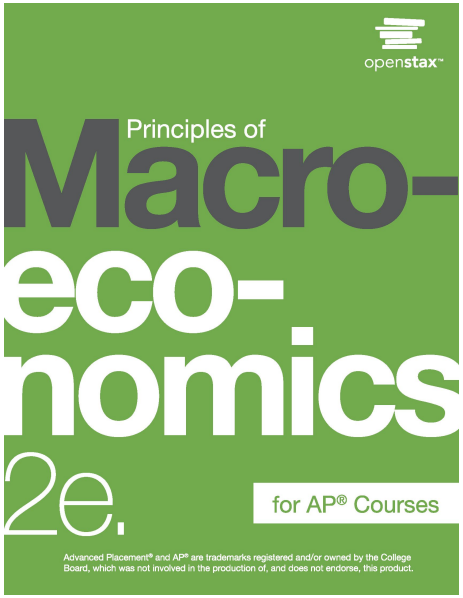
PRINCIPLES OF MACROECONOMICS 2e

Chapter 14 Monetary Policy and Bank Regulation

PowerPoint Image Slideshow



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CH.14 OUTLINE

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14.1 Marriner S. Eccles Federal Reserve Headquarters, Washington D.C.

- Some of the most influential decisions regarding monetary policy in the United States are made behind these doors.

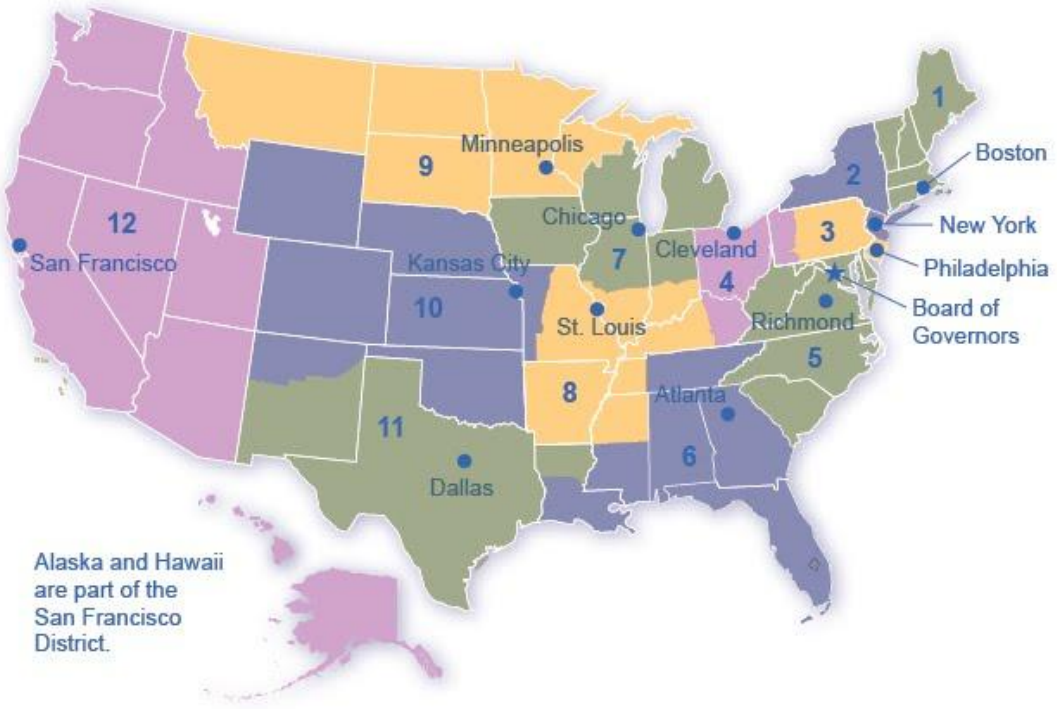
(Credit: modification of work by “squirrel83”/Flickr Creative Commons)

14.1 The Federal Reserve Banking System and Central Banks

Chair of the Federal Reserve Board

- Janet L. Yellen is the first woman to hold the position of Chair of the Federal Reserve Board of Governors. (Credit: Board of Governors of the Federal Reserve System)
- While the Chair of the Federal Reserve has only one vote, they control the agenda, and is the Fed's public voice.

