Economics 173B - Corporate Finance Spring 2020-21
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Sample Final Exam

Question 1.a. The face value is $100,000, the coupon rate is 5.5% APR, interest is paid semiannually, the time to maturity is 6 years, the annualized yield is 6.4%. What is the current bond price?

b. The current share price is $48.00, the upcoming dividend is $3.25 per share, the return on equity is 11%, dividends grow at a constant rate. What is the share price at year 2?

c. The current share price is $5.35, there are 22 million shares outstanding, the value of debt is $34 million, the return on debt is 6.9%, the equity beta is 1.73, the risk-free rate is 2.3%, the market risk premium is 6.1%. What is the CCC?

Question 2. The real assets of Basic Co. generate cash flows of $92 million per year. The value of debt is $260 million, the return on debt is 5%, and the coupon rate equals the yield on all debt issues. Interest is paid annually. The tax rate is 35%.

a. Suppose the OCC of real assets is 14% and the Standard ITS Formulas are valid. Calculate the value of the firm and the return on equity.

b. Suppose instead that the value of the firm is $820 million, the return on equity is 18%, and annual interest payments grow at 1% per year. Calculate the OCC of real assets.

Question 3. Voracious Ventures, Inc. has a current market value of $290 billion, with $116 billion in debt and 6.7 billion shares outstanding. Voracious is purchasing the real assets of Craven Corp. for $25 billion. Once held by Voracious, the real assets will have a value of $30 billion. The purchase is financed with new debt and internal cash. A brokerage cost of 2% must be paid on new debt. The brokerage cost is financed using internal cash. The tax rate is 35%. For each scenario, calculate the APV of the purchase, and the effect on the value of Voracious and its share price.

a. $10 billion in new debt is issued.

b. The current debt ratio is maintained.

Question 4. Finest City Oil Corp. is considering a fracking project in Balboa Park. The project requires an investment of $55 million and generates revenues of $250 million per year in years 1 and 2. Production costs and working capital requirements are 70% and 20% of revenues, respectively. Working capital is recovered at year 2, and a cleanup cost of $80 million is paid at year 3.

For tax purposes, the initial investment is depreciated straight-line for two years to an ending book value of $5 million, and the cleanup cost is treated as SG&A at year 3. The tax rate is 35% and the OCC is 13%. What is the NPV of this project?