CHAPTER 30

Monetary Policy and Bank Regulation

Principles of Economics: Economics and the Economy

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Graph showing the relationship between price level, real GDP, and aggregate supply and demand.
The Central Bank

• The central bank has several tools to conduct monetary policy:
  ✓ **open market operations**, which involves buying and selling government bonds with banks.
  ✓ **reserve requirements**, which determine what level of reserves a bank is legally required to hold.
  ✓ **discount rates**, which is the interest rate at which a central bank makes loans to individual banks.
  ✓ **Federal funds rate**, where banks lend to each other overnight.
  ✓ **Moral suasion**, the Fed chairperson uses the verbal influence of her position.

• The most commonly used tool is **open market operations**. During the 2007–2009 recession, central banks around the world also used quantitative easing to expand the supply of money and credit.
The Federal Reserve

• The U.S. Constitution gives Congress the power “to coin money” and “to regulate the value thereof.”
• As part of the 1913 legislation that created the Federal Reserve, Congress delegated these powers to the Fed.
• The Federal Reserve at the national level is run by a Board of Governors, which consists of seven members who the President of the United States appoints and the U.S. Senate must confirm.
• The Federal Reserve System is set up in 12 districts, which are headquartered in the cities shown in Exhibit 30-1 (next slide).
EXHIBIT 30-1 The Twelve Federal Reserve Districts

Alaska and Hawaii are part of the San Francisco District.
How a Central Bank Affects the Money Supply

• A loose or **expansionary monetary policy** raises the quantity of money and credit above what it otherwise would have been and reduces interest rates.

• A **contractionary monetary policy**, also called a tight monetary policy, reduces the quantity of money and credit below what it otherwise would have been and raises interest rates, seeking to hold down inflation. An expansionary monetary policy, also called a loose monetary policy, seeks to boost aggregate demand, and thus to counter recession.
EXHIBIT 30-6 The Pathways of Monetary Policy

(a) The story of expansionary monetary policy is that the central bank causes the supply of money and loanable funds in the economy to increase, which causes the interest rate to fall. The lower interest rate stimulates additional borrowing for investment and consumption, causing AD to shift right. The result is both a higher price level and, at least in the short run, higher real GDP.

(b) The story of contractionary monetary policy is that the central bank causes the supply of money and credit in the economy to decrease, which causes the interest rate to rise. The higher interest rate discourages borrowing for investment and consumption, causing AD to shift to the left. The result is a lower price level and, at least in the short run, lower real GDP.
EXHIBIT 30-5 Expansionary or Contractionary Monetary Policy

(a) The economy is originally in a recession with the equilibrium output and price level shown at $E_R$. Expansionary monetary policy will reduce interest rates and shift aggregate demand to the right from $AD_0$ to $AD_1$, leading to the new equilibrium $E_p$ at the potential GDP level of output with a relatively small rise in the price level.

(b) The economy is originally producing above the potential GDP level of output at the equilibrium $E_1$ and is experiencing pressures for an inflationary rise in the price level. Contractionary monetary policy will shift aggregate demand to the left from $AD_0$ to $AD_1$, thus leading to a new equilibrium $E_p$ at the potential GDP level of output.
Monetary Policy and Economic Outcomes

- Monetary policy is inevitably imprecise, for a number of reasons:
  (a) the effects occur only after long and variable lags;
  (b) if banks decide to hold excess reserves, monetary policy cannot force them to lend;
  (c) velocity may shift in unpredictable ways
Basic Quantity Equation of Money

- The basic quantity equation of money is $MV = PQ$, where $M$ is the money supply, $V$ is the velocity of money, $P$ is the price level, and $Q$ is the real output of the economy.
- Higher velocity = each dollar spent turns over more quickly throughout the economy; higher rate of inflation
- Lower velocity = each dollar spent turns over more slowly throughout the economy; lower rate of inflation
**EXHIBIT 30-8 Velocity**

Velocity is the nominal GDP divided by the money supply for a given year. Different measures of velocity can be calculated by using different measures of the money supply. Velocity as calculated by using M1 has lacked a steady trend since the 1980s, instead bouncing up and down.
**EXHIBIT 30-7  Monetary Policy, Unemployment, and Inflation**

Through the episodes shown here, the Federal Reserve typically reacted to higher inflation with a contractionary monetary policy and a higher interest rate, and reacted to higher unemployment with an expansionary monetary policy and a lower interest rate.
The Central Bank

The End...
Even though it never really ends!

Good luck on the Final Exam!