API-120: Advanced Macroeconomics for the Open Economy, Fall 2017

Harvard Kennedy School

Course Syllabus: prospectus, outline/schedule and readings

Staff:
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Times:
Lectures: Mondays and Wednesdays, 2:45-4:00 pm, L230.¹
Review Sessions: Fridays: 10:15 a.m. and 11:45 am, L130.²
Final exam: Monday, Dec.11, 3:00-6:00 pm.

Course Description: This course is the first in the two-course sequence on Macroeconomic Policy in the MPA/ID program. It particularly emphasizes the international dimension. The general perspective is that of developing countries and other small open economies, defined as those for whom the terms of trade are determined on world markets and for whom foreign income, inflation and interest rates can also be taken as given. The focus is on monetary, fiscal, and exchange rate policy, and on the determination of the current account balance, national income, and inflation. Models of devaluation include those where the price of internationally traded goods in terms of non-traded goods is central. A major overall theme is the implications of increased integration of global financial markets. Another is countries’ choice of monetary regime, especially the degree of exchange rate flexibility. There will be applications to the Dutch disease and financial crises, among other topics. (The topic of portfolio choice and emerging markets has now been moved to the first few weeks of API 119.)

Nature of the approach: The course is built around analytical models. Although real-world examples will appear throughout, the course will rely very heavily on theoretical and econometric analysis, as is customary in economics classes. This is not an appropriate course for students who want some basic exposure to open-economy macroeconomics. It requires sustained immersion in relevant economic theory, and will not present a primarily descriptive or historical approach. Having said that, the course largely leaves to the successor course, API 119, the mathematical derivation of behavioral equations from first principles of individuals’ optimization of intertemporal utility.

Who is expected to take the course: This course, like Advance Macro for the Open Economy II (API 119), is a required component of the MPA / International Development sequence. It is envisioned that a typical student might one day be making policy recommendations or decisions in a central bank or economics ministry or an international financial institution, but first needs training at a high level of intellectual rigor. In addition to MPA/ID students, a very few other students are sometimes admitted by permission of instructor – for example, someone who has taken BGP-620 and done well in it, and who in addition is comfortable with calculus and the other mathematical tools that distinguish the MPA/ID curriculum.

Required tools: Besides macroeconomics, some knowledge of basic microeconomics and international economics is presumed. Analytical tools to be used include especially calculus; also some probability and statistics.

¹/ 1st lecture: Mon., Aug. 28, 3rd lecture Friday, Sept. 1.
²/ We also plan review sessions before Thursdays on which Problem Sets are due. Normally on Tuesdays, 4:15-5:30.
**Grading:** Problem sets 25% (eight of them), mid-term exam 25%; final exam 50%.

<table>
<thead>
<tr>
<th>Problem Set</th>
<th>Due date (10:10 a.m. in the MPA/ID drop box)</th>
<th>Special problem set review sessions (4:15-5:30 in L230)</th>
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<tr>
<td>1</td>
<td>Aug. 29 or 30, time TBD</td>
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<td>2</td>
<td>Thursday, Aug. 31</td>
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<td>Thurs., Sept. 7</td>
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<td>Thurs., Sept. 21</td>
<td>Tues, Oct 3 (day before midterm)</td>
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<td>5</td>
<td>Thurs., Oct. 19</td>
<td>Tues., Oct 17</td>
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<td>Thurs., Nov. 16</td>
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<td>8</td>
<td>Thurs., Nov. 30</td>
<td>Tues., Nov 28</td>
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For each problem set, each student must decide whether to work in a group or to do it on his or her own. Those who do it on their own: (1) must not discuss any aspect of the problem set with any other student, (2) need to indicate below their name when they hand in the problem set that they did it on their own, and (3) will then receive a small bonus on the grade (one point). If you indicated that you did it on your own despite having discussed something with another student, that would be a violation of academic integrity, which is always a serious matter. You are urged to read the Academic Code: http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/degree-programs/registrar/academic_code.pdf

Please check the dates of the midterm and final exams. *If you cannot take the exams, do not take the course.*

**Readings:**

For most lectures, there is a single triple-starred reading that students are required to read *in advance of the lecture*. You may be called on in class to answer a question based on the reading.

