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**Stock price reaction to announcement of equity financing by companies listed on the  
Shanghai stock exchange**

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## **Abstract**

Investors nowadays are doing investment in the stock market, the announcement of new equity issue would also a part of the strategy for them to gain more returns. This paper will mainly test empirically on the market model to see if the equity financing announcement would affect the stock price. And it examines the stock prices in the Shanghai stock exchange response to the announcement of equity issues. Some findings are relative to other many theoretical rationales. First, stock price roughly has a positive reaction to the announcement of the new equity issuance, and the reaction is different from some previous research. Second, for the different time intervals within one day, the average return also would be different. As for the importance of this research, it would show whether investors would gain through the announcement of new equity financing.

*Keywords:* Equity financing, Announcement, Stock price, Event study, Abnormal return, Cumulative abnormal return, Shanghai stock exchange.

## **Introduction**

In China, a large number of companies especially those Internet companies with huge attention from their users and potential users are looking forward to collecting enough capital to maintain and widen their market. Therefore, financing is a good way for those companies to get enough money to do the following projects.

Equity financing is prevalent in China recently. In 2020, Companies in the Shanghai stock exchange had financed about 6.6 trillion Chinese yuan in form of issuing equity. Despite this large magnitude, one can question whether the new equity financing would be helpful to companies' stock prices. Besides, it's conceivable that investors would perceive the change of stock price before equity financing, making an efficient investment. Furthermore, the effect of equity financing on the stock exchange would also have a significant difference in variant stock exchanges. (Calomiris et al., 2021)

Before the equity financing, companies tend to post the announcements. This announcement would clearly show the specific money required, the equity issuance and the exact date of issuing equity, etc. Therefore, the announcement has a strong connection with equity financing. Moreover, the most important point of the announcement of equity financing is timeliness. Before equity financing, companies published a relative announcement to the public. With such an announcement, investors would have a reference of investment.

The market reaction to the new issues of corporate equity has been the focus of a large number of empirical investigations. Previous studies, like Barclay's (1988) research focus on the intraday stock price change after the announcement of equity issuing, and Bhana (1998) investigates a two-day announcement period. According to Bhana (1998), the market reaction to

new equity issuance is always unfavorable. Thus, companies tend to avoid equity financing in case stock price decreases. (Tanaka, 2016)

After perceiving such announcement effect, especially the share price behavior, a significant amount of theoretical research also is generated. Thus, this paper would mainly apply the former theoretical explanations, such as information signaling, managerial incentives, meanwhile, the empirical information would also be simultaneously supported. To avoid some other research's unambiguous explanation of the effect of equity financing announcement to share price, this study will seek and verify a more comprehensive explanation for the existing market reaction to the announcement.

After the new stock issuance, the market also recognizes the overinvestment problem which would lead to lower return than expected return. (Jense, 1986) Furthermore, the signaling hypothesis is another theory that indicates that the issuance of equity will lead to a negative relation between equity issuance and stock returns. Meanwhile, Fonseka illustrates that companies should recognize their capacity of equity issuance is determined by the price issued. And the capacity of issuing equity will be negatively related to the stock returns.

In this paper, the share price reaction to the announcement of equity financing by companies listed on the Shanghai stock exchange is investigated both theoretically and empirically. Bhana (1998) argued that the empirical evidence can test with two main hypotheses, the managerial ownership hypothesis, and the slack abundance hypothesis.

## **Literature Review**

### **2.1 Basic introduction**

The market is not always perfect, meanwhile, some market imperfections have been recognized for a long time. This article mainly focuses on the effect of the equity financing announcement which would be influenced by some specific market imperfections. For example, Myers and Majluf model illustrates that there is information symmetry which would cause low-value investment between management and the public market. (Myers & Majluf, 1984) Furthermore, Mayers and Majluf (1984) also introduced financial slack which includes all the handy cash which could be used to do corporate projects. Later, information symmetry and financial slack will be presented to be one of the factors of the new equity announcement. On the other hand, Jensen and Meckling (1976) indicated that once managers' ownership fraction of one firm was reduced, they would try to find another optimal investment to maintain their profit. This is a part of managerial incentives which are related to the announcement of new equity.

