

Problem Set # 6

Econ 1015

- 1) Consider a firm that has three investment projects. Project I costs \$20,000. Revenues from Project I will be \$50,000 one year from now. Project II costs \$300,000 with revenues being \$310,000 one year from now. Project III costs \$650,000 today and will yield revenues equal to \$710,000 one year from now. Compute the firm's demand for investment projects for three different interest rates: 20 percent, 10 percent, and 5 percent. Draw the investment demand curve for this firm.
- 2) Households see that the risk of future income is declining. They respond by reducing their precautionary supply of saving. Describe how this change will impact the equilibrium quantity of the interest rate and the equilibrium level of savings and investment.
- 3) (Difficult) Consider a case in which productivity declines due to drought. Draw the effect that this change will have on the equilibrium quantity of the interest rate and on the equilibrium level of savings and investment. Show how the change in this one market will translate into a change in the slope of the households budget constraint over consumption today and consumption tomorrow. Will the slope of the new budget line be steeper or flatter compared to the original budget line. Draw the budget lines using a graph with  $c_1$  and  $c_2$  axes.