

ORF435 / ORF535 / FIN535

Homework 1

Instructor: Professor John M. Mulvey

Due date: Thursday, 9/28/2016

Notice: The examples and exercises are based on the **second** edition of “Investment Science”. If you are using the first edition, please make sure you are working on the correct problem. The homework is due Thursday at the beginning of the class.

Question 1: Chapter Exercises

Solve questions 9 and 12 in chapter 5.

Question 2: Gold Mine Revisited

Consider the following change for example 5.5: The current amount of gold is $x_0 = 10000$ ounces, and the current price is 1300 dollars per ounce. The interest rate is 5% and gold price increases by 2% per year. Assume we have a 5-year lease and the cost to extract gold is the same formula as in the book, how much is the lease worth?

Question 3: Political Uncertainty?

Take example 5.8 (XX Corporation) and change the tax rate to 15% as Trump proposes recently. What is the impact on the optimal reinvestment rate u , the growth rate g and the PV?