

For shareholders, a stock's value is the present value of future dividends. This chapter described three valuation techniques directly based on this dividend discount definition of value: discounted dividends, discounted abnormal earnings/ROEs, and discounted free cash flows. The discounted dividend method attempts to forecast dividends directly. The abnormal earnings approach expresses the value of a firm's equity as book value plus discounted expectations of future abnormal earnings. Finally, the discounted cash flow method represents a firm's stock value by expected future free cash flows discounted at the cost of capital.

Although these three methods were derived from the same dividend discount model, they frame the valuation task differently. In practice they focus the analyst's attention on different issues and require different levels of structure in developing forecasts of the underlying primitive, future dividends.

Price multiple valuation methods were also discussed. Under these approaches, analysts estimate ratios of current price to historical or forecasted measures of performance for comparable firms. The benchmarks are then used to value the performance of the firm being analyzed. Multiples have traditionally been popular, primarily because they do not require analysts to make multiyear forecasts of performance. However, it can be difficult to identify comparable firms to use as benchmarks. Even across highly related firms, there are differences in performance that are likely to affect their multiples.

The chapter discussed the relation between two popular multiples, value-to-book and value-earnings ratios, and the discounted abnormal earnings valuation. The resulting formulations indicate that value-to-book multiples are a function of future abnormal ROEs, book value growth, and the firm's cost of equity. The value-earnings multiple is a function of the same factors and also the current ROE.

DISCUSSION QUESTIONS

1. Joe Watts, an analyst at EMH Securities, states: "I don't know why anyone would ever try to value earnings. Obviously, the market knows that earnings can be manipulated and therefore it only values cash flows." Discuss.
2. Explain why terminal values in accounting-based valuation are significantly less than those for DCF valuation.
3. Manufactured Earnings is a "darling" of Wall Street analysts. Its current market price is \$15 per share, and its book value is \$5 per share. Analysts forecast that the firm's book value will grow by 10 percent per year indefinitely, and the cost of equity is 15 percent. Given these facts, what is the market's expectation of the firm's long-term average ROE?
4. Given the information in question 3, what will be Manufactured Earnings' stock price if the market revises its expectations of long-term average ROE to 20 percent?
5. Analysts reassess Manufactured Earnings' future performance as follows: growth in book value increases to 12 percent per year, but the ROE of the incremental book value is only 15 percent. What is the impact on the market-to-book ratio?
6. How can a company with a high ROE have a low PE ratio?
7. What types of companies have
 - a high PE and a low market-to-book ratio?
 - a high PE ratio and a high market-to-book ratio?
 - a low PE and a high market-to-book ratio?
 - a low PE and a low market-to-book ratio?

8. Free cash flows (FCF) used in DCF valuations discussed in the chapter are defined as follows:

$$\begin{aligned} \text{FCF to debt and equity} = & \text{Earnings before interest and taxes} \times (1 - \text{tax rate}) \\ & + \text{Depreciation and deferred taxes} - \text{Capital} \\ & \text{expenditures} -/+ \text{Increase/decrease in working capital} \end{aligned}$$

$$\begin{aligned} \text{FCF to equity} = & \text{Net income} + \text{Depreciation and deferred taxes} \\ & - \text{Capital expenditures} -/+ \text{Increase/decrease in working} \\ & \text{capital} +/- \text{Increase/decrease in debt} \end{aligned}$$

Which of the following items affect free cash flows to debt and equity holders? Which affect free cash flows to equity alone? Explain why and how.

- An increase in accounts receivable
 - A decrease in gross margins
 - An increase in property, plant, and equipment
 - An increase in inventory
 - Interest expense
 - An increase in prepaid expenses
 - An increase in notes payable to the bank
9. Starite Company is valued at \$20 per share. Analysts expect that it will generate free cash flows to equity of \$4 per share for the foreseeable future. What is the firm's implied cost of equity capital?
10. Janet Stringer argues that "the DCF valuation method has increased managers' focus on short-term rather than long-term performance, since the discounting process places much heavier weight on short-term cash flows than long-term ones." Comment.

NOTES

1. The incorporation of all non-capital equity transactions into income is called clean surplus accounting. It is analogous to comprehensive income, the concept defined in FAS 130.
2. Changes in book value also include new capital contributions. However, the dividend discount model assumes that new capital is issued at fair value. As a result, any incremental book value from capital issues is exactly offset by the discounted value of future dividends to new shareholders. Capital transactions, therefore, do not affect firm valuation.
3. Appendix C to this chapter provides a simple proof of the earnings-based valuation formula.
4. See P. M. Dechow, A. P. Hutton, and R. G. Sloan, "An empirical assessment of the residual income valuation model," *Journal of Accounting and Economics* 23, January 1999.
5. This formulation is a variant of a model proposed by J. Ohlson, "Earnings, book values, and dividends in security valuation," *Contemporary Accounting Research* 11, Spring 1995. Ohlson includes in his forecasts of future abnormal earnings a variable that reflects relevant information other than current abnormal earnings. This variable then also appears in the stock valuation formula. Empirical research by Dechow, Hutton, and Sloan, "An empirical assessment of the residual income valuation model," *Journal of Accounting and Economics* 23, January 1999, indicates that financial analysts' forecasts of abnormal earnings do reflect