THE UNIVERSITY OF HONG KONG
FACULTY OF BUSINESS AND ECONOMICS

PhD Course Syllabus

Course Code/Title: **[FINA6052] [Empirical Asset Pricing]**

Course Description: This doctoral seminar is an in-depth study of existing empirical work in asset pricing, including econometric and statistical methods. The focus is on empirical studies of the fundamental economic questions in asset pricing. This course consists of reading, presenting, and discussing articles on the general subject of empirical asset pricing.

Course Objectives: To introduce interested students to the empirical work on the empirical asset pricing; To assist students to develop a critical perspective of the literature; To provide the tools for conducting cutting-edge empirical asset pricing research in this field.

Pre-requisite:

Assessment: 70% coursework; 30% examination

Remarks: All PhD courses are non-credit-bearing and will be assessed on a pass/fail basis.

Course Learning Outcomes (CLOs) On completion of this course, students should be able to:	Aligned PLOs*				
	1	2	3	4	5
1. Understand the basic model assumptions of the asset pricing Setup and derive models for asset pricing	Y	Y			
2. Analyze asset pricing problems with mathematical/statistical softwares		Y			
3. Understand the frontier research and replicate important results in the current literature		Y			Y
4. Develop research idea and conduct empirical tests accordingly	Y	Y			Y

***Programme Learning Outcomes (PLOs) for Research Postgraduate Programme:**

1. Demonstrate critical understanding, at an advanced level, of up-to-date knowledge and research methodology of a particular field
2. Implement effective academic and personal strategies for carrying out research projects independently and ethically
3. Contribute original knowledge in response to issues in their specialist area
4. Communicate research findings at a diverse range of levels and through a variety of media
5. Evaluate one's own research in relation to important and latest issues in the field

COURSE DETAILS *(subject to change at instructor's discretion)*

Year/Semester: 2022-09, First Semester

Time/Venue: Thursday, 1:30pm—4:30pm

Instructor: **[Name]**
Email: yanxuj@hku.hk
Office: KKL-929 (by appointment)

I. Teaching and Learning Activities

In-class and Out-of-class Activities *(e.g. lectures, class discussion, papers reading, proposal writing)*	Expected hour	% of student study effort
1. Lectures	36	25%
2. Assignments	72	50%
3. Self-study	36	25%
4.		
Total	144	100%

II. Assessment

Assessment Components *(e.g. assignments, proposal, presentation, examination)*	Weight	CLOs to be assessed				
		1	2	3	4	5
1. Assignments	25%	Y	Y	Y	Y	Y
2. Class paper	30%			Y	Y	Y
3. Presentation and participation	15%	Y	Y		Y	
4. Examinations	30%	Y	Y	Y	Y	Y
Total	100%					

Students will be assessed based on the following performance standards:

Course Grade	Performance Standard
Pass	– Novel research idea, clean and clever model derivation, outstanding economic intuition, good empirical proxy, solid empirical analyses, and good discussions of results. – Mediocre research idea, reasonable model derivation, understandable economic intuition, acceptable empirical proxy, reasonable empirical analyses, and plain discussion of results. – Poor idea, over-simplified model derivation, barely acceptable economic intuition, almost poor empirical proxy, basic empirical analyses, and plain discussion of results. – Poor idea, over-simplified model derivation, unacceptable economic intuition, irrelevant empirical proxy, preliminary

	empirical analyses, and unclear discussion of results.
Fail	No idea, no model derivation, unacceptable economic intuition, no empirical proxy, no empirical analyses, or no discussion of results.

Assessment Component 1 *(Optional)*

Score	Performance Standard

Assessment Component 2 *(Optional)*

Score	Performance Standard

Assessment Component 3 *(Optional)*

Score	Performance Standard

Assessment Component 4 *(Optional)*

Score	Performance Standard

III. Course Content and Tentative Schedule

1 Overview

- Cochrane, chapter 1
- John Cochrane, Discount rates, Journal of Finance. 2011
- Singleton, chapter 1

2 Market efficiency tests

- Singleton, Chapter 9
- Campbell, Lo, MacKinlay (CLM), Chapters 2 and 3
- Fama, Eugene F and Kenneth R French, 1988b, Permanent and temporary components of stock prices, The Journal of Political Economy 246–273

- Lo, Andrew W and Archie Craig MacKinlay, 1988, Stock market prices do not follow random walks: Evidence from a simple specification test, Review of Financial Studies 1, 41–66
- Poterba, James M and Lawrence H Summers, 1988, Mean reversion in stock prices: Evidence and implications, Journal of Financial Economics 22, 27–59
- Richardson, Matthew and Tom Smith, 1994, A unified approach to testing for serial correlation in stock returns, Journal of Business 371–399

3 Time series predictability

- Cochrane, John H., Asset Pricing Ch. 20, 21
- Hamilton, Chapter 11
- Shiller, Robert. 1981, ”Do Stock Prices Move Too Much to be Justified by Subsequent Changes in Dividends?,” The American Economic Review, 71, 421-436.
- Cochrane, John H., Explaining the Variance of Price-Dividend Ratios” Review of Financial Studies (1992) 5:2, 243-280.
- Campbell, John Y. and Robert J. Shiller, ”Cointegration and Tests of Present Value Models” Journal of Political Economy 95, 1062–1088, October 1987.
- Campbell, John Y., and Robert J. Shiller, ”The Dividend-Price Ratio and Expectations of Future Dividends and Discount Factors”, Review of Financial Studies 1:195–228, Fall 1988.
- Goyal, Amit and Ivo Welch A Comprehensive Look at The Empirical Performance of Equity Premium Prediction Review of Financial Studies 21 1455-1508
- Cochrane, John H. The Dog that Did Not Bark: A Defense of Return Predictability. Review of Financial Studies 21, 1533-1575.

