Economics 310

Money and Banking

Assignment Four

University of Michigan
Fall 2017

Question One

Risk premiums on corporate bonds are usually anti-cyclical; that is, they decrease during business cycle expansion and increase during recession. Why do you think this is so?

Question Two

If income tax rates increase, what would you expect to happen to interest rates on Treasury bonds? What would you expect to happen to interest rates on municipal bonds? Explain, making use of the fact that income from Treasury bonds is taxed as normal income, but income from municipal bonds is tax-exempt.

Question Three

Explain why we might observe a "term premium" or "interest risk premium" being paid to holders of long-term bonds.

Question Four

Describe the model we use for determination of the Federal Funds Rate. Specifically:

(a) What are "Federal Funds", and where do they come from?
(b) How does demand for federal funds depend on the federal funds rate? Why?
(c) Describe the supply curve for federal funds. Why does it have this shape?

Now describe the effects of the following Fed actions in the federal funds market

(d) The Fed makes an open market sale of securities to the banking sector.
(e) The Fed increases the discount rate.
(f) The Fed increases the required reserve ratio.

The Fed uses the federal funds rate as the primary target for implementing monetary policy. This means that, each day, they need to estimate where the demand curve for federal funds will lie and then use some policy tool to ensure that the equilibrium federal funds rate is close to their target.

(g) List the different methods available to the Fed for manipulation of the federal funds rate. Which of these does the Fed actually use? Why is this method likely to be more effective than the others?
(h) Suppose the Fed projects that the demand curve for federal funds will remain fairly stable, but they wish to lower the federal funds rate by 25 basis points (i.e.

0.25 of 1%). How will they accomplish this? What effect does this have on base money? How is this likely to affect the M1 money supply?

Question Five

In trying to manipulate the federal funds rate, the Fed first estimates the quantity of reserves the banking system will demand at the desired federal funds rate. For convenience, call the estimated quantity of reserves demand R^*. Also label the target federal funds rate i^*.

Prior to 2003, the Fed sought to produce a federal funds rate of i^* by:

(i) Conducting open market operations to ensure a level of non-borrowed reserves equal to R^*; and
(ii) Setting the primary credit discount rate equal to i^*.

Since 2003, the Fed has preferred a slightly different approach:

(i) Conducting open market operations to ensure a level of non-borrowed reserves equal to R^*; and
(ii) Setting the primary credit discount rate equal to i^* + 50 basis points.

Use the federal funds market model to explain how the two approaches are similar and are different when the observed quantity of reserves demanded is greater than or less than R^*.

Question Six

What is the current interest rate on reserves? What is the current primary credit discount rate? Use this information to draw a diagram depicting the current Federal Funds market. Recall from earlier in the course that we know the banking sector currently holds enormous quantities of non-borrowed reserves. For the purposes of this question we don't need to know exactly how much, but only that the quantity they hold is certainly far, far above the quantity they are required to hold, and far above the quantity that they would currently find "acceptable." A huge portion of these reserves are simply sitting in reserve accounts collecting interest since the banks have nothing better to do with them.

From our model, what would you expect the federal funds rate to be? How much trading to expect the commercial banks to be undertaking at that rate?

Look on the Fed's web page (or elsewhere) to find the recent observations of the Federal Funds rate. Do these observations contradict the sorts of predictions you made from the model? Why?

When the Fed announces their intention to "raise interest rates" in the near future, what action do you think they will take to make it happen? Why?