Readings are either scholarly articles, short news media stories, or chapters from the textbook. The main textbook is the second half of *World Trade and Payments*, R. Caves, J. Frankel, & R. Jones (10th edition, Addison-Wesley Longman, 2007), which is abbreviated *WTP* on the reading list. Chapters available on canvas course site, plus some copies are on reserve at HKS library.

For lectures 6-9 [Money & Inflation], the text is Chapter 10, “Inflation and Monetary Policy,” of David Romer’s *Advanced Macroeconomics* (4th ed., McGraw Hill, 2012). It is just one chapter, but Romer is the text for API119, Macro II, so most students will have to buy it anyway.

**Textbooks for further background:** Most students will have already studied basic or intermediate macroeconomics. The necessary pre-requisite background in macroeconomics at a basic level is represented by Greg Mankiw, *Macroeconomics*, e.g., 8th ed. (Worth: NY), 2013.

Topics and schedule:

Tentative due dates for Problem Sets (Thursdays):

I. DEVALUATION AND THE TRADE BALANCE

II. THE MUNDELL-FLEMING MODEL
3. (9/1) Mundell-Fleming model of monetary and fiscal policy with a fixed exchange rate
4. (9/6) Mechanisms of adjustment: Reserve flows and exchange rate changes
5. (9/11) The model with a floating rate & perfect capital mobility; The Impossible Trinity.

III. MONEY AND INFLATION
6. (9/13) Aggregate Demand and Aggregate Supply
7. (9/18) Inflation and the rational expectations hypothesis
8. (9/20) Dynamically inconsistent monetary policy vs. monetary rules
9. (9/25) Seigniorage and hyperinflation

IV. INTEGRATION OF GOODS MARKETS
11. (10/2) Does PPP hold empirically? Speed of adjustment.
12. (10/4) MIDTERM EXAM
13. (10/11) Barriers to integration.

V. SMALL OPEN ECONOMIES
15. (10/18) Devaluation in small countries
16. (10/23) The Salter-Swan Model featuring nontraded goods
17. (10/25) APPLICATION: Macro policy in China #2
18. (10/30) Dutch Disease
Optional lecture: The Natural Resource Curse

VI. EXCHANGE RATE REGIMES
19. (11/1) Classification; Pros and cons of fixed vs. floating Rates

VII. INTEGRATION OF FINANCIAL MARKETS
21. (11/8) The theory of gains from intertemporal trade
22. (11/13) The Lucas Paradox
23. (11/15) Interest Rate Parity

VIII. MONETARY MODELS OF EXCHANGE RATES
25. (11/27) With sticky prices: the overshooting model
26. (11/29) Speculative attack models

Monday, Dec.11, 3:00-6:00 pm. FINAL EXAM

IX. THE CARRY TRADE, RISK, PORTFOLIO DIVERSIFICATION, AND EMERGING MARKET CRISSES
1. Exchange rate forecasting & Forward rate bias
2. Optimal portfolio diversification
3. Sovereign risk and debt dynamics
4. APPLICATION: Currency mismatches, sudden stops and EM crashes
5. APPLICATION: Early warning indicators
API-120: Macroeconomic Policy Analysis I
Prof. Jeffrey A. Frankel, Harvard Kennedy School

READING ASSIGNMENTS

* = required reading, available online, when possible
** = required strongly, available online, when possible
*** = required strongly to read before lecture. You may be called upon.
[ ] = background readings

MACRO REVIEW (8/19-8/20)
(i) GDP accounting

(ii) Balance of payments accounting & the National Saving identity
Caves, Frankel and Jones, World Trade and Payments (WTP), 2007, Chapter 15 & 17.2

(iii) The Keynesian multiplier model
Caves, Frankel and Jones WTP, 2007, Chapter 17.1&17.3.

