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Market reaction to "unsweetened" and "sweetened" rights offerings in an emerging European stock market

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Abstract

This research investigates the market reaction to both "unsweetened" (plain) and "sweetened" (with simultaneous distribution of bonus issues) rights offerings in the Istanbul Stock Exchange. Consistent with previous U.K. and U.S. evidence, although with larger magnitude, the announcement day abnormal returns for "unsweetened" rights offerings are negative and significant, suggesting that such issues convey unfavorable information about the future operating performance, investment opportunities, liquidity and dividend policy. In contrast, for "sweetened" rights offerings, the abnormal returns are positive. The empirical results do not provide evidence for the enhanced trading liquidity effect (the "sweetener" split effect) and for the overvaluation signaling effect.

JEL classification: G3; G32

Keywords: Rights offerings; Signaling; Liquidity

1. Introduction

The market reaction to seasoned equity offerings has been the focus of a significant number of empirical investigations in developed capital markets, especially in the U.S. where corporations predominately use firm commitment public offerings in issuing seasoned equity. Empirical studies in these capital markets show significant negative announcement returns conveying negative

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signals about the firm value. Even though rights offerings are rarely used in the U.S., an average negative announcement effect of −2% is observed.[1] In the U.K., continental Europe and in many emerging markets, rights offering is the primary flotation method. Slovin et al.'s (2000) study on "insured" and "uninsured" rights offerings in the U.K. reports negative announcement returns of −2.9% and −5% respectively. Similarly, Gajewski and Ginglinger (2002), and Marsden (2000) find negative announcement effects for the French and New Zealand corporations respectively. However, in other markets such as Switzerland, Japan, Malaysia, Korea, Greece, Germany and Norway, several studies report positive announcement effects (e.g., Loderer and Zimmermann, 1988; Kang and Stulz, 1996; Salamudin et al., 1999; Kang, 1990; Tsangarakis, 1996; Gebhardt and Heiden, 1998; Bohren et al., 1997).

Several hypotheses have been put forward to explain the market reaction to seasoned equity issues, including adverse selection and signaling effects associated with information asymmetries, agency costs of free cash flow, wealth transfers between classes of security holders, and moral hazard problems in lowering managerial stock ownership. The signaling hypothesis appears to be the most developed theoretically and supported empirically (e.g., Myers and Majluf, 1984). However, this hypothesis and others do not completely explain the unfavorable/favorable market reaction evidence to equity issues in different institutional settings. Investigation of market reaction and underlying motivations in different institutional and geographical settings makes this research potentially enlightening, especially for the managers of multinational corporations.

There is only a limited amount of research on market reaction to rights offerings in emerging markets that have the following typical institutional settings: (1) Corporations can only use rights offerings in their seasoned equity issues; (2) there is a lack of organized secondary market for the rights; (3) there is a low diffusion of ownership; (4) there is a weak commercial paper market; and (5) there are limited financing alternatives for corporations. The Istanbul Stock Exchange (ISE) is an emerging European capital market with these institutional characteristics.

Seasoned equity issues are called "paid-in capital increase" issues in the Turkish capital market. Like in the rest of Europe, rights offerings are the norm in the ISE. Plain rights offerings are called "unsweetened" rights offerings and rights offerings with simultaneous distribution of bonus issues are called "sweetened" rights offerings in the ISE. Bonus issues are similar to stock dividends in the U.S., but they are not financed from retained earnings and/or distributable profit. Bonus issues in Turkey are mainly financed by using the "revaluation reserve", an equity account in which the fixed assets are adjusted for inflation by a constant ratio announced by the Ministry of Finance periodically.[2] To a certain extent, the balance sheets are adjusted for the persistent inflation in Turkey by using the revaluation reserve.

This research investigates the price behavior of "unsweetened" and "sweetened" rights offerings during the announcement period and tries to shed light on the motivations and characteristics of corporations using these two types of rights offerings. The market reaction to clean samples of "unsweetened" and "sweetened" rights offerings is investigated for the period 1994–1999. The results show large negative abnormal returns of −7.1% during the announcement period of "unsweetened" rights offerings. These results are similar to the U.S. and the U.K. where the

[1] White and Lusztig (1980), Hansen (1988), and Eckbo and Masulis (1992) detect negative announcement effects of −1.03%, −2.61%, and −1.39% respectively.

[2] Bonus issues are common corporate practice in several emerging markets such as China, Australia, Greece and India, and especially in countries with inflation problem. In addition to the revaluation reserve, other equity reserves used occasionally are the share premium account, the cost revaluation account, the capital gain from the sale of corporation's real estate and the capital gain from the sale of the corporation's portfolio of participatory shares.

abnormal returns are between −2% and −5% (e.g., Masulis and Korwar, 1986; Slovin et al., 2000). Interestingly, for "sweetened" rights offerings, a positive cumulative market reaction of 2.0% is found for the first three days during the announcement period. For both "unsweetened" and "sweetened" rights offerings, no statistically significant reversal trend is observed in the post-event period. The regression results indicate a positive relationship between the price change and the relative size of the equity issue, suggesting an issue size effect for the "sweetened" rights offerings, but not for the "unsweetened" rights offerings.

The results show that corporations issuing "sweetened" rights offerings have better operating performance, cash position, investment opportunities and dividend policy relative to the corporations issuing "unsweetened" rights offerings. "Unsweetened" rights offering corporations are in a cash tight position with low market valuation. The operating performance and dividend policy measures for the "sweetened" rights offering corporations have positive signaling content only in the announcement year and not in the following year. This finding is not surprising in the unstable economic and political environment during the sample period and has signaling value for the ISE investors who are typically short-term investors. In both types of offerings, empirical support is not found for the overvaluation signaling effect as well as for the enhanced trading liquidity effect (the "sweetener" split effect).

The rest of the article is organized as follows: Section 2 discusses the tested effects during the announcement. Section 3 describes the data and methodology followed by the empirical results in Section 4. Section 5 presents the concluding remarks.

2. Announcement effects

2.1. Signaling effects

In the presence of asymmetric information, empirical studies show that corporations issue seasoned equity when managers believe their corporation's stock price is overvalued (i.e., the adverse selection problem). The negative market reaction to seasoned equity offerings announcements is regarded as evidence supporting the overvaluation signal. The rights offering is the primary flotation method in issuing seasoned equity in Europe. However, Loderer and Zimmermann (1988) state that rights offering cannot alone solve the adverse selection problem unless the rights offering is fully subscribed. They also state two additional requirements for eliminating the adverse selection problem: (1) The life of the information asymmetry is shorter than the period of time between announcement and issue date, and (2) the offer price is set on the announcement date. All these conditions hold for the ISE. The subscription price is implicitly stated in the rights offering announcement and there is a considerable time lag between the announcement and the ex-rights date. In addition, rights offerings in the ISE are typically uninsured and fully subscribed.[3] Overall, the ISE's institutional characteristics of full subscription, short-lived information asymmetry and the offer price announcement are in line with Loderer and Zimmerman's conditions for not having the overvaluation signal, and hence, it is expected that the overvaluation signal does not exist for the rights offerings in the ISE.

