

# IB9KC-15 Financial Econometrics

**26/27**

**Department**

Warwick Business School

**Level**

Taught Postgraduate Level

**Module leader**

Zhao Liu

**Credit value**

15

**Module duration**

9 weeks

**Assessment**

20% coursework, 80% exam

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

The purpose of this module is to provide a general introduction to econometric techniques used for modeling and understanding financial markets. Upon finishing the module, students should have a solid grasp of several important models in financial econometrics.

[Module web page](#)

### Module aims

The aim is to introduce the main tools and approaches to estimation and inference of financial and economic models.

### 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.

The module includes a selection of the following topics:

- Linear Regression
- Instrumental Variables

- Maximum Likelihood Estimation
- High-Frequency Data and Econometrics
- Cross Section of Expected Returns
- Observable or Unobservable Factor Model, and Factor Construction in Practice
- State-Space Models and Filtering
- Econometrics of Options
- Generalized Method of Moments Estimation
- Hedging Climate Risks
- Additional Advanced Topic

## Learning outcomes

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

- Demonstrate understanding of mathematical and statistical tools and techniques used in quantitative finance
- Think quantitatively and critically

## Indicative reading list

[Reading lists can be found in Talis](#)

## Interdisciplinary

Contents from several disciplines, such as economics, finance, and statistics, are included in the module.

## Subject specific skills

Estimate quantitative models and conduct statistical inference  
Analyze different data structures using relevant models

## Transferable skills

Problem solving

## Study

### Study time

Type	Required
Lectures	9 sessions of 2 hours (23%)
Total	77 hours

Type	Required
Seminars	8 sessions of 1 hour (10%)
Private study	51 hours (66%)
Total	77 hours

## Private study description

pre-reading

## Costs

No further costs have been identified for this module.

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## Assessment

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

### Assessment group D3

Assessment component	Weighting	Study time	Eligible for self-certification
Group Project Group project, 2500 words	20%	15 hours	No
Reassessment component is the same			
Centrally-timetabled examination (On-campus) Written Examination	80%	58 hours	No

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- Answerbook Pink (12 page)
- Students may use a calculator

**Weighting** **Study  
time**

**Eligible for self-  
certification**

Reassessment component is the same

## **Feedback on assessment**

Written qualitative and quantitative feedback will be given after the final exam and class test  
Written individual feedback will be given after the group project

[Past exam papers for IB9KC](#)

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## **Availability**

### **Pre-requisites**

To take this module, you must have passed:

- All of
  - [ST959-15 Financial Statistics](#)

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