1. Australia has a flexible exchange rate system and allows capital mobility. Consider the following information about Australia.

**Australia Debates Whether It Has a Debt Crisis**

By ROB TAYLOR  Wall Street Journal May 7, 2014 online

CANBERRA, Australia—Prime Minister Tony Abbott is preparing to cut spending and raise taxes in the nation’s annual budget next week—a move he’s defending as necessary to avoid a European-style debt crisis. Mr. Abbott, who came to power last year promising austerity, has to convince Australians used to a generous welfare state that the debt situation has become bad enough to warrant aggressive belt-tightening. Critics say Australia’s public debt and government deficit remain modest compared with the U.S. and Europe. Mr. Abbott's Liberal Party-led administration, by focusing on austerity, could further slow an economy already coping with a sharp drop in mining investment, they say….  

Canada, a nation whose economy is comparable to Australia because of its reliance on resources exports, has [a government debt-to-GDP that’s more than twice as high as Australia’s]. Economists have warned Mr. Abbott against cutting too deeply into health, welfare and education payments. They argue that too much austerity risks damaging a fragile economy still adjusting to the end of a long China-led mining boom. Retail sales rose only slightly in March—according to data released Wednesday—signaling consumers may be becoming more cautious amid the talk of tough budgets. Consumer confidence, meanwhile, has fallen to levels not seen since 2008 during the global financial crisis. Australia's economy is expected to grow under 3% this year, a percentage point below recent levels. "It is admirable to see the government looking to improve the medium term outlook for national finances," said Savanth Sebastian, an economist with Australian brokerage house CommSec. "However cutting too deeply in the short term can have a detrimental impact on sentiment and in turn spending.”

James Morley, a professor at the Australian School of Business, said the focus on fiscal prudence might force the nation's central bank to keep rates lower for longer than it would like to maintain confidence, potentially stoking a housing bubble. The Reserve Bank of Australia on Tuesday held interest rates at a record low of 2.5% for the eighth straight board meeting. "If there's a big risk of potential financial problems, it's really low real interest rates for a really long time to keep the economy on an even keel," Mr. Morley said. …

a. (12pts) Using the IS-LM-FX Model, show and explain what would happen to Australian real aggregate output, interest rates, and the Australian dollar if Australia cuts government spending and raises taxes to “avoid a European-style debt crisis”, and the Australian central bank tightens to prevent “stoking a housing bubble”. How would these policy actions affect the competitiveness of Australia’s goods and services in global markets?

b. (12pts) Using the IS-LM-FX Model, show and explain what would happen to Australian real aggregate output, interest rates, and the Australian dollar if Australia cuts government spending and raises taxes, and the Australian central bank, worried about the resulting effect on consumer confidence, feels forced “to keep rates lower for longer than it would like”. How would these policy actions affect the competitiveness of Australia’s goods and services in global markets?
2. To answer parts (a)-(d) use Carmen Reinhart and Kenneth Rogoff’s analysis of housing price bubbles and financial crises in *This Time is Different*.

(a) (4pts) What pattern is evident in real estate markets surrounding the years of a financial crisis?

(b) (4pts) How do cycles of real housing prices and banking crises compare for advanced economies and emerging markets?

(c) (4pts) What sensible proposition was the Federal Reserve's logic grounded in for ignoring housing prices in the United States during the run-up to the 2008-2009 financial crisis?

(d) (2pts) What did Ben Bernanke sensibly argue in 2004 was the right way to deal with housing price bubbles fueled by inappropriately weak lending standards?

3. Use the information in the following article to answer parts (a)-(d).

**U.S. Senators Back Buttressing Ukraine's Currency**
By William Mauldin, Wall Street Journal April 11, 2014

Two Republican senators want Treasury Secretary Jack Lew to consider bolstering Ukraine's currency to limit the country's sensitivity to external factors, including military and financial moves by Russia. In a letter to Mr. Lew, Sen. Marco Rubio of Florida and Sen. Ted Cruz of Texas say they oppose any move for Ukraine to further devalue its national currency, the hryvnia. The senators’ letter to Mr. Lew is another sign of the strong backing the Ukrainian government has won in some quarters on Capitol Hill, and particularly among Republicans, amid its continuing struggles with Russia.

As a part of its preliminary bailout deal, the International Monetary Fund is asking Kiev to maintain flexibility in its exchange rates, a shift from a long-held policy of pegging the hryvnia to the dollar. Since the crisis, the hryvnia has fallen sharply, and the IMF has said that no further devaluation would likely be needed but that the rate shouldn't be fixed. The two U.S. lawmakers say a floating hryvnia could lead to high inflation, and they suggested that Mr. Lew back forming a currency board that would ensure the hryvnia's convertibility at a fixed rate, according to their letter, obtained by The Wall Street Journal. The senators cite the example of Baltic countries that stabilized their currencies with currency boards following the collapse of the Soviet Union, before eventually moving to adopt the euro. In many former Soviet countries with relatively undeveloped markets, exchange rates are the main barometer of economic progress, but also a measure of financial distress when the national currency weakens. A weakening currency would raise the price of imported goods in Ukraine but make its exports more competitive. "A collapsing hryvnia under an independent government in Kiev provides an easy target for [Russian President Vladimir] Putin as he seeks a propaganda advantage at this critical moment," the senators wrote. "We urge you to move quickly to examine such a strategic approach for stabilizing Ukraine against Putin's continuing incursions, both physical and psychological." Messrs. Rubio and Cruz suggested that the Treasury Department work with IMF personnel and Kiev officials on the proposal.

Ukraine’s Finance Minister Oleksandr Shlapak said Thursday night in Washington that a currency board isn't practical because it would require large reserves. He said he expects the country to keep its exchange rate flexible under the IMF program. Ukraine's economy is highly sensitive to changes in the price of natural gas from Russia. The breakaway Crimea region of Ukraine, meanwhile, has moved to adopt the Russian ruble.
For parts (a)-(c) below, suppose Ukraine had continued trying to peg against the dollar and maintain capital mobility.

(a) (20pts) Consider the first-generation model of exchange rate crises presented by Alan Taylor in *International Macroeconomics*. Describe how a first-generation type of currency crisis could hit Ukraine. Show and explain the causes and consequences of that crisis. In your explanation, refer to a graph with Ukraine’s nominal money supply on the horizontal axis and its central bank holdings of domestic government debt on the vertical axis.

(b) (20pts) Describe how a second-generation type of currency crisis could hit Ukraine. Show and explain the causes and consequences of that crisis. In your explanation, refer to the graphs in the IS-LM-FX model.

(c) (5pts) Consider again the first-generation model of exchange rate crises that Alan Taylor presents in *International Macroeconomics*. Define a currency board in this model. In your definition, refer to a graph with Ukraine’s nominal money supply on the horizontal axis and its central bank holdings of domestic government debt on the vertical axis.

(d) (5pts) Do you agree with Senators Rubio and Cruz that Ukraine should adopt a currency board? Explain your reasoning.

4. (6pts) According to Reinhart and Rogoff in *This Time is Different*, why does fixing the exchange rate (either explicitly or implicitly) make currency crashes more serious for a country?

5. (6pts) What do Reinhart and Rogoff find are the three characteristics that occur more often than not in the aftermath of severe financial crises?