The Twelve Federal Reserve Districts



- The Federal Reserve is more than the Board of Governors.
- The Fed also includes 12 regional Federal Reserve banks, each of which is responsible for supporting the commercial banks and economy generally in its district.

What Does a Central Bank Do?

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14.2 Bank Regulation

Bank Supervision

A Run on the Bank

Bank run - when depositors race to the bank to withdraw their deposits for fear that otherwise they would be lost.

- Bank runs during the Great Depression only served to worsen the economic situation. (Credit: National Archives and Records Administration)

Deposit Insurance and Lender of Last Resort

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14.3 How a Central Bank Executes Monetary Policy

How Open Market Operations Increase the Money Supply

Assets		Liabilities + Net Worth	
Reserves	40	Deposits	400
Bonds	120		
Loans	300	Net Worth	60

(a) The original balance sheet

Assets		Liabilities + Net Worth	
Reserves	40 + 20 = 60	Deposits	400
Bonds	120 – 20 = 100		
Loans	300	Net Worth	60

(b) The central bank buys bonds

Assets		Liabilities + Net Worth	
Reserves	60 – 20 = 40	Deposits	400
Bonds	100		
Loans	300 + 20 = 320	Net Worth	60

(c) The bank makes additional loans

- (a) shows that Happy Bank starts with $460 million in assets, divided among reserves, bonds and loans, and $400 million in liabilities in the form of deposits, with a net worth of $60 million.
- (b) shows when the central bank purchases $20 million in bonds from Happy Bank, the bond holdings of Happy Bank fall by $20 million and the bank's reserves rise by $20 million.

How Open Market Operations Increase the Money Supply, Continued

Assets		Liabilities + Net Worth	
Reserves	40	Deposits	400
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(c) The bank makes additional loans

- However, Happy Bank only wants to hold $40 million in reserves (the quantity of reserves with which it started),
- So, (c) shows the bank loans out the extra $20 million in reserves and its loans rise by $20 million.
- The central bank's open market operation causes an expansion of the money supply.

How Open Market Operations Decrease the Money Supply

Assets		Liabilities + Net Worth	
Reserves	40	Deposits	400
Bonds	120		
Loans	300	Net Worth	60

(a) The original balance sheet

Assets		Liabilities + Net Worth	
Reserves	40 - 30 = 10	Deposits	400
Bonds	120 + 30 = 150		
Loans	300	Net Worth	60

(b) The central bank sells bonds to the bank

Assets		Liabilities + Net Worth	
Reserves	10 + 30 = 40	Deposits	400
Bonds	150		
Loans	300 – 30 = 270	Net Worth	60

(c) The bank makes fewer loans

- (a) shows the balance sheet of Happy Bank before the central bank sells bonds in the open market.
- (b) shows when Happy Bank purchases $30 million in bonds, Happy Bank sends $30 million of its reserves to the central bank, but now holds an additional $30 million in bonds.

How Open Market Operations Decrease the Money Supply, Continued

Assets		Liabilities + Net Worth	
Reserves	40	Deposits	400
Bonds	120		
Loans	300	Net Worth	60

(a) The original balance sheet

Assets		Liabilities + Net Worth	
Reserves	40 - 30 = 10	Deposits	400
Bonds	120 + 30 = 150		
Loans	300	Net Worth	60

(b) The central bank sells bonds to the bank

Assets		Liabilities + Net Worth	
Reserves	10 + 30 = 40	Deposits	400
Bonds	150		
Loans	300 – 30 = 270	Net Worth	60

(c) The bank makes fewer loans

- However, (c) shows that Happy Bank wants to hold $40 million in reserves, so it will adjust down the quantity of its loans by $30 million, to bring its reserves back to the desired level.
- A bank can easily reduce its quantity of loans by slowing down or briefly stopping to make new loans.
- This operation causes the money supply to decrease.

