Chapter 23 – Aggregate Demand and Supply Analysis

Aggregate Demand

Aggregate Supply

Aggregate Demand

1) Monetarist View:

Recall: Quantity Theory of Money

2) Keynesian view: Aggregate Demand is made up of four components

   – **consumption expenditure**

   – **planned investment spending**

   – **government purchases**

   – **net exports**

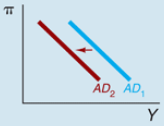
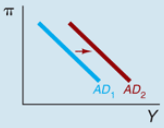
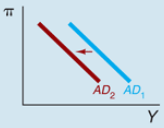
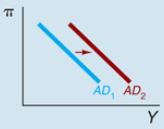
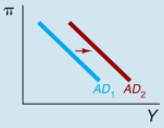
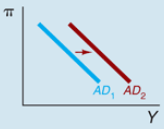
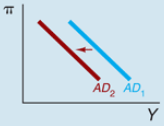
The aggregate demand curve is downward sloping because

- The fact that the aggregate demand curve is downward sloping can also be derived from the quantity theory of money analysis.
- If velocity stays constant, a constant money supply implies constant nominal aggregate spending, and a decrease in the price level is matched with an increase in aggregate demand.

Factors that Shift the Aggregate Demand Curve

- An increase in the money supply shifts AD to the right: holding velocity constant, an increase in the money supply increases the quantity of aggregate demand at each price level
- An increase in spending from any of the components *C, I, G, NX,* will also shift AD to the right

Factors That Shift the Aggregate Demand Curve

Factor	Change	Shift in Aggregate Demand Curve
Autonomous monetary policy, $\bar{r}$	↑	
Government purchases, $\bar{G}$	↑	
Taxes, $\bar{T}$	↑	
Autonomous net exports, $\overline{NX}$	↑	
Autonomous consumption expenditure, $\bar{C}$	↑	
Autonomous investment, $\bar{I}$	↑	
Financial frictions, $\bar{f}$	↑	

Note: Only increases (↑) in the factors are shown. The effect of decreases in the factors would be the opposite of those indicated in the "Shift" column.

Figure 1 Leftward Shift in the Aggregate Demand Curve

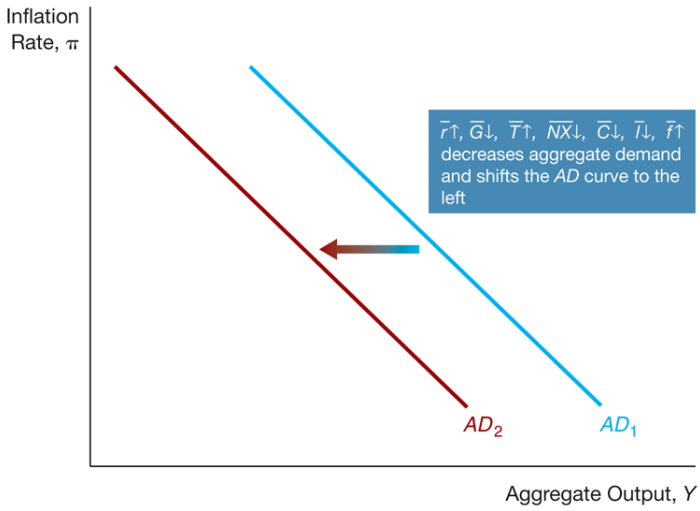
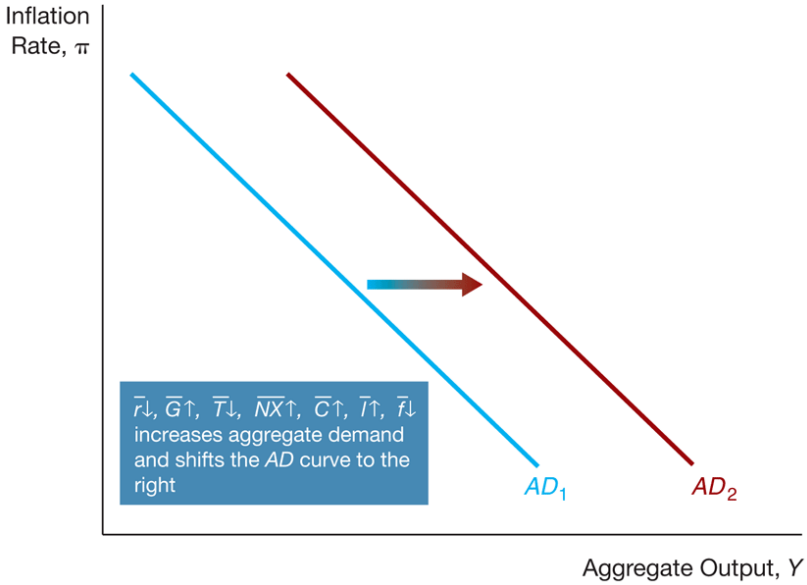


