BBA 315

Business Forecasting

S1 Day 2019

Department of Actuarial Studies and Business Analytics

Contents

Disclaimer

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General Information

Unit convenor and teaching staff
Unit Convenor & Lecturer (Please contact Prashan for academic matters)
Dr. Prashan Karunaratne
prashan.karunaratne@mq.edu.au
Contact via 'Contact the Unit Convenor - Prashan' link on iLearn
4ER (E4A) 449
Please see iLearn for consultation times

Teaching Assistant (Please contact Katie for administrative matters)
Ms. Katie West
katie.west@mq.edu.au
Contact via 'Contact the Teaching Assistant - Katie' link on iLearn
4ER (E4A) 622B

Student Services (Please contact BESS for Special Consideration matters)
Business and Economics Student Services
6ER (E4B) 106
Weekdays 8:30am - 5:30pm

Credit points
3

Prerequisites
((39cp at 100 level or above) or (6cp in BBA or BUS units at 200 level)) and (STAT150 or STAT170 or MKTG216)

Corequisites

Co-badged status

Unit description
This unit explores business forecasting by considering the planning process of the organisation, the environment in which business forecasts are made, prediction of key variables using qualitative and quantitative information, and the practical considerations of forecast implementation. Quantitative predictions will generally make use of spreadsheets and simple statistical procedures that can be easily applied in the business environment.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Demonstrate and explain the need for, and uses of, forecasting in a business context.

Understand and apply quantitative and qualitative forecasting techniques for use in business.

Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.

Crtically examine business contexts and transform relevant data to provide recommendations for stakeholders.

General Assessment Information

It is the responsibility of students to view their marks for each within session assessment on iLearn within 20 working days of posting. If there are any discrepancies, students must contact the unit convenor immediately. Failure to do so will mean that queries received after the release of final results regarding assessment marks (not including the final exam mark) will not be addressed.

Assessment Tasks

Name	Weighting	Hurdle	Due
Quizzes	20%	No	Weeks 7, 10
Case Study Reports	30%	No	Part 1: 3 May; Part 2: 31 May
Final Examination	50%	No	University Examination Period

Quizzes

Due: **Weeks 7, 10**
Weighting: **20%**

There will be **two within-semester quizzes held in tutorials in weeks 7 and 10**. Both within-semester quizzes will consist of multiple-choice questions. Each quiz will be worth 10% of the total mark in this unit. Students need to sit the test in the tutorial in which they are officially enrolled. Failure to sit the test in the officially enrolled tutorial (unless permission has been obtained prior to the test week from the unit co-ordinator) will lead to zero marks for the quiz. Please consult the Special Consideration Policy if required.

On successful completion you will be able to:

• Demonstrate and explain the need for, and uses of, forecasting in a business context.

- Understand and apply quantitative and qualitative forecasting techniques for use in business.

Case Study Reports

Due: **Part 1: 3 May; Part 2: 31 May**
Weighting: **30%**

This assessment consist of **two written reports** based around business forecasting projects. You will need to determine and find suitable empirical data which will then be used as the basis of relevant business forecasts and associated recommendations. **Each report will be equally weighted at 15% of the total assessment for this unit (30% in total).**

Case Study Report 1 (Part 1) consists of some preliminary data identification, analysis and provision of basic forecasts. The analysis required may involve development of scenarios, strategies and provision of suitable recommendations. Each student is required to submit their response to Report 1 through Turnitin on the unit website by 11 pm, Friday 3rd May.

Case Study Report 2 (Part 2) will involve the development of further forecasts for relevant business variables. The analysis required may involve development of scenarios, strategies and provision of suitable recommendations. Each student is required to submit their response to Report 2 through Turnitin on the unit website by 11 pm, Friday 31st May.

