

Intellectual Reaction Differences among Market Participants to a Company's Information Disclosure and Trading Behaviors on IPO KOSDAQ

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In this paper, we investigate intellectual reaction differences among market participants to various corporate information announcements and the main information prompting investors to trade. Our research is based on IPO companies listed on the KOSDAQ exchange from January 2000 to September 2012 and concentrates on three information disclosures - bonus issue, seasoned equity offer, and new investment in facilities announcements.

We find that intellectual market participants react positively to bonus issues and seasoned equity offers, but negatively to new investment announcements. Market trading volume increases before the positive events and all cgroups actively buy shares during these periods. For the negative events, only institution participants show active selling. Overall, institutions act as momentum traders, and individuals and foreigners as contrarian traders. We also discuss the implications of this study.

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1. Introduction

One of the endless studies of many financial researchers is to observe relationship between stock returns and trading behavior of different investor groups. Korean stock market could be divided for the three main investors' groups discussed here as individuals, institutions and foreigners. Most of previous study results show presence of information asymmetry between investors and its increase before scheduled

corporate disclosures. It has been generally accepted that institutions trade better than individuals, follow positive or momentum trading strategies, according to their informational advantage and professional approach. On the other hand, individuals show poor performance acting as contrarian traders, and negatively correlated with the market returns, so not seem to be information driven.

In contrast, studies of foreign investors trading provide different conclusions. Some show

that momentum trading occurs because of their information disadvantage, another reports that foreign investors consistently generate large trading gains from good market timing.

In this paper we will try not only to review investors' trading behavior, but especially observe market reaction and trade volume fluctuations on corporate events announced by firms within first three IPO years. Our sample concentrated on three types of corporate disclosures as bonus issue, seasoned equity offerings and new investment announcements.

Bonus issue is an offer of free additional shares to existing shareholders in proportion to their shareholdings. In theory bonus issue won't affect company's value, but still there are a lot of empirical studies which try to recognize why firms use bonus issue and what is the subsequent effect of it.

Seasoned equity offerings (thereafter, SEO) is a new equity issue of public company, exists in two types: cash offer - in which firm offers new shares to investors at large and rights offer where firm offers the new shares only to existing shareholders. Researchers have found that, on average, the market greets the news of SEO with a price decline, in our paper we will check if this theory different for IPO companies.

Additionally, nowadays in conditions of fast economical growth and hard competition, companies would try to expand their activities investing in new projects. In case such kind of news will bring actual character with future profit increase, and not just to support share value,

market should react positively, otherwise stock prices would be failed. Thus, we choose new facilities investment announcements to observe how investors react on it.

2. Empirical studies

In this section, we would like to discuss important prior researchers' works related to trading behaviors of investors, bonus issues, seasoned equity offerings, investment disclosure. There have been extensive studies published on the trading behavior of different types of investors with most of them reporting on the institutional performance better than other traders.

Yi K. (2003), Hong G. et al (2011) show evidence that institutional investors and foreign investors follow the momentum strategy, purchasing raised and selling failed shares. In case of individual investors following the contrarian strategy, they perform the worst.

Park et al. (2013) reports that domestic institutions sell their stock anticipating negative news; however, individual investors trade their stock in the opposite direction to the news. Trade imbalance by institutions predicts stock returns upon the negative news.

Bae et al. (2011) reported evidence that foreigners outperform both local institutions and individual investors buying the stocks significantly outperform those they previously sell. For institutional investors, they showed little difference in profitability between the traded stocks. On the

other hand, Korean individual investors tend to buy past losers and to dispose of past winners.

Results on bonus issue show positive and gradually market reaction started around 3-4 days before and until 10 days after the announcement. According to abnormal sales volume, there are no significant results before the event day, but after it trading volume increases in respect of improved liquidity (Lee, 2003; Jeong, 2011).

Based on information asymmetry hypothesis insiders have more superior information about firm's value, so when additional funds needed they aim to issue new shares on overvalued market price, otherwise, in case company highly undervalued by market they prefer issue bonds. Thereby, until 2000 US market reaction on SEO was mainly negative (Ross, 1977; Myers and Majluf, 1984; Miller and Rock, 1985). On the other hand domestic researches report different results with positive abnormal stock returns before the announcement and negative stock returns at the day and after the event (Chung et al., 2008).

