**INVESTMENT MANAGEMENT**

**(MGF633: Spring 2023)**

**Electronic version of this syllabus is available at**

<https://ublearns.buffalo.edu/> and look for MGF 633 Course Documents

Dr. Kee H. Chung, Louis M. Jacobs Professor

360 Jacobs Management Center

(phone) 716-645-3262; (e-mail) [keechung@buffalo.edu](mailto:keechung@buffalo.edu)

Class: Monday & Wednesday 12:30 – 1:50 pm at 112 Jacobs or Zoom

Office Hours: Wednesday 2:00 – 3:00 pm & by appointment at 360 Jacobs or Zoom

***COURSE OBJECTIVES***

This course provides you with a general understanding of the operation of capital markets and basic analytical tools of investment management. Covered topics include financial market structure, portfolio theory, capital asset pricing model, equity valuation, efficient market hypothesis, option pricing, and the valuation of fixed-income securities. After taking this course, you will have working knowledge on the following issues that are essential for your investment decisions:

1. **How securities are issued and traded; How much do you pay to trade (buy and sell) securities?**
2. **Historical returns from different assets; What do we learn from them?**
3. **How to measure the risk of securities and portfolios;**
4. **How to (optimally) allocate your investment to different assets;**
5. **How securities are priced in the capital markets;**
6. **Market efficiency (pricing efficiency) and market anomalies (pricing inefficiency); Can we beat the market?**
7. **Psychology of investing; Behavioral finance;**
8. **How to value securities (e.g., stocks, options, and bonds);**
9. **How to identify mispriced securities and exploit mispricing; Arbitrage trading;**
10. **How to manage bond portfolios;**

***PREREQUISITES****: MGF 631* or Equivalent & Introductory Statistics

***TEXTBOOK****: Investments*, by Zvi Bodies, Alex Kane, and Alan Marcus, Richard D. Irwin, Inc., 2021 (12th edition). <https://www.mheducation.com/highered/product/investments-bodie-kane/M9781260013832.html>

***GRADING POLICY***

Three Exams (25% each), Investment Project (15%), Class Participation and Attendance (10%)

There will be no make‑up examination. For those who miss any mid‑term exam due to objectively verifiable and unavoidable situation, other exams would have higher weights in the determination of the final grade.

***ATTENDANCE*** on every class meeting is required. **If you miss more than five class meetings without justifiable reasons, you will automatically receive "F" or "FX" for the course.**

***EXPECTATIONS FOR STUDENTS***

For Zoom sessions, please turn on your camera to show your face during class

For in-person sessions, read **“**Behavioral Expectations in the Classroom”

[**https://catalog.buffalo.edu/policies/obstruction.html**](https://catalog.buffalo.edu/policies/obstruction.html)

**ASSIGMNMENTS**

I'll be assigning homework problems from the book. I choose problems that I think are "useful", in the sense of helping you understand the material and prepare for exams.

Solutions to homework problems will be provided in the following site:

<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Homework%20Solutions/>

***COURSE POWERPOINT***

[**http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/PowerPoint/**](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/PowerPoint/)

**ANNOUNCEMENTS**

You are responsible for knowing what goes on in class, which may include material not covered in the book, modifications to the syllabus, and announcements concerning exams. These announcements will be made in class and/or on UBlearns. I may also send emails to HUB Faculty Center's record of your UB email address. It is your responsibility to ensure that the information is correct and to check the email and/or make sure that it is forwarded to an address that you do check.

***USEFUL WEBSITE***

Yahoo Finance: <http://finance.yahoo.com>

###### **CLASS SCHEDULE**

LN denotes "lecture note"

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**January 30**

Course Introduction

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**February 1, 6, 8**

**How Securities Are Traded (Chapter 3)**

Homework Problems: 3:6,7,9,14

**Discussion:** Larry Harris, "What to Do about High-Frequency Trading."

<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/What%20to%20Do%20about%20High-Frequency%20Harris%20FAJ%20MGF%20633%20Reading.pdf> (cut and paste this link to download the paper).

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**February 13, 15**

**History of Returns (Chapter 5)**

Homework Problems: 5:5,6(a)(b)(c),7,13; CFA Problems: 3,4,5

(LN)<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/MorningstarCharts%201926-2006.ppt>

**Discussion:** Mark Kritzman, "What Practitioners Need to Know About Time Diversification."

<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/What%20Practitioners%20Need%20to%20Know%20About%20Time%20Diversification.pdf>

[Table 2 calculation](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/What%20Practitioners%20Need%20to%20Know%20About%20Time%20Diversification%20Table%202%20calculation.docx)

Table 4 [calculation](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/What%20Practitioners%20Need%20to%20Know%20About%20Time%20Diversification%20Table%204%20Calculation.pdf)

