ADVANCED FINANCIAL THEORY

INTRODUCTORY EXAM 16.10.2004

2 h
Calculator allowed

1. Define briefly what is meant by:

   a) marginal rate of transformation (MRT)
   b) the geometric mean return of a portfolio
   c) a fair gamble
   d) second degree stochastic dominance
   e) safety first according to Roys's criterion.

(10 p)

2. An investor has the following utility function:

   $U(W) = \ln W$

Compute whether he has an increasing / constant / decreasing absolut, and relative risk aversion (ARA and RRA). Also define verbally the two risk aversion definitions. What type of risk aversion do people really seem to have, i.e. what does empirical evidence indicate concerning ARA and RRA ?

(10 p)

3. Explain what is meant by the Fisher separation theorem (a verbal explanation complemented by graphical illustration is preferred). How is the Fisher separation affected by transaction costs ?

(10 p)