

7. Discounted cash flow valuation.

Murlow Company is a privately held firm. David Murlow, its owner-manager, has been approached by Murson Inc. for a possible acquisition. The firm has no debt. What is the minimum price David Murlow should ask, given the following information about his firm?

- Sales, currently at \$500 million, are expected to grow by 6 percent for the next three years, and then by 4 percent in perpetuity
- The operating margin before tax is expected to remain at 20 percent of sales
- Annual capital expenditure is expected to be equal to the depreciation expense of the year
- The working capital requirement would remain at 18 percent of sales
- The corporate tax rate is 40 percent
- David Murlow requires a return of at least 10 percent for his family investment in the firm

8. Discounted cash-flow valuation.

We wish to estimate the value of Portal Inc. under alternative assumptions about the firm's performance.

- a. Using the discounted cash flow (DCF) approach to valuation and the following assumptions, provide an estimate of Portal's value.

- This year sales are expected to be \$750 million. They are expected to grow at a rate of 5 percent per year for the next four years, and then at 3 percent per year forever
- The pre-tax operating margin currently at 15 percent will grow at a rate of 1 percent every year for four years and then stabilize at 20 percent forever
- The working capital requirement to sales ratio will remain at its current level of 18 percent forever
- Capital expenditure will be \$50 million this year and will grow at the same rate as the sales
- Annual depreciation expense for the current year will be \$50 million and then grow at the same rate as the capital expenditure
- Portal Inc. has \$500 million of debt outstanding. It can borrow at 6 percent
- Portal's income tax rate is 40 percent
- Portal's beta is 1.05. The risk-free rate and the market risk premium are 5 percent
- The debt-to-total-capital ratio of Portal, at market value, is 50 percent

through the following:

