Quiz 2: Equity Instruments

You have been asked to value Yukon Enterprises and have collected the following information:

a. The firm’s primary business is chemicals and it has $1 billion in book capital invested in the business, generating $150 million in after-tax operating income in the most recent financial year. The operating income is expected to grow 5% in perpetuity and the cost of capital for the chemical business is 10%.

b. The firm owns 25% of Powloon Steel, a manufacturer of steel. Powloon Steel has $400 million in capital invested in its business, generating $40 million in after-tax operating income in the most recent financial year. The operating income is expected to grow 3% a year in perpetuity and the cost of capital for the steel business is 9%. (This holding is categorized as a minority holding)

c. Yukon Enterprises has $100 million in cash and marketable securities. The firm also has $250 million in interest bearing debt outstanding. Powloon Steel has no debt outstanding

d. There are 100 million shares outstanding in Yukon and there are no equity options outstanding at either firm.
1a. Estimate the value of the operating assets (in chemicals) at Yukon Enterprises (1.5 points)

1b. Estimate the value of Yukon's minority holding in Powloon Steel. (1.5 points)
1c. Estimate the value of Yukon’s equity per share. (1 point)
2. SafeCorp Savings is a savings and loan company. The firm reported net income of $100 million on book equity of $800 million last year, and you believe that the firm is in stable growth. There are 100 million shares outstanding trading at $12 per share and the stock has a beta of 1. If the treasury bond rate is 6% and the market risk premium is 4%, estimate the expected growth rate in perpetuity.

(3 points)
3. You are an equity research analyst following telecommunication companies in different countries and you use enterprise value to EBITDA multiples to make your judgments. You regress EV/EBITDA against return on capital and tax rates and arrive at the following output:

\[ \text{EV/EBITDA} = 5.64 - 3.5 \times (\text{Tax rate}) + 31.5 \times (\text{Return on capital}) \]

[For example, the expected EV/EBITDA multiple for a developed market firm with a tax rate of 40% and a return on capital of 10% would be would be 5.64 – 3.5 (.40) + 31.5 (.10) = 7.39]

You are examining a telecomm firm with $70 million in after-tax operating income, 100 million shares trading at $12 per share and $300 million in debt outstanding. The firm has a 30% tax rate, $150 million in cash and marketable securities and reported $50 million in depreciation. If the firm is fairly priced, given the sector regression, estimate the book value of capital invested in the firm. (3 points)