4 Preference-based asset pricing, GMM

- Cochrane, Chapter 5,6,8
- Singleton, Chapter 10
- Hansen, Lars Peter and Kenneth J Singleton, 1982, Generalized instrumental variables estimation of nonlinear rational expectations models, Econometrica 1269–1286
- Hansen, Lars Peter and Ravi Jagannathan, 1991, Implications of security market data for models of dynamic economies, The Journal of Political Economy 99, 225–262
- Hansen, Lars Peter and Scott F Richard, 1987, The role of conditioning information in deducing testable restrictions implied by dynamic asset pricing models, Econometrica 587–613

5 Consumption-based asset pricing

- Cochrane, Chapter 21
- Campbell, John Y and John H Cochrane, 1999, By force of habit: A consumption-based explanation of aggregate stock market behavior, Journal of Political Economy 107
- Bansal, Ravi and Amir Yaron, 2004, Risks for the long run: A potential resolution of asset pricing puzzles, The Journal of Finance 59, 1481–1509

6 Portfolio construction and linear models

- Cochrane, Chapters 10, 12 and 13
- Singleton, Chapter 11
- Gibbons, Michael R, Stephen A Ross, and Jay Shanken, 1989, A test of the efficiency of a given portfolio, Econometrica 1121–1152

- Hansen, Lars Peter and Ravi Jagannathan, 1997, Assessing specification errors in stochastic discount factor models, The Journal of Finance 52, 557–590

7 Cross-sectional tests

- Cochrane, Asset Pricing , Ch. 20
- Fama, Eugene F., and Kenneth R. French 2006, ”Dissecting Anomalies” Journal of Finance 63 (4) 1653-1678.
- Asness, Cliff, Toby Moskowitz and Lasse Pedersen, June 2009, ”Value and Momentum Everywhere”
- Andrew Ang, Robert Hodrick, Yuhang Xing, Xiaoyan Zhang, High idiosyncratic volatility and low returns: International and further U.S. evidence, Journal of Financial Economics, 2009, Volume: 91, Pages: 1-23
- Campbell, John Y and Tuomo Vuolteenaho, 2004, Bad beta, good beta, American Economic Review 1249–1275

8 Term structure of interest rates

- Singleton, Chapter 12, 13
- CLM, Section 11
- Hamilton, Chapter 13
- Dai, Qiang and Kenneth J Singleton, 2000, Specification analysis of affine term structure models, The Journal of Finance 55, 1943–1978
- Dai, Qiang and Kenneth J Singleton, 2002, Expectation puzzles, time-varying risk premia, and affine models of the term structure, Journal of Financial Economics 63, 415–441

9 Volatility

- CLM, Chapter 12
- Singleton, Chapter 7
- Engle, Robert F, 1982, Autoregressive conditional heteroscedasticity with estimates of the variance of united kingdom information, Econometrica 987–1007
- Andersen, Torben G, Tim Bollerslev, Francis X Diebold, and Heiko Ebens, 2001, The distribution of realized stock return volatility, Journal of Financial Economics 61, 43–76
- Ghysels, Eric, Pedro Santa-Clara, and Rossen Valkanov, 2005, There is a risk-return trade-off after all, Journal of Financial Economics 76, 509–548

10 Options

- Singleton, Chapter 15
- Bates, David S, 2003, Empirical option pricing: A retrospection, Journal of Econometrics 116, 387–404
- Goyal, Amit and Alessio Saretto, 2009, Cross-section of option returns and volatility, Journal of Financial Economics 94, 310–326
- Zhang, Xiaoyan, Rui Zhao, and Yuhang Xing, 2010, What does the individual option volatility smirk tell us about future equity returns?, Journal of Financial and Quantitative Analysis, 45, 641–662

IV. Required/Recommended Readings

- Campbell, John, Lo, Andrew, and MacKinlay, Craig, 1997, Econometrics of Financial Markets, Princeton University Press, Princeton, N.J.
- Cochrane, John, 2001, Asset Pricing, Princeton University Press, Princeton, N.J.
- Singleton, Kenneth, 2005, Empirical Dynamic Asset Pricing: Model Specification and Econometric Assessment , ISBN 0691122970.

V. Course Policy

The University Regulations on academic dishonesty will be strictly enforced! Academic dishonesty is behaviour in which a deliberately fraudulent misrepresentation is employed in an attempt to gain undeserved intellectual credit, either for oneself or for another. It includes, but is not necessarily limited to, the following types of cases:

a. Plagiarism - The representation of someone else's ideas as if they are their own. Where the arguments, data, designs, etc., of someone else are being used in a paper, report, oral presentation, or similar academic project, this fact must be made explicitly clear by citing the appropriate references. The references must fully indicate the extent to which any parts of the project are not one's own work. Paraphrasing of someone else's ideas is still using someone else's ideas, and must be acknowledged. Please check the University Statement on plagiarism on the web: http://www.hku.hk/plagiarism/

b. Unauthorized Collaboration on Out-of-Class Projects - The representation of work as solely one's own when in fact it is the result of a joint effort.

c. Cheating on In-Class Exams - The covert gathering of information from other students, the use of unauthorized notes, unauthorized aids, etc.

d. Unauthorized Advance Access to an Exam - The representation of materials prepared at leisure, as a result of unauthorized advance access (however obtained), as if it were prepared under the rigors of the exam setting. This misrepresentation is dishonest in itself even if there are not compounding factors, such as unauthorized uses of books or notes.

You are expected to do your own work whenever you are supposed to. Incident(s) of academic dishonesty will NOT be tolerated. Cheating or plagiarism of any kind would result in an automatic FAIL grade for the course plus strict enforcement of all Faculty and/or University regulations regarding such behaviour.