

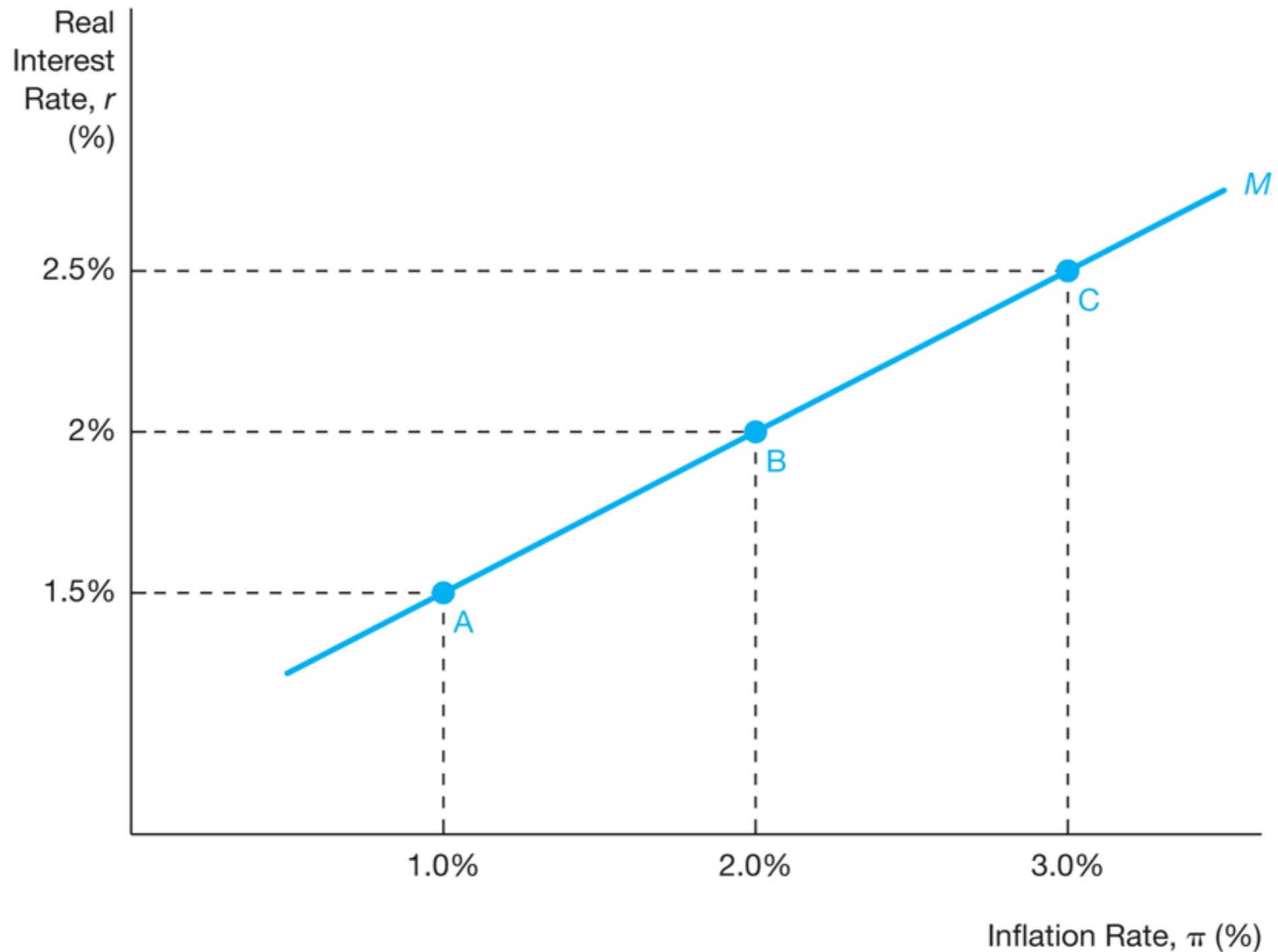
Chapter 21

The Monetary Policy and Aggregate Demand
Curves

The Federal Reserve and Monetary Policy

- The Fed of the United States conducts monetary policy by setting the federal funds rate—the interest rate at which banks lend to each other
- When the Federal Reserve lowers the federal funds rate, real interest rates fall; and when the Federal Reserve raises the federal funds rate, real interest rise