Consistent with the lack of timing of seasoned equity offerings, previous studies report that corporations in the ISE come to raise equity in the market very frequently. For example, Aydogan and

[3] In the sample used for this study, there is an average of 93 trading days between the announcement and ex-rights day. All rights offerings in the sample are fully subscribed.

Muradoglu (2003) find that ISE corporations regularly issue rights offerings, especially "sweetened" rights offerings.[4] This corporate behavior indicates that managers in the ISE do not time their equity issues in order to take advantage of the market overpricing in contrast to U.S. corporations which issue new equity once per decade (Megginson, 1997).

Another signaling potential for corporations issuing seasoned equity offerings is that these corporations are likely to have potential increases in future earnings in order to at least maintain or increase their cash dividends (Lasfer, 1997). Aivazian et al. (2003a) and Adaoglu (2000) show that corporations trading in the ISE follow unstable dividend policies unlike the stable and sticky dividend policy behavior in developed capital markets. Due to unstable dividend policy, the signaling power of a potential increase in future earnings does not exist or is minimal for corporations trading in the ISE. Similarly, in their study of dividend policy and the organization of capital markets including Turkey, Korea, India, Pakistan, Thailand, Malaysia and Zimbabwe, Aivazian et al. (2003a) show that dividends are less sensitive to past dividends in these countries and their results support the view that the institutional structures of these developing countries make dividends a less viable mechanism for signaling and for reducing agency costs.

The typical characteristic of investors in the ISE is that they are short-term investors. As shown by Ozden's (1996) study on investment practices in Turkey, short-term capital appreciation is the paramount investment concern of investors in the ISE and dividend income is clearly at the bottom of their security selection criteria list. Additionally, the lack of long-term institutional investors in the ISE makes the market very volatile which is a typical characteristic of all emerging markets (Muradoglu et al., 1999). The rights coupon market did not exist in the ISE until the beginning of 1993 and shareholders were forced to participate in the rights offerings or sell their shares before the ex-rights day in order to avoid the dilution effect. Especially, short-term investors in the ISE are concerned with the market setting that rights coupon market is not very active and existing shareholders cannot capture the full value of their rights coupons.

In an inflationary environment, corporations trading in the ISE issue equity frequently in order to increase their eroding paid-in capital which is regarded as a sign of fundamental strength by investors in the ISE. Aydogan and Muradoglu (1998) argue that since bonus stocks are issued from retained earnings and/or the revaluation reserve of fixed assets, profitable firms with a high fixed asset base are expected to declare bonus issues frequently and at higher rates, since higher profits are likely to result in higher retained earnings, and a large asset base will cause the revaluation fund to be higher. Therefore, "sweetened" rights offerings convey favorable information to investors regarding the fundamentals such as the asset base and profitability.

Within these unique settings of non-existent overvaluation signal, signaling on corporation fundamentals, and short investment horizon, the market reaction to a rights offering announcement in the Turkish market can be different from the ones in developed capital markets and in other emerging markets.

2.2. *The "sweetener" split effect*

Corporations in the ISE typically issue rights offerings simultaneously with bonus issues in order to make the offering more attractive and to increase the trading liquidity. Even though bonus

[4] In the "sweetened" rights offerings sample ($n = 75$) for 6 years (1994–1999), there are 11 corporations with 2 offerings, 4 corporations with 3 offerings and 1 corporation with 4 offerings giving an idea on the frequency of offerings.

issues in "sweetened" rights offerings do not inject any cash to the corporation and shareholders do not gain through this accounting manipulation, these simultaneous stock distributions are regarded as "sweeteners" by investors. Moreover, rights offerings with simultaneous distribution of bonus issues are commonly referred as "split" in the Turkish capital market.

In terms of overall distribution ratio,[5] "sweetened" rights offerings are similar to stock split factors in the U.S., but they differ in terms of their accounting treatment. Aydogan and Muradoglu (2003) state that corporations trading in the ISE typically distribute cash dividends at the same time with "sweetened" rights offering and investors use the dividend income to pay for the rights offering.[6] Overall, the resulting transaction in a "sweetened" rights offering is not different from a bonus issue, and investors watch out for the total 'split factor' taking into account the rights offering distribution as well as the bonus issue distribution.

Stock splits in the U.S. and in other markets are associated with positive market reaction around the announcement day (e.g., Lamoureux and Poon, 1987; Ikenberry et al., 1996). One of the explanations for the positive market reaction is the expected increase in trading liquidity following stock splits. However, the empirical evidence on the trading liquidity effect is not convincing and empirical results show contrary evidence (Copeland, 1979; Lakonishok and Lev, 1987; Conroy et al., 1990).

Based on the observation of an average public openness (free float) of 24% in the ISE, financial practitioners argue that "sweetened" rights offerings are welcomed by investors since there is a substantial increase in the number of shares in circulation resulting in higher liquidity and marketability. Within the unique institutional settings of ISE, it is expected that "sweetened" rights offerings announcements are associated with positive market reaction due to the "sweetener" split effect resulting in a substantial increase in the free float shares.

3. Data and methodology

3.1. Procedural aspects of announcements

In July 1993, the Capital Markets Board (CMB), the regulatory body in Turkey, issued a decree regulating the information flow to the public. In the decree, the rights offering announcements of corporations trading in the ISE are categorized as price sensitive information. As soon as the rights offering decision is made by the board of directors, the decision has to be reported first to the CMB as well as the ISE. The decision has to reach the CMB and the ISE promptly or by 9.00 a.m. of the day following the board's rights offering decision. The ISE disseminates the information to the trading floor electronically, and then to data and information service providers such as Reuters. Additionally, the announcement is published in the daily official bulletin at the end of the trading day. The publication date is the "Official Announcement Date" on which the board's rights offering decision is announced publicly for the first time by the ISE. In this study, this date is considered as the announcement day of the rights offering (Day 0).

The ISE listing requirements impose additional rules on the information flow to the market such as the information transmission procedure, required documents and time limits. Typically, the announcement of a rights offering includes the following information: The announcement

[5] In the sample, the "unsweetened" rights offerings increase the number of shares on average by 157% whereas the "sweetened" rights offerings increase on average by 273%.

[6] In the "sweetened" rights offerings sample for 5 years (1994–1999), 51 out of 75 (68%) observations distributed cash dividends around the ex-rights day.

date and the board of directors' meeting date; the total amount of rights offering and the implicit subscription price[7]; if any, the total amount of bonus issue; the current amount of paid-in capital and the amount of paid-in capital after the issue.

3.2. Rights offerings sample

In order to identify the rights offerings during the investigation period 1994–1999, the daily official bulletins of the Istanbul Stock Exchange were searched for the rights offerings announcements. During this time period, 457 rights offerings are identified, but the final sample includes only rights offerings by non-financial corporations and consequently, the number of rights offerings decreases to 294. Of the 294 rights offerings, 40 are "unsweetened" and 254 are "sweetened" rights offerings. As the next step, the official daily bulletins are investigated thoroughly in order to satisfy the following criteria:

- The announcement date of the rights offering must be printed in the official daily bulletin.
- The announcement has to be a board of directors' announcement.
- The first announcement of the board of directors is not altered by another board meeting.
- The announcement is not simultaneously contaminated by other important information such as earnings and dividend policy announcements.
- The announcement is not contaminated by other corporation specific announcements within ± 5 days of the announcement date.
- The capital and dividend adjusted price data are available.

