

# IB253-15 Principles of Finance 1

**26/27**

**Department**

Warwick Business School

**Level**

Undergraduate Level 2

**Module leader**

Richard White

**Credit value**

15

**Module duration**

10 weeks

**Assessment**

Multiple

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

This is an elective module available for WBS and non-WBS students. To find detailed availability and to apply for this module, log in to [my.wbs.ac.uk](http://my.wbs.ac.uk) using your normal IT login details and apply via the my.wbs module application system. Once you've secured a place on my.wbs you should apply via your home department's usual process, which usually takes place via eVision.

Note that you do not require the module leader's permission to study a WBS module, so please do not contact them to request it.

[Module web page](#)

### Module aims

Introduce students to the workings of the equity and bond markets.

Equip students with the skills and understanding to use quantitative tools for pricing stocks and bonds.

Develop in students a critical understanding of the trade-off between risk and return, and of techniques for exploiting that trade-off to maximum effect.

Make students aware of key empirical tests of the Efficient Markets Hypothesis, and the implications of those empirical findings.

Provide students with structured opportunities to practise using the key tools and techniques of

Financial Markets theory.

Introduce students to the workings of the derivatives markets.

Equip students with the skills and understanding to use quantitative tools for pricing derivatives.

Prepare students for advanced undergraduate and postgraduate studies in Finance.

## 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.

Financial Arithmetic:

Discounted cash flow, annuities, perpetuities, Gordon growth model, net present value, internal rate of return.

Investment under Certainty:

Inter-temporal consumption, Fisher Separation.

Investor Preferences :

Risk aversion, Expected utility

Optimal Portfolio Selection:

Diversification, Risk vs. Return, Capital Market Line.

Capital Asset Pricing Model:

Beta, CAPM, Securities Market Line

Bonds & Interest Rates:

Spot rates, forward rates, bond pricing, term structure of interest rates, Pure Expectations and Liquidity Preference hypotheses.

Market Efficiency :

Efficient Markets Hypothesis, calendar anomalies, speculative bubbles, empirical tests.

Financial Derivatives:

Arbitrage-free futures pricing, binomial and Black-Scholes option pricing.

## Learning outcomes

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

- Describe how the equity and bond markets function, and their importance to both individual investors and institutions.
- Explain how these markets price stocks and bonds.
- Explain how risk can be diversified by forming portfolios of assets, and how to construct the optimum portfolio.
- Critically assess theoretical relationships between risk and return.
- Distinguish between spot and forward rates of interest.
- Formulate different hypotheses for the term structure of interest rates.
- List the different forms of market efficiency, and interpret the results of key tests of the Efficient Markets Hypothesis.
- Describe how derivatives markets function.
- Explain how these markets determine the prices of derivative securities.
- Explain key theoretical models, and reflect critically on the limitations of those models and the assumptions that underpin them.

- Interpret empirical evidence.
- Solve structured numerical problems and analyse case-study information.
- Communicate complex ideas effectively.

## Indicative reading list

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

## Subject specific skills

Use discounted cash-flow techniques to value financial securities and/or estimate the value added by capital projects.

Write informed critiques of key issues in asset valuation.

Analyse short case-studies and construct arguments to support a particular solution.

Calculate spot and forward rates of interest from observed market prices of calibration bonds, and use these rates to price other bonds and identify arbitrage opportunities.

Calculate the forward price of a traded asset using the no-arbitrage principle.

Price option contracts using the one-period binomial model or the Black-Scholes model.

## Transferable skills

Solve structured numerical problems.

Write informed critiques of key issues in asset valuation.

Determine the risk-return characteristics of portfolios of risky assets.

Calculate the forward price of a traded asset using the no arbitrage principle.

Price option contracts using the binomial and Black-Scholes models.

Calculate spot and forward rates of interest, and use these to price bonds.

## Study

### Study time

Type	Required
Lectures	11 sessions of 1 hour (7%)
Seminars	9 sessions of 1 hour (6%)
Online learning (independent)	9 sessions of 1 hour (6%)
Private study	48 hours (32%)
Assessment	73 hours (49%)
Total	150 hours

### Private study description

No private study requirements defined for this module.

## 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 DD

	Weighting	Study time	Eligible for self-certification
Participation	10%	8 hours	No
Centrally-timetabled examination (On-campus)	90%	65 hours	No

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

### Assessment group R5

	Weighting	Study time	Eligible for self-certification
In-person Examination - Resit	100%		No

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

## Feedback on assessment

Feedback via My.WBS

[Past exam papers for IB253](#)

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## Availability

### Pre-requisites

To take this module, you must have passed:

- Any of

- [IB132-15 Foundations of Finance](#)
- [IB2D9-15 Finance in Practice](#)

## **Post-requisite modules**

If you pass this module, you can take:

- EC334-15 Topics in Financial Economics: Corporate Finance and Markets
- IB3M7-15 Alternative and Responsible Investments
- IB3H7-15 Mergers and Acquisitions
- IB254-15 Principles of Finance 2

## **Anti-requisite modules**

If you take this module, you cannot also take:

- ST339-15 Introduction to Mathematical Finance
- EC333-15 Topics in Financial Economics: Theories and International Finance
- IB266-15 Fundamentals of Finance
- IB235-15 Finance 1: Financial Markets
- IB3FP-15 Principles of Finance (for Finalists)

## **Courses**

This module is Optional for:

- Year 2 of UGEA-RN21 Undergraduate German and Business Studies
- Year 2 of UIPA-L8N1 Undergraduate Global Sustainable Development and Business
- Year 2 of UIPA-L8N2 Undergraduate Global Sustainable Development and Business Studies (with Intercalated Year)