Akita International University

Global Business Program

Portfolio Management [ECN347]

Syllabus

Spring Semester, 2021

Instructor
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Office: A4-7   Office Hours: Monday 17:00-18:00 or by appointment.

Scheduled Lecture Times: Monday and Wednesday 15:30 – 16:45

Course Description:
This course is about the theory and practice of investment management. The course covers investment theory and concepts including security valuation, Modern Portfolio Theory, the risk/return trade-off, diversification, and the Black-Litterman Model. We will use these theories to construct portfolios using securities data in excel and R, and create portfolio analytics using R. We will discuss practical aspects of investment management, as well as the current situation of the investment management business in Japan and overseas. We also cover practical aspects of investment management such as investment philosophy, portfolio design, risk management, performance evaluation, ethics and fiduciary duty.

Course Objectives:
By the end of this course, students should have a clear understanding of how financial assets are combined into portfolios, and the issues involved in real world portfolio management. Students should be competent in understanding, analysing and constructing investment portfolios comprised of stocks, bonds and alternative assets.

Credits: 3.0

Language: English

On-line Course Format:
The course consists of the following components:
1. Course Mode: The course will be conducted as on-line Zoom lecture sessions. Please use the Zoom link on AIMS to join the lectures. You are expected to attend all sessions unless there are extenuating circumstances. Please notify me in advance if you cannot attend a session.
2. Lecture Slides: These will be posted on AIMS.
3. Readings: Links to required readings are listed in this syllabus and will be posted on AIMS.
4. Assignments: An assignment for each topic will be posted on AIMS. Please submit your answers through AIMS.
5. Slack Workspace: Please communicate with me about the course using Slack group. You can use this for any communication about the course, assignments and discussion. You can send private messages to me, discuss the course in the general channel and send messages to each other. I will answer you questions approximately daily via Slack and/or in the lectures. Unless your question is of a private nature, I may post the answer to the Slack general channel so that all students can benefit from it.

6. <u>Office Hours:</u> You may request to meet on Zoom or Skype during my office hours or at another time by appointment. Please send me a message on Slack to arrange a meeting.
7. <u>Group (or Individual) Presentation by Students:</u> These will be scheduled in the last sessions of the course and delivered to the class using Zoom.
8. <u>Three Exams:</u> There are three exams. These will be held during a lecture period approximately after each third of the course. More information is provided below.

If you are located in a different time zone or will otherwise have legitimate difficulty in attending scheduled on-line sessions, please contact me at the beginning of the course.

Evaluation:

Assignments	20%
Presentation	20%
Exam 1	20%
Exam 2	20%
Exam 3	20%

Assignments: Assignments will be distributed throughout the course. Please complete the assignments to fully understand the concepts presented in the course and to practice and prepare for the exams. Each assignment will be coarsely graded as pass (100%) and fail (0%). The assignments must be submitted via AIMS by their due date in order to receive a grade.

Presentation: Each group (or individual) will present on the final topic of the course, Portfolio Management Disasters. The point of this is to learn from some of the biggest investment management mistakes and disasters that have occurred in the finance business. Detailed guidelines on the presentation are posted on AIMS.

Exams: There will be three exams held approximately after each third of the course. Each exam will primarily cover the preceding third of the course. However, some cumulative knowledge over the course will be required. You may use your own notes only during the exam to help you answer the questions. **You are NOT permitted to use the internet to answer questions during an exam. I will require you to attest that you observed this rule when you do your exam. Even though you may refer to your notes during the exam, you must answer the exam questions with your own words.** The majority of questions will be interpretive which means you must be well prepared for the exam questions in order to score well. A calculator will be required for some questions. In principle, no supplementary exams will be provided unless there are extenuating circumstances. See the schedule at the end of the syllabus for exam dates and times.

Exams will be held using Google Suite. You must be logged into your AIU account to complete the exams. Exam rules will be provided before each exam.

It is your responsibility to make sure you complete the exams, hand in the required assignments and give the presentation on time.

Software and data:
We will use the open-source statistical programming language R, together with RStudio. Download the software for free from the links. RStudio makes R easier to use. We will use the software to analyse financial data, construct portfolios and calculate various portfolio analytics. You will need access to a PC or Mac computer that can run R and RStudio for this course. You will need to be able to access the internet to download financial securities data from Nikkei Financial Quest, data that I have compiled on AIMS from Financil Quest, Yahoo Finance, FRED and other databases. No prior knowledge of coding in R is required for this course. I will provide most code for you, and there will be little independent coding required. R can be challenging to learn in the beginning, but with some dedication and practice (and my help) you will understand how to use it. R is a very powerful tool for data analysis and visualisation, and

many innovative companies look for people with good R skills. I recommend setting up R and RStudio on your own computer, but if you have difficulties you may use RStudio Cloud which allows you to run the software via a web browser if you create an account. Please be sure to backup your code and data to your own computer given that RStudio Cloud is a Beta version and note that free use of RStudio Cloud is time limited.

