Chapter 14

Inflation and Monetary Policy
The Objectives of Monetary Policy

- Stability of the banking system
  - Alleviate financial panics
- Low and stable interest rate
- Low and stable rate of inflation
- Full employment of the labor force
Low, stable inflation

- A high inflation rate
  - Cost to society
  - Labor, time

- Unstable inflation
  - High risk of lending and borrowing
    - Redistribute real income
  - Interferes with long-run financial planning

- Inflation - unpopular with the public
Full employment

- Natural rate of unemployment
  - No cyclical unemployment
- Unemployment rate - below natural rate
  - GDP > potential output
  - Creates inflation
- Unemployment rate - above natural rate
  - GDP < potential output
  - Downward pressure on the price level
The Fed’s Performance

Figure 1 The Fed’s Performance Since 1950 to Mid-2006 (a)

In the 1970s and early 1980s there were periods of high inflation . . .

but the inflation rate dropped during the 1980s . . .

and it dropped again in the 1990s and early 2000s.
The Fed’s Performance

**Figure 1** The Fed’s Performance Since 1950 to Mid-2006 (b)

The unemployment rate was particularly high during the early 1980s . . .

but it fell dramatically during the 1990s . . .

then rose again during the 2001 recession.
Federal Reserve Policy

- Goals:
  - Low inflation
  - Full employment
- In many cases
  - Trade-off
- Assumption
  - the Fed’s goal: zero inflation rate
Responding to Demand Shocks

- Positive demand shock
- The Fed’s possible responses:
  - Maintain the money supply
  - Maintain the interest rate
  - Neutralize the shock
Positive Demand Shock; Constant MS

Figure 2 A Positive Demand Shock with a Constant Money Supply

Interest Rate

Money

Price Level

Real GDP ($ Trillions)

A

B

M^s

B

A

M^d_1

M^d_2

7%

5%

100

110

10.0

11.5

12.5

110

100

E

H

F

AD_2

AD_1

AS
Positive Demand Shock; Constant MS

- Potential output
- Positive demand shock
- The Fed: maintains the money supply
  - Output – overshoots potential
  - Rise in the price level - short run and long run
Positive Demand Shock; Constant $r$

**Figure 3** A Positive Demand Shock with a Constant Interest Rate

[Diagram showing the effect of a positive demand shock on the economy.]
Positive Demand Shock; Constant $r$

- Potential output
- Positive demand shock
- The Fed: maintains the interest rate
  - Output – overshoots potential output (even more)
  - Greater rise in the price level
Positive Demand Shock: Neutralized

Figure 4  A Positive Demand Shock Neutralized by Monetary Policy

Interest Rate

Money

Price Level

Real GDP ($ Trillions)

Ms2  Ms1

M^d_1

AD1

AS1

100

10.0

9%

5%

D

A

E
Positive Demand Shock: Neutralized

- Potential output
- Positive demand shock
- The Fed: Neutralize the shock
  - Raises interest rate target
  - Creates complete crowding out
  - Prevents any shift in the AD curve
Responding to Supply Shocks

- Negative supply shock
  - Short-run tradeoff
    - Limit the recession - more inflation, or
    - Limit inflation - deeper recession
  - Hawk and Dove Policies
Responding to Supply Shocks

**Figure 5** Responding to Supply Shocks

The diagram illustrates the effect of supply shocks on the price level and real GDP. The graph shows the interaction between the Aggregate Demand (AD) and Aggregate Supply (AS) curves under different conditions:

- **AD<sub>no recession**</sub> and **AS<sub>1**</sub> show a scenario where the AD curve shifts right without encountering a recession.
- **AD<sub>no inflation**</sub> and **AS<sub>2**</sub> depict a situation where the AD curve shifts right without causing inflation.

Key points:
- **P<sub>1</sub>** and **P<sub>2</sub>** represent price levels before and after the shock.
- **Y<sub>3**</sub>, **Y<sub>2**</sub>, and **Y<sub>FE**</sub> indicate levels of real GDP before, during, and after the shock, respectively.
- The diagram demonstrates how supply shocks can impact the economy, either by maintaining growth without inflation or by avoiding recession.
Expectations and Ongoing Inflation

- Ongoing inflation
  - Public – expects similar trend
- A continuing, stable rate of inflation
  - Built into the economy
Built-in Inflation

- Built-in inflation
  - AS curve shifts upward each year
  - Even when output = potential
  - And unemployment = natural rate
- Built-in inflation = upward shift AS curve
- The Fed – short run
  - Can reduce inflation below the built-in rate
  - Creates recession
Built-In Inflation

Figure 6 Long-Run Equilibrium with Built-In Inflation

Price Level

$Y_{FE}$

Real GDP ($\$\text{ Trillions}$)
The Phillips Curve

- Phillips curve
  - Fed’s choices between inflation and unemployment
  - Short run