The Ex-Date Wealth Effect of Rights Offerings in the Philippines

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Rights offerings in the Philippines in the period January 1987 - March 1995 show significant market adjusted returns averaging 7.6% on ex-date. The excess returns are not driven by outliers, the sectoral mix of the offerings, nor by the large representation of 1994 offerings. We surmise that the excess returns represent a liquidity premium and hence, reflect a normalization of prices on ex-date. The prospects of illiquidity and a significant increase in investments in the stock could put downward pressure on stock prices (possibly soon after the announcement of the offering). We find a high correlation between excess returns and the proportion of capital rendered illiquid. The sample consists of 42 offerings by 28 companies with transactions for each of the 10 days surrounding the ex-date, out of a total 110 offerings by 63 listed companies during this period.

1. *Introduction and Review of Related Studies*

A rights offering is the issuance of new shares for the purpose of raising equity capital for the company. The right is a pre-emptive option given to shareholders to buy the new shares on a pro-rata basis relative to existing shareholdings.

The price of the new shares, or the offer price, is usually fixed and pre-set.[1] The stock exchange sets an ex-date that defines the time limit for new investors to buy already issued shares with the rights still attached to the shares. On ex-date, shares purchased through the exchange will no longer carry the rights. The stock will normally adjust to its ex-rights price corresponding to the increased number of shares and capital expected given the terms of the offering. The ex-date of the stock exchange is generally four trading days before the record date, which latter date is the basis for drawing up the list of shareholders entitled to the rights.

Typically, there is a time limit for the exercise of the pre-emptive right. Beyond this deadline, unexercised rights may be offered to other shareholders, to third parties, or will simply expire with the corresponding shares remaining unissued.

We are not aware of any previous study on rights offerings in the Philippines, but various researchers have studied rights offerings in more developed markets. Smith (1986) reviews the research literature on the theory and evidence on the capital acquisition process in the US and the associated effects on security prices. Among his general findings is that corporate announcements

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[1] A few companies have used a different pricing formula, e.g., the offer price is set as a certain fraction of the average of the actual trading prices of the stock over a specified period.

to raise external capital are associated with negative abnormal returns. Sales of common stocks are associated with larger negative returns than those of preferred stock or debt.

Related evidence by Marsh (1979) in the UK shows that rights offerings experienced significant price declines averaging 0.9% in the month of the issue. In one of the more recent studies however, Goyal, et al., (1994) found that in the Tokyo Stock Exchange, 248 rights offerings over the period 1975 to 1989 exhibited significant abnormal returns on ex-date averaging 7.1%. Moreover, the positive returns persisted in the 5-day period following ex-date. Returns in the 5-day period preceding ex-date were not significantly different from zero.

Goyal, et al., do not offer a theoretical explanation for the abnormal returns, but they do demonstrate that the abnormal ex-date returns are not driven by calendar time factors or by residual announcement effects, and are only partially driven by bid-ask spreads.

Smith (1986) discusses the various hypotheses that might explain the negative price effects of announcements of security issues in the US. Firstly, the announcement may signal a change in capital structure. Smith notes however that hypotheses involving the optimal capital structure are quite difficult to test. The announcement could also signal changes in expected net operating cash flows. A corporate decision to raise cash through a security issue may signal that the company has experienced lower-than-expected cash flow, which is of course bad news for shareholders.

Yet another hypothesis is premised on possible information asymmetry between the corporate manager and potential buyers of the security. Investors figure that a corporation is more likely to issue securities in periods when management assesses the price of the security to be above its intrinsic value. Finally, the announcement could signal a change in ownership and control of the company. The direction of the price effect in this case is more difficult to predict. Smith's review does show that security issues that increase ownership concentration tend to produce positive abnormal returns.

2. Research Issues, Data and Methodology

Due to the difficulty of establishing the dates of announcements of rights offerings, this study limits its investigation to wealth effects on ex-date and the 10-day period around ex-date.

