

Exam I Spring 2008 FINC 4532 Answer Key

Closed book

1. Usually the phrase “maximize shareholders wealth” is listed as the best way of expressing the primary goal of a firm’s financial managers, while “asset substitution” is a serious agency problem. Describe a situation where “asset substitution” could be consistent with “maximizing shareholders wealth.” Be precise in defining asset substitution.

Asset Substitution problem occurs when riskier assets are substituted for firms existing assets. The shareholders take a gamble with debt holder’s money by substitution. If gamble pays off big, shareholders win! Debt holders “set amt”. If loss, debt holders lose. This expropriation of wealth from debt holders to shareholders could be consistent with shareholder wealth maximization.

2. Explain why the statement, “We would generally expect the value of a firm to be unaffected by agency problems,” could be a true statement.

Let the shareholder be the A basic tenet of agency theory is that the agent bears the cost of agency conflicts, except in the case of moral hazard. Thus, if a principal knows everything the agent does, the agent bears the agency cost (in the form of reduced compensation) and the wealth of the shareholder is not impacted. Under the Principle of Self-Interest, the agent is less likely to take actions which did not benefit principal. In a perfect capital markets world, a principal could monitor all agent’s actions at no cost and eliminate even the risk of moral hazard.

3. One of the most obvious examples of moral hazard (the possibility of agent misbehavior) involves employee decisions that affect personal benefits, or perquisites. These include _____.

b. the use of a company car for personal business

4. The most common method of external firm financing for publicly traded firms is:

d. Selling bonds

5. (4 points) Which announcement would have the greater negative impact on a firm’s current stock price; issuing new equity via a Rule 144A placement or via a Rule 415 placement? Why is your answer correct.

Either answer could be correct. I looked for definitions of each rule, then a discussion of agency, contracting, and signalling costs. Below is one accepted answer.

I believe Rule 144A would have greater negative impact. The Rule 415 placement- aka shelf registration is when firm placed securities on “shelf” until later time (within 2 yrs) to sell securities-adds flexibility to financing. The 144A is in Private Placements is when unregistered securities sold to investment bankers to be sold to QIBs (Qualified institution buyers) and equated to a underwritten public offering. Since issuing stock usually has a negative impact on stock price, the immediate issuance implied by the Rule 144a would have larger negative impact than the potential issuance implied by the Rule 415 shelf registration. Note, this answer could be different if the shelf registration occurred in the past, and the announcement is for the immediate issuance under Rule 415.

6. Preferred stock is a hybrid security that is often viewed a form of “expensive” debt.

a. True **b. False**

7. List the four basic rights of shareholders.

1- Voting Rights, 2- Dividend Rights, 3- Liquidation rights, 4- Pre-emptive Rights

8. Which of the following statements is false?

d. Liquidation value is usually higher than reorganization value.

9. Which of the following is the optimal managerial contract?
 \$61 a. Contracting costs are \$5, Monitoring Costs are \$15, and Misbehavior Costs are \$41.
 \$60 b. Contracting costs are \$40, Monitoring Costs are \$15, and Misbehavior Costs are \$5.
 \$53 c. Contracting costs are \$15, Monitoring Costs are \$27, and Misbehavior Costs are \$11.
 \$47 d. Contracting costs are \$15, Monitoring Costs are \$15, and Misbehavior Costs are \$17.
\$40 e. Contracting costs are \$13, Monitoring Costs are \$5, and Misbehavior Costs are \$22.
10. A questionable motive two firms may have for merging include _____.
c. to realize financial synergy AKA REDUCE DEBT and PRINCIPLE Risk-Return Tradeoff
11. Financial synergy is more likely than business synergy to be a good reason to merger two firms.
 a. True **b. False** **Business synergy (asset) is likely to be more important than financial synergy (debt)**
12. The disadvantage of a proxy contest relative to a tender offer is that few succeed.
a. True b. False
13. Empirical evidence suggests that mergers tend to produce synergy and that the stockholders of acquired firms tend to benefit handsomely.
a. True b. False
14. Which of the following is false?
e. All of the above are true statements.
15. _____ permits the bankruptcy court to confirm a proposed plan over the objections of one or more classes of creditors.
b. The cramdown procedure
16. (4 points) You read the following headline, "Pill did not work, Pac-man was defeated, greenmail not an option," about a stock you own. Does this make you happy or sad? Explain your answer
If you own the stock, you are happy. Lots of people are attempting to buy your stock (take it over) and your stock price will go up...be happy! Each of the items listed, poison pill, pac-man, and greenmail, are tactics used to prevent a takeover and therefore prevent shareholders from getting a higher price for their stock.

