Quiz 3: Corporate Finance

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

1. Ragtime Inc. is a small, publicly traded company that has 50 million shares outstanding, trading at $5/share and $750 million in debt (book and market) outstanding. The current (levered) beta for the company is 2.52 and the current pre-tax cost of debt is 9%. The riskfree rate is 3%, the equity risk premium is 6% and the marginal tax rate is 40%.
   a. Estimate the current cost of capital for the firm. (1 point)
b. Now assume that you believe reducing your debt to capital ratio to 25% is the right choice to make and that doing so will reduce your default spread by half. Estimate the cost of capital at a 25% debt ratio. (3 points)
2. Granger Media is a publicly traded firm with 120 million shares outstanding, trading at $10/share, and $300 million in debt outstanding. Granger is considering borrowing $550 million and buying back shares at $11/share; the cost of capital will drop from 8.25% to 8% as a consequence. Assuming no growth in perpetuity, estimate the value per share for the remaining shares, after the buyback. (3 points)
3. Simco Tel is a telecom company with 60 million shares, trading at $40/share and $600 million in debt outstanding; half the debt is 3-year zero coupon debt and the rest is a balloon payment bank loan, with principal and interest due in one year. You are considering borrowing money and acquiring Chloe Films, a media business, for $1.5 billion and you have run regressions of firm value changes against interest changes for both firms:

\[ \Delta \text{Firm Value}_{\text{Simco}} = 0.50 - 8.00 \Delta \text{T.Bond Rate} \]
\[ \Delta \text{Firm Value}_{\text{Chloe}} = 0.50 - 2.00 \Delta \text{T.Bond Rate} \]

If you want the duration of your total debt to be matched up to the duration of your assets, post-acquisition, estimate the duration of the debt you would use in funding the acquisition. (3 points)