Unit Outline*

ECON7492

Macroeconomic Theory and Applications

Semester 2, 2011
Campus: Crawley

Unit Coordinator
Winthrop Professor Rod Tyers

Business School
www.business.uwa.edu.au

* This Unit Outline should be read in conjunction with the Business School Unit Outline Supplement available on the Current Students web site http://www.business.uwa.edu.au/students
UNIT DESCRIPTION

Unit content
This unit overlaps in content with Econ 3365. While much of its structure is the same, the standard of written work is set at honours level and the final examination is separate and distinct. This unit provides an advanced treatment of macroeconomics and the current practice of macroeconomic policy. It is shown how economic theory is used to construct macroeconomic models and how these models are applied in economic policy formulation. Special attention is paid to the link between macroeconomics and finance, including the formation of price expectations in asset markets and the dependence of macroeconomic outcomes on expectations. Having developed the tools of macroeconomic analysis, much of the remainder of the unit is concerned with issues and problems of the past two decades and the present and with the design of appropriate macroeconomic policy responses.

The goal of the unit
An important goal of this unit is to enable the participants to follow the modern macroeconomic literature in professional and academic journals and to participate in the macroeconomic policy debate. In addition, the participants learn how to conduct applied macroeconomic analysis, using graphical and computer models.

Learning outcomes
On completion of this unit, you should have:

- a deeper grasp of the principles underlying macroeconomic behaviour, performance and its measurement.
- the ability to apply analytical tools to economic policy formulation.
- the ability to write both descriptive and analytical reports on the key issues facing macroeconomic policy.

For the last outcome, an assignment will be required that applies macroeconomic modelling to key policy and behavioural issues of the present and recent decades.

Educational principles and graduate attributes
In this unit you are encouraged to critically evaluate macroeconomic arguments that are put forward in the political arena and that can be found in the popular press. Your ability to debate macroeconomic issues and policies in a consistent, reasoned way that emphasizes economic principles will be enhanced. At the same time, you will develop more effective written communication and presentation skills that can be used in many areas of applied economic and financial research.

TEACHING AND LEARNING RESPONSIBILITIES

Teaching and learning strategies
Ideally, you will attend the lectures and participate in the tutorials. Lectopia notwithstanding, attendance of the lectures is important since peripheral but sometimes essential information is provided verbally and, most importantly, the lecturer offers levels of emphasis that are an important guide to study. For this unit, however, attendance at tutorials is completely essential. This is the engine room of learning, where participants actually do macroeconomic analysis. For this reason, to provide incentives to participate in every tutorial session, there are in-tutorial assessments randomised through the semester the results from which are not redeemable.
Successful completion of this unit requires the completion of tutorial work and the final assignment. A good understanding of this work alone is sufficient, though more work on lecture material that there is not time to address in tutorials is generally needed to achieve very high marks.

**Attendance**

Participation in class, whether it be listening to a lecture or getting involved in other activities, is an important part of the learning process, therefore it is important that you attend classes. More formally, the University regulations state that ‘to complete a course or unit students shall attend prescribed classes, lectures, seminars and tutorials’. Where a student, due to exceptional circumstances, is unable to attend a scheduled class, they are required to obtain prior approval of the unit coordinator to be absent from that class. Any student absent from class without having had such absence approved by the unit coordinator may be referred to the faculty for advice and may be required to withdraw from the unit.

**Teaching and learning evaluation**

You may be asked to complete two evaluations during this unit. The Student Perception of Teaching (SPOT) and the Students’ Unit Reflective Feedback (SURF). The SPOT is optional and is an evaluation of the lecturer and the unit. The SURF is completed online and is a university wide survey and deals only with the unit. You will receive an email from the SURF office inviting you to complete the SURF when it is activated. We encourage you to complete the forms as your feedback is extremely important and can be used to make changes to the unit or lecturing style when appropriate.

**CONTACT DETAILS**

We strongly advise students to regularly access their student email accounts. Important information regarding the unit is often communicated by email and will not be automatically forwarded to private email addresses.

<table>
<thead>
<tr>
<th>Unit coordinator/lecturer</th>
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<tbody>
<tr>
<td><strong>Name:</strong></td>
<td>Rod Tyers</td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td><a href="mailto:rod.tyers@uwa.edu.au">rod.tyers@uwa.edu.au</a></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td>6488 5632</td>
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<tr>
<td><strong>Consultation hours:</strong></td>
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<tr>
<td><strong>Lecture times:</strong></td>
<td>Refer to <a href="http://www.timetable.uwa.edu.au">http://www.timetable.uwa.edu.au</a></td>
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<tr>
<td><strong>Lecture venue:</strong></td>
<td>Refer to <a href="http://www.timetable.uwa.edu.au">http://www.timetable.uwa.edu.au</a></td>
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**TEXTBOOK(S) AND RESOURCES**

**Unit website**

The course website (http://www.webct.uwa.edu.au) includes course outline, tutorial questions, home assignments, macroeconomic data and old exams. It will also provide lecture slides and some unit notes as well as related articles.
Recommended/required text(s)

There is no prescribed text.

