

**FIN4115/FIN4713 Applied Portfolio Management: Security Analysis and Valuation  
SEM 1, 2020 – Course Syllabus (DRAFT)**

**Instructor:** Joseph Cherian

**Email:** bizjc@nus.edu.sg

**Section:** Tuesday 3pm – 6pm

**TA:** Ms. Xu Wanrong <xuwanrong@u.nus.edu>

**Room:** 7-58, BIZ 1

**Tel:** 6516-5991(O)

**Course Description:** This elective in Advanced Applied Portfolio Management will serve as a comprehensive real-world examination of the quantitative, fundamental, behavioral, and model-based approaches utilized for performing security valuation & portfolio management in the financial industry. Major topics covered include Relative Valuation, Multifactor Models, Liquidity and Value Enhancement Strategies. Lectures will involve frequent interaction with practitioners from the industry, hands-on lab projects, and real-life examples. Students are also expected to research, write, and publish either equity investment reports (preferably on Asian companies with limited research analyst coverage) and/or portfolio investment and dynamic asset allocation strategies. These individualized reports and a presentation in the form of a team-based pitch could subsequently be presented by the students to a panel of senior members from the Singapore investment management industry so as to showcase & ascertain students' investments research and alpha-generating skills. There may also be an opportunity to put your stock selection skills to the test. Students will be divided into sector teams and their analysis & recommendations (appropriately formatted) could be incorporated into the portfolio optimization process. This course is suitable for students interested in a career as a financial analyst (both on the buy-side and sell-side), or as a portfolio manager.

**1. Multifactor Models (MFM) in Portfolio Management**

- Economic rationale for MFM
- Types of models – APT, Relative Valuation, Fundamental
- Diversification of themes
- Testing for efficacy, monotonicity, transitions, downside risk

**2. Behavioral Finance**

- Anchoring, over and under-reaction, overconfidence, loss aversion
- Herding
- Mental accounting
- Confirmation and Hindsight Bias

**3. Liquidity and Asset Prices**

- How we define and measure liquidity
- How liquidity affects valuation of asset prices
- Flight to liquidity versus flight to quality

**4. Hedge funds and Alternative Investments**

- Investment strategies
- Performance and risk management, particularly evaluating downside risk

## 5. Reading Materials:

- Investment Valuation (Revised and Updated), by Aswath Damodaran (AD), 3rd University Ed., Wiley Finance, 2012. This text serves as the primary reference guide.
- “Worry-free Inflation-Indexing for Sovereigns: How Governments Can Effectively Deliver Inflation-Indexed Returns to Their Citizens and Retirees,” (Z. Bodie, J. Cherian and W.K. Chua), Life-cycle Investing: Financial Education and Consumer Protection (CFA Institute), The Research Foundation of Chartered Financial Analysts (CFA) Institute Publications Series, 2012, Z. Bodie, L.B. Siegel and L. Stanton (Editors)
- “A Tail of Two Cities: On the Downside Risk and Loss Profile of Asian and North American Hedge Funds,” 2014, (J. Cherian, C. Kon and W. Weng), CAMRI Working Paper, NUS Business School (SSRN Abstract ID 2520354; <http://ssrn.com/abstract=2520354>), Forthcoming, The Journal of Alternative Investments, 2016.
- “Liquidity and Portfolio Management,” (J. Cherian, S. Mahanti and M. Subrahmanyam), March 2012, CAMRI Working Paper, NUS Business School
- If you happen to have access to Bloomberg, CAMRI's various guides for new users of Bloomberg will be made available via LumiNUS.
- Barra resources, such as the CAMRI-developed Guide to Barra Aegis Portfolio Manager and Guide to Barra Aegis Performance Analyst, will also be made available to you via LumiNUS. You can view various Barra Training Videos by searching for them here: <https://www.msci.com/webinars>
- The course will also have my overheads & various current articles distributed via LumiNUS.

## Learning Outcomes

- In-depth knowledge of distinct security valuation approaches
- Methodologies & models used in theory and in practice - Relative Valuation, Multifactor Models, and Value Enhancement Strategies, Behavioral Finance.
- How liquidity affects valuation
- Ability to value various assets and stochastic cash flows related to the firm (decision-making under conditions of uncertainty)
- Hands-on computational finance, risk & portfolio management, and trading abilities

## Students are expected to:

1. Research, write, and publish investment reports (preferably on companies with limited research analyst coverage) using both quantitative and fundamental techniques
2. Perform live & backtested portfolio investment strategies to develop equity research and stock-picking skills using financial applications such as Refinitiv EIKON, Barra and Bloomberg (TBC)
3. Perform portfolio optimization and risk management routines and analysis
4. Explore the latest thinking in investment management systems and processes