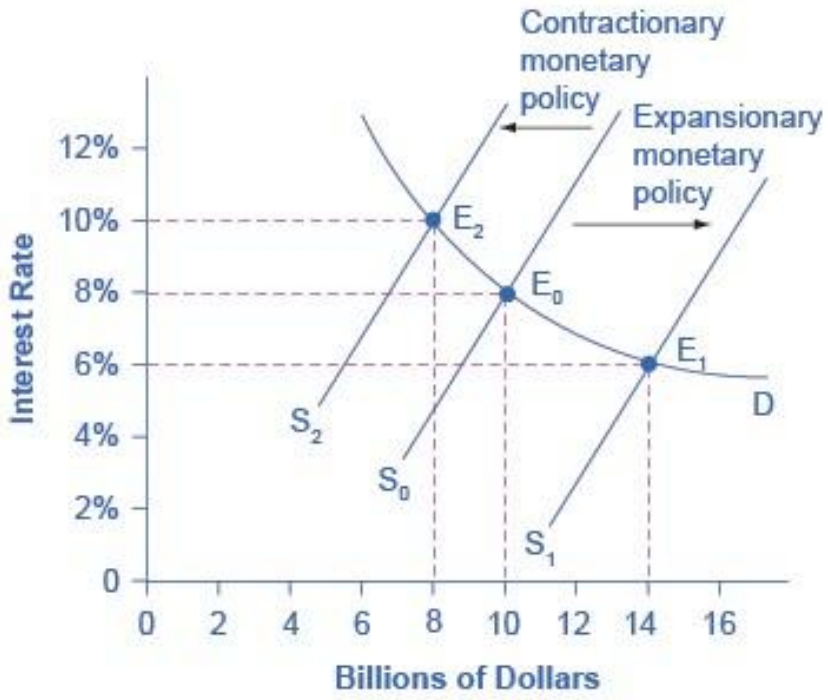
Changing Reserve Requirements

Changing the Discount Rate

14.4 Monetary Policy and Economic Outcomes

The Effect of Monetary Policy on Interest Rates

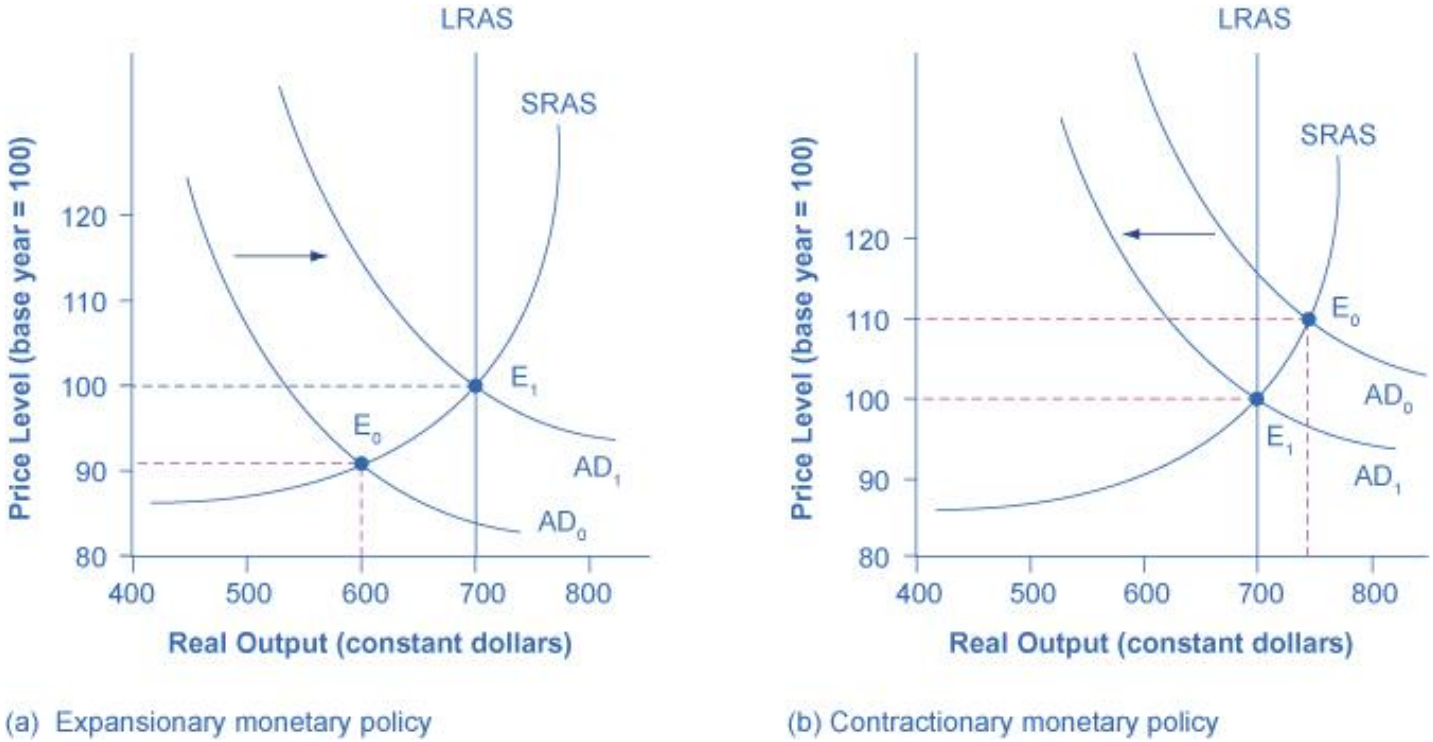
Monetary Policy and Interest Rates



- The original equilibrium occurs at E_0.
- An expansionary monetary policy will shift the supply of loanable funds to the right from the