



c. How would you explain the difference between the two models, and which one would you use as your benchmark for comparison to the market price?

3. Ecolab Inc. sells chemicals and systems for cleaning, sanitizing, and maintenance. It reported earnings per share of \$2.35 in 1993, and expected earnings growth of 15.5% a year from 1994 to 1998 and 6% a year after that. The capital expenditure per share was \$2.25, and depreciation was \$1.125 per share in 1993. Both were expected to grow at the same rate as earnings from 1994 to 1998. Working capital was expected to remain at 5% of revenues, and revenues, which were \$1 billion in 1993, were expected to increase 6% a year from 1994 to 1998, and 4% a year after that. The firm had has a debt ratio  $[D/(D + E)]$  of 5%, but planned to finance future investment needs (including working capital investments) using a debt ratio of 20%. The stock was expected to have a beta of 1 for the period of the analysis, and the Treasury bond rate was 6.50%. (There were 63 million shares outstanding, and the market risk premium was 5.5%.)
- a. Assuming that capital expenditures and depreciation offset each other after 1998, estimate the value per share. Is this a realistic estimate?

b. Assuming that capital expenditures continue to be 200% of depreciation even after 1998, estimate the value per share.

c. What would the value per share have been, if the firm had continued to finance new investments with its old financing mix (5%)? Is it fair to use the same beta for this analysis?



c. Estimate the value of equity at the end of 1993, and the value per share, using the FCFF approach.

5. You are analyzing a valuation done on a stable firm by a well-known analyst. Based on the expected free cash flow to firm next year of \$30 million and an expected growth rate of 5%, the analyst has estimated a value of \$750 million. However, he has made the mistake of using the book values of debt and equity in his calculation. While you do not know the book value weights he used, you know that the firm has a cost of equity of 12% and an after-tax cost of debt of 6%. You also know that the market value of equity is three times the book value of equity, while the market value of debt is equal to the book value of debt. Estimate the correct value for the firm.