

FIN3102A/FIN3702A: INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

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Session: Semester 2, 2020/2021

Course objectives

The objective of this course is to develop key concepts in investment theory from the perspective of a portfolio manager, and to apply such concepts using real financial data. Topics to be covered include portfolio optimization and asset pricing theories, as well as their applications to problems in modern financial practice. This course also explores the application of various financial instruments in investment management and introduces the basic techniques of portfolio performance evaluation.

Prerequisites

- Finance (FIN2004/FIN2704)
- Basic understanding of Excel Spreadsheet functions
- Use of financial calculator

Course textbook

The reference noted below has been placed in the RBR section in HSSML:

Bodie, Zvi, Alex Kane and Alan Marcus, 2021, *Investments (12th Edition)*, McGraw Hill, ISBN 978-1-260-57115-8.

All other course materials, journal articles, data files, and information pertaining to FIN3102A/FIN3702A will be posted on LumiNUS. You are expected to check any updates and files on the LumiNUS system on the regular basis. You are encouraged to read the financial news from Bloomberg or The Financial Times regularly.

Assessment Methods

Class Participation	10%
Individual Assignments	10%
Group Assignments	20%
Group Project	20%
Test 1	20%
Test 2	15%
<u>Ethics</u>	5%
Total	100%

I. Class participation (10%)

Both class preparation and participation are important. The classroom is a great place to test and enhance your understanding of the material by asking and answering questions. It will be hard to contribute to the discussions if you are unprepared. I strongly encourage you to prepare for class.

Class participation, from clarifying questions to creative and insightful comments, is greatly encouraged. Your active participation will transform this class into a great learning experience for everyone, including myself.

II. Individual Assignments (10%)

A total of three Individual Assignments will be done online through LumiNUS. Students should complete these in the specified week.

III. Group Assignments (20%)

A total of two Group Assignments will be given to students. Please work in groups for these assignments. The number of members of each group will be determined after the class sizes are confirmed. All groups will submit their answers in the specified week. Each group should hand in only one set of answers. Each group member will receive the same grade on an exercise, and each is expected to make a significant contribution to the solution of every problem.

Please put a cover page on the assignment to include student names, group number and assignment number (i.e., "A#_Group#_Assignment#").

IV. Group Project (20%)

Each group will complete a 10-page report (inclusive of appendices) in **Word/PDF** document (with font size 12), an excel workbook and also a 15-slide presentation deck in **PPT/PDF** document. The cover page (including student names and group number) is not within the page limit. The project deliverables shall be submitted through LumiNUS electronically. Please zip all deliverables into a folder and label it in the following format: "A#_Group#_Case#" with the group number and case number.

The final presentation is scheduled on week 13. Each group will have 15 minutes for their presentation.

V. Test 1 (20%)

A closed-book test will be held on **17th Feb 2021 (Wednesday) 6.30pm (subject to change)**.

You are allowed to bring two calculators and a **two-sided A4-sized help sheet** for Test 1. The examinable syllabus of Test 1 covers Topics 1 – 4.

VI. Test 2 (15%)

A closed-book test will be held on **7th Apr 2021 (Wednesday) 6.30pm (subject to change)**.

You are allowed to bring two calculators and a **two-sided A4-sized help sheet** for Test 2. The examinable syllabus of Test 2 covers Topics 5 – 8.

VII. Investment Ethics (5%)

There will be online materials for study of Ethics and a quiz on the materials in LumiNUS. This is in compliance to NUS being a CFA affiliated institution.

Main Topics:

Topic 1: Introduction (BKM Chapter 1 to 5)

1. Different asset classes
2. How securities are traded
3. Risk & Return

Topic 2: Portfolio Theory (BKM Chapter 6 to 7)

1. Determine risk tolerance
2. Measure portfolio risk and return
3. Identify investment opportunity set
4. Optimal asset allocation

Topic 3: Equilibrium Asset Pricing Models (BKM Chapter 8, 9 & 10)

1. CAPM
2. Single Factor Model
3. APT
4. Multi Factor Model

Topic 4: Efficient Market Hypothesis and its Applications (BKM Chapter 11)

1. Forms of Market Efficiency
2. Tests of Market Efficiency
3. Passive investment
4. Active investment

Topic 5: Behavioral Finance (BKM Chapter 12.1)

1. Behavioral Biases
2. Limits to Arbitrage

Topic 6: Portfolio Management (BKM Chapter 24)

1. Performance measures
2. Style Analysis

Topic 7: Security Analysis (BKM Chapter 17, 18 & 12.2)

1. Macroeconomic Analysis
2. Industry Analysis
3. Fundamental Analysis
4. Technical Analysis

Topic 8: Bond Investment (BKM Chapter 14, 15 & 16)

1. Bond features
2. Bond pricing and yields
3. Interest rate determinants
4. Term structure theories
5. Duration and Convexity
6. Bond investment

Topic 9: Options & Futures (BKM Chapter 20, 21, 22, & 23)

1. Overview of derivatives ^[1]_[SEP]
2. Options and Futures ^[1]_[SEP]
3. Investment with derivatives ^[1]_[SEP]

Schedule (Subject to Change):

Week	Lesson	Topic	Deliverable (end of week)
1 (11/1)	Lecture 1	Topic 1	
2 (18/1)	Lecture 2	Topic 2	
3 (25/1)	Lecture 3	Topic 3	Individual Assignment #1
4 (1/2)	Lecture 4	Topics 4 & 5	Group Assignment #1
5 (8/2)	Test 1 Review		
6 (15/2)	No Lesson	Test 1	17th Feb 2021 (Wed) 6.30pm
<i>Recess Week</i>			
7 (1/3)	Lecture 5 & Group Project Brief	Topic 6	Individual Assignment #2
8 (8/3)	Lecture 6	Topics 7 & 8	Individual Assignment #3
9 (15/3)	Lecture 7	Topic 8 (cont'd)	
10 (22/3)	Lecture 8	Topic 9	Group Assignment #2
11 (29/3)	Test 2 Review		Group Project Report
12 (5/4)	No Lesson	Test 2	7th Apr 2021 (Wed) 6.30pm
13 (12/4)	Project Presentations		

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is “the practice of taking someone else's work or ideas and passing them off as one's own” (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule – You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

<http://nus.edu.sg/osa/resources/code-of-student-conduct>