Figure 1: The Monetary Policy Curve



The Monetary Policy Curve

- The Monetary Policy (MP) curve show how monetary policy, measured by the real interest rate, reacts to the inflation rate π :

$$r = \bar{r} + \lambda\pi$$

- where
- \bar{r} = autonomous component of r
- λ = responsiveness of r to inflation
- The MP curve is upward sloping: real interest rates rise when the inflation rate rises

The Taylor Principle: Why the Monetary Policy Curve Has an Upward Slope

- The key reason for an upward sloping MP curve is that central banks seek to keep inflation stable
- Taylor principle: To stabilize inflation, central banks must raise nominal interest rates by more than any rise in expected inflation, so that r rises when π rises
- Thematically, if a central bank allows r to fall when π rises, then (Y^{ad} = Aggregate Demand):

$$\pi \uparrow \implies r \downarrow \implies Y^{ad} \uparrow \implies \pi \uparrow \implies r \downarrow \implies Y^{ad} \uparrow \implies \pi \uparrow \implies \dots$$

•

Shifts in the MP Curve

- Two types of monetary policy actions that affect interest rates:
 - Automatic (Taylor principle) changes as reflected by movements along the MP curve
 - Autonomous changes that shift the MP curve
 - Autonomous tightening of monetary policy that shifts the MP curve upward (in order to reduce inflation)
 - Autonomous easing of monetary policy that shifts the MP curve downward (in order to stimulate the economy)

