Econ 353 Money, Banking, and Financial Institutions Spring 2006
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Homework Assignment 2. Due: Thursday, January 26.

1. (2 points) Consider an annuity that makes yearly payments C for as long as someone lives. What would happen to the purchase price of the annuity as
    a. The age of the purchaser (at the time of purchase) goes up.
    b. The size of the monthly payment rises.
    c. The health of the purchaser improves.
    d. What is the value of this annuity today, if it pays $100 a year, and the interest rate is 5%?
2. (2 points) Most of college students face substantial uncertainty about their future incomes. How would you design a financial instrument that would allow you to insure against future income risk?
3. (2 point) Nicole found a new job after graduating from an MBA program. This job has two salary options: (1) either get a $100,000 sign-up bonus and $90,000/year salary or (2) $110,000/year salary. Market interest rate is 6%. For how many years will Nicole have to work to justify taking option (2)?
4. (2 points) Simon thinks about starting up a software company. He'd have to buy one computer now and one computer in 5 years to replace the older one. The price of a computer is $1000 now and $1100 in 5 years. Simon expects to get $300 a year in revenues for the next ten years. There is no inflation. The market interest rate is 5%. Should Simon undertake this project?
5. (2 points) Jim wants to buy a house for $100,000. Bank offers him a 30-year mortgage with fixed interest rate 7% (fixed in this case means that the interest rate won't change until mortgage loan is repaid in 30 years). Jim would have to make 360 monthly payments of about $651 each. What would the monthly payment be if the interest rate were 8% instead of 7%?