original supply curve (S_0) to the new supply curve (S_1) and to a new equilibrium of E_1, reducing the interest rate from 8% to 6%.
- A contractionary monetary policy will shift the supply of loanable funds to the left from the original supply curve (S_0) to the new supply (S_2), and raise the interest rate from 8% to 10%.

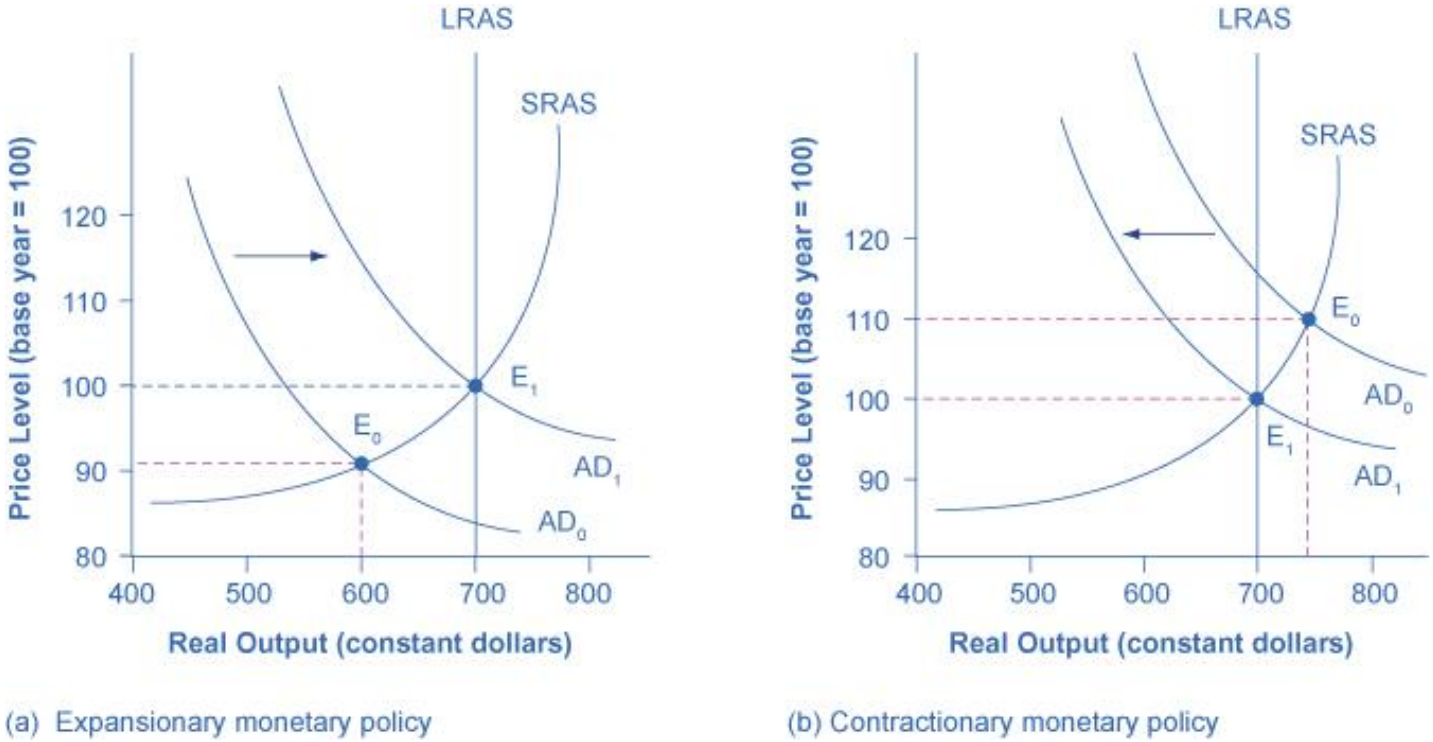
The Effect of Monetary Policy on Aggregate Demand

