



**BEA2/341**

**Research Methods for Finance  
Semester 3, 2008**

**School of Economics and Finance  
Faculty of Business**

**Unit Outline**

**Mr Norton Grey**

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## Contact Details

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### Lecturer

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Phone:	03 6226 2377		
Fax:	03 6226 7587		
Room Number	Room 411, Commerce Building, Level 4.		
Consultation Hours:	Monday	2.00pm to 4.00pm	During the teaching weeks
	Tuesday	2.00pm to 4.00pm	
	Thursday	3.00pm to 5.00pm	
Other times:	By appointment only, contact Tracy Kostiuk		

### Unit Details

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Unit Title:	Research Methods for Finance
Unit Code:	BEA2/341
School:	Economics & Finance
Faculty:	Business
Campus & Mode:	Hobart, MyLO (previously, WebCT-Vista) supported
Unit Weight:	12.5%
Prerequisite(s):	BEA140 Quantitative Methods BFA1/281 Financial Management (Finance Major)
Teaching Staff:	Mr Norton Grey

## Unit Description

This is an intermediate level unit in quantitative methods for finance. It is an *either/or* unit for students who have elected the Finance major in both the Bachelor of Business (BBus) and Bachelor of Economics (BEC) degrees. The rules applying for finance require either BEA242 Introduction to Econometrics or BEA2/341 Research Methods for Finance. This unit is an elective in all other BEC majors.

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 include the use of Excel spreadsheets for financial applications.

### Learning Outcomes

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

- calculate 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

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

Attribute	Description	Exemplars	How the attribute will be Assessed
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.	Assignment, Quiz and Examination
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.	The Major Assignment and Participation in Workshops
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.	<ul style="list-style-type: none"> <li>• Identify critical issues in the discipline and professional area.</li> <li>• Conceptualise problems and formulate a range of solutions.</li> <li>• Find, acquire, evaluate and use relevant information for presentation in report form.</li> </ul>	Assignments, Quiz and Examination

### ***Prior Knowledge/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.

### ***Pre-requisites/Co-requisites Units***

- BEA140 Quantitative Methods
- BFA1/281 Financial Management (For Student enrolled in the Finance Major only)

## **Texts, References and Learning Resources**

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### ***Prescribed Text(s)***

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

### ***E- (electronic) resources***

**MyLO** (My Learning Online)

Unit materials are available via the UTAS online learning management system MyLO (previously WebCT Vista).

To access MyLO:

- From the UTAS webpage: [www.utas.edu.au](http://www.utas.edu.au) > click on Current Students > MyLO.
- This will take you to the Learning Online website where you can:
  - Access important information about setting up your home computer for MyLO
  - Login to MyLO using your UTAS username and email password.
  - Access self-help guides on how to use MyLO.

For technical support contact the Service Desk:

- In person: Morris Miller Library, Hobart or Launceston Campus Library
- Email: [servicedesk@utas.edu.au](mailto:servicedesk@utas.edu.au)
- Phone: 1818 (if you are off-campus 1300 304903)

For questions relating to unit materials, contact your lecturer.

## Teaching Arrangements

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### **Lectures:**

There will be one three-hour lecture per day. Workshops exercises will be included as part of the lecture. The lectures will be held in Room Com104, Level 1, Commerce Building. The lectures will be held over two weeks:

Week 1: Monday 14<sup>th</sup> January to Friday 18<sup>th</sup> January 2008

Week 2: Monday 21<sup>st</sup> January to Friday 25<sup>th</sup> January 2008

Quizzes will be given in Week 1, the beginning of the Day 4 and in Week 2, the beginning of Day 3.

### **Teaching Schedule**

Week 1	Topics (Lectures & Workshops)	Text Reference
Day 1	Statistics & Financial Maths required for this unit	Chapter 2 - Text
Day 2	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> 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
Day 3	Probability Distributions in Finance <ul style="list-style-type: none"> <li>• Normal Distribution</li> <li>• Binomial Distribution</li> <li>• Poisson Distribution</li> </ul> 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 4 – Text  Chapter 5 – Text
Day 4	<b>QUIZ 1 (FIRST HOUR)</b> Special Topic: “Share Price Indices and Price Index Numbers”	Chapter 6 – Text ps 71-80.
Day 5	Simple Regression Analysis (One Independent Variable)	Chapter 6 – Text (ps 187-195, Additional Notes will be distributed).

