

**Asset Management
(B7323-001 – Fall 2022)**

Note: Fall 2022 syllabus – will be updated for Fall 2023

Professor: Geert Bekaert

Office: Kravis, Room 1123

Classrooms: See individual dates on syllabus

E-mail: gb241@gsb.columbia.edu (preferred means of communication)

Office Hours: by appointment

Teaching Assistant: Tomas Mondino

Practical Details:

Class times: See schedule on Canvas and outline below.

Prerequisites: Students must have taken or exempted from B5300 Corporate Finance. Students must have taken or exempted from B7306 Capital Markets and Investments or take it as a co requisite.

TAs: The TA will hold a review session on basic statistical and finance concepts. He will also help with potential problems with the mean-variance optimization software I use for the class.

COURSE DESCRIPTION AND COURSE OBJECTIVE:

The course provides students with a fundamental understanding of the principles and analytics of asset management as applied to both institutional and private clients. This course will be of great interest to anyone aspiring to a career in asset, portfolio, private wealth, endowment, or pension fund management. A fundamental understanding of the issues in asset management, whether institutional or private, will also be helpful in other areas of finance such as investment banking, insurance, accounting and personal finance. In addition, students will learn how to better manage their future personal wealth.

All investors face three main problems, which will be covered to varying degrees in the course:

1. Asset Allocation – How do investors decide on the level of capital to allocate to individual asset classes?
 - Strategic asset allocation of pension funds/endowments
 - Global asset allocation (Quantitative asset management)
 - Individual's asset allocation
2. Implementation issues - How to implement the asset allocation?
 - Portfolio Manager Selection: Asset owners usually delegate management of their portfolios to financial intermediaries, which may invest across a broad array of assets or specialize in a certain investment style or asset class.
 - Investment Vehicles – passive versus active management, mutual funds, ETFs, hedge funds and private equity.

3. Performance Measurement – How do investors determine how well money managers have performed?

The course includes finance theory, statistical analysis and basic optimization theory, mirroring the investment management industry's increased reliance on quantitative methods. The class will attempt to bring students to the frontier of best practice, but also introduce new relevant concepts from academic research. In addition, throughout the class I will point out puzzling behaviors or empirical facts, motivating why they are puzzling, and outlining the most recent academic thinking regarding these puzzles.

The organization of the class is roughly as follows:

I. Institutional Asset Allocation

This section starts by reviewing modern portfolio theory and applying it to the problem of strategic asset allocation (relevant for pension funds or endowments). We then discuss the state-of-the art techniques used by quantitative asset managers, including the Black-Litterman model developed at Goldman Sachs. Globalization is a major trend affecting the asset management industry and we devote special attention to the international diversification of portfolios and the problem of global asset allocation. We also use international data to illustrate the quantitative tools employed in the industry. The final class in this segment examines emerging markets and how the globalization process has affected asset prices.

II. Performance Measurement and Investment Vehicles

We cover standard performance measures such as Sharpe ratios, Treynor measures, Jensen's alpha and information ratios. These measures were mostly developed for standard long only portfolios, such as those offered by mutual funds. Mutual funds run both portfolios for both individuals and institutions, but we will cover the mutual fund industry from the perspective of individual investors. We also analyze the state-of-the-art and popular technique of style analysis and apply it to the performance of the legendary Magellan Fund. We also discuss performance evaluation techniques for hedge funds. We use a case on active currency managers to discuss the emergence of a new asset class, performance measurement for active managers using technical analysis, and the value of an asset management business. The hedge fund industry is discussed more generally as well.

III. Asset Management for Individuals

With the increasing importance of defined contribution plans, the responsibility of asset allocation has shifted to the individual. Financial planning for individuals has been revolutionized recently as more and more sophisticated advice has become available, e.g. through "robo advisors" on the Internet. We discuss these new developments and other special issues regarding individual asset allocation, human capital, dynamic investing, and retirement planning. We also discuss Private Wealth Management, the asset management for the very rich. Although Private Wealth Management relies on the concepts and analytics of institutional asset management, it has developed as a field of research and practice that is distinctly separate from portfolio management and institutional asset allocation. The challenges introduced by the need for tax efficiency, including issues relative to wealth transfer, as well as psychological and behavioral

issues differentiate the practice of Private Wealth Management. An experienced practitioner will present to the class as the instructor has no special expertise in this area.

