THE INFORMATION CONTENT OF THE TARGET PRICE ADJUSTED BY FOREIGN INVESTORS-COMPARISON BETWEEN TRADITIONAL MEDIA AND SOCIAL MEDIA

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Abstract

The media has developed rapidly in recent years. The adjustment of target price is the important basis of investors when they make a decision of investment. This research explores the information content of the target price set up by foreign investors, which was released through social media and traditional media from June 2017 to June 2018. This research utilizes event study to determine whether if the investors get profits or not. The empirical result shows that the target price cannot provide significant abnormal returns to investors.

Keywords

Foreign Investors, Target Price, Legacy Media, Social Media, Event Study

1. Introduction

This study explores whether the adjusted target price of foreign capital released by traditional media and social media has reference value for investors. Most of the relevant literature is concentrated in traditional media (such as print media and TV media), but due to the advancement of technology, the convenience of mobile devices and Internet technology, social networking sites have also become one of the main sources of information for the public. It is often difficult to distinguish the authenticity of most of the information obtained from the website, causing investors to be dazzled when selecting information. Although investors in a wide range of workplaces can obtain information at any time through the community, stock market news is springing up like mushrooms. Can retail investors at the end of the information correctly distinguish the accuracy of the information? In addition, many literatures study the market reaction to analyst recommendations, Davies and Canes (1978) found that analysts' public recommendations can significantly affect prices for two days. Kim, Lin, J., and Slovin (1997) found that analysts recommend buying stocks 15 minutes before the opening will affect the zero price of the stock after the opening. Lin, Lin, and Wang (2009) demonstrated empirically that investors in the Taiwan stock market can obtain excess returns by using analysts to release news or analysis suggestions in the media to operate. In view of this, this article focuses on whether traditional media or social media release target price adjustment information, which is more profitable for investors.

According to the Efficient Market Hypothesis, in a market with unobstructed information circulation, investors cannot obtain excess profits from any public information no matter what trading strategy they use. Can the adjusted target prices publicly announced by social media and traditional media really make investors profitable? This research uses the adjusted target price of foreign capital announced by social media and traditional media from June 2017 to June 2018 as a research sample, observes the stock price changes of social media and traditional media before and after the information disclosure date, and uses the event study method (Event Study) to check whether this information can bring abnormal returns to investors.

2. Literature

Womack (1996) pointed out that when foreign analysts put forward buy and sell ratings, they will indeed generate market abnormal returns, that is, investment ratings have predictive power and value, and negative ratings have a

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higher impact on stock prices than positive ones. Jegadeesh et al (2004) held the opposite opinion, believing that foreign analysts usually like to recommend growth stocks, so if they follow their investment recommendations for a long time, they will cause losses. In addition, they also found that changes in ratings are more valuable than ratings themselves. Lin and McNichols (1998) studied whether the underwriting relationship between foreign analysts and companies will affect its earnings forecast and investment rating. The research results show that foreign analysts with underwriting relationships will indeed put forward more favorable investment suggestions. Brav & Lehavy (2003) took the data from this database from 1997 to 1999 as a sample to test the short-term and long-term response of the target price to the market, and found that only two-thirds of foreign analyst reports provided target prices, of which investment Buy and strong buy ratings are more likely to be accompanied by target price recommendations. In addition, it is also found that when investment rating revisions are in the opposite direction of target price revisions, market returns will be reduced, and target price revisions usually Along with earnings forecast revisions, both have a significant impact on market reaction.

3. Methodology

This article initially uses 603 listed and OTC stocks with adjusted target prices released by social media and traditional media from June 2017 to June 2018 as research samples. In addition, due to incomplete information in some of the 603 samples, and in order to avoid the repetition of the sample, the final sample after deletion was 148 listed community-raised stocks, 145 listed traditionally-raised stocks, and 77 listed community-downgraded stocks. Stocks, 46 listed traditional downgraded stocks, 36 OTC community upgraded stocks, 12 OTC traditional uplifted stocks, 19 OTC community downgraded stocks, and 7 OTC traditional downgraded stocks.

