

FIN 3102: INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

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Session: Semester 1, 2017/2018

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)
- Statistics (BZ1008/ST1131A)
- Basic understanding of Excel Spreadsheet functions
- Financial calculator

Course textbook

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

Bodie, Zvi, Alex Kane, Alan Marcus and Ravi Jain, 2014, *Investments: Asia Global Edition*, McGraw Hill, ISBN 978-007-126228-6.

All other course materials, journal articles, data files, and information pertaining to FIN3102 will be posted on the IVLE. You are expected to check any updates and files on the IVLE system on the regular basis. You are encouraged to use IVLE discussion forum for your questions and comments. I encourage you to read regularly the financial news from Wall Street Journal or the Financial Times.

Assessment Methods

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|---------------------------|-------------|
| Class Participation | 10% |
| Group Project | 25% |
| Test 1 (7 October 2017) | 30% |
| Test 2 (16 November 2017) | 30% |
| <u>Ethics</u> | 5% |
| Total | 100% |

(i) Class participation (10%)

Credits will be given for active participation in class. (*Warning: Zero mark will be given for non-participation throughout the course.*) Students will also be prompted with questions on the additional assigned readings from the financial times, the economists, and the Bloomberg.

(ii) Group Project on Case Report and Presentation (25%)

There are THREE CASES in this course. Each class will form 9 groups. Group 1, 2, and 3 are to complete a 10-page case analysis report including appendix in **MICROSOFT WORD** document (with font size 12) and be prepared to present the case analysis in class for CASE 1 in class. The presentation slides should not exceed 20 slides. Group 4, 5 and 6 will do the same for CASE 2. Group 7, 8 and 9 will do the same for CASE 3. The case report shall be submitted through IVLE electronically. When uploading the reports, please label the file in the following format: "A1_Group1_Case 1" with the section number, group number and case number.

CASE 1:

It will be distributed on **1 September 2017 (Friday)** by 2pm via IVLE. The case reports from Group 1, 2 and 3 are due on **15 September 2017 (Friday) by 2pm to IVLE.**

CASE 2:

It will be distributed on **6 October 2017 (Friday)** by 2pm via IVLE. The case reports from Group 4, 5 and 6 are due on **20 October 2017 (Friday) by 2pm to IVLE.**

CASE 3:

It will be distributed on **20 October (Friday)** by 2pm via IVLE. The case reports from Group 7, 8 and 9 are due on **3 November (Friday) by 2pm to IVLE.**

(iii) Test 1 (30%)

A 2-hour closed-book test will be held on **7 October 2017 (Saturday) from 10am to 12pm.** You are allowed to bring a financial calculator and one-sided A4-sized Note for Test 1. The contents of Test 1 cover everything till Week 6. The format of Test 1 will be MCQs (100%).

(iv) Test 2 (30%)

A 2-hour closed-book test will be held on **16 November 2017 (Thursday) from 6pm to 8pm.** You are allowed to bring a financial calculator and two-sided A4-sized Note for Test 2. The contents of Test 2 are cumulative and cover everything taught in the entire course. The format of Test 2 will be MCQs and Open-ended Questions.

(v) Investment Ethics (5%)

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

Consultation Hours

TBC.

Main Topics:

Topic 1: Introduction (BKMJ Chapter 1 to 5)

1. Investment environment
2. Different asset classes
3. How securities are traded
4. Investment companies
5. Risk & Return

Topic 2: Portfolio Theory (BKMJ 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: Equilibriums Asset Pricing Models (BKMJ Chapter 8, 9 & 10)

1. CAPM
2. APT
3. Applications

Topic 4: Portfolio Management (BKMJ Chapter 24)

1. Passive investment
2. Active investment
3. Performance measure

Topic 5: Efficient Market Hypothesis and its Applications (BKMJ Chapter 11 & 12)

1. Forms of Market Efficiency
2. Tests of Market Efficiency
3. Implications of Efficient Capital Markets

Topic 6: Security Analysis (BKMJ Chapter 17 & 18)

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

Topic 7: Bond Investment (BKMJ Chapter 14, 15 & 16)

1. Bond features
2. Bond pricing and yields
3. Interest rate determinants
4. Term structure theories

5. Duration
6. Convexity
7. Bond investment

Topic 8: Investment in Singapore

Schedule:

Week 1: Topic 1
Week 2: Topic 2
Week 3: Topic 3
Week 4: Topic 4
Week 5: Topic 5
Week 6: Case 1 Discussion
Recess Break
Week 7: Test 1 on 7 October from 10am to 12pm
Week 8: Topic 6
Week 9: Topic 7 (I)
Week 10: Case 2 Discussion
Week 11: Topic 7 (II) & Topic 8
Week 12: Case 3 Discussion
Week 13: Test 2 on 16 November from 6pm to 8pm