Expansionary or Contractionary Monetary Policy



- In (a), the economy is originally in a recession with the equilibrium output and price shown at E_0.
- Expansionary monetary policy will reduce interest rates and shift aggregate demand to the right from AD_0 to AD_1,
- This leads to the new equilibrium (E_1) at the potential GDP level of output with a relatively small rise in the price level.

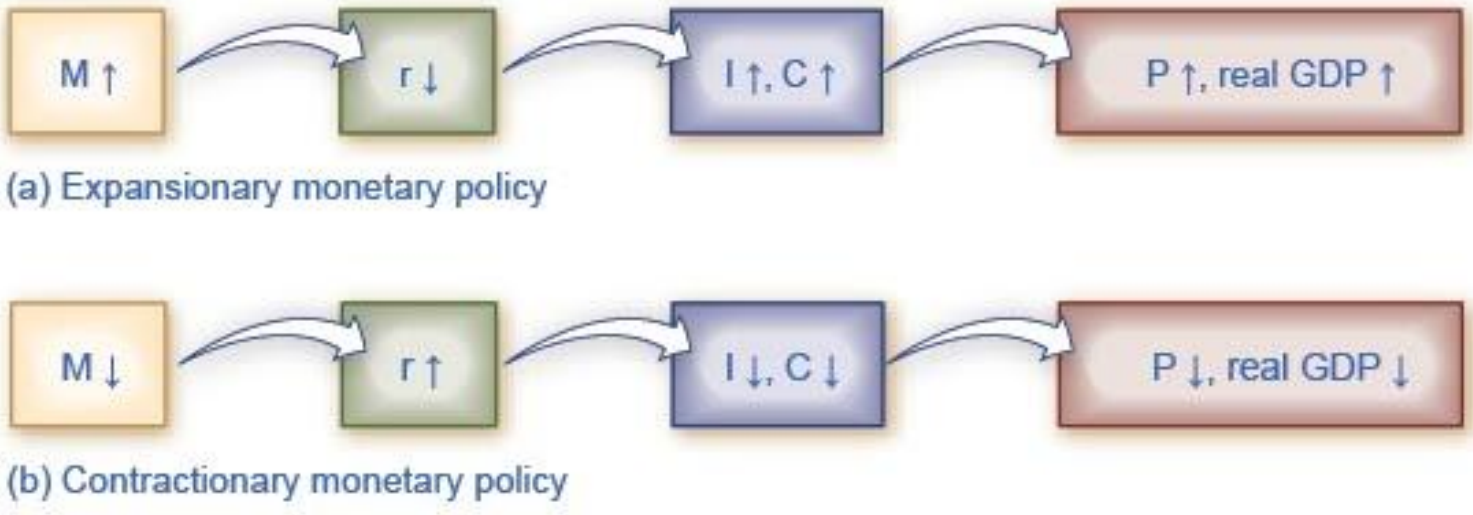
Expansionary or Contractionary Monetary Policy, Continued



- In (b), the economy is originally producing above the potential GDP level of output at the equilibrium E_0 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,
- This leads to a new equilibrium (E_1) at the potential GDP level of output.

