**Fin 401**

# Problem Set #6

***Modigliani & Miller and Leverage***

Instructions: Complete all questions. This problem set is worth 10 points. Problems sets are graded on effort and completeness; you must show your work in order to get full credit. Short answers (“checkpoints”) are available for some questions on Learning Suite so that you can check your answers. Full solutions are available on Learning Suite after the problem set is due. (Some full answers are found in the back of Higgins; it’s best not to look at these until you have tried your best to answer the question.)

1. Do Higgins, Chapter 6, #12.

2. Big 4 Rents, an equipment rental company in Berkeley, CA, currently has debt with a market value of $110 million. They have 5 million shares outstanding that are trading at a price of $30. They are preparing to do a recapitalization in which they will sell $50 million of new shares and use the proceeds to pay down debt. In a Modigliani & Miller world, what will be the value of the following things after the recapitalization? (Assume that paying down the debt has no effect on the market value of the remaining debt).

Big 4 Rents Firm Value:

Big 4 Rents Debt Market Value:

Big 4 Rents Market Capitalization:

Big 4 Rents Shares Outstanding:

Big 4 Rents Share Price:

3. Do Higgins, Chapter 6, #8.

4. You are considering an investment in Slots ‘o Fun, the greatest casino on the Las Vegas strip. You figure that there is an 80% chance that the investment will pay off $6000 after one year, and a 20% chance that it will pay off $4000.

1. If you require an expected return of 12% for an investment with this amount of risk, how much would you be willing to pay for the investment? What realized return would you make in the good outcome? What realized return would you make in the bad outcome?
2. Now suppose that instead of paying all cash for the investment, you borrow $3000 at 5% interest for one year to help fund the investment. What is your expected return? What would be your realized return in the good outcome? What would be your realized return in the bad outcome?
3. Explain the differences between your answers to parts a and b.