Monetary Policy

Chapter 14.4 and 16.1

Outline

- How the Fed conducts monetary policy
- Monetary policy rules

14.4 HOW THE FED CONDUCTS MONETARY POLICY

- How should the Fed use its power to achieve its objectives of keeping inflation low and economic fluctuations small?
- Decisions about monetary policy in the United States are made by the *Federal Open Market Committee* (FOMC).

Setting Interest Rates or Money Growth

- FOMC alternatives for monetary policy:
  - **Set the growth rate of the money supply.**
  - **Set the short-term interest rate.**
  - **Money supply setting is preferable if shifts in the IS curve dominate.**
  - **Interest rate setting preferable if shifts in the LM curve dominate.**

The Zero Bound on Nominal Interest Rates

- What are the implications for the conduct of monetary policy when nominal interest rates approach or equal zero?
- The constraint of a *zero bound* on the nominal interest rate limits the scope of monetary policy.
- If the nominal interest rate is zero, it cannot be lowered any further to stimulate the economy.

The Zero Bound on Nominal Interest Rates

- Deflation is negative inflation (falling prices).
- With deflation, a zero nominal interest rate produces a positive real interest rate.
- This may be too high to stimulate the economy, and cannot be lowered any further.

16.1 MONETARY POLICY RULES

- A **monetary policy rule** describes a systematic response of monetary policy to events in the economy.
  - The central bank can set either the growth rate of the money supply or the short-term nominal interest rate.
  - Almost all central banks, including the Fed, now conduct monetary policy by setting the short-term nominal interest rate.

16.1 MONETARY POLICY RULES

- The Fed does not actually set the short-term nominal interest rate.
- The FOMC sets a target level of a very short-term (overnight) nominal interest rate, the federal funds rate, and then keeps the federal funds rate close to its target by increasing or decreasing the money supply through open-market operations.

Reacting to Events in the Economy

- Like many other central banks, the Fed has a **target inflation rate**
  - The level of inflation it would like to see on average over the long term.
  - The Fed is less explicit about its target inflation rate, but it has an implicit inflation-rate target of about 2 percent.

Reacting to Events in the Economy

- How do the Fed and other central banks set the interest rate to achieve their long-run inflation and output-stability goals?
- A convenient way to describe the actions of a central bank is through a **monetary policy rule,** or reaction function
- A monetary policy rule is simply a function that describes how the Fed, or any other central bank, sets the interest rate in response to variables in the economy.

The Taylor Rule

- The Taylor rule states that the Fed raises the nominal interest rate *r* when real GDP is greater than potential GDP, and when inflation is greater than the target inflation rate.

$$r = \pi + \beta \hat{Y} + \delta(\pi - \pi^*) + R^* \qquad (16.1)$$

  - where *r* is the short-term nominal interest rate set by the Fed (the federal funds rate)

The Taylor Rule

- An important attribute of the Taylor rule is that it is *stabilizing*.
  - When real GDP is greater than potential GDP or when inflation is greater than the target inflation rate, following the Taylor rule smoothes out fluctuations.

$$r = (1+\delta)\pi + \beta\hat{Y} + R^* - \delta\pi^* \qquad (16.2)$$

  - When inflation rises above the target inflation rate, the Fed raises the nominal interest rate by more than inflation rises.

The Taylor Rule

- The importance of raising the nominal interest rate more than one-for-one with the inflation rate, so that the real interest rate rises when inflation increases, is known as the **Taylor principle.**
- A monetary policy rule is stabilizing only if it obeys the Taylor principle.

What is the rationale for the Taylor rule?

- The Fed is concerned with keeping inflation close to target and keeping output and unemployment fluctuations small, and the Taylor rule helps accomplish both objectives.
- The Taylor rule is an example of inflation targeting, but one that targets both current and expected future inflation.

Taylor rule and Exchange Rate

- The Taylor rule requires a flexible exchange rate.

- Fixing the exchange rate is incompatible with conducting monetary policy according to the Taylor rule.

Numerical Example

- Suppose that $\beta = 0.5$, $\delta = 0.5$, $\pi^* = 0.02$, and $R^* = 0.02$. Then, the Taylor rule in Equation 16.1 becomes

$$r = \pi + 0.5\hat{Y} + 0.5(\pi - \pi^*) + 0.02$$

$$r = 1.5\pi + 0.5\hat{Y} + 0.01$$