### **2.2 Information signaling**

Myers and Majluf model is a kind of information hypothesis that can be also called the existing asset value signaling hypothesis. In this hypothesis, Myers and Majluf (1984) reckoned that investors realize their ignorance, thus they would think that the new issue equity is not good enough which wouldn't help the gain profit, even would make them loss. To make this more detailed, compared with equity issuance, Barclay and Litzenberger (1987) showed that companies prefer the debt issue because the announcement of the debt issue is positive, but the announcement of new equity is negative. Another hypothesis which was about the cash flow hypothesis was posed by Miller and Rock. In this hypothesis, Miller and Rock (1985) introduced

that after publishing the new equity announcement, though both the planned investment and value of the firm's assets have symmetric information, new projects could be launched without enough new funds on account of the information asymmetry of internal cash flow. Therefore, the announcement of equity issuance causes negative stock returns.

However, foreign equity issuance is a good way to reduce the information symmetry because this way could help gain more people's, especially those specialists' attention. (Bris, Cantale, & Nishiotis, 2007) Moreover, Benos and Weisbach (2004) indicated that listing equity issuance in the foreign market would get different registration and need to obey more standards. Therefore, the quality of the equity issued in foreign would be more reliable. Thus, Meisami (2014) showed his group's opinion that they thought issuing equity in the overseas market is a good choice for most companies. Nevertheless, Bell and his team (2012) argued that foreign companies would face "home bias" by those local corporates, as a result, some inevitably costs would be accounted for, decreasing companies' profit. Therefore, the first hypothesis is that:

H1=The equity financing would decrease companies' stock prices.

### 2.3 Managerial incentives

Managerial incentives were posted by Jensen and Meckling. In this theory, Jensen and Meckling (1976) reckoned that managers' participation in the ownership of the organization would help managers make more efficient decisions. Therefore, managers are not willing to issue equity, as is the case of the new equity announcement. However, Morck et al. (1988) researched that relatively low insider ownership (about 5%) would increase firm value, in this way, the stock price would relatively increase. Once the insider ownership reaches a relatively high position (about 25%), the firm value wouldn't be increased with high insider ownership, because

of the incremental erosion of outside investors' interests. Another research also indicates that a firm with lower manager ownership would have a relatively high yield. (Tanaka, 2016) Similar to Myers and Majluf's information signaling, Tanaka's scholar (2016) also indicates that outside investors always hold suspect opinions toward new equity. Moreover, Tanaka excludes the incentives of managers in some way. Thus, Tanaka supports Morck's suggestions or not Jensen and Meckling's.

Besides, Bhana (1998) shows his ideas that the new equity issue announcement's effect to share price would be related to the firm ownership structure. Meanwhile, Bhana also introduced Jensen and Meckling's theory (1976) that the whole ownership firm would have lower costs compared with the part ownership firm. However, this model predicates that rational outside shareholders would force managers who have ownership of the firm to undertake the agency costs. Therefore, this model indicates that when the firm gains outside financing, the value of this firm would grow. (Bhana, 1998) Furthermore, another hypothesis is tested following:

H2=The equity financing would increase the companies' stock price.

## 2.4 Price pressure

Financial theorists have long argued that the incremental supply of market securities would cause the price to go down. According to Scholes's price pressure hypothesis, two sub-hypotheses were listed as the Downward sloping demand curve and the transaction cost hypothesis. Downward sloping demand curve was deduced from the economic demand curve which illustrates that the more stocks the investors hold, the less the stock price exist. (Scholes, 1972) Based on such assumptions, Barclay and Litzenberger (1987) predicted that the increase in issuing new equity stock results that a permanent decrease in the stock price. Meanwhile, another

sub-hypothesis of price pressure, in the transaction cost hypothesis, companies would provide a discount for investors who would undertake the decrease of stock price and transaction cost.

