Homework and Suggested Example Problems  
Investment Valuation – Damodaran  

Lecture 4 – Estimating Growth and Terminal Value

In Lecture 3, we discussed the measurement of earnings and the estimation of cash flows. In Lecture 4, we turn our attention to forecasting future earnings and cash flows. We will begin with a discussion of alternative methods for estimating earnings growth, including historical growth, analyst growth forecasts, and growth based on fundamental. We will then analyze the stable growth phase for the firm and the assumptions that must be made in order to estimate the terminal value.

After completing this material, we will turn our attention to the practical application of DCF models to several real companies.

Discussion Problems:

Complete the problems on the attached pages and be prepared to discuss your solutions in class.

Additional Suggested Problems:

The following suggested problems will serve as additional examples related to our class material and should give you a basic idea of the topics that I want to emphasize from the text. The solutions to these problems are available on the class web site.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Suggested Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Estimating Growth</td>
<td>1a, 2, 3, 4</td>
</tr>
<tr>
<td>12</td>
<td>Estimating Terminal Value</td>
<td>2, 3, 5</td>
</tr>
</tbody>
</table>
1. Using the fundamental growth formulas we discussed in class and assuming the ROC remains constant, estimate the expected growth in EBIT for Nike for the coming year. Be sure to incorporate any necessary adjustments made in prior assignments (for example, adjustments for one-time charges, operating leases, capitalization of advertising, etc.). How does your estimate of future growth compare to the firms actual growth in EBIT over the past year? (Note that much of the information you need to answer questions 1 and 2 can be found in the solutions to prior homework assignments.)

2. Using the fundamental growth formulas we discussed in class and assuming the ROE remains constant, estimate the expected growth in Net Income for Nike in the coming year. Be sure to incorporate any necessary adjustments made in prior assignments (for example, adjustments for one-time charges, capitalization of advertising, etc.). How does your estimate of future growth compare to the firms actual growth in Net Income over the past year?
3. Consider a simple firm that pays no taxes and pays out all of its earnings as dividends. In the current year, the firm has total revenues of $500 million and total expenses of $400 million. The firm's book value of capital at the beginning of the year was $1 billion.

a) Calculate the firm's operating income and its return on capital (ROC) in the current year.

b) The current inflation rate is 3% and the firm expects this inflation rate to affect revenues and expenses equally (i.e., both will increase by 3% in the second year). Given these assumptions, calculate the firm's operating income and its return on capital (ROC) in the second year.

c) Calculate the percentage change (growth rate) in operating income for this firm from the first year to the second. Using the fundamental growth equation we discussed in class, write the firm's growth rate as a function of reinvestment and return on capital (ROC).