Pricing of Financial Securities and Derivatives **Final Exam 9.5.2005**
Time: 4 hours
Calculator may be used
Note: The exam is first graded on a 40 p scale, and then scaled to 60 p.

1. Briefly explain the following words and expressions (10 p):

   a) compounding swap
   b) OTC market
   c) the relative form of the PPP
   d) cheapest to delivery bond
   e) implied volatility

2. Hull (Ch. 22) lists a number of reasons why interest rate derivatives are more difficult to value than equity and foreign exchange derivatives. Discuss briefly at least three of these reasons. (6 p)

3. Explain how one should calculate the theoretical future's price F for an asset S (for example a share or bond) that does not pay any income before the future's contract expires. Explain why this is the theoretically correct way to arrive at the future's price F by explaining how one could exploit overpricing and underpricing of the future if the future's price F is not correct. (12 p)

4. Discuss modified duration and key rate durations as measures of interest rate risk in the following order: a) how are they calculated, what factors affect them and how?, b) what do they measure, how should they be interpreted?, c) what are their weaknesses and limitations? (12 p)