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| Description: F:\Corporate Comm\Master Programme\Logos\SMU Master\SMU_Master_Horz[1].jpg | **The Lee Kong Chian School of Business**  **Master of Science in Applied Finance**  **Academic Year 2018-19, Term 3** |

**Course Code: FNCE6004**

**Course Title: Advanced Portfolio Management**

Instructor : Dr. Roger LOH

Title : Associate Professor of Finance and Lee Kong Chian Fellow

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**Pre-requisite/CO-REQUISITE/MUTUALLY EXCLUSIVE cOURSE(S)**

FNCE6006 Equity Analysis and Portfolio Management

**COURSE AREA**

FINANCE

**Grading BaSIS**

Graded

**Course UNIT**

1 CU

**FIRST offering term**

Academic Year: AY 2018-19

Academic Term: Term 3

**COURSE DESCRIPTION**

This course seeks to provide an advanced coverage of concepts, theories, applications, decision-making rules in portfolio management. Topics include benchmark-based investing, asset allocation decisions, equity portfolio management, smart beta investing, trading and execution, performance evaluation, and risk management. A substantial portion of the course will mirror the portfolio management syllabus in CFA Level 3 and some parts of Level 2. In addition, we will discuss specific cutting edge academic research (e.g. in the topic on smart beta investing). You will also work on a group project that involves back testing portfolio strategies and recommending a suitable portfolio for an investor with certain risk preferences.

**LEARNING OBJECTIVES**

At the end of this course, students will be able to:

* Understand stock index and benchmarks and how they can be used in portfolio management
* Understand the importance of asset allocation
* Understand equity portfolio management strategies
* Know what smart beta investing is all about and describe the popular strategies involved
* Understand the important role of trading and execution
* Use performance evaluation techniques on portfolios
* Understand risk management tools
* Know how to download and back test portfolio strategies to estimate their expected returns.

**INSTRUCTIONAL MethodS AND EXPECTATIONS**

Prof Loh’s class will use the framework of the CFA level III readings on portfolio management topics. He will build on this material to examine practical examples of portfolio management in the industry. As a research track-professor, Prof. Loh will also talk about cutting-edge academic finance research relevant to the class. You will learn overarching principles in portfolio management that will not only be useful for practical work in the fund management industry, but for managing your own portfolios.

The group project will allow students in groups to perform an analysis of an asset allocation problem that does back testing of portfolio strategies. The topic will be given to you in the middle of the term and the project report and slides will be due for all sections on Thursday 21 Feb 2019, 8AM. The projects will be presented in class in session 8.

You will have an individual assignment in the beginning of the term to help you get familiar with thinking about return performance and correlations and with downloading financial data using <https://wrds-web.wharton.upenn.edu/>. The assignment is released after session 3 and due on Friday 1 Feb at 12PM in the afternoon.

The final exam helps to consolidate what you have learnt in the course. The exam will be closed book but you are allowed an A4 cheat sheet which must be handed up together with the exam scripts.

Class participation includes your class attendance and your class questions and comments. The focus is not only on quantity of comments but the quality of the comments. It will include questions that you ask during the Q&A segment of the project presentations. Asking questions after the lecture is over, emails, or office consultations do not count towards class participation.

**ASSESsMENT METHODS**

Your overall evaluation will be based on these components with the following weights:

Class participation 10%

Individual assignment 10%

Group project 30%

Exam 50%

**ACADEMIC INTEGRITY**

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions,  or tampering with the academic work of other students) are serious offences.

All work presented in class must be the student’s own work.  Any student caught violating this policy may result in the student receiving zero marks for the component assessment or a fail grade for the course.  This policy applies to all works (whether oral or written) submitted for purposes of assessment.

When in doubt, students are encouraged to consult the instructors of the course. Details on the SMU Code of Academic Integrity may be accessed at <http://www.smuscd.org/resources.html>.