(Scholes, 1972) Furthermore, according to Bhana's article (1998), the downward demand curve is not infinitely elastic, however, it changes with the information signaling as part 1 indicates.

According to Scholes (1972), the price decline correlates with the size of equity issuance.

Compared with the downward demand curve, the transaction cost hypothesis doesn't indicate the correlation between the two variables.

## 2.5 leverage hypothesis

This paper focuses on equity financing and stock price, thus leverage is another main factor that would be influenced by equity issuance. According to Kane's (2009) optimal capital structure, with information symmetry, the firm value would be increased regardless of issuing new equity or debt. However, another reasonable hypothesis called the tax advantage of debt hypothesis which was suggested by Modigliani and Miller (1963) doesn't have such analysis. Instead, Modigliani and Miller (1963) assume that new equity issuance would cause the decrease of leverage, following that, the stock price would also decrease, and the absolute value of the decline is related to the issue size. Compared with the stock issue intending to the debt, the new debt issue would bring more positive effect on the stock issue, because the not only the tax advantage of debt financing but also the greater effect on financial leverage.

Furthermore, the redistribution hypothesis gives the assumption that equity issue announcement would bring a negative effect on stock price, instead, a positive effect would be processed by the new debt issue announcement. Additionally, these two adverse effects are directly related to the issue size. (Barclay & Litzenberger, 1988)

After collecting data and examining it, Barclay and Litzenberger (1988) showed that after 15 minutes of the new equity announcement, they got a relatively low average stock return of about 1.3%. At the same time, they found that issue size and some other factors which are indicated before are unrelated to the announcement effect. Different from some other theories, Barclay and Litzenberger's (1988) evidence is conflicting with other theoretically rationales.

## Methodology

Generally, this paper will mimic the methodology Dann (1984) used in his study. Dann indicates that the market model, mean adjusted return, and market adjusted return model should be applied to measure the effect on the stock price of the equity financing announcement.

In detail, the method used in this paper mainly consists of three models which are about the abnormal return for the security. First, the main equation should be recognized as follows:

$$RAR = \alpha_a = R_{a,t} - \beta_a E(R_{m,t}) \quad (1)$$

$$MAR = \alpha_a = R_{a,t} - \bar{R} \quad (2)$$

$$MKAR = \alpha_a = R_{a,t} - R_{m,t} \quad (3)$$

Where t is the day relative to the equity financing announcement. AR is the abnormal return for the security a for day t. R is the observed return for the security a of day t, and E(R) is the expected rate of return of t days security a. Then to specify the E(R), several indicators also are introduced as follows: (4)

$$E(R_{a,t}) = \alpha_a + \beta_a E(R_{m,t}) + e_{a,t}$$

Where the  $E(R_{m,t})$  is the return on the market portfolio represented by the Shanghai stock exchange overall index of day t.  $\beta_a$  is  $\text{cov}(R_{a,t}, R_{m,t})/\text{var}(R_{m,t})$ ,  $\alpha_a$  represents the difference between  $E(R_{a,t})$  and  $\beta_a E(R_{m,t})$ .  $e_{a,t}$  is the disturbance term which is expected as 0 in this definition. The event window is set at 42 days (-21,21).

After collecting each security, the average abnormal return within the portfolio should also be recognized as follows: (4)

$$AR = \sum_{a=1}^N \frac{\alpha_{a,t}}{N}$$

In this equation, N is the number of securities in the portfolio with abnormal returns of day t.

The cumulative abnormal returns for portfolio S should be also indicated as CAR which is calculated as the sum of the AR indicated above. (5)

$$CAR_{S,x,y} = \sum_{t=x}^y AR_{S,t}$$

Where the  $CAR_{S,x,y}$  is the cumulative abnormal returns of portfolio S for the period from t=x to t=y.

Furthermore, the CAR should be tested whether it is significant. The t-test is listed: (6)

$$t = \frac{CAR}{\sigma}$$

In this t-test,  $\sigma$  is the standard deviation of cumulative abnormal returns of the sample we collect for the period from day -20 to day 20.