McConnell and Muscarella (1985) argued that based on investment opportunity hypothesis if SEO's character brings new investment opportunity and guarantees profitable output its negative effect on firms value could be enough refreshed. Moreover, companies with better management performance deliver strong positive message with upcoming growth in stock returns (Yoon et al., 2013)

Bhana(2008) has observed 378 cases of capital expenditure made by South African companies for the period 1995-2004 and found

significant positive excess returns surrounding capital spending announcements, with information related to the capital expenditure decisions was impounded in the share prices three days prior to the public announcement.

Jonhston(2005) investigated firm-specific economic consequences of regulatory and voluntary environmental capital expenditures. Results of market-based tests show both regulatory and voluntary environmental capital expenditures are negatively related to stock prices and stock returns, but with significant t-value only for regulatory expenditures.

Kim, Park (2008) have analyzed equipment and R&D expenditure impact on the firms value of the firms listed on IPO for period 1990 to 2007. Results show significant positive effect until one year after IPO for equipment investment and until four years for R&D.

Jain and Kini (2008) have tested the impact of strategic investment decisions of issuing firms at the time of their IPO on their post-issue operating performance. Results indicate that the extent of diversification at the time of going public is consistently positively related to the improvement in operating performance after the IPO and more diversified IPO firms demonstrate a significantly higher probability of survival and longer survival time

3. Research approach & used data

3.1 Sample Data

To observe investors trading pattern around corporate announcements we use three types of corporate events - bonus issue, seasoned equity offerings and new investments announcement. Disclosure data were collected from electronic disclosure system Dart for the period starting from January 2001 to September 2013. IPO data on newly listed companies were collected from Korea Exchange for the period from January 2000 to September 2012. Daily trading volume of each stock by individuals, foreigners and institutions around the corporate announcements, and financial figures collected from FnGuide.

We excluded companies which reported bonus issues and seasoned equity offerings at the same date or in the period less than 1 month between two disclosures to avoid bias of doubled event. Any type of disclosure presented at first year of IPO was also excluded.

Final sample consists 241 firms representing 84 bonus issue companies, 101 - seasoned equity offerings and 56 - new investment announcements.

Table 1 reports number of events by year and descriptive statistics for sampled firms.

3.2 Analysis of market and investors' reaction

3.2.1 Stock reaction on corporate announcement

Using date of bonus issue, SEO and new

〈Table 1〉 A. Number of events by year

Year	Bonus issue	SEO	New investment
2001	0	0	4
2002	5	5	4
2003	8	2	5
2004	8	17	6
2005	4	12	6
2006	4	18	4
2007	10	8	5
2008	10	12	1
2009	6	12	2
2010	4	9	7
2011	7	3	3
2012	13	2	4
2013	5	0	5
Total	84	101	56

〈Table 1〉 B. Descriptive statistics of sample firms

Variable	Total Asset (bln won)	Total Capital (bln won)	MC (bln won)	EBIT/ Total Asset(%)	Debt/ Total Asset(%)	MB (%)
Ave	68.02	46.14	0.09	0.10	0.28	1.96
STD dev	86.71	59.45	0.16	0.08	0.15	2.78
Min	12.23	6.41	0.00	-0.09	0.04	0.28
Median	540.92	411.64	0.98	0.34	0.77	24.01
Max	45.18	32.77	0.04	0.10	0.25	1.40

investment announcements as event dates, we observe stock reaction through the cumulative abnormal return, using market adjusted return model by i - firm at t -date abnormal return AR_{it} :

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

R_{it} is rate of return for firm i on day t , R_{mt} - market rate of return

Summed abnormal daily return through the event period used to calculate cumulative abnormal return (CAR) for share i from date h to $h+k$,

$$CAR_i(h, h+k) = \sum_{t=h}^{h+k} AR_{i,t} \quad (2)$$

Average abnormal return (AR_{pt}) and cumulative average abnormal return from day h to $h+k$ ($CAR_p(h, h+k)$) for N below:

$$AR_{pt} = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \quad (3)$$

$$CAR_p(h, h+k) = \sum_{t=h}^{h+k} AR_{p,t} \quad (4)$$

3.2.2 Turnover volume change rate and imbalanced trading calculation

On the stock market, volume reflects reaction inequality on new information between investors' groups and occurs when they trade in different trends. Thus, abnormal volume turnover around event was estimated as follow:

$$AV_{it} = V_{it} - V_{mt} \quad (5)$$

AV_{it} i firm's abnormal volume change rate at day t

V_{it} , V_{mt} i firm's volume change rate at day t and market's rate of change¹⁾