Figure 2 Rightward Shift in the Aggregate Demand Curve

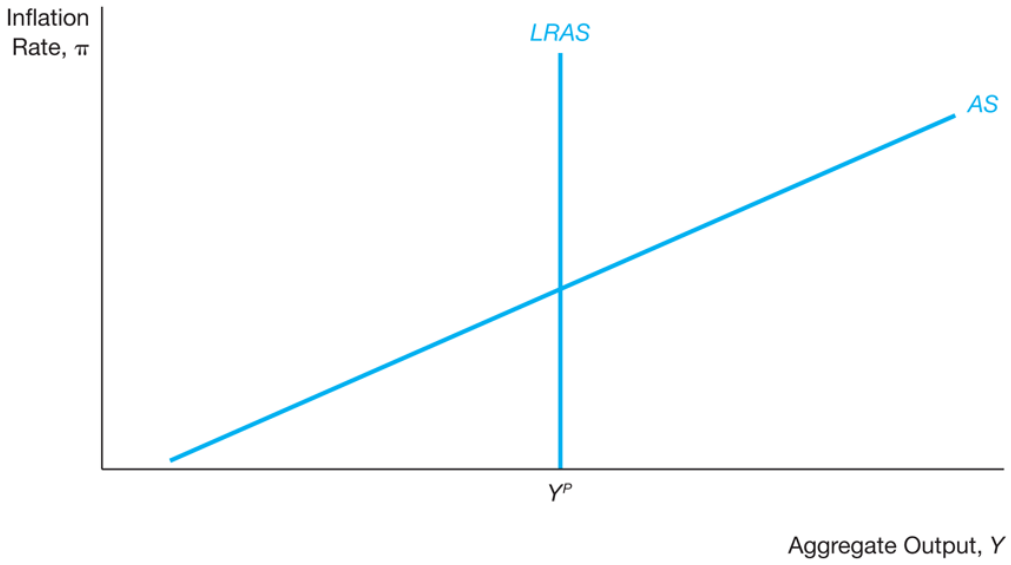


The Crowding Out Debate

Aggregate Supply

- Long-run aggregate supply curve
  - Determined by amount of capital and labor and the available technology
  - Vertical at the natural rate of output generated by the natural rate of unemployment
- Short-run aggregate supply curve
  - Wages and prices are sticky
  - Generates an upward sloping *SRAS* as firms attempt to take advantage of short-run profitability when price level rises

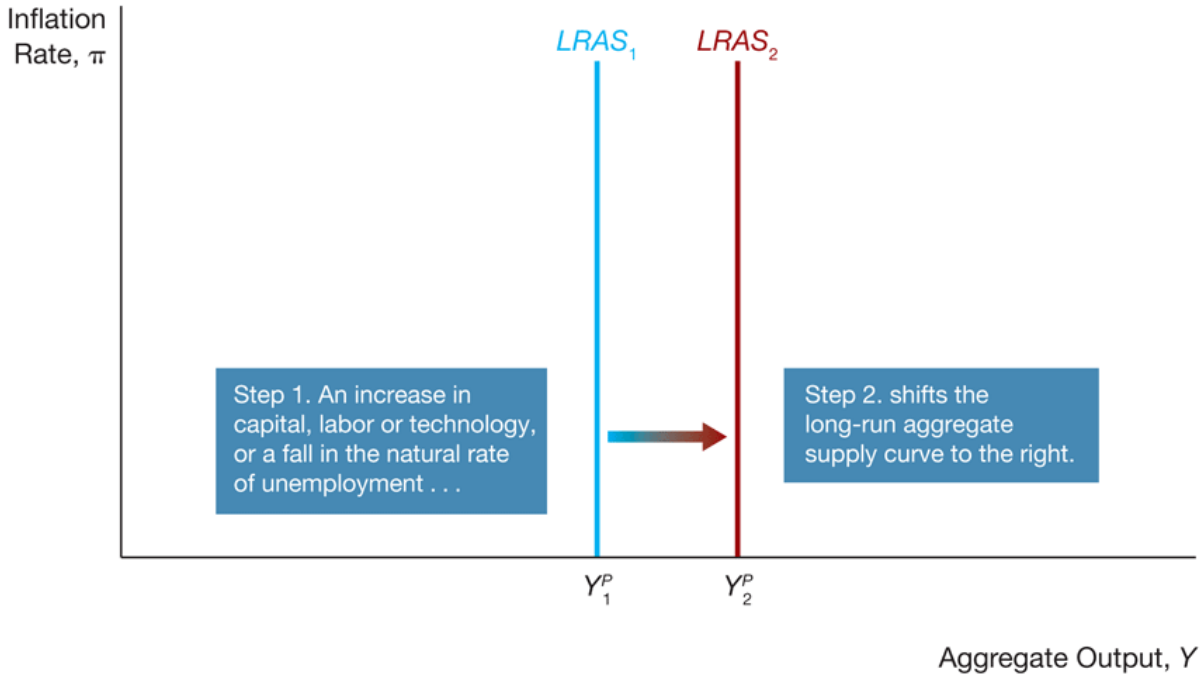
Figure 3 Long- and Short-Run Aggregate Supply Curves



