Pension Fund Management Strategies and Performance Evaluation

KAIST
BAF 680
Fall 2022

Class Hours: 7:00 p.m. - 9:50 p.m. on Tuesdays
Room: 11-3, Yeouido
Professor: Inmoo Lee
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Office Hours: 6:30 - 6:50 p.m. on Tuesdays and by appointments
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Teaching Assistants:
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Course Objectives:

This course covers various topics related to managing and evaluating pension and other types of funds. The course covers the characteristics of different asset classes and investment strategies used for different asset classes. In addition, it covers asset allocation and performance evaluation related issues. It is assumed that students have taken at least one Investment related course. Some exercises are done using Python and students are required to learn Python for these exercises.

Required Materials:

- Course materials available on the course website at KLMS.
- "Efficiently Inefficient" by Lasse Heje Pedersen, 2015, Princeton University Press (Amazon Kindle edition and paperback edition (2019) are available).

References:

- "Asset Management: A Systematic Approach to Factor Investing" by Andrew Ang, 2014, Oxford University Press.
- "Expected Returns: An Investor's Guide to Harvesting Market Rewards" by Antti Ilmanen, 2011, John Wiley & Sons Ltd.
- "Machine Learning for Asset Managers" by Marcos M. López de Prado, 2020, Cambridge University Press.

Contact Information

Anyone is welcome to stop by the office at Yeouido during the office hours to discuss any class related issues. I strongly encourage students to contact me even outside my regular office hours whenever clearer explanations for any covered topics are necessary. The best way to communicate is through email but an alternative arrangement can be made once an email is received with a clear indication of requesting for an alternative arrangement. For this course, TA's role is to help the course with class logistics, not to help students with the contents of the class. All course materials and contents related questions should be directed to me.

Grading Policy

1. Two Exams (60%)
2. One Group Assignment (10%)
3. Final Group Project and Presentation (20%)
4. Participation and Attendance (10%)

F will be given when one misses classes more than four times.

Exam

Exams are in-class exams. Everyone is allowed to bring a cheat-sheet in which anything to be referenced can be **hand-written in one-side** of an A4 size paper. Students who violate this rule will receive only **50%** of exam scores. The default weights are 30% for each exam. However, you are given a free option to change the weights to 20% - 40% after taking the first exam. More details will be provided after the first exam.

Assignment

Everyone will be asked to join a group of 3 (or 4) students on the first day of the class. Each group is responsible for the submission of a group report on an assignment. The assignment should be submitted through an email by **7:00 a.m. on the due date**. Groups submitting an assignment after a due time will receive a partial or zero score depending on the time submitted. For a late submission, **20% of the score will be deducted for each one-hour-bracket after 7:00 a.m.**. For example, if an assignment is submitted at 9:10 a.m., then 60% (= 20% × 3) of the score will be deducted from the graded score (i.e., if the score without a penalty is 90, then the final score will be 36 (= (1 - 60%) × 90)). This means that **an assignment submitted after 12:00 p.m. will receive a zero score**. On the due date of each assignment, some groups may receive questions about their report and therefore, each group should be prepared to answer any questions regarding the submitted assignment. When you submit the assignment through an email, please use the following file naming rule for the attachment: **Group#_Ass** (e.g., for Group **1**, **Group1_Ass**). Please send your assignment to **both TA and me**.

Final Group Project & Presentation

Each group is responsible for choosing a topic related to the course and writing a group report on the chosen topic. The project can be a detailed analysis of how an institutional investor manages its fund and evaluates its performance, an analysis of a particular investment strategy, an asset allocation exercise or a performance evaluation exercise using historical data, or a survey of academic and practitioner targeted articles on fund management related issues. For the survey, it should cover more than 10 articles on related topics. The report should be no longer than 15 pages (double spacing with at least 10 pitch) including all exhibits. Each group should notify me the topic of the report by **Nov. 1**. I strongly encourage you to ask me any questions regarding this final group report. Please start to work on the final group report as soon as possible. Each group is responsible for **presenting its mid-report for five minutes on Nov. 22.** The mid-report should include topic, progresses, and future plans. Each group also needs to present the final group report in the class during the last week of the semester. The due date for the submission of the report together with presentation materials is **Dec. 6 (by 7: a.m. as for the assignment)**. Most groups with adequate preparation and good presentation will get 17 points. Groups with very thorough analyses and creative ideas with good presentation will get 20 points. Groups with poor preparation but good presentation will get 13 points. Groups with poor presentation will get 3 points off from the above mentioned points. When you submit the final report through an email, please use the following format of the attached file name: **Group#_FP** (e.g., for Group 1, **Group1_FP**). Please send your final project to **both TAs and me**.

