Corpfin module 14: Rights issues practice problems

(The attached PDF file has better formatting.)

** Exercise 14.1: Rights issue

- The common stock of firm ABC is trading at $100 a share with 1 million shares outstanding.
- A rights issue allows each holder of a share on July 1, 20X1, to buy two new shares at $70 a share.
- Half the shareholders (Group Y) buy new shares with the rights offer.
- Half the shareholders (Group Z) sell their rights to new investors (Group W).
- Investors in Group X buy shares in the free market on July 2.

A. If all rights are exercised, how many new shares are issued?
B. What is the value of the firm after all rights are exercised?
C. What is the stock price on July 2 paid by investors in Group X?
D. What is the value of a right to buy one new share (Group W pays to Group Z)?
E. What is the gain or loss to existing investors from the rights issue?

Part A: One million shares are outstanding before the rights issue. Each share gives a right to buy two new shares at below their market price, so all rights will be exercise. Two million new shares are issued, for a total of three million shares.

Part B: The firm is worth 1 million shares × $100 per share = $100 million. The right issue brings new cash of 2 million shares × $70 per share = $140 million. The value of the firm after the rights issue is $100 million + $140 million = $240 million.

Part C: After all rights are exercised, the firm is worth $240 million / 3 million shares = $80 per share.

Question: Perhaps some investors have not yet exercised their rights. If only 100,000 rights have been exercised, the firm is worth $107 million and have 1.1 million shares.

Answer: The stock market is efficient. Investors know that all rights will be exercised, so the stock price goes immediately to the price after all rights are exercised.

Part D: The shares are worth $80 apiece after July 1, and they give the right to buy a share of $70. Each right is worth $80 – $70 = $10.

Part E: An investor with one share before July 1 has a $100 investment in the firm. On July 1, the investor pays 2 × $70 = $140, buys two more shares. All three shares are now worth $80 apiece, so the investor has a $240 investment in the firm. The higher value of the investment ($240 – $100 = $140) is the cash paid by the investor. The gain or loss is zero.

Question: Is it common for a firm with $100 million of market value to raise another $140 in a rights issue?

Answer: Normally, a right issue allows purchase of one new share for 3 or 4 shares now held. Some final exam problems say that an investor holding 2 shares (or 4 shares) can buy one new share at the lower price.

See Brealey and Myers page 381

** Exercise 14.2: Rights issue

- The common stock of firm ABC is trading at $100 a share with 1 million shares outstanding.
- A rights issue allows each holder of a share on July 1, 20X1, to buy two new shares at $70 a share.
- Half the shareholders (Group Y) buy new shares with the rights offer.
- Half the shareholders (Group Z) sell their rights to new investors (Group W).
- Investors in Group X buy shares in the free market on July 2.

Firm ABC will use the additional cash for projects with a net present value of zero.

Ignoring issue costs and underwriting costs, who gains the most from the rights issue?

A. Firm ABC
B. Group Y
C. Group Z
D. Group W
E. Nobody gains or loses from the rights issue

Answer 14.2: E