Week 2	Topics (Lectures & Workshops)	Text Reference
Day 1	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).
Day 2	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</li> <li>• Heteroskedasticity</li> <li>• Autocorrelation</li> <li>• Multicollinearity</li> <li>• Binary Variables</li> </ul>	Chapter 6 – Text (ps 202 – 212 Additional Notes will be distributed).
Day 3	<b>QUIZ 2 (FIRST HOUR)</b> 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.
Day 4	Time Series Analysis Applied to Finance (1) <ul style="list-style-type: none"> <li>• Processes</li> <li>• Random Walks</li> <li>• Martingales</li> <li>• ARIMA's</li> <li>• AR Processes</li> </ul>	Chapter 7 – Text
Day 5	Applications to Finance <ul style="list-style-type: none"> <li>• Report Presentation</li> </ul> Course review <ul style="list-style-type: none"> <li>• Exam hints and format</li> </ul>	Not Applicable

**Important dates to remember:**

<b>Week 1</b>	<b>Date</b>	<b>Event</b>
Day 1	Monday 14 <sup>th</sup> January 2008	First Lecture
Day 4	Thursday 17 <sup>th</sup> January 2008	Quiz 1
Day 5	Friday 18 <sup>th</sup> January 2008	Assignment 1 Due, 4.00pm
<b>WEEK END</b>		
<b>Week 2</b>	<b>Date</b>	<b>Event</b>
Day 2	Tuesday 22 <sup>nd</sup> January 2008	Assignment 2 Due, 4.00pm
Day 3	Wednesday 23 <sup>rd</sup> January 2008	Quiz 2
Day 5	Friday 25 <sup>th</sup> January 2008	Major Business Report Review Class presentation and lab session
<b>EXAMINATION PERIOD 4<sup>TH</sup> – 8<sup>TH</sup> FEBRUARY 2008</b>		

**Office Hours**

All office hours will be held in Room 411, Level 4, Commerce Building:

Monday	2.00pm to 4.00pm	
Tuesday	2.00pm to 4.00pm	During the teaching weeks
Thursday	3.00pm to 5.00pm	
Other times:	By appointment only, contact Tracy Kostiuk	

## Assessment

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Continuous assessment: 60%

Final examination: 40%

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

### Assessment Summary

Component	Weight/Value	Due date
Quiz 1	10%	Week 1: Day 4, Thursday 17 <sup>th</sup> January 2008, first hour of lecture.
Assignment No 1	10%	Week 1: Day 5, Friday 18 <sup>th</sup> January 2008, 4.00pm
Assignment No 2	10%	Week 2: Day 2, Tuesday 22 <sup>nd</sup> January 2008, 4.00pm
Quiz 2	10%	Week 2: Day 3, Wednesday 23 <sup>rd</sup> January 2008, first hour of lecture.
Major Business Report (MBR)	20%	Tuesday 29 <sup>th</sup> January, 4.00pm
<i>Total Internal</i>	<i>60%</i>	
Final Examination	40%	Exam Period 4 <sup>th</sup> to 8 <sup>th</sup> February 2008
<i>Total Assessment</i>	<i>100%</i>	

### Your Final Mark / How to Pass this Unit

Your final mark for this unit is determined by your internal assessment (60%) and your examination mark (40%). In order to pass this unit only your final total mark (i.e., the sum of internal plus final examination) must be 50% or higher. The final mark for the unit may be moderated.

