

# Chapter 22

## Understanding Business Cycles

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### The Aggregate Supply Curve

- The aggregate supply curve tells us where on the aggregate demand curve the economy will end up, explaining the relationship between inflation and real output in the process.

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### The Aggregate Supply Curve

- Inflation persistence → FLAT SRAS
  - When inflation is low one year, it tends to be low the next, and when it is high, it tends to stay high
  - Over shorter periods of several months, inflation remains steady while real output adjusts

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## The Aggregate Supply Curve

- The Sources of Inflation Persistence
  - When people expect inflation to continue, they adjust their prices and wages accordingly
  - Not all wage and price decisions are made at the same time.
- Inflation persistence → FLAT SRAS

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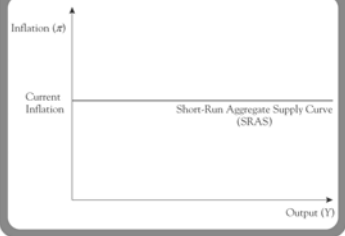
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## The Aggregate Supply Curve

Figure 22.3 Short-Run Aggregate Supply Curve

Inflation persistence means the short-run aggregate supply curve is horizontal.



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## The Aggregate Supply Curve

- Shifts in the Short-Run Aggregate Supply Curve
  - *Output Gaps*

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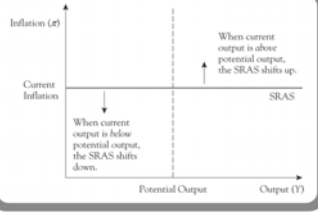
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# The Aggregate Supply Curve

Figure 22.4 Shifts in the Short-Run Aggregate Supply Curve  
Response to an Output Gap

When current output rises above potential output, creating an expansionary output gap, the short-run aggregate supply curve shifts upward. When current output falls below potential output, creating a recessionary output gap, the short-run aggregate supply curve shifts downward.




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# The Aggregate Supply Curve

- Shifts in the Short-Run Aggregate Supply Curve
  - Inflation Shocks

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# The Aggregate Supply Curve

Figure 22.6 Shifts in the Short-Run Aggregate Supply Curve  
Response to an Inflation Shock

A rise in labor costs, the price of raw materials, or the expected future level of inflation creates an inflation shock that shifts the short-run aggregate supply curve upward, causing inflation to rise.




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## The Aggregate Supply Curve

- The long-run aggregate supply curve
  - Vertical at the point where current output equals potential output.
  - Any point along the long-run aggregate supply curve, current output equals potential output and current inflation equals expected inflation.

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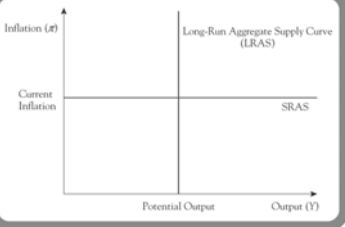
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## The Aggregate Supply Curve

Figure 22.7 The Long-Run and Short-Run Aggregate Supply Curves

The long-run aggregate supply curve is vertical at the point where current output equals potential output.



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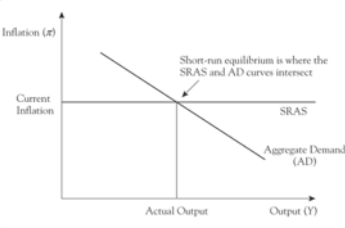
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## Equilibrium and the Determination of Output and Inflation

Figure 22.9 Short-Run Equilibrium of Output and Inflation

Inflation and actual output are determined by the intersection of the short-run aggregate supply curve with the aggregate demand curve.



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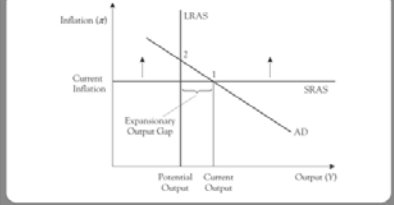
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## Equilibrium and the Determination of Output and Inflation

Figure 22.10 Adjustment to Long-Run Equilibrium

A. Adjustment when Current Output is Greater than Potential Output  
At the initial short-run equilibrium point 1, current output is greater than potential output, creating an expansionary output gap that exerts upward pressure on inflation. From here, the short-run aggregate supply curve will shift upward. The process continues until the economy reaches point 2, where current output and potential output are equal.