Figure 2: Shifts in the Monetary Policy Curve

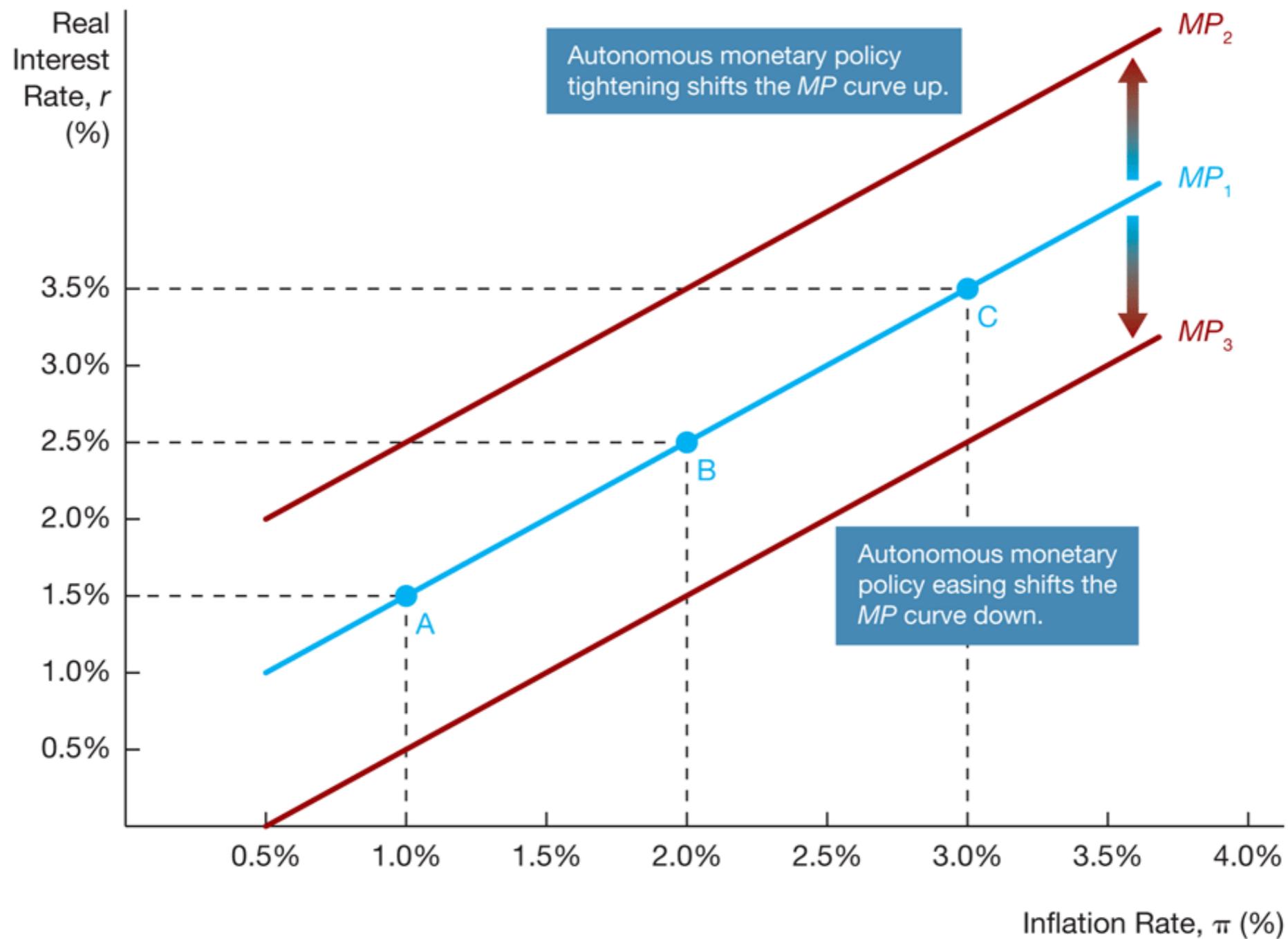
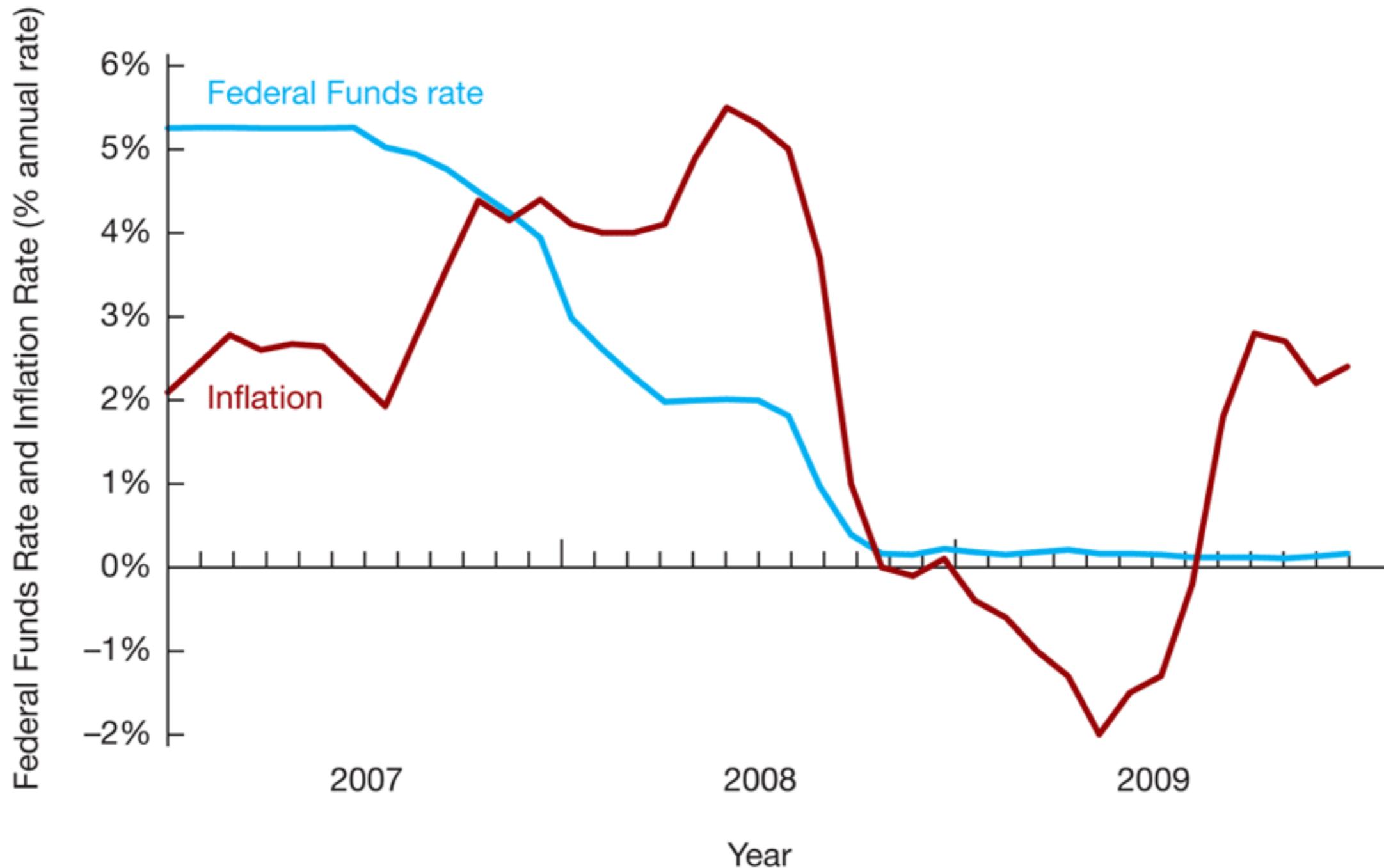