Of 40 "unsweetened" rights offerings, 11 are contaminated by other corporation specific announcements within ± 5 days of the announcement date; 4 are not a board of directors meeting announcement; 3 are simultaneously contaminated by other important information. Thus, the final sample includes 22 clean "unsweetened" rights offerings announcements.

Of 254 "sweetened" rights offerings, 42 are simultaneously contaminated by other important information; 74 are contaminated by other corporation specific announcements within ± 5 days of the announcement date; 38 are not a board of directors meeting announcement; 11 are changed by another board meeting after the initial announcement; 14 have no price data available due to being delisted. Thus, the final sample is 75 clean "sweetened" rights offerings announcements.

3.3. Market reaction tests

The standard market model, as developed by Brown and Warner (1980, 1985), is used to measure the market reaction to rights offerings.[8] The parameters of the market model are estimated by using the ordinary least squares (OLS) regression over the estimation period from $t = -120$ to -21 relative to the event day $t = 0$. The return on the market portfolio is proxied by the value-weighted ISE 100 index which includes 100 corporations based on their market value and liquidity characteristics.

[7] The implicit subscription price is the par value (1000 Turkish Lira) unless the board specifically states in the announcement that the subscription price has premium over the par value and announces the price.

[8] Two other models, namely the market-adjusted and mean-adjusted models, are also used for measuring the market reaction. The test results are qualitatively and quantitatively similar to those reported in this study.

Table 1
Summary statistics (%) for the "unsweetened" and "sweetened" rights offerings announcements

	Mean	Median	S.D.	Minimum	Maximum
Panel A: Unsweetened rights offerings sample					
Cash capital inflow as a % of paid-in capital	166.1	144.2	115.5	10.0	450.0
Ratio of "unsweetened" rights offering shares to common shares outstanding	157.1	123.3	121.3	10.0	450.0
Bonus share potential	122.5	75.8	139.9	4.8	532.1
Panel B: Sweetened rights offerings sample					
Cash capital inflow as a % of paid-in capital	146.3	89.3	455.2	10.0	4000.0
Ratio of rights offerings shares to common shares outstanding	143.6	88.1	455.2	10.0	4000.0
Bonus share potential	251.6	124.0	467.9	7.9	2905.8
Ratio of bonus shares to common shares outstanding	129.2	65.0	279.0	10.0	2400.0
Ratio of total capital increase as a % of paid-in capital	275.5	165.0	727.9	29.1	6400.0
Ratio of total new common shares issued to common shares outstanding	272.8	165.0	727.2	29.1	6400.0

The table reports selective descriptive statistics for the samples of "unsweetened" and "sweetened" rights offerings. The statistics are self-explanatory except for "bonus share potential" which is calculated by summing the revaluation reserve, equity premium account and retained earnings, and dividing the total by the amount of paid-in capital.

3.4. Analysis of operating performance and selected ratios

The motivations and characteristics of corporations in issuing "unsweetened" and "sweetened" rights offerings can be different. Therefore, characteristics of the sample corporations are examined in order to shed light on the relationship between corporation characteristics and rights offering type.

In analyzing operating performance of corporations issuing "unsweetened" and "sweetened" rights offerings, operating margin ratio (%) (operating income scaled by the book value of sales) is used, since other measures such as earnings per share are greatly affected by accounting manipulations, and particularly for the ISE, there is a substantial increase in the number of shares due to the rights offerings (see Table 1). Since rights offerings are fully subscribed and the ownership structure is not altered, using earnings per share as an operating performance measure will be misleading and will underestimate the operating performance.[9]

Market-to-book ratio is used to measure the quality of the corporation's prospects (i.e., the investment opportunities). High market-to-book values imply that good investment opportunities exist for the corporation. In other words, the proceeds from the equity capital raised are likely to be injected into positive net present value projects. In addition, the market-to-book ratio behavior around the rights offering announcement can show whether the corporation is taking advantage of the market overvaluation of the stock and if so, a peak (i.e., a dramatic increase) in the market-to-book ratio during the pre-announcement year is expected (Heron and Lie, 2004).

Corporations with low liquidity can use the proceeds to solve the liquidity problem. In some announcements of rights offerings in the ISE, managers plainly state that the raised capital will be used in normalizing the cash flow position. In an inflationary environment, liquidity has greater importance for corporations, and maintaining the real value of capital is the primary concern.

[9] I would like to thank the anonymous referee for pointing out the problems of using earnings per share as an operating performance measure, especially for the Turkish market.

Similarly, Heron and Lie (2004) find that U.S. corporations sell equity in rights offerings when their financial situation is tight. Two measures, namely the cash ratio (cash and cash equivalents divided by short-term liabilities) and the financial leverage ratio (total debt divided by total assets), are used to provide insights into the need for external equity financing.

For the preceding measures, "unadjusted" and "industry-adjusted" median levels are reported since non-parametric median tests are found to be more powerful than parametric tests in the studies of operating performance and ratio analyses with extreme observations (Barber and Lyon, 1996). To control for the changes in industry and economic conditions, the industry median level of the tested measure is subtracted from each sample corporation's measure and the "industry-adjusted" level is obtained.

Non-parametric Wilcoxon/Mann–Whitney *U*-test is used to detect the statistical significance of differences in median levels for fiscal years −2, −1, 0, +1, +2. Additionally, median of changes in the tested measures for (−1 to 0), (0 to +1) and (−1 to +1) periods are calculated and the non-parametric Wilcoxon signed rank test is used to verify whether the median change is statistically significant from zero.[10]

In order to detect the effect of "unsweetened" and "sweetened" rights offerings on dividend policy, median dividend ratio (total dividends distributed divided by shareholders' paid-in equity) is calculated for the fiscal year ending before the announcement (−1), the announcement fiscal year (0) and the fiscal year after the announcement (+1). The dividend ratio is used in dividend policy announcements in Turkey and is widely used in emerging markets.[11] In their comparative study of dividend policies in emerging markets, Aivazian et al. (2003b) use a similar ratio (Div/BV) to avoid the pricing problems related with the dividend yield measure and to avoid the instability of the payout ratio during the times of low earnings. However, since paid-in shareholders' equity is substantially increased by both "unsweetened" and "sweetened" rights offerings in the ISE, using the dividend ratio as a performance measure will underestimate the dividend policy performance of corporations. Taking into account that the rights offerings are typically fully subscribed and there is no resulting change in the ownership structure, "adjusted" dividends per share (total dividends/number of shares outstanding in the fiscal year before the announcement (−1)) is calculated for both the announcement fiscal year (0) and the fiscal year after the announcement (+1). In other words, dividends per share numbers are adjusted by using the pre-rights offering number of shares outstanding. The frequency distributions of dividend changes comparing three periods are calculated and Wilcoxon/Mann–Whitney *U*-test is used to detect the statistical significance of differences in the median levels of (−1 versus 0), (0 versus +1) and (−1 versus 0).

