Financial Management

Chapter 3. The cost of capital. Questions and Problems.

1. Suppose the General Tool Company issued a 20-year, 7% coupon, $1000 face value bond, 8 years ago. The bond is currently selling for 96%. The tax rate is 30%. a. What is the pretax cost of debt? b. What is the after tax cost of debt? c. What is the after tax cost of debt if flotation costs of debt are estimated at 0.5% of face value?

2. Jiminy's Cricket Farm issued a 10-year, 8% coupon bond 3 years ago, $1000 face value. The bond currently sells for 93 % of its face value. The company's tax rate is 30%. a) How much is paying Jiminy's Cricket Farm for this debt (cost of the current debt); b) What is the cost of debt for the calculation of the cost of capital?

3. CTO Co issued a 20-year zero coupon bond, 3 years ago. The bond is currently selling for 66% of its $1000 face value. Calculate the pretax and after tax cost of debt if the tax rate is 30%.

4. A company is 40% financed by debt (pretax cost of debt is 6%). The risk-free interest rate is 3%, the expected market risk premium is 8%, and the beta of the company's common stock is 0.5. The tax rate is 35%. What is the company cost of capital?

5. Suppose stock in Alpha Air Freight has a beta of 1.2. The market risk premium is 7%, and the risk-free rate is 6%. Alpha's last dividend was $2 per share, and the dividend is expected to grow at 3% indefinitely. The stock currently sells for $30. What is Alpha's cost of equity?

6. Alabama Power Co. has issued preferred stocks with a $100 par value and a 6% preferred dividend. The preferred stocks are currently selling for $84 per share. Calculate the cost of preferred stock.

7. The B.B. Lean Co. has 1.4 million shares of stock outstanding. The stock currently sells for $20 per share. The firm's debt is publicly traded and is currently priced at 93% of face value. It has a total face value of $5 million, and provides a 11% annual return. The risk-free rate is 8%, and the market risk premium is 7%. Lean has a beta of 0.74. If the corporate tax rate is 30%, what is the Lean Co.'s cost of capital?

8. Suppose stock in Watta Corporation has a beta of 0.80. The market risk premium is 6%, and the risk-free rate is 3%. Watta's last dividend was $1.20 per share, and the dividend is expected to grow at 8% indefinitely. The stock currently sells for $45 per share. What is Watta's cost of equity?

9. Stock in Dragula Industries has a beta of 1.1. The market risk premium is 7%, and the risk-free rate is 4.5%. The company's most recent dividend was $1.70 per share, and dividends are expected to grow at a 3% annual rate indefinitely. The stock sells for $39 per share. Calculate the cost of capital according with the dividend discount model and with the CAPM.

10. In the former exercise, use the cost of equity obtained from the CAPM to value a share of the company, according with the Dividend discount model.

11. Mullineaux Corporation has a target capital structure of 60% common stock, 5% preferred stock, and 35% debt. Its cost of equity is 12%, the cost of preferred stock is 5 %, and the pretax cost of debt is 7%. The relevant tax rate is 30%. What is Mullineaux's cost of capital?

12. Erna Corp. has 8 million shares of common stock outstanding. The current share price is $73, and the book value per share is $7. Erna Corp. also has two bond issues outstanding. The first bond issue has a face value of $85 million, has a 7%coupon, and sells for 97% of par. The second issue has a face value of $50 million, has an 8% coupon, and sells for 108% of par. The first issue matures in 21 years, the second in 6 years.

a. What are Erna's capital structure weights (D/(D+E) and (E/(D+E) on a book value basis?

b. What are Erna's capital structure weights on a market value basis?

13. Miller Manufacturing has a target debt-equity ratio of 55/. Its cost of equity is 12 percent, and its cost of debt is 4 percent. If the tax rate is 30 percent, what is Miller`s cost of capital?

14. Given the following information for Huntington Power Co., find the WACC. Assume the company`s tax rate is 35 percent.

Debt	5,000 6 percent coupon bonds outstanding, $1,000 par value, 25 years to maturity, selling for 105 percent of par; the bonds make annual payments.
Common Stock	175,000 shares outstanding, selling for $58 per share; the beta is 1.10.
Market	7 percent market risk premium and 5 percent risk-free rate.