Shifts in Aggregate Supply Curves

- Shifts in the long run aggregate supply curve
  - The long-run aggregate supply curve shifts to the right from when there is 1) an increase in the total amount of capital in the economy, 2) an increase in the total amount of labor supplied in the economy, 3) an increase in the available technology, or 4) a decline in the natural rate of unemployment
  - An opposite movement in these variables shifts the LRAS curve to the left

Figure 4 Shift in the Long-Run Aggregate Supply Curve



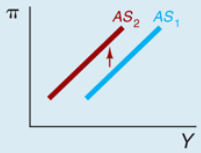
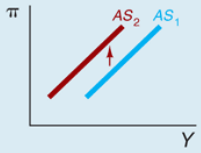
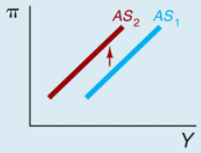
Shifts in the Short-Run Aggregate Supply Curve

There are three factors that can shift the short-run aggregate supply curve:

1) expected inflation
2) price shocks
3) a persistent output gap

SUMMARY TABLE 2 Factors That Shift the Short-Run Aggregate Supply Curve

Factors That Shift the Short-Run Aggregate Supply Curve

Factor	Change	Shift in Supply Curve
Expected inflation, π^e	↑	
Price shock, ↑	↑	
Output gap, $(Y - Y^P)$	↑	

Note: Only increases (↑) in the factors are shown. The effect of decreases in the factors would be the opposite of those indicated in the "Shift" column.

Figure 5 Shift in the Short-Run Aggregate Supply Curve from Changes in Expected Inflation and Price Shocks

