

Key

YOUR NAME _____ EXAM 3 FINC 4531 FALL 2009
YOU HAVE 120 MINUTES TO COMPLETE BOTH PARTS OF THIS EXAM

Instructions:

- 1) The part of the exam is closed book and closed notes. No scrap paper is allowed; use the back of the exam if necessary.
- 2) True/False questions are worth 2 points. Multiple-choice questions are worth 3 points. Short answer/Fill in the Blanks questions usually take less than three sentences and are worth 4 points.

B

1. A financial manager of a corporation is considering different operating strategies for the coming year. From a financial management standpoint, which one of the following would be her optimal strategy?

- a. reducing the overall risk level of the firm
- b. maximizing the current value of the stock
- c. maximizing current year profits
- d. maximizing cash flows
- e. minimizing the cost of debt

AN
10

2. (2 points each, all or none on grading) Real Options – fill in the blanks. The following real options are from my tough economic times series of real options. If you need to describe the option more fully, write your description near the question. For the record, the type of option is either call or put. The underlying asset refers to the item that, upon a change in value, will affect the decision to exercise or not exercise the option. Write additional information if you feel it is needed to explain your answer.

a. The number of people applying for Social Security at age 62 instead of waiting until age 65 is up by 25%. A person getting Social Security at age 62 draws about 30% less money than if one waits until age 65, and if this person starts to work again, they pay taxes on their income and on their social security earnings.

Type of option Call Who is long Person Who is short US Govt Underlying Asset PU of Social Security
Exercise Price the case of could be higher future taxes

b. In Florida there is a minimum mandatory prison sentence of 5 years for anyone using a gun in a felony crime. Because of prison overcrowding, almost no one gets more than the minimum sentence. Danny, a Florida resident, was laid off from work after 30 years at age 59. Danny is now unemployed, hungry, has no insurance, and have lost his house to foreclosure. Danny finds a gun lying on the street.

Type of option Put Who is long Danny Who is short Florida Underlying Asset Prison room
Exercise Price commit felony with gun

c. Same scenario as part B, with one extra fact. Federal law has a three year minimum sentence. Robbing a bank is a Federal crime. Federal prisons are of higher quality and nicer locations than Florida state prisons. Danny is trying to decide between robbing a bank or a convenience store.

Type of option either Who is long Danny Who is short Federal Govt Underlying Asset 3 yrs Prison
Exercise Price Rob bank

d. The Federal Deposit Insurance Corporation insures deposits, up to \$250,000 in banks. There have been four banks in Carroll County fail in the past year. No depositor has lost any money and no depositor has had to wait more than one week to get their money from a failed bank. However without insurance, the average depositor would have lost about 40% of their money and would have waited about one year. Describe the depositor's real option.

Type of option Put Who is long Depositor Who is short Govt Underlying Asset Deposit
Exercise Price Bank failure

e. A famous football coach, Bobby Bowden, did not have his contract renewed last week by Florida State University and was forced into retirement. Instead of receiving a \$2.5 million dollar salary next year, Bobby Bowden will receive an immediate severance payment of \$1 million.

Type of option Put Who is long FSU Who is short Bobby Underlying Asset next year's football income
Exercise Price 1 million

3. (4 points) Two investment opportunities have the same total cash flows. This means that with a discount rate of 0%, their cash flows have the same sum. Choose the combination from the following three aspects of capital budgeting that will give the fastest Payback Period (hint, change each of the aspects one at a time, assume the projects are identical except for this change). CHOOSE THE BEST ANSWER.

- | | | | | | | |
|---|--------------------|--------------------------------------|--------------------|-------------|-------------|-------------|
| A | Project Risk | Depreciation (to zero salvage value) | Cost of Financing | | | |
| | 1. High | 4. straight line | 7. high cost | | | |
| | 2. Low | 5. MACRS | 8. low cost | | | |
| | 3. does not matter | 6. does not matter | 9. does not matter | | | |
| | a. 3, 5, 9 | b. 1, 5, 8 | c. 1, 4, 7. | d. 3, 6, 9. | e. 3, 4, 9. | f. 2, 5, 8. |

15,7 OK
3,5,9 Best
1,5,9 OK

4. Suppose that inflation unexpectedly increases. What would you expect to happen to the value of a firm's planned capital budgeting projects?