**CAMRI Lab:** Located at Level 3 of BIZ 1 (MRB), the NUS Investment Management & Trading Lab enhances students' portfolio research & management experience and activity. The Lab has 41 student workstations + 1 Instructor workstation, Bloomberg live feeds, Refinitiv EIKON, live financial data tickers, investment and risk management software modules, and various other trading and portfolio management software applications. The aim is to enable NUS Business School students to have first-hand experience and training with the best tools available to the professional investment community, and as a result, best prepare them for the investments, financial, and wealth management job markets. Financial Software & Datasets

available in the CAMRI Lab include: EIKON and Barra installed on all 41 PCs (TBC). (Bold indicates students should have acquired deep knowledge of these software by semester’s end.) For the weblinks and downloadable training materials on the aforementioned software, please visit LumiNUS for this module

**NUS Recess Week is from Sat, 19 Sep 2020 - Sun, 27 Sep 2020**

**The Major Quiz is on Tuesday 27/10/2020 (in class or online). There is no Final Exam in this class.**

**Grading:**

| <b>Quantity</b> | <b>Type</b>  | <b>Points</b> |
|-----------------|--|---------------|
| 1               | Major Quiz (Tuesday Oct 27th – in class or online) | 40            |
| 1               | Homework Assignment #1                             | 15            |
| 1               | Homework Assignment #2                             | 15            |
| 1               | Team in-class Presentation                         | 10            |
| 1               | Class Participation***                             | 20            |
|                 | TOTAL  | 100           |

**\*\*\*Class Participation can include UP TO FOUR (4) POP QUIZZES WORTH 5 POINTS EACH (4 X 5 points = 20 points)!**

**GUEST SPEAKERS:** We will have numerous guest speakers from the portfolio management, trading, asset allocation, external manager selection, back office operations and private equity industry sharing with us what their average day is like. This is a VERY important part of our experiential learning program in this class. All materials - be it fundamental, quantitative, equities, credits, global macro, asset allocation, big data analytics & AI, risk management, or sales & marketing - covered by the Guest Speakers can be fodder for homework assignments and/or the Major Quiz. So please make every effort to attend all classes, especially those given by our Guest Lecturers. You are also welcome to do your own “due diligence” on the Speaker, his/her firm, strategies, etc., before the class.

The following renowned practitioners usually speak at our class during the semester (SEM 1), some (where indicated and pending pandemic clause) travel specially from Tokyo, Hong Kong and NY to speak to us:

1. MR. VIKAS GATTANI (FOUNDER & CEO, PROGRESS CAPITAL, FORMER HEAD OF PROP TRADING – ASIA, JP MORGAN). INCLUDES HOMEWORK ASSIGNMENT TO BE COMPLETED IN TEAMS
2. DR. PENG CHEN (FORMER CEO – ASIA EX JAPAN, DIMENSIONAL FUND ADVISORS)
3. MR. SAMUEL RHEE (CEO, ENDOWUS & FORMER CEO – ASIA, MORGAN STANLEY INVESTMENT MANAGEMENT)
4. MR. ALVIN CHUA (SR MD & HEAD, GLOBAL FIXED INCOME SALES & TRADING, BANK OF CHINA INTERNATIONAL (BOCI), HONG KONG)
5. MR. ARMIN CHOKSEY (PARTNER AND HEAD OF ASSET MANAGEMENT, PWC)
6. MR. CHRIS COWARD (FOUNDER & HEAD, POINT 72 LATITUDE, NEW YORK)
7. MR. EUGENE CHIU (EX PORTFOLIO MANAGER, EMERGING MARKETS FIXED INCOME - GOLDMAN SACHS ASSET MANAGEMENT)
8. MR. TOMOYA MASANAO (HEAD OF JAPAN AND ASIA PORTFOLIO MANAGEMENT, PIMCO, TOKYO)
9. MR. VIKAS GATTANI (REPRISE - HOMEWORK REVIEW)
10. DOMINIC LIM (COO/CAO/CRO, NUS ENDOWMENT OFFICE)

11. DR. PRAKASH KANNAN (CHIEF ECONOMIST & HEAD OF TOTAL PORTFOLIO MANAGEMENT, GIC)

## Readings in Times of Pandemic:

### 11 May 2020

#### **The State as Insurer of Last Resort**

The Edge Singapore

URL: <https://www.theedgesingapore.com/views/commentary/state-insurer-last-resort>

By Joseph Cherian and Bernard Yeung

In this commentary (an abridged version of the **ABFER Pandemic Commentaries** article of the same title from 14 April 2020), Profs Cherian and Yeung argue for the role of the state when market incompleteness sets in during times of pandemic.

