

Sample Final Exam

Question 1. Zero Corp.'s next dividend is scheduled for one year from now at \$1.50 per share. After this, dividends are paid annually, and they are projected to rise at a rate of 1.5% per year in perpetuity.

- a. If Zero's return on equity is 7%, what is its current share price? What will its share price be four years from now?
- b. If Zero stock currently trades at \$18.75 per share, what is its return on equity?
- c. Suppose the risk-free rate is 2.3% and the market risk premium is 7.2%. If Zero equity has a beta of .57, what is its share price?

Question 2. Generic Corp. is financed by \$300 million in debt and 20 million shares of common stock, currently trading at \$55 per share. Generic intends to invest \$25 million in a project that will be worth \$30 million. Generic faces a tax rate of 35%. Ignore brokerage costs. For each of the following financing plans, compute the APV of the project, along with the value of the firm, the share price after project adoption, and the number of shares issued or repurchased.

- a. Issue \$10 million in new debt and \$15 million in new shares.
- b. Issue \$15 million in new debt and use \$10 million in internal cash flow.
- c. Sell existing assets having a value of \$25 million, and finance the remainder using new debt. The assets sold have a current book value of \$15 million.

Question 3. Standard Example Corp. is financed by \$100 million worth of outstanding bonds and 5 million shares of common stock trading at \$40 per share. The bonds have a coupon rate of 5%, paid annually, and they will mature in 10 years. Debt and equity returns have been estimated at 5% and 15%, respectively. The tax rate is 35%.

- a. Calculate the value and CCC of Standard.
- b. Suppose Standard will issue no new debt after the bonds mature. Calculate the unlevered value and unlevered CCC.
- c. Recalculate the unlevered value and unlevered CCC under the assumption that Standard refinances its bonds with equivalent issues whenever they mature.
- d. Suppose cash flows from real assets grow by 2% per year and Standard maintains a constant debt ratio. Recalculate the unlevered value and unlevered CCC for this case.

Question 4. Cut-Rate Construction Co. is building a new campus for the University of California. Construction requires cash outlays of \$25 million now, \$100 million in one year and \$75 million in two years. The University will pay \$300 million for the project upon completion, two years from now. Cut-Rate will finance the first two investments with bank loans, which require annual interest payments of 9%. The loans will be repaid in two years.

The tax rate is 35% and the OCC is 15%. What is the APV of this project?