CAPITAL MARKET THEORY
[MSFA 740]
FALL 2013

Instructor: Professor Ludwig Chincarini, CFA, Ph.D.
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Office Hours: Wednesday 12:00 - 1:00 PM and 5:15 – 6:15 PM (or by request).
Class Hours & Location: Wednesday, 1:00 P.M., Howard, Room 527

Course Description: *The course focuses on four main topics. First, an in-depth analysis of investment portfolio construction is undertaken. This examines both portfolios that hold only risky assets and portfolios that also include a risk-free asset. This analysis incorporates theoretical, empirical and practical considerations. Second, the course considers a number of equilibrium theories regarding equities, based upon financial optimization. These theories involve a number of simplifying assumptions that must be examined in addressing the value of the proposed theory. Once this analysis is undertaken, we then consider the key implications for the portfolio decision. Third, we consider some methods of analysis for equities related to the equilibrium theories covered in the course. Once this analysis is undertaken, we then consider the key implications for the portfolio decision. Fourth, the efficient markets hypothesis is examined. This has important implications for active versus passive management, and the use of index funds. We then consider the key implications for the portfolio decision. This course has a theoretical and empirical perspective of the essence of what is often referred to as "modern portfolio theory".*

The goal is to develop a thorough understanding of asset pricing. In the spirit of our CFA partnership, the course will provide an a detailed analysis of capital market theory and the portfolio management process

Industry Licenses:
Some of you may wish to enroll in the CFA program (www.cfainstitute.org) Much of the material in this course will overlap with the study guide of the CFA.

Required Text:

Chincarini, Ludwig B. and Daehwan Kim. *Quantitative Equity Portfolio Management*. New York, McGraw-Hill, 2006.

Chincarini, Ludwig B. *The Crisis of Crowding. Quant Copycats, Ugly Models, and the New Crash Normal*, Wiley, 2012.

Suggested Companion Texts (not-required):

Reilly, Frank K. and Keith C. Brown. *Investment Analysis and Portfolio Management*, 10th Edition or 11th Edition, Thomson South Western.

Solnik, Bruno and Dennis LcLeavey. *Global Investments*, 6th Edition, Prentice Hall.

Bodie, Kane, and Marcus. Investments. 7th Edition, McGraw-Hill.

Software and Programming:

This course will use **STATA** and **MATLAB**. As a by-product of this course, your skills in computer programming for financial analysis will be improved. Also, it is strongly encouraged that you become familiar with **Bloomberg** and use it to download data and perform analysis.

Handouts & Readings: Additional readings will be given by instructor.

Newspapers: Students are **strongly encouraged** to read the Wall St. Journal on a daily basis. Discount order forms available from instructor.

The Honor Code: As a Jesuit institution committed to cura personalis- the care and education of the whole person- USF has an obligation to embody and foster the values of honesty and integrity. USF upholds the standards of honesty and integrity from all members of the academic community. The

Honor Code can be found at: http://www.usfca.edu/fogcutter. Plagiarism on group projects or cheating on quizzes or exams will result in deferral to the appropriate disciplinary authority. The CFA code of conduct can be found: http://www.cfainstitute.org/ethics/codes/ethics/Pages/index.aspx.

Disability: Students are encouraged to inform the instructor of any disabilities that may impair their ability to learn.

Lateness and Attendance: Missed exams, late papers, and absenteeism can reduce a student's grade up to the discretion of instructor.

Course Requirements and Grading:

Group Project:	**10%**	**(extra credit)**
Final Exam:	**50%**	
Quizzes:	**40%**	
Participation:	**10 %**	

Course Outline

Meeting Date	Topics	Readings	Important Events
October 16, 2013	Introduction and Overview ● Portfolio Theory Risk and Return ● Mean-Variance Maths ● Diversification Maths	*QEPM*, Appendix Chap. 9. Chapter 9 and Chapter 1 &2. *Articles*: Fama & French (1992, 1993), Asness (2013a, 2013b), Fama & Litterman (2012), Andrade et al. (2013).	Problem Set #1 A. Data Project: Efficient Frontier Lab (Lab#9)
October 23, 2013	Index Models ● Single Index Model ●Theoretical Estimation of Beta ● Empirical Estimation of Beta ●Theoretical and Empirical Adjustments of Beta ●Theory of Multi-Index Model	*QEPM*, Chapters 6,7, and 9.Appendix 15E on CD. *Crowding*: Chapter 8. *Articles*: Blume (1970), Blume (1975), and Beaver et al. (1975). MacKinlay (1997), Lucca and Moench (2012).	Problem Set #1 R. Problem Set 2 A. Quiz #1. Data Project: Estimating Beta. Replication of Blume.
October 30 2013	The CAPM ● Theory and Assumptions ● SML, CML, Sharpe Ratio ● Derviation of Tax CAPM ● Tests of the CAPM and Flaws	*QEPM* CD, Appendix B. *Crowding*: Chapter 14 & 15. *Articles*: Jegadeesh (1993), Womack (1996), Shiller (1981), Campbell & Shiller (1998), Cochrane (2011).	Problem Set #2 R. Problem Set 3 A. Data Project: Labs #6 and #7.
November 6, 2013	The APT ● Theory & Arbitrage Examples ● Maths of Transaction Cost Models ●Theory and Empirics of Tax Costs	*QEPM*, Chapter 15. *Crowding*: Chapter 10. *Reilly et al.* Chapter 10. Articles: Rapach et al. (2013), Henderschott et al. (2011), Kirilenko & Lo (2013).	Problem Set #3 R. Problem Set 4 A. Quiz #2
November 13, 2013	Eliminating Systemic Risk: Market Neutrality ● Modelling tecniques and empirics Arbitrage and Leverage ● Modelling techniques and execution	*QEPM*, Chapter 12 & 13. *Crowding*: Chapter 11. Bodie et al. Chapter 11, 12, 13. Articles: Bruno, Chincarini and Whitelaw (2013), Kramer and Runde (1997), and Hirschleifer (2003), Edelen (2013), Beber and Pagano (2013), Kaplan et al. (2013)	Problem Set #4 R. Data Project: Labs #10 and #11. Leveraged ETF lab.
November 20, 2013	Portfolio Theory and Performance Analysis International CAPM Theorical Flaws: More anomalies	*QEPM*, Chapter 16 and 17. Appendix 15A-15E. *Crowding*: Chapter 4. *Articles*: Sloan (1996), Leippold and Llore (2010), Chincarini (2007), Brunnermeier (2009).	Quiz #3. Data Project: Labs #12 and #13.
December 11, 2013*	Final Exam		