Prerequisites & Preparation:
Completing Financial Theories & Applications (ECN301) prior to this course is preferable but not mandatory. We will briefly review some essential fundamental finance theory in the first few weeks of the course. Revise finance theory, mathematics, probability and statistics. Students who have not taken a finance course may need to supplement their knowledge with self study of relevant topics by referring to one of the following textbooks (or similar):

- Madura, J. (2018). *Financial Markets and Institutions*. South-Western Cengage Learning, 12th edition.
- Pilbeam, K. (2010). *Finance and Financial Markets*. Palgrave Macmillan.
- Fabozzi, F. J., Modigliani, F., and Jones, F. J. (2014). *Foundations of Financial Markets and Institutions*. Pearson Education.

Students should familiarize themselves with current financial market news and the issues being discussed in the financial press. Assignments may require research using the financial press and interpretation of financial news articles.

AIU students can access **Nikkei Telecom**, a professional financial markets newswire service, via the Nakajima Library website. Nikkei Telecom has articles in Japanese and English, including some of the top stories each day from the Wall Street Journal. I recommend you check a few articles on Nikkei Telecom each day to familiarise yourself with developments in the financial markets and the terminology used. **Access the service from** 日経テレコン **on the Nakajima Library Digital Resources site.**

Other recommended free sources of financial news include:

- Reuters Markets
- Bloomberg Markets
- CNBC
- Yahoo Finance News
- CNN Business
- MarketWatch
- Investing.com
- Investopedia News

You do not need to refer to subscription-based financial news sites for this course, but if you are interested in good quality paid financial news I would recommend:

- The Economist
- Financial Times
- Wall Street Journal

There are many easy to read and interesting books (not mandatory) which give you an entertaining big picture introduction to finance and the financial markets. Some that I recommend you read are:

- Lewis, M. M. (2006). *Liar's Poker*. Hodder.
- Lewis, M. M. (2011). *The Big Short: Inside the Doomsday Machine*. W.W. Norton, first edition.
- Malkiel, B. G. (2015). *A Random Walk Down Wall Street: The Time-tested Strategy for Successful Investing*. W.W. Norton, New York.

Required Textbook: There is no set textbook for the course.

References and Required Readings:
Links to reading and video materials are provided in the following Topic and References guide and on AIMS. Reading materials include chapters from some of the reference books listed below, academic journal articles, articles from the financial press and reports from asset managers or consultants. Optional reading provides more detailed information on the topic, and is not required but may be useful to gain a deeper understanding of the topic.

We will cover several chapters of the following book which is available on-line from the Nakajima Library:

- Fabozzi, F. J. and Markowitz, H. M. (2011). *The Theory and Practice of Investment Management*. John Wiley & Sons. Available to AIU students at Proquest.

A useful reference book (not mandatory) is:

- Bodie, Z., Kane, A., and Marcus, A. J. (2018). *Investments*. McGraw-Hill Education, 11th edition.

A good practical reference book (not mandatory) on financial markets is:

- Arnold, G. (2012). *Financial Times Guide to the Financial Markets*. Financial Times-Prentice Hall. Available on Amazon.

More advanced portfolio management books (not mandatory) include:

- Grinold, R. C. and Kahn, R. N. (1999). *Active Portfolio Management: A Quantitative Approach for Producing Superior Returns and Controlling Risk*. McGraw-Hill Library of Investment and Finance. McGraw-Hill, New York, second edition.
- Grinold, R. C. and Kahn, R. N. (2019). *Advances in Active Portfolio Management: New Developments in Quantitative Investing*. McGraw-Hill.

Finance glossary:

A good on-line reference for financial terms is Investopedia. Finance textbooks such as Madura (2018) and Pilbeam (2010) contain lists of financial terms.

Additional useful finance and investment websites that we may use in the course:

- Institutional Investor
- Morningstar
- ETF.com
- MSCI
- Seeking Alpha
- BlackRock iShares
- Vanguard
- Statestreet

AIU Academic Dishonesty Policy:

Acts of Academic Dishonesty: In accord with AIU policies and good practices in higher education, acts of academic dishonesty such as plagiarism, cheating, forgery (on a paper, examination, test, or other assignment) will result in the failure of the course at a minimum. An act of academic dishonesty during the final examination or assignment in lieu of the final examination will result in failure of all courses registered in the relevant academic term. Cases of academic dishonesty will be reported to the Dean of Academic Affairs for relevant action.

