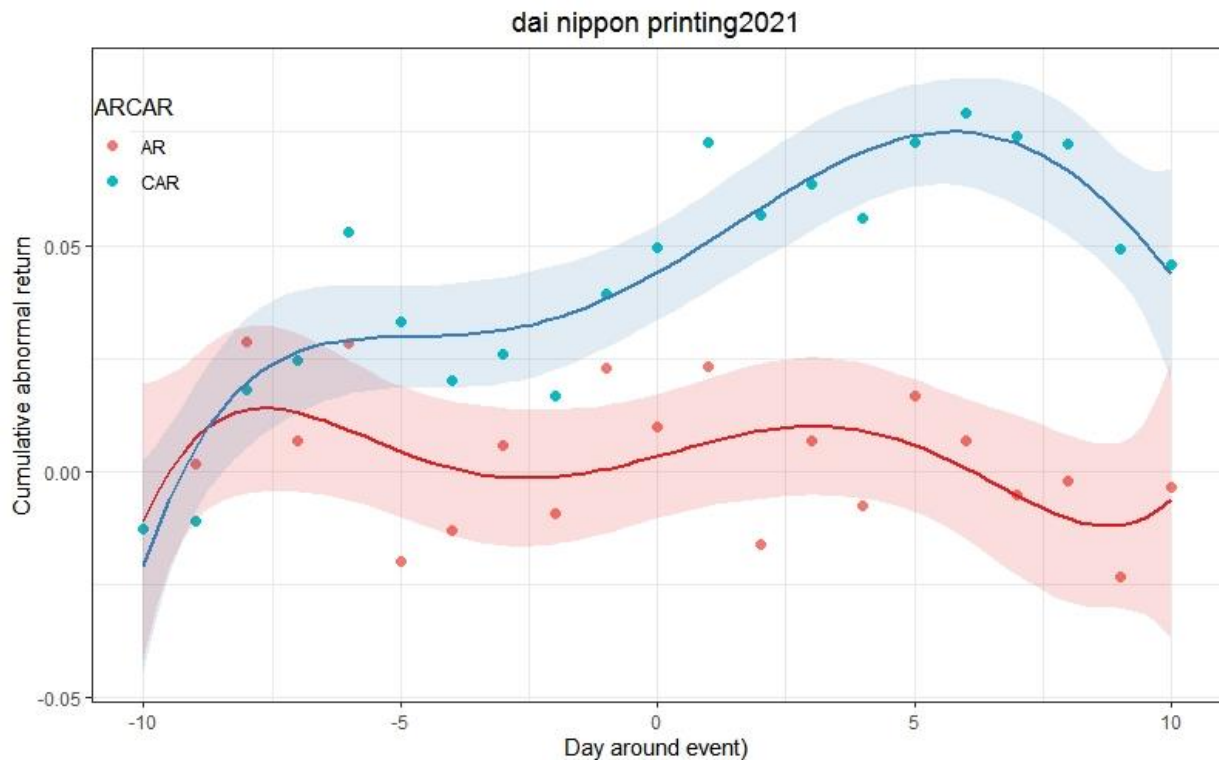
The above show the AR and CAR of sponsor Dai Nippon Printing during the 2020 Olympic games, which has been postponed. From figure 11, the AR sponsored by Panasonic fluctuates below 0. From the CAR row, the last result is -0.116813893, which is a negative number. This refers to that there's negative effect act on the stock

during the deferred period. This refers to that the postponement of the Olympics has brought a certain strike to Dai Nippon Printing corporation. Figure 11 shows that the CAR had a downward tendency which can be predicted there will be a rise in the stock deficit.