**ACCESSIBILITY**

SMU strives to make learning experiences accessible for all. If you anticipate or experience physical or academic barriers due to disability, please let me know immediately. You are also welcome to contact the university's disability services team if you have questions or concerns about academic provisions: [included@smu.edu.sg](mailto:included@smu.edu.sg). Please be aware that the accessible tables in our seminar room should remain available for students who require them.

**Recommended READINGS**

* CFA level 2 and 3 relevant readings (2019) that are highlighted in the course lesson plans. Note that not all the material in the indicated readings will be discussed in the slides. In the same vein, the slides will contain supplementary material that are not in the CFA readings.
* The additional articles listed in the lesson plans and other articles that might be posted during the term.
* Textbook: There is no recommended textbook but the lecture slides will be quite comprehensive to include the content needed for the class. Some practice questions for each topic will also be provided.

**class schedule and FINAL EXAMINATION**

Venue to be announced.

G1

1) 10-Jan-19, Thursday, 8am - 11.30am, LKCSB SR2.1

2) 17-Jan-19, Thursday, 8am - 11.30am, SOL B1.01‐SR

3) 24-Jan-19, Thursday, 8am - 11.30am, LKCSB SR2.1

4) 26-Jan-19, Saturday, 9am - 12.30pm, LKCSB SR2.2

5) 31-Jan-19, Thursday, 8am - 11.30am, LKCSB SR2.1

6) 7-Feb-19, Thursday, 8am - 11.30am, LKCSB SR2.1

7) 14-Feb-19, Thursday, 8am - 11.30am, LKCSB SR2.2

8) 21-Feb-19, Thursday, 8am - 11.30am, LKCSB SR2.2

G5

1) 10-Jan-19, Thursday, 3.30pm - 7pm, LKCSB SR2.1

2) 17-Jan-19, Thursday, 3.30pm - 7pm, SOL 2.16‐SR

3) 24-Jan-19, Thursday, 3.30pm - 7pm, LKCSB SR2.2

4) 26-Jan-19, Saturday, 1.30pm - 5pm, LKCSB SR2.2

5) 31-Jan-19, Thursday, 3.30pm - 7pm, LKCSB SR2.2

6) 7-Feb-19, Thursday, 3.30pm - 7pm, LKCSB SR2.2

7) 14-Feb-19, Thursday, 3.30pm - 7pm, SOL B2.01‐SR

8) 21-Feb-19, Thursday, 3.30pm - 7pm, LKCSB SR2.2

Final Exam

Tuesday 5 Mar 2019 7:15pm

**Teaching Assistant**

Lucas WON Weng Keen

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**WEEKLY LESSON PLANS**

| **Week** | **Topic** | **Learning objectives** | **Readings** (CFA readings are for 2019) |
| --- | --- | --- | --- |
|  | Introduction &  Market Indexes and Benchmarks | * Understand the use of market indexes as benchmarks * Discuss advantages and disadvantages of different index weighting schemes * Evaluate the selection of a benchmark for a particular investment strategy * Describe index construction principles * Understand the Dow Jones industrial index * Discuss index inclusion effects | * CFA Level 3 Reading 27. Passive Equity Investing (also for week 3) * Apple added to Dow, WSJ, 2015 * Why investors need to know about indices, FT, 2015 |
|  | Asset Allocation | * Strategic and tactical asset allocation * Asset and liability based approaches * Adjusting for risk tolerance (risk adjustment) * Impact of behavioral biases * Choosing asset classes including overseas assets * Conditional return correlations in diversification benefits/limitations * Mean-variance asset allocation strategies * Asset allocation for individuals versus institutional investors * Role of an investment policy statement (IPS) | * CFA Level 3 Reading 18. Introduction to Asset Allocation * CFA Level 3 Reading 19. Principles of Asset Allocation * CFA Level 3 Reading 15. Managing Institutional Investor Portfolios * Harvard’s poor run holds lessons for university endowments, FT 2017 * The asset allocation debate, Vanguard, 2007 * Apple best investment of all time, NYT, Sep 2017 |
