

ECON 525
Global Macroeconomic Analysis
Andrews University Portland MBA Program
6:30-9:30 p.m. Monday-Thursday
9:00-12:00 p.m. and 1:00-4:00 p.m. Sunday
August, 2006

Instructor: David Beckworth, Ph.D.
Email: dmb@andrews.edu

Course Description

The study of global or open-economy macroeconomics. Within the context of competing economic theories, the course considers domestic policies, international trade and payment issues, economic growth, international institutions and the spread of regional economic crises, and the impact of stabilization policies. Spreadsheet analysis is required.

Course Objectives

The goal of this course is to expose you to some of the economic tools necessary to do macroeconomic analysis. Many firms today have analysts who follow specific economies throughout world in order that the firms might make better decisions. For example, Wal-Mart might be interested to know how changes in Mexico's fiscal policy could influence the Mexican economy and ultimately investment opportunities in Mexico or, a pension fund manager might want to know whether investing in Japan securities is wise choice given the sluggish growth in recent years. Country analysts need a solid grasp of macroeconomics and an understanding of how current developments—economic, social, political—can affect the economy. This course will give you the opportunity to develop some of the necessary tools. Tools you will develop in this course are as follows:

- An understanding of economic theory as it applies to both small-open economies and large-open economies.
- An ability to use the data for analysis and interpretation.

Development of the first tool will be the focus of most class time. The latter tool will primarily be developed through a series of problem sets that will be excel intensive and require much data manipulation.

Course Prerequisites

Principles of Macroeconomics is required for this course—no exceptions. I assume that you already have mastered the material in a basic macroeconomic course.

Course Materials

The assigned textbook is *Macroeconomics and the Global Business Environment* by David Miles and Andrew Scott, 2nd edition (ISBN 0471644552). Additionally, two trade books will be read for the class: (1) *And the Money Kept Rolling In (And Out)* by Paul Blustein (ISBN 1586482459), and (2) *The Great Depression: An International Disaster of Perverse Economic Policies* by Thomas Hall and David Ferguson (ISBN 0472066676). All of these books are available at Amazon.com.

Class Expectations Before Class Begins August 6th

You need to have read *And the Money Kept Rolling In (And Out)* and a completed book review for the first day of class. This book provides the story behind the economic meltdown in Argentina in 2001-2002 and will give us a real world example to help us evaluate the theories we will develop throughout the class. See the section below for the guidelines on the book review.

Course Requirements

The course requirements consist of the following items: (1) a mid-term exam and a final exam; (2) two book reviews; (3) two problem sets. The weight given for the above requirements and the letter grade breakdown is as follows:

<u>Point Distribution</u>		<u>Letter Grades</u>	
Class Participation	10 points	A 94-100	C 74-76
Book Reports (10 points each)	20 points	A- 90-93	C- 70-73
Problem Sets (15 points each)	30 points	B+ 87-89	D 60-69
Mid-term Exam	20 points	B 84-86	F 0-59
Final Exam	20 points	B- 80-83	
<u>Total</u>	<u>100 points</u>	C+ 77-79	

Book Review

Two book reviews, one on *And the Money Kept Rolling (And Out)* and one on *The Great Depression* is required for successful completion of the course. This first book provides a great story version of a recent financial crisis that has influenced the debate in open-economy macroeconomics. As noted above, it will also help flesh out some of the theories we develop in class. The second book covers from an international perspective the Great Depression of the 1930s. This book review and its discussion will take place at the end of class and will allow us to apply the tools we have learned to a prominent historical event. The book reviews should have a (1) 4-5 page summary section and a (2) 1-2 page critical response section. The book reviews should be typed, double spaced, and turned in to me on time. Each day the reviews are late will lead to a 15% reduction of total points earned.

In-Class Paper Participation

I expect you to be reading along with the class and prepared to discuss the readings. My lecture will consist of both formal outlines and open discussion. Participation points will consist of both (1) attendance and (2) actual participation in class discussions.

Mid-term and Final Exam

Your exams will be a series of multiple choice and essay questions covering material from the class. The dates of the exams are listed below. If you must miss an exam for a valid reason (i.e. serious illness, death in the family), you must notify prior to the exam time. Make-up tests are not guaranteed to like the original and an appointment must be made as soon as possible to take the exam.

