



APPLIES TO ACADEMIC YEAR 2013/2014

## DRE 4016 Topics in Finance

### Programme

Finance; Economics

### Responsible for the course

Charlotte Østergaard

### Department

Department of Financial Economics

### Term

According to study plan

### ECTS Credits

6

### Language of instruction

English

### Introduction

This course provides students with an introduction at the PhD level to four topical areas in financial economics. The common theme running through the course is the pricing of financial assets. Part 1 of the course deals with International Asset Pricing models. Part 2 of the course examines non-standard preferences and assess the role of behavioural biases on asset prices. Part 3 of the course examines the role of liquidity in financial markets. Part 4 of the course introduces students to the optimal design of mortgage contracts and explores mortgage prepayment and default.

### Learning outcome

**Part 1. International Asset Pricing.** This part reviews the fundamental papers in international asset pricing and discuss recent developments in the field. Students should understand the theoretical underpinnings of international asset pricing models. In addition, students should comprehend the empirical methodologies for testing international asset pricing models. Learning how to estimate, test and interpret results from international asset pricing is an integral aspect of this part of the course. Particular attention will be given to understanding the integration and segmentation of international capital markets along with currency risk.

**Part 2. Behavioural Finance.** There are reasons to believe that rational agents in efficient markets is an inadequate description of financial markets. The first part of this course surveys evidence on how investor behavior influence asset prices in ways not predicted by standard asset pricing theory. The second part of the course deals with behavioral corporate finance emphasizing the security issue process. Students learning is focussed on the understanding of how non-standard preferences effect the cross section of asset prices and on managerial decisions regarding security issuance.

**Part 3. Asset Pricing and Liquidity.** This part of the course focuses on the importance of liquidity with respect to asset pricing. Recent papers suggest that liquidity is an important determinant for asset pricing, something that is basent in traditional models of asset pricing. In this part of the course emphasis is placed on different dimensions of liquidity and particular focus will be placed on the empirical literature. Student learning will be concentrated on understanding how liquidity can effect asset prices, both in the cross-section and time series of asset returns.

**Part 4. Real Estate Financing.** This part of the course examines the designing of residential mortgage contracts and explores mortgage prepayment and default. The objective of the lectures is to give the students an understanding of the linkages between loan design and borrower characteristics. The options embedded in debt instruments are discussed. While the discussion is frames around residential mortgages, the knowledge attained by students should be relevant for many more fixed income instruments. The students will familiarize themselves with the key articles on the topics to date.

### Prerequisites

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

External candidates are kindly asked to attach confirmation of admission to a PhD programme when signing up for a course with the doctoral administration. Other candidates may be allowed to sit in on courses by approval of the course leader. 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

#### Part 1. International Asset Pricing Models

*A: Models of international asset pricing.*

Adler, Michael, and Bernard Dumas, 1983, International portfolio choice and corporation finance: A synthesis, *Journal of Finance* 38, 925-984.

Dahlquist, Magnus and Torbjørn Sällström, 2002, An evaluation of international asset pricing models, *CEPR Discussion paper* No. 3145.

Errunza and Losq, 1989, Capital flow controls, International Asset Pricing and Investors welfare: A multicountry framework, *Journal of Finance* , 1025-38

Christian Heyerdahl-Larsen

Sercu, Piet, 1980, A generalization of the international asset pricing model, *Revue de l'Association Francaise de Finance* 1, 91-135.

Solnik, Bruno H., 1974, An equilibrium model of the international capital market, *Journal of Economic Theory* 8, 500-524.

Stulz, Rene M. 1995, International asset pricing: An integrative survey, *Handbook of Modern Finance* , R. Jarrow, M. Maksimovic and W. Ziemba eds., North Holland - Elsevier, 201-223.

Uppal, Raman, 1993, A General Equilibrium Model of International Portfolio Choice, *Journal of Finance* , pp 529-553

Harvey, Campbell, 1991. The World Price of Covariance Risk, *Journal of Finance* 46, 111-158.