Software requirements

The computer model to be used for the assignment requires the software Rungem, which is a freeware component of Gempack (Monash University Centre for Policy Studies). The software can be downloaded from the Monash site and the model will be available from the unit web site.

UNIT SCHEDULE

The following is a list of topics from which the lectures will draw. There may not be time for all, though it is intended that the great majority of them should be covered.

Review of the National and Balance of Payments Accounts

No behavioural model is yet constructed, but it is essential that all participants in the class have a common understanding of the accounting identities before we do move to the construction of our short run behavioural models of the whole economy.

Microeconomic Analysis of the Real Exchange Rate

The real exchange rate – the price of home relative to foreign goods and services - is an essential element of macroeconomic behaviour. To understand it, some microeconomic methods are first reviewed, culminating in treatments of the Balassa-Samuelson Hypothesis about real exchange rate change and of Dutch Disease behaviour, with applications to Australia and Asia.

The small open economy in the short run – constructing a flex-price Mundell-Fleming Model

For most of the remainder of the unit we consider the behaviour of the economy as it departs from long term growth patterns, and what determines its fluctuations around them. This section briefly reviews how we construct one particular model to do this. The supply side is developed first, commencing with technology and factor demand. On the demand side we have the household’s inter-temporal consumption choice from which derives its savings behaviour. Then we add the investment behaviour of domestic and foreign firms to construct the domestic capital market. To complete the real part of the small open economy we add the domestic market for foreign goods and services, the balance of payments and the real exchange rate. Finally, we add the nominal part of the economy by introducing domestic and foreign money and the domestic money market. From this we derive the domestic price level and the nominal exchange rate.

The supply side of the short run small open economy model: variable factor markets

Here we commence by assuming a length of run within the gestation period of new investment, so that the active capital stock is constant. The focus is on a review of the determinants of labour demand and supply and labour market behaviour in the short run.
Consumption and saving
The demand side commences with the open economy capital market, the first element of which is saving. We begin with the household’s inter-temporal consumption choice and derive relationships between consumption today and the household’s present and expected future income and the interest rate it faces. From this we can formulate the determinants of domestic private saving. Here we also consider government saving and hence construct the relationship between economy-wide domestic saving, present and expected future incomes and interest rates.

Investment
Firms’ decisions to invest depend on the opportunity cost of the funds needed, but they also depend on the cost of capital goods, the rate at which they depreciate and the real rate of return on each firm’s physical capital. We use all these considerations in characterising domestic investment demand.

The global financial market and current account imbalances
The Metzler diagram builds on theories of saving and investment and is used here to analyse the effects of recent financial and policy shocks on saving, investment and therefore on current account imbalances.

Risk and portfolio analysis
A brief review is offered on risk aversion and the risk-return trade-off in portfolio choice. The risk-free rate is defined and optimum portfolio choice theory summarised. This behaviour eventually assumes considerable significance in the understanding of the response of the wider economy to financial shocks.

The financial capital market of the small open economy
Here the small open economy’s financial capital market is assembled by bringing together investment demand with the supply of savings from at home and abroad. This enables the analysis of the behaviour of current accounts and long term real borrowing rates following supply and demand side shocks.

International trade and the real exchange rate
The identities used in constructing the balance of payments are revisited, followed by a simple characterisation of the determination of imports and exports and the real exchange rate.

Money and nominal exchange rates
Here the role of money and the determinants of its demand are briefly reviewed, with emphasis on the “cash in advance constraint” rationale for money. The role of both commercial banks and the central bank is reviewed and theory proposed to explain the term structure of interest rates. A short run money market is constructed that is sensitive to components of the money multiplier. This enables us to show how monetary policy at home and abroad determines the price level and the nominal exchange rate. This section provides the final element of our “standard” flex-price Mundell-Fleming model of the small open economy in the short run.

Demand and supply side shocks with stabilisation by monetary and fiscal policy
The model is subjected to both demand and supply side shocks, shedding light on the short run effects of microeconomic reforms and wage restraint on the one hand and fiscal or monetary expansions, capital flight, investment booms and busts and foreign policy shocks on the other.

Financial shocks and the macroeconomic policy response
Here the effects of capital flights and other pessimism shocks are examined using the flex-price Mundell-Fleming model and the appropriateness or otherwise of monetary and fiscal policy responses is reviewed. The capital flights of the Asian financial crisis are discussed along with the broader pessimism shocks of the GFC. The central role of monetary policy is identified as are the conditions under which fiscal intervention is justified.
Enhancing the role of expectations: a more advanced model

The flex-price Mundell-Fleming model has many deficiencies. For one thing expectations are treated informally; for another, it incorporates only a single domestic product. We relax both these constraints with the use of a more advanced model that will be available to all participants to simulate. This model is the core of the unit assignment.