    The sample data uses social media and traditional media as sources of data respectively; social media includes websites such as Caibaogou, Juheng.com, and C Money; traditional media includes Economic Daily, Business Times, Caixun Express, Central News Agency, Liberty Times, and China Collected from newspapers such as The Times. According to the individual stock information released by foreign capital to adjust the target price published by these two types of media, through the database of Taiwan Economic News (TEJ) according to the daily data of the event day, log in one by one, and use the event study method to perform data calculations sequentially to test whether individual stocks There are unusual payouts. Event Study (Event Study) is one of the designs that have been widely used in the field of finance and accounting in recent years. The purpose of event research is to investigate whether there will be fluctuations in stock prices and whether it will cause abnormal returns (Abnormal Return) or excess returns (Excess Return) of securities when a specific event occurs.

    This article mainly uses the GARCH(Generalized AutoRegressive Conditional Heteroskedasticity) risk adjustment model to study this issue, and focuses on the information release of foreign capital. Bollerslev, Chou and Kroner (1992) believed that the GARCH model can fully describe the heterogeneity and deterioration of the stock return rate. The GARCH model is listed as follows:

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt} \qquad (1)$$
$$\varepsilon_{jt}|\Psi_{t-1} \sim N(0, h_{jt}) \qquad (2)$$
$$h_{jt} = \omega_j + \delta_j h_{jt-1} + \gamma_j \varepsilon_{jt-1}^2 \qquad (3)$$

where $\omega_j > 0$、$\delta_j \geq 0$ and $\gamma_j > 0$. Ψ_{t-1} represents the information sets before reaching the t_{th} period, and is the conditional heterogeneous variance of the t_{th} period and N(·) normal distribution. In order to satisfy the model as a stable (stationary) sequence, $Var(\varepsilon_{jt}) < \infty$ and must satisfy $\gamma_j + \delta_j < 1$. The maximum likelihood estimation method is used when estimating the parameters. The characteristics and estimation methods of GARCH model refer to Bllerslev (1986).

4. Empirical Result

In this study, a total of 490 samples from the Taiwan stock market were selected, and the samples were divided into Listed communities-increase target price, Listed tradition - increase target price, Listed community - decrease target price, Listed tradition - decrease target price, OTC community - increase target price, OTC tradition - increase target price , OTC community-reduce the target price and OTC tradition-reduce the target price, and uses the event study to analyze the difference in abnormal returns.

Date	AR1-AR2	T-Value	P-Value
-20	-0.3551	-1.1258	0.2612
-19	-0.0149	-0.0626	0.9502
-18	0.4131	1.5971	0.1114
-17	-0.1029	-0.3473	0.7286
-16	0.1519	0.5739	0.5665
-15	0.0453	0.1647	0.8693
-14	-0.1773	-0.593	0.5537
-13	0.2481	0.9043	0.3666
-12	0.0712	0.2723	0.7856
-11	0.4694	1.8093	0.0715*
-10	0.2476	0.9445	0.3457
-9	0.6089	1.9007	0.0584*
-8	-0.3200	-1.1524	0.2501
-7	-0.0220	-0.0664	0.9471
-6	-0.0181	-0.0578	0.9540
-5	0.4711	1.6233	0.1057
-4	-0.1717	-0.5316	0.5954
-3	-0.2498	-0.6973	0.4862
-2	0.1715	0.5499	0.5828
-1	-0.4872	-1.4639	0.1445
0	0.2884	0.7117	0.4772
1	-0.1846	-0.6092	0.5429
2	0.4441	1.5453	0.1234
3	0.4571	1.5470	0.1230
4	-0.0789	-0.2998	0.7645
5	-0.1462	-0.5813	0.5615
6	-0.2478	-0.9558	0.3400
7	0.4041	1.4112	0.1593
8	0.0756	0.2622	0.7934
9	0.3227	1.1186	0.2643
10	0.2005	0.7355	0.4627
11	-0.1789	-0.8052	0.4214
12	0.0734	0.2966	0.7670
13	0.5465	2.0789	0.0385**
14	-0.1661	-0.6228	0.5339
15	-0.2161	-0.8672	0.3866
16	0.1410	0.5759	0.5652
17	0.0281	0.1076	0.9144
18	-0.2638	-0.935	0.3506
19	0.3288	1.1904	0.2349
20	0.9294	3.2958	0.0011***