CONNECTION WITH THE CORE:

The class will utilize build on, and extend concepts covered in the following core courses:

Corporate Finance:

- Efficient markets
- Risk
- The CAPM

Managerial Finance:

- Statistics data analysis (means, correlations,...)
- Normal distribution
- Linear regressions

Global Economic Environment

- Material on exchange rates
- Interest rates and inflation

The course builds heavily on and deepens much of the material covered in Capital Markets.

COURSE MATERIALS:

- Class notes, Case materials.
- *Course Readings*, online set of readings, cases.
- Some chapters in Bodie, Kane and Marcus, (Irwin McGraw Hill); the text for Capital Markets (B7306), should prove useful for a better comprehension of investment analytics.
- Required books:
 - The Intelligent Portfolio by Christopher L. Jones. This book will be a nice complement to a number of classes and provides a free try-out of the Financial Engines financial advice product.
 - International Financial Management by Geert Bekaert and Robert Hodrick; some classes build heavily on some chapters in the book.

METHOD OF EVALUATION/COMPONENTS OF THE GRADE

Most assignments for this class will be conducted within groups of 3 to 5 people. The groups are to be the same for all cases / assignments and the group members will rate each other's contribution at the end to avoid free riding. The groups should be formed as soon as possible, preferably in the first week.

1) Case Write Ups (45%)

There will be 6 Cases. This could be a genuine Harvard case (for example the Harvard Management Company case) or it could be a mini-case or exercise written by the instructor (for example the G7 Global Asset Allocation Case). Each case is accompanied by a set of questions that have to be answered in a formal document, written by the group. This document must be handed in at the beginning of the class in which the case is discussed. Because the class notes contain the case solution, no late assignments are accepted. The Cases and due dates are clearly listed on Canvas. The Syllabus below has a preliminary schedule, but please, check Canvas regularly for updates.

The total grade for the group will be based on the best five cases; the worst case will not count towards your grade. That means that each group can elect to not submit one case. Nevertheless, learning will be maximized when groups prepare the cases thoroughly on a consistent basis.

All class write-ups are Type A!

2) Class Participation and Attendance (10%)

Class participation is an important part of your grade. You will be graded on attendance, thoughtful participation in class, and overall contribution to the learning of your peers. I will punish students who do not attend: missing more than two sessions (which amounts to 25% of the classes) will lead to an incomplete grade for the class.

Successful participation also includes:

- Being on time when class starts (including respecting the amount of time allocated to the break)
- When guest speakers are present, being particularly respectful and prepared with thoughtful questions.
- Not using electronic devices, in particular, phones during class time. Laptops may be used for taking notes but nothing else, unless instructed.

I will be particularly sensitive to the rules above for sessions with outside speakers. Please show them the respect they deserve.

3) Final Quiz (45%)

The Quiz will be organized as a take home exam, likely in the week after the last class. It will be an open-book, written exam, which will primarily test your knowledge of the concepts taught in class. The exam should at most take three hours to complete. If you attend class and do the work, it should be rather straightforward to pass with flying colors. As a practical matter, you will be able to download the quiz from Canvas, and will have to return the completed exam within three hours. You can take the exam whenever you want to within the time frame specified (which will be at least one week).

Finally, I have prepared a number of questions (a “testbank”) designed to help you prepare for the final exam. You can solve these questions on your own but I will hold a review session based on the testbank material.

PRELIMINARY OUTLINE:

(12 sessions of 3 hours)

The outline is highly preliminary and subject to change. Readings will be added as we go on and the outline will be updated on Canvas. Classes denoted with an asterisk are likely to be “equation-intensive,” extra caffeine dosage highly recommended. Readings marked as “Background materials” are not required reading.

[Speaker dates/times listed on the syllabus are tentative]

NOTE: This section will be updated for Fall 2023

Statistics Review Session by TA: September 9, 11:40 am – 12:45 pm, Geffen 390.

