



APPLIES TO ACADEMIC YEAR 2009/2010

DRE 4011 Empirical Asset Pricing

Programme

Finance and Economics

Responsible for the course

Department

Term

According to study plan

ECTS Credits

6

Language of instruction

English

Introduction

Please note that this course will be revised before it is offered again.

This course is intended for PhD students in finance and related fields. The course is an introduction to empirical research in finance. Topics include tests of asset pricing models, return predictability in time-series and cross-section, conditional and unconditional tests. The aim is to familiarize students with essential econometric methods and with important empirical facts and areas of current research interest. This course will provide 6 ECTS credits. It is assumed that students are familiar with the material in FE I: Introduction to Asset Pricing. Knowledge of a software package such as SAS, RATS etc, or programming skills are required..

Learning outcome

Learning Outcomes:

- To understand the testable implications of asset pricing models
- To formulate empirical tests of asset pricing models using econometric techniques
- To understand the implications of time-varying expected returns on tests of asset pricing models
- To appreciate the importance of international factors in determining asset returns in the data
- To be able to test amongst alternative asset pricing models
- To understand small sample bias in tests of asset pricing models

Prerequisites

Admission to a PhD Programme is a general requirement for participation in PhD courses at BI Norwegian School of Management.

External candidates are kindly asked to attach confirmation of admission to a PhD programme when signing up for a course with the doctoral administration. Candidates can be allowed to sit in on courses by approval of the courseleader. Sitting in on courses does not permit registration for courses, handing in exams or gaining credits for the course. Course certificates or conformation letters will not be issued for sitting in on courses

Compulsory reading

Recommended reading

Course outline

Syllabus: Below lists the topics that will be covered in class, time permitting. Reading is provided below.

1. The Predictability of Asset Returns
1. Business Cycle Variables and Return Predictability
2. Market Sentiment Variables and Return Predictability
3. Mean Reversion Tests

Campbell, Lo and MacKinlay (1997) (CLM) Chapter 2

Baker, Malcolm and Jeffrey Wurgler, 2006, Investor Sentiment and the Cross-Section of Stock Returns, *Journal of Finance*, 61, 1645-1680.

Boudoukh, Jacob, Roni Michaely, Matthew Richardson and Michael G. Roberts, 2005, On the Importance of Measuring Payout Yield: Implications for Empirical Asset Pricing, *Journal of Finance*, forthcoming.

Fama, Eugene F., and Kenneth R. French, 1988, Dividend Yields and Expected Stock Returns, *Journal of Financial Economics*, 22, 3-27.

Fama, Eugene F., and Kenneth R. French, 1989, Business Conditions and Expected Returns on Stocks and Bonds, *Journal of Financial Economics*, 25, 23-49.

Goyal, Amit and Ivo Welch, 2006, A Comprehensive Look at the Empirical Performance of Equity Premium Prediction, *Review of Financial Studies*, forthcoming.

Lettau, Martin and Sydney Ludvigson, 2001, Consumption, Aggregate Wealth, and Expected Stock Returns, *Journal of Finance*, 56, 815-849.

Lewellen, Jonathan, 2004, Predicting Returns with Financial Ratios, *Journal of Financial Economics* 74, 209-235.

2. Present Value Relations

CLM Chapter 7.

3. The Cross-section of Expected Stock Returns

(a) Testing Methodologies: Time-series, cross-section and ML.

(b) Single and Multifactor Models

(c) Explaining Size and Book-to-Market

(d) Conditional Models

(e) Portfolio Formation

CLM Chapters 5 and 6

Campbell, J.Y., and T. Vuolteenaho, 2004, Bad Beta, Good Beta, *AER* 94, 1249-1275

Daniel and Titman, Testing factor model explanations of market anomalies, Working Paper.

Fama and French, 1992, The cross-section of expected stock returns, *Journal of Finance* 47, 427-465.

Fama, E. and J.D. MacBeth, 1973, Risk, return and equilibrium: empirical tests, *Journal of Political Economy* 81, 607-636.

Fama, E. and K. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 1975-1999.

Ferson and Harvey, 1991, The variation of economic risk premiums, *Journal of Political Economy* 99, 385-415.

Jagannathan R., and Z. Wang, 1996, The conditional CAPM and the cross-section of expected stock returns, *Journal of Finance* 51, 3-53.

Lettau and Ludvigson, 2001, Resurrecting the (C)CAPM: A cross-sectional test when risk premia are time-varying, *Journal of Political Economy* 109, 1238-1287.

