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# ECON*6380 Financial Economics F15

## 0.50 Credit

## General Course Information

**Instructor:** Ilias Tsiakas

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*Office Location* *MacKinnon 737*
*Office Hours* Monday 3:30-5pm (or by appointment)
*Department/School* Department of Economics and Finance

## Course Description

This is a graduate course in financial economics designed for Masters and PhD students. The objective of this course is threefold: (i) build a common background for all students in order to facilitate discussion of finance research; (ii) provide an in-depth look at a few selected core topics in finance, and (iii) expose students to the analysis of seminal and top recent research papers. This course is designed to provide in-depth analysis of few topics rather than superficial analysis of a wide variety of topics.

The delivery of this course will involve formal lecturing as well as class discussions and student presentations. About half of the course will be dedicated to formal lecturing and the other half to structured discussions focusing on a set of finance research papers. Students are strongly encouraged to participate and indeed lead the discussions to the extent that they can. In this course, the more interaction, the better the learning experience.

There is no required textbook for this course. The readings will consist of the lecture notes and a set of assigned papers for each topic. All materials, including lecture notes and assigned papers, will be posted on courselink or distributed in class.

## Indicative Content

### LIST OF TOPICS

#### REVIEW

- Measuring risk and return: mean, variance, standard deviation, covariance, correlation, skewness, kurtosis
- The normal distribution and the lognormal distribution for modeling asset returns
- The empirical properties of asset returns: stocks, bonds and exchange rates
- Investor preferences: a comprehensive review of risk aversion

## VALUING STOCKS AND BONDS

- Financial Calculus:
  - Compounding and future value
  - Discounting and present value
  - Annuities and perpetuities

- Valuing Bonds:
  - Computing bond prices: the effect of the yield, coupon rate and time to maturity
  - The term structure of interest rates

- Valuing Stocks:
  - Computing stock prices: the dividend discount model, the cost of equity, the present value of growth opportunities
  - The Campbell and Shiller (1988) decomposition.

## DYNAMIC ASSET ALLOCATION

- The foundations of portfolio choice and diversification

- Mean variance analysis: assumptions, strengths and weaknesses
  - Maximum Utility Strategy
  - Maximum Expected Return Strategy
  - Minimum Volatility Strategy
  - Global Minimum Variance Strategy
  - The 1/N strategy

- Performance Measures, Transaction Costs and long horizon investing

## THE CROSS SECTION OF EXPECTED STOCK RETURNS

- A Review of the Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT)

- The Fama and McBeth (1973) methodology

- The Fama-French (1993) factors

- Alternative factors for explaining the cross section of stock returns:
  - Momentum factor
  - Volatility factor

## RETURN PREDICTABILITY

- Out-of-sample prediction of the equity premium
  - Types of conditioning information: dividend yield, T-bill yield, term spread, default spread, etc.
  - Short vs. long horizon

## FX AND THE CARRY TRADE

- The Foreign Exchange market
- The forward bias in exchange rates
- The carry trade strategy
- The momentum strategy for currencies

## Course Assessment

| | | | Notes | Due Date |
|---|---|---|---|---|
| **Assessment 1:** | **10%** | In-class participation | | |
| **Assessment 2:** | **20%** | In-class presentation | *Based on a research paper* | ***TBA*** |
| **Assessment 3:** | **10%** | Written summaries of two research papers | | ***TBA*** |
| **Assessment 4:** | **40%** | Major empirical project | | ***Wednesday Nov 25 in class*** |
| **Assessment 5**: | **20%** | Final Exam | Take-home for 48 hours | **Wednesday December 2; 11:30 am** |
| **Total** | **100%** | | | |

*Participation*

Students are expected to attend all classes and actively participate in the discussions on both the lecture material and the student presentations. You participation grade will be based on both the quality of your participation and attendance. Attendance will be taken in every class. Lack of attendance will result in a penalty using the following rule. A student is allowed to miss three classes during the semester without an explanation and with no penalty. When a student misses a fourth class, there will be a deduction of 1% from the final grade for every missed class (counting the first three classes) up to a maximum of a 10% deduction. Perfect attendance may result in a bonus mark.

*Presentations*

Each student will be assigned one paper for their presentation. However, all students must read all the assigned presentation papers (including the papers assigned to your classmates) so that we can have a discussion after each presentation.

The in-class presentation involves writing about 10 PowerPoint slides. The slides will be submitted to the instructor in class right before the presentation and students will receive a grade based on the quality of their presentation and the quality of the slides. For the slides, what counts is the content not how fancy their design is. A simple PowerPoint design will be just fine. You should aim to talk for a maximum of 30 minutes (but no less than 20 minutes). A class discussion will follow each presentation.