In an efficient market, the wealth effect should occur on or soon after the announcement date. Ex-date effects should be negligible, particularly when there is a long interval between the announcement date and the ex-date.[2] As discussed in the literature review, the price impact of the rights offering on or soon after the announcement date may be positive or negative. Furthermore, the behavior of stock prices on ex-date will not necessarily be an indication of the direction of price reaction around the announcement date. For example, if ex-date abnormal returns are positive, this may be an indication of a residual positive effect of the announcement. On the other hand, it is possible that the announcement effect was negative, but the ex-date return may become positive if subsequently the market perceives the earlier negative reaction as excessive or unjustified. In either

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2 Rights offerings in the Philippines are generally announced weeks before the record date, in contrast to more developed markets where the interval may just be a matter of days. The delay here may be traced in part to approvals that the issuing company has to secure from the Securities and Exchange Commission and from its own shareholders.

case, an excess return on ex-date may suggest that information about the rights offering is still not fully incorporated in stock prices (or "fully discounted," to use the language of securities analysts).

It is also important to note that there are inefficiencies in market mechanisms associated with rights offerings in the Philippines. Firstly, rights are not exchange traded. A shareholder who does not subscribe will have difficulty recovering the price dilution that is expected on ex-date. If the offer price is at a significant discount from the prevailing market price, the resulting price dilution could mean a significant loss. On the other hand, a subscribing shareholder suffers from temporary illiquidity until the new shares are issued. The new capital paid is of course illiquid until the new shares are issued, while the portion of existing capital diluted is also frozen from ex-date until the new shares are issued. These considerations may reflect themselves in the price and trading patterns during the period from the rights offering announcement until ex-date.

A. The Wealth and Price Adjustment to a Rights Offering

The focus of the study is on the wealth effect of rights offerings on ex-date. To empirically determine this effect, it is necessary to convert prices on and around the ex-date into wealth relatives, i.e., comparable prices that reflect the new shares being acquired by the shareholder and the price paid for these shares. Unlike stock dividends and stock splits, a rights offering involves new capital for the company. A stock dividend merely increases the number of shares outstanding. Hence, in the case of a stock dividend, we simply divide prices before the ex-date by one plus the amount of stock dividends per share to establish the prices comparable to the ex-date price.

In the case of a rights offering, the financial impact of the new capital should be considered. In theory the wealth of shareholders on ex-date should be equal to the market value of existing shares plus the present value of the corporate activities funded by the additional capital. As noted above, in efficient markets the *NPV* of the new capital should be reflected in the price of the already issued shares soon after the announcement. Positive *NPV* projects should result in higher prices of the stock, while negative *NPVs* should correspondingly depress prices soon after the announcement. Prices on ex-date itself should just adjust to the additional shares and capital so as to maintain shareholder wealth at post-announcement levels.

Under this premise, the full adjustment price (P_0) on ex-date (Day 0) is a weighted average of the offering price (P_r) and the market price prior to ex-date (P_{-1}), appropriately weighted by the shares offered expressed as a fraction (N) of shares owned:[3]

$$P_0 = \theta P_{-1} + (1 - \theta) P_r \qquad \text{where} \qquad \theta = \frac{1}{1 + N}$$

The statistical test of wealth effects is based on the market adjusted returns model (Brown and Warner, 1985). Positive wealth effects are said to occur if the sample stocks earn a significant return in excess of that of the overall market on the relevant event dates.

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[3] For example, suppose a company offers to issue new shares at the price of P200 per share. Shareholders of record are entitled to purchase one new share for every five shares owned (N = 0.2). Suppose that P_{-1} = 800. Then the adjusted price at P_0 = (800 + 0.2 x 200)/1.2 = 700.

B. Sample

Data on rights offerings and stock prices were obtained from the Manila Stock Exchange (MSE) for the period 1987 to mid-1994. These were updated to March 1995 based on information in the monthly bulletins of the Philippine Stock Exchange.[4] Using these procedures, a total of 110 rights offerings were identified. The 110 offerings involved 63 issuing companies (many companies undertook more than one offering over the 1987-1995 period). Of the 63 companies, 32 were listed under the commercial-industrial (C-I) board, while 27 were in the mining and oil boards (see Table 1). The frequency of offerings by oil and mining companies is evident. Of the total 110 rights offerings during this period, 57 (52%) were undertaken by oil and mining companies. This contrasts with the sectoral distribution of companies listed in the stock exchange where mining and oil companies constituted 34% of the total of 189 companies at year-end 1994.

