

BMF5332 FOUNDATION OF INVESTMENTS

AY2024/2025 Semester 2

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Office Hours: By appointment
Instruction: In-person

MODULE DESCRIPTION

This module is about the theory and practice of investing in capital markets. Starting from theoretical frameworks, it will explore how to systematically value financial securities and construct portfolios. You will learn about topics such as historical risk and return in capital markets, asset pricing models, the efficiency of capital markets (and when it might fail), stock market anomalies and return prediction, and the basics of equity valuation.

The course will investigate the fundamental concepts underlying portfolio theory and how they are applied in practice. We will use a variety of approaches to explore these concepts, including Excel calculations, data visualizations, composing Twitter threads, creating videos, listening to technical podcasts, presenting in class, classroom lectures and discussions, and numerical problem sets. Each student is expected to contribute regularly to classroom discussions.

This course aims to equip students with a high-level conceptual understanding of investing that goes beyond a textbook treatment. You are expected to be comfortable with probability and statistics, as well as basic usage of Excel. If you want, you can also use more advanced software like R or Python, although we will not get into technical details; these are covered by other courses.

To do well, you will have to put in consistent work. Apart from the individual and group projects, I expect you to work on the textbook problems to prepare for quizzes. To get the most out of this course, make sure to read the assigned readings before we cover the material in class.

LEARNING OUTCOMES

By the end of this course, you will be able to understand and communicate foundational concepts of investment theory. You will be able to apply these concepts when evaluating investment decisions and dissecting current issues from the world of investing. We will systematically evaluate questions such as: Should you put all your savings in index funds? Is Tesla's stock price too high? Does factor investing work? Is holding bonds, gold, or Bitcoin a good hedge against higher inflation? After completing this course, you will be able to give well-informed answers to these and other questions using the language of investment professionals.

PREREQUISITES

BMF5322 Introduction to Finance

COURSE MATERIALS

1. Textbook

Investments (13th Edition, 2024)

Authors: Zvi Bodie, Alex Kane, Alan J. Marcus (BKM)

Publisher: McGraw Hill

ISBN: 9781264412662

You can also use older editions of *Investments*, which are much cheaper. They are usually just as good; some of them can be a bit dated. There is also an “Asia Global Edition” you could use. You are responsible for any potential differences to the 13th edition, but these differences tend to be small. We will use the textbook to understand key concepts and to help you with the problem sets.

2. Textbook problems

I will upload selected problem sets as homework on Canvas. These textbook problems will help you prepare for the tests.

3. Class presentation slides

I will post the slides on Canvas **one hour** before each lecture. The slides are **not** self-contained. You are expected to take notes during class.

4. Other course materials

Data files, articles from academic finance journals or periodicals (The Economist, etc.), and links to other materials will be posted on Canvas. I will assign further readings throughout the course.

5. Calculator

For the tests, you will need a calculator, which may also be useful in some lectures. Any calculator that has an x^y button will do.

ASSESSMENTS

Component	Weight
Group presentation	5%
Class participation and homework	10%
Podcast questions	10%
Group projects	15%
Quiz #1	30%
Quiz #2	30%
Total	100%

I will assign letter grades based on the class distribution of the course’s total scores. The grade cutoff points will be adjusted based on the class’s overall performance.

Some assignments will be done in groups. We will assign groups in/after the first lecture. You will be able to rate your other group members’ work, and poor ratings from all other team members will lead to a

downward adjustment in your grade. Assignments have to be handed in before the lecture. Failure to turn in assignments by this deadline will result in a zero grade without exceptions.

Class participation and homework

I want you to actively participate in class. Every student starts with a 0% grade and can improve it by providing thoughtful comments that lead the discussion forward. Students who make a substantial effort and are prepared will be rewarded. Attending the class is necessary but not sufficient to get a favourable grade. In each lecture, a teaching assistant will record who contributed to make sure the process is transparent.

Note that points awarded are at my discretion and are based solely on my opinion of your efforts and your contribution to class discussions. They are not subject to negotiation.

I will also assign textbook-type problems as “homework”, which will be graded. These will help you prepare for the quizzes and you will have five minutes at the end of each lecture to answer them.

Group presentation

Starting in week 2, every group will present the takeaways of an academic research article in class.

Podcast questions

You will answer questions based on an episode of the quantitative investment strategy podcast “Flirting with Models”.

Group project #1

You will compose a “Twitter thread” on optimal portfolio choice. All else equal, shorter is better.

Group project #2

This is a 2-part assignment.

Part 1: You will prepare a short video about the “perfect portfolio in 2025” in groups; individual submissions are not accepted. This is a creative exercise. It is up to you how you want to answer the project prompt. We will show and discuss all videos in class.

Part 2: You will be assigned another group’s video and give a highly critical, challenging 5-minute presentation outlining the weaknesses of their approach.

Quizzes

There will be two quizzes. The second quiz will be cumulative but will emphasize topics covered after the first quiz. The quiz format will be a combination of multiple-choice and true-false questions, numerical problems, and essay-type questions. If you did the readings, projects, and revisited our discussions in class, you will be well-prepared.

