Spring 2013 Name:

# Quiz 3: Corporate Finance

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

1. Lowell Inc. is an all-equity funded publicly traded firm, with 60 million shares outstanding, trading at $25/share. Its current cost of capital is 7.5% and it expects to generate pre-tax operating income of $ 60 million next year. The company is planning on borrowing $ 1 billion at an interest rate of 7.5% and buying back shares. If the risk free rate is 3%, the equity risk premium is 6% and the marginal tax rate for all companies is 40%, estimate the cost of capital for the firm next year (after the share buyback). (3 points)

2. FirstLine Inc. is a publicly traded firm that produces and sells gourmet coffee beans. The firm has a current cost of capital of 9% but it is significantly under levered; it has $ 120 million in debt and 40 million shares trading at $12/share. The company is planning on borrowing $130 million in additional debt and buying back shares at a price of $13/share. If the remaining shares in the company trade at $12.50/share, after the buyback, estimate the cost of capital after the buyback. (You can assume that there is no growth in perpetuity) (3 points)

3. Misto Inc. is a publicly traded company that operates in two businesses: a beverage business with an estimated value of $10 billion and an asset duration of 8 years and a bottling business with an estimated value of $5 billion and a duration of 5 years. The company currently has two classes of debt with the following characteristics:

| Debt issue | Market value | Estimated duration |
| --- | --- | --- |
| Bank loans | $ 4 billion | 4.00 years |
| Corporate bonds | $ 1 billion | 10.00 years |

a. Estimate the duration of Misto's existing businesses (assets). (1 point)

b. Estimate the duration of Misto's existing debt. ( 1 point)

c. Misto is considering acquiring another beverage company with an estimated value of $ 5 billion, and using corporate bonds (with the same duration as its existing bonds) to fund at least part of the acquisition (with the rest coming from a new stock issue). If Misto wants to match the duration of its debt to the duration of its assets, after the acquisition, how much debt should Misto use to fund the acquisition? (2 points)