Investment Analysis (1793), Part 2 on Value Investing, 2014 Exam
Monday, May 12, 2014
Exam time: 4 hours

Maximum score is 70 points. Minimum required to pass the exam is 35 points. Avoid answers beyond two pages. Answer the questions below. Please write as clearly as possible.

(1) To get from EBIT to normalized earnings we need to make several adjustments. One of the adjustments is to add back excess depreciation. This can be done by adding back depreciation and amortization and subtracting maintenance capital expenditure (MCX). The following financial information is available:

- Average Property, plant and equipment (PPE) / Sales (over last 5 years) = 20%
- Current dollar increase in sales (from previous year) = EUR 5 million
- Capital expenditures (Capex) from the cash flow statement = EUR 23 million
  - (i) Calculate the growth capital expenditures for this firm in euros.
  - (ii) Calculate the maintenance capital expenditures for this firm in euros.

[Based on Greenwald et al. (2001)]

(10p)

(2) Company XYZ Inc. has reported after-tax current earnings of EUR 100 million euros. After relevant adjustments (including adjustments for nonrecurring items, cyclical variation, accounting depreciation, special situations, and leverage) the reported after-tax earnings are raised to an after-tax earnings power of EUR 135 million. Additional company information:

- The tax rate is 24.5%
- Financing: 1/3 debt, 2/3 equity
- The company pays 9% on debt
- The cost of equity is estimated to be 10.8%.

(a) What is the weighted average cost of capital for company XYZ Inc.?
(b) What is the earnings power value for this firm?
(c) The estimated reproduction costs of the firm's assets amount to EUR 1200 million (changes were made to the values of property, accounts receivables, and inventory). We subtract (i) spontaneous liabilities (e.g., accounts payable to suppliers) and (ii) circumstantial liabilities (e.g., liabilities incurred because of adverse legal judgments) amounting to EUR 100 from the reproduction cost to arrive at an adjusted asset value (net worth is 1200 - 100 = 1100 million). Since we are looking to make an equity investment, we also subtract the value of debt (only book value

available) amounting to EUR 383 million, which gives an equity book value at reproduction cost that equals EUR 717 million.

To be able to compare the earnings power value to market value of equity and the reproduction costs (in equity terms), we subtract debt (EUR 383 million) and *add* cash in excess of 1% of sales (EUR 100 million). This yields a total earnings power value which equals your earnings power value calculation (question (b)) – EUR 383 million + EUR 100 million.

The firm appears to have a competitive advantage but zero or very modest growth. Would you invest in the firm if it traded at a market value of equity equal to EUR 900 million? Motivate your answer.

[The question is based on concepts in Greenwald et al. (2001)]

(30p)

(3) Answer **two** of the following three questions briefly:

(a) Discuss the chapter "Stock selection for the enterprising investor" (chapter 15) in Graham (2003).

(b) Discuss central findings in the paper "The other side of value: The gross profitability premium" by Novy-Marx (Journal of Financial Economics, 2013).

(c) Discuss key issues in the chapter "Constructing the portfolio: risk, diversification, and default strategies" [chapter 8 in Greenwald et al. (2001)].

(30p)

Good luck!