Your presentation should focus on the following:

- Discuss the objectives of the paper
- Set the paper in context, by discussing whether this is an important subject
- Describe the data and methods
- Present the results and implications.

You can also spend a few minutes doing your best to analyze the paper:

- Indicate the strengths and weaknesses of the paper
- Say what you may have done differently and why
- Speculate on what research needs to be done next.

However, if you do not have strong opinions about the above three bullet points, you can ignore them.

The best presentations are the ones that use simple language to describe the main ideas of the paper in a clear and precise manner that makes sense to everyone, even those who have not read the paper. *Think of your presentation as teaching the paper to your classmates*. So what you need to emphasize is whether the paper makes sense, whether the question is important, whether the results support the question and, in the end, whether we should care.

*Written summaries of papers*

Each student will be assigned two research papers among the ones that will be presented in class for which they will write a summary. Each summary will have maximum length of one page, and will contain: (i) one paragraph describing what the paper does; (ii) one paragraph listing the main findings of the paper (you can use bullet points here); and (iii) one question addressed to the student who will be presenting this paper. It is important for the summary to cover the main points of the paper in a clear and precise way. The summary must be able to stand on its own: i.e., someone who has not read the paper must be able to understand what the paper is about by reading the summary. The question can be about: so, is the question of the paper interesting? Is the methodology appropriate? Do the authors find strong support for their hypothesis? Why should we care about this result?

*Advice on how to read papers*

When reading a paper, start with the abstract, introduction and conclusion. Try to obtain a general understanding before diving into the technicalities. There are many points in papers which are difficult to understand either because of the techniques (math or econometrics) or because of the sophistication in the economic ideas. Do not get hung-up on small details, but try to see the "big picture". Do not worry if you do not understand all the details of the methodology. If you are presenting a paper, you should try to understand as much as you can. If you cannot understand something, say so in your presentation. It could very well be that the paper is not clearly written or simply that the quantitative sophistication of the paper is beyond the level of this course.

*Empirical Project*

You are required to write an empirical project on one of three topics. It is your decision which one to choose. Details of the empirical projects are provided separately.

***The deadline for submission of the empirical project is Wednesday November 25, 2015.***

*Final Exam*

The final exam will cover all the material taught in this course. Students will be asked to write one essay on one of the topics discussed in class. It will be a take home exam which will be given to you in advance and will be due on the last class on **Wednesday December 2, 2015**. More details on the format of the exam will be provided later.

## Course Resources

### Recommended Texts:

There is no set textbook for this course. Students are expected to study the lecture handouts and the assigned papers. For further information on a number of topics, students can refer to numerous textbooks such as the following:

"*Financial Economics*" by Fabozzi, Neave and Zhou, 2012. (intermediate level)

"*Asset Pricing*" Revised Edition, by John H. Cochrane, Princeton University Press, 2005. (advanced graduate level)

### Other Resources:

All other materials, including lecture notes, will be posted on courselink or distributed in class..

## List of Papers: *For discussion in class and presentations*

### DYNAMIC ASSET ALLOCATION

Barberis, N. (2000). "Investing for the Long Run when Returns are Predictable," *Journal of Finance* 55, 225-264.

DeMiguel, V., L. Garlappi, and R. Uppal (2009). "Optimal versus Naive Diversification: How Inefficient is the 1/N Portfolio Strategy?" *Review of Financial Studies* 22 1915-1953.

### THE CROSS SECTION OF EXPECTED STOCK RETURNS

Ang, A., R.J. Hodrick, Y. Xing, and X. Zhang (2006). "The Cross-Section of Volatility and Expected Returns," *Journal of Finance* 61, 259-299.

Carhart, M. (1997). "On Persistence in Mutual Fund Performance," *Journal of Finance* 52, 57-82.

Fama, E., and K. French (1992). "The Cross-Section of Expected Stock Returns," *Journal of Finance* 47, 427-465.

Fama, E., and K. French (1993). "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33, 3-56.

Fama, E., and J. McBeth (1973). "Risk, Return and Equilibrium: Empirical Tests," *Journal of Political Economy* 81, 607-636.

Jegadeesh, N., and S. Titman (1993). "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency," *Journal of Finance* 48, 65-91.

Pastor, L., and R.F. Stambaugh (2003). "Liquidity Risk and Expected Stock Returns," *Journal of Political Economy* 111, 642-685.

Krishnan, C.N.V., R. Petkova, and P. Ritchken (2009). "Correlation Risk," *Journal of Empirical Finance* 16, 353-367.

## RETURN PREDICTABILITY

Campbell, J.Y., and R.J. Shiller (1988). "The Dividend-Price Ratio and Expectations of Future Dividends and Discount Factors," *Review of Financial Studies* 1, 195-227.

