



Shanghai Jiao Tong University

BU430 Portfolio Management

Office Hours:	TBD		
Term:	December 16, 2019- January 7, 2020	Credits:	4 units
Classroom:	TBD	Teaching Assistant(s):	TBD
Class Hours:	Monday through Friday, 160 mins per teaching day		
Discussion Sessions:	2 hours each week, conducted by teaching assistant(s)		
Total Contact Hours:	64 contact hours (1 contact hour = 45 mins, 2880 mins in total)		
Required Texts (with ISBN):	Edwin J. Elton, Martin J. Gruber, Stephen J. Brown & William N. Goetzmann <ul style="list-style-type: none">• ISBN-10: 1119427290• ISBN-13: 978-1119427292		
Prerequisite:	Students should have completed a basic course in finance prior to commencing the course.		



Course Overview

The course aims to introduce students to the basic theory and related practice of portfolio management. The course includes material on stock portfolio management (via the Markowitz approach to portfolio formation); on bond portfolio management (via the use of duration and convexity to manage interest-rate sensitivity); and on the use of derivatives to alter the risk-return characteristics of portfolios. The course also covers the area of portfolio performance evaluation, and provides an introduction to tools that can be used to test proposed trading strategies.

Learning Outcomes

The course has the following aims:

- (1) To provide students with a good theoretical and practical knowledge of the approach to portfolio management pioneered by Harry Markowitz, involving determination of the 'efficient frontier' of stock combinations.
- (2) To provide students with experience of using Excel tools to determine efficient frontiers, minimum-variance portfolios and tangent portfolios.
- (3) To train students in the analysis of bond portfolio characteristics, and in tailoring bond portfolio characteristics to the risk-preferences of investors.
- (4) To provide a practical understanding of the use of derivatives in the fine-tuning of portfolio risks.

Grading Policy

Attendance (1% per day's full attendance)	15%
Group report	35%
Final exam	50%



Grading Scale is as follows:

Number grade	Letter grade	GPA
90-100	A	4
85-89	A-	3.7
80-84	B+	3.3
75-79	B	3
70-74	B-	2.7
67-69	C+	2.3
65-66	C	2
62-64	C-	1.7
60-61	D	1
≤59	F (Failure)	0



Class Schedule

Date	Lecture	Chapter
Day 1	Introduction to mean-variance analysis of stocks	EGBG chapter 4
Day 2	Generating an efficient frontier in Excel I: Simple examples	EGBG chapters 5 & 6
Day 3	Generating an efficient frontier in Excel II: Using real data	EGBG chapters 5 & 6
Day 4	An introduction to single and multi-index models	EGBG chapters 7 & 8
Day 5	Single & multi-index models: estimating a covariance matrix and correlation matrix	EGBG chapters 7 & 8
Day 6	Numerical and mathematical aspects of covariance matrix estimation	EGBG chapters 7 & 8
Day 7	Bond portfolio management I	EGBG chapters 21 & 22
Day 8	Bond portfolio management II	EGBG chapters 21 & 22
Day 9	Bond portfolio management III	EGBG chapters 21 & 22
Day 10	Monte Carlo simulation and model testing using Excel VBA	No set reading
Day 11	Use of derivatives in portfolio management I	EGBG chapters 23 & 24
Day 12	Use of derivatives in portfolio management II	EGBG chapters 23 & 24
Day 13	Use of derivatives in portfolio management III	EGBG chapters 23 & 24
Day 14	Measuring portfolio performance I	EGBG chapters 26, 27 & 28
Day 15	Measuring portfolio performance II	EGBG chapters 26, 27 & 28