For both Reports 1 and 2:

- No extensions will be granted.
- There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period, or part thereof, that the submission is late (for example, 25 hours late in submission – 20%, 6 marks, penalty). This penalty does not apply for cases in which an application for special consideration is made and approved. No submission will be accepted after solutions have been posted.
- More details on the exact nature of the tasks required will be distributed in the early weeks of the semester.

Please consult the Special Consideration Policy if required.

On successful completion you will be able to:
- Demonstrate and explain the need for, and uses of, forecasting in a business context.
- Understand and apply quantitative and qualitative forecasting techniques for use in business.
- Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.
- Crtically examine business contexts and transform relevant data to provide recommendations for stakeholders.

Final Examination

Due: **University Examination Period**
Weighting: **50%**

- The final examination will be a three-hour examination

- The exam will consist of Multiple Choice (10%) and Short Answer Questions (40%)

- All material in the unit is examinable

- *Complex formulae, and statistical tables (if required), will be provided with the examination. Simpler formulae will not be provided*

- *Students may bring into the examination*

   ◦ **a non-programmable calculator (not a smart-phone) and**

   ◦ **you are permitted ONE A4 page of paper containing reference material printed on both sides. The material may be handwritten or typed. The page will not be returned to you at the end of the final examination.**

Further details about the final examination will be given later in the semester.

The Macquarie university examination policy details the principles and conduct of examinations at the University. The policy is available at: http://www.mq.edu.au/policy/docs/examination/policy.htm

On successful completion you will be able to:
- Demonstrate and explain the need for, and uses of, forecasting in a business context.
- Understand and apply quantitative and qualitative forecasting techniques for use in business.
- Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.

Delivery and Resources

Classes

Number and length of classes: 3 hours face-to-face teaching per week, consisting of 1 x 2 hour lecture and 1 x 1 hour tutorial. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/

Prizes

Prizes for this unit (if applicable). http://www.businessandeconomics.mq.edu.au/undergraduate_degrees/prizes_scholarships

Recommended Texts and/or Materials

You do *not* need to buy these books. Occasionally, handouts thereof might be distributed in class.

Hanke, John E & Wichern, Dean W, (2013), *Business Forecasting,* (International Edition) Pearson, (9th Edition) ISBN: 9781292023007, ISBN 10: 1292023007

Also available as a Kindle book.

Additional readings

Hyndman, Rob J and Athanasopoulos, George (2014), *Forecasting: principles and practice*, OTexts Online: https://www.otexts.org/fpp/

Technology Used and Required

Students will learn to use spreadsheets (*MS-Excel*) and *MINITAB*.

Unit Web Page

The web page for this unit can be found at: *iLearn* http://ilearn.mq.edu.au

Teaching and Learning Strategy

This unit is lecture- and tutorial-based. Typically, the class-time structure will be like this:

- **Lectures**: Business Forecasting theory and concepts will be discussed. We will establish links between theory and your personal knowledge in a business strategic planning setting during class discussions.
- **Tutorials**: students are required to work on some tasks of business forecasting solutions using several models and techniques. Student participation and meaningful contribution are essential to understand business forecasting concepts and calculations.

Lecture notes will be posted before each lecture on *iLearn*

Passing the Unit

Students must obtain a mark of 50 % to pass the unit. There are no other hurdle requirements for BBA315 in S1, 2019