Countercyclical

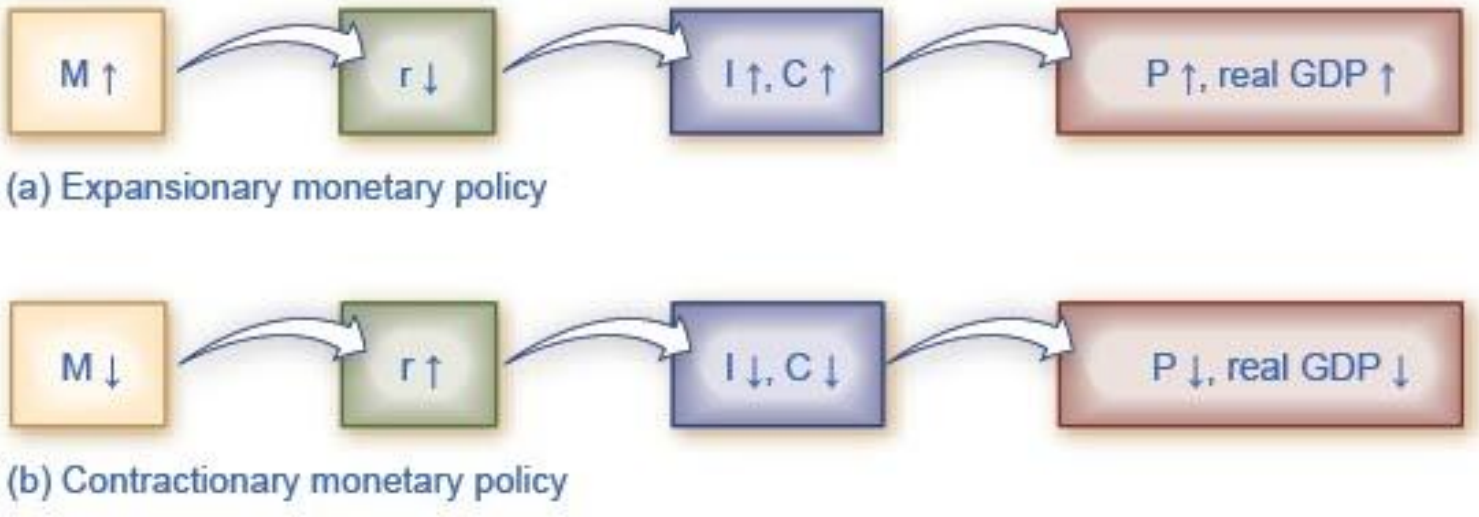
The Pathways of Monetary Policy



- For (a), in expansionary monetary policy the central bank causes the supply of money and loanable funds (M) to increase, which lowers the interest rate (r), stimulating additional borrowing for investment (I) and consumption (C), and shifting aggregate demand *right*.

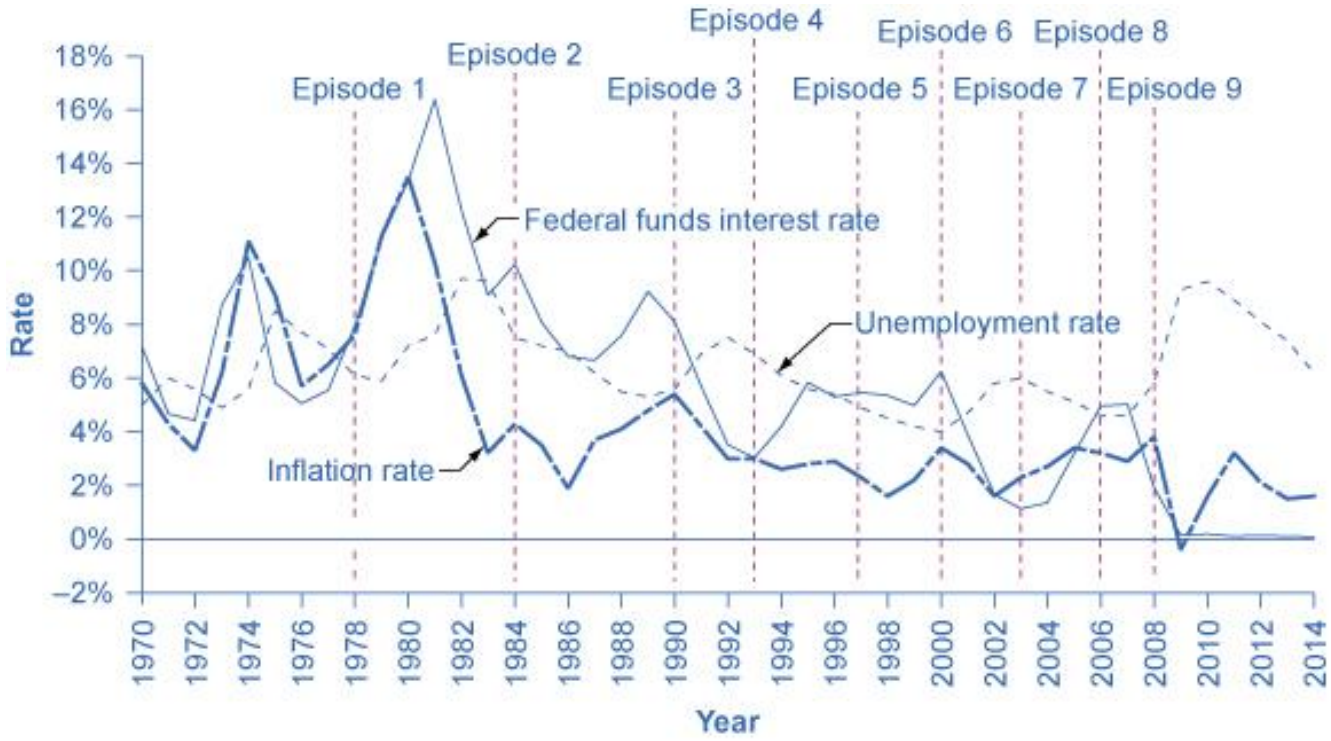
- The result is a higher price level (P) and, at least in the short run, higher real GDP.

