FINA1082 – FINANCIAL MANAGEMENT

Long Term Financing

Tutorial Solution for Lecture 19

A. Short Answer and Discursive Questions

A1. Question 11 of BMA 10Edition

Why are the costs of debt issues less than those of equity issues? List the possible reasons.

There are several possible reasons why the issue costs for debt are lower than those of equity, among them:

- The cost of complying with government regulations may be lower for debt.
- The risk of the security is less for debt and hence the price is less volatile. This decreases the probability that the issue will be mis-priced and therefore decreases the underwriter's risk.

A2. Question 12 of BMA 10Edition

There are three reasons that a common stock issue might cause a fall in price: (a) the price fall is needed to absorb the extra supply, (b) the issue causes temporary price pressure until it has been digested, (c) that managers issue shares only when their shares are overvalued. Explain these reasons more fully. Which do you find most plausible? Is there any way that you could seek to test whether you are right?

a. Inelastic demand implies that a large price reduction is needed in order to sell additional shares. This would be the case only if investors believe that a stock has no close substitutes (i.e., they value the stock for its unique properties).

b. Price pressure may be inconsistent with market efficiency. It implies that the stock price falls when new stock is issued and subsequently recovers.

c. If a company's stock is undervalued, managers will be reluctant to sell new stock, even if it means foregoing a good investment opportunity. The converse is true if the stock is overvalued. Investors know this and, therefore, mark down the price when companies issue stock. (Of course, managers of a company with undervalued stock become even more reluctant to issue stock because their actions can be misinterpreted.)

If (b) is the reason for the price fall, there should be a subsequent price recovery. If (a) is the reason, we would not expect a price recovery, but

the fall should be greater for large issues. If (c) is the reason, the price fall will depend only on issue size (assuming the information is correlated with issue size).

A3.

Discuss the advantages of convertible bonds to companies

- Convertible bonds are good when in the directors' opinion; the company's ordinary share price is depressed and so does not reflect the true worth of the company.
- Directors may convert to raising finance using convertible bonds because they feel that an immediate issue of new equity would cause an unacceptable large fall in earnings per share
- Convertible bonds are also attractive because they usually, like ordinary shares, pay fixed interest, making financial forecasting and planning somewhat easier.
- Issuing convertible bonds allows a company to pay a lower rate of interest than it would pay if it were to issue straight bonds of a similar maturity.
- As interest payments on bonds are tax deductible, issuing convertible bonds may decrease the overall cost of capital.
- Convertible bonds allow companies to push their gearing beyond a level normally considered acceptable by creditors.
- If the conditions governing conversion were assessed correctly at the time of issue, the issuing company does not have to find cash to redeem them, whereas straight bonds must be redeemed or refinanced on maturity.

B. Problems

B1. Question 2 of BMA 10Edition

The authorised share capital of the Alfred Cake Company is 100,000 shares. The equity is currently shown in the company's books as follows:

Company stock ($0.50 par value	$40,000
Additional paid-in capital	10,000
Retained earnings	30,000
Common equity	80,000
Treasury stock (2,000 shares)	5,000
Net common equity	$75,000

a. How many shares are issued?

b. How many are outstanding?

c. How many more shares can be issued without the approval of shareholders?

d. Suppose that Alfred Cake issues 10,000 shares at $2 a share. Which of the above figures would be changed?

e. Suppose instead that the company bought back 5,000 shares at $5 a share, Which of the above figures would be changed?

a. 40,000/.50 = 80,000 shares

b. The shares outstanding will exclude the treasury stock therefore 80,000 – 2,000 = 78,000 shares

c. Authorised share capital is the maximum shares that can be issued therefore 100,000 – 80,000 issued = 20,000 shares can be issued

d. Company Stock increases by 10,000 * $0.5 = $5,000
Additional Paid-in Capital increases by ($2-$0.5) * 10,000 = $15,000
Retained Earnings and Treasury stock will not be directly affected by the issue of new shares.