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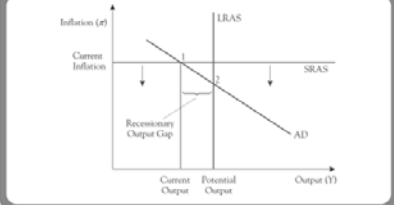
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## Equilibrium and the Determination of Output and Inflation

Figure 22.10 Adjustment to Long-Run Equilibrium

B. Adjustment when Current Output is Less than Potential Output  
At the initial short-run equilibrium point 1, current output is lower than potential output, creating a recessionary output gap that exerts downward pressure on inflation. From here, the short-run aggregate supply curve will shift downward. The process continues until the economy reaches point 2, where current output and potential output are equal.



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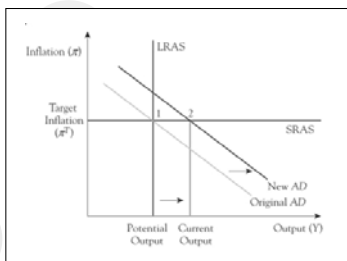
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## The Impact of a Shift in Aggregate Demand on Output and Inflation

Short-Run Equilibrium Inflation and Output Following an Increase in Aggregate Demand



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## The Impact of a Shift in Aggregate Demand on Output and Inflation

- **1. Start at Long-Run Equilibrium**
  - $Y = \text{Potential Output}$
  - $\pi = \text{Target Inflation}$
- **2. Aggregate Demand Shifts Right**
  - Original AD shifts to New AD
  - $Y > \text{Potential Output}$
  - Inflation Is Unchanged

Short-run equilibrium moves from point 1 to point 2

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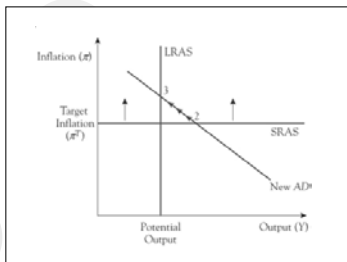
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## The Impact of a Shift in Aggregate Demand on Output and Inflation

Adjustment of Short-Run Equilibrium Inflation and Output Following an Increase in Aggregate Demand



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## The Impact of a Shift in Aggregate Demand on Output and Inflation

- **Adjustment:**
- **1. At the Short-Run Equilibrium point 2:**
  - $Y > \text{Potential Output}$
- **2. SRAS begins to shift up**
  - Output begins to fall
  - Inflation begins to rise as economy moves along New AD
- **3. With no policy response, economy moves to point 3, where**
  - Current inflation  $>$  Target inflation

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### The Impact of a Shift in Aggregate Demand on Output and Inflation

- If central bankers simply sit and watch as the aggregate demand curve shifts to the right, inflation will rise
- So long as monetary policymakers remain committed to their original inflation target, they will need to do something to get the economy back to the point where it began—point “1”

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### The Impact of a Shift in Aggregate Demand on Output and Inflation

- An increase in government purchases raises the long-term real interest rate.
- Policymakers will compensate by shifting their monetary policy reaction curve to the left, increasing the real interest rate at every level of inflation

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### The Impact of a Shift in Aggregate Demand on Output and Inflation

- When the monetary policy reaction curve shifts, the aggregate demand curve shifts with it.
- The aggregate demand curve will shift to the left, bringing the economy back to long-run equilibrium.

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## The Impact of Inflation Shocks on Output and Inflation

- An inflation shock shifts the short-run aggregate supply curve (such as an oil price increase )

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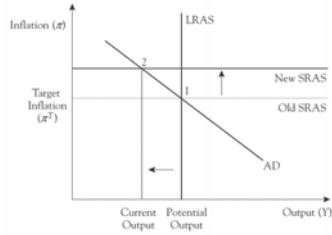
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## The Impact of Inflation Shocks on Output and Inflation

Figure 22.12 The Effects of a Positive Inflation Shock on Short-Run Equilibrium

A positive inflation shock shifts the short-run aggregate supply curve upward, moving short-run equilibrium from point 1 to point 2. Inflation rises and output falls.



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## Shifts in Potential Output and Real Business Cycle Theory

- Real business cycle theory
  - Focuses on shifts in potential output

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## Stabilization Policy

- Monetary Policy
  - Policymakers can shift the aggregate demand curve by shifting their monetary policy reaction curve, but they cannot shift the short-run aggregate supply curve
  - They can neutralize movements in aggregate demand, but they cannot eliminate the effects of an inflation shock

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## Chapter 22

End of Chapter

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