

Midterm Exam October 22 2003

Do all 3 questions. All count equally.

1. What is the effect on a person's saving of a 25 percent tax on the return to saving to the following person? The person lives for two periods, earns all of her income in the first period and has a utility function

$$U(C_1, C_2) = A\sqrt{C_1} + C_2$$

defined over consumption in the first and second period of her life. Here  $C_1$  is her first-period consumption,  $C_2$  is her second-period consumption, and  $A$  is a positive constant.

2. Show ( graphically, or otherwise ) the effect of the taxation of the return to saving on the composition of an individual's portfolio between a safe asset and a risky asset, if there were **no loss offset** ( that is, if losses on an investment could not be deducted from any other taxable income ).

3. In an overlapping-generations framework, what would be the long-run effect of decreasing the tax rate on labour income, and increasing the tax rate on consumption ( keeping the tax yield constant )?