Chapter 23

Monetary Policy Theory

Response of Monetary Policy to Shocks

- Monetary policy should try to minimize the difference between inflation and the inflation target

- In the case of both demand shocks and permanent supply shocks, policy makers can simultaneously pursue price stability and stability in economic activity (“divine coincidence”)

- Following a temporary supply shock, however, policy makers can achieve either price stability or economic activity stability, but not both. This tradeoff poses a dilemma for central banks with dual mandates

Response to an Aggregate Demand Shock

- Policy makers can respond to this shock in two possible ways:
  - No policy response
  - Policy stabilizes economic activity and inflation in the short run
- In the case of aggregate demand shocks, there is no tradeoff between the pursuit of price stability and economic activity stability

Figure 1: Aggregate Demand Shock: No Policy Response

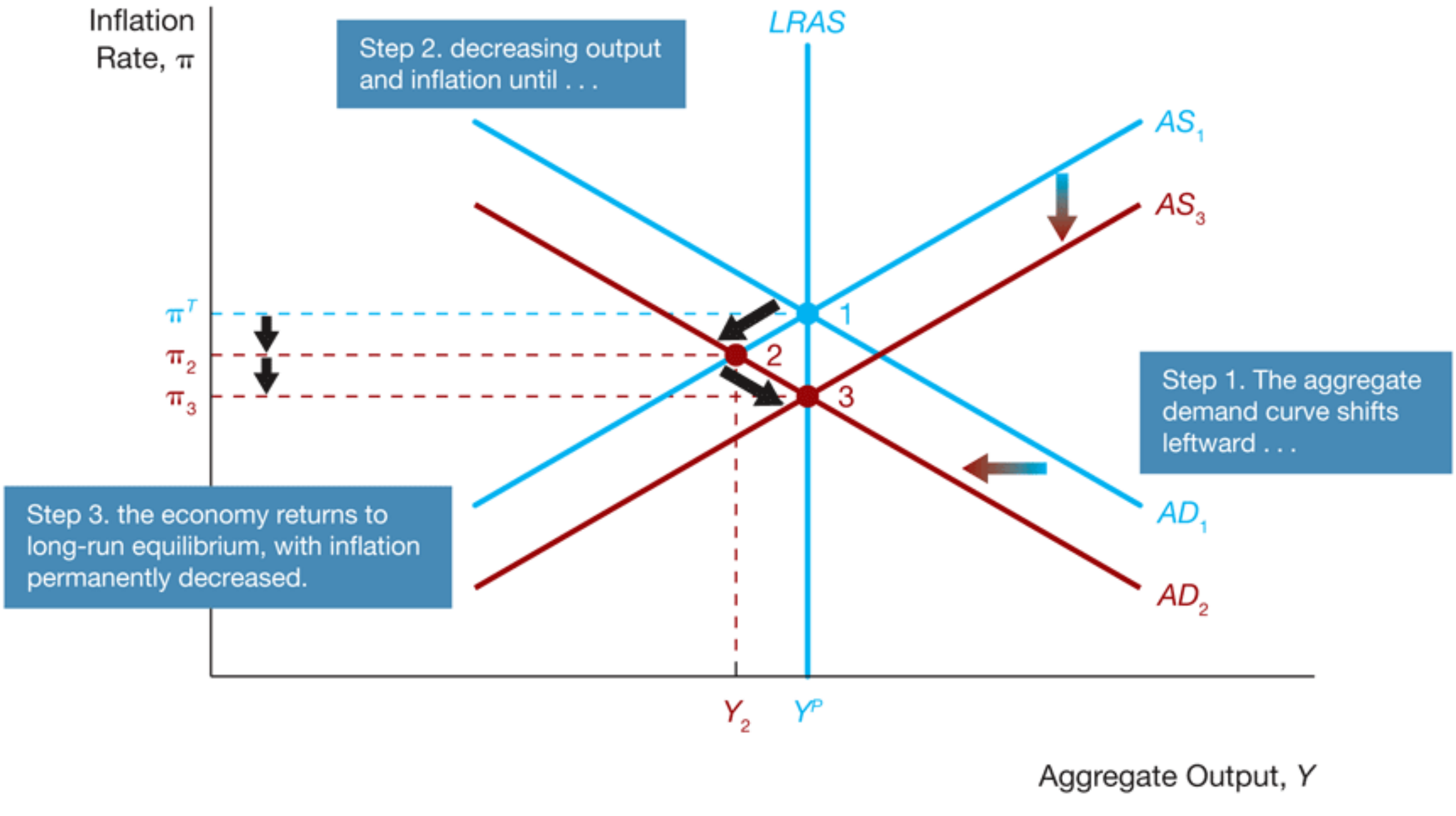
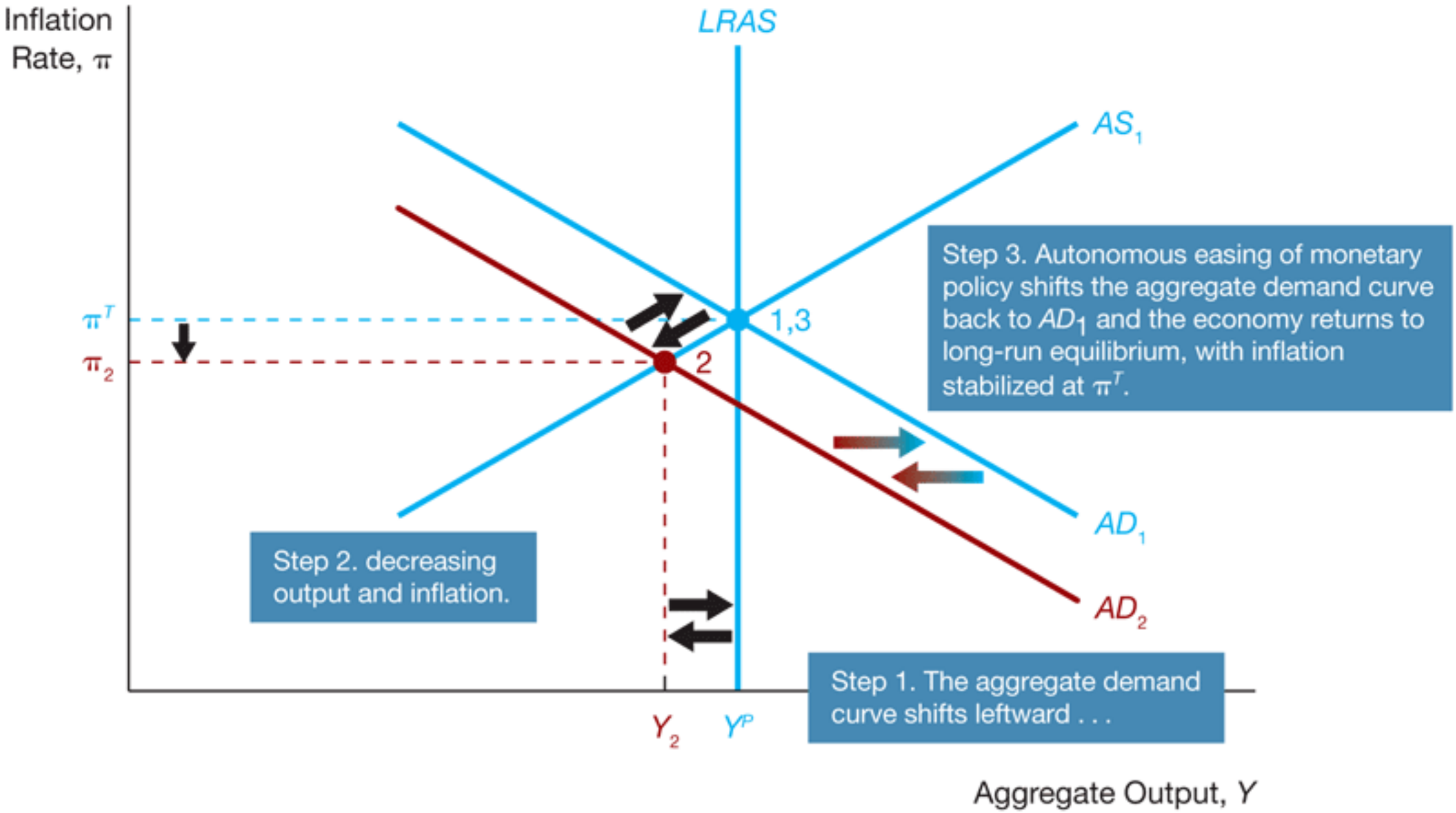


