

Asset Pricing Theory

(Finance: 15-hour module)

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Aims: Continuous-time asset pricing theory expresses a rich body of central results in Financial Economics from the perspective of models in which agents can revise their decisions continuously in time. The aim of this module is to provide students with a review of the essential features of continuous-time asset pricing theory and to help them develop the analytical and technical skills for doing research in the field.

Contents

- I. Pricing underlying long-dated assets that provide payouts
- II. Trading strategies, martingales, and arbitrage.
- III. State-price densities (stochastic discount factors).
- IV. Absence of arbitrage opportunities and equivalent martingale measures.
- V. Dynamic replication and no-arbitrage pricing.
- VI. Commodity derivatives pricing.
- VII. American options and leveraged corporate valuation (endogenous default risk).
(time permitting)
- VIII. Equilibrium with a representative agent (consumption-based capital asset pricing model).
(time permitting)

Evaluation: It is based on a written exam.

Main References

Detailed lecture notes prepared by the instructor will be handed out to the course participants.

Graduate textbooks/references useful for this module are:

COCHRANE, J. H. (2005), *Asset Pricing* (revised edition), Princeton University Press.

MELE, A. (2022), *Lectures on Financial Economics*, MIT Press,
<https://mitpress.mit.edu/9780262046848/financial-economics/>.