

IB253-15 Principles of Finance 1

24/25

Department

Warwick Business School

Level

Undergraduate Level 2

Module leader

Elizabeth Whalley

Credit value

15

Module duration

10 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This is an elective module for non-WBS students.

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.

[Module web page](#)

Module aims

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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

REQUIRED TEXT:

Hillier D, Ross SA, Westerfield RW, Jaffe J and Jordan BD, Corporate Finance (3rd ed. 2016), McGraw-Hill

OTHER TEXTS:

Bodie Z, Kane A & Marcus AJ, Investments (12th ed. 2020), McGraw-Hill

Copeland TE, Weston JF & Shastri K, Financial Theory and Corporate Policy (4th ed. 2013), Pearson Addison-Wesley

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	49 hours (33%)
Assessment	72 hours (48%)
Total	150 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 DA

	Weighting	Study time	Eligible for self-certification
Participation	10%	7 hours	No
In-person Examination	90%	65 hours	No

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

Assessment group R3

	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

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
- IB359-15 Derivatives and Risk Management
- IB394-15 International Financial Management
- IB254-15 Principles of Finance 2
- IB3M1-15 Fintech
- IB3M7-15 Alternative and Responsible Investments
- IB357-15 Investment Management

Anti-requisite modules

If you take this module, you cannot also take:

- IB235-15 Finance 1: Financial Markets
- EC333-15 Topics in Financial Economics: Theories and International Finance
- IB266-15 Fundamentals of Finance
- ST339-15 Introduction to Mathematical Finance

Courses

This module is Optional for:

- Year 4 of UIBA-MN34 Law and Business Four Year (Qualifying Degree)
- UECA-3 Undergraduate Economics 3 Year Variants
 - Year 2 of L100 Economics
 - Year 2 of L116 Economics and Industrial Organization
- Year 2 of UECA-LM1D Undergraduate Economics, Politics and International Studies
- Year 2 of UIPA-L8N1 Undergraduate Global Sustainable Development and Business
- Year 4 of UIBA-MN32 Undergraduate Law and Business Studies

- Year 5 of UIBA-MN37 Undergraduate Law and Business Studies (Qualifying Degree) with Intercalated Year
- Year 5 of UIBA-MN36 Undergraduate Law and Business Studies with Intercalated Year (4+1)
- USTA-G1G4 Undergraduate Mathematics and Statistics (BSc MMathStat) (with Intercalated Year)
 - Year 4 of G1G4 Mathematics and Statistics (BSc MMathStat) (with Intercalated Year)
 - Year 5 of G1G4 Mathematics and Statistics (BSc MMathStat) (with Intercalated Year)

This module is Unusual option for:

- UPHA-L1CA Undergraduate Economics, Psychology and Philosophy
 - Year 2 of L1CA Economics, Psychology and Philosophy
 - Year 3 of L1CA Economics, Psychology and Philosophy
- Year 3 of UPHA-V7ML Undergraduate Philosophy, Politics and Economics

This module is Option list A for:

- Year 3 of UESA-HN15 BEng Engineering Business Management
- Year 4 of UESA-HN13 BEng Engineering Business Management with Intercalated Year

This module is Option list B for:

- Year 4 of UMAA-G105 Undergraduate Master of Mathematics (with Intercalated Year)
- Year 3 of UMAA-G100 Undergraduate Mathematics (BSc)
- UMAA-G103 Undergraduate Mathematics (MMath)
 - Year 3 of G100 Mathematics
 - Year 3 of G103 Mathematics (MMath)
- Year 3 of UMAA-G106 Undergraduate Mathematics (MMath) with Study in Europe
- Year 4 of USTA-GG17 Undergraduate Mathematics and Statistics (with Intercalated Year)
- Year 4 of UMAA-G101 Undergraduate Mathematics with Intercalated Year
- Year 4 of USTA-Y603 Undergraduate Mathematics, Operational Research, Statistics, Economics (with Intercalated Year)

This module is Option list G for:

- Year 2 of UPHA-V7ML Undergraduate Philosophy, Politics and Economics