3.5. Enhanced trading liquidity tests

Similar to the case presented for the Tel Aviv Stock Exchange by Amihud et al. (1997), liquidity of stocks cannot be measured by bid-ask spreads in the ISE. There are no market makers or specialists who post bid and ask prices. In the ISE, it is the investors providing liquidity to the market by entering their limit orders into the electronic trading system. Investors act as market makers and do not have to hold stock inventories in the ISE's price competitive and order-matching trading system.

[10] Since the ISE corporations issue rights offerings frequently, longer period tests are not carried out in order to avoid the previous and subsequent rights offerings by the same corporation.

[11] For the Indian corporations, Lukose and Sapar (2004) also use the dividend ratio (Div/Equity) in measuring the effect of stock dividends on the dividend policy.

Theoretically, stock's trading volume is an increasing function of its liquidity, *ceteris paribus* (Amihud and Mendelson, 1986). Therefore, an increase (decrease) in the trading volume shows an increase (decrease) in liquidity. Following Amihud et al. (1997), three different measures of liquidity, namely the stock's raw and relative trading volume, and the stock's liquidity ratio, are used in order to test the enhanced trading liquidity effect. The first two measures of liquidity are the average raw and relative daily Turkish Lira (TL) trading volume in the periods before and after the ex-rights day. The change in raw trading volume (ΔVOL) for security i is computed as:

$$\Delta \mathrm{VOL}_i = \ln(\mathrm{VOL}_i)_{\mathrm{after}} - \ln(\mathrm{VOL}_i)_{\mathrm{before}} \tag{1}$$

where VOL_i is the average daily trading volume in the periods before the announcement day (before) and after the ex-rights day (after) respectively. The average trading volumes are calculated for the period (-120 to -21) before the announcement day and for the period (+21 to +120) after the ex-rights day.[12]

Similarly, taking into account the effect of market activity, the change in average daily relative trading volume (ΔRELVOL) for security i is computed as:

$$\Delta \mathrm{RELVOL}_i = \ln\left(\frac{\mathrm{VOL}_i}{\mathrm{VOL_M}}\right)_{\mathrm{after}} - \ln\left(\frac{\mathrm{VOL}_i}{\mathrm{VOL_M}}\right)_{\mathrm{before}} \tag{2}$$

where VOL_i is the average trading volume of security i and $\mathrm{VOL_M}$ is the average trading volume of the market in the periods before the announcement day and after the ex-rights day respectively.

The second measure is the liquidity ratio which is also known as the *Amivest* measure of liquidity or the market depth ratio. Originally developed by *Amivest* corporation for its monthly newsletter, the liquidity ratio is considered as a good proxy for market depth in several microstructure studies (e.g., Khan and Baker, 1993; Muscarella and Piwowar, 2001). The liquidity ratio measures the trading volume associated with a unit change in the stock price. In other words, a high ratio indicates that investors can trade a large number of shares with little price change. Therefore, an increase (decrease) in the liquidity ratio shows an increase (decrease) in liquidity or market depth for a stock. The ratio is measured as:

$$\mathrm{LR}_i^{k,m} = \frac{\sum_k^m V_{i,\mathrm{t}}}{\sum_k^m |R_{i,\mathrm{t}}|} \tag{3}$$

where $V_{i,\mathrm{t}}$ and $|R_{i,\mathrm{t}}|$ are the trading volume and the absolute return, respectively, for stock i on day t, comparing the liquidity for the period (-120 to -21) before the announcement day to the liquidity for the period (+21 to +120) after the ex-rights day. The change in the liquidity ratio (ΔLR) for security i is measured as:

$$\Delta \mathrm{LR}_i = \ln(\mathrm{LR}_i)_{\mathrm{after}} - \ln(\mathrm{LR}_i)_{\mathrm{before}} \tag{4}$$

These three measures (ΔVOL, ΔRELVOL and ΔLR) are calculated for both "unsweetened" and "sweetened" rights offering samples. The statistical significance of mean and median changes in VOL, RELVOL and LR is tested by using the parametric t-test and the non-parametric Mann–Whitney U-test.

[12] Since corporations trading in the ISE issue rights offerings frequently and in order to avoid the confounding effect of another rights offering in the previous and subsequent year, the liquidity measures are computed for a limited time period of 100 trading days.

4. Empirical results

4.1. Announcement market reaction and size effects

Table 1 presents selective descriptive statistics for both "unsweetened" and "sweetened" rights offerings sample. For the "unsweetened" rights offerings announcement sample (Panel A), in terms of capital proceeds from rights offerings as a percentage of the outstanding paid-in capital, the median (average) value is 144.2% (166.1%). The median (average) ratio of total rights offering shares issued to common shares outstanding is 123.3% (157.1%). It should be noted that the capital inflow as a percentage of paid-in capital outstanding and the ratio of new shares issued to common shares outstanding figures are very close to each other due to the fact that rights offering price is typically the par value.

For the "sweetened" rights offerings announcements sample (Panel B), in terms of capital proceeds from rights offerings as a percentage of the outstanding paid-in capital, the median (average) value is 89.3% (146.3%). Relative to the "unsweetened" sample, cash rights offerings component has a lower percentage for the "sweetened" rights offerings.

For the "sweetened" rights offerings announcements sample (Panel B), the median (average) ratio of total new shares issued to common shares outstanding is 165.0% (272.8%). Overall, relative to the "unsweetened" sample, "sweetened" rights offerings result in a substantially higher increase in the balance sheet's equity capital. In terms of ratio of bonus shares to common shares outstanding, the median (average) is 65.0% (129.2%). Median (average) bonus share contribution to the balance sheet is less than the contribution from the median (average) cash rights offering component.

The bonus issue potential of "unsweetened" and "sweetened" samples is also calculated by summing the revaluation reserve, equity premium account and retained earnings, and dividing the total by the amount of paid-in capital. In Table 1, it is shown that the "sweetened" sample has a substantially higher potential for issuing bonus shares (median: 124.0% versus 75.8%).

Table 2 presents the mean abnormal returns (AR) for the period (−5, +5) relative to the announcement day (Day 0) and the cumulative mean abnormal returns (CAR) for both "unsweetened" and "sweetened" rights offerings. For the "unsweetened" rights offerings, market reaction results indicate that there is a statistically significant negative mean abnormal return on the announcement day (Day 0: −2.1%, *t*-value: −2.66) and the following two days (Day 1: −3.6%, *t*-value: −4.60; Day 2: −1.5%, *t*-value: −1.87) showing that "unsweetened" rights offerings announcements are viewed unfavorably by the market. Especially, on Day 1, 86% of the sample observations have negative abnormal returns. During the pre-announcement period (−5, −1), there are no statistically significant mean abnormal returns and the cumulative mean abnormal return for the period (−5, −1) is statistically insignificant. For the six trading days (0, +5), the cumulative mean abnormal return reaches a statistically significant level of −7.1% (*t*-value: −3.64). These results are also confirmed in Fig. 1 by the random trend in cumulative mean abnormal return up to the announcement day and the negative trend after the announcement.