Accumulated abnormal turnover volume by firm through the event period used to calculate cumulative abnormal volume (CAV) for share i from date h to $h+k$,

$$CAV_i(h, h+k) = \sum_{t=h}^{h+k} AV_{i,t} \quad (6)$$

Average abnormal turnover volume (AV) and cumulative average abnormal turnover from day h to $h+k$ ($CAV_p(h, h+k)$) for N quantity of firms at date t were calculated as below:

$$AV_{pt} = \frac{1}{N} \sum_{i=1}^N AV_{i,t} \quad (7)$$

$$CAV_p(h, h+k) = \sum_{t=h}^{h+k} AV_{p,t} \quad (8)$$

To investigate investors' trading behavior and performance, we calculate daily trade imbalance for each investor group following Malmendier and Shanthikumar(2004):

$$TI_{i,x,t} = \frac{buy_{i,x,t} - sell_{i,x,t}}{buy_{i,x,t} + sell_{i,x,t}} \quad (9)$$

$buy_{i,x,t}$ - buy volume on firm i by investor x at day t

$sell_{i,x,t}$ - sell volume on firm i by investor x at day t

Standardized trade imbalance calculated by using the standard deviation of the TI over the year:

1) Volume turnover at particular date was calculated as logged previous date volume turnover vs. present day volume turnover(Kang Heum Yon, Han Nah Kim, 2013)

$$STI_{i,x,t} = \frac{TI_{i,x,t} - \overline{TI}_{i,x,year(t)}}{std(TI_{i,x,year(t)})} \quad (10)$$

3.2.3 Regression of STI by investor group

To address which factors drives trading decisions of each investor group, and if they are feedback traders or not, we regressed each STI by investor type as follows:

$$STI_{jt} = \alpha + D_1(event) + D_2 \times \beta_1 CAR_{t+i} + \beta_2 STI_S_{t+i} + \beta_3 STI_D_{t+i} + \beta_4 STI_F_{t+i} + \beta_5 EPS + \beta_6 Cash + \beta_7 EBIT + \beta_8 Asset \quad (11)$$

STI_{jt} - cumulated standardized trading imbalance of J investor type from day t to $t+i$;

D_1 - dummy variable for event type;

$D_2 \times CAR_{t+i}$ - cumulative abnormal return for estimated event from day t to day $t+i$;

STI_S (D, F) cumulated standardized trading imbalance of institutional (individual, foreign) investor for the period from day t to day $t+i$

EPS - Earning per share

Cash - cash flow growth rate

EBIT - EBIT/Total Assets

Asset - log Total Asset

4. Empirical Results

4.1 Market reaction on different corporate announcements

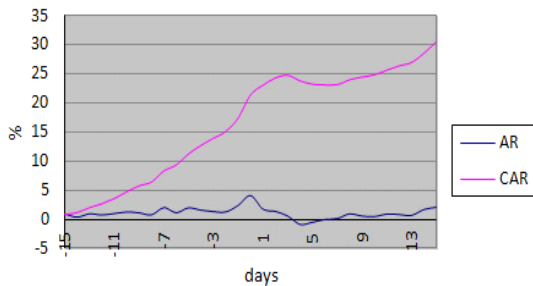
<Table 2> and <Figure 1> represent market portfolio's AR and CAR on bonus issue, seasoned equity offerings and new investments in facilities for the period -15 to 15 days before and after the announcements.

<Table 2> Market reaction and significance test on different corporate announcements

