

## Session 10: Post Class tests

1. A key input into your terminal value is the expected growth rate in perpetuity. Assuming that you are valuing a company in a currency with a risk free rate of 3%. Which of the following growth rates is not feasible?
  - a. -3% in perpetuity
  - b. 0% in perpetuity
  - c. 2% in perpetuity
  - d. 4% in perpetuity
  - e. None of the above
2. Avalon Inc. is a high growth publicly traded firm that is expected to become a stable growth firm after 5 years. You have estimated an expected after-tax operating income of \$60 million in year 6 and believe that the firm will generate a return on capital of 12% in perpetuity. If the cost of capital is 10% and the expected growth rate in perpetuity after year 5 is 3%, what will the terminal value be at the end of year 5?
  - a. \$857.14 million
  - b. \$666.67 million
  - c. \$642.86 million
  - d. \$450 million
  - e. None of the above
3. Wayfarers Inc. is a risky technology company that is expected to have a cost of capital of 12% for the next 10 years. At the end of year 10, it is anticipated that the firm will become a mature company, earning a return on invested capital equal to its stable period cost of capital of 10% in perpetuity. If the expected after-tax operating income in year 11 is \$80 million and the expected growth rate in perpetuity is 3%, estimate the present value of the terminal value at the end of year 10.
  - a. \$257.58 million
  - b. \$308.43 million
  - c. \$367.97 million
  - d. \$440.62 million
  - e. None of the above
4. It is true that in a discounted cash flow valuation, the terminal value accounts for a large proportion (60% or more) of the value. It follows that the assumptions you make about terminal value are the most critical determinants of value.
  - a. True
  - b. False
5. You are using a dividend discount model to value a bank, which is expected to generate a 15% return on equity in perpetuity. The company paid dividends of \$40 million on net income of \$100 million in the most recent year and is expected to maintain high growth for the next 3 years, before settling into stable growth, growing 3% a year in perpetuity. If the cost of equity is 9%, estimate the terminal value at the end of year 3.
  - a. \$889.25 million
  - b. \$1778.51 million

- c. \$2223.13 million
- d. \$741.04 million
- e. None of the above