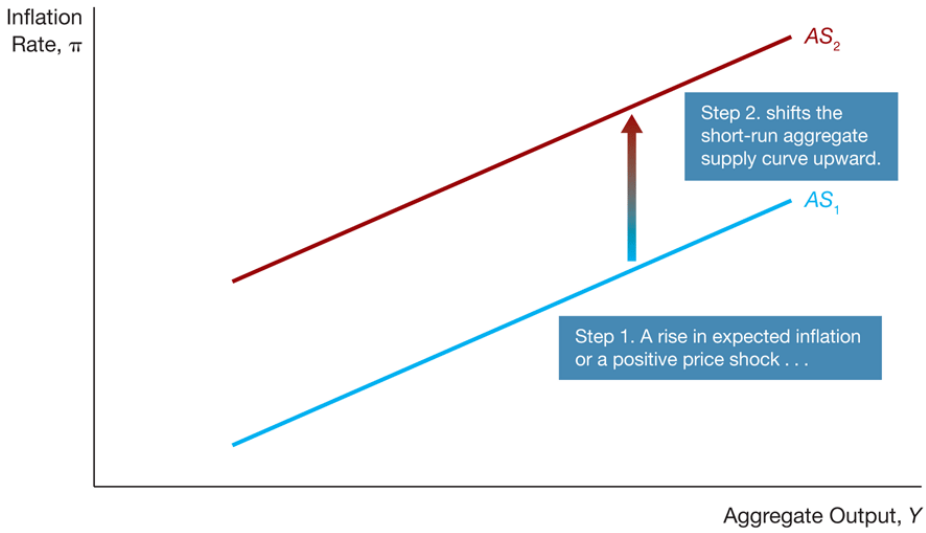
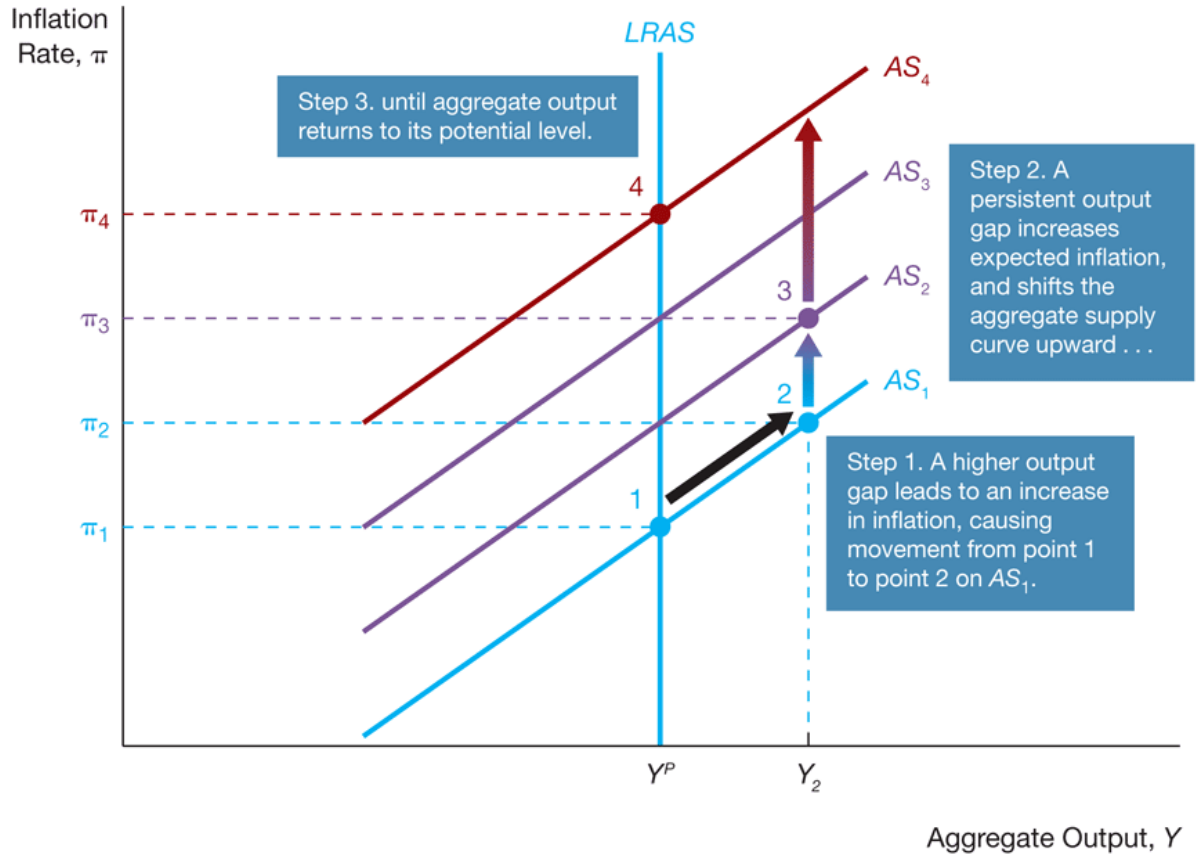


Figure 6 Shift in the Short-Run Aggregate Supply Curve from a Persistent Positive Output Gap



Equilibrium in Aggregate Demand and Supply Analysis

- We can now put the aggregate demand and supply curves together to describe **general equilibrium** in the economy, when all markets are simultaneously in equilibrium at the point where the quantity of aggregate output demanded equals the quantity of aggregate output supplied

