Mid-term Review

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Outline

Introduction

1. Introduction to Financial Economics(2 pricing theories **[HW1,Q1]**
2. Interest & Bond:
    1. IRR, NPV, yield **[HW1,Q2]**
    2. Spot Rate(pricing), Forward Rate **[HW1,Q3]**
    3. Duration
3. Stocks:
    1. DDM model**[HW2,Q1]**
    2. Dividend decision & Fisher Separation Theorem**[HW2,Q2Q3]**

Outline

CAPM

1. Preference: Mean-Variance Analysis**[HW3,Q1]**
2. Behavior: Market Portfolio & Two-fund separation**[HW3,Q2]**
3. Equilibrium: Partial, SML vs. CML
    1. Proof1: Quadratic Utility Function**[HW4,Q1]**
    2. Proof2: Portfolio Construction & Sharp Ratio**[HW4,Q2]**
4. Properties: CAPM
    1. Systematic vs. Idiosyncratic
    2. $E(r_i) - r_f = \beta_i(E(r_M) - r_f)$**[HW4,Q3]**
    3. Applications & Deficiency**[HW4,Q4]**

Outline

- Preference: Expected Utility(Lecture 8)
  - Expected Utility Theorem(Without Proof)**[HW5,Q1]**
  - Risk Aversion: ARA, RRA and common utility functions**[HW5,Q2Q3]**
- Behavior: Behavior under risks(Lecture 9)
  - Risk Assets [Different State]
    - Proposition1:$a^* > (=, <)0 \Leftrightarrow E\tilde{r} > (=, <)r_f$
    - Proposition2:$a^{*\prime}(w_0) > (=, <)0 \Leftrightarrow R'_A(\cdot) < (= , 0)0(DARA, CARA, IARA)$
    - Proposition3:e$(w_0) = (>, <)1 \Leftrightarrow R'_R(\cdot) = (<, >)0(CRRA, DRRA, IRRA)$((Without Proof)
  - Risk and Savings [Different Time]
    - Determinacy case & Uncertainty case**[HW6,Q1]**
    - Proposition4:$s_A > (=, <)s_B \Leftrightarrow P_R(sR) < (=, >)2$
- Equilibrium: General Equilibrium(Lecture 10-11)
- Properties: C-CAPM(Lecture 12)

- Preference: Expected Utility(Lecture 8)
- Behavior: Behavior under risks(Lecture 9)
- Equilibrium: General Equilibrium(Lecture 10-11)
  - Asset market + Complete,Arrow-Debreu**[HW6,Q2Q3]**
  - Equilibrium in Complete Market**[HW6,Q4]**
  - Property of best risk sharing: Central Planner**[HW7,Q1Q2]**
    - Consumptions of all consumers are perfectly correlated
    - Consumptions only determined by aggregate risk
    - Idiosyncratic risk
  - Representative Consumer (HARA)
  - Asset prices in equilibrium
- Properties: C-CAPM(Lecture 12)
  - $E[\tilde{r}_j] = r_f + (E[\tilde{r}_j] - r_f)$
  - Risk-free rate: $r_f \approx \frac{1-\delta}{\delta} + R_R\bar{g} - \frac{1}{2}R_R P_R \sigma_g^2$
  - Risk premium:$E[\tilde{r}_j] - r_f = -\frac{\delta(1+r_f)}{u'(c_0)} cov(u'(\tilde{c_1}), \tilde{r}_j)$

Acknowledge

60pt 计算 vs. 40pt 简答，请务必携带计算器

Thanks for your listening and sleeping!!!