Table 1 Comparison between Listed communities and Listed tradition -increase target price

Date	AR1-AR2	T-Value	P-Value
-20	0.7483	2.5582	0.0121**
-19	0.0956	0.2710	0.7870
-18	-0.1188	-0.4176	0.6770
-17	-0.1553	-0.5629	0.5746
-16	0.7714	2.4305	0.0166**
-15	0.0371	0.1213	0.9037
-14	0.8419	2.0918	0.0393**
-13	0.5362	1.4030	0.1635
-12	-0.0848	-0.1983	0.8434
-11	0.0925	0.2477	0.8049
-10	0.0952	0.2657	0.7911
-9	0.5673	1.4819	0.1411
-8	0.4702	1.1825	0.2407
-7	0.0895	0.2219	0.8248
-6	0.3986	0.7800	0.4380
-5	0.1251	0.3351	0.7382
-4	0.4770	1.0114	0.3140
-3	0.5085	1.0121	0.3137

-2	-0.1579	-0.3935	0.6949
-1	0.8932	1.4584	0.1490
0	0.6011	0.9539	0.3424
1	-1.4898	-2.4180	0.0185**
2	-0.7311	-1.3180	0.1911
3	-0.4939	-1.2819	0.2028
4	-0.7415	-1.6786	0.0961*
5	-0.5006	-1.1107	0.2698
6	0.5467	1.1981	0.2342
7	0.2008	0.6223	0.5350
8	0.3916	0.9190	0.3608
9	-0.8589	-2.4124	0.0174**
10	-0.0549	-0.1667	0.8679
11	-0.3282	-0.9174	0.3611
12	0.6136	1.5358	0.1277
13	-0.2069	-0.5497	0.5841
14	-0.3041	-0.8236	0.4120
15	-1.0153	-2.0695	0.0411**
16	-0.0111	-0.0327	0.9740
17	-0.0127	-0.0341	0.9729
18	0.4334	0.9867	0.3259
19	-0.1967	-0.7040	0.4829
20	0.3907	1.1012	0.2731

Table 2 Comparison between Listed communities and Listed tradition -decrease target price

Date	AR1-AR2	T-Value	P-Value
-20	-1.4362	-1.4306	0.168
-19	-0.5189	-0.8865	0.382
-18	-0.3699	-0.6083	0.5468
-17	1.0958	1.218	0.2374
-16	-0.1181	-0.1378	0.8918
-15	0.0693	0.0814	0.9358
-14	0.0517	0.0388	0.9696
-13	0.9421	0.9117	0.3763
-12	-0.1251	-0.1982	0.8445
-11	-0.5483	-0.6476	0.525
-10	1.2945	2.2462	0.0342**
-9	0.9121	1.1349	0.2722
-8	1.2839	1.8612	0.0768*
-7	-1.4253	-2.5349	0.0159**
-6	-0.6188	-0.5965	0.5556
-5	1.6862	2.4667	0.0196**
-4	0.2638	0.2504	0.8041
-3	0.0132	0.0143	0.9887
-2	-2.0702	-2.1209	0.046**
-1	2.5892	3.8269	0.0009***
0	-0.2012	-0.1968	0.8461
1	-0.5997	-0.4481	0.6601
2	0.9362	1.2582	0.2177
3	1.4523	1.4366	0.1701
4	-0.8993	-1.07	0.2974
5	0.0800	0.0927	0.927
6	-0.3426	-0.3703	0.7137
7	-1.6014	-2.1409	0.0422**
8	1.1238	1.3009	0.2074
9	1.2216	1.402	0.18
10	0.114	0.1238	0.9027
11	-1.473	-2.0143	0.0511*
12	2.2096	1.9091	0.0715*
13	1.3691	1.2591	0.2241
14	-1.15	-1.0432	0.3124
15	0.8457	0.9655	0.3478
16	-1.314	-1.8088	0.0805*