The Pathways of Monetary Policy, Continued



- For (b), in contractionary monetary policy, the central bank causes the supply of money (M) and credit in the economy to decrease, which raises the interest rate (r), discouraging borrowing for investment (I) and consumption (C), and shifting aggregate demand *left*.
- The result is a lower price level (P) and, at least in the short run, lower real GDP.

Federal Reserve Actions Over Last Four Decades



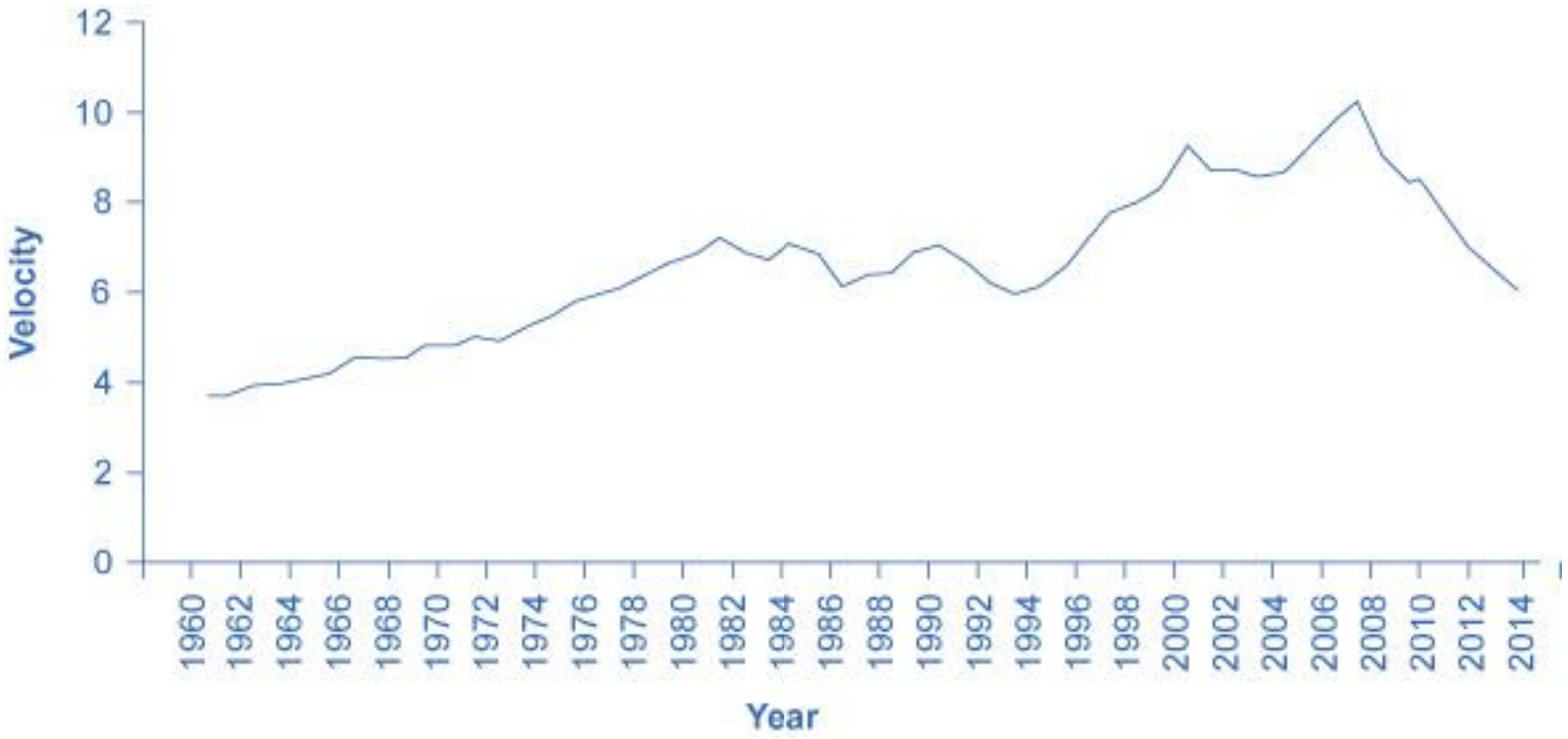
- Through the episodes here, the Federal Reserve typically reacted,
  - to higher inflation - with a contractionary monetary policy and a higher interest rate.
  - to higher unemployment - with an expansionary monetary policy and a lower interest rate.