Session 1 (Friday, Sept. 9, 3:45 pm – 6:45 pm, Geffen 440)

**Introduction to Asset Management
Concepts and Techniques (MVO)**

The Asset Management Industry
Introduction to Wealth Management
Review of Concepts/Techniques of Modern Portfolio Management
Review of Mean Variance Optimization (with Matrix Algebra), using the Harvard Management Case as an illustration*
Introduction to Strategic Asset Allocation

Materials:

- **READ BUT DO NOT SOLVE THE HARVARD MANAGEMENT CASE**
- Class Notes
- Bekaert-Hodrick textbook Chapter 13 on International Capital Market Equilibrium, Sections 13.1, 13.2 and 13.3
- The Structure of the Global Asset Management Industry
- Harvard Case 9-201-053: The Harvard Management Company and Inflation-Protected Bonds
- WSJ - Bank of New York to Pay \$714 Million to Resolve Currency Suits

Background Material:

- Bodie, Kane, Marcus (11th Edition), Chapters 5, 6, 7
- Jones, Chapters 1, 5

Session 2 (Friday, Sept. 23, 3:45 pm – 6:45 pm, Geffen 440)

**Concepts and Techniques
Strategic Asset Allocation**

Mean Variance Optimization
Strategic Asset Allocation at HMC

Materials:

- Class Notes
- Harvard Case 9-201-053: The Harvard Management Company and Inflation-Protected Bonds

Background Material:

- Bodie, Kane, Marcus (11th Edition), Chapters 5- 7
- Jones, Chapters 2, 8

Session 3 (Saturday, Sept. 24, 3:45 pm – 6:45 pm, Geffen 440)**Strategic Asset Allocation****The Case for International Diversification**

TIPSs

Capital Market Assumptions Equities/Bonds

Endowments versus Pension Funds

Puzzle: The Fed Model

The “Case for International Diversification”

Puzzle: Home Bias

Introduction to the G7 Case

Materials:

- **WRITE UP THE HARVARD MANAGEMENT CASE DUE**
- Class Notes
- Harvard Case 9-201-053: The Harvard Management Company and Inflation-Protected Bonds

Background Material:

- Bodie, Kane, Marcus (11th Edition), Chapters 5-7, 25
- Jones, Chapters 1, 2, 5, 8
- Bekaert-Hodrick textbook Chapter 13 on International Capital Market Equilibrium, Section 13.3
- Bekaert and Wang, Inflation Risk and the Inflation Risk Premium, 2010, Economic Policy, 755-806.

Session 4 (Friday, Oct. 7, 12:30 pm – 3:30 pm, Geffen 440)**Global Asset Allocation and the Black-Litterman Model**

Wrap-up International Diversification

The G7 Case

Review of CAPM*

Revisiting Home Bias

Materials:

- **WRITE UP G7 CASE DUE**
- Class Notes
- Bekaert-Hodrick textbook Chapter 13 on International Capital Market Equilibrium, Sections 13.4 and 13.5

Background Material:

- Bodie, Kane, Marcus (11th Edition), Chapters 9, 27
- Jones, Chapter 4

Session 5 (Saturday, Oct. 8, 3:45 pm – 6:45 pm, Geffen 440)
Advanced Asset Management: Black-Litterman “Light”

Review CAPM
The Black-Litterman Model*
Revisiting the HMC Case*

Materials:

- Read but do not submit G7 Case, Part II
- Black, Fischer, and Robert Litterman, “Global Portfolio Optimization,” *Financial Analysts Journal*, September – October 1992

Background Material:

- Bodie, Kane, Marcus (11th Edition), Chapter 8
- Chapters 2, 3, and 6 in Bekaert-Hodrick textbook

Session 6 (Friday, October 21, 12:30 pm – 3:30 pm, Geffen 440)
Advanced Asset Management: Black-Litterman “Light”
Emerging Markets: Introduction and Case

The Black-Litterman Model*
Revisiting the HMC Case
Emerging Markets and Asset Allocation

Materials:

- **WRITE UP ON EMERGING MARKETS CASE DUE**
- Class Notes

Background Material:

- Bekaert-Hodrick textbook, Chapters 12, 13, 14

Session 7 (Friday, Nov. 4, 8:30 am – 11:30 am, Geffen 390)
Emerging Markets, continued
Idiosyncratic Risk
Introduction to Asset Management for Individuals

