Spring 2016 Name:

# Quiz 3: Corporate Finance

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

1. Lopez Enterprises is a chemical company that has 20 million shares outstanding, trading at $25 a share **and no debt**; its **current cost of capital is 7.1%**. The firm has announced that it is borrowing $250 million and will be paying a special dividend with that money. If the risk free rate is 2%, the equity risk premium is 6% and the marginal tax rate is 40%, how high does the pre-tax cost of borrowing have to be for the company's cost of capital to remain unchanged.?

   (4 points)

2. Southern Oil is a small, publicly traded oil company that has been hard hit by the drop in oil prices. It has 60 million shares outstanding, trading at \$5/share, and has debt outstanding of \$1200 million. The company's rating has dropped to CCC and its cost of capital is 10%. The firm has reached a deal with debt holders to exchange \$600 million in debt for 120 million new shares, an action which it believes will raise the bond rating to BBB and reduce the cost of capital to 9%.
   a. Assuming that the savings (from a lower cost of capital) last forever (with no growth), estimate the change in firm value as a result of the recapitalization. (1 point)

   b. Estimate the value per share after the recapitalization. (2 points)

3. Stylistics Inc. is a furniture manufacturer with a market capitalization (market value of equity) of \$2 billion and \$ 1 billion in 6-year zero coupon bonds outstanding. It is considering acquiring Flex Stores, a furniture retailer, for \$2 billion and plans to fund this acquisition entirely with debt. Your research has led you to conclude that the duration of furniture manufacturers is 10 years and that of furniture retailers is 4 years.
   a. What will the duration of Stylistics' assets be, after the merger? (1 point)

   b. If your objective is to end up with total debt of roughly the same duration as your total assets for the post-merger firm, what does the duration of your new debt have to be to accomplish this objective? (2 points)