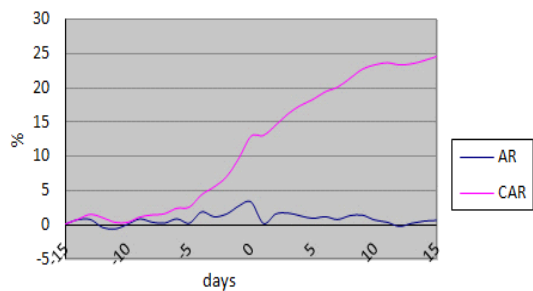
Period	Bonus issue		Seasoned equity offering		New investment	
	AR	CAR	AR	CAR	AR	CAR
-15	0.85 1.95*	0.85 1.95*	0.04 0.07	0.04 0.07	-0.14 -0.35	-0.14 -0.35
-14	0.30 0.81	1.15 2.01**	0.70 1.51	0.74 1.07	-0.17 -0.47	-0.31 -0.57
-13	0.86 2.28**	2.01 2.93***	0.71 1.42	1.45 1.64	-0.36 -0.85	-0.66 -0.98
-12	0.66 1.42	2.67 3.22***	-0.48 -0.77	0.97 0.82	-0.86 -2.46*	-1.53 -2.00**
-11	0.90 2.09**	3.57 3.82***	-0.69 -1.20	0.28 0.20	-0.56 -1.42	-2.08 -2.43**
-10	1.16 2.85***	4.73 4.64***	-0.01 -0.01	0.27 0.17	-0.11 -0.29	-2.20 -2.34*
-9	1.03 2.47**	5.76 5.23***	0.79 1.15	1.07 0.59	-0.50 -1.51	-2.70 -2.70***
-8	0.67 1.52	6.42 5.42***	0.30 0.55	1.37 0.89	0.57 1.16	-2.13 -1.92*

Period	Bonus issue		Seasoned equity offering		New investment	
	AR	CAR	AR	CAR	AR	CAR
-7	1.91 ^{***} 3.72 ^{***}	8.33 ^{***} 6.46 ^{***}	0.17 0.39	1.55 1.09	0.03 0.07	-2.10 -1.75 [*]
-6	1.04 2.06 ^{**}	9.38 ^{***} 6.76 ^{***}	0.81 1.64	2.36 1.50	1.17 2.46 ^{**}	-0.93 -0.72
-5	1.88 ^{***} 3.37 ^{***}	11.26 ^{***} 7.53 ^{***}	0.16 0.29	2.52 1.34	0.23 0.52	-0.70 -0.51
-4	1.48 3.45 ^{***}	12.73 ^{***} 8.19 ^{***}	1.83 2.44 ^{**}	4.35 2.01 ^{**}	-0.04 -0.11	-0.74 -0.52
-3	1.23 ^{***} 3.33 ^{***}	13.96 ^{***} 8.73 ^{***}	1.12 1.52	5.47 [*] 2.33 [*]	-0.58 -1.46	-1.32 -0.90
-2	1.19 2.53 ^{**}	15.15 ^{***} 9.09 ^{***}	1.49 1.79 [*]	6.96 2.77 ^{***}	0.00 -0.01	-1.33 -0.86
-1	2.29 4.89 ^{***}	17.45 ^{***} 10.08 ^{***}	2.69 3.58 ^{***}	9.65 4.21 ^{***}	0.06 0.13	-1.26 -0.78
0	3.99 4.89 ^{***}	21.44 ^{***} 11.20 ^{***}	3.29 4.48 ^{***}	12.94 6.28 ^{***}	0.94 1.88 [*]	-0.32 -0.19
1	1.66 2.18 [*]	23.10 ^{***} 11.21 ^{***}	0.12 0.13	13.06 5.37 ^{***}	0.03 0.04	-0.30 -0.16
2	1.28 1.90	24.37 ^{***} 11.25 ^{***}	1.52 1.84 [*]	14.58 5.20 ^{***}	-0.11 -0.24	-0.41 -0.22
3	0.47 0.68	24.84 ^{***} 10.93 ^{***}	1.66 1.91 [*]	16.24 5.03 ^{***}	0.09 0.27	-0.31 -0.17
4	-0.96 -2.41	23.88 ^{***} 10.35 ^{***}	1.24 1.25	17.48 5.05 ^{***}	-0.02 -0.07	-0.34 -0.18
5	-0.59 -1.65	23.29 ^{***} 9.98 ^{***}	0.87 1.01	18.34 5.01 ^{***}	0.26 0.53	-0.07 -0.04
6	-0.12 -0.34	23.17 ^{***} 9.81 ^{***}	1.12 1.64	19.47 6.12 ^{***}	-0.03 -0.07	-0.11 -0.05
7	0.05 -0.34	23.23 ^{***} 9.67 ^{***}	0.70 1.15	20.17 7.16 ^{***}	0.36 1.16	0.25 0.12
8	0.84 2.3 [*]	24.06 ^{***} 9.91 ^{***}	1.28 [*] 2.01 [*]	21.44 7.05 ^{***}	0.63 1.41	0.89 0.42
9	0.47 1.23	24.53 ^{***} 9.98 ^{***}	1.36 1.75	22.80 6.25 ^{***}	-0.06 -0.17	0.83 0.39
10	0.38 0.91	24.91 ^{***} 9.99 ^{***}	0.63 0.81	23.43 5.93 ^{***}	-0.17 -0.48	0.66 0.31
11	0.80 2.07 ^{**}	25.71 ^{***} 10.19 ^{***}	0.32 0.55	23.74 5.95 ^{***}	-0.44 -1.09	0.22 0.10
12	0.74 1.71 [*]	26.46 ^{***} 10.33 ^{***}	-0.30 -0.38	23.44 5.61 ^{***}	-0.02 -0.04	0.20 0.09
13	0.59 1.35	27.04 ^{***} 10.41 ^{***}	0.15 0.24	23.59 6.63 ^{***}	0.20 0.49	0.41 0.18
14	1.59 3.41 ^{***}	28.63 ^{***} 10.85 ^{***}	0.48 0.80	24.06 7.49 ^{***}	0.51 1.31	0.91 0.39
15	1.98 3.38 ^{***}	30.61 ^{***} 11.32 ^{***}	0.58 0.83	24.64 7.14 ^{***}	-0.31 -0.72	0.60 0.26