Academic Honesty

Andrews University, as a Seventh-day Adventist institution, expects students to demonstrate the ability to think clearly and exhibit moral integrity in every sphere of life. Honesty in all academic matters is a vital component of personal integrity. Breaches in academic integrity principles are taken seriously by the university and are subject to the disciplinary penalties as found in the *University Bulletin*. Such acts are tracked are reported by the office of the Vice President for Academic Administration. Repeated offenders will be referred to the Committee on Academic Integrity for further recommendations on penalties. Anyone found cheating on a test will be given an "F" on that test. Also, please note that all electronic equipment other than a calculator is banned during a test.

Important Course Dates	
Date	Event
August 6	First Book Report Due
August 10	Problem Set I Due
August 13	Exam I
August 17	Second Book Report Due
August 18	Problem Set II Due
August 20	Exam II

Course Outline & Projected Dates

TC = Textbook Chapter,
DA = Discussion Article

I. The Basics

Sunday, 8/6

- A. Market Economy Overview
Required Readings: Power of the Market ([Friedman Article](#)); DA [Prices and Natural Disasters](#)
- B. Macroeconomic Basics
Required Readings: TC 1, 2
- C. Review *And the Money Kept Rolling in (And Out)*

II. Long-Run Analysis

Monday, 8/7

- A. Economic Growth
Required Readings: TC 3; DA Chasing the Leader, ([Economist Article](#)) [Relative Wealth](#)
Capital and Technology
Required Readings: TC 4, 5; DA The Road to Riches, ([Economist Article](#))

III. Short-Run Analysis

Tuesday, 8/8

- A. Labor Markets
Required Readings: TC 7
- B. Consumption
Required Readings: TC 12
- C. Investment
Required Readings: TC 13

Wednesday, 8/9

- A. International Trade
Required Readings: TC 8; DA Outsourcing Articles [Article 1](#), [Article 2](#), [Article 3](#)
- B. Globalization
Required Readings: TC 9
- C. Book Discussion

Thursday, 8/10

- A. Fiscal Policy
Required Readings: TC 10
- B. Money & Prices
Required Readings: TC 11
- C. Monetary Policy
Required Readings: TC 15

Sunday, 8/13

- A. Exam I (9:00 a.m. – 12:00 p.m.)
- B. Yield Curve Analysis
Required Readings: TC 18, [Ben Bernanke, Summary](#)
- C. Business Cycles
Required Readings: TC 14
- D. Stabilization Policy
Required Readings: TC 16

Monday, 8/14

- A. Balance of Payments Accounting & Identities
Required Readings: TC 19
- B. Exchange Rates I
Required Readings: TC 19, 20; Big Mac Index, [June 2005 Index](#), [May 2006 Index](#), [Dutch Disease](#)

Tuesday, 8/15

- A. Exchange Rates II
Required Readings: TC 21; (1) <http://www.imf.org/external/pubs/ft/fandd/2001/06/fischer.htm>
(2) <http://www.imf.org/external/pubs/ft/fandd/2004/03/pdf/taylor.pdf>
- B. Currency Crisis
Required Readings: TC 21; [\(JEP Article\)](#)
- C. Currency Crisis Case Study (handout)

Wednesday, 8/16

- A. Global Imbalances
Required Readings: [IMF](#), [Eichengreen](#)
- B. Commanding Heights Video

Thursday, 8/17

- A. Review *The Great Depression: An International Disaster of Perverse Economic Policies*
- B. Catch Up/Review

Sunday, 8/20

- A. Exam II

Problem Set 1
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1. According to our discussion on the importance of the price signal for the market economy, should price controls be enacted during disasters? Could there be any adverse consequences to price controls during disasters? Explain your answer.
2. Explain the following graph:



3. Using the [United Nations National Accounts database](#) and using GDP at constant prices (i.e. real GDP), U.S. dollars, calculate and interpret the following:
 - (1) The annual real GDP growth rates of the *world*, the *advanced nations* (use the G7: U.S. Canada, France, Germany, Italy, United Kingdom, Japan), and the *rest of the world* for the 1995-2004 period. The rest of the world aggregate can be calculated by subtracting the advanced nations GDP from the world GDP.
 - (2) The contribution each of the above two regions made to world growth for the years covering 1995-2004. The contributions for each region should add up to the world's growth rate. Effectively, you are finding how much of the overall world growth can be attributed to each region. Contributions can be calculated by taking the weight of each region's GDP as % of the world GDP for the previous year times the current year growth rate of the region's GDP. For example, to calculate the advanced nations contribution to world GDP in 2003, do the following (using constant dollar GDP):

$$\frac{\text{Advanced Nations } GDP_{2002}}{\text{World } GDP_{2002}} \times \text{Growth Rate of Advanced Nations } GDP_{2003}$$

4. Calculate and interpret the contributions to growth from the real expenditure categories (i.e. $GDP = C+I+G+NX$) for both China and the U.S. for the years covering the 1995-2004 period. The constant dollar expenditure accounts for both countries can be found at the [United Nations National Accounts database](#). Here, C = final consumption expenditure, I = Gross Capital Formation, and G = Gross Government Final Expenditure, and NX is self explanatory. (Note, the individual expenditure categories don't add up exactly to the listed total real GDP. Consequently, in your calculations use the real GDP that results from adding up the individual expenditure categories)
5. Your textbook on page 43 gives us the following equation,

$$\frac{GDP}{Population} = \frac{GDP}{Hours\ Worked} \times \frac{Hours\ Worked}{Employment} \times \frac{Employment}{Labor\ Force} \times \frac{Labor\ Force}{Population}, \quad (1)$$

which can be reduced to

$$\frac{GDP}{Population} = \frac{GDP}{Employment} \times \frac{Employment}{Population}. \quad (2)$$

This reduced-form equation tells us that GDP per capita is equal to labor productivity (GDP/employment) times the share of the population that is employed. This reduced-form equation shows that either a country must (1) increase labor productivity or (2) have a larger percent of the population working to get a higher per capita GDP. Which of these two factors can a country increase without end? Why?

Now use data from <http://research.stlouisfed.org/fred2/> to see what has actually happened based upon the reduced-form equation. You will need to download Real GDP, population, civilian employment: 16 years and older, and the civilian employment-population ratio beginning in 1950 to the present (population can be derived from these series). GDP is provided quarterly, but civilian employment and population is provided monthly so you will need to pull out the quarterly values (i.e. March, June, September, December) for the latter two series to match the GDP data (You may also want to try www.freelunch.com which sometimes provides quarterly values). Create the three series that make up the reduced-form equation (2) from this data and then graph them. What appears to explain more of the movement in GDP per capita?

6. Use the growth accounting method to determine the role capital, labor, and total factor productivity (TFP) played in U.S. economic growth from 1987 to 2004. Table 1.1 *Fixed Assets and Consumer Durables* from the [BEA](#) will provides a measure of the capital stock (use fixed assets) and the [BLS](#) provides the total civilian labor force over 16 years for use as the labor input. Calculate the contribution each input and TFP made to the annual growth rate over the 1987-2004 period. After calculating the yearly values, take the average capital, labor, and TFP contribution for 1987-1994 and for 1995-2004. Is there any big difference?
7. Good institutions are presented by the textbook as an important part of economic growth. The World Bank tracks several measures of institutions including the following: voice and accountability, political stability, government effectiveness, regulatory quality, and rule of law. These measures are found [here](#). These indicators are evaluated on a scale from 1 to 5 with 1 being the lowest and 5 the highest.¹ I have pulled the five columns for the above characteristics of institutions for 2002 and have added another column next to

¹ The data was originally presented on a scale of -2.5 to 2.5 by the World Bank and can be found at <http://www.worldbank.org/wbi/governance/pdf/2002kkzdata.xls>. I simply added 2.5 to every series to make the scale run from 1 to 5.

them: 2002 GDP per capita for each country (source: IMF WEO). Now take each of the institution indicators and plot them against GDP per person in a scatter plot graph. Do any of the indicators appear related to GDP per person? If so, is the relationship strictly linear? That is, is there a constant relationship between changes in the institution variable and GDP per person? If not, tell a story explaining why.