Market reaction results for the "sweetened" rights offerings indicate that there is a statistically significant positive mean abnormal return (Day 1: 1.5%, *t*-value: 3.16) on the day following the announcement day indicating that "sweetened" rights offerings announcements are viewed favorably by the market. Especially, on Day 1, 64% of the sample observations have positive abnormal returns. In Fig. 2, there is a positive trend starting on Day −3, but there are no statistically significant mean abnormal returns during the pre-announcement period. Additionally, the cumulative mean abnormal return for the period (−5, −1) is statistically insignificant. The

Table 2
Market reaction to "unsweetened" and "sweetened" rights offerings (ROs) during the announcement period

"Unsweetened" ROs				"Sweetened" ROs				Differences in means/medians tests	
Event day	AR	*t*-value	% < 0	Event day	AR	*t*-value	% > 0	Parametric mean *t*-test	Non-parametric Mann–Whitney *U*-test
Panel A: Daily abnormal returns (ARs)									
−5	0.01322	1.6713	41	−5	−0.00349	−0.7499	40	1.6193	1.9512*
−4	−0.00307	−0.3875	68	−4	−0.00745	−1.5999	43	0.4267	0.1508
−3	0.00823	1.0407	64	−3	0.00402	0.8639	49	0.5140	0.4178
−2	−0.00824	−1.0411	50	−2	0.00076	0.1634	51	0.9588	0.5470
−1	0.00447	0.5663	50	−1	0.00412	0.8836	56	0.0401	0.0991
0 ⇨	−0.02107**	−2.6649	73	0 ⇨	0.00489	1.0493	56	2.6477***	2.5284***
1	−0.03641***	−4.6033	86	1	0.01473***	3.1627	64	3.9617***	4.0446***
2	−0.01480*	−1.8713	64	2	0.00069	0.1473	47	1.3369	0.7882
3	0.00251	0.3185	50	3	−0.00173	−0.3708	41	0.4859	0.5298
4	−0.01073	−1.3571	59	4	−0.00456	−0.9782	41	0.6491	0.2780
5	0.00990	1.2515	36	5	−0.00298	−0.6404	44	1.3875	1.5549

"Unsweetened" ROs			"Sweetened" ROs		
Period	CAR	*t*-value	Period	CAR	*t*-value
Panel B: Cumulative abnormal returns (CARs)					
(−5, −1)	0.01463	0.8272	(−5, −1)	−0.00204	−0.1963
(0, +2)	−0.07229***	−5.2767	(0, +2)	0.02030**	2.5169
(0, +5)	−0.07061***	−3.6443	(0, +5)	0.00449	0.2911

The table shows the daily mean abnormal returns (ARs), the percentage (%) of positive (>0) or negative (<0) ARs, and the *t*-statistic values (*t*-value) of AR for each event day in the period from −5 to +5 trading days around the announcement day (Event Day 0) of both the "unsweetened" and "sweetened" ROs. The parametric and non-parametric differences in means/median test results are also shown testing whether mean/median AR for each event day is statistically different. Cumulative mean abnormal returns (CARs) are also shown for the pre-announcement period (−5, −1) and for the post-announcement periods (0, +2) and (0, +5).

* Significant at 10%.

** Significant at 5%.

*** Significant at 1%.

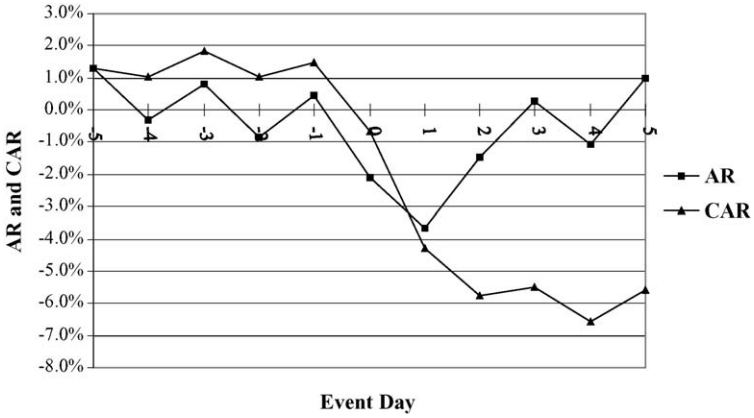

Fig. 1. Mean abnormal returns (ARs) and cumulative mean abnormal returns (CARs) for "unsweetened" rights offerings.

positive trend continues till Day 2 and for the three trading days including the announcement day, CAR(0, +2) reaches a statistically significant level of 2.0% (t-value: 2.52). However, it should be mentioned that the cumulative mean abnormal return for the period (0, +5) is statistically insignificant indicating that most of the positive announcement effect is eliminated for the "sweetened" rights offerings by subsequent post-event negative mean abnormal returns, while the negative announcement effect (CAR(0, +5)) for the "unsweetened" rights offerings is not reversed.

Even though "unsweetened" rights offerings are received unfavorably by investors, rights offerings with simultaneous distribution of bonus issues ("sweetened") turn the negative reaction into a positive one. Supportively, differences in means/medians test results in Table 2 confirm the finding that on event days 0 and 1, the mean/median abnormal returns of "unsweetened" and "sweetened" rights offerings are statistically different from each other. "Unsweetened" mean abnormal returns are negative relative to positive mean abnormal returns of "sweetened" rights offerings on these two event days.

In order to test whether there is a relationship between the size of the equity issue and the market reaction, ordinary least square regressions are estimated for both the "unsweetened" and

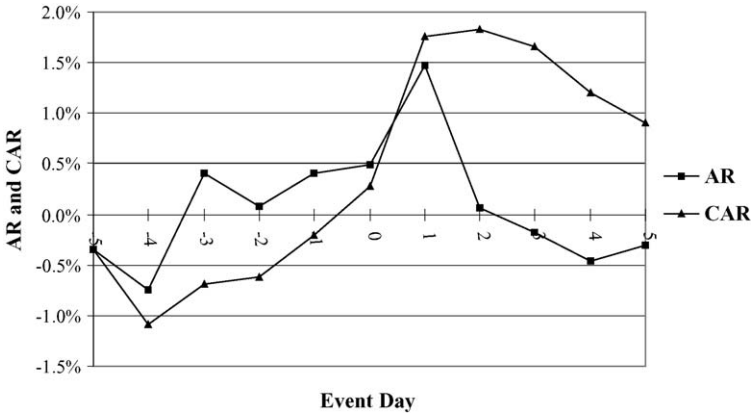

Fig. 2. Mean abnormal returns (ARs) and cumulative mean abnormal returns (CARs) for "sweetened" rights offerings.

"sweetened" rights offerings. For the "unsweetened" rights offerings, the results are as follows:

$$\mathrm{CAR}_{(0,+5),i} = \underset{(-2.12)^{**}}{-0.0751} + \underset{(0.16)}{0.0029}\,\mathrm{SHR}_i, \quad \text{Adj. } R^2 : 0.1\%$$

where t-statistics are in parentheses; (***) significant at 1% level, (**) significant at 5% level, (*) significant at 10% level and where SHR shows the number of shares offered in rights offerings divided by the number of shares outstanding[13] and CAR(0, +5) is the cumulative mean abnormal return for the period (0, +5). The only statistically significant estimate is the intercept, and *ceteris paribus*, the statistically significant negative intercept implies that investors react negatively to the announcement. Size effect is not detected for the "unsweetened" rights offerings.

