Quiz 3: Valuation

Answer all questions and show necessary work. Please be brief. This is an open books, open notes exam.

1. Serengeti Hotels is a multinational hotel company that generated $60 million in after-tax operating income (after taxes of 40%) and reported depreciation of $ 80 million in the most recent year. The firm also reported $ 300 million in book value of equity, $ 300 million in book value of debt and a cash balance of $ 100 million. Serengeti has 100 million shares trading at $ 7/share and its book value of debt is equal to its market value.
   a. Estimate the EV/EBITDA multiple for Serengeti Hotels. (1 point)

   b. You have run a regression of EV/EBITDA for multinational hotels and arrived at the following output:
   EV/EBITDA = 1.60 – 1.50 (Tax rate) + 36.00 (Return on invested capital) – 0.50 (Debt to Equity ratio)
   (All independent variables are entered as decimals. Thus, a 40% tax rate is entered as 0.40)
   If Serengeti is fairly priced, relative to the sector, estimate the debt to equity ratio for the firm. (2 points)

2. You have just been hired as a CEO for a MEICO, a troubled insurance company. MEICO has a book value of equity of $ 1 billion and its stock trades at 60% of its book value. The cost of equity for MEICO is 9% and the company is mature, and expects its business to grow 2% a year in perpetuity. If the equity is fairly priced right now, estimate the price to book ratio, if you move the company into riskier businesses (which will increase the cost of equity to 10%) and double the existing return on equity? (3 points)

3. You are CEO of a publicly traded company, Protix Media, and the company is currently all equity-funded and has a beta of 1.20; the correlation of the stock with the market is 0.40. Protix Media is expected to generate net income of $60 million next year on book equity of $ 1 billion; it is a stable growth company that expects to grow 3% a year in perpetuity. If you invest the rest of your personal wealth in it, you believe that you could take the company back to being a private business and could double its net income (without changing the book equity invested or the expected growth rate). Assuming that you plan to keep the business as a privately owned business in the aftermath, evaluate whether this transaction makes sense. (The riskfree rate is 3% and the equity risk premium is 6%) (4 points)