The New figures will be:

Company stock ($0.50 par value	$45,000
Additional paid-in capital	25,000
Retained earnings	30,000
Common equity	100,000
Treasury stock (2,000 shares)	5,000
Net common equity	$95,000

e. When the company buys back shares, Treasury stock increases by 5000 shares* $5 = $25,000 to $30,000

Company stock ($0.50 par value	$40,000
Additional paid-in capital	10,000
Retained earnings	30,000
Common equity	80,000
Treasury stock (2,000 shares)	30,000

Net common equity	$50,000

B2.

Associated Breweries is planning to market unleaded beer. To finance the venture, it proposes to make a rights issue with the subscription price of $10. One new share can be purchased for each two shares held. The company currently has outstanding 100,000 shares priced at $40 a share. Assuming that the new money is invested to earn a fair return, give values for the following:

a) Number of new shares.

   Number of new shares = 50,000 since one new share will be issued for every two of the outstanding 100,000 shares.

b) Amount of new investment

   New investment = 50,000 shares × $10 per share

   = $500,000

c) Total value of company after issue.
   = $4,000,000 original value
   + 500,000 new investment
   $4,500,000 total value of company after issue

d) Total number of shares after issue.
   = 100,000 original shares
   + 50,000 new shares
   150,000 total shares

e) Share price after the issue.
   $4.5 million/150,000 = $30 per share.

B3.

Nolig plc has in issue 2 million ordinary shares of par value £1.00, currently trading at £2.20 per share. The company decides to raise new equity funds by offering its existing shareholders the right to subscribe for one new share at £1.85 each for every four shares already held. After the announcement of the issue, the ordinary share price falls to £2.10 and remains at this level until the time of the rights issue.

a) What is the theoretical ex-rights price?
b) Calculate the value of the rights attached to four Nolig shares.
c) If Rose, a shareholder, owns 1000 shares in Nolig plc, how will Rose's wealth be affected in each of the following scenarios?
   i. Rose subscribes for all new shares in the rights issue.
   ii. Rose sells all her rights.

iii. Rose takes no action over the rights issue.

a)

Cum rights price,	=£2.10
New issue price or subscription price,	=£1.85
Number of old shares	=2 million
Number of new shares	=0.5million
Total number of shares	=2.5 million

The Theoretical ex-rights price, P_e = $\frac{(4\times 2.10)+(1\times 1.85)}{2.5} = £2.05$

b)

Value of the right = Theoretical Ex-rights price - Subscription price
= £2.05 – 1.85 = £0.20

Note: This is the amount that an investor would be prepared to pay in exchange for the rights attached to the four shares, as he could then pay £1.85 for a share which would be worth £2.05 on the equity market.
The value of the rights can also be expressed as 20p/4 = 5p per share

c)

i) Rose subscribes for 250 new shares given the 1000 old shares and a 1 for 4 rights issue

1000 shares cum-rights @ £2.10 =	£2,100
Cash for 250 new shares @ £1.85=	£462.50
1250 shares ex-rights @ £2.05=	£2562.50

Rose's overall wealth position is unchanged (as 1250shares * £2.05 = 2562.50 same as the sum above) if she subscribes for the new shares, even though some of her wealth has changed from cash into ordinary shares.

ii) Rose sells her rights:

1000 shares ex-rights @ £2.05=	£2,050
Sale of rights, 1000 @ 5 pence=	£50
Wealth position after rights issue	£2,100

Rose's wealth position is also unchanged (given her original holding is 1000 shares * £2.10 =£2,100) if she sells her rights: the effect here is that some of her wealth has changed from ordinary shares into cash.

iii) Rose takes no action over the rights issue

Initial position, 1000 shares @ £2.10 =	£2,100
Final position, 1000 shares @ £2.05 =	£2,050
Decline in wealth by doing nothing	£50

Rose's wealth has declined because the price of her shares has fallen from the cum-rights value to the ex-rights value.