The regression results for the "sweetened" rights offerings announcements are shown as follows, where two dependent variables (CAR(0, +2); CAR(0, +5)) are used:

$$\mathrm{CAR}_{(0,+2),i} = \underset{(0.28)}{0.0030} + \underset{(5.35)^{***}}{0.0120}\,\mathrm{SHR}_i, \quad \text{Adj. } R^2 : 27.2\%;$$

$$\mathrm{CAR}_{(0,+2),i} = \underset{(-0.43)}{-0.0049} + \underset{(5.29)^{***}}{0.0195}\,\mathrm{BON}_i, \quad \text{Adj. } R^2 : 26.8\%;$$

$$\mathrm{CAR}_{(0,+5),i} = \underset{(-0.08)}{-0.0012} + \underset{(2.81)^{***}}{0.0085}\,\mathrm{SHR}_i, \quad \text{Adj. } R^2 : 8.5\%;$$

$$\mathrm{CAR}_{(0,+5),i} = \underset{(-0.53)}{-0.0080} + \underset{(3.01)^{***}}{0.0147}\,\mathrm{BON}_i, \quad \text{Adj. } R^2 : 9.8\%$$

where t-statistics are in parentheses; (***) significant at 1% level, (**) significant at 5% level; (*) significant at 10% level and SHR is the number of rights offerings shares divided by the number of shares outstanding and BON is the number of bonus shares divided by the number of shares outstanding. Since SHR and BON explanatory variables are highly correlated with each other (Pearson correlation: 0.96; p-value: 0.00), two separate models are estimated avoiding the multicollinearity problem. For both dependent variables (CAR(0, +2); CAR(0, +5)), the coefficients of the explanatory variables SHR and BON are positive and statistically significant. The sign and the magnitude of these two explanatory variables indicate that shareholders take into account the total increase in the number of shares offered.

4.2. *Operating performance, selected ratios and dividend policy behavior analysis results*

In Table 3, the "unadjusted" and "industry-adjusted" median levels of operating margin ratio, market-to-book ratio, financial leverage ratio, and cash ratio for both 'unsweetened' and "sweetened" offerings are shown along with relevant statistical test results. Focusing on −1, 0, +1 fiscal years due to frequent equity issues, the "unadjusted" operating margin levels indicate that "sweetened" rights offerings corporations perform better than the "unsweetened" rights offerings corporations with statistically significant difference. Additionally, the negative "industry-adjusted" levels (see also Fig. 3 (Panel A)) show that "unsweetened" rights offerings corporations underperform relative to their industry peers. For both types of offerings, the median changes in "industry-adjusted" levels (−1 to +1) are statistically insignificant indicating that over time, there is no significant change in the operating performance of these corporations.

[13] This number is same as cash capital inflow divided by paid-in capital since the rights offer price is typically equal to the par value in the ISE.

Table 3
Selected ratios for the "unsweetened" and "sweetened" rights offerings

	Fiscal year relative to announcement					Median changes		
	−2	−1	0	+1	+2	−1 to 0	0 to +1	−1 to +1
"Unsweetened" offerings								
Panel A: Operating margin (%)								
Unadjusted	11.6289*	11.485***	10.10***	7.1909***	10.4490***	−3.1632	−4.7405	−3.0583**
Industry-adjusted	−0.4221	−0.3149	−0.3193	−3.3245	−2.1653	−1.0338	1.8058	0.0491
Panel B: Market-to-book ratio								
Unadjusted	2.469	1.708**	1.582**	1.423**	1.447**	0.2062	-0.5696	0.0177
Industry-adjusted	−0.608***	−0.739***	−1.042***	−1.042**	−1.161***	−0.3421*	0.1062	−0.1752
Panel C: Financial leverage (%)								
Unadjusted	67.080**	64.619***	55.317	57.453*	65.227**	0.0748	1.7514	4.0813
Industry-adjusted	5.200	4.361*	1.135	3.550	9.214	−2.0465*	4.9695**	−0.4376
Panel D: Cash ratio								
Unadjusted	0.0851	0.0418	0.1423	0.1693	0.0775	0.0500**	−0.0151	−0.0005
Industry-adjusted	−0.1062**	−0.0635**	0.0022	−0.0074	−0.0125	0.0675*	−0.0043	0.0312
"Sweetened" offerings								
Panel A: Operating margin (%)								
Unadjusted	21.248*	19.762***	18.578***	17.281***	15.639***	−1.8300*	−0.9729**	−3.4206***
Industry-adjusted	1.143	0.000	0.360	0.000	0.118	−0.2015	0.4106	−0.3238
Panel B: Market-to-book ratio								
Unadjusted	2.342	2.372**	2.265**	1.814**	1.996**	−0.2796*	−0.1391	−0.3348***
Industry-adjusted	0.194***	0.349***	0.044***	−0.260**	−0.204***	−0.1507	−0.2640*	−0.3469**
Panel C: Financial leverage (%)								
Unadjusted	49.556**	53.254***	52.543	50.073*	55.893***	−2.0194	0.7109	0.8167
Industry-adjusted	−0.764	−1.068*	−0.803	−0.719	0.000	0.0000	0.2515	0.0000
Panel D: Cash ratio								
Unadjusted	0.1088	0.1453	0.1664	0.0699	0.1222	−0.0041	−0.0142**	−0.0044
Industry-adjusted	0.0093**	0.0045**	0.0407	−0.0135	0.0078	0.0053	−0.0107	0.0014

The table displays median levels (unadjusted) and median industry-adjusted levels (industry-adjusted) of operating margin (%), financial leverage (%), market-to-book, and cash ratios for fiscal years −2, −1, +1, +2 relative to the announcement fiscal year (0). Median of changes for (−1 to 0), (0 to +1), and (−1 to +1) periods is shown for each ratio. Non-parametric Wilcoxon/Mann–Whitney *U*-test is used to detect the statistical significance of differences of median levels between "unsweetened" and "sweetened" rights offerings for each fiscal year. Non-parametric Wilcoxon signed rank test is used to test whether the median change is statistically significant from zero. The results of both non-parametric tests are not shown in the table, but the significance of the test results are shown by (*) significant at 10%, (**) significant at 5%, (***) significant at 1%.

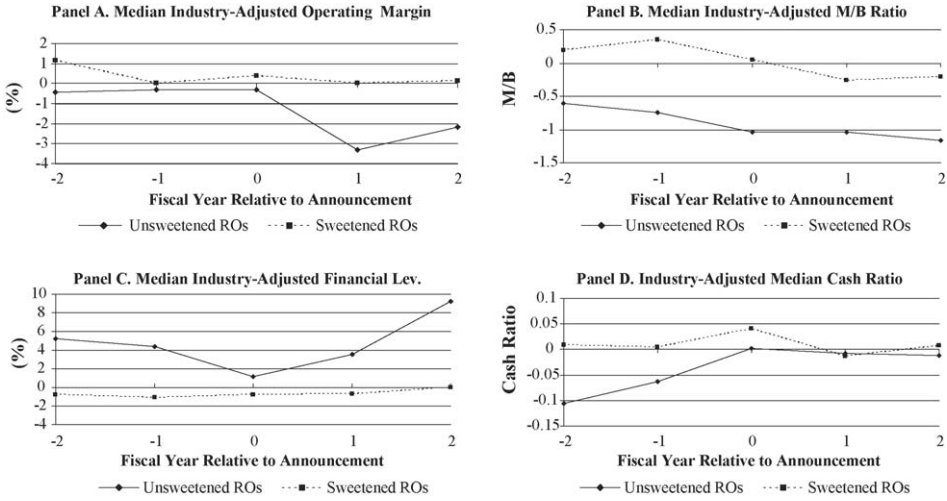

Fig. 3. Median industry-adjusted ratios around the rights offering announcement.

