Capital Markets and Investments

Fall 2016, Mathematics, GR 5280

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The dates of seminars (double lecture every Friday)

1. 9/9/2016;
2. 9/16/2016;
3. 9/23/2016;
4. 9/30/2016;
5. 10/7/2016;
6. 10/14/2016;
7. 10/21/2016;
8. 10/28/2016;
9. 11/4/2016;
10. 11/11/2016;
11. 11/18/2016 (take home Final Exam given out);
12. 11/25/2016;
13. 12/2/2016 (take home Final Exam collected).

LECTURE TIME: Fridays, 5:00 PM – 7:20 PM

LECTURE ROOM: 312, Mathematics Building

GRADE = ATTENDANCE (20%) + HWs (40%) + FINAL EXAM (40%)
The course Objectives

By following the classical text of Bodie, Kane, Marcus “Investments” [1], introduce the students to the following notions:

1) That in the reasonably free and competitive financial markets the securities prices are nearly efficient, and how useful this observation is for the securities valuation and investments strategies selection.

2) Risk/return tradeoff, diversification and their role in the modern portfolio theory, their consequences for asset allocation, portfolio optimization. We will cover Capital Asset Pricing Model, Modern Portfolio Theory, Factor Models, and Equities Valuation.

3) Definition and treatment of futures, options, fixed income securities.

Even though [1] is a classical MBA/CFA text, we will be trying to place a larger emphasis on the empirical finance (heavy use of Bloomberg Professional data) and applied math/quantitative considerations of the above subjects.
Tentative subjects to be covered

1. The investment environment. Real assets versus financial assets. Financial assets. Some examples from Bloomberg. Role of financial assets in economy: the informational role of financial markets; consumption timing; allocation of risk; separation of ownership and management. The investment process. Markets competitiveness: risk-return trade-off; efficient markets. The players in financial markets: financial intermediaries; investment bankers. The financial crisis of 2008: conditions before the crisis; various illustrations from Bloomberg; changes in housing finance; mortgage derivatives; credit default swaps; the rise of systemic risk; crisis unfolding; systemic risk and the real economy.
Reading: chapter 1 of [1].

Reading: chapter 2 of [1].

Reading: chapter 3 of [1].


Reading: chapter 5 of [1].


Reading: chapter 6 of [1].


Reading: chapter 7 of [1].


Reading: chapter 8 of [1].


Reading: chapter 9 of [1]. Some chapters from [7].
   
   *Reading: chapter 10 of [1]. Some chapters from [7].*

10. Efficient market hypothesis. Random walk and efficient market hypothesis. Implications of EMH.
    
    *Are markets efficient?*
    
    *Reading: chapter 11 of [1].*

    
    *Reading: chapter 12 of [1].*
References