Figure 2: Aggregate Demand Shock: Policy Stabilizes Output and Inflation in the Short Run



Application: Quantitative (Credit) Easing to Respond to the Global Financial Crisis

- Sometimes the negative aggregate demand shock is so large that the central bank cannot lower the real interstate further
    - Zero-lower bound problem
        - occurred after the Lehman Brothers bankruptcy in late 2008
- In this situation, the central bank must turn to nonconventional monetary policy
    - liquidity provision and asset purchases
    - the Fed tried to decrease the financial frictions ($\bar{f}$)

Application: Quantitative (Credit) Easing to Respond to the Global Financial Crisis (cont'd)

- Result:
  - The Fed successfully shift the AD curve to the right
  - However, the negative aggregate demand shock to the economy from the global financial crisis was so great that the Fed was unable to shift the aggregate demand curve all the way back and the economy still suffered a severe recession

Response to a Permanent Supply Shock

- There are two possible policy responses to a permanent supply shock:
  - No policy response
  - Policy stabilizes inflation

Figure 3: Permanent Supply Shock: No Policy Response

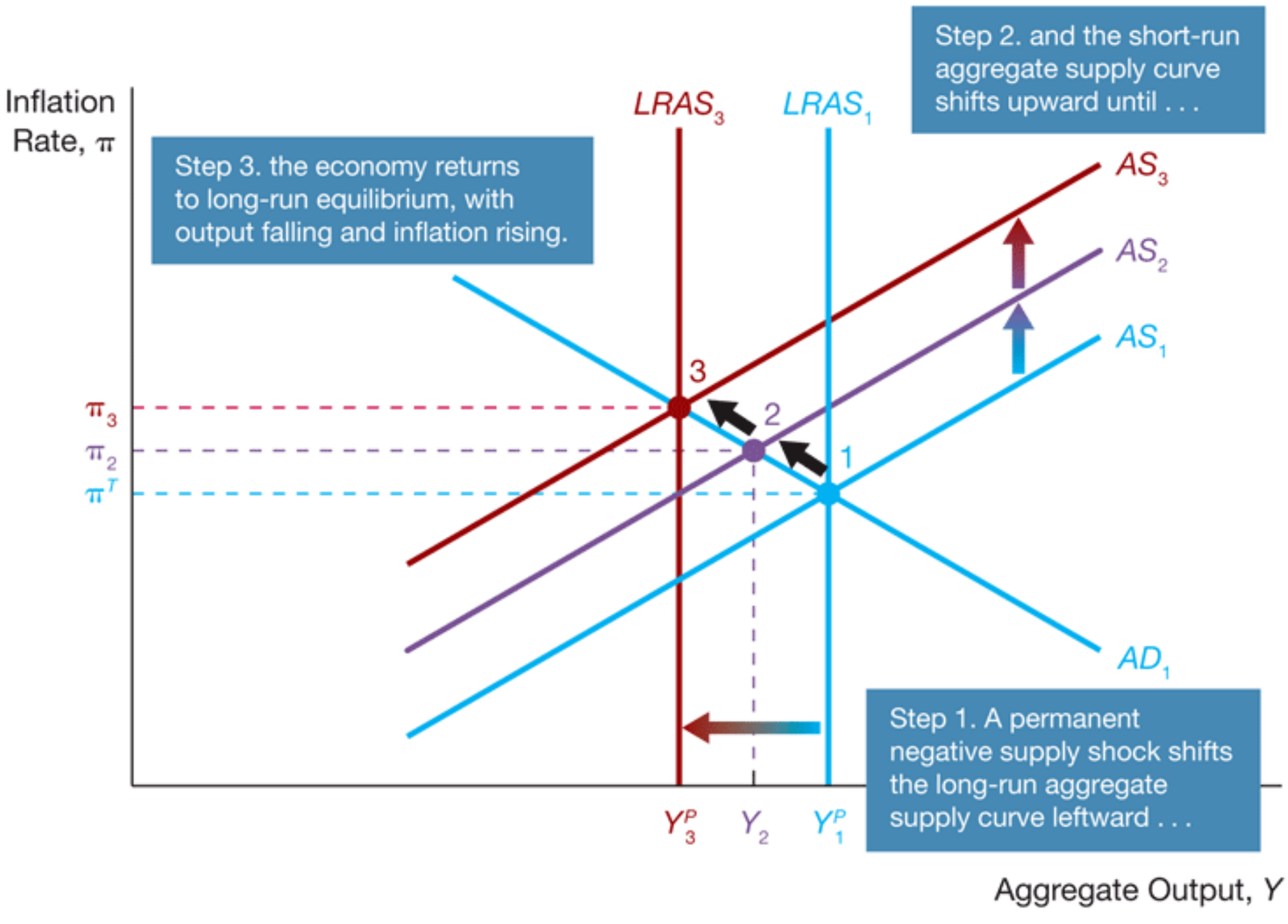
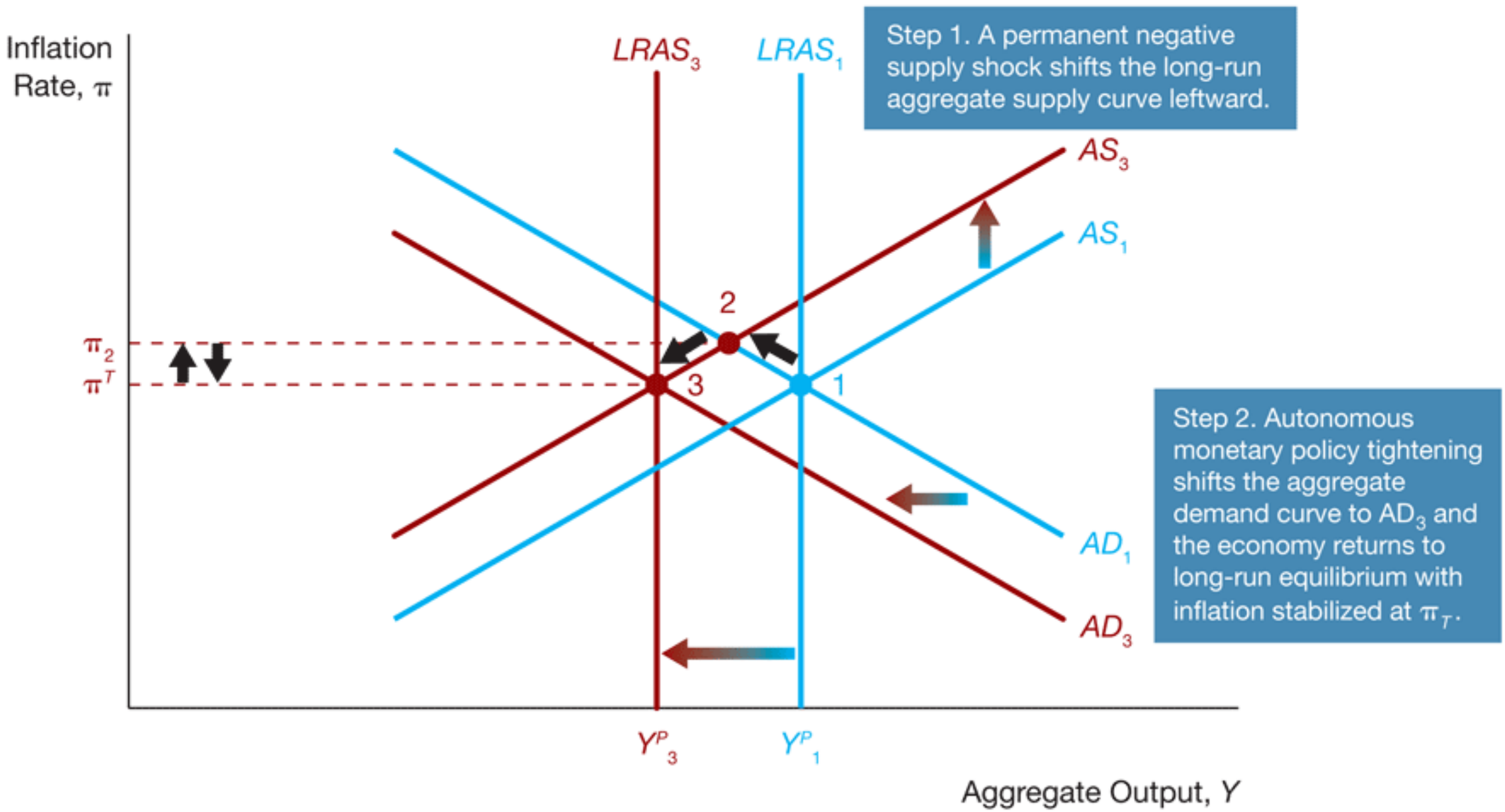