The following topics, in economic growth, will be covered if time permits

Determinants of economic size - the Swan-Solow growth model
The most basic of growth models is reviewed and it is shown that this model's principal role is in identifying the determinants of economic size. Secondly, it is useful in pointing out the trade-offs between population growth and per capita income and in defining the “golden rule” saving rate.

Endogenous saving – the Ramsey and Diamond models
Here the assumption that the saving rate is fixed is relaxed and long run dynamics are explored. Crude demography in the Diamond model is shown to make dynamic equilibria potentially inefficient, though, with the exception of modern China, empirical analysis offers little empirical evidence for widespread dynamic inefficiency.

Economic growth and economic policy
Extensions to some “endogenous growth” models are explored briefly. The role of long term growth influencing policy levers is then reviewed.

Understanding China
China’s high saving rate would suggest dynamic inefficiency (excessive capital accumulation and too-slow consumption growth). While this is broadly true, it does not stem from a conscious policy on the part of the Chinese government. Here the flex-price Mundell-Fleming model is used to show that China’s current account surplus stems from a combination of aversion to financial risk, motivating capital controls, and a structural high saving rate that is primarily due to incomplete industrial reform.

References

No formal text book is needed and none covers all the material listed. Most reliance will be placed on web notes, to be posted prior to lectures.

The financial economics lectures, including portfolio theory, draw on Bodie et al. The standard flex-price Mundell-Fleming model is available in many texts, including Mundell's and Fleming’s original papers and the applications in the Tyers references. In this unit the lecture notes present it using market diagrams (avoiding IS-LM and AD-AS). The treatments of inter-temporal optimisation, saving and global imbalances draw primarily on the book by Obstfeld and Rogoff. Although it is not used in the unit's coverage of short run macroeconomic stabilisation issues, the material on economic growth models is closest to, though less demanding than, the text by David Romer.


**ASSESSMENT MECHANISM**

**The purpose of assessment**

There are a number of reasons for having assessable tasks as part of an academic program. The assessable tasks are designed to encourage you to explore and understand the subject more fully. The fact that we grade your work provides you an indication of how much you have achieved. Providing feedback on your work also serves as part of the learning process.

**Assessment mechanism summary**

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight</th>
<th>Due date</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Tutorial exercises</td>
<td>25%</td>
<td></td>
<td>Students are required to complete at least six in-tutorial tests during the semester, the best five results from which will contribute to their final assessment. If a tutorial is missed for the usual good reasons, and it happens to have included a test, this test must be made up within one week through contact with the tutor, who will assign at random an alternative question from the missed tutorial exercise.</td>
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<tr>
<td>Written assignment</td>
<td>10%</td>
<td>October 21</td>
<td>12 noon submission. Even though assignment work can be done in groups, reports must be each student’s own work – complete independence of expression will be required.</td>
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<tr>
<td>Group presentation</td>
<td>5%</td>
<td>Final week in tutorials</td>
<td>Groups within tutorials will present their results during the final tutorial session. Mark out of 5% to be shared by all members of each group.</td>
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<tr>
<td>Final exam</td>
<td>60%</td>
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<td>Venue, day and time available on Student Connect</td>
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**Note 1:** Results may be subject to scaling and standardisation under faculty policy and are not necessarily the sum of the component parts.

**Note 2:** Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning outcomes as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of
Business School programs. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the unit.

Assessment details

- The most important part of the unit is the tutorial series. This is where participants learn by doing macroeconomic analysis. Tutorial participation is therefore essential to the successful completion. Fittingly, then, the in-tutorial assessments are worth 25% of the unit and are non-redeemable. They require an attempt at tutorial questions before attendance. Assessments then provide participants with feedback on a weekly basis.

- The single assignment applies a computer model to be made available either for download or for use in the Business School laboratories. Individual student reports must be written independently and submitted by **12 noon, Friday 21 October**. Late submissions will not be accepted.

- On line submission is also available as per the details below.

- The papers will be marked by group tutors. The final marks will be adjusted so that all marks are consistent (it is hence important to ensure that your own tutor receives your paper).

Submission of assignment documents

Submit your assignment in an electronic format by going to the Uniprint web site [www.uniprint.uwa.edu.au](http://www.uniprint.uwa.edu.au), then click on “Student Assignments” and follow the instructions.

Student Guild

Phone: (+61 8) 6488 2295  
Facsimile: (+61 8) 6488 1041  
E-mail: enquiries@guild.uwa.edu.au  
Website: [http://www.guild.uwa.edu.au](http://www.guild.uwa.edu.au)

Charter of Student Rights and Responsibilities

The Charter of Student Rights and Responsibilities outlines the fundamental rights and responsibilities of students who undertake their education at UWA ([refer](http://handbooks.uwa.edu.au/undergraduate/poliproc/policies/StudentRights)).

Appeals against academic assessment

The University provides the opportunity for students to lodge an appeal against assessment results and/or progress status ([refer](http://www.secretariat.uwa.edu.au/home/policies/appeals)).