

# FINA 221: Investment Analysis and Portfolio Management

## (Fall 2002)

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Sessions: L1 and L2

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### Class schedule

L1	Tue. and Thu. 3:00 - 4:20 p.m.	Rm#: 4333
L2	Tue. and Thu. 4:30 - 5:50 p.m.	Rm#: 4333

### Course description

This course offers basic knowledge about investments in financial securities. The first half of the course focuses on how financial markets work and how securities (stocks) are priced in the markets. The fundamental concepts of investments and securities markets such as risk diversification, portfolio selection, arbitrage, etc. will be taught. The second half of the course discusses market efficiency, fixed income securities, options and futures and portfolio management.

### Reading materials

#### 1. Textbook

Bodie, Z., A. Kane and A.J. Marcus, Essentials of Investments (4th edition), Irwin, 2001)

#### 2. Supplementary materials

##### *Asian Wall Street Journal*

You are encouraged to read the AWSJ for two purposes: (1) Help you understand timely financial issues in the (investment) world. While this partly motivates why you should take the course, you should also (try to) apply the concepts, principles and insights to be learnt in the course to analyzing these financial issues. (2) Help you in the job market.

#### 3. Optional readings or references

- [1] Leslie S.F. Young & Raymond C.P. Chiang, 1997, *Hong Kong Securities Industry*, The Stock Exchange of Hong Kong Limited.
- [2] Robert A. Haugen, 1999, *The New Finance*, Prentice Hall
- [3] Robert A. Haugen, 1999, *The Inefficient Stock Market*, Prentice Hall
- [4] George Constantinides, Milton Harris, and Rene Stulz, 2001, *Handbook of the Economics of Finance*, Ch17 (Anomalies and Market Efficiency), this is an interesting survey!

*The first book offers some details of the financial system in Hong Kong. If you are interested in the financial markets of HK or in finding a job in the financial industry in HK, reading this book is rewarding. The second and third books are for casual reading, and show some different views (from what I teach in class) on financial investments. A copy of each of the books will be put into library reserves, so that you can check them out (2 hours) and glance through to determine whether you want to order them from the bookstore (in campus).*

### Background you need

- ◆ You should have basic knowledge about finance. Any courses being equivalent to fina110 or fina111 (in HKUST) is the minimum.
- ◆ Statistical knowledge (minimum): Must understand very well random variables, mean, variance, covariance and simple regression techniques. Please try to have a review by yourself as soon as possible, if you forgot these concepts.

### Rules of the class

- ◆ Always turn off your mobile phone before entering the class!
- ◆ Class attendance is not compulsory. But if you come, please come to the class on time.

### Exam

- ◆ There are two exams, mid-term and final, which consist of MC questions, structured problem solving questions and short essay questions.
- ◆ Absence from the exams will *not* be excused except for a serious medical reason (require a doctor's note or letter as a formal proof in this case).

### Homework

- ◆ You have three homework assignments, and are required to work on a team basis. Each team consists of one to four members (at maximum). You need to form your team and inform my TA (Miss. Kao) your team members by Sept. 12. Each team will need to submit only **one** write-up for each homework assignment, and all team members receive the same grade for their work.
- ◆ All homework assignments have to be **typed**. If not, your homework won't be graded. Credits will also be given on the basis of the clarity and neatness of your presentation.
- ◆ Some homework assignments require the use of *Microsoft Excel* for analysis. If you have never used Excel, it is strongly recommended that you go through the self-guided Excel Tutorial.
- ◆ All homework assignments have to be submitted on the due dates.
- ◆ Each team must work **independently**. A strong penalty will be imposed on those teams who copy other teams' solutions or whose solutions are copied, either partly or fully. If such a case is found, all the teams involved will receive zero credit on the assignment and may face further disciplinary action.