Table 1
Total and Sample Offerings, January 1987-March 1995

	Commercial -Industrial	Mining Stocks		Oil Stocks		Total
		Big Board	Small Board	Big Board	Small Board	
Total						
Offerings	53	7	25	15	10	110
Companies	32	3	16	5	7	63
Sample						
Offerings	16	2	7	12	5	42
Companies	13	2	5	4	4	28

The study limits the investigation to wealth effects on ex-date and the five trading days before and the five days after the ex-date. If a stock did not trade on any of these days, then data for this particular offering are excluded from the study. This criterion results in a total sample of 42 offerings involving 28 companies. Of the 42 offerings, 26 are for mining and oil stocks while of the 28 companies, only 13 are in the commercial-industrial (C-I) sector. Of the 16 offerings by C-I companies, four are by holding companies, three are by property development companies, two each are by mutual funds, telecommunication companies and banks, and one each are by packaging, pharmaceutical, and fertilizer manufacturing firms.

If a stock's rights offering involved both "A" and "B" shares, only the "A" share data are included. Closing prices in the Manila Stock Exchange (MSE) are used while the MSE Composite Index is utilized to represent overall market performance. Subsequent to the merger of the two exchanges, closing prices and the overall index of stock prices, Phisix, of the Philippine Stock Exchange are used.

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[4] The Manila Stock Exchange made available its computer files on rights offerings. The data appear fairly comprehensive but cannot be said to be complete, e.g., we identified several rights offering not recorded in these files.

3. Results

Table 2 reports the (equally weighted) daily market adjusted return for the rights offerings in our sample. The mean ex-date unadjusted return is 7.4% which, given the -0.3% return on the stock price index, results in a significant market adjusted or excess return of 7.6%.

Table 2
Mean Return Around the Ex-Date of Rights Offerings, n=42

Event Day	Unadjusted Return (%)	
Stock: Ex-Date	7.4	
Index : Ex-Date	- 0.3	
Day:	**Market Adjusted Return (%)**	***t*-Statistic**
- 4	- 0.7	- 1.455
- 3	- 0.7	- 1.165
- 2	0.2	0.227
- 1	- 0.5	- 0.659
0 (Ex-Date)	7.6	3.604**
+ 1	- 0.1	- 0.118
+ 2	0.2	0.209
+ 3	1.6	2.126*
+ 4	0.7	1.197
+ 5	0.8	1.019
- 4 to - 1	- 1.9	- 1.607
+ 1 to + 5	3.4	1.765

** Significant at the 1% level.
* Significant at the 5% level.

While the mean excess return over the five days after the ex-date is positive, statistically this is not significantly different from zero (although day +3 shows a positive return of 1.6% which is statistically significant at the 5% level.) Notably, neither is the negative return of the five-day period preceding the ex-date significant.

83% of the 42 sample offerings showed positive market-adjusted returns on ex-date, suggesting that the excess return is not due to outliers. Even after high return (of more than 10%) offerings are excluded, the remaining sub-group still averaged a positive excess return of 2.7%, which is statistically significant at the 1% level ($t = 2.74$, $n = 32$).

1994 offerings account for about 28% of total rights offerings during this period. The preponderance of 1994 offerings is even more pronounced in the sample, where they constitute 43% of the 42 offerings. In order to test whether overall ex-date returns are mainly due to the performance of these 1994 offerings, the sample was sub-grouped into 1994 and non-1994 offerings. Both groups showed statistically significant positive returns,[5] suggesting that excess ex-date returns are not driven by the 1994 sub-group.

As previously shown in Table 1, there is also a preponderance of mining and oil stock offerings, and hence our sample represents a less diversified group than the overall market. Tests on sectoral groupings show that more diversified subgroups also exhibit excess returns. The mean excess return is significant for purely commercial-industrial stocks, and for the sub-group which excludes small board mining and oil stocks (Table 3).[6]

Table 3
Ex-Date Returns of Sectoral Groups

Sector	Market Adjusted Return (%)	n	*t*-Statistic
Commercial-Industrial	4.1	16	2.300*
Commercial-Industrial and Big Board (Mining and Oil)	5.7	30	3.309**

** Significant at the 1% level.
* Significant at the 5% level.

The significant excess return is particularly notable given certain disadvantages associated with a rights offering. New shares are typically offered at a significant discount from the prevailing market price: the equally weighted mean discount in our sample is 46.5%. Shareholders stand to suffer significant dilution if they do not exercise their rights. In more mature markets, rights are traded in the exchange, providing a mechanism for such shareholders to offset dilution costs. In the Philippines, there is no such organized market. A shareholder must exercise his rights, or sell his shares before the ex-date to avoid an outright loss.

