



UNIVERSITY  
OF TASMANIA

## **School of Economics**

**Faculty of Commerce**

### **BEA2/341**

## **Research Methods for Finance**

**Semester 2, 2003**

## **Unit Outline**

**Lecturer: Mr Norton Grey**

CRICOS Provider Code: 00586B

# Contact details

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# Unit details

**School:** Economics  
**Faculty:** Commerce  
**Unit Title:** Research Methods for Finance  
**Unit Code:** BEA2/341  
**Prerequisites/** BEA140 Quantitative Methods 1  
**Corequisites** BFA1/281 Financial Management  
**Campus & Mode:** Hobart Campus, WebCT supported  
**Unit Weight:** 12.5%  
**Teaching Staff:** Mr Norton Grey

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## **Unit description**

This is an intermediate level unit in quantitative methods for finance. It is compulsory for students who have elected the Finance major in both the BCom and BEc degrees. This unit is an elective in all other BEc majors.

## **Aim**

This unit provides Finance students with the quantitative methods required to analyse the valuation of financial assets; the choices of portfolio investors; risk and uncertainty inherent in finance markets; finance market equilibria and the trade off between financial and non-financial assets.

The unit aims to extend knowledge about the presentation of reports containing financial data. The unit will also include the use of Excel spreadsheets for financial applications.

## **Learning outcomes**

On completion of this unit, you should be able to:

- complete and apply asset returns
- understand risk avoidance measures
- apply distributional analysis to finance problems
- estimate regression models based on OLS
- apply basic elements of time series analysis to finance problems

## Generic graduate attributes

Attribute	Description	Exemplars
Knowledge	Graduates will have a sound knowledge of the basic models of valuation for securities and ability to apply this knowledge practically.	Apply financial models to finance problems.
Communication Skills	Graduates will be able to communicate in report form, basic financial and financial statistical information and interpret critically financial reports.	Demonstrate oral, written, numerical and graphical communication.
Problem Solving Skills	Graduates will be able to effectively understand financial problems and apply a logical, critical and creative approach to writing and understanding financial reporting.	Identify critical issues in the discipline and professional area.  Conceptualise problems and formulate a range of solutions.  Find, acquire, evaluate and use relevant information for presentation in report form.

## Prerequisites/corequisites

### Assumed skills

- Basic knowledge of statistical methods/financial mathematics.
- Ability to interpret complex graphs associated with financial variables.
- Basic standards of literacy in the English language.

### Prerequisites

BEA140 Quantitative Methods 1

BFA1/281 Financial Management

## Texts, references and learning resources

### Prescribed text(s)

Watsham, T.J. & Parramore, K. (1997), *Quantitative Methods in Finance*, 1<sup>st</sup> Edition, Thomson, Melbourne.

### Access to WebCT

The WebCT entry page is at <http://webct.utas.edu.au:8900/>. Click 'Log on to myWebCT' and enter the same username and password that you use for your University email account. Your personal WebCT page will appear, with the units in which you are enrolled listed at the top left of the screen. Click on the 'BEA2/341 Research Methods for Finance' link to gain access to the home page for this unit. Details about WebCT features are available on <http://www.webct.com/quickstart>. If you run into problems with WebCT, contact the Help Desk on Telephone: 6324 3888, or Email: [HelpDesk@weboffice.utas.edu.au](mailto:HelpDesk@weboffice.utas.edu.au).

## Teaching arrangements

### Lectures

There will be 1 two-hour lecture per week

Time: Monday 3.10 – 5.00pm Commerce Lecture Theatre 1 (COM\_LTH1).

Note: During the week beginning Monday July 14<sup>th</sup>, the lecture will be held on Friday 18<sup>th</sup>, 2.10pm – 4.00pm, Commerce Lecture Theatre 2.

### Workshops

Workshops are held once weekly for one hour. The class will be split into two workshop groups. This will be organised in the first lecture. Workshops will start in week 15, Semester 2.

Times: Group 1 - 5.10 Monday Commerce Lecture Theatre 1  
Group 2 - 12.00 Tuesday Life Lecture Theatre 2

Quizzes will be given at the beginning of the workshop in Week 17 and Week 23 respectively. By consultation with students only one workshop time will be used these weeks.