Figure 4: Permanent Supply Shock: Policy Stabilizes Inflation



Response to a Temporary Supply Shock

- When a supply shock is temporary, policymakers face a short-run tradeoff between stabilizing inflation and economic activity
- Policymakers can respond to the temporary supply shock in three possible ways:
  - No policy response
  - Policy stabilizes inflation in the short run
  - Policy stabilizes economic activity in the short run

Figure 5: Response to a Temporary Aggregate Supply Shock: No Policy Response

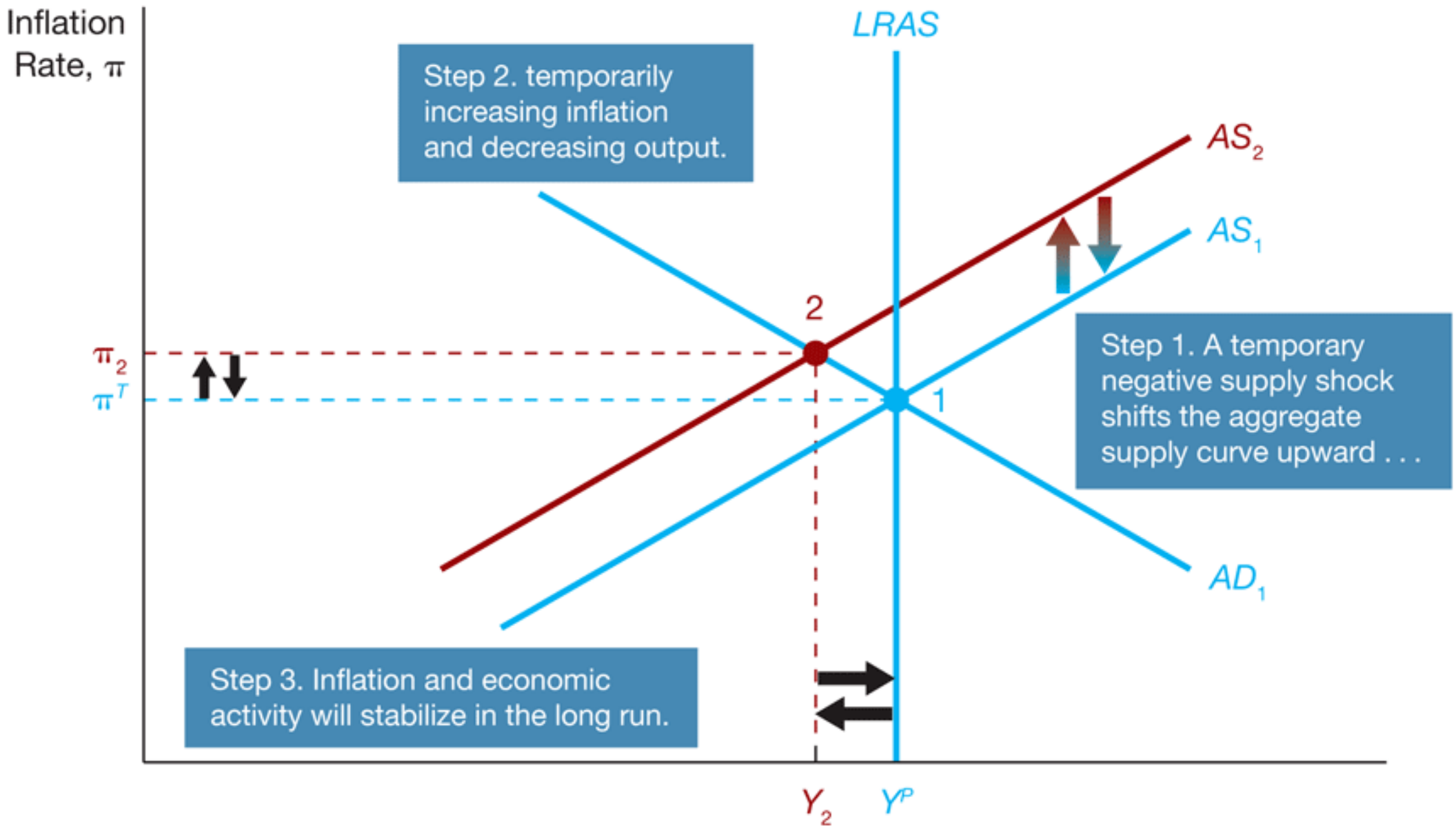


Figure 6: Response to a Temporary Aggregate Supply Shock: Short-Run Inflation Stabilization