To collect efficient sample data, there are several criteria should be recognized:

1. The sample size is about 50 companies listed on the shanghai stock exchange, moreover, these companies should list at least 200 days prior to the announcement. And those initial public offerings are exclusive.
2. Only equity issuance only. Those mixed ways offerings should also be exclusive.
3. Announcement should be reported on the business day (trading day).

4. Making sure that no other announcement simultaneously published, the period mainly during the 10-years period 2008-2018.

## Analysis and Findings

### **Model 1: Market model**

Market model is the most superior one among these three models. Table 1 indicates the abnormal return and cumulative abnormal return from day -21 to day 21 included in the random sample under market model. On the announcement date, the CAR was about 2.51. To research the stock price reaction to equity financing announcement, this study mainly separates the event into two event windows, (-1,0) and (-20,20). The (-1,0) indicates a slight decrease in the abnormal return, which would be influenced by the inside factors. The internal management and shareholders would react in advance to adjust the investment because of the information symmetry, therefore the decline occurred at this time window. Furthermore, The CAR falls by about 1.339% in the five days after the announcement, and the growth persists then. This situation shows that profit-motivated investors catch the investment chance.

On the assumption that the CARs at the (-20,20) window are independent drawings from the stationary normal distribution, the data given by (6) is t-test with fifty degrees of freedom. Given that the t-statistic for the announcement period CAR is 6.344. The null hypothesis is rejected at the 0.01 significance level. Of the 50 CARs on the 15<sup>th</sup> day, 40 are positive and 10 are negative. Furthermore, the distribution of the 15<sup>th</sup> day CARs reported in Table 2 indicates that 75% of the positive announcement CAR is between 4% and 8%. The result presented in Table 1 and Table 2 indicates that announcements of equity financing are associated with a positive relationship in the price of stock under the Market model.

CAR at 15th day	Number of observed CAR
CAR>=8%	5
6%=<CAR<8%	18

4%=<CAR<6%	12
2%=<CAR<4%	3
0%=<CAR<2%	2
	40
(-	
2%)=<CAR<0%	0
(-4%)=<CAR<(-2%)	3
(-6%)=<CAR<(-4%)	1
(-8%)=<CAR<(-6%)	2
CAR<=-8%	4
	10
	50

(Table 2)

### **Model 2: Mean adjusted return model**

This part indicates the stock reaction to the equity financing announcement under the mean adjusted return model. Table 3 illustrates the abnormal return and cumulative abnormal return from day -21 to day 21, and the event window is divided into two parts, (-1,0) and (-21,21). For figure 2, in the first event window, the abnormal return has similar change as the market model does, therefore the cumulative abnormal return increases marginally. After the announcement, the AR turns negative, leading the CAR to decrease. Compared with market model, this model's percentage of decline is smaller.

For the event window (-20,20), t-test will be given to testify the significance level between equity financing announcement and stock price. The data given by (6) is t-test with fifty degrees of freedom, and the t-statistic for the announcement period is 2.276. Though it shows that the null hypothesis should be rejected at the 0.05 significance level, the significance level is relatively low which means that under the mean adjusted return model, the equity financing announcement would affect the stock price, however, the degree of the influence is low compared with the market model. To elaborate the detailed relationship between announcement

and the stock market, Table 4 is the following. From this table, about. According to Table 3 and Table 4, it is shown that the announcements of equity financing are associated with a slightly positive relationship in the stock price of Shanghai stock exchange under mean adjusted return model.