Globalization and Asset Prices
Is Emerging Markets Still an Asset Class?
Measuring Idiosyncratic Risk
Quantifying the Cost of the Idiosyncratic Risk
Company Stock and Asset Allocation
Puzzle: Under-diversification

Materials:

- **WRITE UP ON IDIOSYNCRATIC RISK CASE DUE**
- Class Notes
- The BP-Amoco Case (Idiosyncratic Risk)
- Harvard Case 9-201-052: The Harmonized Savings Plan at BP Amoco

Materials:

- Class Notes

Background Material:

- Geert Bekaert, Campbell R. Harvey, Tomas Mondino, Emerging Equity Markets in a Globalizing World, *Working Paper*
- Jones, Chapter 6

Session 8 (Friday, Nov. 18, 3:45 pm – 6:45 pm, Kravis 690)**The Hedge Fund Industry (speaker)****Performance Measures: Standard Measures****Preparation TOM Case**

Guest speaker (confirmed): Ben Appen, Magnitude Capital, on the Hedge Fund Industry

Ben will speak from 3:45 till 5:10. I will speak from 5:25 – 6:45 on Performance Measures.

Background Material:

- Bode, Kane, Marcus, Chapters 4 (Mutual Funds), 24 (Performance Measurement), 26 (Hedge Funds)
- Wermers, Russ, "Performance Measurement of Mutual Funds, Hedge Funds and Institutional Accounts," *Annual Review of Financial Economics*, 2001, 3:537-74

Session 9 (Saturday, Nov. 19, 8:30 am – 11:30 am, Geffen 440)**Currencies and Hedge Funds**

Active Currency Management/Hedge Funds

Technical Analysis

Currencies as an Asset Class

Puzzle: The Carry Premium

Commodities vs. Currencies

Materials:

- **WRITE UP ON ACTIVE CURRENCY MANAGEMENT CASE DUE** (see case below)
- Bekaert, G., "Valuing Currency Management: TOM vs. U.S. Commerce Bank," Columbia Caseworks ID#100310, Nov. 2010
- Nielsen, Bo. "Taylor Rules Currencies, Not to be Confused With the Other Guy," www.bloomberg.com 2008
- Poljarliev, M., and R. Levich, "Do Professional Currency Managers Beat the Benchmark?," *Financial Analysts Journal*, 2008

- Pukthuanthong-Le, K., R. Levich, L. Thomas III, “Do Foreign Exchange Markets Still Trend?,” *Journal of Portfolio Management*, Fall 2007

Background Material:

- Jones, Chapters 3, 5, 7, 9-11
- Bekaert-Hodrick textbook, Chapters 7, 10

Session 10 (Friday, Dec. 2, 12:30 pm – 3:30 pm, Geffen 620)

Personal Wealth Management

Performance Measures (prep for Magellan case)

Guest Speakers (confirmed): Doris Meister and Anthony Roth, Wilmington Trust, on “Personal Wealth Management” (12:30-2:30 p.m.)

Style Analysis*

Wrap-Up Currency Case

Materials:

- Sharpe, William F. “Asset Allocation: Management Style and Performance Management,” *Journal of Portfolio Management*, Winter 1992.
- Class Notes

Review Session on Testbank Questions (date, room and time TBD).

Session 11 (Friday, Dec. 9, 12:30 pm – 3:30 pm, Geffen 440)

Mutual Funds and Performance Measurement

The Magellan Case

Puzzle: Why are there so many active funds?

ETFs

Wrap-up performance measurement notes, if necessary.

Materials:

- **WRITE UP ON THE MAGELLAN CASE DUE**
- Class Notes
- Sharpe, William F. “Asset Allocation: Management Style and Performance Management,” *Journal of Portfolio Management*, Winter 1992.

Background Material:

- Bodie, Kane, Marcus, Chapter 26

Session 12 (Saturday, Dec. 10, 3:45 pm – 6:45 pm, Geffen 440)
Individual Asset Allocation/ Retirement Planning

The Stock Market non-participation puzzle
Individual Portfolio Management
The Annuity Puzzle

Materials:

- Class Notes

Background Material:

- Jones, Chapters 3, 5, 7, 9-11
- Bodie, Kane, Marcus, Chapters 4, 11, 24

Final Exam: Take Home!