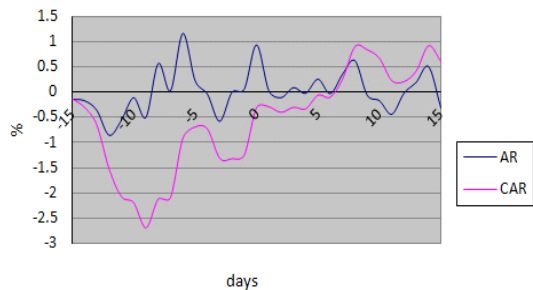
***, ** indicate significance level at 10%, 5% and 1% respectively



〈Figure 1〉 Panel A. Market reaction on Bonus issue announcements



〈Figure 1〉 Panel B. Market reaction on seasoned equity offering announcements



〈Figure 1〉 Panel C. Market reaction on new investments announcements

The results show significant CAR for the whole period -15 to +15 days around the corporate announcement on bonus issue. Pre-disclosure period of -15 to -1 reports CAR for more than

17% at 1% significance level. On the event day share return achieves almost 22% at 1% significance level and continues to increase reaching 30% threshold on +15 day after disclosure. These results consistent with previous empirical study outcomes that show positive market reaction on bonus issue and conjecture that information on positive events start leaks before the event²⁾.

Market's reaction on SEO announcements exhibits significant CAR for more than 4% observed starting -4 days before the event day and continued upward movement until +15 days with return growth almost to 25%. Compared with Yoon's et al. (2013) results, who claimed significant CAR starting -12 days before the disclosure with near 20% growth between -30 and +1 day, our estimations show delay effect for about 5 days.

Overall CAR on new facilities investment announcement is negative in general, with small insignificant positive values starting on the +7 post-event day. Most negative abnormal returns estimated for the period -15 to -9 days before the event. These results inconsistent with empirical studies and might be interpreted like even if strategic investment decisions at the time of IPO accepted by market positively, additional capital expenditures on the first year of listing less welcomed.

2) See Kothari, Shu and Wysocki (2009), Park and Song (2013)

4.2 Corporate announcements' influence on the trade volume

Using <Equitation 5> to <8> we estimated abnormal trading volume by investor type around corporate announcements and <Table 3> reports its results.

CAV results show that institutional investors increase their trading activity at 1% significance level both before and after bonus issue event, but only before the SEO and after investment announcements. On the other hand, individual traders increase their sales at pre-disclosure period and dramatically decrease sales volume starting just -1 day before the event date. Foreign traders

show similar with individuals trading pattern before the corporate announcements, but with less drop in sales after events.

Results of our estimations supposed to be consistent with existed literature, which claims positive information leakage much earlier than disclosure day and increase of trading volume before positive events. According to negative new investment information trading volume significant only for periods starting -15 and -10 days before the event, but insignificant just before the announcement -5 to -1 days, that also confirms that investors try to avoid huge trading volume before the negative events.