*B: Integration vs segmentation*

Aydemir, Cevdet, 2004, Why are international equity market correlations low?, *Working paper* , Carnegie Mellon University.

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

Bekaert, Geert, Robert J. Hodrick, and Xiaoyan Zhang, 2008, International Stock Return Comovements, *Working paper* , Columbia University and Cornell University.

Carriero, Francesca, Vihang Errunza, and Ked Hogan, 2007, Characterizing world market integration through time, *Journal of Financial and Quantitative Analysis* 42, 915-940.

Carriero, Francesca, Vihang Errunza, and Sergei Sarkissian, 2004, Industry Risk and Market Integration, *Management Science* , 50, 207-221.

De Jong, Frank, and Frans A. de Roon, 2005, Time-varying market integration and expected returns in emerging markets, *Journal of Financial Economics* 78, 583-613.

Esther Eiling and Bruno Gerard, 2008, Dispersion, Equity Returns Correlations and Market Integration, *Working Paper*

Errunza, Vihang, and Etienne Losq, 1985, International asset pricing under mild segmentation: Theory and test, *Journal of Finance* 40, 105-124.

*C: Currency risk*

Brandt, Michael W., John H. Cochrane, and Pedro Santa-Clara, International Risk Sharing is Better Than You Think, or Exchange Rates are Too Smooth, *Journal of Monetary Economics* 53, 2006, 671-698.

Campbell, John Y., Karine Serfaty-de Medeiros, and Luis Viciara, 2008, Global Currency hedging, Forthcoming, *Journal of Finance*.

Frans De Roon, Esther Eiling, Bruno Gerard and Pierre Hillion, 2009, Currency Investing in Global Portfolios: Hedging or Speculative Benefits?, *Working Paper*

De Santis, Giorgio and Bruno Gerard, 1998, How big is the premium for currency risk? *Journal of Financial Economics* 49, 375-412.

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

Glen, Jack, and Philippe Jorion, 1993, Currency hedging for international portfolios, *Journal of Finance* 48, 1865-1886

Lustig, Hanno N, and Adrien Verdelhan, 2007, The cross-section of foreign currency risk premia and consumption growth risk, *American Economic Review* 97, 89-117.

#### Part 2. Behavioural Finance

Cao, Melanie, and Jason Wei, 2005, Stock market returns: A note on temperature anomaly, *Journal of Banking and Finance* 29, 1559--1573.

Baker, Malcolm, and Jeffrey Wurgler, 2006, Investor sentiment and the cross-section of stock returns, *Journal of Finance* 61, 1645--1680.

Baker, Malcolm and Richard S. Ruback and Jeffery Wurgler, 2005, Behavioral Corporate Finance, *Handbook of Corporate Finance: Empirical Corporate Finance*, Elsevier/North-Holland, Handbooks in Finance Series, ed.B. E. Eckbo.

Frieder, Laura, and Avanidhar Subrahmanyam, 2004, Nonsecular regularities in returns and volume, *Financial Analysts Journal* 60, 29--34.

Hirshleifer, David, 2001, Investor psychology and asset pricing, *Journal of Finance* 91, 342--346.

Hirshleifer, David, and Tyler Shumway, 2003, Good day sunshine: Stock returns and the weather, *Journal of Finance* 58, 1009--1032.

Kahneman, Daniel, and Amos Tversky, 1979, Prospect theory: An analysis of decision under risk, *Econometrica* 47, 263--292.

Kamstra, Mark-J., Lisa-A. Kramer, and Maurice-D. Levi, 2000, Losing sleep at the market: The daylight saving anomaly, *American Economic Review* 12, 1000--1005.

Kamstra, Mark-J., Lisa-A. Kramer, and Maurice-D. Levi, 2003, Winter blues: A SAD stock market cycle, *American Economic Review* 93, 324--343.