### Occupational health and safety (OH&S)

The University is committed to providing a safe and secure teaching and learning environment. In addition to specific requirements of this unit you should refer to the University's policy at: [http://www.admin.utas.edu.au/hr/ohs/pol\\_proc/ohs.pdf](http://www.admin.utas.edu.au/hr/ohs/pol_proc/ohs.pdf)

## Unit schedule

Week	Topics (Lectures & Workshops)	Text Reference
14	Statistics & Financial Maths required for this unit	Chapter 2 - Text
15	Interest Rates and Asset Returns <ul style="list-style-type: none"> <li>• Interest and Time Value of Money</li> <li>• PV of Money</li> <li>• Spot, Forward Rates</li> <li>• Application</li> </ul>	Chapter 1 – Text
16	Further Application: <ul style="list-style-type: none"> <li>• Yields (of various kinds)</li> <li>• Term Structure</li> <li>• Mortgages and Annuities</li> </ul>	Chapter 1 – Text
17	<b>Quiz 1</b>  Probability Distributions in Finance <ul style="list-style-type: none"> <li>• Normal Distribution</li> <li>• Binomial Distribution</li> <li>• Poisson Distribution</li> </ul>	Chapter 4 – Text
18	Statistical Inference Applied to Finance <ul style="list-style-type: none"> <li>• Sampling Distribution</li> <li>• Confidence Intervals</li> <li>• t-tests</li> <li>• Hypothesis Tests</li> </ul>	Chapter 5 – Text
19	Special Topic: “Share Price Indices and Price Index Numbers”	Chapter 6 – Text ps 71-80.
20	<b>Quiz 2</b>  Simple Regression Analysis (One Independent Variable)	Chapter 6 – Text (ps 187-195, Additional Notes will be distributed).
21	Diagnostic Tests of OLS Simple Regression Models <ul style="list-style-type: none"> <li>• Significance Tests of Coefficients</li> <li>• Standard Errors</li> <li>• Hypothesis Testing</li> <li>• Goodness of Fit</li> <li>• Prediction Interval</li> </ul>	Chapter 6 – Text (ps 195-202, Additional Notes will be distributed).

<b>Week</b>	<b>Topics (Lectures &amp; Workshops)</b>	<b>Text Reference</b>
22	Multiple Regression and Breakdown of OLS Assumptions <ul style="list-style-type: none"> <li>• Multiple Regression</li> <li>• Chow Test for Breaks</li> <li>• Breakdown of OLS                             <ul style="list-style-type: none"> <li>○ Heteroskedasticity</li> <li>○ Autocorrelation</li> <li>○ Multicollinearity</li> <li>○ Binary Variables</li> </ul> </li> </ul>	Chapter 6 – Text ps 202 – 212 Additional Notes will be distributed).
23	Application to Finance (Regression) <ul style="list-style-type: none"> <li>• CAPM</li> <li>• Market Efficiency</li> <li>• Multifactor Models</li> <li>• Hedging Behaviour</li> </ul>	Chapter 6 – Text ps. 230, 309 & 334.
24	Time Series Analysis Applied to Finance (1) <ul style="list-style-type: none"> <li>• Processes                             <ul style="list-style-type: none"> <li>○ Random Walks</li> <li>○ Martingales</li> <li>○ ARIMA's</li> <li>○ AR Processes</li> </ul> </li> </ul>	Chapter 7 – Text
25	Applications to Finance	na
26	Unit Review	

## Important Dates to Remember

<b>Week</b>	<b>Date</b>	<b>Event</b>
14	Beginning Monday July 14 <sup>th</sup>	Beginning of Semester
15	Beginning Monday July 21 <sup>th</sup>	Workshops Begin
17	Beginning Monday July 28 <sup>th</sup>	Quiz 1
18	Beginning Monday August 11 <sup>th</sup>	Assignment 1 Due
21	Beginning Monday September 1 <sup>th</sup>	Assignment 2 Due
23	Beginning Monday September 15 <sup>th</sup>	Quiz 2
<b>AVCC Common Week</b>		
25	Beginning Monday October 6 <sup>th</sup>	Classes Resume
25	Beginning Monday October 6 <sup>th</sup>	Major Business Report Due
26	Friday October 17 <sup>th</sup>	Second Semester Ends
	Monday October 20 <sup>th</sup> – 24 <sup>nd</sup>	Study Period
	Saturday October 25 <sup>rd</sup>	Second Semester Examination Begin
	Tuesday November 11 <sup>th</sup>	Second Semester Examinations End

## Learning expectations and strategies

### Expectations

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

The University's Code of Conduct for Teaching and Learning states:

*Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.*

### Learning strategies

If you need assistance in preparing for study please refer to your tutor or lecturer. For additional information refer to the Learning Development website : <http://www.utas.edu.au/learndev/>

If you will be using WebCT for the first time and would like some information on how to use WebCT refer to the following guide: [http://www.utas.edu.au/coursesonline/docs/using\\_webct.pdf](http://www.utas.edu.au/coursesonline/docs/using_webct.pdf)

Some of the units you will study use video conferencing to deliver lectures and tutorials. To enable you to get the best out of a video conference please refer to the following guide. <http://www.its.utas.edu.au/videoconf/vcstudentguide.pdf>

### Assessment Summary

Continuous assessment:	50%
Final examination:	50%

The internal grade will be determined by your performance in two assignments (10 percent each), two quizzes (5 percent each), and one major business report (20 percent). Final examination will be three hours in duration.