Please participate in this course to the fullest extent of your ability and with your highest level of personal and professional integrity. Ethics are important in Portfolio Management.

Topic and References Guide

Topic 1: Course Introduction and Overview

References:

- Syllabus.
- Portfolio Management Disasters – Presentation Guidelines.

Topic 2: Asset Classes and Review of Securities Valuation

References:

- Geer, C. T. (2013). Your Portfolio Still Need Bonds. Wall Street Journal, July 21
- *Optional:*
  - Fabozzi and Markowitz (2011), Chapter 2.
  - For background on securities valuation, refer to an intermediate finance text, such as Madura (2018) Chapters 8 and 11; Pilbeam (2010) Chapters 5, 6, 8 & 9; Bodie et al. (2018) Chapters 14 and 18.

Topic 3: Investment Industry Landscape

References:

- Saito, M., Hogen, Y., and Nishiguchi, S. (2014). Portfolio Rebalancing Following the Bank of Japan's Government Bond Purchases: A Fact Finding Analysis Using the Flow of Funds Accounts Statistics. *Bank of Japan Review*, 2014-E-2(June):1–5. (**Main points covered in lecture only**). Link
- The Economist (2014c). The Economist explains: What is quantitative easing? March 9.
- The Economist (2014b). Japan's pension giant: Risk on. March 15.
- The Economist (2016a). Don't shed a tier. February 3.
- The Economist (2014a). Fund management: Cheap is cheerful. 3 May.
- The Economist (2016c). Pensions: Fade to grey. 26 September.
- The Economist (2017). American public pensions suffer from a gaping hole. 7 October.
- The Economist (2013). Fund Management: The Rise of Smart Beta. 6 July.
- Buttonwood (2017). Do smart-beta investment funds work? 18 May.
- The Economist (2015). Robo-advisers: Does not compute. 29 October.
- *Optional:*
  - Kaneko, H., Kawahashi, H., Urakabe, A., and Maeyama, T. (2021). Japan's Asset Management Business 2020/21. Nomura Research Institute, Ltd. Link
  - The Economist (2016b). Nope to NIRP. February 18.
  - Financial Times (2015). Japan's Government Pension Investment Fund posts record returns.
  - Beardsley, B., Donnadieu, H., Fages, R., Sheridan, B., and Xu, Q. (2018). The Hidden Pressures on Asset Managers. The Boston Consulting Group, May. Link

Topic 4: The Properties of Securities Returns

References:

- Cont, R. (2001). Empirical properties of asset returns: Stylized facts and statistical issues. *Quantitative Finance*, 1(2):223–236. Link
- *Optional:*
    - Venables, W., Smith, D., and R Core Team (2019). An Introduction to R. Link
    - R For Beginners.

Topic 5: The Portfolio Management Process

References:

- Fabozzi and Markowitz (2011), Chapter 1.
- Authers, J. (2013). Nobel contradiction Fama v Shiller. The Financial Times, October 14.
- Sharpe, W. F. (1991). The Arithmetic of Active Management. *Financial Analysts Journal*, 47(1):7–9. Link
- Kidd, D. (2011). The Sharpe Ratio and the Information Ratio. *CFA Institute Publications*, (1):1–4. Link
- *Optional:*
    - Video: Eugene Fama and Richard Thaler discuss the EMH.
    - Wolla, S. A. (2016). Stock Market Strategies: Are You an Active or Passive Investor? Page One Economics, Federal Reserve Bank of St. Louis, April. Link

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Topic 6: Portfolio Construction

References:

- Fabozzi and Markowitz (2011), Chapter 3.
- Spero, K. W. (2000). Building a Client's Risk Profile: Using Questionnaires to Develop Investment Policy. *Financial Analysts Journal*, 56:9–17.
- Example: Charles Schwab Questionnaire Link
- Buttonwood (2019b). The long-term decline in bond yields enters a new phase. The Economist, June 6,
- Buttonwood (2019a). Robert Merton and the effect of time on portfolio choice. The Economist, June 15
- *Optional:*
    - Markowitz, H. M. (1952). Portfolio Selection. *The Journal of Finance*, 7(1):77–91. Link
    - Matt, M., Hill, J. M., Nadig, D., and Aronson, T. R. (2015). *A Comprehensive Guide to Exchange-Traded Funds (ETFs)*. CFA Institute Research Foundation. Link