CAR at 15th day	Number of observed CAR
CAR>=8%	0
6%=<CAR<8%	4
4%=<CAR<6%	13
2%=<CAR<4%	10
0%=<CAR<2%	5
	32
(-2%)=<CAR<0%	5
(-4%)=<CAR<(-2%)	3
(-6%)=<CAR<(-4%)	4
(-8%)=<CAR<(-6%)	2
CAR<=-8%	4
	18
	50

(Table 4)

### **Model 3: market adjusted return model**

Market adjusted return model is the final model applied by this study. According to Table 5, the event window could also be separated into two parts, (-1,0) and (-21,21), to explore the announcement effect. Data given by (6) is also t-test with fifty degrees of freedom, however, the result is totally different from the previous two models, the t-statistic for the announcement period is 0.771, which gives that the null hypothesis is not rejected at the 0.01 significance level. Therefore, market adjusted return model doesn't provide the effect of equity financing announcement on stock price.

## Conclusion

This study gives two event windows to illustrate the different abnormal returns and cumulative under these three models. At the (-1,0) event window, though the CAR increases, the AR indicates marginal decline. This situation mainly shows that the information symmetry, which would lead the insider stockholders like management and part of shareholders to give up some stocks. According to the previous study, the abnormal return shows negative reaction to the equity financing announcement. Inside holders would trade part of their stocks to reduce the following loss because of the reduction of stock price. However, this trade mainly occurs in the inner part of the organization, because of the information symmetry, insiders would obtain the announcement in advance, therefore they have enough chance and time to adjust their investment, and the AR wouldn't change dramatically. After the announcement date, the stock price shows obvious decrease. This situation indicates the reaction of the whole market rather than the inside stockholders.

Though the market reaction to the announcements of equity financing is negative the first time, after about 15 days of the announcement, the market begins to react positively. After the gloomy abnormal return, those investors detect the potential benefit of the stock, therefore the AR turns positive, pulling the CAR grows sharply.

According to market model and mean adjusted model, the announcements of equity financing influence the stock price in the short period. However, market model shows a strong significance level, which means that equity financing announcements influence the stock price a lot, after the announcements, stock price increases a lot. Furthermore, this result reflects the stock market reaction. Though the previous study indicates the negative returns after the

announcements of equity financing, investors would catch the potential investment chance to increase the amount of stock purchase.

## **Limitations and Contributions**

### **Limitation:**

This research does have several limitations, some of which come from the stock market, some of which belong to the method and model I used for collecting and analyzing data.

The first main limitation is market flexibility. When the equity financing announcement is published, some information will not get timely feedback which would lead to the relatively small change of the stock price, even some adverse results. Meanwhile, the market is also relatively unfair. Those companies with bigger scale and huge influence in society would attract more attention compared with those small corporates. Therefore, after the publication of the announcement, investors wouldn't quickly notice this kind of situation, then the result would also be affected.

Furthermore, this paper mainly collects the announcement randomly, thus the final data I collect would exist some bias because some campiness has some other behaviors which would influence the stock price during the period I investigate. For example, some companies would defect that they have made some fraud behavior which would lead to some punishment, meanwhile, the stock price would face a sharp decline. Thus, when collecting the companies which publish equity issuance announcements, the companies' relative news should also be identified to avoid some other effect that would reduce the effect of the announcement on stock price or even change the result.

The final result is totally different from the previous study, this paper's result indicates the positive effect of equity financing announcement on the stock price, however, articles by Dann and Bhana show negative effects. In contrast, the possible reasons are the time and location

differences. Furthermore, the number of event objects is also one of the limitations, because of the limited research time.

**Contributions:**

Compared with the paper which adopted advanced and complicated methods to explore the effect of equity financing announcements on stock market, this paper mainly applies market model, mean adjusted model and market adjusted model to research the effect. Therefore, this paper will provide relatively friendly guidance to investors when trading during the announcement period.

In addition, though the result is different from the previous study, this conclusion would give reference to the later study, especially for those equity financing research on the Shanghai stock exchange.

