Problem Set 2 Solutions

Cornell University
Economics 4905: Financial Fragility and the Macroeconomy
Fall 2016

1 Essay Questions

Write a brief, concise paragraph on each of the following topics:

1. The Federal Reserve System, including (a) the Board of Governors, (b) the Regional Banks, c) the Federal Open Market Committee, (d) monetary policy

Answer:
The Federal Reserve System (or simply, the Fed) is the central bank of the United States. Compared to other central banks, it gives the outward appearance of decentralization of powers. Instead of a single Governor, there is a Board of 7 Governors. There are in addition several Regional Federal Reserve Banks. The FOMC sets monetary policy. The FOMC is comprised of the 7 Governors, the President of the Federal Reserve Bank of NY, and other Regional Bank presidents on a rotating basis. The Humphrey-Hawkins Act sets 2 goals for monetary policy: price stability and full employment. Other central banks have only one legally imposed goal: price stability.

2. The government budget deficit, the national debt, and monetary policy.

Answer:
The current government budget deficit = current government spending - current government receipts. The current government debt = cumulated government budget deficits to date.

3. The zero lower bound (ZLB)

Answer:
The ZLB: Without very special tools, the nominal interest rate cannot be easily made to fall below zero, since people and institutions can store cash at small cost.

4. US banking history, including local banking, distrust of banks, distrust of central banks (and)
6. Alexander Hamilton and the First Bank of the United States

Answer:
Alexander Hamilton created the First Bank of the United States, patterned after the Bank of England. The BofE was a private bank that eventually performed central bank functions.

The FBofUS was from the first a private bank performing central bank functions. Banks were mis-trusted by the southern planters and by farmers generally. Banks and central banks were held to be important by businessmen and other professionals in the northeast. Sympathy for banks was not widespread, but banks proved to be useful. Until the Fed, the US had only 2 brief episodes of central banking. Until recently, there were no nation-wide banks. In fact, even within-statebranch banking was severely restricted or even banned. Small banks were in favor of limited branching and limited entry in banking; many large banks were similarly inclined.

5. Asset bubbles, rational and irrational

Answer:
An asset bubble occurs when an asset is selling for more than the discounted value of its projected revenue stream. It is difficult to know when an asset or assets are in bubble states. Perhaps projected future earnings are high and/or projected interest costs are low. It is even more difficult to determine whether or not the alleged bubble is individually irrational and/or socially irrational. Money in the OG model is an example of a bubble that is individually and socially irrational.

7. The GSEs including Fannie Mae and Freddie Mac

Answer:
A problem with a banking system in which branch banking is limited is that the bank's portfolio is poorly diversified. During the New Deal, Fannie Mae and other similar institutions were introduced: the goal was for a local bank to sell mortgages to a government agency that would pool the risks. FNMA and others were privatized and dubbed government sponsored agencies. The GSE's borrowed at low rates because of the implicit government guarantee. Two recent events eliminated the social rationale for the GSE's: (1) branch banking and nationwide banking are no longer restricted; (2) investment banks securitized buddies of mortgages. Either (1) or (2) would suffice to make the GSE's redundant. The GSE's still exist, thanks to their political powers. They now make money speculating on mortgaged back securities.

8. Fragility of Eurozone sovereign debt (i.e., government bonds)

Answer:
The US can always pay its bondholders since it has the power to print dollars. The UK can do the same because it prints pounds sterling. The debt of Italy, for example, is denominated in euros. Italy cannot print euros. So even though Italy is not worse fiscally than the US or the UK, it is subject to a bank-run on its sovereign debt (i.e., government bonds).

9. Large denomination bank notes, e.g., the US $100 bill
Answer:
Ken Rogoff and others have argued that the US (and others) should print only low denomination notes (i.e., currency) to reduce crime and to allow the Fed ease in driving the nominal interest rate below zero. Heavy coins would be even better for this purpose. The idea is to make it difficult to store and utilize currency. Bitcoin might foil the Rogoff plan.

10. Taxes denominated in dollars

Answer:
Money taxation is a source of financial fragility since the price-level is indeterminate and hence could be affected by sunspots. Finance is a general source of this fragility.

11. David Ricardo and retirement of the public debt

Answer:
David Ricardo showed in the context of the finite horizon economy that the public debt must be retired by the end of the world. That is, in finite models, imbalanced tax policies are not bonafide. In the OG model, however, the public debt need not necessarily be retired. Paul Samuelson showed that there are imbalanced tax policies that are bonafide.