

Self-Study Quiz 6

Equity Valuation - Finance 70610

1. Consider the four firms described below:

	Expected Growth	ROE	Beta
Firm A	12.0%	12.5%	1.00
Firm B	8.0%	9.1%	1.30
Firm C	9.5%	12.5%	1.10
Firm D	3.2%	6.5%	1.30

- a) Assuming the market is efficient, which of the four firms would you expect to have the highest PE ratio and which of the four firms would you expect to have the lowest PE ratio?

Firm A will have the highest PE ratio – this firm has the highest growth, the highest ROE, and the lowest risk.

Firm D will have the lowest PE ratio – this firm has the lowest growth, the lowest ROE, and the highest risk.

- b) Suppose you estimate a regression of PE ratios on firm characteristics and get the results shown below. Based on these regression results, what would be your estimate of the PE ratio for Firm A?

$$PE = 13.5 + 16.9(g) + 29.4(ROE) - 3.2(\beta)$$

$$PE = 13.5 + 16.9(.12) + 29.4(.125) - 3.2(1) = 16.0$$

- c) Now assume that markets may not be efficient. If Firm A's actual PE ratio is 18, would you conclude that the stock is correctly priced, overvalued, or undervalued? Explain your answer in one sentence.

The actual PE is higher than the expected PE derived from fundamental characteristics (18 > 16). As a result, we conclude that the firm is overvalued.