Lewellen, J., S. Nagel and J. Shanken, 2006, A skeptical appraisal of asset-pricing tests, working paper, Dartmouth University.

Li, Vassalou, and Xing, Sector investment growth rates and the cross section of equity returns, *Journal of Business*

Liew, J., and M. Vassalou, 2000, Can book-to-market, size and momentum be risk factors that predict economic growth, *Journal of Financial Economics*, 221-245.

McElroy, M.B, E. Burmeister, and K.D. Wall, 1985, Two estimators for the APT model when factors are measured, *Economic Letters* 19, 271-275.

Chen, Roll and Ross, 1986, Economic forces and the stock market, *Journal of Business* 59, 383-403.

Xing, Interpreting the value effect through the q-theory: An empirical investigation, Forthcoming RFS

4. Consumption CAPM

CLM Chapter 8

5. International Asset Pricing Models

Bekaert, G., and C.R. Harvey, 1995, Time-varying world market integration, *Journal of Finance* 50, 403-444.

Chan, K.C., A. Karolyi and R.M. Stulz, 1992, Global financial markets and the risk premium on U.S. equity, *Journal of Financial Economics* 32, 137-168.

Cho, D.C., C.S. Eun, L.W. Senbet, 1986, International arbitrage pricing theory: An empirical investigation, *Journal of Finance* 41, 313-330.

De Santis, G., and B. Gerard, 1997, International asset pricing and portfolio diversification with time-varying risk, *Journal of Finance* 52, 1881-1912.

Dumas, B., and B. Solnik, 1995, The world price of foreign exchange risk, *Journal of Finance* 50, 445-479.

Engle, R.F., and V.K. Ng, 1993, Measuring and testing the impact of news on volatility, *Journal of Finance* 48, 1749-1778.

Ferson, W.E., and C.R. Harvey, 1993, The risk and predictability of international equity returns, *Review of Financial Studies* 6, 527-566.

Ferson, W.E., and C.R. Harvey, 1994, Sources of risk and expected returns in global equity markets, *Journal of Banking and Finance* 18, 775-803.

Hardouvelis, Malliaropoulos and Priestley, 2006, EMU and European stock market integration, *Journal of Business* 79, 365-392.

Griñon, J., 2002, Are the Fama and French factors global or country specific? *Review of Financial*

Studies 15, 783-804.

Gultekin, M., N. Gultekin, and A. Penati, 1989, Capital controls and international capital market segmentation, *Journal of Finance* 44, 849-869.

Harvey, C.R., 1991, The world price of covariance risk, *Journal of Finance* 46, 111-158.

Harvey, Campbell R., 1995, Predictable risk and return in emerging markets, *Review of Financial Studies* 8, 773-816.

Korajczyk, R.A. and C.J. Viallet, 1989, An empirical investigation of international asset pricing, *Review of Financial Studies* 2, 553-586.

Stulz, R.M., 1995, International portfolio choice and asset pricing: An integrative survey, in R. Jarrow, M. Maximovich and W. Ziemba, Eds.: *Handbook of modern finance*, North-Holland, New York, 201-223.

Computer-based tools

Learning process and workload

Examination

Your course grade will be based on the following activities and weights:

30 % class work (in the form of a mix of some/ all of the following: hand in of case write ups, projects, and homeworks; case presentations and class participation; in class midterm and quizzes).

70% 3 hour written final exam.

Both parts of the evaluation need to be passed in order to get a grade in the course.

The course will be graded on the ECTS scale, A to F

Exam code(s)

DRE 40111 accounts for 100% of the grade

Examination support materials

BI-approved exam calculator only

BI-approved exam calculator: TEXAS INSTRUMENTS BA II Plus™.

Instruction manuals can only be used at examinations where “all exam aids” are allowed. In cases where a BI-approved calculator is allowed, only one – 1- such calculator can be brought to the examination premises. In addition one simple calculator can be brought.

Re-sit examination

Re-takes are only possible at the next time a course will be held. When the course evaluation has a separate exam code for each part of the evaluation it is possible to retake parts of the evaluation. Otherwise, the whole course must be re-evaluated when a student wants to retake an exam.

Additional information

Honour Code

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honour code system. This is a most significant university tradition.

Students are responsible for familiarizing themselves with the ideals of the honour code system, to which the faculty are also deeply committed.

Any violation of the honour code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academic integrity. If you have any questions about your responsibilities under the honour code, please ask.