I. DEVALUATION AND THE TRADE BALANCE

Caves, Frankel & Jones, WTP, 2007, Chapter16 & Supplement, pp. S43-S44. ***


II. THE MUNDELL-FLEMING MODEL

3. (9/1) Mundell-Fleming model of monetary and fiscal policy with a fixed exchange rate
Caves, Frankel and Jones WTP, 2007, Chapters 22.1-22.3, ***
[For background: WTP Chapter 18. Also Romer, Chapter 6.1]

4. (9/6) Mechanisms of adjustment: Reserve flows and exchange rate changes
Caves, Frankel and Jones WTP, 2007, Chapters 19.1, 22.4-22.7. ***
“Hot money flows into Argentine peso spook President Macri,” Financial Times, May 27, 2016. *
5. (9/11) The model with a floating rate & perfect capital mobility; the Impossible Trinity.
Caves, Frankel and Jones WTP, 2007, Chapter 23. ***


III. MONEY AND INFLATION

6. (9/13) Aggregate Demand, Aggregate Supply, and money growth
WTP, Chapter 26.1 ***

"Some like it hot: Which emerging economies are at greatest risk of overheating?" Economist, 7/2/11, p.65.**

7. (9/18) Inflation and the rational expectations hypothesis
Romer’s Advanced Macroeconomics, Chapter 11.1-11.3 in 4th ed. (Chapter 10 in 3rd ed.) ***

8. (9/20) Dynamically inconsistent monetary policy vs. monetary rules
WTP, Chapters 26.3-26.4 ***

Romer’s Advanced Macroeconomics, Chapters 11.7-11.8 in 4th ed. **
“The desperation of independents: Stubbornly low interest rates may mean the end of central-bank autonomy,” The Economist, Aug, 6, 2016

9. (9/25) Seigniorage and hyperinflation
WTP, Chapter 19.3 & page 582 ***

Romer’s Advanced Macroeconomics, Chapter 11.9 **

IV. INTEGRATION OF GOODS MARKETS

11. (10/2) PPP
   Caves, Frankel and Jones, *WTP*, 2007, Chapter 19.2. ***

12. (10/4) MIDTERM EXAM

13. (10/11) Barriers to integration

14. (10/16) Nontraded goods and Balassa-Samuelson
   “*The Big Mac Index: Of Bucks and Burgers,*” *The Economist*, July 15, 2017. **

V. SMALL OPEN ECONOMIES

15. (10/18) Devaluation in small countries

16. (10/23) The Salter-Swan Model
   Caves, Frankel and Jones, *World Trade and Payments*, Chapter 20. ***

17. (10/25) APPLICATION: Macro Policy in China #2 (RMB policy & 2012-16 slowdown)
   J.Frankel, 2015, *Congress, China, and Currency Manipulation,* "China-US Focus*, vol.6, May, 36-38.**

18. (10/30) Dutch Disease
   Jeffrey Sachs, “How to Handle the Macroeconomics of Oil Wealth,” Ch. 7 in *Escaping the Resource*


OPTIONAL LECTURE: The Natural Resource Curse & solutions


VI. EXCHANGE RATE REGIMES

19. (11/1) Classification; Pros and cons of fixed vs. floating Rates


20. (11/6) Optimum Currency Areas & Currency Unions

WTP, Section 26.5. ***


VII. INTEGRATION OF FINANCIAL MARKETS

21. (11/8) The theory of gains from intertemporal trade

WTP, Section 21.5. ***


22. (11/13) The Lucas Paradox


23. (11/15) Interest Rate Parity  
WTP, Sections 21.4, 27.1. ***

VIII. MODELS OF EXCHANGE RATE DETERMINATION

24. (11/20) With flexible prices  
WTP, Sections 27.2-27.3. ***

Michael Mussa, 1976, "The Exchange Rate, the Balance of Payments, and Monetary and Fiscal Policy under a Regime of Controlled Floating, Scandinavian J. of Econ. 78, May, 229-48.

25. (11/24) With sticky prices: the overshooting model  
WTP, Sections 27.4-27.6. ***

Rudiger Dornbusch, 1976, "Expectations and Exchange Rate Dynamics" JPE, 84, 1161-76. **

26. (11/29) Speculative attack models  
WTP, 2007, Ch. 24.3 ***


Currency crises in Emerging Markets  
WTP, 2007, Ch. 24.1-24.2, 24.4-24.9 ***


TO BE CONTINUED IN API-119 (winter 2018):

IX. THE CARRY TRADE, RISK, PORTFOLIO DIVERSIFICATION, AND EM CRISES