

BOSTON UNIVERSITY
Questrom School of Business
FE 823: Investments
Summer, 2018
SYLLABUS

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Office room number: 527
Office hours: 5:30 - 6:30 p.m. on Tuesday or by appointment
Classroom: HAR 304
Class times: 6:30 - 9:30 pm on Tuesday and Thursday

Description of the Course

Investments and investment processes are significant and wide-ranging topics within the world of finance. While numerous economic principles and mathematical formulae can be brought to bear to provide a robust intellectual framework for investment management, successful investing remains a complex fusion of art and science. As such, after providing an appropriate course introduction, FE 823 will discuss defining investment objectives and constraints, while introducing Modern Portfolio Theory, CAPM, Fama-French factors, arbitrage pricing theory (APT), and efficient markets. The course will also cover issues related to specific asset classes, including stock and bond valuation models, alternative investment strategies, and asset allocation. More broadly, FE 823 will also review the key characteristics of active and passive investment strategies, fundamental security analysis, trading practices, and performance evaluation. In addition, the course will introduce the role of forwards, futures, swaps, and options with regard to hedging and speculation as well as the mechanics and valuation models underlying these instruments. Students will come to understand the assumptions underlying different investment, hedging, and/or speculative approaches as well as their limitations. Finally, the course will devote time to topics related to current events and recent financial crises.

Learning Outcomes

At the conclusion of this course, students should be able to:

- Describe the global investment landscape and explain the purposes of investments and the financial markets in society
- Describe the various categories of financial assets as well as their distinguishing characteristics, with specific focus on:
 - Money market instruments
 - Bonds and concepts related thereto
 - Equity instruments and associated hybrids
 - Derivative instruments (equity, fixed income, credit, and foreign exchange)
- Describe the various forms of investment companies and vehicles as well as the distinguishing characteristics of their approaches to investing and portfolio management

- Discuss the critical considerations related to managing single asset class portfolios, especially their associated investment/financial risks and constraints; evaluate portfolio performance and risk
- Explain the principles of asset allocation in the context of a mean-variance space; describe the underpinning assumptions and limitations of the capital asset pricing model
- Describe the various forms of the efficient market hypothesis and contrast these forms with the tenets of behavioral finance
- Discuss the arguments for and against passive and/or active investment management
- Describe the various considerations related to investing for retirement

Course Web Site on Questrom Tools

There is one site for Section A1. This site will be used to post announcements, classroom presentation materials, assignments, and course updates. I will make every effort to post the class materials in a timely manner so that you can download them and bring them to class. You will be responsible for any changes to due dates or assignments posted to the course site.

Textbook

The required textbook for the course is “Investments”, 10/e, by Zvi Brodie, Alex Kane, and Alan J. Marcus, McGraw-Hill, 2013

The book contains a formal presentation of most of the material covered in class. It also provides many examples that help students follow the discussion. The Barnes and Noble bookstore carries the book. You are also expected to follow current financial news. Suggested resources include “The New York Times”, “The Wall Street Journal”, “The Financial Times”, and “The Economist”.

Course Requirements

Classes:

During the course, I intend to post on Questrom Tools in advance of each class additional reading material as well as the slides to be discussed in class. I expect you to review the slides and the discussion article(s) prior to class. It is good practice to print the slides and use them to take notes in class. I also expect you to do any other assigned reading (e.g., from the textbook) prior to class. Please bring your calculator to every class as we will routinely do practice problems in class. I recommend reading the financial press for current topics/business cases evolving parallel with the class. Lectures will be recorded and the links posted on Questrom Tools under the “Echo360” section.

Attendance/Participation:

All students are expected to attend all classes, be fully prepared, and to participate actively in class. Please notify me by e-mail if you intend to miss a class as I am required to take attendance. We will typically discuss at least one recent news article during class. I will cold-call students. Your participation grade will be based upon how active and prepared you are in class discussions, rather than on your attendance. However, low attendance will lower your participation grade. Please, turn off all cell phones and/or pagers while you are in class.

Wiki:

I have created a simple Wiki within the FE 823 site on Questrom Tools. All students are required to post the link to at least one article on this Wiki along with a few sentences describing the article's relevance to FE 823. The deadline for posting an article will be 5:00 p.m. on Wednesday, June 28th. Students who do not post an article by that time will have a point subtracted from their cumulative score for the semester.

Team Projects:

Each student will be assigned to a five-person team at the beginning of the course. Teams will be charged with completing the following two projects: (i) calculation of the optimal mix of assets for a proscribed forward-looking volatility estimate, with each team's results to be presented in class, and (ii) a report containing research and analysis of an actual University's endowment, which will include a recommendation for an improvement to that endowment's investment portfolio.

Problem Sets:

Problems sets will typically be assigned on a weekly basis. I will attempt to return these problem sets with corrections and grades by the following class.

Tests:

The schedule of the tests is given below within the schedule of topics. There are two tests, an interim "take home" assessment, which will be open book in nature, and a two hour final exam, which will be a closed-book. There are no make-up exams, unless for exceptions allowed by Boston University.

