

# Review for Final Exam

## Final Exam

*Don't Forget:*

Scan Sheet  
Calculator  
Pencil  
Picture ID  
Cheat Sheet

## Things To Do...

Study both the notes and the book.

Remember the Panopto Recordings in Canvas.

Do suggested problems.

Do more problems!

Be comfortable with calculator, but understand concepts (e.g., timeline).

Get help if you are having problems.

## Tips

Be Prepared

Read Questions Carefully

What information is given?

What is being asked?

Ask if something is not clear.

See the big picture!

## Example #1

A firm has 1 million shares of common stock outstanding, each currently trading at \$40. The firm's stock has a beta of 1.3. The firm also has 10,000 bonds outstanding, each with a \$1,000 par value and an 8 percent annual coupon. The bonds mature in 22 years and currently sell for \$1,101.23. You also know that the market risk premium is 8.6%, the return on U.S. Treasury bills is 4.5 percent, and the firm has a marginal tax rate of 34%. What is the firm's WACC?

## Example #2

Assume the same information as Example #1, but now you know the firm has a target debt/equity ratio of 0.2753. What is the firm's WACC?

## Example #3

FirstYost, Inc. has 20 million shares of common stock outstanding that are currently being sold for \$25 per share. The firm's debt is publicly traded at 95 percent of its face value of \$180 million. The yield to maturity is 10 percent and the firm's cost of equity is 20 percent. FirstYost is interested in investing in a 5 year telecomm project. The project will require the purchase of \$25 million in equipment that will be depreciated straight-line to zero over 5 years, but is expected to be sold for \$4 million at the end of the project. In addition, the project will require an increase in net working capital of \$2 million. Sales are expected to be \$12.5 million annually and yearly operating costs are expected to be \$3 million. Given the project is an extension of its core business, the project risk is similar to the overall risk of the firm. If the firm's marginal tax rate is 40%, should the firm invest?

## Example #4

Asset A has an expected return of 10%. The expected market return is 14% and the risk-free rate is 5%. What is asset A's beta?

## Example #5

You purchased a bond for \$870 one year ago. Today, you receive your only interest payment for the year of \$70. The bond can currently be sold for \$925. What is your total percentage return on your investment?

## Example #6

The hypothesis that market prices reflect all publicly-available information is called efficiency in the:

- (A) open form
- (B) strong form
- (C) semi-strong form
- (D) weak form
- (E) stable form?

## Example #7

If a firm suffers reduced profits to the point of moving to a lower tax bracket, one would expect the depreciation tax shield, all else the same, to become \_\_\_\_\_.

- A. More valuable
- B. Less valuable
- C. Unchanged, since depreciation doesn't change
- D. Unchanged, because changes in tax rates don't matter once a project is in place.
- E. It is impossible to tell how it will change, if at all, without more information.

## Example #8

Your company has a bond outstanding that has a \$1,000 par value and an 8% coupon rate, paid semiannually. If the bond matures in 16 years, and has a yield to maturity of 10%, how much would you pay for the bond today?

## Example #9

Which of the following is most correct?

- A. The NPV and IRR rules will always lead to the same decision in choosing between mutually exclusive projects, unless one or both of the projects are “nonconventional” in the sense of having only one change of sign in the cash flow stream.
- B. The Modified Internal Rate of Return (MIRR) compounds cash outflows at the cost of capital.
- C. Conflicts between NPV and IRR rules arise in choosing between two mutually exclusive projects (that each have conventional cash flows) when the cost of capital exceeds the crossover point.
- D. The discounted payback method overcomes the problems that the payback method has with cash flows occurring after the payback period.
- E. None of the statements above is correct.

## Example #10

Yost Rocks, Inc. just paid a \$2 dividend, which it expects to maintain for the foreseeable future. The firm has a beta of 1.2 and U.S. Treasury bills yield 3%. If the market risk premium is 9.6%, what is the current price of the stock?

#10

If the firm expects to maintain a constant 3% growth rate in dividends, what would the price be today?

#10

If the firm was unable to pay a dividend for the next 4 years, but then paid a \$2 dividend which grew at a constant 3%, what would the price be today?

## Answers

- |    |                     |     |                              |
|----|---------------------|-----|------------------------------|
| 1. | 13.3%               | 6.  | C                            |
| 2. | 13.3%               | 7.  | B                            |
| 3. | NPV = \$17,723; Yes | 8.  | \$841.97                     |
| 4. | 0.56                | 9.  | E                            |
| 5. | 14.37%              | 10. | \$13.77; \$17.88;<br>\$10.09 |