The results in Table 3 show that the "sweetened" rights offerings have statistically significant higher "unadjusted" and "industry-adjusted" market-to-book ratios indicating better investment opportunities. Fig. 3 (Panel B) shows that in the pre-announcement period, "sweetened" rights offering corporations have higher market-to-book ratios relative to their industry peers whereas the "unsweetened" rights offering corporations have relatively lower market-to-book ratios. Fig. 3 (Panel B) shows a decrease in the market-to-book ratio in the announcement year and in the post-period for both types of offerings, but this deterioration (median change (−1 to +1)) is statistically insignificant for the "sweetened" offerings and significant for the "unsweetened" offerings. The industry-adjusted market-to-book ratios of both types of offerings do not peak in the pre-announcement year indicating that managers are not taking advantage of the market overvaluation.[14] Especially for the "unsweetened" rights offerings, the market values of corporations continue to decrease after the announcement.

The "unadjusted" and "industry-adjusted" financial leverage ratio levels show that "unsweetened" rights offering corporations are financially levered higher relative to "sweetened" rights offering corporations as well as relative to their industry peers (see also Fig. 3 (Panel C)). Especially, in the pre-announcement fiscal year, both "unadjusted" and "industry-adjusted" financial leverage levels of "unsweetened" and "sweetened" rights offerings are statistically different from each other. For the "unsweetened" rights offerings corporations, there is a statistically significant negative median change in the financial leverage ratio due to the equity cash injection in the announcement fiscal year, but this negative decrease is reversed by the statistically significant positive median change right after the offering (0 to +1). Similar conclusions can also be drawn for the "unadjusted" and "industry-adjusted" cash ratio levels for the two types of offerings. Fig. 3 (Panel D) clearly shows that "unsweetened" rights offerings corporations are in a tight cash position during the pre-announcement year whereas "sweetened" rights offering corporations do not have this problem.

[14] For regular, mixed and secondary offerings in the U.S., Heron and Lie (2004) find dramatic increases in the market-to-book ratio during the pre-announcement fiscal year. For rights offerings, the ratio is at its lowest point.

Table 4
Dividend policy behavior

	"Unsweetened" rights offerings (dividends/paid-in equity ($n=22$))			"Sweetened" rights offerings (dividends/paid-in equity ($n=75$))		
	−1	0	+1	−1	0	+1
Panel A						
Median	0	0	0	30	50	16
Dividend changes	−1 to 0	0 to +1	−1 to +1	−1 to 0	0 to +1	−1 to +1
Ratio increases (%)	41	27	14	55	23	29
Ratio decreases (%)	5	9	23	17	44	33
Omissions (%)	14	32	23	12	11	17
Omissions cont. (%)	41	32	41	15	23	16
Ratio same (%)	0	0	0	1	0	4
Difference tests	−1 vs. 0	0 vs. +1	−1 vs. +1	−1 vs. 0	0 vs. +1	−1 vs. +1
Wilcoxon/Mann–Whitney U-test	0.32	1.00	1.33	0.95	2.72***	1.92**
	"Unsweetened" rights offerings adjusted DPS ($n=22$)			"Sweetened" rights offerings adjusted DPS ($n=65$)		
	−1	0	+1	−1	0	+1
Panel B						
Median	0	0	0	0.148	0.358	0.300
Dividend changes	−1 to 0	0 to +1	−1 to +1	−1 to 0	0 to +1	−1 to +1
DPS increases (%)	36	36	32	60	42	52
DPS decreases (%)	9	0	5	6	17	6
Omissions (%)	14	32	23	9	14	15
Omissions cont. (%)	41	32	41	25	28	26
DPS same (%)	0	0	0	0	0	0
Difference tests	−1 vs. 0	0 vs. +1	−1 vs. +1	−1 vs. 0	0 vs. +1	−1 vs. +1
Wilcoxon/Mann–Whitney U-test	0.19	0.41	0.20	1.91**	−0.00	1.27

In Panel A, dividend ratio (total dividends/shareholders' paid-in equity) sample medians are calculated for the fiscal year ending before the announcement (−1), the announcement fiscal year (0) and the fiscal year after the announcement (+1). Similarly, in Panel B, "adjusted" dividends per share (total dividends/number of shares outstanding in the fiscal year before the announcement (−1)) is calculated for both the announcement fiscal year (0) and the fiscal year after the announcement (+1). In other words, dividends per share numbers are adjusted by using the pre-rights offering number of shares outstanding. Non-parametric Wilcoxon/Mann–Whitney U-test is used to detect the statistical significance of changes in median dividend ratios for three periods (−1 vs. 0), (0 vs. +1), (−1 vs. +1).

** Significant at 5%.

*** Significant at 1%.

Table 4 (Panel A) shows the dividend ratio medians for the fiscal year ending before the announcement (−1), the announcement fiscal year (0) and the fiscal year after the announcement (+1). "Ratio increases" shows the percentage of cases where dividend ratio increased; "ratio decreases" shows cases where dividend ratio decreased; "omissions" shows cases where dividend ratio moved from positive to zero; "omissions continued" shows cases where corporations continued to omit dividends relative to the previous year; and "ratio same" shows cases where dividend ratio stayed the same relative to the previous year. Overall, the results show that "unsweetened" rights offerings corporations do not tend to distribute cash dividends and dividend ratio is consistently 0 for fiscal years −1, 0, +1. "Ratio decreases", "omissions" and "omissions continued"

Table 5
Changes in liquidity

	ΔVOL	ΔRELVOL	ΔLR
Panel A: Unsweetened rights offerings			
Mean (*t*-statistic)	0.552 (1.32)	−0.138 (0.08)	0.568 (1.11)
Median (Mann–Whitney *U*-test)	0.745 (0.97)	0.117 (0.15)	0.815 (0.31)
Positive:Negative	15:7	12:10	13:9
Panel B: Sweetened rights offerings			
Mean (*t*-statistic)	0.307 (0.98)	−0.283 (1.25)	0.445 (1.43)
Median (Mann–Whitney *U*-test)	0.270 (0.71)	−0.317 (1.32)	0.434 (1.31)
Positive:Negative	42:33	22:43	45:30