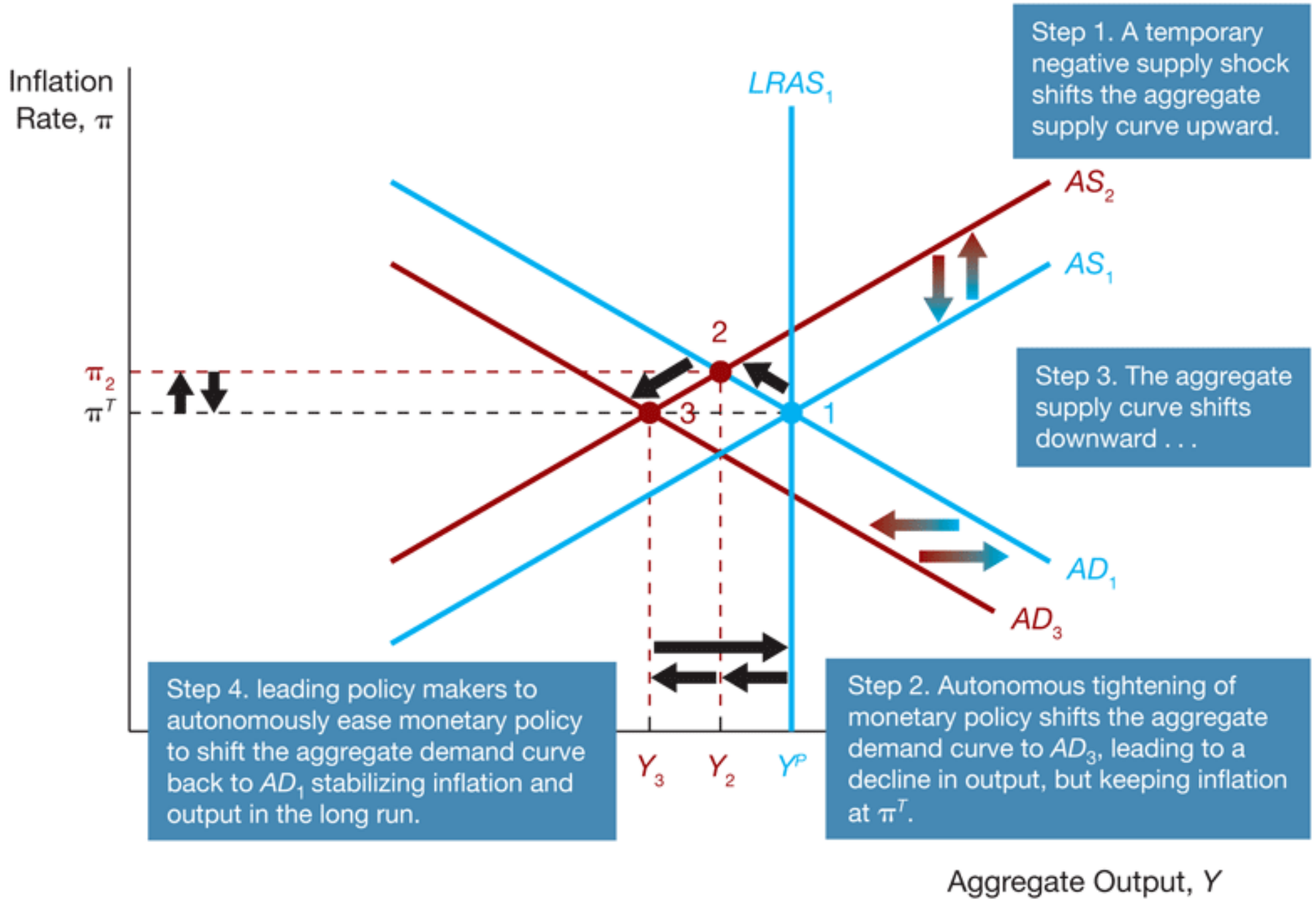
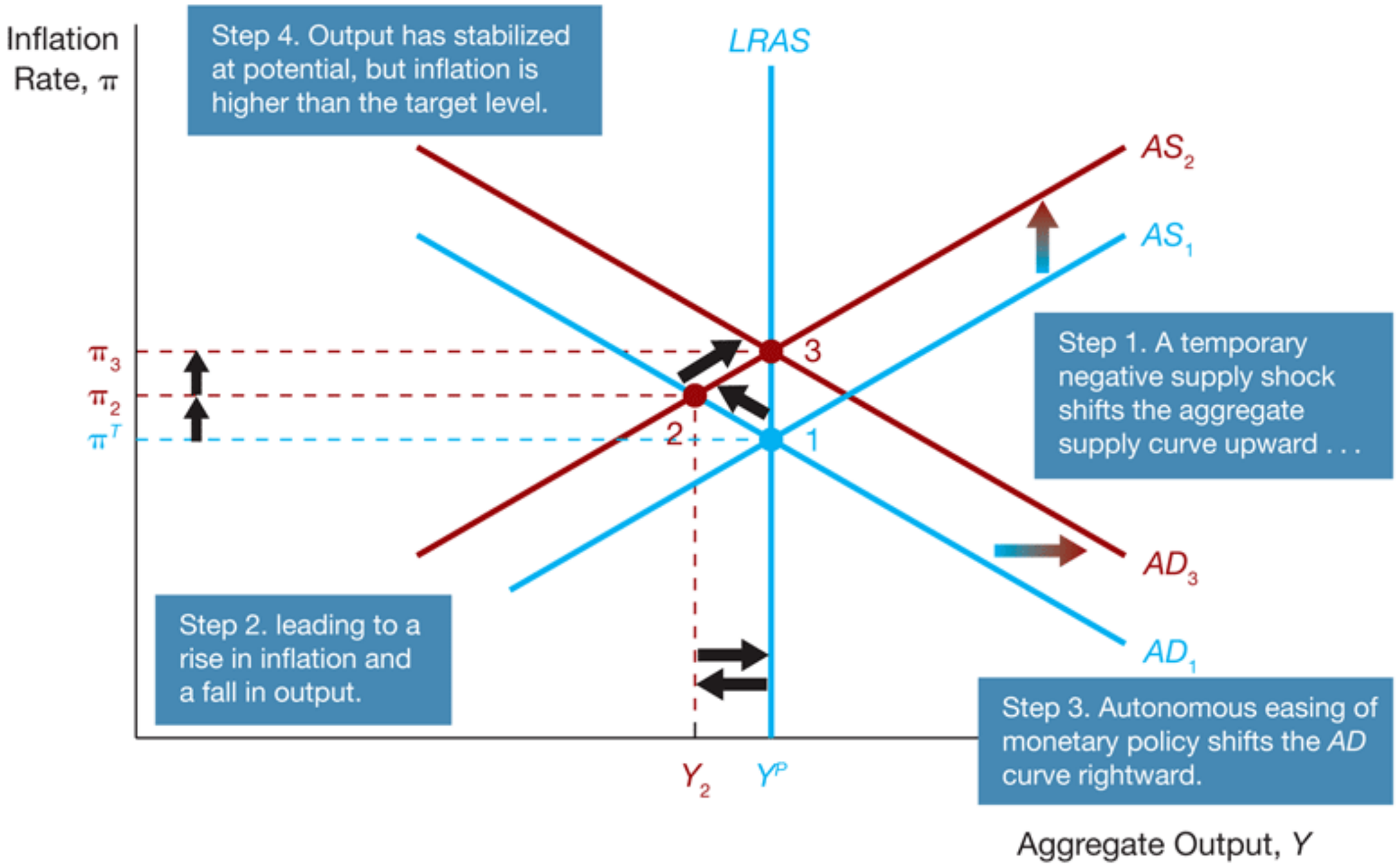