2 issues We do not know
increase WACC, therefore lower NPV
Increase Revenues & Expenses, while fixed are \$
Fixed probably raises profits over increases NPV

5. Seldon Wright, an analyst for the Catamount Manufacturing Co., is pondering which discount rate to use in his NPV analysis of a new project. If the company goes forward with the project, they plan to use existing cash on hand to make the investment. What should Seldon do?

- E
- a. Seldon should not impose any required cost of capital on the project since the cash is already on hand.
 - b. Seldon should use the cost of debt for the portion of cash on hand that was raised by debt but should not include any cost of equity since internally generated capital is free.
 - c. Seldon should evaluate the project at the firm's cost of equity since internally generated cash flow is not free and belongs to stock holders.
 - d. Seldon should evaluate the project at the weighted average cost of capital since this will ensure that shareholders economically break even on average.
 - e. Seldon should evaluate the project at the return appropriate for its risk since this return is the correct opportunity to investors.

6. You are advising a friend who is attempting to decide whether or not to drop one of the required courses they are currently enrolled in. The friend expects to fail the course. If they drop the course, they will forfeit half of the money spent on tuition. Which of the following statements made by your friend are consistent with capital budgeting principles?

- C
- I. Remaining in the class incurs opportunity cost because they cannot work as many hours at their part-time job. ✓
 - II. The tuition refund is irrelevant, as the initial tuition was paid at the beginning of the semester. ✗
 - III. You must retake the course in a later semester. ✓
- a. I only b. I and II only c. I and III only d. II and III only e. I, II, and III

7. About six months before an option expires, you observe a stock price of \$ 55, an exercise price of \$50, and an option price of \$8.50 and \$3. If investors are rational, the lower priced option must be:

- F
- a. an in-the-money call.
 - b. an in-the-money put.
 - c. an at-the-money call.
 - d. an at-the-money put.
 - e. an out-of-the money call.
 - f. an out of the money put.
- cost of money put

8. The overall process of capital budgeting can be broken down into five steps as a project moves from idea to reality. Name the most important step and briefly discuss why it is the most important.

Hi Idea, positive NPV is driven by good idea. The analysis confirms the intuition
CF, riskiness

9. (3 points) Strategic NPV = $\frac{1}{\text{Passive NPV}} + \frac{2/1}{\text{Value of Option}}$
 + $\frac{\text{Cost of Options}}{a}$ + _____ (note you may not need all of the blanks)

B

10. ~~4x~~ Soft capital rationing refers to the rationing imposed externally by limited funds for borrowing from outside sources.
 a. True
 b. False

11. In plain English (i.e., as if you explaining this to marketing major), explain what it means to say "on this million dollar investment, the PI equals 1.4."

PI of 1.4 implies return of \$1.40 for every \$ invested, in today's dollars, thus we get 40% rate in today's \$ for this \$1 million invest

gen \$1.40 -3
 PV=2

Consider the following possible problems that arise in using alternative capital budgeting decision rules, such as IRR or NPV, etc. Then, in the next three problems, choose the problems associated with the technique identified.

- I. Ignores time value of money ~~x~~
- II. Ignores the more distant cash flows ~~x~~
- III. May give ambiguous results, e.g., multiple answers ~~x~~
- IV. May not correctly distinguish among mutually exclusive projects ~~x~~

C

12. What are the problems associated with IRR?
 a. II only.
 b. III only.
 c. III and IV only.
 d. I, II and III only.
 e. none of the above

E

13. What are the problems associated with NPV?
 a. II only.
 b. III only.
 c. III and IV only.
 d. I, II and III only.
 e. none of the above

D

14. What are the problems associated with Payback Period?
 a. II only.
 b. III only.
 c. III and IV only.
 d. I, II and III only.
 e. none of the above