IB9Y8-15 Asset Pricing

26/27

Department
Warwick Business School
Level
Taught Postgraduate Level
Module leader
Alexander Stremme
Credit value
15
Module duration
10 weeks
Assessment
30% coursework, 70% exam
Study location
University of Warwick main campus, Coventry

Description

Introductory description

This module aims to explore and formalize the fundamental relationships between investors' decision-making in the presence of uncertainty and the cross-sectional and inter-temporal properties of prices and returns of financial assets.

Module web page

Module aims

A key outcome of this module is the construction of a solid and generic theoretical framework for asset pricing which can then be further developed and tailored to facilitate more specific applications. As such, this module complements the parallel core modules in that it provides the theoretical context in which the more applied techniques developed in the latter are anchored. Together, the first-term core modules will equip students with the skills and techniques required to evaluate and conduct research in the area of Financial Economics. Finally, this module lays down the theoretical and methodological foundations on which the more specialised Finance modules (that are available in the spring term) are built.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

1. Introduction: Markets, Prices and Returns
2. Preferences and Choice: Time Value
3. Modelling Uncertainty, Measuring Risk
4. Preferences and Choice: Decision-making in the Prescence of Uncertainty
5. Portfolio Theory: Optimal Asset Allocation
6. The Price of Risk: Factor Models
7. Factor Models and Efficiency: Estimation and Testing
8. State Preference Theory: Arbitrage and the Stochastic Discount Factor
9. Application: Contingent Claim Pricing
10. Extensions: Dynamic Models

Learning outcomes

By the end of the module, students should be able to:

- Explain and discuss the paradigm of decision theory in the presence of uncertainty.
- Apply the theory to understand and implement optimal asset allocation, and to explain its implications for the cross-section of asset prices and returns.
- Explain how the theory gives rise to models of “state preference theory”, and to build, analyse, and evaluate such models.
- Explain the general principle of “contingent claim pricing” using the process of “replication”, and to apply this principle to compute the prices of derivative securities.
- Critically evaluate different theoretical models: understand and be able to explain the assumptions made and intuitively assess their vailidity, understand and be able to explain the implications and discuss their scope and limitations.
- Explain how to develop a framework that would facilitate the empirical verification or rejection of theoretical models
- Analyse real world events, case studies and/or data, in the context of a given theoretical framework.

Indicative reading list

Reading lists can be found in Talis

Research element

Use a variety of sources to acquire data to investigate a given research hypothesis

Subject specific skills

Build (using spreadsheet or other suitable software) implementations of the models developed in the module to explicitly calculate asset prices or optimal portfolios based on model parameters. Build (using a spreadsheet or other statistical software) a framework in which it is possible to estimate the parameters of, or empirically assess the validity of such models.

Understand and quantify the risks and other characteristics of a given ("real") market environment and construct optimal investment strategies on the basis of this analysis.
Use a variety of sources to acquire data to investigate a given research hypothesis.

Transferable skills

Demonstrate problem solving skills.
Demonstrate written and verbal communication skills to present the results of analyses

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Study

Study time

Type	Required
Lectures	10 sessions of 2 hours (13%)
Seminars	9 sessions of 1 hour (6%)
Private study	49 hours (33%)
Assessment	72 hours (48%)
Total	150 hours

Private study description

Private study to include preparation for lectures and own reading

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group D8

Assessment component	Weighting	Study time	Eligible for self-certification
Group Project	20%	14 hours 30 minutes	No

	Weighting	Study time	Eligible for self-certification
Group project (2,000 words)			
Reassessment component			
Individual Assignment Individual Assignment 1000 words			Yes (extension)
Assessment component			
Class Participation	10%	7 hours	No
Reassessment component is the same			
Assessment component			
Centrally-timetabled examination (On-campus) Written Examinations 1.5 hr	70%	50 hours 30 minutes	No

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- Answerbook Green (8 page)
- Students may use a calculator

Reassessment component is the same

Feedback on assessment

Summary feedback on examination performance and the class tests will be posted on my.wbs.

Past exam papers for IB9Y8

Availability

Courses

Course availability information is based on the current academic year, so it may change.

This module is Core for:

- Year 1 of TIBS-N300 MSc in Finance
- Year 1 of TIBS-LN1J Postgraduate Taught Finance and Economics