



B500 Seminar Advanced Topics on Finance

Summer term 2024

Equity Risk Premium Estimation and Real Options

Organization

The seminar is directed to master students who are interested in writing their thesis in the research area of Finance. It is particularly suited for students who participated in at least one course in the field of Finance and/or Financial Econometrics. Still, this is not a formal prerequisite.

Students have to register by sending an email with a one-page CV and current grade transcript to fin-education@wiwi.uni-tuebingen.de until **April 10 (end of day)**. Please also state whether you are not able to present in German.

The kick-off event takes place on Tuesday, **April 16 at 10 AM (Room E07, Mohlstraße 36)**. The attendance of all participants at the kick-off event is compulsory. At the kick-off, the topics will be shortly introduced and assigned to groups of 2 or 3 students (depending on the total number of participants), who will collaborate on the respective topic.

The papers and abstracts have to be submitted via ILIAS by Wednesday, **June 12 (end of day)**, and the final presentations will take place on Wednesday, **June 19**. Each group member is expected to present a portion of the joint work. Each group has a net presentation time of 30 minutes. Great importance is attached to an interactive discussion between all participants and presenters to treat the topics from different perspectives and respond to questions intensely. Therefore, the total time available per group is about 90 minutes.

Topic 1: Equity Risk Premium Estimation

This seminar topic deals with different models that estimate the required rate of return of an asset. While the calculation is straightforward, models may suffer misspecification issues and, therefore, can yield the wrong evaluation of an asset. The objective is to use different models to calculate the required rate of return of an asset or portfolio using real-world data, evaluate the models regarding their limitations and bring the findings into an economic context.

The seminar thesis can go in different directions. The focus of the thesis can lie in the comparison of the models and the evaluation of different risk premia. Alternatively, existing models can be extended to include additional factors. The third focus is to check the sensitivity of the model inputs.

Topic 2: Real Options

This seminar topic deals with real options, i.e. options embedded in investment projects. These options are often ignored in the valuation of such projects. The objective is to build a model for the valuation of a specific real option, to calibrate the model using real-world data and to evaluate the economic and financial consequences of the option.

The following topics are available. Options 1 and 2 concern the initiation and termination of a project. Options 3 and 4 concern the scope of the project. Option 5 concerns the lifetime of the project. Options 6 and 7 concern the choice of technology.

1. Option to abandon
2. Option to defer
3. Option to expand
4. Option to contract
5. Option to extend

Experience in the use of spreadsheet software (like Microsoft Excel) is useful. Alternatively, students may want to familiarize themselves with advanced academic software packages like LaTeX and MATLAB to prepare for their final thesis.

Literature

Articles on risk premia

- Fama, E. F./French, K.R., Common Risk Factors in the Returns of Stocks and Bonds”, *Journal of Financial Economics*, 33, 1993, 3–56.
- Fama, E. F./French, K.R., Multifactor explanations of asset pricing anomalies”, *Journal of Finance*, 51(1), 1996, 55–84.
- Fama, E. F./MacBeth, J.D., Risk, Return, and Equilibrium: Empirical Tests”, *Journal of Political Economy*, 81(3), 1973, 607–636.
- Carhart, M. M., On the persistence in mutual fund performance”, *Journal of Finance*, 52, 1997, 57–82.
- Jegadeesh, N./Titman, S., Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency”, *The Journal of Finance*, 48, 1993, 65–92.
- Frazzini, A./Pedersen, L. H., Betting against beta”, *Journal of Financial Economics*, 111(1), 2014, S. 1–25.
- Hansen, L. P. & Jagannathan, R., Assessing specification errors in stochastic discount factor models”, *The Journal of Finance*, 52(2), 1997, 557–590.
- Gutierrez, C. E. C., & Gaglianone, W. P., Evaluating Asset Pricing Models in a Fama-French Framework”, (No. 175), 2008.

Books on option valuation and real options

- Hull, J. C., “Options, Futures and other Derivatives”, 9th edition, Prentice-Hall, 2014.
- Amram, M. and N. Kulatilaka, “Real Options”, Harvard Business School Press, 1999.
- Copeland, T. and V. Antikarov, “Real Options: A Practitioners Guide”, Texere, 2003
- Trigeorgis, L., “Real Options: Managerial Flexibility and Strategy in Ressource Allocation”, MIT Press, 1996.

Articles on real options

- Luehrmann, T., “Strategy as a Portfolio of Real Options”, *Harvard Business Review*, September-October 1998, 89–99.
- Mason, S. P. and R. C. Merton, “The Role of Contingent Claims Analysis in Corporate Finance”, in E. Altman and M. Subrahmanyam (editors), *Recent Advances in Corporate Finance*, Richard D. Irwin, 1985.
- Triantis, A. and A. Borison, “Real Options: State of the Practice”, *Journal of Applied Corporate Finance*, 14(2), 2001, 8–24.