[Risk Averse Utility Function](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Risk%20Averse%20Utility%20Function.pdf)

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**February 20, 22, 27**

**Risk Analysis & Capital Allocation (Chapter 6)**

Investor Profile Questionnaire

<https://www.schwabmoneywise.com/resource/smw-investor-profile-questionnaire>

Homework Problems: 6:4, 6-21

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**March 1**

**Exam 1 (12:30 – 1:50 pm)**

**Jacobs 112**

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**March 6, 8**

**Optimal Portfolios (Chapter 7)**

Homework Problems: 7:4-11; CFA Problems 1,2,3;

# (LN) Risk and Return

[http://www.acsu.buffalo.edu/~keechung/CU%20Lecture%20Notes%20and%20Syllabus/Chapter%206%20-%20Risk%20and%20Return.doc](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Chapter%207%20-%20Risk%20and%20Return.doc)

# (LN) Minimum Variance Portfolio and Optimal Risky Portfolio

<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Chapter%207%20-%20MVP%20and%20P%20Numerical%20Examples.doc>

Excel App: <http://highered.mheducation.com/sites/0077861671/student_view0/chapter7/excel_templates.html>

**March 13**

**Index Models (Chapter 8)**

**CAPM (Chapter 9)**

Homework Problems: 9:3,4,8,17,18; CFA Problems 1,2

**March 15, 27**

**Equity Valuation (Chapter 18)**

Homework Problems: 18:8,9,10,14,17,23; CFA Problems 1,2,8

(LN) <http://csimarket.com/Industry/Industry_Valuation.php?s=1100>

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**March 27, 29**

**The Efficient Market Hypothesis (Chapter 11)**

You may find the following YouTube video interesting: <https://www.youtube.com/watch?v=bM9bYOBuKF4>

Both guests (Eugene Fama and Richard Thaler) are the Nobel Laureates.

Here is a short video on value vs. growth stocks: <https://www.youtube.com/watch?v=HIKO-t4vU6Q>

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**April 3**

**Exam II (12:30 – 1:50 pm)**

**Jacobs 112**

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**April 5, 10**

**Behavioral Finance (Chapter 12)**

There is no PowerPoint for this chapter.

**Discussion:** R. Fuller. "Behavioral Finance and the Sources of Alpha."

<http://www.acsu.buffalo.edu/~keechung/Collection%20of%20Papers%20for%20courses/Behavioral%20Finance%20and%20Sources%20of%20Alpha.pdf>

**Discussion:** K. Fisher and M. Statman. "A Behavioral Framework for Time Diversification."

<http://www.acsu.buffalo.edu/~keechung/Collection%20of%20Papers%20for%20courses/A%20Behavioral%20Framework%20for%20Time%20Diversification.pdf> [Prospect Theory](http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Prospect%20theory%20with%20utility%20function.pdf)

**Dispostion effect**

(LN) <http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Disposition%20effect.pdf>

**Discussion:** Scott A. MacKillop. "Behavioral Aspects of Dollar Cost Averaging."

<http://www.acsu.buffalo.edu/~keechung/Lecture%20Notes%20and%20Syllabus%20(MGF633)/Behavioral%20Aspects%20of%20DollarCostAveraging.pdf>

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**April 12, 17, 19, 24**

**Options Market (Chapter 20)**

Homework Problems: 20:5,6,7,8

**Option Pricing (Chapter 21)**

Homework Problems: 21:6-12

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**April 24, 26; May 1, 3**

**Bond Analysis I (Chapter 14)**

Homework Problems: 14:6,7,8,9; CFA Problems 1,2

**Bond Analysis II (Chapters 15 & 16)**

Homework Problems: 15:1,2,3,4,5,6,7

Homework Problems: 16:13,16

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**May 8, 10**

**Investment project presentations**

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**May 17 (Wednesday)**

**Final Exam (11:45AM - 2:45PM)**

**Jacobs 112**

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\*This is a tentative schedule and thus subject to modification if any such need emerges during the course. All changes will be announced in class. Students not attending class are responsible for obtaining this information.

**Investment Project**

* Each team consists of three students. **Turn in your team composition by February 15.** Ideally, each team should have team members who are good at data processing (Excel, SPSS, SAS, etc), write-up, and presentation.
* Each team has $1,000,000 to invest.
* Define your own investment horizon.
* Consider capital allocation, asset allocation, and security selection decisions and provide your rationale for your decisions.
* You can send me emails or request a meeting for any questions.
* Turn in your report (10 – 20 pages) before your presentation (last week of class).
* You may consider the following factors in making your investment decisions:

Alpha

Beta

Time diversification

Dollar cost averaging

Intrinsic value

Correlation structure

PE ratios

Efficient frontier

Risk tolerance

Analyst recommendation

Earnings forecasts

Known market anomalies (e.g., size and book-to-market ratio)