Loughran, Tim and Paul Schultz, 2004, Weather, Stock Returns, and the Impact of Localized Trading Behavior, *Journal of Financial and Quantitative Analysis* 39, 343--364.

Pinegar, J.-Michael, 2002, Losing sleep at the market: Comment, *American Economic Review* 92, 1251--1256.

Saunders, Edward-M., 1993, Stock prices and Wall Street weather, *American Economic Review* 83, 1337--1345.

Yuan, Kathy, Lu Zheng, and Qiaoqiao Zhu, 2006, Are investors moonstruck? Lunar phases and stock returns, *Journal of Empirical Finance* 13, 1-23.

### Part 3. Asset Pricing and Liquidity

Amihud, Yakov, Illiquidity and stock returns: cross-section and time-series effects. *JFM* 2002, 31-56.

Amihud, Y. and H. Mendelson, "Asset Pricing and the Bid-Ask Spread," *JFE* 1986.

Amihud, Yakov, Haim Mendelson and Lasse Heje Pedersen, Liquidity and asset prices. *Foundations and Trends in Finance* 2006, 269-364.

Acharya, V. and L. Pedersen, "Asset Pricing with Liquidity Risk," *JFE* 2005.

Baker, Malcolm and Jeremy C. Stein, Market liquidity as a sentiment indicator. *JFM* 2004, 271-299.

Brennan, M. and A. Subrahmanyam, "Market Microstructure and Asset Pricing: On the Compensation for Illiquidity in Stock Returns," *JFE* 1996.

Chordia, T., R. Roll, and A. Subrahmanyam, "Commonality in Liquidity," *JFE* 2000.

Chordia, Tarun, Richard Roll and Avanidhar Subrahmanyam, Order imbalance, liquidity, and market returns, *JFE* 65.

Constantinides, G., "Capital Market Equilibrium with Transaction Costs," *JPE* 1986.

Dunbar, N., "Inventing Money: The Story of Long-Term Capital Management and the Legends behind it," John Wiley, NY.

Easley, David, Soeren Hvidkjaer and Maureen O'Hara, 2002, Is information risk a determinant of asset returns? *JF* 2002, 2185-2221.

Fujimoto, A. and M. Watanabe, "Stock Market Activity and Liquidity Risk," mimeo Rice University.

Hasbrouck, Joel and Duane J. Seppi, Common factors in prices, order flows and liquidity, *JFE* 2001, 383-411.

Huang, M. "Liquidity Shocks and Equilibrium Liquidity Premia," *JET* 2002.

Huang, Jennifer and Jiang Wang, Market liquidity and asset prices under costly participation, Sloan School, MIT.

Lo, Andrew W., Harry Mamaysky and Jiang Wang, Asset prices and trading volume under fixed transaction costs. *JPE* 2004, 1054-1090.

Pastor, L. and R. Stambaugh, "Liquidity Risk and Expected Stock Returns," *JPE* 2003.

Vayanos, D. "Transaction Costs and Asset Prices: A Dynamic Equilibrium Model," *RFS* 1998.

### Part 4. Real Estate Financing

#### A. Designing Residential Mortgage Contracts

- i. Brueckner, Jan K. (1994). Borrower Mobility, Adverse Selection and Mortgage Points, *Journal of Financial Intermediation*, 3(4).
- ii. Chari, V.V., and R. Jagannathan (1989). Adverse Selection in a Model of Real Estate Lending, *Journal of Finance*, 44(2).
- iii. Dunn, Kenneth R. (1988). Private Information and Incentives: Implications for Mortgage Contract Terms and Pricing, *Journal of Real Estate Finance and Economics*, 1(1).
- iv. Dunn, K.R., and C.S. Spatt, (1986). The Effect of Refinancing Costs and Market Imperfections on the Optimal Call Strategy and the Pricing of Debt Contract, Working paper, Carnegie Mellon University: Pittsburgh, PA.
- v. LeRoy, Steven F. (1996). Mortgage Valuation Under Optimal Prepayment, *Review of Financial Studies*, 9(3).
- vi. Rothschild, M., and J. Stiglitz (1976). Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information, *Quarterly Journal of Economics*, 90(4).
- vii. Stanton, Richard, and Wallace, Nancy (1998). Mortgage Choice: What is

the Point? Real Estate Economics, 26 (2).