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## Appendix

Trading day	RAR	RCAR
-21	0.18561	0.18561
-20	-0.2566	-0.071
-19	1.05287	0.98191
-18	0.2894	1.27131
-17	-0.9063	0.36496
-16	-0.3425	0.02247
-15	0.10478	0.12725
-14	0.09709	0.22434
-13	-0.2853	-0.061
-12	-0.6448	-0.7058
-11	0.06129	-0.6445
-10	0.91506	0.27058
-9	-0.7173	-0.4467
-8	-0.0459	-0.4926
-7	1.1654	0.67278
-6	1.60104	2.27383
-5	-0.3284	1.94542
-4	-0.2649	1.68055
-3	-0.0746	1.60596
-2	0.49754	2.1035
-1	0.2818	2.38531
0	0.12261	2.50792
1	-0.1981	2.30978
2	-0.1408	2.16894
3	-0.619	1.54993
4	-0.1254	1.42448
5	-0.2561	1.16835
6	0.10999	1.27834
7	0.0094	1.28774
8	-0.2241	1.0636
9	2.00454	3.06814
10	-0.0856	2.98254
11	0.21977	3.20232
12	0.55568	3.758
13	-0.2267	3.53131
14	0.02248	3.55379
15	0.02297	3.57675
16	-1.6921	1.88462

17	-0.5477	1.33695
18	-0.8647	0.4722
19	-0.81	-0.3378
20	-0.3645	-0.7023
21	0.6744	-0.0279

Table 1: Abnormal return and cumulative abnormal return under market model

CAR at 15th day	Number of observed CAR
CAR>=8%	5
6%=<CAR<8%	18
4%=<CAR<6%	12
2%=<CAR<4%	3
0%=<CAR<2%	2
	40
(-2%)=<CAR<0%	0
(-4%)=<CAR<(-2%)	3
(-6%)=<CAR<(-4%)	1
(-8%)=<CAR<(-6%)	2
CAR<=-8%	4
	10
	50

Table 2: Number of events CAR at 15<sup>th</sup> (Shanghai stock exchange) under market model

Trading day	MAR	MCAR
-21	0.45979	0.45979
-20	-0.5224	-0.0626
-19	0.81181	0.74921
-18	0.59897	1.34818
-17	-1.1699	0.17831
-16	-0.4146	-0.2363
-15	-0.1409	-0.3772
-14	0.17761	-0.1996
-13	-0.507	-0.7066
-12	-0.79	-1.4966
-11	0.4091	-1.0875
-10	0.84063	-0.2469
-9	-1.0324	-1.2793

-8	-0.069	-1.3482
-7	1.2116	-0.1366
-6	1.72635	1.58974
-5	-0.7993	0.79043
-4	-0.3948	0.39561
-3	-0.1442	0.25141
-2	0.0388	0.29021
-1	0.43445	0.72466
0	0.297	1.02166
1	-0.024	0.99765
2	-0.3313	0.66637
3	-0.7325	-0.0662
4	-0.1112	-0.1774
5	-0.4363	-0.6137
6	0.23953	-0.3742
7	-0.5885	-0.9627
8	0.56937	-0.3933
9	2.02483	1.6315
10	-0.7904	0.84109
11	0.91782	1.75891
12	0.31503	2.07394
13	-0.4122	1.66176
14	0.27374	1.9355
15	0.71763	2.65313
16	-1.1858	1.46732
17	-0.3669	1.10044
18	-0.7741	0.32639
19	-0.132	0.1944
20	-0.7862	-0.5918
21	0.67503	0.08327

Table 3: AR and CAR under mean adjusted model

CAR at 15th day	Number of observed CAR
CAR>=8%	0
6%=<CAR<8%	4
4%=<CAR<6%	13
2%=<CAR<4%	10
0%=<CAR<2%	5
	32

(-	
2%)=<CAR<0%	5
(-4%)=<CAR<(-2%)	3
(-6%)=<CAR<(-4%)	4
(-8%)=<CAR<(-6%)	2
CAR<=-8%	4
	18
	50

Table 4: Number of events CAR at 15<sup>th</sup> (Shanghai stock exchange) under mean adjusted model