Figure 7 Short-Run Equilibrium

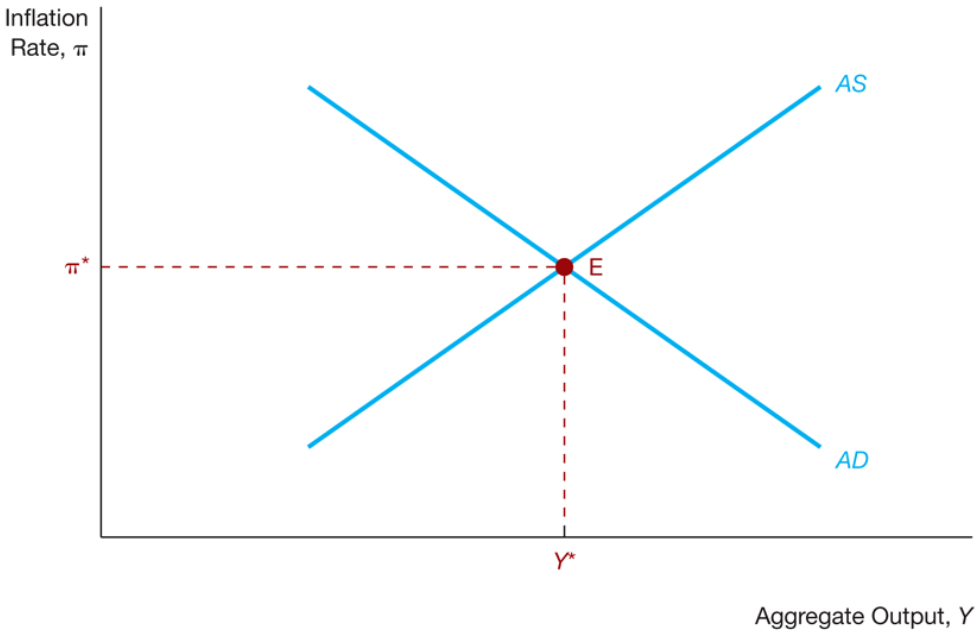
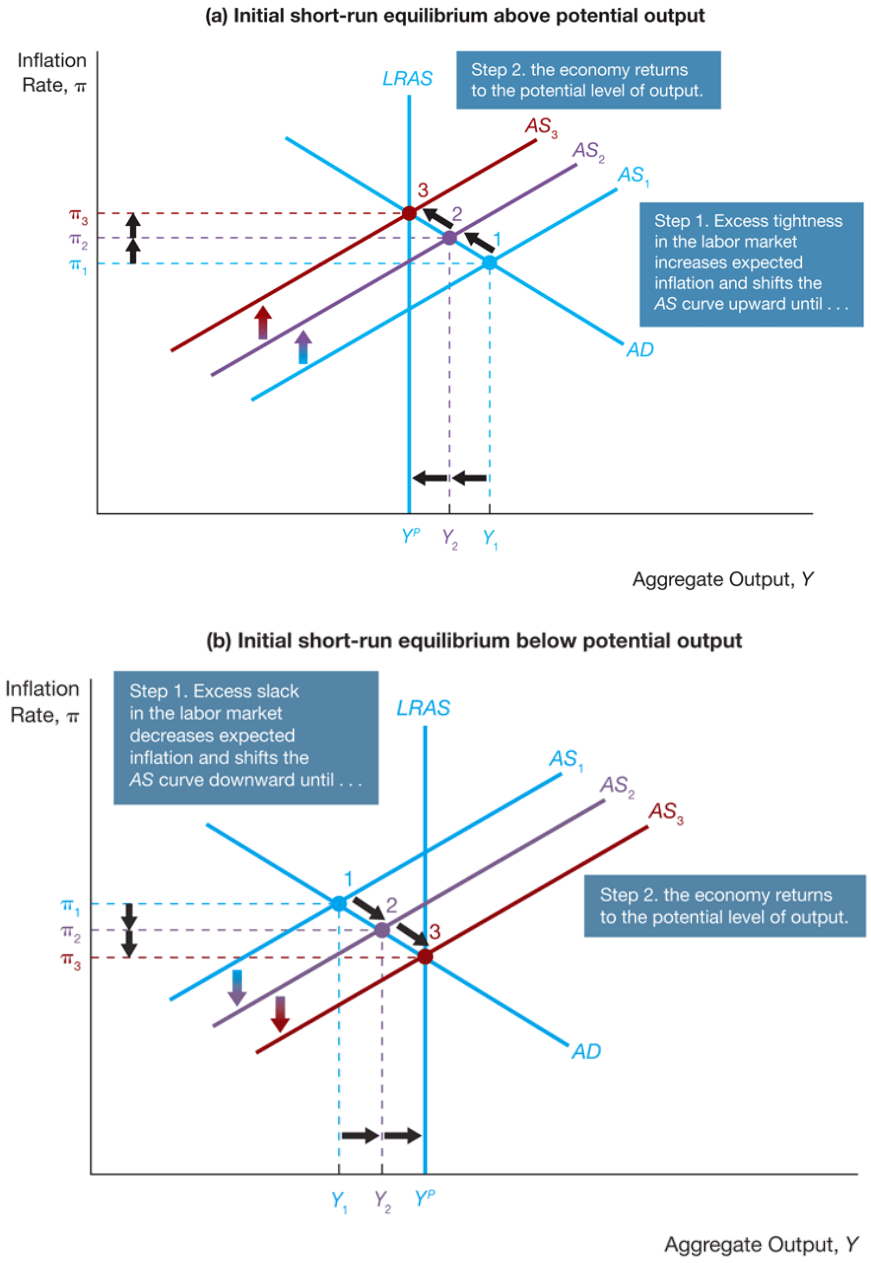