CONTACT

For questions about course content, you can reach me via email at kmuller@nus.edu.sg.

For informing me of class absence or other logistical issues, please email one of my teaching assistants:

PAN Yuanyuan: yuanyuan@u.nus.edu

SU Ziyu: su.ziyu@u.nus.edu

CLASS POLICIES

Attendance

Our class discussions will go considerably beyond the scope of the textbook. This means it is important you come to class. If you are unable to attend a particular class, you need to register as missing before that class using a Google Forms link I will provide or by emailing one of my teaching assistants (see above). Failure to notify me about your absence might result in a failing grade.

Class format

The format of this class is in-person. We will work in Excel together in class, so I would strongly encourage you to bring a laptop to class with Excel installed. Please pay attention to the announcements made in Canvas during the semester for any changes.

Device policy

Please be respectful of others in your usage of electronic devices. Please answer your emails and text messages at another time. Mobile phones should be shut off or in silent mode. If you bring a laptop or tablet, please turn off the sound. If you disturb the class or appear consistently distracted by your devices, I reserve the right to give you zero points for class participation (10% of your grade). No gaming during class, please.

AI policy

Artificial intelligence tools, including large language models (LLMs), are an emerging and extremely powerful technology. You should make use of it liberally throughout the class. For many assignments, a pro subscription of ChatGPT will be highly useful.

The advent of this new technology comes at one cost to you: it is no longer acceptable to submit assignments with spelling or grammatical errors or poor expression, as LLMs are at your disposal.

ACADEMIC HONESTY AND PLAGIARISM

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity and honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

<http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct>

Online Module on Plagiarism:

<http://emodule.nus.edu.sg/ac/>

TENTATIVE COURSE SCHEDULE (Subject to Change)

All readings are required unless it says “recommended”; please read them before the corresponding lecture. I do not expect you to read appendices, but they can be helpful. BKM stands for Bodie-Kane-Marcus. I will assign further reading throughout the course. Unless stated differently, assignments should be handed in by **8am on the day of the lecture** (unless otherwise specified).

Week	S01	S02	S03	Topic	Readings	Deadlines
0				Review	<ul style="list-style-type: none"> BKM: Ch. 7, Appendix B Recommended: Ch. 1-3 	
1	14 Jan 12:00 - 15:00	14 Jan 15:00 - 18:00	13 Jan 12:00 - 15:00	Risk and Return in Historical Perspective	<ul style="list-style-type: none"> BKM: Ch. 5 Recommended: <i>UBS Global Investment Returns Yearbook 2024 Summary Edition</i> 	
2	21 Jan 12:00 - 15:00	21 Jan 15:00 - 18:00	20 Jan 12:00 - 15:00	Portfolio Theory	<ul style="list-style-type: none"> BKM: Ch. 6, 7 Economist Article, <i>Why it is wise to add bitcoin to an investment portfolio</i> 	
3	28 Jan 12:00 - 15:00	28 Jan 15:00 - 18:00	27 Jan 12:00 - 15:00	The Capital Asset Pricing Model	<ul style="list-style-type: none"> BKM: Ch. 9, 10 HBR Article, <i>Does the Capital Asset Pricing Model work?</i> 	
4	4 Feb 12:00 - 15:00	4 Feb 15:00 - 18:00	3 Feb 12:00 - 15:00	Are Financial Markets Efficient?	BKM: Ch. 11, 12	Group project #1
5	11 Feb 12:00 - 15:00	11 Feb 15:00 - 18:00	10 Feb 12:00 - 15:00	Stock Market Anomalies	<ul style="list-style-type: none"> BKM: Ch. 13 FT Article, <i>'Buy the haystack' approach still hard to beat</i> FT Article, <i>The hidden 'replication crisis' of finance</i> 	
6	Quiz #1 18 Feb, 16:00 – 18:00					
Recess						
7	4 Mar 12:00 - 15:00	4 Mar 15:00 - 18:00	3 Mar 12:00 - 15:00	Asset Allocation in Practice	BKM: Ch. 4, 25	Podcast questions
8	11 Mar 12:00 - 15:00	11 Mar 15:00 - 18:00	10 Mar 12:00 - 15:00	Basics of Equity Valuation	BKM: Ch. 18 + 19	
9	18 Mar 12:00 - 15:00	18 Mar 15:00 - 18:00	17 Mar 12:00 - 15:00	Fund Management	BKM: Ch. 11.5, 26.1, 26.2	

10	25 Mar 12:00 - 15:00	25 Mar 15:00 - 18:00	24 Mar 12:00 - 15:00	Portfolio Evaluation	BKM: Ch. 24, 27	
11	Quiz #2 1 Apr, 16:00 – 18:00					
12	8 Apr 12:00 - 15:00	8 Apr 15:00 - 18:00	7 Apr 12:00 - 15:00	Topics lecture (students' choice)		
13	15 Apr 12:00 - 15:00	15 Apr 15:00 - 18:00	14 Apr 12:00 - 15:00	The perfect portfolio		Group project #2