17	-0.537	-0.6552	0.5194
18	0.0471	0.06	0.9526
19	1.4065	1.61	0.1161
20	0.135	0.1369	0.8925

Table 3 Comparison between OTC communities and OTC tradition -increase target price

Date	AR1-AR2	T-Value	P-Value
-20	0.6783	0.9082	0.3746
-19	-1.8069	-2.0609	0.0599*
-18	1.1780	1.2203	0.2479
-17	0.5796	0.3890	0.7107
-16	-2.2875	-0.8668	0.4257
-15	-2.3777	-2.3766	0.0350**
-14	3.8232	6.5888	0.0000***
-13	-0.2469	-0.7208	0.4794
-12	-0.8509	-1.3120	0.2309
-11	0.6052	0.5833	0.5758
-10	1.2406	2.7389	0.0160**
-9	1.1530	1.0626	0.3232
-8	0.1069	0.0460	0.9651
-7	0.7911	0.1699	0.3399
-6	-0.5291	-0.4661	0.6489
-5	0.7478	0.5212	0.6136
-4	-0.5684	-0.5501	0.5890
-3	-0.6005	-0.3096	0.7674
-2	-1.8777	-1.1753	0.2671
-1	0.4071	0.3722	0.7146
0	4.6080	2.8046	0.0264**
1	4.3164	2.2645	0.0429**
2	0.1103	0.1161	0.9098
3	-1.8287	-2.2254	0.0531*
4	2.5274	2.0601	0.0784*
5	-2.4137	-3.5393	0.0022***
6	-0.0290	-0.0190	0.9855
7	-0.1837	-0.2354	0.8163
8	4.9955	4.8236	0.0002***
9	-2.4391	-3.8417	0.0010***
10	-0.3089	-0.3411	0.7372
11	0.1316	0.1072	0.9173
12	0.2629	0.2180	0.8323
13	0.3427	0.3874	0.7024
14	-1.8073	-1.3256	0.2145
15	-2.4174	-1.2649	0.2528
16	-0.3033	-0.4603	0.6512
17	1.3260	1.8026	0.0865*
18	-2.6945	-2.2705	0.0636*
19	-0.9884	-0.7221	0.4937
20	1.5248	0.8810	0.4122

Table 4 Comparison between OTC communities and OTC tradition -decrease target price

From Table 1 to Table 4, t=0 represents the day when the event occurred, -20 represents 20 days before the event, 20 represents 20 days after the event, and so on. *, **, *** represent the significance levels of 10%, 5% and 1% respectively, rejecting the null hypothesis. AR1 is the average abnormal return of traditional media listed companies; AR2 is the average abnormal return of social media listed companies. The results of the abnormal rate of return difference test show that the traditional media has leaked the information before the news (t=0) until the day of the event, and after the event, the social media has more information content than the traditional media.

5. Conclusion

Regardless of listed or OTC companies, there is no significant difference between traditional and social media for foreign institutional investors to adjust target price information, and investors cannot make stable profit. After the event day (T=0~20), investors will gradually shift their observation to social media. However, investors cannot rely on the information released by the two medias to make stable profit. This study believes that there are the following

reasons: social media has gradually become the main channel for investors to obtain information, but also because of the huge amount of information released by social media, content plagiarism and reprinting often occur, and even many fictitious rumors are spread frequently, and various factors make investors afraid to trust the information released by social media in the first place. Compared with the community, traditional media has a clear source of information, such as a foreign-funded securities company or a large legal entity, etc., but the news has already leaked before the event, and the speed of information transmission is slow, which cannot make investors profit in the first time. After the event day (T=0), because the information has been officially exposed, it has caused heated discussions and responses on the extremely fast social media. However, such actions cannot make stable profit for investors.

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