Unit Schedule

Week/s	Lecture Topics Covered	Chapter(s)	Other Information
Week 1	**Introduction to Forecasting in Management** • Explaining the unit outline. • The meaning and philosophy of forecasting. • Organisations, planning and budgeting.	Hanke & Wichern (H & W) Ch. 1 Hyndman & Athanasopoulos (H & A) Ch. 1	
Week 2	**The Forecasting Environment** • Evaluation of forecasting tasks. • Definition of time series. • Sources of data for prediction. • Analysing components of Time Series. • Stationarity	H & W Ch. 2, 3, 5 H & A Ch. 2	
Weeks 3 - 6	**Introduction to Quantitative Forecasting Techniques** • Errors of prediction, Costs of errors • Simple predictor models • Naïve, MA, SES	H & W Ch. 4, 5 H & A Ch. 2, 7	
	Incorporating Steps and Trends • ARSSES model • Prediction of trends • Holts smoothing model • Trend extrapolation	H & W Ch. 4, 5 H & A Ch. 7	
	Exploring Seasonality • Seasonal models • De-seasonalising data • Decomposition • Winters Smoothing Model	H & W Ch. 4, 5 H & A Ch. 6, 7	
Weeks 7 - 9	**Regression Models (I)** • Introduction to Regression models. • Ways to Evaluate Models • Diagnosing Regression Models	H & W Ch. 6, 7 H & A Ch. 4, 5	**Quiz 1 in the Week 7 Tutorial** **Case Study Report 1 due Friday, 3rd May, 11pm Sydney time)**

	Regression Models (II) • Dummy Variables • Trends in Regression • Autoregressions, VAR	H & W Ch. 7, 8 H & A Ch. 4, 5, 9	
Week 10	**Business Indicators** • Leading Indicators • Cycles • Anticipatory Surveys		**Quiz 2 in the Week 10 Tutorial**
Week 11	**Judgmental Forecasting (I)** • Judgmental methods • Subjective probability assessments. • The role of judgmental prediction in the organisation	H & W Ch. 10 H & A Ch. 3	
	Judgmental Forecasting (II) • Scenario development methods • DELPHI approaches • Analogy methods	H & W Ch. 10 H & A Ch. 3	
Week 12	**Judgmental Forecasting (III)** • Other types of Judgmental Forecast Methods • Judgmental Forecast Examples • Combining Forecasts	H & W Ch. 10 H & A Ch. 3	**Case Study Report 2 due Friday, 31st May, 11pm Sydney time)**
	Judgmental Forecasting (IV) • Using all the information to forecast. • Putting it all together. • Forecasting in practice. • The future of forecasting	H & W Ch. 10, 11 H & A Ch. 3	
Week 13	**Revision, Exam Preparation**		

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

• Academic Appeals Policy

- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

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Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

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Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

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Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

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IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

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Graduate Capabilities

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Understand and apply quantitative and qualitative forecasting techniques for use in business.
- Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.

Assessment tasks

- Quizzes
- Case Study Reports
- Final Examination

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Demonstrate and explain the need for, and uses of, forecasting in a business context.
- Crtically examine business contexts and transform relevant data to provide recommendations for stakeholders.

Assessment tasks

- Quizzes
- Case Study Reports
- Final Examination

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Demonstrate and explain the need for, and uses of, forecasting in a business context.
- Understand and apply quantitative and qualitative forecasting techniques for use in business.
- Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.
- Crtically examine business contexts and transform relevant data to provide recommendations for stakeholders.

Assessment tasks

- Quizzes
- Case Study Reports
- Final Examination

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Demonstrate practical knowledge of spreadsheets and statistical software to produce business forecasts.
- Crtically examine business contexts and transform relevant data to provide recommendations for stakeholders.

Assessment tasks

- Case Study Reports
- Final Examination

Changes from Previous Offering

There are no changes to the recommended texts or assessment components in S1, 2019.

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Global Contexts & Sustainability

This unit teaches Business Forecasting principles that can be applied in a global context.

Sustainability issues are embedded in our discussions of equity, privacy and ethics throughout the progress of this unit.

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Research and Practice

- This unit includes research by the unit convenor and other Macquarie University researchers
- This unit uses research from external sources. This unit gives you opportunities to learn how to critique current research at the frontiers of your discipline as a prelude to later conducting your own research.

Relevant journals for business forecasting:

- *Journal of Forecasting*
- *Foresight: The International journal of applied forecasting*
- *International Journal of Forecasting*
- *Journal of International Business Studies*
- *Journal of Marketing Research*