Notes

1 See T. Copeland, M. Goedhart, and D. Wessels, *Valuation: Measuring and Managing the Value of Companies,* 6th ed. (Hoboken, New Jersey: John Wiley & Sons, 2015).

2 One way to estimate systematic risk is to regress the firm's stock returns over some recent time period against the returns on the market index. The slope coefficient represents an estimate of β. More fundamentally, systematic risk depends on how sensitive the firm's operating profits are to shifts in economy-wide activity and the firm's degree of leverage. Financial analysis that assesses these operating and financial risks should be useful in arriving at reasonable estimates of β.

3 The average return reported here is the arithmetic mean as opposed to the geometric mean. Ibbotson and Associates explain why this estimate is appropriate in this context (see *Stocks, Bonds, Bills, and Inflation,* 2002 Chicago Yearbook). This estimate of the worldwide equity risk premium is an arithmetic mean derived from statistics reported in E. Dimson, P. Marsh, and M. Staunton, "Credit Suisse Global Investment Returns Sourcebook," which updates the evidence in "Global Evidence on the Equity Risk Premium," *Journal of Applied Corporate Finance* 15(4) (2003): 8–19.

4 E. Dimson, P. Marsh, and M. Staunton (2003), op. cit., argue that when estimating future equity risk premiums, it is preferred to take a global approach than a country-by-country approach. Reasons for taking a global approach are, for example, that many country-specific events that affected historical risk premiums are non-recurring and that worldwide capital markets have integrated significantly. In their study "International Differences in the Cost of Equity Capital: Do Legal Institutions and Securities Matter," *Journal of Accounting Research* 44(3) (2006): 485–531, L. Hail and C. Leuz provide evidence that international differences in the strictness of disclosure and securities regulation and enforcement also create international differences in firms' cost of equity. Harmonization of such regulations within, for example, the European Union may therefore also reduce the country variations in risk premiums.

5 See Mathijs A. van Dijk, "Is Size Dead? A Review of the Size Effect in Equity Returns," *Journal of Banking and Finance* 35 (2011): 3263–3274.

6 See William R. Gebhardt, Charles M.C. Lee, and Bhaskaran Swaminathan, "Toward an Ex-Ante Cost of Capital," *Journal of Accounting Research* 39 (2001): 135–176; and James Claus and Jacob Thomas, "Equity Premia as Low as Three Percent? Evidence from Analysts' Earnings Forecasts for Domestic and International Stock Markets," *The Journal of Finance* 56 (October 2001): 1629–1666.

7 Valuation based on discounted abnormal profit does require one property of the forecasts: that they be consistent with "clean surplus accounting." Such accounting requires the following relation:

End-of-period book value = Beginning book value + profit or loss – dividends ± capital contributions/ withdrawals

Clean surplus accounting rules out situations where some gain or loss is excluded from profit or loss but is still used to adjust the book value of equity. For example, under IFRS Standards, gains and losses on foreign currency translations are handled this way. In applying the valuation technique described here, the analyst would need to deviate from IFRS Standards in producing forecasts and treat such gains/losses as a part of profit or loss. However, the technique does *not* require that clean surplus accounting has been applied *in the past* – so the existing book value, based on IFRS Standards or any other set of principles, can still serve as the starting point. All the analyst needs to do is apply clean surplus accounting in his/her forecasts. That much is not only easy but is usually the natural thing to do anyway.

8 If losses are likely to be transitory, this may be a reason to extend the forecast horizon. P. Joos and G. Plesko find that the probability of losses being transitory is negatively related to the size of the loss and positively related to the size of the firm, revenue growth, whether the loss is the first loss, and whether the firm pays out dividends. If a loss is likely to be permanent, the value of the firm is driven by the value of the abandonment option. See P. Joos and G. Plesko, "Valuing Loss Firms," *The Accounting Review* 80 (2005): 847–870.