Figure 8 Adjustment to Long-Run Equilibrium in Aggregate Supply and Demand Analysis



Self-Correcting Mechanism

- Regardless of where output is initially, it returns eventually to the natural rate
- **Slow**
  - Wages are inflexible, particularly downward
  - Need for active government policy
- **Rapid**
  - Wages and prices are flexible
  - Less need for government intervention

Changes in Equilibrium: Aggregate Demand Shocks

- With an understanding of the distinction between the short-run and long-run equilibria, you are now ready to analyze what happens when there are demand shocks, shocks that cause the aggregate demand curve to shift

Figure 9 Positive Demand Shock

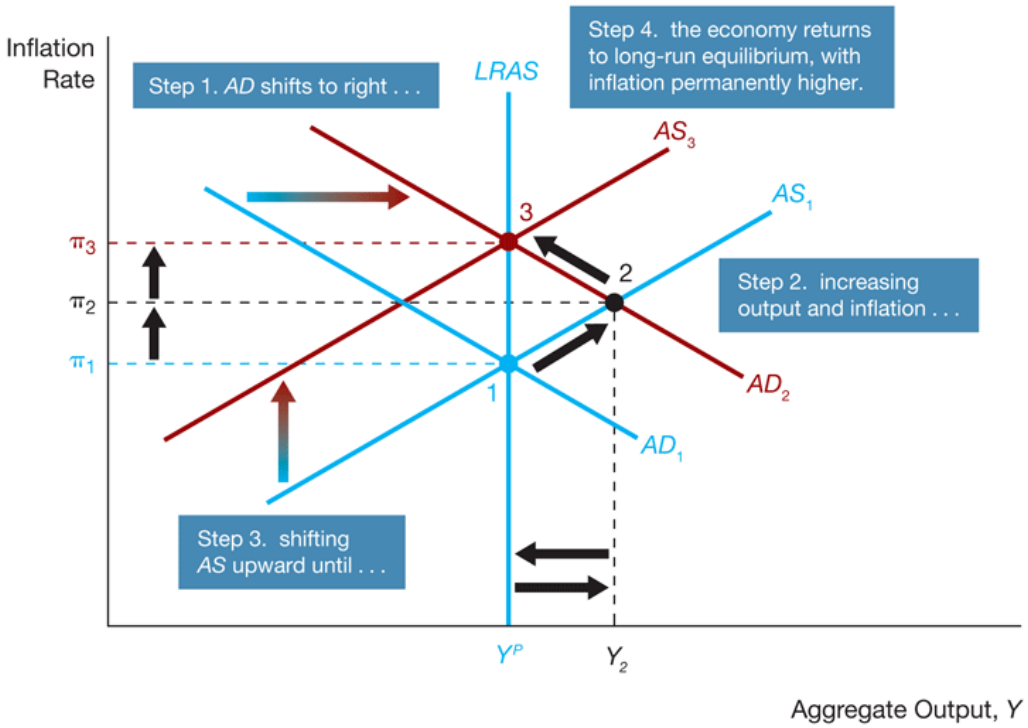
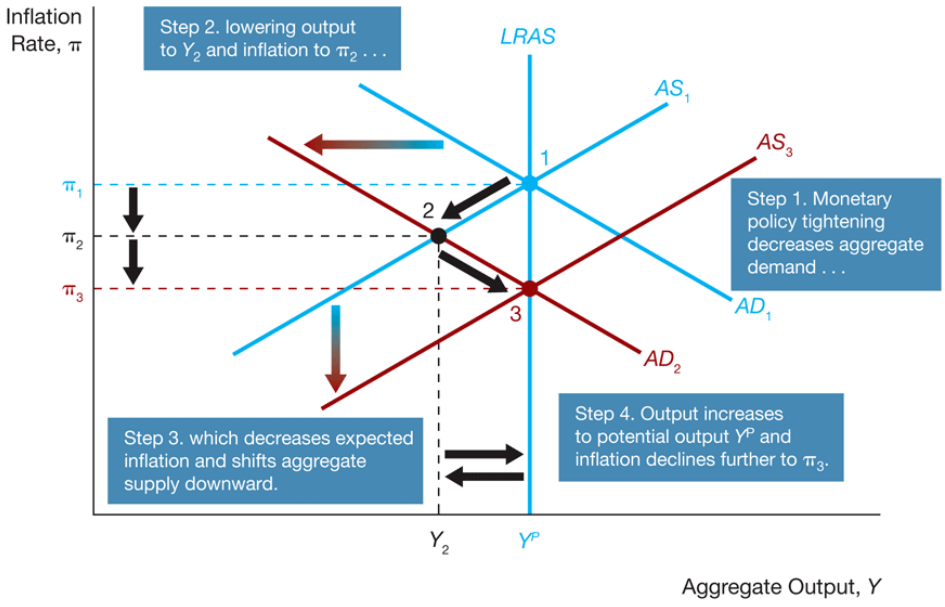