Grading

Course evaluation is based on:

- Participation: 20%
- Team Projects: 15%
- Problem Sets: 20%
- Interim Assessment: 15%
- Final Exam: 30%

Review Sessions

There will be one review session during the class prior to the final exam session. The agenda in the review sessions is mostly determined by the students.

Academic Honesty

You have the responsibility of promoting high academic standards. Academic dishonesty includes cheating, falsifications and fabrications, multiple submissions, plagiarism, complicity in academic dishonesty. Cases of academic dishonesty will be treated to the full extent according to University guidelines.

Links to Outside Data Sources

Here are some potentially useful sources of information on the global financial markets.

Exchanges:

- NYSE: <https://www.nyse.com>
- Chicago Mercantile Exchange: <http://www.cmegroup.com>
- NASDAQ OMX PHLX (formerly) Philadelphia Stock Exchange: <http://www.nasdaqtrader.com/Micro.aspx?id=phlx>
- London International Financial Futures Exchange (now part of NYSE Euronext): <https://derivatives.euronext.com/en/products/currencies>

Global Economy / Central Banks:

- European Central Bank: <http://www.ecb.europa.eu/euro/html/index.en.html>
(official site with euro conversion calculator)
- Bank for International Settlements: <http://www.bis.org/cbanks.htm>
(central bank resource center)
- International Economics Gateway: <http://altaplana.com/Gate.national.html> (directory of national governments' statistical pages)
- World Trade Organization: www.wto.org/english/res_e/statis_e/its2014_e/its14_toc_e.htm
(international trade statistics)
- Global Financial Data: <http://www.globalfinancialdata.com>

Other Sources of Data and/or Information:

- Morningstar: www.morningstar.com
- The Economist: <http://www.economist.com>
- Company data: finance.yahoo.com
- SEC filings: www.sec.gov/edgar.shtml
- Derivatives' market volume data: <http://www.bis.org/statistics/derstats.htm>
- Standard and Poor's: <http://www.standardandpoors.com/home/en/us>
- Investopedia: www.investopedia.com/term (dictionary of financial terms/concepts, including derivatives)
- Vanguard: <https://personal.vanguard.com/us/insights/newsarchive> (topics on personal investing)

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COURSE OUTLINE

Class	Date	Topic	Book Chapters	Home-work
1	5/22	Introduction to Investments Asset and Security Classes Investment Companies	1.1-6 4.1-6 (S 4.7) 28.1-2	
2	5/24	Short-Term Investments, Trading, Margin, Short Sales, and Liquidity	2.1, 3.1-2, 3.4 3.6-9 (S 3.3) 9.2 (pp. 310-3) 13.4	
3	5/29	Risk, Return, & Efficient Diversification The Capital Asset Pricing Model	2.4, 5.2, 5.4-8, 6.1-5 (S 6.6) 7.1-2, 8.1-3, 9.1 (S 7A, 9.2-4)	PS #1
4	5/31	Market Indices, Fama-French Factors Arbitrage Pricing Theory, Market Efficiency	10.1-5, 11.1-2, 11.4-5 (S 11.3) 13.1, 13.3 (S 13.2, 13.5), 24.1	Team Pre- sentations
5	6/5	Equity Ownership and Equity Valuation Alpha and Evaluating Portfolios	2.3, 18.1-6 (S 19.3-4, 19.6-7)	PS #2
6	6/7	Bond Market Overview, Prices, Yield, and Duration, Inflation and Real Rates, Managing Bond Portfolios	2.2, 5.1-3, 14.1-4 15.1-5 (S 15.6) 16.1-3 (S 16.4)	
7	6/12	International Investments, Currency Regimes, Foreign Exchange	17.1, 25.2-5	PS #3
8	6/14	[Interim Assessment] Alternative Investment Strategies: Hedge Funds and Private Equity	26.1-2, 26.5-6 (S 26.3-4) Articles on hedge funds and private equity	
9	6/19	Investing for Retirement, Pension Plans Asset Allocation and Introduction to Endowment Management	5.9, 7.3-4, 28.3-6 (S 28.7) Article on asset Allocation Yale Endowment case study	
10	6/21	Endowment Guest Speaker Forwards and Futures Contracts	BU Endowment reading 22 (inclusive), 23. 1-2	PS #4
11	6/26	Behavioral finance, Credit Default Swaps, Bubbles and the 2008-2009 Crisis	1.7, 12.1, 14.5	Team Reports
12	6/28	Options: Mechanics, Put/Call Parity, Black- Scholes Model, Delta Replication	20.1-5, 21.1-3 (S 21.4-5)	
13	7/3	Interest Rate Derivatives Review Session for Final Exam	23.3-4	PS #5
14	7/5	Final Exam		

* Problem sets will be posted on Questrom Tools. These problem sets will be due weekly prior to class on the day indicated above unless otherwise announced.