Spring 2017 Name:

Quiz 3: Corporate Finance

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

1. Cowers Inc. has 200 million shares outstanding, trading at $10/share, no debt and a cost of capital of 10%. It is considering borrowing money to get to a 20% debt to capital ratio. At what pre-tax interest rate would the company need to be able to borrow the money for the cost of capital to drop to 9.44%? (The marginal tax rate is 40%, the risk free rate is 3% and the equity risk premium is 5%). (4 points)

2. You are considering using the APV approach to evaluate the effect on value of having debt at Chronotech, a technology company. The company currently has a market capitalization (market value of equity) of $1250 million and $250 million in debt outstanding (market and book value). If the marginal tax rate is 40%, the current probability of bankruptcy is 10% and the cost of bankruptcy is 30% of overall firm value (equity plus debt), estimate the value of the firm with no debt. (3 points)

3. You are advising Calavisor, a company that operates in two business, technology and retailing and have collected the following information (Dollar values in millions).

	Value	*Duration*		*Value*	*Duration*
Technology	$750	6	Debt	$500	6.00
Retailing	$750	15	Equity	$1000	NA

Calavisor is planning on borrowing money and doubling the size of its technology business (in value). If the objective is to match the duration of its total debt to that of all of its assets after the transaction, estimate the duration of the new debt. (3 points)