Figure 10 The Volcker Disinflation

(a) Aggregate Demand and Aggregate Supply Analysis

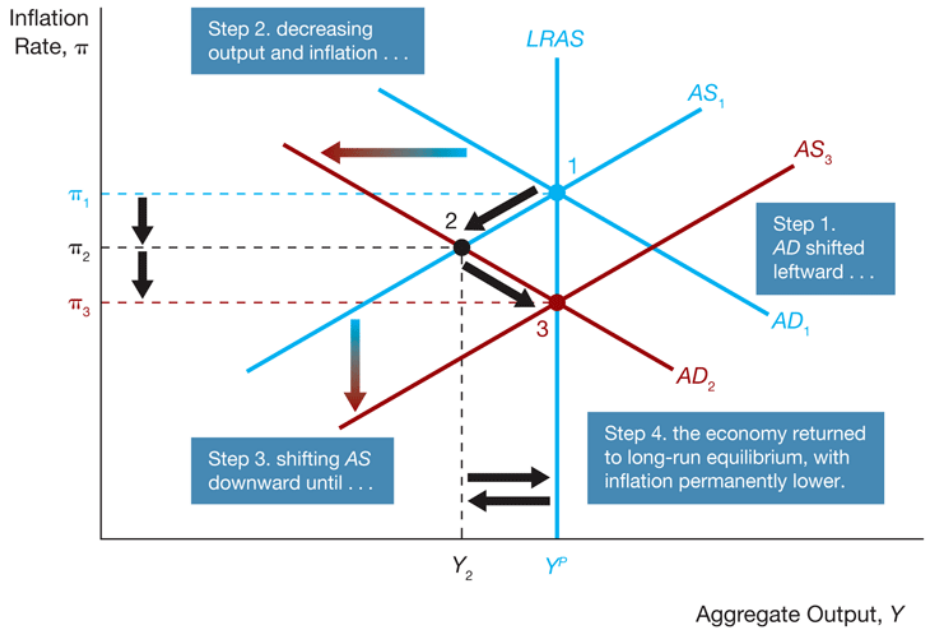


(b) Unemployment and Inflation, 1980–1986

Year	Unemployment Rate (%)	Inflation (Year to Year) (%)
1980	7.1	13.5
1981	7.6	10.3
1982	9.7	6.2
1983	9.6	3.2
1984	7.5	4.3
1985	7.2	3.6
1986	7.0	1.9

Figure 11 Negative Demand Shocks, 2001–2004

(a) Aggregate Demand and Aggregate Supply Analysis



(b) Unemployment and Inflation, 2000–2004

Year	Unemployment Rate (%)	Inflation (Year to Year) (%)
2000	4.0	3.4
2001	4.7	2.8
2002	5.8	1.6
2003	6.0	2.3
2004	5.5	2.7