Topic 7: Equity Portfolios and Factor Models

References:

- Fabozzi and Markowitz (2011), Chapters 9 and 5.
- Morningstar (2005). Fact sheet: The Morningstar equity style box. Morningstar Research Inc. Link
- Institutional Investor (2019). Did the Model Do Anything Stupid ?. Link

Topic 8: Asset Allocation and Black Litterman

References:

- Becker, T. (2009). The Black-Litterman Model: An Introduction for the Practitioner. *Investments & Wealth Monitor*, (January/February):21–24.
- He, G. and Litterman, R. (1999). The Intuition Behind Black-Litterman Model Portfolios. *Goldman Sachs Research Paper*, (December):1–19.
- Doeswijk, R., Lam, T., and Swinkels, L. (2014). The Global Multi-Asset Market Portfolio, 1959–2012. *Financial Analysts Journal*, 70(2):26–41. Link
- ***Optional or background reading:***
  - Idzorek, T. M. (2005). A Step-by-Step guide to the Black-Litterman Model: Incorporating user-specified confidence levels.

Topic 9: Lessons from Investment Management Disasters

References:

- Please research your assigned presentation topic and include a references list.

Additional Topic: Portfolio Analytics*

References:

- Selected analyses in R from:
  - Bennett, M. J. and Hugen, D. L. (2016). *Financial analytics with R : building a laptop laboratory for data science*. Cambridge University Press.

Notes on the Topics and References Guide:

- The topics and schedule may be adjusted depending on our progress over the semester.
- The topic marked with an asterisk may be covered at the end of the course only if there is time available.
- All references are required reading, except for those listed as "Optional".
- Most of the readings, such as those from the *FT* or *Economist*, are very short articles.
- Additional readings may be assigned in lectures.
- Some of the topics require work in R and RStudio. I will guide you on the coding in the lectures. I expect you to work in R and RStudio during the lectures as we run these analyses in R.

Week	Monday	Mode	Topic	Wednesday	Mode	Topic	Assignment (Due)
1	12 Apr.	OL	(1) Course Introduction (2) Asset Classes & Review of Sec. Val.	14 Apr.	OL	(2) Asset Classes & Review of Sec. Val.	–
2	19 Apr.	OL	(2) Asset Classes & Review of Sec. Val.	21 Apr.	OL	(2) Asset Classes & Review of Sec. Val.	–
3	26 Apr.	OL	(2) Asset Classes & Review of Sec. Val. (3) Industry Landscape	28 Apr.	OL	(3) Industry Landscape	A1 (Fri 30 Apr.)
GW	3 May	–	Install R and RStudio on your computer	–	–	–	–
4	10 May	OL	(3) Industry Landscape (4) Properties of Securities Returns	12 May	OL	(4) Properties of Securities Returns	
5	17 May	OL	(4) Properties of Securities Returns	19 May	OL	(4) Properties of Securities Returns (5) Portfolio Management Process	A2 (Tue 18 May)
6	24 May	OL	(5) Portfolio Management Process	26 May	OL	Catch-up and recap	A3 (Tue 25 May)
7	31 May	OL	Exam 1: Topics 2 – 4	2 Jun.	OL	(5) Portfolio Management Process	–
8	7 Jun.	OL	(6) Portfolio Construction	9 Jun.	OL	(6) Portfolio Construction	A4 (Tue 8 Jun.)
9	14 Jun.	OL	(6) Portfolio Construction	16 Jun.	OL	(6) Portfolio Construction	A5 (Tue 15 Jun.)
10	21 Jun.	OL	(6) Portfolio Construction	23 Jun.	OL	(7) Equity Portfolios & Factor Models	–
11	28 Jun.	OL	Catch-up and recap	30 Jun.	OL	Exam 2: Topics 5 – 6	A6 (Sun 27 Jun.)
12	5 Jul.	OL	(7) Equity Portfolios & Factor Models	7 Jul.	OL	(7) Equity Portfolios & Factor Models	–
13	12 Jul.	OL	(8) Asset Allocation & Black-Litterman	14 Jul.	OL	(8) Asset Allocation & Black-Litterman	A7 (Tue 13 Jul.)
14	19 Jul.	OL	(9) Investment Management Disasters	21 Jul.	OL	(9) Investment Management Disasters Catch-up and recap	A8 (Tue 20 Jul.)
15	26 Jul.	OL	Exam 3: Topics 7 – 9	–	–	–	–

Updated: 15 May 2021