Investment Analysis (1793), Part 2 on Value Investing, 2014 Exam
Monday, June 9, 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) Haugen and Baker (JFE 1996) develop an expected returns model which they use to estimate expected returns for individual stocks around the world each month. Discuss how their model is designed and how it has performed.

(15 p)

(2) Company XYZ 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, leverage, R&D (added back 25% to arrive at zero growth case), and SG&A (added back 25% to arrive at zero growth case)) the reported after-tax earnings are raised to an after-tax earnings power of EUR 135 million. Additional company information:

- Cost of capital (WACC) is 9.46%
- Earnings power value (EPV) is EUR 1426.30 million (given by 135/0.0946)
- Sales growth and profitability figures are shown in Table 1.
- To estimate the value of the firm's growth, you need the firm's profitability and growth numbers (see Table 1).
- An estimate of the value of growth can be obtained from Table 2.

(a) What is firm XYZ's growth worth?
(b) What would be the margin of safety if you could buy this firm at its earnings power value (EPV)?

Table 1.

	2009	2010	2011	2012	Average ('09-'12)
Growth in sales	7%	9%	8%	8%	8%
Growth in adjusted EBIT	11%	9%	8%	12%	10%
Return on equity	18%	16%	18%	19%	18%
Return on invested capital	22%	20%	23%	22%	22%

Table 2. Growth Value Matrix					
	(A)	(B)	(C)	(D)	(E)
ROC/R	1	1.5	2	2.5	3
(1) G/R 25%	1.00	1.10	1.17	1.20	1.22
(2) G/R 50%	1.00	1.30	1.50	1.60	1.67
(3) G/R 75%	1.00	2.00	2.50	2.80	3.00

Note:

- ROC / R is the firm's profitability divided by cost of capital
- G/R is the growth divided by the firm's cost of capital
- The values in the growth matrix are calculated using the formula M = (1 – (G/R) (R/ROC))/(1-(G/R))

[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 "Things to consider about per-share earnings" (chapter 12) in Graham (2003).

(b) Discuss central findings in the paper "Value investing: The use of historical financial statement information to separate winners from losers" by Piotroski (Journal of Accounting Research 2000).

(c) "The key to investing is not assessing how much an industry is going to affect society, or how much it will grow, but rather determining the competitive advantage of any given company, and, above all, the durability of that advantage. The products and services that have wide, sustainable moats around them are the ones that deliver rewards for investors" [Quote from "How to pick stocks like Warren Buffett" by T.P. Vick (2000)].

There are three types of genuine competitive advantages: supply, demand, and economies of scale. (a) Describe each of these with examples. (b) Which variables would you use to test for the existence of firms' competitive advantages? [Lecture slides; Greenwald and Kahn, HBR 2005]

(25p)

Good luck!