SYLLABUS

FIN 521: Investments

Spring, 2023

Monday, Wednesday, 8:00 AM – 9:15 AM (McClelland Room 132)

Instructor and Contact Information

Instructor: Mihai Ion
Instructor contact: mihaiion@email.arizona.edu
Instructor office hours: Mondays from 2:00 – 3:00 PM (room 315H)
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Teaching Assistant office hours: by appointment (email her)

Course Description

In FIN 521 you will be introduced to the fundamental principles of investments management. The course is designed to provide you with the theoretical framework and the analytical tools needed to make sound investment decisions. Broadly speaking, the major topics covered will include: the risk-return tradeoff, optimal asset allocation, security selection (valuation), and derivative securities. The computational aspects for each topic will be showcased using Microsoft Excel.

Course Format and Teaching Methods

Lectures will be held in person. All lecture notes will be posted in D2L. The lecture notes will contain both an explanation of the material, as well as the quantitative example used to showcase the material. All computations will be performed using Excel.

Course Objectives

The topics covered in this course were chosen with the objective of developing your understanding of sound investment practices. These topics fall into three broad categories:

- Foundations of investments
  - Calculating holding-period returns
  - Annualizing returns (APR and AER)
  - Adjusting for inflation (real vs nominal rates)
  - Average returns
    - Arithmetic average
    - Geometric average
  - Volatility of returns
    - Variance and standard deviation of returns
    - Correlation and covariance of returns
  - Excess returns, risk premia, and risk aversion
  - Sharpe ratios
- Portfolio theory
  - Understanding the mechanics of portfolio returns, portfolio volatility and diversification
  - Optimal capital allocation decisions
  - Optimal risky portfolios (tangency portfolios)

    - Optimal asset allocation decisions
- Valuation
    - Bond valuation
        - Bond pricing
        - Yield to maturity
        - Understanding bond risk exposure
    - Stock valuation
        - Multiples valuation
        - Dividend discount model
        - Discounted cash flow model
- Stock options
    - Call options and put options
    - Option pricing
    - Risk management with options

Expected Learning Outcomes

After completion of the course, students should be able to:

- Obtain working knowledge of data analysis using Excel
- Calculate holding period returns, means and standard deviation of returns for individual stocks and portfolios of stocks
- Understand the process of asset allocation and calculate optimal risky portfolios
- Understand the CAPM and use it to estimate expected returns
- Explain the concept of market efficiency, systematic and idiosyncratic risk
- Calculate prices, yields, and interest rate risk for bonds
- Calculate intrinsic value of stocks using dividend models, multiples and discounted cash flows
- Calculate payoffs, and prices for call options and put options and portfolios of options
- Express financial information and concepts clearly and concisely when speaking and writing

Course Communications

Announcements will be made through D2L. If you have questions outside of class times and office hours, please email the instructor or the TA and we will try to get back to you within 24 hours during weekdays or the following Monday for questions asked over the weekend.

Texts or Readings

The textbook for this course is: *Investments (10th Edition), by Bodie, Kane and Marcus.*

The textbook is NOT mandatory to buy; though I highly recommend it, especially if you are interested in pursuing a career in finance. You are allowed to use older editions of the book, but you are responsible for checking if chapters match with the edition we use for this class.

Required or Special Materials

You will need a working computer and an internet connection to participate in the data-analysis part of the lectures and for your exams. For assignments and exams, you will be asked to perform computation-intensive tasks that cannot be performed by hand. For this purpose, you will have to use Excel. It is your responsibility to make sure you have access to Excel during exams, as well as a reliable internet connection.

Assignments and Examinations

The final grade for the course will be based on:

- Assignments
  - These will show up as quizzes on D2L. Please see D2L for due dates. Late submissions are not accepted.
  - Assignments will contain multiple choice questions from the material covered in class.
  - I recommend using Excel to answer the assignment questions though you do not need to do so for all of them (e.g. some of them can be answered with a financial calculator)
- Exams
  - Exams are in class, and will be administered through D2L. Exam times are as follows:
    - Exam 1: February 15, 2023 at 8:00 AM – 9:15 AM
    - Exam 2: March 27, 2023 at 8:00 AM – 9:15 AM
    - Exam 3: May 10, 2023 at 8:00 AM – 10:00 AM
  - Exams will contain multiple choice questions from the material covered in class
  - You will need to use Excel to answer some of the exam questions
  - There will be no makeup exams. If you have a valid excuse to miss one of the exams, the weight of that exam will be split between the remaining two exams.

