Econ 448
April 19, 2012
Exam 2

Write all answers in your blue book. Show all of your work and draw large graphs. Read all of the parts of each question before you answer any of them. The exam ends at 12:25.

1. (3pts) Define a country's external wealth (W), also known as the Net International Investment Position.

2. Consider Carmen Reinhart and Kenneth Rogoff's analysis of inflation and government policy in <u>This Time is Different</u>.

(a) (4pts) According to Reinhart and Rogoff, what four elements of government inflationary policy have been seen with startling regularity throughout history?

(b) (4pts) According to Reinhart and Rogoff, why might countries choose to inflate beyond seignorage-maximizing rates? Be sure to define seignorage in your answer.

For parts (c) and (d) consider a country whose government, households, and firms have borrowed considerable amounts from creditors abroad who all insisted that repayment be in United States dollars.

(c) (1pt) What is the connection between the creditors' insistence on repayment in U.S. dollars and Reinhart and Rogoff's observation about countries choosing to inflate beyond seignorage-maximizing rates?

(d) (3pts) If the home currency were to depreciate relative to the U.S. dollar, what would be the resulting effect on the country's external wealth (W)? With reference to an equation for external wealth, show how you found this result, and explain your reasoning.

(e) (5pts) According to Reinhart and Rogoff, how and why did the ratio of external debt defaults to domestic debt defaults shift in the early 20th century?

3. (6pts) Draw the triangle that represents the trilemma. Label the sides and the corners of your triangle.

4. Assume risk neutrality and capital mobility, so that uncovered interest parity holds. In the short run prices on average are not flexible, but the interest rate and the exchange rate are.

(a) (10pts) Draw a Keynesian Cross diagram for an open economy, when the domestic interest rate is i_1. On your diagram, be explicit about each of the components of aggregate demand. Label with an (A) the goods market equilibrium.

(b) (10pts) Suppose now that the interest rate in this country falls to i_2. Derive an open-economy IS curve. In your derivation, use the diagram from part (a) and also use a diagram for the foreign exchange market. Explain, in words, what you are doing as you derive the IS curve. On your IS curve, label with an (A) the goods market equilibrium when the interest rate is i_1. Label with a (B) the goods market equilibrium when the interest rate is i_2. On your foreign exchange market diagram, label with an (A) the equilibrium when the interest rate is i_1. Label with a (B) the equilibrium when the interest rate is i_2. On your foreign exchange market diagram be explicit about what the expected foreign return (FR) curve represents.

(c) (4pts) Place a (C) on your IS curve diagram to indicate where the goods market equilibrium would be at the interest rate i_2, if this were a closed economy. Explain your reasoning.

5. Consider the information in the following article.

Australian Consumer Sentiment Slumps

Wall Street Journal April 11, 2012 By JAMES GLYNN

SYDNEY—Australian consumers are at their gloomiest since a crisis gripped global financial markets in August, which economists say will help cement the case for a further cut in interest rates in May, with more to follow later in the year.

The closely watched Westpac-Melbourne index of consumer sentiment in Australia fell 1.6% in April to 94.5 from a March reading of 96.1. The April reading, released Wednesday, is the lowest since August and among the weakest readings in the past decade.

Australian consumers are as gloomy now as they were in mid-2011 when fears of a sovereign default in Europe were escalating and the U.S. economy looked to be sliding back into recession.

The list of worries for consumers is long, said Westpac chief economist Bill Evans. They include concerns over job security, house prices, high debt levels, petrol prices, utility costs and uncertainty over the imminent introduction of a tax on carbon emissions.

"Apart from last year's lows and the March 2008 to May 2009 period, when households feared a recession associated with the global financial crisis, we have to go all the way back to 2001 … to find sustained lower reads," Mr. Evans said. Westpac's research fits the picture of an economy with a weak pulse in the early months of the year, and one that is struggling to cope with rapid restructuring forced on it by a mining boom and a high Australian dollar.

With economic growth flagging, the government faces an ever-increasing challenge to bring the budget back into surplus for the fiscal year starting July 1.

Key engines of the economy including trade, consumer spending and construction are all showing signs of weakening. Some argue the harsh budget contraction planned for the next fiscal year may make matters worse.

Former Reserve Bank of Australia board member Warwick McKibbin said Wednesday the plan to return the budget to surplus risks sending the economy back into recession. "It's purely a political decision and it could be very dangerous," Mr. McKibbin said in a radio interview.