Trading day	MKAR	MKCAR
-21	0.41297	0.41297
-20	-0.38	0.03297
-19	0.86131	0.89428
-18	0.14164	1.03592
-17	-1.1648	-0.1289
-16	-0.453	-0.5818
-15	0.06077	-0.521
-14	0.06691	-0.4541
-13	-0.245	-0.6992
-12	-0.7191	-1.4183
-11	0.06001	-1.3583
-10	0.7096	-0.6487
-9	-0.8929	-1.5416
-8	0.04042	-1.5012
-7	1.0143	-0.4869
-6	1.65679	1.16988
-5	-0.3164	0.8535
-4	-0.1865	0.66705
-3	-0.3227	0.3444
-2	0.31414	0.65854
-1	0.39074	1.04928
0	0.13401	1.18329
1	-0.3209	0.86235
2	-0.4154	0.447
3	-0.6883	-0.2413
4	-0.1522	-0.3935
5	-0.2314	-0.6249
6	0.27984	-0.3451
7	-0.1534	-0.4985

8	0.06574	-0.4328
9	2.08517	1.65241
10	-0.3918	1.26063
11	0.38684	1.64747
12	0.76304	2.41051
13	-0.2117	2.19881
14	-0.0928	2.106
15	0.13109	2.23709
16	-1.6204	0.61666
17	-0.4739	0.14272
18	-1.0136	-0.8709
19	-0.4462	-1.3171
20	-0.4131	-1.7302
21	0.58009	-1.1501

Table 4: AR and CAR under market adjusted model

One-Sample Test						
Test Value = 0						
	t	df	Significance	Mean	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p	Difference	
VAR43	6.344	42	<.001	<.001	1.27330	.8682 1.6784

Table 5: CAR t-test result under market model

One-Sample Test						
Test Value = 0						
	t	df	Significance	Mean	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p	Difference	
VAR43	2.276	42	.014	.028	.34499	.0392 .6508

Table 6: CAR t-test result under mean adjusted model

One-Sample Test						
Test Value = 0						
	t	df	Significance	Mean	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p	Difference	
VAR43	.771	43	.222	.445	.13157	-.2126 .4757