<Table 3> CAV around corporate announcements

Period	Bonus issue			SEO			New investment		
	CAV			CAV			CAV		
	Inst	Ind	For	Inst	Ind	For	Inst	Ind	For
(-15,-1)	0.49 4.12***	0.12 4.64***	0.37 3.51***	0.32 3.15***	0.07 2.48**	0.17 2.87***	0.18 2.02**	0.07 2.32**	0.21 2.51**
(-10,1)	0.27 2.98***	0.07 3.48***	0.28 2.99***	0.26 2.76***	0.05 2.26**	0.11 2.16**	0.13 1.62	0.05 1.98**	0.12 2.14**
(-5,-1)	0.16 2.48**	0.08 6.14***	0.13 2.93***	0.18 2.33**	0.04 2.23**	0.09 2.18**	0.07 1.16	0.03 1.61	0.05 1.42
(-1,1)	0.12 1.93*	-0.03 -2.05**	0.01 0.50	0.01 0.20	-0.01 -0.35	0.02 0.85	0.09 1.62	0.01 0.47	0.10 2.29**
(0,1)	0.08 1.53	-0.07 -4.78***	-0.01 -0.59	-0.03 -1.72	-0.04 -2.95***	-0.02 -1.14	0.10 1.97**	-0.01 -1.03	0.05 1.49
(0,5)	0.41 1.98**	-0.08 -3.69***	0.09 0.90	-0.01 -0.36	-0.05 -2.90***	0.01 0.37	0.16 2.67***	0.01 0.52	0.10 1.93*
(0,10)	0.43 2.03***	-0.06 -1.43	0.17 1.42	0.14 1.40	-0.03 -0.98	0.05 0.97	0.25 3.02***	0.01 0.50	0.11 1.64

*,**,*** indicate significance level at 10%, 5% and 1% respectively

4.3 Trading imbalance by different investors groups

Estimations of cumulative standardized trading imbalance in <Table 4> show which type of three investors - institutions, individuals and

foreigners, sell or buy more stocks with the upcoming corporate announcements.

We find that the institutions STI is positive and statistically significant around bonus issue events and pre-SEO announcement, but statistically

<Table 4> CSTI around corporate announcements by investor type

Period	Bonus issue		SEO		New investment	
	STI	t-val	STI	t-val	STI	t-val
	Institutions					
(-15,1)	1.62	4.45 ^{***}	0.96	3.23 ^{***}	-1.20	-2.62 ^{***}
(-10,1)	1.37	4.74 ^{***}	0.64	2.60 ^{***}	-0.63	-1.67 [*]
(-5,-1)	0.62	2.85 ^{***}	0.28	1.73 [*]	-0.60	-2.29 ^{**}
(0,1)	0.73	3.32 ^{***}	0.01	0.11	-0.49	-3.1 ^{***}
(0,5)	0.80	2.37 ^{***}	0.12	0.63	-1.14	-4.0 ^{***}
(0,10)	0.33	0.69	0.22	0.87	-2.02	-5.13 ^{***}
Individuals						
(-15,1)	-0.60	-1.69 [*]	0.10	0.23	-0.13	-0.25
(-10,1)	-0.53	-1.79 [*]	-0.06	-0.18	-0.38	-0.89
(-5,-1)	-0.26	-1.15	0.10	0.23	-0.77	-2.0 ^{**}
(0,1)	-0.35	-2.77 ^{***}	0.47	2.08 ^{**}	-0.36	-1.42
(0,5)	-0.56	-2.42 ^{**}	0.76	2.38 ^{**}	-0.17	-0.46
(0,10)	-0.28	-0.93	1.10	2.91 ^{**}	-0.09	-0.18
Foreigners						
(-15,-1)	0.68	1.83 [*]	-0.72	-1.52	0.10	0.24
(-10,1)	0.70	2.34 ^{**}	-0.51	-1.32	0.11	0.33
(-5,-1)	0.47	2.23 ^{**}	-0.34	-1.25	0.11	0.39
(0,1)	-0.21	-1.74 [*]	-0.21	-1.23	0.07	0.46
(0,5)	-0.61	-2.88 ^{***}	-0.43	-1.46	-0.06	-0.23
(0,10)	-0.69	-2.32 ^{**}	-1.14	-2.84 ^{***}	-0.19	-0.55

*, **, *** indicate significance level at 10%, 5% and 1% respectively

negative around investment events. These results consistently with previous studies one more time prove the theory about institutional momentum trading strategy, buying winner shares and selling loser.