### Assessment details

Quiz 1	
<b>Date</b>	Week 1: Day 4, Thursday 17 <sup>th</sup> January 2008, first hour of lecture.
<b>Task length</b>	60 minutes
<b>Content</b>	Material from the 1 <sup>st</sup> three days of lectures
<b>Format</b>	15 multi-choice and three computational questions
<b>Materials</b>	Writing Instruments
<b>Contribution to Final Mark</b>	10 percent

Quiz 2	
<b>Date</b>	Week 2: Day 3, Wednesday 23 <sup>rd</sup> January 2008, first hour of lecture.
<b>Task length</b>	60 minutes
<b>Content</b>	Material from Day 4 (week 1) to Day 2 (week 2)
<b>Format</b>	15 multi-choice questions and 2 theoretical question
<b>Materials</b>	Writing Instruments
<b>Contribution to Final Mark</b>	10 percent

N.B. Students who cannot make the class time for the quiz need to contact teaching staff well before the day of the quiz to make other arrangements. You are required to fill in the form, "Request to sit a test at an alternative time". The blank form is available on the MyLO site for this unit, or alternatively you may download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

Assignment 1	
<b>Date</b>	Week 1: Day 5, Friday 18 <sup>th</sup> January 2008, 4.00pm
<b>Content</b>	Material from Week 1 : Days 1 – 5
<b>Format</b>	10 short answer questions
<b>Materials</b>	Legibly presented with calculations shown
<b>Contribution to Final Mark</b>	10 percent

N.B. Students who require an extension for an assignment need to contact teaching staff well before the due date to make other arrangements. The student is required to fill in the form, "Approval of an extension for an assignment". This blank form can be found on the MyLO site for this unit, or alternatively you can download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

Assignment 2	
<b>Date</b>	Week 2: Day 2 Wednesday 23 <sup>rd</sup> January 2008, 4.00pm
<b>Content</b>	Material from Week 2 : Days 1 – 2
<b>Format</b>	10 short answer questions
<b>Materials</b>	Legibly presented with calculations shown
<b>Contribution to Final Mark</b>	10 percent

N.B. Students who require an extension for an assignment need to contact teaching staff well before the due date to make other arrangements. The student is required to fill in the form, "Approval of an extension for an assignment". This blank form can be found on the MyLO site for this unit, or alternatively you can download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

<b>Major Business Report</b>	
<b>Date</b>	Tuesday 29 <sup>th</sup> January 2008, 4.00pm
<b>Task length</b>	4 – 7 pages plus appendix
<b>Content</b>	Report to Board on Behaviour and Predictions of Company Share Price
<b>Format</b>	<p>Business Report presentation with Executive Summary and Appendix. Reports communicate information which has been compiled as a result of research and analysis of data and of issues. Reports can cover a wide range of topics, but usually focus on transmitting information with a clear purpose, to a specific audience.</p> <p>The scope and style of reports varies widely. It depends on three key factors:</p> <ul style="list-style-type: none"> <li>• the report's intended audience,</li> <li>• the report's purpose and</li> <li>• the type of information to be communicated; for example, technical reports communicate technical information, so the degree of technicality in the report will depend on the reader's familiarity and understanding of technical concepts.</li> </ul> <p>For more information on report writing:  <a href="http://unilearning.uow.edu.au/report/rep_business.html">http://unilearning.uow.edu.au/report/rep_business.html</a></p>
<b>Materials</b>	Must be presented in typed format
<b>Contribution to Final Mark</b>	20 percent

N.B. Students who require an extension for an assignment need to contact teaching staff well before the due date to make other arrangements. The student is required to fill in the form, "Approval of an extension for an assignment". This blank form can be found on the MyLO site for this unit, or alternatively you can download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

## **Submission of assignments**

All work must have the School of Economics and Finance Assignment Cover Sheet attached. The cover sheet will be available on the unit page on MyLO. 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 well before the due date. If you are ill, please provide a medical certificate so that this can be noted. Students are required to fill out the form "Approval of an extension for an assignment". The blank form can be found on the MyLO site for this unit or alternatively you can download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

If you are unable to attend the mid-semester quiz or other quizzes due to circumstances beyond your control, please inform your lecturer well before the test date. You are required to fill out the form "Request to sit a test at an alternative time". The blank form can be found on the MyLO site for this unit or alternatively you can download a copy from the School web page at: [www.utas.edu.au/ecofin/home/teaching.htm](http://www.utas.edu.au/ecofin/home/teaching.htm)

## **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
More than 5 business days	=	100% penalty

## ***Academic referencing and Plagiarism***

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 the Harvard system. For further information: <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.

