

IB2B2-15 Financial Econometrics

23/24

Department

Warwick Business School

Level

Undergraduate Level 2

Module leader

Anthony Garratt

Credit value

15

Module duration

10 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

The module aims to provide a solid grounding in the principles and techniques of modern financial econometrics. In doing so, it will serve as an introduction to key econometric and statistical methods of empirical investigation in Finance and Financial Economics.

[Module web page](#)

Module aims

The module aims to equip students with the following competencies, in particular:

1. Establish the specific characteristics of a financial dataset.
2. Undertake empirical analysis of financial-markets data.
3. Understand the features of univariate time-series modelling.
4. Understand volatility and correlation modelling and their relevance for financial investment decisions.
5. Use of econometric software packages as tools for quantitative and statistical analysis.

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.

Asset returns and the Efficient Markets Hypothesis.

Present-value relations and returns predictability.

Univariate time-series analysis.

Univariate volatility modelling: ARCH and GARCH.

Correlation and covariance modelling: RiskMetrics.

Portfolio allocation and risk assessment.

Forecast and assessment of market risk (Value-at-Risk).

Non-stationarity and co-integration.

Forecasting and modelling long-run relationships in Finance.

Panel Data: fixed-effects and random-effects models.

Learning outcomes

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

- Understand the theoretical principles underpinning a suite of introductory econometrics and statistical tools.
- Select the most appropriate model specification and econometric setup to answer a research question in empirical Finance.
- Assess the robustness and power of a suite of statistical and econometric techniques for analysing financial data.

Indicative reading list

Brooks C (3rd edition, 2014) *Introductory Econometrics for Finance*, Cambridge University Press
Campbell J, Lo A and MacKinlay A (1997): *The Econometrics of Financial Markets*, Princeton University Press

Christoffersen, P (2nd edition, 2012) *Elements of Financial Risk Management*, Elsevier, Academic Press

Wooldridge, (6th edition, 2016) *Introductory Econometrics: A Modern Approach*, Cengage

Subject specific skills

Upon successful completion of the module, students will be able to:

- (a) carry out robust empirical analysis of cross-sectional, time-series and panel data in Finance.
- (b) critically evaluate and replicate aspects of published empirical finance studies.

Transferable skills

Upon successful completion of the module, students will be able to:

- (a) design and undertake small inquiry-based projects in empirical finance.
- (b) critically evaluate a range of econometric techniques for analysing financial data.

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (13%)
Seminars	9 sessions of 1 hour (12%)
Online learning (independent)	10 sessions of 1 hour (13%)
Private study	49 hours (63%)
Total	78 hours

Private study description

No private study requirements defined for this module.

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 D2

	Weighting	Study time
Group Report	20%	14 hours
In-person Examination Exam	80%	58 hours

- Answerbook Gold (24 page)
- Students may use a calculator

Assessment group R2

	Weighting	Study time
Individual Assignment	20%	
In-person Examination - Resit Exam	80%	

Feedback on assessment

In-class and on my.wbs

[Past exam papers for IB2B2](#)

Availability

There is currently no information about the courses for which this module is core or optional.