According to individuals trading, significant negative STI values observed around bonus issue despite the continued growing in share returns after disclosure day. Selling more immediately after announcement -0.35% from 5% significance level on +1 day and -0.56% from 5% significance level on between 0-5 days individuals seems to be trying to realize positive returns, but as mentioned in empirical conclusions sells winners too early, that confirms their contrarian trading behavior. In case of SEO announcements, individuals actively start buying stocks only after information becomes public, that also make them to lose abnormal profits. For the negative event, there is short time active sales for individuals, but insignificant in general for the whole event period, which confirms that individuals hold loser shares too long.

Foreigners trading results show active share purchasing before the event period on bonus issue 0.7% from 5% significance level on -10 to 1 days, 0.47% from 5% significance level on -5 to -1 days and then immediate selling pattern after disclosure 0.61% from 1% significance level for the period 0 to +5 days, 0.69% from 5% significance level for the period 0 to +10 days. For the SEO, overall STI shows selling activity, with 1.14% from 1% significance level on 0 to +10 days after the announcement. These results suggesting similar to individual's contrarian results selling winner shares

to fast and holding losers too long.

4.4 STI Drivers of each investor groups

For robustness check using <Equation 11> we have checked main factors influencing investors' trading decisions before corporate events, previous trading pattern or firm's financial coefficients for the preceding year. $STI_J(-5,-1)$ is cumulated STI of J investor for the period from -5 to -1 days before the event, supposed to be influenced by investor previous trading pattern for period -15 to -5 days. <Table 5> reports its results.

As for the $STI_S(-5,-1)$ we found strong positive effect of STI_S ($\beta=0.3***$), $EBIT$ ($\beta=0.3**$) and negative relations with EPS ($\beta=-0.2^*$) for all three types of announcements, which could be explained that institutional traders showing continuous pattern on their sales -15 to -1 days of event.

Individual investors mainly influenced by their previous trading pattern pre-event periods, with significant CAR ($\beta=0.03**$) on SEO disclosure and less but significant STI_D ($\beta=0.10^*$). According to financial coefficients, only Asset shows significant influence ($\beta=0.29^*$ and $\beta=0.42**$) on individuals trading pattern for bonus and SEO events. Regarding, STI_F , we find positive significant CAR for bonus event ($\beta=0.03^*$) and significant positive values for STI_F ($\beta=0.1**$). Financial indexes show significant results for $EBIT$ on bonus and new investment issues ($\beta=0.7^*$).

〈Table 5〉 CSTI around corporate announcements by investor type

N=241	Bonus issue		SEO		New investment	
	Coef	t-val	Coef	t-val	Coef	t-val
	STI_S(-5,-1)					
CAR	0.01	1.06	0.00	-0.12	0.02	0.77
STI_S	0.32	6.65***	0.31	6.57***	0.32	6.61***
STI_D	0.00	0.09	0.00	0.07	0.00	0.13
STI_F	0.01	0.22	0.01	0.29	0.01	0.31
EPS	-0.23	-1.77*	-0.22	-1.69*	-0.21	-1.65*
Cash	0.00	-0.28	0.00	-0.27	0.00	-0.30
EBIT	0.37	2.7**	0.37	2.3**	0.37	0.70
Asset	0.10	0.53	0.09	0.51	0.09	0.52
_cons	-1.87	-0.61	-1.77	-0.56	-1.78	-0.58
F(8, 232)	8.61		8.43		8.53	
Prob > F	0.00		0.00		0.00	
R ²	0.23		0.23		0.23	
Adj R ²	0.20		0.20		0.20	
MSE	2.04		2.05		2.05	
	STI_D(-5,-1)					
CAR	-0.03	-1.24	0.03	2.51**	-0.07	-1.30
STI_S	-0.02	-0.17	-0.02	-0.20	-0.01	-0.13
STI_D	0.10	1.86*	0.10	1.89*	0.10	1.76*
STI_F	0.03	0.35	0.00	0.05	0.02	0.24
EPS	-0.17	-0.72	-0.26	-1.10	-0.21	-0.89
Cash	0.03	0.86	0.04	1.35	0.03	0.91
EBIT	0.30	0.31	0.60	0.62	0.31	0.32
Asset	0.29	1.88*	0.42	1.97**	0.29	0.91
_cons	-4.79	-0.85	-7.56	-1.33	-5.03	-0.90
F(8, 232)	1.10		1.71		1.12	
Prob > F	0.36		0.10		0.35	
R ²	0.04		0.06		0.04	
Adj R ²	0.00		0.02		0.00	
MSE	3.72		3.68		3.72	
	STI_F(-5,-1)					
CAR	0.02	1.72*	0.00	-0.54	0.03	1.00
STI_S	-0.07	-1.43	-0.08	-1.54	-0.08	-1.53
STI_D	0.03	0.92	0.03	0.88	0.03	0.96
STI_F	0.10	1.94*	0.10	2.07**	0.10	2.06**
EPS	-0.22	-1.65*	-0.20	-1.48	-0.20	-1.48
Cash	-0.01	-0.87	-0.02	-0.91	-0.01	-0.88
EBIT	0.75	1.68*	0.73	1.32	0.76	1.78*
Asset	-0.19	-1.02	-0.20	-1.08	-0.19	-1.03
_cons	3.64	1.15	4.02	1.24	3.77	1.18
F(8, 232)	3.02		2.65		2.75	
Prob > F	0.00		0.01		0.01	
R ²	0.09		0.08		0.09	
Adj R ²	0.06		0.05		0.06	
MSE	2.10		2.12		2.11	