### Submission of assignments

All work must have the School of Economics Assignment Cover Sheet attached. The cover sheet will be available on the unit page on WebCT.

Please remember that you are responsible for lodging your written work on or before the due date. We suggest that you keep a copy – photocopying is ideal. Even in the most 'perfect' of systems, items sometimes go astray. Lodge your assignments in the box marked BEA2/341 on Level 4, Foyer Area, Commerce Building. Work will be returned during classes. Uncollected assignments will be available from the Secretary's office, Room 407.

## Requests for extensions

Extensions will only be granted on the basis of consultation with your lecturer before the due date. If you are ill, please provide a medical certificate so that this can be noted.

## Penalties

Late submission of assignments and other forms of assessment will incur a penalty of:

1 business day late	10% penalty
2 – 5 business days late	25% penalty
5 business days or more	100% penalty

## Academic referencing

Student writers need to back up their ideas by referring to scholarly literature, works of art and inventions that they have used. Failure to do so constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence. It is important that students understand how to correctly refer to the work of others and maintain academic integrity.

The appropriate referencing style for this unit is

Baumol, William (1986), "Productivity Growth, Convergence and Welfare", *American Economic Review*, vol. 76, pp. 1072-85.

Maddison, Angus (1970), *Economic Progress and Policy in Developing Countries*, London, Allen and Unwin.

For information on presentation of assignments :

<http://www.utas.edu.au/library/assist/gpoa/gpoa.html>

Please read the following statement on plagiarism. Should you require clarification please see your unit coordinator or lecturer.

## Plagiarism

Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example, using an author's words without putting them in quotation marks and citing the source, using an author's ideas without proper acknowledgment and citation or copying another student's work.

In fact the intentional copying and submission of someone else's work as one's own is a serious offence tantamount to academic fraud. It is a University offence punishable by a range of penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, exclusion from a unit, a course, or the University. **When in doubt consult your lecturer or tutor.** Details of penalties that can be imposed are available in the Ordinance of Student Discipline or at: [www.utas.edu.au/plagiarism](http://www.utas.edu.au/plagiarism)

## Additional assistance

If you are experiencing difficulties with your studies or assignments, have personal or life planning issues, disability or illness which may affect your course of study, you should raise these with your lecturer.

Student Services staff are located in Hobart, Launceston and Burnie and provide a wide range of services to assist students, they include:

- Student Counsellor
- Careers Adviser
- Disability Adviser
- Student Employment Service.

Or visit the Student Services website at :  
<http://student.admin.utas.edu.au/services/>

Should you require assistance in accessing the Library visit their website for more information at <http://www.utas.edu.au/library/>

Your contact Librarian for this unit is :  
<http://www.utas.edu.au/library/about/contact.html#mm>

International Services website provides information on the assistance available to international students, visit their site at :  
<http://www.international.utas.edu.au/index.html>

The Learning Development website has a wide range of resources on study skills and learning strategies, visit their site at : <http://www.utas.edu.au/learndev/>

## Help resolving concerns about this unit

If you have any concerns or complaints with the administration and/or management in this unit or your BEc course of either a general or personal nature, then you should in the first instance discuss the matter with your lecturer. If you feel that you would rather discuss the issue with an independent person within the School of Economics, then contact the Ombudsperson:

**Dr Sarah Jennings**  
**School of Economics**  
**Room 413**  
email [sarah.jennings@utas.edu.au](mailto:sarah.jennings@utas.edu.au)

If the matter is still unresolved and you would like to know who to contact or the procedures for resolving your concern refer to the following website :  
<http://student.admin.utas.edu.au/services/complaints/index.html>

The Hobart based Tasmanian University Union (TUU) or the Launceston/Burnie based Student Association (SA) may also be able to assist.

## Unit feedback

The University of Tasmania, on a regular basis, evaluates its teaching and learning environment through the Student Evaluation of Teaching and Learning (SETL) system. The University values feedback from students and from time to time you will be asked to complete a SETL evaluation for a unit of study. For more information on SETL go to :

<http://www.admin.utas.edu.au/HANDBOOKS/UTASHANDBOOKS/STUDINFO/studeval.html>