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://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct>

Online Module on Plagiarism:

<http://emodule.nus.edu.sg/ac/>

| COURSE ACTIVITY SCHEDULE | | | |
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| Subject | Description | Take-Home Exercises | Submission Dates |
| WEEK 1 (14 August 2017) | | | |
| Introduction BKMJ 1-4 | 1. Investment environment 2. Different asset classes 3. How securities are traded 4. Investment companies | BKMJ 5: Concept Check Questions (CCQ) 12; CFA 3-6. | Form 9 groups and submit names to Professor |
| Risk & Return BKMJ 5.4, 5.5, 5.8 | 5. Risk & Return | Read BKMJ 6 & 7 | |
| WEEK 2 (21 August 2017) | | | |
| Portfolio Theory BKMJ 6 & 7.1-7.4 | 1. Determine risk tolerance 2. Measure portfolio risk and return 3. Identify investment opportunity set 4. Optimal asset allocation | BKMJ 6: 5, 13, 14, 15, 17, 18, 19; CFA 4, 5, 7. BKMJ 7: 4 -10 Read BKMJ 8, 9, 10 | |
| WEEK 3 (28 August 2017) | | | |
| Equilibrium Model BKMJ 8.1-8.2, 9.1 & 10.1-10.5 | 1. CAPM 2. Factor Model 3. Arbitrage Pricing Theory | BKMJ 8: 7; CFA 1,2 BKMJ 9: 17, 18, 19; CFA 2, 5, 6 BKMJ 10: 5; CFA 1,2 Read BKMJ 24 | Case 1 will be distributed on 1 September 2017 by 2pm via IVLE. |
| WEEK 4 (4 September 2017) | | | |
| Portfolio Management BKMJ 24.1-24.3, 24.5-24.7 | 1. Passive investment 2. Active investment 3. Performance measure | BKMJ 24: 4, 8, 15; CFA 1, 2, & 4. Read BKMJ 11 & 12 | |
| WEEK 5 (11 September 2017) | | | |
| Efficient Market Hypothesis BKMJ 11 & 12 | 1. Forms of market efficiency 2. Tests of market efficiency 3. Applications of market efficiency | BKMJ 11: 8, 10, 14; CFA 2, 4. BKMJ 12: 2, 3; CFA 3. Read Case 1 and prepare for the answers for non-presenting groups. | Case 1 report is due on 15 September 2017 before 2pm to IVLE. |
| WEEK 6 (18 September 2017) | | | |
| Case 1 Discussion | Case 1 Presentation and Discussion | Prepare for Test 1 | |
| RECESS WEEK (23 September 2017 – 1 October 2017) | | | |

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| WEEK 7: Test 1 on 7 October 2017 from 10am to 12noon (Case 2 will be distributed through IVLE on 6 October 2017 by 2pm) | | | |
| WEEK 8 (9 October 2017) | | | |
| Security Analysis BKMJ 17, 18 | 1. Macroeconomic Analysis 2. Industry Analysis 3. Fundamental Analysis | BKMJ 17: 11, 18, 19, 20, 21, CFA 6, 8 BKMJ 18: 10, 14, 20, CFA 5, 7 | |
| WEEK 9 (16 October 2017) | | | |
| Bond Pricing BKMJ 14 & 15 | 1. Bond features 2. Bond pricing and yields 3. Interest rate determinants 4. Term structure theories | BKMJ 14: 5, 9, 10, 13 BKMJ 15: 2, 4, 7, 12 Read Case 2 and prepare for the answers for non-presenting groups. | Case 2 report is due on 20 October 2017 by 2pm to IVLE. Case 3 will be distributed through IVLE on 20 October 2017 by 2pm. |
| WEEK 10 (23 October 2017) | | | |
| Case 2 Discussion | Case 2 presentation and discussion | Read BKMJ 16 | |
| WEEK 11 (30 October 2017) | | | |
| Bond Investment BKMJ 16 Investment in Singapore | 1. Bond price volatility 2. Duration 3. Convexity 4. Investment applications 5. Investment in Singapore 6. Final review | BKMJ 16: 3, 7, 10, 11, 12, 13, 14, 15, 16, 23, CFA 3, 12 Read Case 3 and prepare for the answers for non-presenting groups. | Case 3 report is due on 3 November 2017 by 2pm to IVLE. |
| WEEK 12 (6 November 2017) | | | |
| Case 3 Discussion | Case 3 presentation and discussion | Prepare for Test 2 | |
| WEEK 13: Test 2 on 16 November 2017 from 6pm to 8pm | | | |