*,**,*** indicate significance level at 10%, 5% and 1% respectively

5. Summary and Conclusion

With active growth of stock market many financial researchers continue to explore trading behavior and preferences of different investor groups and influence of corporate disclosures on stock returns.

In this study paper, we tried to observe stock reaction on different corporate announcements and investors trading behaviors with attention to first three IPO years. Results of our findings show that market positively reacts on bonus issue and seasoned equity offering announcements, and negative to new investments in facilities. Cumulative stock return on bonus issue events achieve more than 30% growth for the period -15 to +15, and almost 25 % for the same period on seasoned equity offerings. On the other hand, new investment decisions bring high drop in stock returns for the period -12 to -7 days with following negative, but insignificant pattern after, with small growth to positive return starting on the +7 day after announcement.

Trading volume does not decrease before the positive event date by all investor groups, that consistent with empirical studies on good information leakage before the announcements. According to negative new investment disclosure, active trading starts -15 and -10 days before the disclosure, but shows insignificant coefficients closely to event day from -5 to -1, that also consistent with theory that trading volume decrease before the bad news.

Trading imbalance show momentum trading

for institutional investors, who actively buy growing stocks and sell failing one. Individual traders show contrarian trading behavior selling in opposite direction with stock returns or selling growing shares too fast, immediately after positive event, and holding losers too long. Foreigners show significant results only for bonus issue, performing contrarian trading after the disclosure date.

We have observed relation between variable corporate announcements and trading reaction of different investor groups, but due to short period after IPO and sample of disclosures it is hard to argue that our results are representative selected type of events. Also, using short-term period data doesn't explain future performance of the companies and prediction of their survival and thus, needs more research.

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국문요약

코스닥 IPO 기업 공시에 대한 시장 참가자의 다양한 지능적인 반응의 차이점과 주식 거래 행태

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본 논문은 주식 시장 참가자들의 여러 기업 공시에 대한 다양한 지능적인 반응의 차이점과 거래 행동에 영향을 미치는 주요 정보를 분석하였다. 본 연구는 2000년01월부터 2012년 09월까지 코스닥 시장에 신규 상장을 된 기업과 3가지 공시를(무상증자, 유상증자, 신규 시설 투자) 한 기업들을 대상으로 하였다.

시장 참가자들이 무상증자와 유상증자 공시일 경우에 긍정적으로 반응하고 신규 시설 투자일 경우에 부정적으로 반응하다는 연구 결과가 나왔다. 시장 거래량은 긍정적인 사건 전에 급격히 증가하며 모든 그룹의 참가자들의 매수가 활발히 이루어진다. 부정적인 사건일 경우에 기관 참가자들만 활발한 매수 행동을 보여준다. 종합적으로, 기관들은 모멘텀 전략을 보여주며, 개인과 외국인들은 반대투자전략을 보여준다. 본 논문의 합축성도 논의했다.

주제어 : 지능적 반응, 지적 행동차이, 정보고시, IPO

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