However, the planned budget cuts, which are expected to turn a budget deficit of around 38 billion Australian dollars (US$38.98 billion) into a small surplus, are almost certain to clear the way for more interest-rate cuts.

A major union Wednesday called for lower interest rates so that the Australian dollar can fall and take pressure off exporters, helping to avoid job losses. Paul Howes, the national secretary of the Australian Workers Union, said the central bank has consistently made the "wrong call" on interest rates and, as a result, job losses may accelerate.

Another set of figures released Wednesday by the Australian Bureau of Statistics showed the housing sector remained in a slump. The number of housing finance approvals fell a seasonally adjusted 2.5% in February from January, the bureau said.

(a) (2pts) Australia is an open economy with a flexible exchange rate regime and capital mobility. On your trilemma diagram from Question 3, indicate where Australia is.

(b) (10pts) Suppose that because of gloomy consumers and weakening construction, the Australian economy is currently operating slightly below potential Gross Domestic Product. Use the IS-LM-FX model to explain what would happen to the Australian economy if its government implemented "the harsh budget contraction planned for the next fiscal year." Suppose that everyone believes this fiscal tightening would be temporary. In your explanation, you should specify what would happen in the short run to Australian real GDP, the Australian interest rate, and the exchange rate. Show your work on an IS-LM diagram and a foreign exchange diagram. On each diagram, label the initial equilibrium A and the new equilibrium B.

(c) (10pts) Suppose that instead of adopting the tight fiscal policy described in part (b), Australia instead temporarily loosens monetary policy, heeding a major labor union's call "for lower interest rates so that the Australian dollar can fall and take pressure off exporters." Use the IS-LM-FX model to explain what would happen in the short run to Australian real GDP, the Australian interest rate, and the exchange rate. Show your work on an IS-LM diagram and a foreign exchange diagram. On each diagram, label the initial equilibrium A and the new equilibrium B. Assume that because of gloomy consumers and weakening construction, the initial equilibrium has Australia operating slightly below potential Gross Domestic Product. Use separate diagrams from the ones you drew to answer part (b).

(d) (5pts) Suppose that instead of doing only one or the other, Australia simultaneously adopts both tighter fiscal and looser monetary policy, each of which is temporary. With Australia starting at a position slightly below potential real GDP, use the IS-LM-FX model to explain what would happen in the short run to Australian real GDP, the Australian interest rate, and the exchange rate. Show your work on an IS-LM diagram and a foreign exchange diagram. On each diagram, label the initial equilibrium A and the new equilibrium B. Use separate diagrams from the ones you drew to answer parts (b) and (c).

6. Consider Carmen Reinhart and Kenneth Rogoff's analysis of banking crises in This Time is Different.

(a) (2pts) When Reinhart and Rogoff study severe systemic banking crises since 1899, what do they find to be the average effect on unemployment from the pre-crisis peak to the trough of the crisis? What is the average length of this peak-to-trough period?

(b) (4pts) What do Reinhart and Rogoff find to be the fiscal consequences of banking crises?

In their April 17, 2012 Wall Street Journal article "IMF Says Recovery Remains Fragile," Sudeep Reddy and Ian Talley write that the International Monetary Fund "warned that if Europe isn't able to contain its debt and financial crisis, it could shave 2% from global economic output and 3.5% from output in the euro area, which is already in recession."

(c) (2pts) Suppose Europe is not able to contain its financial crisis. Given the fiscal consequences of banking crises that Reinhart and Rogoff have found in their historical study, what are the prospects for Europe containing its sovereign debt crisis? Explain your reasoning.

7. (a) (3pts) The essential features of an international gold standard can be characterized by three rules of the game. What are these rules?

Suppose that Country A and Country B operate on an international gold standard. Country A, whose currency is called the "a", promises to buy or sell gold at 3 a's per ounce of gold. Country B, whose currency is called the "b", promises to buy or sell gold at the rate of 4 b's per ounce of gold. Shipping gold between countries is costly. For every ounce of gold shipped, only 0.95 ounces arrives.

(b) (2pts) What is the mint parity exchange rate between the two currencies?

(c) (10pts) If the market exchange rate is 0.70 a's per b, does the zero arbitrage condition hold? If no, then describe what actions an arbitrageur takes and why she takes them.