**Table 12 Dai Nippon Printing 2021**

stock code	event date	trading date	stock price	index	individual return	market return rate	dif	predicted_return	AR	CAR
7912	2021-07-23	2021-07-08	2372	28118.0293	-0.011666667	0.000703934	-10	0.00096684	-0.012633507	-0.012633507
7912	2021-07-23	2021-07-09	2377	27940.41992	0.002107926	0.001874256	-9	0.000336738	0.001771188	-0.010862318
7912	2021-07-23	2021-07-12	2448	28569.01953	0.029869584	0.000526689	-8	0.001062269	0.028807315	0.017944996
7912	2021-07-23	2021-07-13	2467	28718.24023	0.007761438	0.000390189	-7	0.00113576	0.006625678	0.024570674
7912	2021-07-23	2021-07-14	2540	28608.49023	0.029590596	0.00036019	-6	0.001151912	0.028438684	0.053009358
7912	2021-07-23	2021-07-15	2491	28279.08984	-0.019291339	0.001305808	-5	0.00064279	-0.019934129	0.033075229
7912	2021-07-23	2021-07-16	2461	28003.08008	-0.012043356	0.000926817	-4	0.00084684	-0.012890196	0.020185033
7912	2021-07-23	2021-07-19	2478	27652.74023	0.006907761	0.000394697	-3	0.001133333	0.005774428	0.025959461
7912	2021-07-23	2021-07-20	2453	27388.16016	-0.010088781	0.003832718	-2	-0.0007177	-0.009371081	0.01658838
7912	2021-07-23	2021-07-21	2511	27548	0.023644517	0.000901442	-1	0.000860502	0.022784015	0.039372396
7912	2021-07-23	2021-07-26	2539	27833.28906	0.011150936	0.000304008	0	0.00118216	0.009968776	0.049341171
7912	2021-07-23	2021-07-27	2600	27970.2207	0.024025207	0.001066583	1	0.000771589	0.023253618	0.072594789
7912	2021-07-23	2021-07-28	2561	27581.66016	-0.015	0.00049005	2	0.001081995	-0.016081995	0.056512794
7912	2021-07-23	2021-07-29	2582	27782.41992	0.008199922	5.04081E-05	3	0.001318699	0.006881223	0.063394017
7912	2021-07-23	2021-07-30	2566	27283.58984	-0.006196747	8.87029E-05	4	0.001298081	-0.007494827	0.05589919
7912	2021-07-23	2021-08-02	2610	27781.01953	0.017147311	0.001907825	5	0.000318664	0.016828647	0.072727837
7912	2021-07-23	2021-08-03	2628	27641.83008	0.006896552	0.002027119	6	0.000254436	0.006642116	0.079369953
7912	2021-07-23	2021-08-04	2618	27584.08008	-0.003805175	8.77367E-05	7	0.001298601	-0.005103776	0.074266177
7912	2021-07-23	2021-08-05	2613	27728.11914	-0.001909855	0.002339862	8	8.60548E-05	-0.00199591	0.072270267
7912	2021-07-23	2021-08-06	2554	27820.03906	-0.022579411	0.001354063	9	0.00061681	-0.023196221	0.049074046
7912	2021-07-23	2021-08-10	2546	27888.15039	-0.003132341	0.001971069	10	0.000284613	-0.003416955	0.045657092



**Figure 12 Dai Nippon Printing 2021**

The above table 12 and figure 12 are the dates of Dai Nippon Printing in 2021. From the table 12, Dai Nippon Printing AR during the Olympic games, the AR of the stocks fluctuate around 0. From the CAR row, the result is 0.045657092, which is a positive number. This refers to that there's positive effect act on the stock during the Olympic period. Comparing with the result of Dai Nippon Printing 2020, the Olympic games did bring upward benefit to the company. In graph, there is an upward tendency in the CAR which can be predicted the stock of Dai Nippon Printing will be slowly improved.

## 5. CONCLUSIONS

This study aims to analyze the existence of abnormal returns, differences in abnormal returns before and after the announcement of the postponement and opening ceremony of the Tokyo 2020 Olympics in the sponsor companies listed on the Japanese Stock Exchange. It is found that, except for Panasonic, the cumulative abnormal return rate of most sponsoring enterprises is significant. The postponement announcement positively



impacted Meiji and a negative impact on Canon, Dai Nippon Printing, Japan Airlines, Panasonic and Toyota, as measured by abnormal returns and cumulative daily returns. In addition, the opening of the Olympic Games has a negative impact on Canon, Japan Airlines, Panasonic, Toyota, and a positive impact on Meiji and Dai Nippon Printing.

Combined with the above conclusions, the postponement of the Olympic Games has a negative impact on most sponsoring enterprises, and the opening of the Olympic Games has not improved the performance of most sponsoring enterprises. Therefore, we believe that sponsoring the Olympic Games will not benefit enterprises, but many enterprises ignore the considerable cost of sponsoring the Olympic Games. Enterprises should be more cautious and rational before evaluating and thinking about sponsoring sports events.

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