### **Statement on Plagiarism and Academic Integrity**

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.

**If you have any doubts about how to refer to the work of others in your assignments, please consult your lecturer or tutor** for relevant referencing guidelines, and the academic integrity resources on the web at <http://www.utas.edu.au/tl/supporting/academicintegrity/index.html>.

The intentional copying of someone else's work as one's own is a serious offence punishable by penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, to exclusion from a unit, a course or the University. Details of penalties that can be imposed are available in the Ordinance of Student Discipline – Part 3 Academic Misconduct, see <http://www.utas.edu.au/universitycouncil/legislation/ord9.pdf>

**The University reserves the right to submit assignments to plagiarism detection software, and might then retain a copy of the assignment on its database for the purpose of future plagiarism checking.**

## ***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://student.admin.utas.edu.au/setl/students/index.htm>

SETL feedback in the past suggested that some of the quizzes be converted to other forms of assessment. This has been acted upon converting quizzes (internal assessment was comprised of five quizzes) to an assignment, a presentation and a quiz.

## ***Mobile Phone Policy***

1. Students should normally turn off their mobile phones while in lectures and workshops.
2. In case of special circumstances, such as sick children, student phones may only be left on in class if in "silent mode". Students who leave their phones on should sit near an aisle. If they receive a call they should quietly get up and leave the lecture before taking the call. This provision is meant to cater for special circumstances. Students' answering their mobile phone is disruptive and all these steps are designed to reduce the cost imposed on all.
3. In test situations mobile phones should be kept out of student hands and preferably in the student's bag or backpack – unless prior arrangement has been made with the lecturer.

## ***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)

## Learning Expectations and Strategies

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### ***Expectations***

#### **University's Expectations of Students**

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.*

#### **Teaching Staff's Expectations of Students**

You are expected to:

- i) Familiarise yourself with this document, the unit outline.
- ii) Familiarise yourself with MyLO for the electronic delivery of unit material and for various forms of communication.
- iii) To attend all classes. If you must miss a class make sure you read the lecture notes or WS questions and solutions available on MyLO. Note that quizzes and tests are often held during class time [see assessment for more details].
- iv) Read and attempt the WS questions [available on MyLO] before they are covered and actively participate in Workshop sessions (WS).
- v) To have read the text and attended/read lectures before contacting the teaching staff to explain a concept.
- vi) To check your marked assessment with the solution set [available on MyLO] to determine your errors.
- vii) To check your UTAS email account regularly for message from teaching staff via MyLO. It is also wise to check MyLO regularly for additional material for the unit.
- viii) To check your internals marks once available and contact the teaching staff if there are any errors.

#### **Student's Expectations of Teaching Staff**

Students can expect:

- i) To have all appropriate unit material available electronically via MyLO on a week by week basis.
- ii) The teaching staff to be available by pre-arranged appointment and in their nominated office hours to raise issues or discuss issues with the material or student performance in the unit.
- iii) That all relevant notices regarding the administration of this unit will be communicated to all students enrolled in the unit via email to your UTAS account.

### ***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 MyLO for the first time and would like some information on how to use MyLO refer to the following guide: <http://www.utas.edu.au/coursesonline/software.htm>

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>

### ***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
- Disability Adviser
- Careers 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: Heather Mitchell (ext 2306)

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

The Teaching and Learning website has a wide range of resources on study skills and learning strategies, visit their site at: <http://www.utas.edu.au/tl/students/>. For commencing students I suggest you enrol in the UniStart program.

### ***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 might 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 and Finance, then contact: **Paul Blacklow, School of Economics and Finance, Room 406, email [Paul.Blacklow@utas.edu.au](mailto:Paul.Blacklow@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://www.admin.utas.edu.au/ac\\_serv/complaints\\_info.html](http://www.admin.utas.edu.au/ac_serv/complaints_info.html)

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

### ***Bachelor of Economics Course Coordinator***

If you require assistance with your course please see:

Course coordinator: Dr Michael Brooks  
 Campus: Hobart, Commerce Building, Level 4, Room 401  
 Contact: 03 6226 2286