Spring 2024 Name:

Quiz 3: Corporate Finance

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

1. Rasulo Inc. is an all-equity funded company that currently has a cost of capital of 7.50% and is considering borrowing money at 5.40% and raising its debt to capital ratio to 20%. If the riskfree rate is 4.5%, the equity risk premium is 4% and the marginal tax rate is 30%, **estimate Rasulo's cost of capital at the 20% debt to capital ratio**. (3 points)

2. You are eager to try your hand at the adjusted present value approach, and believe that Bollinger Inc., a small publicly traded company with $400 million in market capitalization (equity) and $100 million in debt outstanding is a good candidate.
The company currently has a bond rating of A-, with a 5% chance of bankruptcy, and is considering borrowing an additional $100 million and buying back stock. If that will increase the risk of bankruptcy to 15%, **estimate how much bankruptcy costs will have to be, as a percent of overall firm value, for the additional debt to have no effect on value**. (The marginal tax rate is 25%. Note that the Expected bankruptcy cost = Probability of bankruptcy * Bankruptcy cost as % of value) (2 points)

3. Silica Inc. has 100 million shares outstanding, trading at $14 a share, and $100 million in debt, with a cost of capital of 8.25%. The company plans to quadruple its dollar debt and buy back shares at $15/share and expects its cost of capital to drop to 7.50%, if it does so. Assuming that the savings from the decline in cost of capital are permanent, with no growth, **estimate the value per share on the shares left over after the buyback.** (3 points)

4. Finian Inc. is a company that operates in the retail and apparel business, and its financial balance sheet is below, with duration estimates for the businesses:

	Value	*Duration*		*Value*	*Duration*
Retail	$400	4.00	Debt	$300.00	3.00
Apparel	$600	8.00	Equity	$700.00	NA

The company is considering borrowing $200 million and buying back stock. If the objective is matching the duration of the debt to the duration of the assets, **estimate the duration of the new debt.** (2 points)