8. Do question 2 page 112.

Problem Set 2

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- Go to U.S. Bureau of Labor Statistics and find the [international data section](#). Download annual data from 1970 to the present of the (1) the labor force participation rate and (2) the unemployment rate. Select the following countries: the U.S., U.K., Germany (note, you will need to combine Germany and W. Germany series), Italy, and France. Now in one graph, show all the unemployment rates and in another graph show all the labor force participation rates. Based on these graphs answer the following questions: What has happened to unemployment in the United States relative to the other countries? How do the labor participation rate vary among countries?
- Using the [WEO](#) database, download for the United States over the 1995-2004 period the following: (1) general government balance as a % of GDP, (2) general government gross debt as a % of GDP, (3) Gross National Savings as a % of GDP. Compare the general government balance and general government debt in one graph while in another graph compare general government balance and gross national savings. (You may want to try the “line on two axes” graph available under custom graphs in excel.) Do you see any relationships?
- Using the [WEO](#) database, select the regions *Newly Industrializing Asian Economies* and *Developing Asia*. Next, select (1) gross national savings as a percent of GDP and (2) investment as a percent of GDP for these two regions for the years 1995-2004. Subtract the investment series from the saving series for both regions and then graph the results. What do you see and how do you explain it? (If there is excess savings, where is it going?)
- Go to the St. Louis Federal Reserve [data website \(FRED II\)](#) and look under the GDP link for (1) real GDP and (2) real potential GDP. Download quarterly data for both series over the 1990 – 2004 period. First, graph these two series together. Second, calculate the annualized growth rate for each quarter for the two series and then derive the output gap (potential GDP growth rate minus actual GDP growth rate). Identify any major deviations from potential growth.
- Some publications like the Economist and the Financial Times have been argued that until recently monetary policy has been too lax in the U.S. and that there is excess liquidity in the global economy. Using the [BEA](#) and [Fred II](#), download quarterly data for nominal GDP, real GDP, CPI, and the federal funds interest rate. Next, calculate the year-on-year (yoy) growth rate for each quarter of nominal and real GDP. For example, the fourth quarter, yoy growth rate for 2002 would be calculated as follows:

$$\frac{Q4_{2002} - Q4_{2001}}{Q4_{2001}}$$

(Note: this is different than the annualized quarterly growth rates.) Now create two graphs, the first one with the yoy growth rate of nominal GDP and the nominal federal funds rate and a second one with yoy growth rate of real GDP and the real federal funds rate. (The real federal funds rate can be calculated by

subtracting the yoy inflation rate from the nominal federal funds rate... recall the fisher identity.) Do these graphs provide any indication that monetary policy has been too loose in recent years in the United States?

6. The U.S. yield curve has attracted a lot of attention recently as it has become nearly flat. Create your own yield curve using U.S. Treasury securities' data from <http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/yield.html>. Specifically create four yield curves: (1) one for end of June 2004, when the Federal Reserve started its monetary policy tightening; (2) one for the end of December 2004; (3) one for the end of December 2005; and (4) one for the latest available data. Create one graph with all of these series and make note of any interesting trends.
7. Most economists believe the dollar is still overvalued. Using exchange rate data from Fred II, download the monthly dollar exchange rate with the Euro, the Canadian Dollar, China Yuan, Japanese Yen, and the South Korean Won beginning in January 1999. Modify the exchange rate data so that (1) all the exchange rates are stated as dollar per foreign currency and (2) normalize the exchange rates so that all are equal to 100 in January, 1999. Now graph these exchange rates from 1999 to the latest date available. Against which currencies has the dollar adjusted the most? Against which currencies has the dollar adjusted very little? What does this imply?
8. The current account balance of the United States has received a lot of attention lately. Using the [WEO](#) database, download and sum the dollar value of the current account balance for the following groupings: (1) Developing Asia, Newly Industrializing Asia, and Japan; (2) Western Hemisphere and Canada; (3) Africa and the Middle East; (4) EU; (5) Commonwealth of Independent States and Mongolia; and (6) the United States. Also download the dollar value of world GDP. Download both series over the period 1990 – 2004. Now take the current account balances for each group and divide it by world GDP. How does the U.S. current account look relative to the other regions of the world?