

Instructions:

- 1) The part of the exam is open book and open notes.
- 2) Point values are listed with the question.
- 3) Show your work in order to have the possibility of partial credit.

1. (3 points) Pern Corp. just paid an annual dividend of \$2.00. Dividends are expected to grow at a constant rate forever. The price of the stock is currently \$28.40. The required rate of return for this stock is 14 percent. What is the expected growth rate of Pern's dividend?

- a. 6.50% b. 6.96% c. 7.48% d. 8.37% e. 19.66%

2. (3 points) Compute the yield to maturity of Arundel bonds based on the following information: Arundel bonds have a \$1000 par value, 25 years remaining until maturity, an 11% coupon rate, paid semi-annually, and a current market price of \$1,187.

3. (8 points) In 2001, the Lissa Company, a low growth firm, paid dividends of \$2,000,000 on after-tax income (cash flow) of \$26,000,000. Capital budget projects totaled \$4,000,000 in 2001. 2001 was a normal year for earnings, dividends, and capital budgets. For the past 8 years, earnings have grown at a constant rate of 5%. However, in 2002, earnings are expected to fall to \$22,000,000 and the firm expects to have profitable investment opportunities will grow to 8,000,000. It is predicted that Lissa will not maintain the 2002 level of earnings growth, and the company will return to its previous 5% growth rate. Lissa's target debt ratio is 20%.

a. Calculate Lissa's total dividends for 1998 if its dividend payment is set to force dividends to grow at the long-run growth rate in earnings.

b. Calculate Lissa's total dividends for 1998 if it continues its 1997 dividend payout ratio.

c. Calculate Lissa's total dividends for 1998 if it uses a pure residual dividend.

d. What is Lissa's optimal dividend policy? Why?

4. (10 points) Rollins Corporation is constructing its MCC schedule. The firm is at its target capital structure. Its bonds have a 9 percent coupon, paid semiannually, a current maturity of 17 years, and sell for \$1,085. Rollins' beta is 1.1, the risk-free rate is 6 percent, and the expected return on the market is 12 percent. Rollins is a constant growth firm, which just paid a dividend of \$2.00, sells for \$27.00 per share, and has a growth rate of 8 percent.

The firm's book value balance sheet is as follows:

Asset	\$4,000	Long Term Debt	\$5,000
		Equity (\$1 par)	\$500
		Retained Earnings	\$500

What is the firm's leverage/debt ratio?

What is Rollins' cost of debt%?

What is Rollins' cost of retained earnings using the CAPM approach?

What is the firm's cost of retained earnings using the DCF approach?

Using your CAPM estimate of the cost of retained earnings, what is Rollins' WACC?

5. (10 points) Deliman Chicken has the following balance sheet; Assets 4000 = Debt 1000 plus Equity 3000. The firm is, zero-growth firm with 50 shares selling for \$60 each. The firm pays no taxes and pays out all earnings as dividends. The firm's debt is selling at par and has a coupon rate of 8%. Last year the firm's EBIT was \$425.

a. Under the current capital structure, what is the WACC?

b. What is the current market value of the firm?

Now assume the firm issues \$1000 of equity to repurchase all of the outstanding debt.

c. What is the firm's new WACC?

d. What is the firm's new Dividend per share?

e. What is the firm's new cost of common equity (%)?

6. Now consider a Company in a world that of perfect capital markets, where CORPORATE TAXES DO EXIST. This world has no personal taxes, all investors have homogeneous expectations, no bankruptcy costs, and M&M's with corporate taxes theory of capital structure is true. Company Y is financed has the following market value balance sheet:

Assets = \$ 185

Liabilities = \$90

Equity = \$95

The firm had \$30 in EBIT last year. The firm has 19 shares outstanding. The firm expects the same return/profits for the foreseeable future. The firm is a zero growth firm that pays out all excess earnings as dividends. Any time the firm changes its capital structure; it changes only the debt/equity mix and does not change its total assets. Liabilities consist only of the firm's debt. The debt is riskless, perpetual, selling at par, and has a 7% pre-tax yield. If the firm were to change its capital structure, new debt would still have a 7% pre-tax yield. The firm's tax rate is 35%. Given this information, answer the following questions:

a. (2 points) What is the value of the firm's tax shield due to the use of perpetual debt?

b. (2 points) What is the current expected return on the firm's equity?