Figure 7: Response to a Temporary Aggregate Supply Shock: Short-Run Output Stabilization



The Bottom Line: The Relationship Between Stabilizing Inflation and Stabilizing Economic Activity

- We can draw the following conclusions from the analysis:

1. If most shocks to the economy are aggregate demand shocks or permanent aggregate supply shocks, then policy that stabilizes inflation will also stabilize economic activity, even in the short run

2. If temporary supply shocks are more common, then a central bank must choose between the two stabilization objectives in the short run

3. In the long run there is no conflict between stabilizing inflation and economic activity in response to shocks

How Actively Should Policy Makers Try to Stabilize Economic Activity?

- All economists have similar policy goals (to promote high employment and price stability), yet they often disagree on the best approach to achieve those goals

- Non-activists believe prices are flexible enough and thus government action is unnecessary to eliminate unemployment

- Activists see the need for the government to pursue active policy to eliminate high unemployment when it develops

Lags and Policy Implementation

- Several types of lags prevent policymakers from shifting the aggregate demand curve instantaneously
  - Data lag: the time it takes for policy makers to obtain data indicating what is happening in the economy
  - Recognition lag: the time it takes for policy makers to be sure of what the data are signaling about the future course of the economy

Lags and Policy Implementation (cont'd)

- Legislative lag: the time it takes to pass legislation to implement a particular policy (shorter in monetary policy)

- Implementation lag: the time it takes for policy makers to change policy instruments once they have decided on the new policy (shorter in monetary policy)

- Effectiveness lag: the time it takes for the policy actually to have an impact on the economy

FYI: The Activist/Non-activist Debate Over the Obama Fiscal Stimulus Package

- Many activists argued that the government needed to do more by implementing a massive fiscal stimulus package

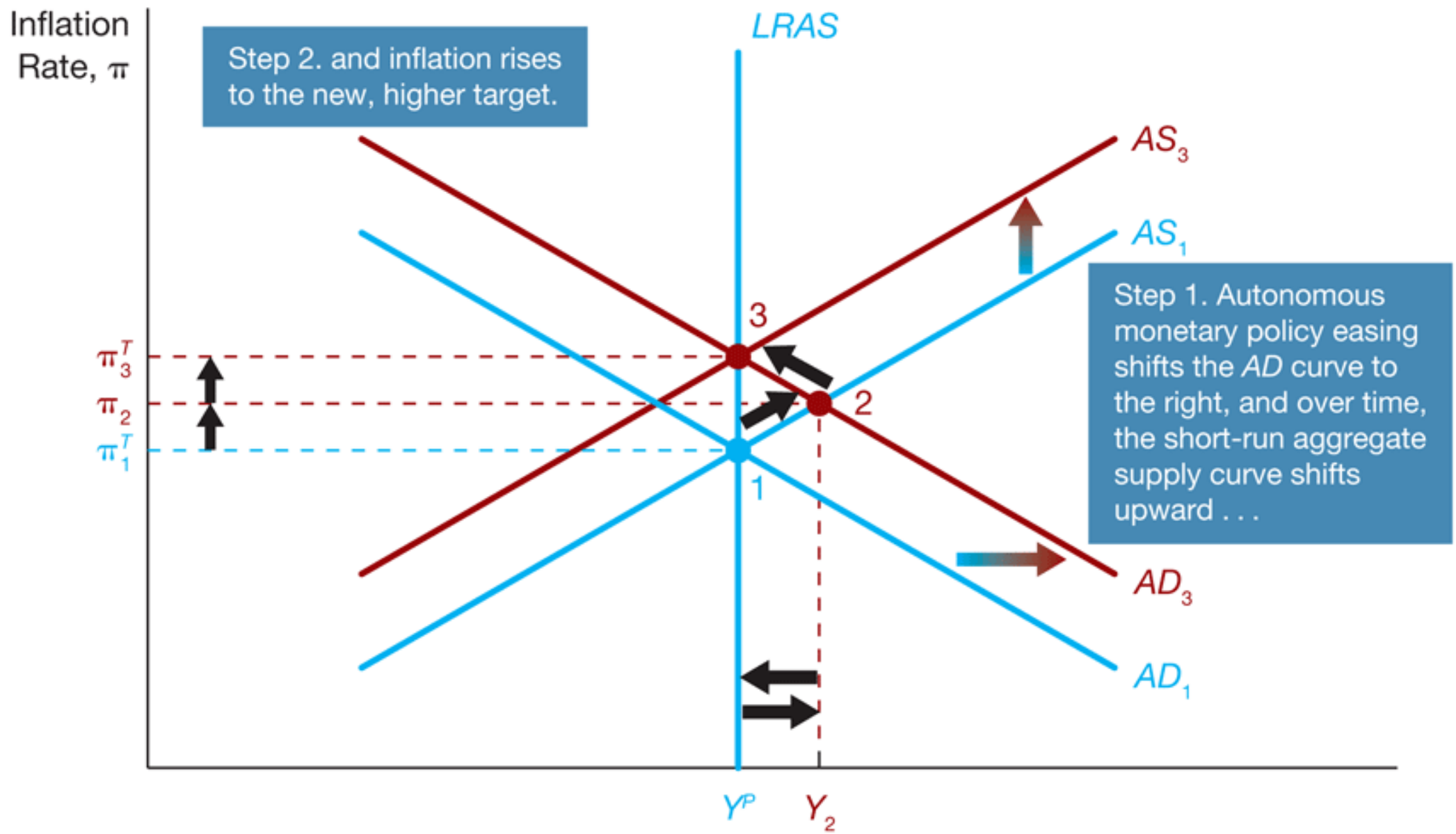
- On the other hand, non-activists opposed the fiscal stimulus package, arguing that fiscal stimulus would take too long to work because of long implementation lags