Table 7: CAR t-test result under market adjusted model

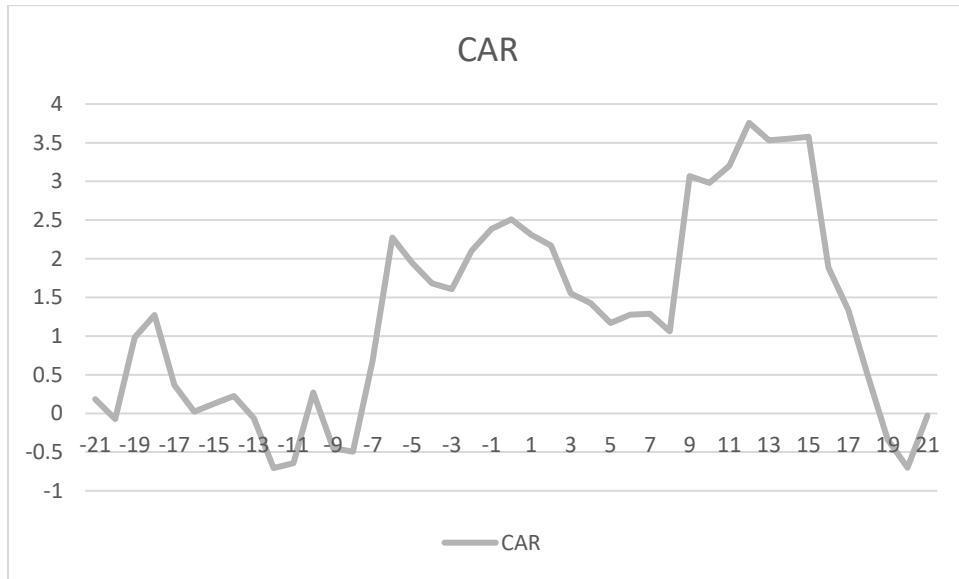


Figure 1: CAR under market model

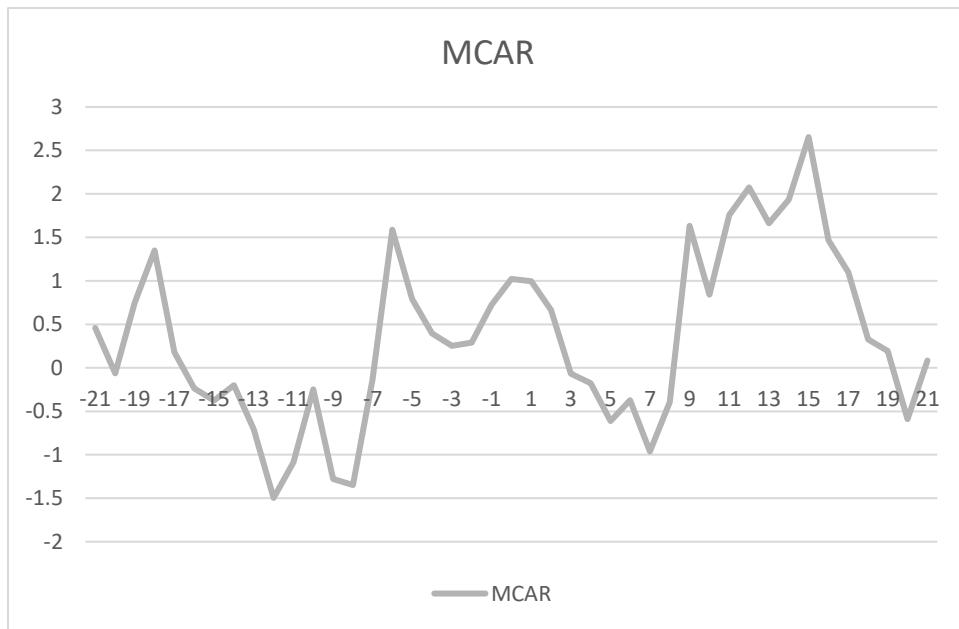


Figure 2: CAR under mean adjusted model

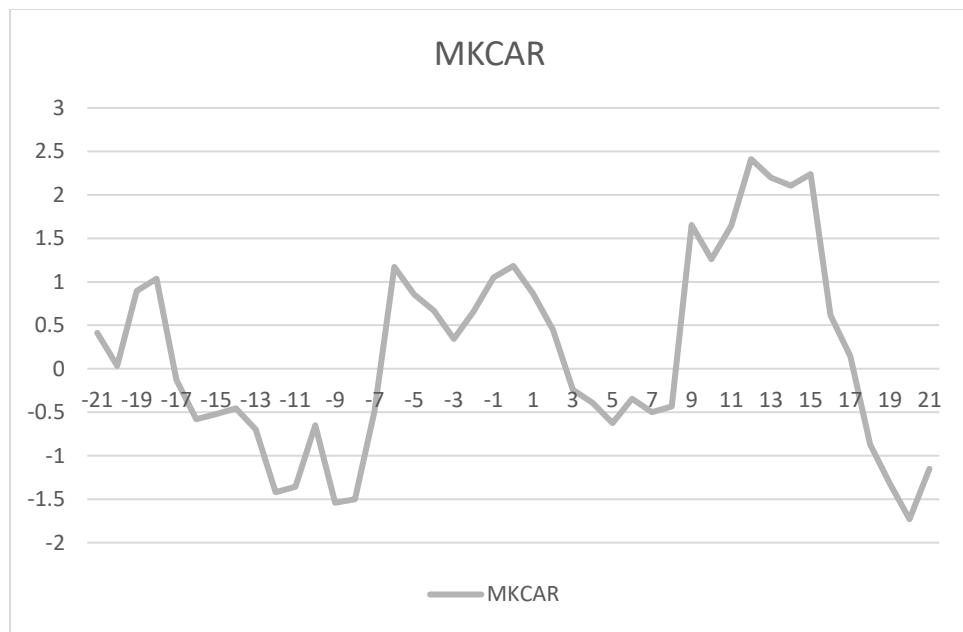


Figure 3: CAR under market adjusted model