### 6 May 2020

#### **Ring-fencing pensions**

Asia Asset Management, May 2020, Vol. 25, No. 5

URL: <https://www.asiaasset.com/post/23349>

By Joseph Cherian and Emma Yan

In this commentary, Joe Cherian and Emma Yan of Endowus argue, both analytically and from a policy standpoint, that there are alternatives to digging into retirement savings to see us through the pandemic.

### 5 May 2020

#### **Webinar with the World Bank Group**

##### **“Maintaining Finance for Firms Impacted by COVID-19: Perspectives for East Asia”**

Speaker: Joseph Cherian

Video: <https://www.worldbank.org/en/news/video/2020/05/04/maintaining-finance-for-firms-impacted-by-covid-19-perspectives-for-east-asia>

There have been efforts to help small-and-medium enterprises in COVID-19 times, such as stimulus packages and a lowering of SMEs’ bank borrowing rates. As some SMEs may still face trouble securing bank loans, an idea to consider is an ownership structure where the state provides equity financing, along with the low-interest loans, collecting ‘dividends’ in the form of higher corporate taxes for a certain period, and giving the business the right to buy back the equity at a suitable price in future.

### 14 April 2020

#### **Financial tradeoffs matter during pandemics**

Asia Asset Management, April 2020, Vol. 25, No. 4 (Online)

URL: <https://www.asiaasset.com/post/23280-financial-tradeoffs-0409>

By Joseph Cherian

A commentary about how healthcare actions taken by governments to stem the pandemic virus’ spread has huge financial economic costs. This essay discusses how a carefully optimized, calibrated and targeted economic stimulus scheme would be more beneficial for both individuals and the economy.

### 14 April 2020

#### **The case for state-owned pseudo-equity: saving Singapore’s private enterprises**

URL: <https://www.businesstimes.com.sg/sme/the-case-for-state-owned-pseudo-equity-saving-singapore-smes>

The Business Times

By Joseph Cherian and Marti Subrahmanyam

The authors opine that if the Singapore government takes on a pseudo-equity role in the resuscitation of formerly profitable local SMEs, which are now struggling to survive due to Covid-19, the additional funds would not only tide them through this difficult pandemic period but could convince SMEs to upgrade their capabilities and even internationalise their operations.

**14 April 2020**

**The State as Insurer of Last Resort**

By Joseph Cherian and Bernard Yeung (14 April 2020, [ABFER Pandemic Commentaries](#))

**2 April 2020**

**3 ABFER “Conversations on the 2020 Pandemic: The View from Asia” (Moderated by Joseph Cherian)**

An NUS Business School & ABFER collaboration

SESSION 1: ECONOMIC OUTLOOK

SESSION 2: POLICY RESPONSE

SESSION 3: HOUSEHOLD FINANCE AND FINANCIAL MARKETS

URL: <http://abfer.org/events/abfer-events/184>

Session 1 commentary appeared in NUS News on 28 April 2020:

<https://news.nus.edu.sg/research/covid-19-outlook-economy>

Session 2 commentary appeared in NUS News on 11 May 2020:

<https://news.nus.edu.sg/research/covid-19-analysing-governments-economic-policy-responses>

**1 April 2020**

**“Are hedge funds just traditional beta?”**

URL: <https://www.asiaasset.com/post/23251>

Asia Asset Management, April 2020, Vol. 25, No. 4

By Joseph Cherian, Christine Kon and Li Ziyun

This research-based commentary is an analysis of North American and Asian hedge fund exposures to systemic risk factors. It finds that while some hedge fund strategies are truly market neutral, others may fall short of their claims. In addition, exposures to several of the risk factors have changed significantly with time, particularly when compared between pre-Global Financial Crisis (GFC) and post-GFC. This article presents early findings from a comprehensive academic study on risk exposures of Asian and North American hedge fund strategies.

**Potential HBS Cases:**

1. Dimensional Fund Advisors, 2002 – Case No: 9-203-026
2. Smith Breeden Associates: The Equity Plus Fund (A) – Case No: 9-297-089

## APPENDIX A – ACADEMIC HONESTY & PLAGIARISM: A WORD FROM YOUR SPONSOR

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & 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:

1. <http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct>
2. Online Module on Plagiarism: <http://emodule.nus.edu.sg/ac/>

**NOTE :** I strongly recommend you register for and take the [CFA \(Levels I, II and III\)](#) and [CAIA \(Levels I and II\)](#) exams if you are seriously interested in a career in the asset management industry.