- The Obama administration came down squarely on the side of the activists and proposed the American Recovery and Reinvestment Act of 2009, a $787 billion fiscal stimulus package that Congress passed on February 13, 2009

Inflation: Always and Everywhere a Monetary Phenomenon

- This adage (by Milton Friedman) is supported by our aggregate demand and supply analysis
- Monetary policy makers can target any inflation rate in the long run by shifting the aggregate demand curve with autonomous monetary policy

Figure 8: A Rise in the Inflation Target



Causes of Inflationary Monetary Policy

- Monetary authority COULD keep inflation rate low.
- Still, governments might pursue other goals, ending up with overly expansionary monetary policy.

Causes of Inflationary Monetary Policy (cont'd)

- High employment targets and inflation

  - Cost-push inflation results either from a temporary negative supply shock or a push by workers for wage hikes beyond what productivity gains can justify

  - Demand-pull inflation results from policy makers pursuing policies that increase aggregate demand

Figure 9: Cost-Push Inflation

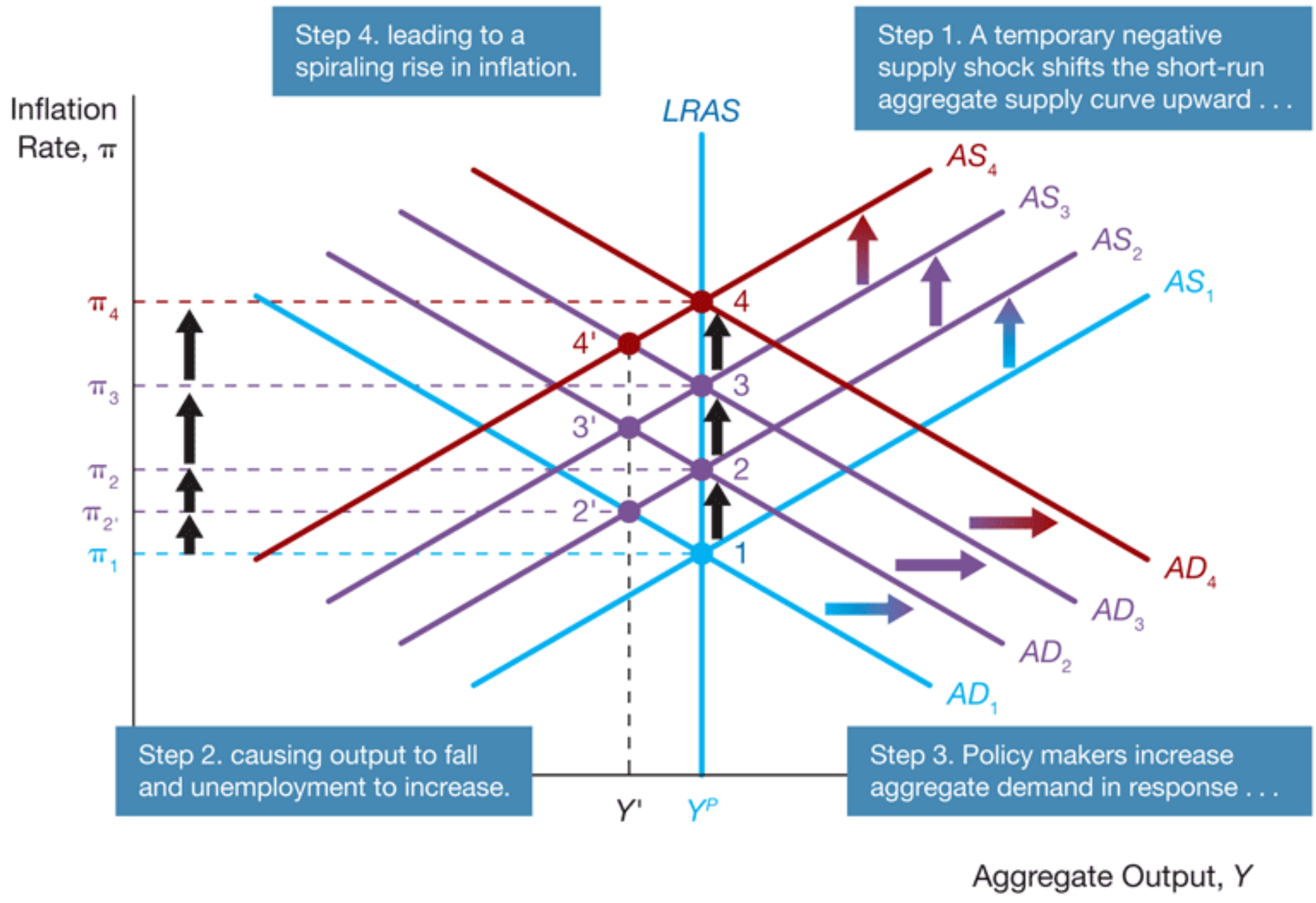