Final Examination or Project

The final exam is Exam 3 mentioned above.

Grading Scale and Policies

Your final grade will be calculated as follows:

- Assignments: 10 x 2.5% = 2.5% of final grade
- Exams: 3 x 25% = 75% of final grade

Letter grades will be assigned as follows:

- A: Final grade of 90% or more, or final grade ranks in the top 35% of the class
- B: Final grade of 80% or more, or final grade ranks in top 85% of the class
- C: Final grade of 70% or more, or final grade ranks in the top 95% of the class
- D or F: Final grade below 70%. Evaluated on a case-by-case basis depending on the effort the student put in the course

Scheduled Topics/Activities

The list of topics below is subject to change. You will be notified if significant changes are made. The "Chapters" column indicates the chapters from the textbook mentioned above (Investments, by BKM) covering the material we used in each lecture.

Date	Lecture	Topic	Chapters
Wednesday, January 11, 2023	1	Overview	1,2
Monday, January 16, 2023		NO CLASS - MLK Day	
Wednesday, January 18, 2023	2	Foundations 1 – Past returns	5
Monday, January 23, 2023	3	Foundations 2 – Future returns	5
Wednesday, January 25, 2023	4	Portfolio theory 1 – The mechanics	6,7
Monday, January 30, 2023	5	Portfolio theory 2 – Capital allocation	6,7
Wednesday, February 1, 2023	6	Portfolio theory 3 – Tangency portfolios	6,7
Monday, February 6, 2023	7	Portfolio theory 4 – Optimal asset allocation	6,7
Wednesday, February 8, 2023	8	Portfolio theory 4 – Optimal asset allocation	6,7
Monday, February 13, 2023	9	Review	
Wednesday, February 15, 2023		EXAM 1	
Monday, February 20, 2023	10	Risk-return tradeoff 1 – Systematic vs idosyncratic risk	8
Wednesday, February 22, 2023	11	Risk-return tradeoff 1 – Systematic vs idosyncratic risk	8
Monday, February 27, 2023	12	Risk-return tradeoff 2 – CAPM and market efficiency	9,11
Wednesday, March 1, 2023	13	Risk-return tradeoff 3 – Cost of Equity and Multifactor models	10
Monday, March 6, 2023		NO CLASS – Spring Recess	
Wednesday, March 8, 2023		NO CLASS – Spring Recess	
Monday, March 13, 2023	14	Bonds I – Pricing	14
Wednesday, March 15, 2023	14	Bonds II – Returns	15
Monday, March 20, 2023	16	Bonds III – Risk	16
Wednesday, March 22, 2023	17	Review	
Monday, March 27, 2023		EXAM 2	
Wednesday, March 29, 2023	18	Stock valuation 1 – Processing Financial Statements	19
Monday, April 3, 2023	19	Stock valuation 2 – Multiples	18
Wednesday, April 5, 2023	20	Stock valuation 2 – Multiples	18
Monday, April 10, 2023	21	Stock valuation 3 – Dividend discount models (DDM)	18
Wednesday, April 12, 2023	22	Stock valuation 3 – Dividend discount models (DDM)	18
Monday, April 17, 2023	23	Stock valuation 4 – Discounted cash flow (DCF)	18
Wednesday, April 19, 2023	24	Stock valuation 4 – Discounted cash flow (DCF)	18
Monday, April 24, 2023	25	Options 1 – Definitions	20
Wednesday, April 26, 2023	26	Options 2 – Valuation	21
Monday, May 1, 2023	27	Options 3 – Risk Management	23
Wednesday, May 3, 2023	28	Review	
Wednesday, May 10, 2023		EXAM 3 (8am-10am, in class)	

Nondiscrimination and Anti-harassment Policy

The University of Arizona is committed to creating and maintaining an environment free of discrimination. In support of this commitment, the University prohibits discrimination, including harassment and retaliation, based on a protected classification, including race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. For more information, including how to report a concern, please see: http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

University Policies

All university policies related to a syllabus are available at: https://academicaffairs.arizona.edu/syllabus-policies.

Subject to Change Notice

Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor of this course.