#### B. Mortgage Prepayment and Default

- i. Deng, Yongheng, John Quigley, and Robert Van Order (2000). Mortgage Terminations, Heterogeneity and the Exercise of Mortgage Options, *Econometrica* 68(2) 275-307.
- ii. Dunn, K., and J. McConnell (1981). Valuation of Mortgage-Backed Securities, *The Journal of Finance*, 36 599-617.
- iii. Foster, Chester, and Robert Van Order (1984). An Option Based Model of Mortgage Default, *Housing Finance Review*, 3.
- iv. Hendershott, Patric, and Robert Van Order (1987). Pricing Mortgages: An Interpretation of the Models and Results, *Journal of Financial Services Research*, 1.
- v. Kau, J. B., D.C. Keenan, W. Muller, and Epperson (1992). A Generalized Valuation Model for Fixed Rate Residential Mortgages, *Journal of Money Credit and Banking*, 24 279-299.
- vi. Kau, J.B., D.C. Kennan, and T. Kim (1993). Transaction Costs, Suboptimal Termination and Default Probabilities, *Journal of the AREUEA*, 21.
- vii. Kau, J.B., and D.C. Kennan (1995). An Overview of the Option-Theoretic Pricing of Mortgages, *Journal of Housing Research*, 6.
- viii. Matthey, J., and N. Wallace, (2001). Housing Price Cycles and Prepayment Rates of U.S. Mortgage Pools, *Journal of Real Estate Finance and Economics*, 23(2) 161-84.
- ix. Quigley, John M., and Robert Van Order (1990). Efficiency in the Mortgage Market: The Borrower's Perspective, *Journal of AREUEA*, 18.
- x. Schwartz, Edwardo, and Walter Torous (1989). Prepayment and the Valuation of Mortgage-Backed Securities, *The Journal of Finance*, 44(2) 375-92.
- xi. Schwartz, Edwardo, and Walter Torous (1989). Mortgage Prepayment and Default Decisions: A Poission Regression Approach, *Journal of AREUEA*, 21.
- xii. Stanton, R., (1995). Rational Prepayment and the Valuation of Mortgage-Backed Securities, *The Review of Financial Studies*, 8 677-708.
- xiii. Stanton, Richard H. (1996). Unobservable Heterogeneity and Rational Learning: Pool Specific Generic Mortgage Backed Security Prices, *Journal of Real Estate Finance and Economics*, 12(3) 243-263.
- xiv. Titman, Sheridan, and Walter Torous (1989). Valuing Commercial Mortgages: An Empirical Investigation of the Contingent Claims Approach to Pricing Risky Debt, *The Journal of Finance* 44 345-73.

#### Computer-based tools

Students should be familiar with an econometric software package.

#### Learning process and workload

|                                                          |           |
|----------------------------------------------------------|-----------|
| Lectures                                                 | 36 hours  |
| Specified learning activities (including reading)        | 70 hours  |
| Autonomous student learning (including exam preparation) | 70 hours  |
| Total                                                    | 176 hours |

#### Examination

There will be four assignments, each counting 25% to the final grade. Each of the four assignments can contain one, or all of the following: presentations, written hand-in, exam. The course will be graded A-F, and it is process evaluation.

#### Examination code(s)

DRE 40161 process evaluation counts for 100% of the final grade in DRE 4016

#### Examination support materials

NA

#### Re-sit examination

Next time the course is offered

#### 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 honour code and academic integrity. If you have any questions about your responsibilities under the honour code, please ask.