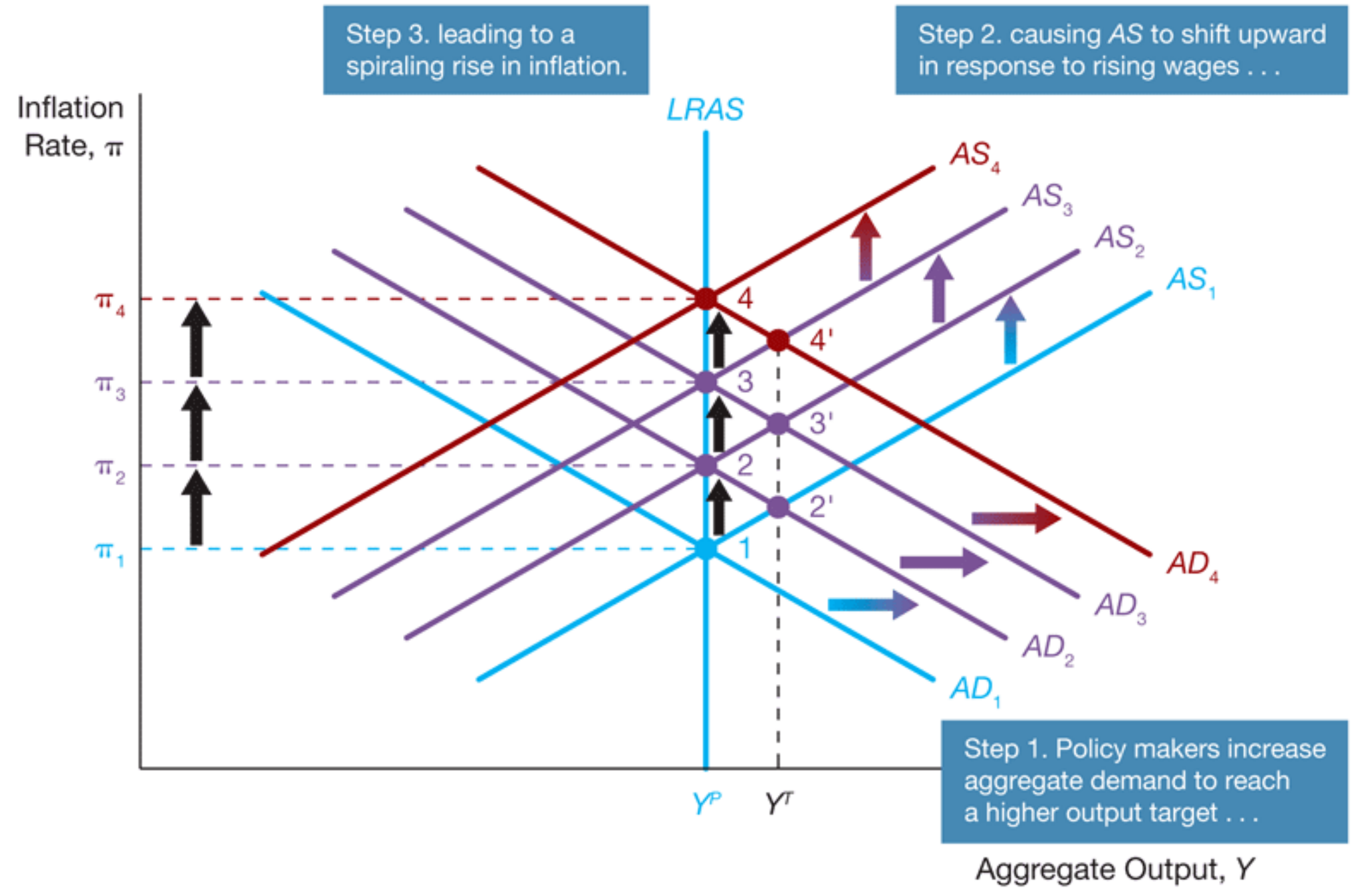


Figure 10: Demand-Pull Inflation



Cost-Push Versus Demand-Pull Inflation

- It is difficult to distinguish the two kinds of causes
    - One could expect to see demand-pull inflation when unemployment is below the natural rate level and cost-push inflation when unemployment is above the natural rate level
        - Measuring the natural rate of unemployment is difficult
- A cost-push inflation can be initiated by a demand-pull inflation

Application: The Great Inflation

- Now that we have examined the roots of inflationary monetary policy, we can investigate the causes of the rise in US inflation from 1965 to 1982, a period dubbed the “Great Inflation”

- Panel (a) of Figure 11 documents the rise in inflation during those years. Just before the Great Inflation started, the inflation rate was below 2% at an annual rate; by the late 1970s, it averaged around 8% and peaked at nearly 14% in 1980 after the oil price shock in 1979

- Panel (b) of Figure 11 compares the actual unemployment rate to estimates of the natural rate of unemployment

Figure 11: Inflation and Unemployment, 1965-1982