|  | Equity Portfolio Management | * Discuss the role of equities in the overall portfolio * Discuss why equities earn higher expected returns than bonds * Discuss passive vs active investment approaches * Understand what closet indexing is * Compare passive replication methods * Understand the popular equity styles of size and value/growth * Identifying investment styles based on returns or holdings * Understanding equity style boxes * Compare long–short and long-only investment strategies and how to “equitized” a market neutral portfolio * Understand different ways that active fees can be charged. * Contrast top-down and bottom-up equity research, and buy and sell-side research. | * CFA Level 3 Reading 26. Introduction to Equity Portfolio Management * CFA Level 3 Reading 28. Active Equity Investing: Strategies (also for week 4) * CFA Level 3 Reading 29. Active Equity Investing: Portfolio Construction * The Morningstar Style Box Fact Sheet * Dying business of picking stocks, WSJ 2016 * Asset managers named in list of potential closet trackers, FT, 2017 * Investors gravitate to core/satellite portfolios, FT, 2015 |
|  | Smart Beta Investing | * Difference between alpha and beta * Regular beta versus smart beta * Why alpha is not scalable in large portfolios * Why smart beta strategies work * “Smart beta” or “risk premiums”? * Categories of smart beta strategies * Democratizing smart beta strategies with ETFs * The potential and the limitations | * Alpha, Beta and Smart Beta, and factor investing articles by Fidelity * iShares smart beta guide * Passive investing defenders make case for ETFs, FT, 2017 * Smart beta funds on course to pass $1t milestone, FT, 2017 |
|  | Evaluating Portfolio Performance | * Performance evaluation from the perspective of fund sponsors and investment managers * Explain components of portfolio evaluation: measurement, attribution, and appraisal * Time-weighted and money-weighted rates of return * Calculate and interpret alpha, Sharpe ratio, Treynor measure, tracking error, information ratio, and M-Square. * Fundamental law of active management * Understand data quality issues on computing rates of return * Understand decomposition of returns into components attributable to the market, to style, and to active management * Macro and micro performance attribution * Advantages and disadvantages of alternative types of benchmarks * Discuss the issues involved in manager continuation policies | * CFA Level 2 Reading 50. Analysis of active portfolio management * CFA Level 3 Reading 36. Evaluating Portfolio Performance * How to measure private equity fund perf, Gurufocus, 2017 * Long short equity fees ate your alpha, Morningstar, 2017 |
|  | Trading and execution | * Types of orders * Types of markets * Market quality * Trading costs, explicit and implicit costs * Algorithmic trading | * CFA Level 2 Reading 51. Algorithmic trading and high-frequency trading * CFA Level 3 Reading 35. Execution of Portfolio Decisions * A different Dimension, Beverly Goodman, Barrons, 2014 * How HFT hit a speed bump, FT, Jan 2018 |
|  | Risk Management | * The risk management process * Financial and nonfinancial risk factors * Value at risk (VaR) and explain its role in measuring overall and individual position market risk * Compare the analytical (variance–covariance), historical, and Monte Carlo methods for estimating VaR * Discuss advantages and limitations of VaR * Risk budgeting, position limits, and other methods for managing market risk * Discuss return over maximum drawdown and the Sortino ratio as added measures of risk adjusted performance. * Understand the risk parity approach | * CFA Level 3, Reading 31. Risk Management * JPMorgan loss stokes risk model fears, FT, 2012 * How does cryptocurrency fit into a portfolio?, Forbes, 2017 |
|  | Project presentations | * Ability to use actual historical asset returns to back test a portfolio allocation strategy (e.g. a smart beta strategy) * Measure the performance of the strategy and predict its expected return in the future. * Based on your results, formulate a portfolio allocation strategy to suit the risk preferences of a hypothetical investor. |  |