BMA5302 INVESTMENT ANALYSIS AND MANAGEMENT

AY2023/2024 Semester 2

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Office Hours: By appointment (see below)
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: 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 tests. 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

It is recommended that the students enrolled in this course have successfully completed Financial Management (BMA 5008) or an equivalent course.

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 **after** 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
Class participation	5%
Homework	5%
Group presentation	5%
Podcast questions	10%
Group projects	15%
Test #1	30%
Test #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 <u>in groups</u>, which we will discuss in the first lecture. Please keep track of how your teammates contribute to the report and how your team functions as a whole. Assignments have to be handed it <u>before the lecture</u>. Failure to turn in assignments by this deadline will result in a <u>zero grade</u>.

<u>Class participation</u>
I want you to actively participate in class. 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. I look for comments that are thoughtful and lead the discussion forward.

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

<u>Homework</u>
I will assign you 4 textbook problems as homework. All homework will be graded.

<u>Group presentation</u>
Every group will make a short presentation in class based on an academic research article. We will assign groups to weeks in the first lecture.

<u>Podcast questions</u>
You will answer questions based on an episode of the quantitative investment strategy podcast "Flirting with Models". I will post a prompt on Canvas and would like you to respond there.

<u>Group project #1</u>
You will compose a "Twitter thread" on optimal portfolio choice. All else equal, shorter is better.

<u>Group project #2</u>
You will prepare a short video about the "perfect portfolio in 2024" in groups; individual submissions are <u>not</u> 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.

<u>Tests</u>
There will be two tests; the exact place and time might change. The <u>second test</u> will be <u>cumulative</u> but will emphasize topics covered after the first test. The test 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

The best way to contact me is via email: kmueller@nus.edu.sg.

CLASS POLICIES

<u>Attendance</u>
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, please notify me <u>before</u> that class. Failure to notify me about your absence, or missing more than two sessions during the course, might result in a failing grade.

Class format
The format of this class is <u>in-person</u>. We will work in Excel together in class, so I would strongly encourage you to <u>bring a laptop</u> 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 (5% of your grade). No gaming during class, please.

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	Date	Topic	Readings	Due
0		Review	• BKM: Ch. 7, Appendix B • Recommended: Ch. 1-3	
1	18 Jan	Risk and Return in Historical Perspective	• BKM: Ch. 5 • Recommended: *Credit Suisse Global Investment Returns Yearbook 2023 Summary Edition*	
2	25 Jan	Portfolio Theory	• BKM: Ch. 6, 7 • Economist Article, *Why it is wise to add bitcoin to an investment portfolio*	**Textbook Problem #1**
3	1 Feb	The Capital Asset Pricing Model	• BKM: Ch. 9, 10 • HBR Article, *Does the Capital Asset Pricing Model work?*	**Group project #1**
4	8 Feb	Are Financial Markets Efficient?	• BKM: Ch. 11, 12	**Textbook Problem #2**
5	15 Feb	Stock Market Anomalies	• BKM: Ch. 13 • FT Article, *'Buy the haystack' approach still hard to beat* • FT Article, *The hidden 'replication crisis' of finance*	
6	22 Feb	**Test #1 (6:30pm, LT16)**		
		Reading week		
7	7 Mar	Asset Allocation in Practice	• BKM: Ch. 4, 25	**Podcast questions**
8	14 Mar	Basics of Equity Valuation	• BKM: Ch. 18 + 19	**Textbook Problem #3**
9	21 Mar	Fund Management	• BKM: Ch. 11.5, 26.1, 26.2	
10	28 Mar	**No Class (NUS Well-Being Day)**		
11	4 Apr	Portfolio Evaluation	BKM: Ch. 24, 27	**Textbook Problem #4**
12	11 Apr	The 'Perfect' Portfolio		**Group project #2**
13	18 Apr	**Test #2 (6:30pm, LT16)**		