FIN 534 – Homework Set #5

Directions: Answer the following questions on a separate document. Explain how you reached the answer or show your work if a mathematical calculation is needed, or both. Submit your assignment using the assignment link in the course shell. This homework assignment is worth 100 points.

Use the following information for Questions 1 and 2:

Boehm Corporation has had stable earnings growth of 8% a year for the past 10 years and in 2013 Boehm paid dividends of $2.6 million on net income of $9.8 million. However, in 2014 earnings are expected to jump to $12.6 million, and Boehm plans to invest $7.3 million in a plant expansion. This one-time unusual earnings growth won't be maintained, though, and after 2014 Boehm will return to its previous 8% earnings growth rate. Its target debt ratio is 35%.

Calculate Boehm's total dividends for 2014 under each of the following policies:

1. (a) Its 2014 dividend payment is set to force dividends to grow at the long-run growth rate in earnings.

   (b) It continues the 2013 dividend payout ratio.

2. (a) It uses a pure residual policy with all distributions in the form of dividends (35% of the $7.3 million investment is financed with debt).

   (b) It employs a regular-dividend-plus-extras policy, with the regular dividend being based on the long-run growth rate and the extra dividend being set according to the residual policy.

Use the following information for Questions 3 and 4:

Schweser Satellites Inc. produces satellite earth stations that sell for $100,000 each. The firm's fixed costs, F, are $2 million, 50 earth stations are produced and sold each year, profits total $500,000, and the firm's assets (all equity financed) are $5 million. The firm estimates that it can change its production process, adding $4 million to investment and $500,000 to fixed operating costs. This change will (1) reduce variable costs per unit by $10,000 and (2) increase output by 20 units, but (3) the sales price on all units will have to be lowered to $95,000 to permit sales of the additional output. The firm has tax loss carryforwards that render its tax rate zero, its cost of equity is 16%, and it uses no debt.

3. What is the incremental profit? To get a rough idea of the project's profitability, what is the project's expected rate of return for the next year (defined as the incremental profit divided by the investment)? Should the firm make the investment? Why or why not?

4. Would the firm's break-even point increase or decrease if it made the change?