

MSB 205 Investments

Syllabus (preliminary) Spring 2023

From the course description

Summary

This course discusses investment decisions, in particular material relevant for portfolio managers. Topics include potential investment vehicles (investable assets), the trading environment (asset markets) and portfolio analysis (risk/return tradeoff). Particular emphasis is on the pricing of assets, such as stocks and bonds, portfolio evaluation, and market efficiency.

Content

Examples of subjects typically covered are

- Financial instruments (equities, fixed income, derivatives).
- Pricing of stocks and bonds.
- Portfolio diversification
- Testing of asset pricing models.
- Alpha and other tools for portfolio evaluation.
- ESG inputs to portfolio decisions.

Learning Outcome

Knowledge

Upon completion of the course students will gain knowledge of:

- K1. Asset Markets, their instruments and how they are traded.
- K2. Portfolio theory.
- K3. Asset Allocation.
- K4. How ESG considerations affect investment decisions.
- K5. The international nature of financial investments.

Skills

Upon completion of the course, students will be able to

- S1. Evaluate portfolio expected return and risk, using models such as the CAPM and its variants.
- S2. Perform portfolio evaluations and evaluate performance of funds.
- S3. Use various methods to price financial assets, such as stocks and bonds.
- S4. Use software tools like R and Excel in investment settings.
- S5. Build portfolios (asset allocation) to match the desired goal of an investor.

Textbook

Bodie, Kane, Marcus: Investments

Investments

This is a first course in investments and capital markets. It introduces a number of key building blocks necessary for the analysis and valuation of financial securities, such as portfolio theory, diversification, arbitrage, equilibrium asset pricing models (CAPM), market efficiency, the term structure of interest rates, performance evaluation and analysis of derivative securities (forward and option contracts).

To work in finance it is at times necessary to go into analysis that is pretty technical. Many of the building blocks we talk about in an investment course are of a technical nature, material that is necessary to understand at a deep level. The lectures in this course will be concentrated on those key concepts.

The teaching plan below shows the list of topics to be covered.

Teaching Plan

The teaching plan is preliminary, expect changes to sequence of presentation. Note that the teaching day-of-the-week is wednesdays (it has moved from tuesdays).

| Lecture | Week | Date | Topic | Readings |
|---------|-------|----------------|---|-----------------------|
| 1 | 2 | 11 jan | Asset classes Trading of securities Returns | BM 1,2,3 |
| 2 | 3 | 18 jan | Risk and return Portfolio construction Diversification | BM 5, 6, 7 |
| 3 | 4 | 25 jan | Asset pricing models | BM 9, 10 |
| 4 | 5 | 1 feb | Interest Rates Bond Prices | BM 14, 15 |
| 5 | 6 | 8 feb | Bond portfolios Term structure | BM 16 |
| 6 | 7 | 15 feb | Equity valuation models Firm Valuation Performance Evaluation | BM 18 BM 24 |
| 7 | 8 | 22 feb | Performance Evaluation ctd Efficient markets | BM 11, (12), 13 |
| | | | Bond Credit Portfolio Management Guest Lecture Jørgen Krog Sæbo, Folketrygdfondet | |
| 8 | 9 | 1 mar 8 mar | Event studies The ESG revolution in institutional investing Case: ESG in the oil fund | |
| 9 | 10 | 8 mar | Managing by index International Portfolios Case: The returns of the Norwegian Oil Fund | BM 2.4 BM 25 |
| 10 | 11 | 15 mar | Active portfolio management The Market Model Mutual funds, ETFs, Alternative asset classes PE, Commodities, Crypto, Real estate, etc | BM 27 BM 8 BM 4 |
| 11 | 12 | 22 mar | Derivatives intro | BKM 20-23 |
| 12 | 13 | 29 mar | Summary session | |
| | 14,15 | | Easter break, no classes | |
| 13 | 16 | 19 apr | Problems, Exam preparation | |

Course Requirements

You need to get a pass on four out of five problem handins to take the exam.

The handins should be done on an individual basis, and uploaded on canvas.

Handin dates:

- 1 2 feb
- 2 22 feb
- 3 15 mar
- 4 29 mar
- 5 19 apr

The grade is based 100% on the final exam.

Course Specifics

The material for the course is the textbook by Bodie, Kane and Marcus. It is extensive, with lots of institutional detail. The lectures attempt to distill the most important concepts. The lectures are accompanied by lecture notes on Canvas. Note the sequence of presentation. Before the lecture the notes are mainly problems that will be gone through in class. To get the most of the lectures, look at the problems, think about how to answer the questions before class. (Ideally: solve them before class, and feel superior when following the class.) After the class full lecture notes (with solutions) will appear.

Your most important task in this class is to *work problems*. It is impossible to understand much of this material without actively applying the concepts in actual calculations. Here it may be useful to get together with other students to discuss problems, but that is up to you, there are no official groups being formed.

There are several sources of problems: With each of the lecture notes you will find a problem set, which provides exercises relevant for that lecture. Solutions to those exercises will be forthcoming a few weeks after that week's lecture. The textbook has numerous end-of-chapter problems, with solutions to selected concept checks.

Finally, there will be a set of compulsory handins. I plan on providing five handins. You will have to get a pass on four of the five in order to take the exam. These handins should be done on an individual basis.

The study of investments is inherently quantitative, and it is necessary to use various computer tools, particularly when estimating inputs to calculations. There are two types of tools which will be referred to in the course. For basic calculations, a spreadsheet like Excel is an excellent tool. Spreadsheets should be well known, and will not be covered in detail in lectures. What will be discussed at some points during the lectures is R. This statistics package is currently the prime tool for the more quantitative parts of the finance industry, having replaced Excel in most quant shops. As you have been exposed to R in your methods course, it is natural to talk about how R is used in finance. So some of the material will have separate lecture notes illustrating R usage. Some of the problems will have solutions in R.

The final exam will not require any computer tools beyond a basic calculator.

Administrative details

The course Canvas page will be used actively. It contains announcements, links to lecture notes, and is where the handins are to be uploaded.

Final Exam

The current plan for the exam date is 5 may 2023.

Frequently Asked Questions

- *If I am retaking the course, do I have to submit the handis?* No, your previous approval of exam prerequisites covers this. But if you plan on retaking the exam, you should do those problems anyway.

- *Do I need to get everything correct on the handins?* No, you need a pass, which will not be a 100% requirement.
- *Do I need to read the book?* Yes. The lectures *complement* the book, they do not replace it.