Quantitative Easing

14.5 Pitfalls for Monetary Policy

Unpredictable Movements of Velocity

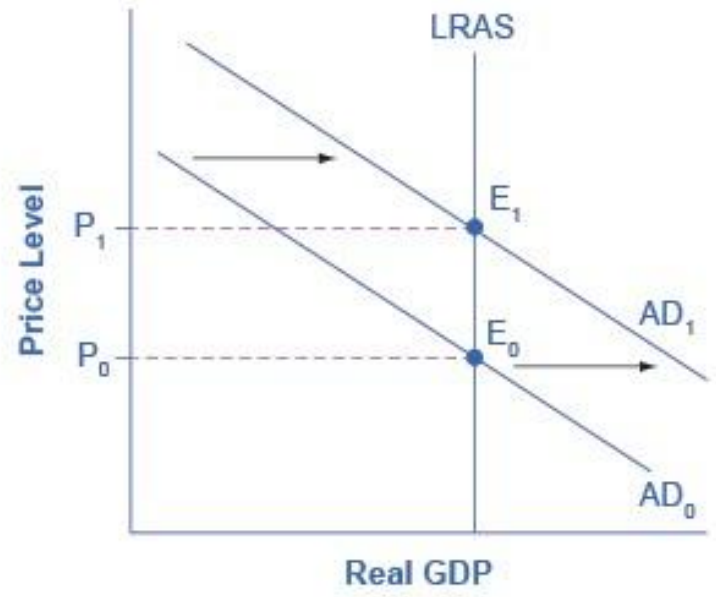
Velocity Calculated Using M1



- Velocity is the nominal GDP divided by the money supply for a given year.
- We can calculate different measures of velocity by using different measures of the money supply.
- Velocity, as calculated by using M1 money supply, has lacked a steady trend since the 1980s, instead bouncing up and down. (credit: Federal Reserve Bank of St. Louis)

Unemployment and Inflation

Monetary Policy in a Neoclassical Model



- In a neoclassical view, monetary policy affects only the price level, not the level of output in the economy.
- For example, an expansionary monetary policy causes aggregate demand to shift from the original AD_0 to AD_1.
- However, the adjustment of the economy from the original equilibrium (E_0) to the new equilibrium (E_1) represents an inflationary increase in the price level from P_0 to P_1, but has no effect in the long run on output or the unemployment rate.
- In fact, no shift in AD will affect the equilibrium quantity of output in this model.