Participation & Attendance

Most students with regular participation and attendance will get 7 points out of 10. Students with very active participation and perfect attendance will get 10 points. Students with no participation or many absences will get 2 points.

Group Management

Each member of a group is expected to motivate others to contribute to the group works equally. To discourage someone from shirking, **a peer evaluation** will be done during the final exam to identify those who are obviously free-riding. Those who receive the worst evaluation (1 out of 5) from all other members will get zero scores for all group assignments. Those who receive the worst evaluation from the majority of group members will receive only 70% of the scores received by the group for all group assignments.

Course Schedule

The following summarizes topics and articles to be covered in each class during the semester. Both topics and articles to be covered are **subject to change**. Any changes made will be posted in the course website.

Week	Topic	Due Date
1W (8/30)	**Overview**	Chapter 1
2W (9/6)	**Performance Evaluation and Risk** Pastor and Vorsatz (2020, RAPS) Grinblatt and Titman (1993, JB)	Chapters 2 & 4
3W (9/13)	**Asset Allocation and Backtesting** Xiong, Ibbotson, Idzorek, and Chen (2010, FAJ)	Chapters 3 & 10
4W (9/20)	**Black-Litterman, TDF & Digital Assets** Idzorek (2004, Ibbotson Associate) Mitchell and Utkus (2021, WP) Grider, Maximo and Zhao (2002, Grayscale)	Chapter 10
5W (9/27)	**Equity** Asness, Frazzini, and Pedersen (2019, RAS) Frazzini, Kabiller and Pedersen (2018, FAJ) Israel, Laursen and Richardson (2021, JPM)	**Ass 1 Due** Chapters 6, 7 & 8
6W (10/4)	**Equity: Quantitative and Event-driven investment**	Chapters 9 & 16
7W (10/11)	**Transaction Costs & Review** Keim (1999, JFE) Chan and Lakonishok (1995, JF) Li (2021, WP)	Chapter 5
8W (10/18)	**Exam**	**Exam 1** (10/18)

9W (10/25)	**Fixed Income Securities** Fama (2003, DFA)	
10W (11/1)	**Stock & Bonds, Convertible Arbitrage and Fixed Income Arbitrage** Baz, Sapra and Ramirez (2019, JPM) Duarte, Longstaff and Yu (2007, RFS)	**Final Topic Due** Chapters 14 & 15
11W (11/8)	**Alternative Investments** Ben-David et al.(2020,NBER WP) Sialm, Sun and Zheng (2020, RFS) Korteweg and Westerfield (2022, WP) Harris et al.(2020, NBER WP)	
12W (11/15)	**Global Macro and Managed Futures** Hurst, Ooi, and Pedersen (2017, JPM) Moskowitz, Ooi, and Pedersen (2012, JFE)	Chapters 11 & 12
13W (11/22)	**Active vs. Passive Investments** Pastor, Stambaugh and Taylor (2015, JFE) Pedersen (2018, FAJ) Del Guercio and Reuter (2014, JF)	**Final Project Mid-Report Presentation**
14W (11/29)	**Inflation Hedging, Review & Wrap-up** Aizenman and Marion (2011, JMacro) Lee & Lee (DFA,2009) Neville, Draaisma, Funnell, Harvey and Hemert (2021, JPM)	
15W (12/6)	**Final Project Presentation**	**Final Project Due**
16W (12/13)	**Exam**	**Exam 2** (12/13)