Exam I Spring 2008 FINC 4532 Open Book

1. (4 points) Your business has experienced some financial distress. Your assets have a two-thirds chance of being worth \$1,800 and a one-third chance of being worth \$900 at year's end. Your debt is \$900 and due at the end of the year. Your creditors (or debtholders) will receive \$1,000 when the assets are high and \$800 when they are low. What is your expected payoff?

Equity is like a call option, thus the payoff at expiration is the Maximum of (Asset value – debt face value) or 0. Your payoff is $\frac{2}{3}$ max of (1800-1000) or 0 and $\frac{1}{3}$ of max of (900-800) or 0. Restated payoff is $\frac{2}{3} \cdot 800 + \frac{1}{3} \cdot 100 = 566.67$

2. (4 points) Your assets have an equal chance of being worth either \$1,600 or \$800 at year's end. Your debt is \$1,000 and due at the end of the year. Now suppose you substitute your current assets for riskier assets that have the same expected value but a wider dispersion. The riskier assets now have equally likely payoffs of \$1,800 and \$600. With the same expected value, the asset substitution renders a zero NPV. Does this mean that you are just as well off?

d. You are even better off because you have gained \$100 in expected value

Same logic as number 1. **Your current payoff is 50% max of (1600-1000) or 0 and 50% max of (800-1000) or 0, with an expected value of 300. If you substitute the riskier asset, your expected payoff is 50% max of (1800-1000) or 0 and 50% max of (600-1000) or 0, with an expected value of 400. The change from an expected 300 to 400 is net 100 to you to do the asset substitution.**

3. Carrollton Utilities currently has 4,000 shares with a market price of \$12.50. They announce a rights offering of 500 shares with a subscription price of \$8 per new share during the 16-day subscription period.

a. (3 points) How many rights will be needed to purchase a new share?

$$\text{Outstanding/New offer} = 4000/500 = 8 \text{ rights}$$

b. (3 points) What is the market value of each right given this stock price?

$$R = \frac{Pr - S}{N + 1} = \frac{12.50 - 8.00}{8 + 1} = .50$$

c. (4 points) Assuming all of the rights are exercised, and no information was conveyed by the rights announcement, what is the expected stock price after the rights offering?

$$\frac{54000}{4500} = \$12. \text{ Or } 12.50 - .50 = 12$$

4. (4 points) Astral Telecom and Bright Wiring will merge. Astral has a total market value (VA) of \$285M (M = million), and Bright has a total market value (VB) of \$210M. Their merger will lead to operating efficiencies and will produce a synergistic effect of \$15M. Answer the following questions. If the NAM is -\$31, and expenses to complete the merger are \$5, what premium is being paid?

$$NAM = [Vab - (Va + Vb)] - Pb - Exp \quad [Vab - (Va + Vb)] = \text{synergy } 15 \quad Vab = 15 + 285 + 210 = 510$$

$$-31 = [510 - (285 - 210)] - Pb - 5 \quad Pb = 41 \quad \text{Premium paid } \$41$$

5. Fill in the Blanks (15 points).

The Peta Company acquires the Nofer company in a stock-for-stock deal.

| | # Shares | P/E | EPS | Stock Price | NI | MV |
|------------------|------------|-------|--------|-------------|---------|-----------|
| Peta | 14,000 | 42 | \$.19 | 7.98 | 2660 | 111,720 |
| Nofer | 100,000 | 17 | \$1.30 | 22.10 | 130,000 | 2,210,000 |
| Combined Company | 290,942.36 | 17.50 | .456 | 7.98 | 132,660 | 2,321,720 |

$$\text{Stock Price} = PE * EPS$$

$$NI = EPS * \# \text{ shares}$$

$$MV = \# \text{ shares} * \text{Price}$$

$$\# \text{ shares} = MV / SP$$

$$EPS = NI / \# \text{ shares}$$

$$PE = \text{Price} / EPS$$

6. ACCOUNTS PAYABLE \$20.0 7.50+1.38=8.86

NOTES PAYABLE (BANKS) 9.5 1.03

ACCRUED WAGES .3 .3

FEDERAL TAXES 1.5 1.5

STATE/ LOCAL TAXES 1.2 1.20

FIRST MORTGAGE \$ 12.0 9.90+.23=10.13

SECOND MORTGAGE 11.5 0+1.25=1.25

DEBENTURES 15.0 1.63

PREFERRED STOCK \$ 8.0 0 COMMON STOCK 65.0 0

PAID-IN CAPITAL 2.0 0 RETAINED EARNINGS -99.0 0