Campbell, J.Y., and S.B. Thompson (2008). "Predicting Excess Stock Returns Out of Sample: Can Anything Beat the Historical Average?" *Review of Financial Studies* 21, 1509-1531.

Fama, E., and K. French (1988). "Dividend Yields and Expected Stock Returns," *Journal of Financial Economics* 22, 3-25.

Goyal, A., and P. Santa-Clara (2003). "Idiosyncratic Risk Matters!," *Journal of Finance* 58, 975-1008.

Lettau, M., and S. Ludvigson (2001). "Consumption, Aggregate Wealth and Expected Stock Returns," *Journal of Finance* 56, 815-849.

Rapach, D.E., J.K. Strauss, and G. Zhou (2010). "Out-of-Sample Equity Premium Prediction: Combination Forecasts and Links to the Real Economy," *Review of Financial Studies* 23, 821-862.

Pollet, J.M., and M. Wilson (2010). "Average Correlation and Stock Market Returns," *Journal of Financial Economics* 96, 364-380.

Welch, I., and A. Goyal (2008). "A Comprehensive Look at the Empirical Performance of Equity Premium Prediction," *Review of Financial Studies* 21, 1455-1508.

## VOLATILITY TIMING

Fleming, J., C. Kirby, and B. Ostdiek (2001). "The Economic Value of Volatility Timing," *Journal of Finance* 56, 329-352.

## FX AND THE CARRY TRADE

Della Corte, P., L. Sarno, and I. Tsiakas (2009). "An Economic Evaluation of Empirical Exchange Rate Models." *Review of Financial Studies* 22, 3491-3530.

Lustig, H., N. Roussanov, and A. Verdelhan (2011). "Common Risk Factors in Currency Markets," *Review of Financial Studies* 24, 3731-3777.

Menkhoff, L., L. Sarno, M. Schmeling, and A. Schrimpf (2012). "Carry Trades and Global Foreign Exchange Volatility," *Journal of Finance* 67, 681-718.

Menkhoff, L., L. Sarno, M. Schmeling, and A. Schrimpf (2012). "Currency Momentum Strategies," *Journal of Financial Economics* 106, 620-684.

## University Policies

### Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration: https://www.uoguelph.ca/registrar/calendars/graduate/2015-2016/

### Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

https://www.uoguelph.ca/registrar/calendars/graduate/2015-2016/

### Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: http://www.csd.uoguelph.ca/csd/

### Course Evaluation Information

Please refer to: https://www.uoguelph.ca/economics/course-evaluation

### Drop date

The last date to drop one-semester courses, without academic penalty, is November 6, 2015**.** For regulations and procedures for Dropping Courses, see the Academic Calendar:

https://www.uoguelph.ca/registrar/calendars/graduate/2015-2016/

## Course Learning Outcomes

The Department of Economics and Finance *Learning Outcomes* for this course are:

**Skills:**

1. ***Written Communication*****:** The empirical project will provide an opportunity for students to conduct an empirical application that evaluates either an asset pricing model or a dynamic asset allocation strategy. This is perhaps the most important component of this course. Another type of written communication used in this course is the one-page summaries of research papers.
2. ***Oral Communication/Presentation*****:** The presentation of a research paper will provide students with an opportunity to present to the class their summary and evaluation of a major research paper.
3. ***Numerical Problem Solving*****:** Students will learn how to value stocks and bonds, how to measure risk and return, how to design optimal portfolios, how to prove certain asset pricing models, and how to solve other numerical problems in asset pricing and corporate finance.
4. ***Analytical Problem Solving*****:** Much of the course is about interpreting the theory of asset pricing and corporate finance and making recommendations for individual investors and companies.
5. ***Problem solving in a Real World Context*****:** All finance topics taught in this course relate to how investors and companies act in the real world.
6. ***Computer Skills*****:** The empirical project involves developing substantial skills in downloading and processing data, as well as in performing graduate-level statistical analysis using statistical packages.

**Knowledge:**

1. ***Mathematical methodology*****:** We will be using mathematical techniques to value stocks and bonds, measure risk and return and build portfolios.
2. ***Statistical and Econometric Methodology*****:** We will be using probability distributions and will be computing descriptive statistics to help us understand the probability of certain future outcomes occurring. Distributions are central to assessing the risk-return tradeoff.
3. ***Understanding of Specific Markets*****:** This course is devoted to understanding financial markets and in particular the markets for stocks and bonds, although other markets may be considered as well.
4. ***Historical and Global context*****:** We will investigate the historical performance of global financial markets.
5. ***Financial Asset Pricing, Corporate Finance, and Risk Analysis*****:** This is just a summary of what this course is about.