The subscriber to a rights offering faces the prospect of illiquidity given the long interval between ex-date and the issuance of the new shares.[7] The price adjustment on ex-date renders a portion of existing capital illiquid, i.e., the value of the price decline of existing shares will now be reflected in the increment of adjusted market price over the offer price for the new shares. On average, 24.5%

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5 1994 offerings had a mean excess return of 6.0% which is statistically significant at the 5% level ($t = 2.228$, $n = 18$), while non-1994 offerings had a mean excess return of 8.6% which is statistically significant at the 2% level ($t = 2.735$, $n = 24$).

6 Small board stocks are mining and oil stocks with a limited record of earnings and dividends. The classification was intended to signal potential risks in the stocks. The new Philippine Stock Exchange has removed this classification.

7 Data on issuance dates of new shares are not available. Data on payment dates however indicate that on average, the minimum period during which existing capital stays illiquid is 94 days. This is based on the average interval between ex-dates and payment dates for 61 offerings with available data on payment dates.

of existing capital becomes illiquid on ex-date. The additional capital provided by subscribing shareholders are also rendered illiquid until the new shares are issued.

Another significant disadvantage associated with a rights offering is that it generally requires an investor to substantially increase his exposure to the stock. Given the price discount and the average fraction of new shares being offered, the mean proportion (equally weighted) of new capital to the market value of existing shares in the sample is 43.9%.

All these suggest that there may be some selling pressure prior to ex-date from shareholders who cannot or do not wish to exercise their rights because of either liquidity concerns or capital constraints. Such pressure should disappear on ex-date when the stock trades ex-rights. Price levels should then normalize, i.e., to the price-earnings ratio prevailing before the selling pressure occurred. Such a scenario could lead to excess returns on ex-date.

Stock performance prior to ex-date shows average market adjusted returns that are generally negative, but these are not statistically significant.[8] It is possible that the selling pressure occurs well before the five-day period preceding ex-date.[9] Unfortunately, the limited data do not allow a further investigation of this possibility.

There is however indirect evidence of a liquidity premium. It may be hypothesized that the downward pressure is greater the bigger the portion of capital rendered completely illiquid. If so, rights offerings that tie up a bigger portion of capital should manifest higher excess returns on ex-date. To explore this question, a measure of illiquidity was developed, based on closing prices on day -1 and the offer terms. The portion of capital that is potentially locked up is the sum of the new investment and the price dilution on the existing shares. This is then computed as a percentage of total investment, i.e., the market value of existing shares reckoned at day -1 closing prices and the new investment. A correlation of this measure with ex-date returns proved to be highly significant (at the 1% level, with r=0.53) and shows that the illiquidity measure[10] accounts for 26 % of the variation in ex-date returns.

4. *Summary and Conclusions*

This exploratory investigation of rights offerings in the Philippines has shown that there are significant market adjusted returns that occur on ex-date. The excess returns are not due to outliers, nor are they driven by the sectoral mix of the offerings, or by the large representation of 1994 offerings.

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[8] Except for the 1994 offerings which showed negative returns between day -5 to day -1 of -4.9%, which is statistically significant at the 5% level (t = 2.387, n = 18).

[9] It has been suggested to this writer that the selling pressure should be strongest on the day before ex-date, on the argument that no one will unnecessarily or prematurely give up a valuable option. While indeed day -1 excess return is negative, it is not statistically significant.

[10] This measure is highly correlated with the measure of new capital raised (r = 0.70).

We surmise that the excess returns reflect a normalization of prices in the ex-rights period. A rights offering generally requires shareholders to significantly increase their investment in the company and renders a good portion of the investor's capital illiquid. These considerations could put downward pressure on stock prices, possibly soon after the announcement of the offering. We find a high correlation between excess returns and the proportion of capital rendered illiquid.

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