The table shows three measures of the change in the liquidity of "unsweetened" and "sweetened" rights offerings comparing the liquidity for the before period (−120 to −21) relative to the announcement day to the liquidity for the *after* period (+21 to +120) relative to the ex-day. The change in liquidity (ΔVOL) is measured as $\ln(\mathrm{VOL}_i)_{\mathrm{after}} - \ln(\mathrm{VOL}_i)_{\mathrm{before}}$, where VOL_i is the average daily trading volume (in thousands TL) for security i. Similarly, the change in relative liquidity (ΔRELVOL) is measured as $\ln(\mathrm{VOL}_i/\mathrm{VOL}_{\mathrm{M}})_{\mathrm{after}} - \ln(\mathrm{VOL}_i/\mathrm{VOL}_{\mathrm{M}})_{\mathrm{before}}$, where VOL is the average daily trading volume for security i and $\mathrm{VOL}_{\mathrm{M}}$ is the average trading volume of the market. The change in the liquidity ratio (ΔLR) for security i is measured as $\ln(\mathrm{LR}_i)_{\mathrm{after}} - \ln(\mathrm{LR}_{\mathrm{i}})_{\mathrm{before}}$, where the liquidity ratio (LR) is measured as $\sum_{\mathrm{t}}(\mathrm{VOL}_{i,\mathrm{t}})/\sum_{\mathrm{t}}(|R_{i,\mathrm{t}}|)$, where $\mathrm{VOL}_{i,\mathrm{t}}$ and $|R_{i,\mathrm{t}}|$ are the trading volume and the absolute return respectively on stock i on day t. "Positive" and "negative" show the number of positive and negative changes respectively.

for the period (−1 to +1) make up 87% of the dividend changes supporting the tendency of "unsweetened" rights offering sample corporations towards not distributing dividends.

Non-parametric Mann–Whitney *U*-test is used to detect the statistical significance of difference in the median dividend ratio level in three periods (−1 versus 0), (0 versus +1), and (−1 versus +1). For "unsweetened" rights offerings, no statistically significant difference is detected for the dividend ratio supporting once again the tendency of not distributing dividends. For "sweetened" rights offerings, a statistically insignificant increase in the median dividend ratio is found for the period (−1 versus 0), and a statistically significant decrease is found between the pre (−1) and post (+1) rights offerings periods (median 30% versus median 16%), but it should be noted that with a full subscription and a median level of 165% increase in the number of shares (average 275%, see Table 1) translates into dividend rates 1.65 (2.75) times, indicating a positive signal in the dividend policy.

In order to eliminate the problem of underestimating the dividend policy performance by using the dividend ratio, "adjusted" dividends per share numbers are calculated and are shown in Table 4 (Panel B).[15] For "unsweetened" rights offerings, "adjusted" dividends per share results confirm the preceding finding that "unsweetened" rights offerings corporations tend to distribute no cash dividends to their shareholders. For "sweetened" rights offerings, "adjusted" dividends per share results show that median "adjusted" dividends per share increases at a statistically significant level in the announcement year (from 0.148 to 0.358) and no significant change is observed subsequently.

The preceding dividend policy results show that within the market settings of ISE, "unsweetened" rights offerings signal the tendency of corporations not to distribute dividends or to continue in omitting dividends and "sweetened" offerings signal an increase in dividends, especially in the announcement year.

[15] The sample size for "unsweetened" rights offerings decreases from 75 to 65 due to the lack of data for some corporations.

4.3. Enhanced trading liquidity test results

In Table 5, the mean and median change in raw trading volume (ΔVOL), the mean and median change in relative trading volume (ΔRELVOL) and the mean and median change in liquidity ratio (ΔLR) for "unsweetened" rights offerings are positive (except for mean change in ΔRELVOL), but all are statistically insignificant according to the parametric *t*-test and the non-parametric Mann–Whitney *U*-test results. The same is also the case for the mean and median ΔLR. For the "sweetened" rights offerings, both ΔVOL and ΔLR results are positive, but statistically insignificant at conventional levels. Both mean and median ΔRELVOL are negative indicating a decline in liquidity, but this liquidity measure is also statistically insignificant. The preceding results of the liquidity measures are thus inconsistent with the enhanced trading liquidity expectation, especially for the "sweetened" rights offerings, showing that there is no significant change in the liquidity (market depth) of the stocks.

5. Conclusions

This research investigates the market reaction to both "unsweetened" (plain) and "sweetened" (with simultaneous distribution of bonus issues) rights offerings in a unique institutional environment. The Istanbul Stock Exchange is an emerging European market where: (1) Corporations are closely held; (2) seasoned equity issues are almost without exception rights offerings; (3) the rights offerings are usually accompanied by bonus issues; (4) rights offerings are uninsured and fully subscribed; (5) the rights offerings as a percentage of the outstanding paid-in capital is significantly higher relative to the percentages in developed capital markets; (6) there is a uniform information disclosure procedure; (7) the market is predominately controlled by short-term investors and is highly volatile; and (8) there is a problem of persistent inflation. Within these institutional settings, the characteristics and motivations of corporations issuing new equity through these two offering methods are also investigated.

Using two clean samples of "unsweetened" and "sweetened" rights offerings for the period 1994–1999, empirical evidence shows that "unsweetened" rights offerings announcements result in a negative cumulative mean abnormal market reaction (CAR(0, +5)) of −7.1%. "Sweetened" rights offerings announcements result in a positive cumulative market reaction of 2.0% for the period (0, +2), but later on, this cumulative positive market reaction is reversed by subsequent statistically insignificant negative mean abnormal returns on Days 3–5. Overall, the cumulative abnormal return for the period (0, +5) is positive, but statistically insignificant. While the "unsweetened" rights offerings announcements result in a consistently negative market reaction, the "sweetened" rights offerings announcements result in a temporary positive reaction. Further research can be carried out on the issue of long-term stock performance of "unsweetened" and "sweetened" rights offerings corporations in order to test whether the preceding short-term stock performances hold in the long-run.

Similar to the market reaction results in developed countries, there is a negative announcement effect for "unsweetened" rights offerings, but to a greater magnitude. However, the negative market reaction is not due to the overvaluation signal as found in many developed markets but is due to the unfavorable information signaling effect. The times series examination of market-to-book ratio around the announcement fiscal year does not provide any evidence for the overvaluation signal. Overall, the "unsweetened" rights offering corporations are in cash tight position with low market valuation and the raised cash is likely to be used in solving the cash problem as well as in

lowering the financial leverage. Moreover, these corporations tend to omit dividends and continue omitting dividends after the offering.

The positive announcement effect in "sweetened" rights offerings provides some empirical evidence for the favorable information signaling effect. Corporations offering "sweetened" rights offerings have better operating performance, cash position and investment opportunities relative to their industry peers as well as relative to "unsweetened" rights offering corporations. At the same time, rights offerings accompanied by bonus issues signal positive operating performance and dividend policy only in the announcement year.

Bonus issues are regarded as "sweeteners" by investors, and corporations issue bonus shares simultaneously with the rights offerings in order to make the offerings more attractive. Typically, corporations in the ISE distribute cash dividends around the ex-rights day and investors use the dividend income to pay for the "sweetened" rights offering. In the Turkish market, the resulting transaction of using the dividend income to pay for the rights offering is characterized as a "split" resulting in a substantial increase in the number of free float shares (i.e., the "sweetener" split effect). However, the resulting transaction is only similar to a stock split in terms of distribution ratio, but not in terms of accounting standards. Investors welcome the "sweetened" rights offerings announcements in the Turkish capital market, since substantial increase in the number of free float shares is expected to result in enhanced trading liquidity and marketability. However, empirical results in the study do not provide any support for the enhanced liquidity effect and show no significant change in liquidity and market depth of stocks.

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