### Grading

Homework (6, 6, 8 pts)	20 points
Mid-term exam	35 points
Final exam	45 points

### IMPORTANT DATES

Date (Day/Month)	Homework	Exam
19/9 (Thursday) 15/10 (Tuesday) 29/10 (Tuesday)	HW#1 Due HW#2 Due	Mid-term examination (7:00 – 9:00 pm)
28/11 (Tuesday)	HW#3 Due	
12-21/12		Final examination (TBA)

**Course outline (tentative)**

- Sept. 3                    **Overview of the Course**
- Sept. 5                    **Investments – Background and Issues**
- Financial vs. real Assets
  - Overall investment process
- Readings: BKM (Chapter 1)
- Sept. 10                  **Financial Markets and Instruments**
- Financial Assets or Securities
  - Stock Indexes
- Readings: BKM (Chapter 2)
- Sept. 12, 17              **Trading Securities**
- Security Exchanges and Markets
  - Trading Arrangements: Orders, Margin Trading, Short Sales
- Readings: BKM (Chapter 3)

Sept. 16-20	<i>MS EXCEL Tutorial (though this is optional, I strongly suggest you to attend): The tutorial covers basic functions, copy-paste, use of formulas, use of functions (average, standard deviation, sum, etc.), handling of multiple time-series, graphs, regression analysis, etc.</i>
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- Sept. 19\*                 **Mutual Funds and Other Investment Companies**
- Open-end and closed-end funds
- Readings: BKM (Chapter 4)

**The HWK#1 is due on Sept. 19.**

- Sept. 24, 26             **Returns on Securities**
- Probability distribution of returns
  - How to measure expected return and risk
  - Tradeoff between risk and expected return
  - Portfolios formation and capital allocation line
- Readings: BKM (Chapter 6)

Oct. 3                     Database demonstration (Compulsory)  
Conducted by Mr. Sam Chu at Library Computer Lab  
(LG 1332 on LG1, next to Media Resources)

- Oct. 8, 10                **Efficient Diversification**
- Portfolio mathematics
  - Systematic and firm-specific risk
  - Efficient diversification
- Readings: BKM (Chapter 7)

- Oct. 15\*,17,22      **Capital Asset Pricing and Arbitrage Pricing Theory**
- CAPM
  - Security Market Line
  - Arbitrage pricing theory
- Readings: BKM (Chapter 8)
- The HWK#2 is DUE on Oct. 15.**
- Oct. 24      **Review Session for the Mid-term Exam**
- Answer your questions (pls. bring your questions to class)
  - Brief summary or review of the chapters covered so far.
- Oct. 29\*      **Mid-term Examination**
- Oct. 31  
Nov. 5      **Market Efficiency**
- Random walk hypothesis
  - Efficient market hypothesis
  - Implication of market efficiency
  - Empirical tests
- Readings: BKM (Chapter 9)
- Nov. 7\*      **Macroeconomics and Industry Analysis (Very brief)**
- Macroeconomic factors
  - Fiscal and monetary policies
  - Business cycles
- Readings: BKM (Chapter 12)
- Nov. 12, 14      **Equity Valuation**
- Dividend discount model
  - Constant growth model
  - Shifting growth rate model
- Readings: BKM (Chapter 13)
- Nov. 19, 21      **Bond Prices and Yields**
- Bond pricing
  - Term structure of interest rates
- Readings: BKM (Chapter 10)
- Nov. 26      **Managing Fixed-income Investments**
- Active and passive strategies
  - Duration
  - Active bond management
- Readings: BKM (Chapter 11)
- Nov. 28\*      **Futures and Options**
- Futures markets and trading
  - Options markets and trading
- Readings: BKM (Chapters 16-18)

**HW# 3 is DUE on Nov. 28!**

Dec. 3

**Portfolio Management**

- Performance Evaluation
- Passive and Active Portfolio Management
- Investment Companies

Readings: BKM (Chapter 19)

Dec. 5

**Review session for the final exam**

- Answer your questions (pls. bring your questions to class)
- Brief summary or review of the course

Dec. 12-21

**Final Examination (to be announced)**