

Investments 2015

Professor Wei Xu

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Course Description

This course offers the financial theory and quantitative tools necessary for understanding how stock, bond prices are determined, and how financial assets are used for investment decisions. Topics covered include modeling the relation between risk and return, optimal portfolio selection based on mean—variance analysis, asset pricing models, money management, and more. The focus is mainly on common stocks, but fixed income securities (bonds) are also analyzed.

The course is quantitative and challenging. Rather than delving into the details of current practice, it takes a rigorous and critical view to the process of investing. The aim is to provide the students with a lasting conceptual framework in which to view and analyze investment decisions. At the same time, the course will discuss alternative philosophies of investing, and relate the material to current financial news and to problems relevant to the practitioner.

Course Web Page

http://cms.pkusz.edu.cn/index.php?next=Next

Grading

The course requirements are project and a Final exam.

Weightings on the various components of the Final grade are as follows:

Project: 50%

Final 50%

Many of you have useful experience that can undoubtedly benefit our class discussions. Do not hesitate to share your experience with the rest of the class!

Exams

Final exam will be close book. Calculators are permitted, except those with word processing capabilities. Cell phones are not allowed as a for calculator. No formulas will be provided and no cheat sheet is allowed in the final exam.

Homework Assignments

Suggested homework will be given, which consist of problems in your text book. You are not required to submit any homework to me, but keep in mind that exam questions will be similar to the assigned homework problems. Solutions of the homework will be posted

Course Materials

Required Text

- 1. Bodie, Zvi, Alex Kane, and Alan Marcus, Investments, McGraw Hill, 9th Edition, ISBN: 0073530700, 2010 (BKM).
- 2. 量化投资 策略与技术, 丁鹏, 电子工业出版社, ISBN: 978-7-121-16536-8, 2012

Recommended Texts

1. Malkiel, Burton, A Random Walk Down Wall Street, Norton, 9th Edition,

2007;

2. Siegel, Jeremy, Stocks for the Long Run, McGraw Hill, 4th Edition, 2008.

The recommended texts will not be explicitly employed in the course, but provide additional insight into some of the topics covered.

Lecture Slides

When presenting the class material, I tend to follow my lecture notes. I will make these notes available to you before each class.

Course Outline and Readings

This is an approximate schedule of topics that will be covered. You should read the corresponding material in the text prior to the lecture. "BKM" refers to the book by Bodie, Kane and Marcus.

Week One – Risk and Return; Asset Pricing and Present Value

- Course Outline and Introduction
- Overview of Financial Markets
- Risk and Return
- -BKM, chapters 1, 2, 3

Week Two – The Capital Asset Pricing Model

- The Capital Asset Pricing Model (CAPM)
- Applications of CAPM
- BKM, chapter 9 (sections 1 2, 3)

<u>Week Three</u> – Arbitrage Pricing Theory

- Multifactor Models and Arbitrage Pricing Theory
- The Fama & French 3-Factor Model
- BKM, chapters 10

Week Four – Equity Valuation Model

- Balance Sheet Models
- Dividend Discount Models
- Price/Earnings Ratios
- Free Cash Flow Models
- BKM, chapters 13

<u>Week Five</u> – Mid-term progress report

• Group representation

<u>Week Six</u> – Portfolio performance evaluation

- Various performance measures
- Style analysis
- Performance Attribution Procedures
- Class review
- BKM, chapter 18

Week Seven-Fixed Income

- Bond Prices and Yields
- The Term Structure of Interest Rates
- BKM, chapters 5.1, 15,

Week Eight - Fixed Income

- •Duration Matching and Immunization. Convexity
- Bond portfolio management
- BKM, chapters 15, 16 (sections 1, 2)

<u>Week Nine</u> – Final project report

• Group presentation

Week Ten – Final Exam
FINAL EXAM