

**ECO 3223 – Money and Banking – Spring 2006**

<http://www.bus.ucf.edu/omikhail>

**Solution to Assignment II**

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## **Chapter 15 Problems and Solutions**

1. For many central banks, the primary goal is to control inflation.
  - a. What are the costs of inflation?
  - b. Does anyone benefit from inflation? If so, who benefits and how?

Answer:

- a. High and unpredictable inflation increases uncertainty, which reduces investment and hinders economic growth.
- b. Borrowers who owe money benefit from inflation because the real value of their required payments falls.

3. Explain how transparency helps eliminate the problems that are created by central bank independence.

Answer: Because it takes significant power away from elected politicians and gives it to a set of appointed officials, central bank independence is inconsistent with representative democracy. Even though they are not elected, monetary policymakers answer to the public. By forcing them to communicate regularly with the public and explain exactly what they are doing and why, transparency makes central bankers accountable.

## Chapter 16 Problems and Solutions

2. What are the Federal Reserve's goals? How are the Fed's officials held accountable for meeting them?

Answer: The goals of the Federal Reserve, as set by Congress are to "maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates." The Fed's officials release large amounts of information in order to maintain accountability. After each of the meetings of the FOMC, the target interest rate is released immediately, along with a brief statement. Minutes and transcripts of the meetings are also eventually made public. Members of the FOMC give public speeches and the chairman reports to Congress and twice a year.

3. Go to the Federal Reserve Board's web site and locate the FOMC's most recent statement. What did the Committee members say at their last meeting regarding the two goals of price stability and sustainable economic growth? What is their current assessment of the balance of risks? Now read the committee's last two statements to see if the balance of risks has changed. If it has, can you figure out why?

Answer: At the May 4, 2004 meeting, the FOMC kept the target federal funds rate at 1 percent. The Committee wrote that it can afford to raise the rate slowly since inflation is low. Regarding the balance of risks, the statement says "The Committee perceives the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. Similarly, the risks to the goal of price stability have moved into balance." The Committee's assessment of the risks to sustainable growth is unchanged from its last two meetings. The balance of risks to price stability has changed slightly; at the previous two meetings, there was more of a risk of a fall in inflation.

6. Some people have argued that the high inflation of the late 1970s was a consequence of the fact that Federal Reserve Board Chairman Arthur Burns did what President Richard Nixon wanted him to do. Explain the connection.

Answer: Because politicians are elected for relatively short terms, they favor expansionary monetary policy that will boost growth in the short run. However, this will eventually lead to higher inflation. This is why it is important for the central bank to be independent.

10. What are the goals of the ECB? How are its officials held accountable for meeting them?

Answer: The primary goal of the ECB is to maintain price stability, which the ECB defines as inflation of less than, but close to, two percent using the Harmonized Index of Consumer Prices. Like the Federal Reserve, the ECB is held accountable through releases of information, including the target interest rate along with an explanatory statement, reports to the European Parliament, and public speeches.

## Chapter 17 Problems and Solutions

4. Compute the impact on the money multiplier of an increase in desired currency holdings from 10 percent to 15 percent of deposits when the reserve requirement is 10 percent of deposits, and banks' desired excess reserves are 3 percent of deposits.

Answer:

When desired currency holdings = 10% of deposits,  $m =$

$$\frac{1+1.1}{1.1+0.1+0.03} = 1.71$$

When desired currency holdings = 15% of deposits,  $m =$

$$\frac{1+1.15}{1.15+0.1+0.03} = 1.68$$

11. Suppose the Fed buys \$1 billion in Japanese yen, paying in dollars. What is the impact on the monetary base? What would the Fed need to do to keep the monetary base from changing following the purchase?

Answer: On the Fed's balance sheet, currency and foreign reserves would both rise by \$1 billion; the monetary base would increase by \$1 billion. If the Fed wished to keep its balance sheet from changing (performing what is called a "sterilized intervention") it could then sell \$1 billion in securities.

12. Suppose the Fed purchases \$1 billion in securities from First Bank. What is the impact on First Bank's balance sheet?

Answer: First Bank's securities would fall by \$1 billion and the bank's reserves would rise by \$1 billion.

14. In 1937, the Fed's policymakers noticed the high level of excess reserves in the banking system and became concerned about the potential for the banking system to expand the quantity of money and spark inflation. As a result, the Fed raised the reserve requirement. Why were banks holding excess reserves in 1937? What do you think the banking system's response was to the increase in required reserves? What do you think happened to the quantity of money outstanding?

Answer: Banks were holding excess reserves because they were concerned about facing illiquidity in the event of a bank run. When the Fed increased the required reserve ratio, banks simply increased the levels of their reserves even further. This reduced the quantity of money.

## Chapter 18 Problems and Solutions

2. Suppose the demand for reserves became less stable. How would monetary policy be affected?

Answer: It would become more difficult for the central bank to determine the supply of reserves required to achieve the target federal funds rate. The rate would become more volatile and monetary policy will become less effective.

8. Economists believe that central banks should be as transparent as possible, allowing the public to accurately forecast changes in interest policy. Explain the justification for this belief. What would happen if policymakers constantly surprised the public?

Answer: If policymakers constantly surprised the public, they would be undermining their goal of financial stability.

9. Suppose Congress banned discount lending. What would be the consequences?

Answer: Banks would increase their reserve holdings. Despite this, there would still be times when banks struggled with liquidity. Without being able to borrow from the Fed, illiquid banks could fail (even if they were not insolvent), and there is the possibility of a system-wide bank panic.

11. The ECB pays a market-based interest rate on required reserves and a lower rate on excess reserves. Explain why the system is structured this way.

Answer: Paying a market-based interest rate on required reserves reduces the costs to banks of holding reserves. Paying interest on excess reserves helps reduce the volatility of the overnight lending rate; banks would never be willing to lend to each other at a rate below the rate paid on excess reserves.