Figure 3: The Inflation Rate and the Federal Funds Rate, 2007-2010



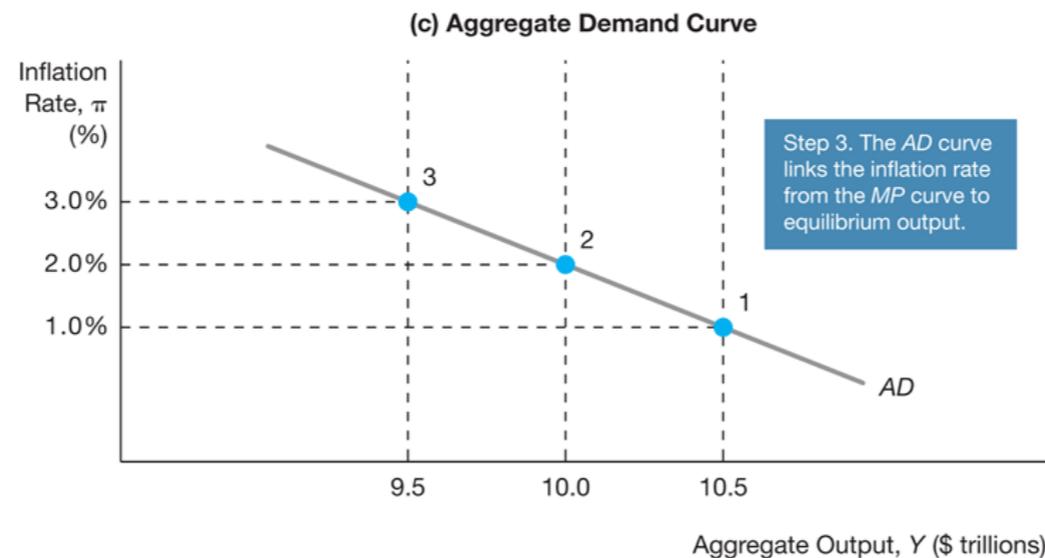
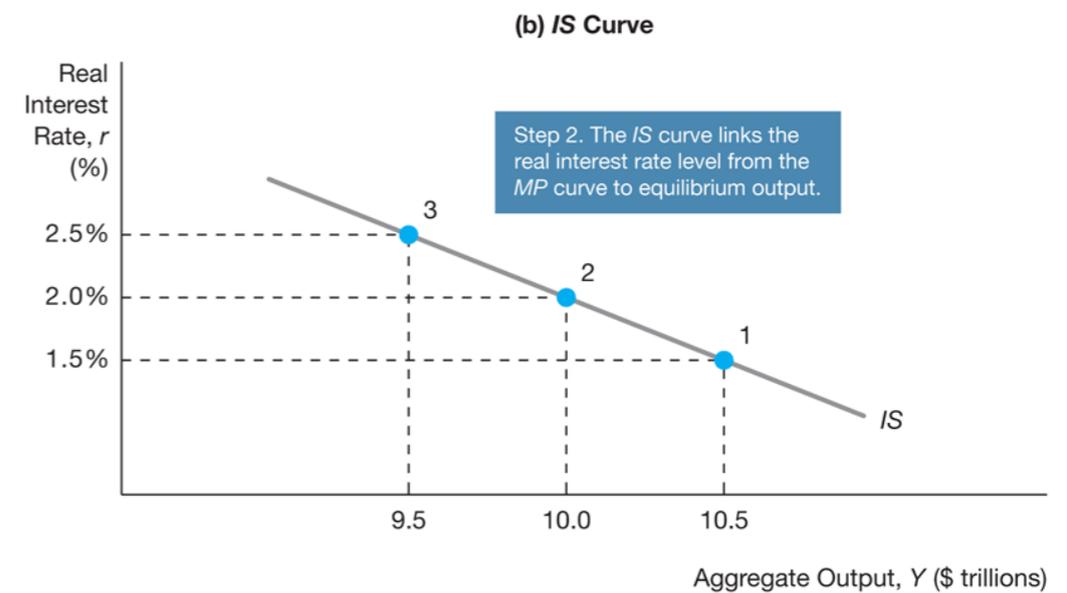
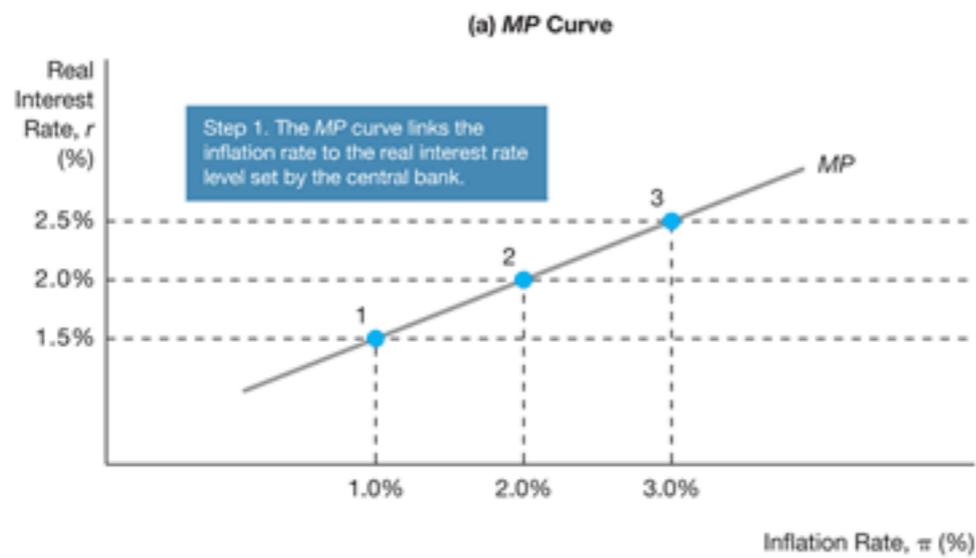
The Aggregate Demand Curve

- The aggregate demand curve represents the relationship between the inflation rate and aggregate demand when the goods market is in equilibrium
- The aggregate demand curve is central to aggregate demand and supply analysis, which allows us to explain short-run fluctuations in both aggregate output and inflation

Deriving the Aggregate Demand Curve Graphically

- The AD curve is derived from:
 - The MP curve
 - The IS curve
- The AD curve has a downward slope: As inflation rises, the real interest rate rises, so that spending and equilibrium aggregate output fall

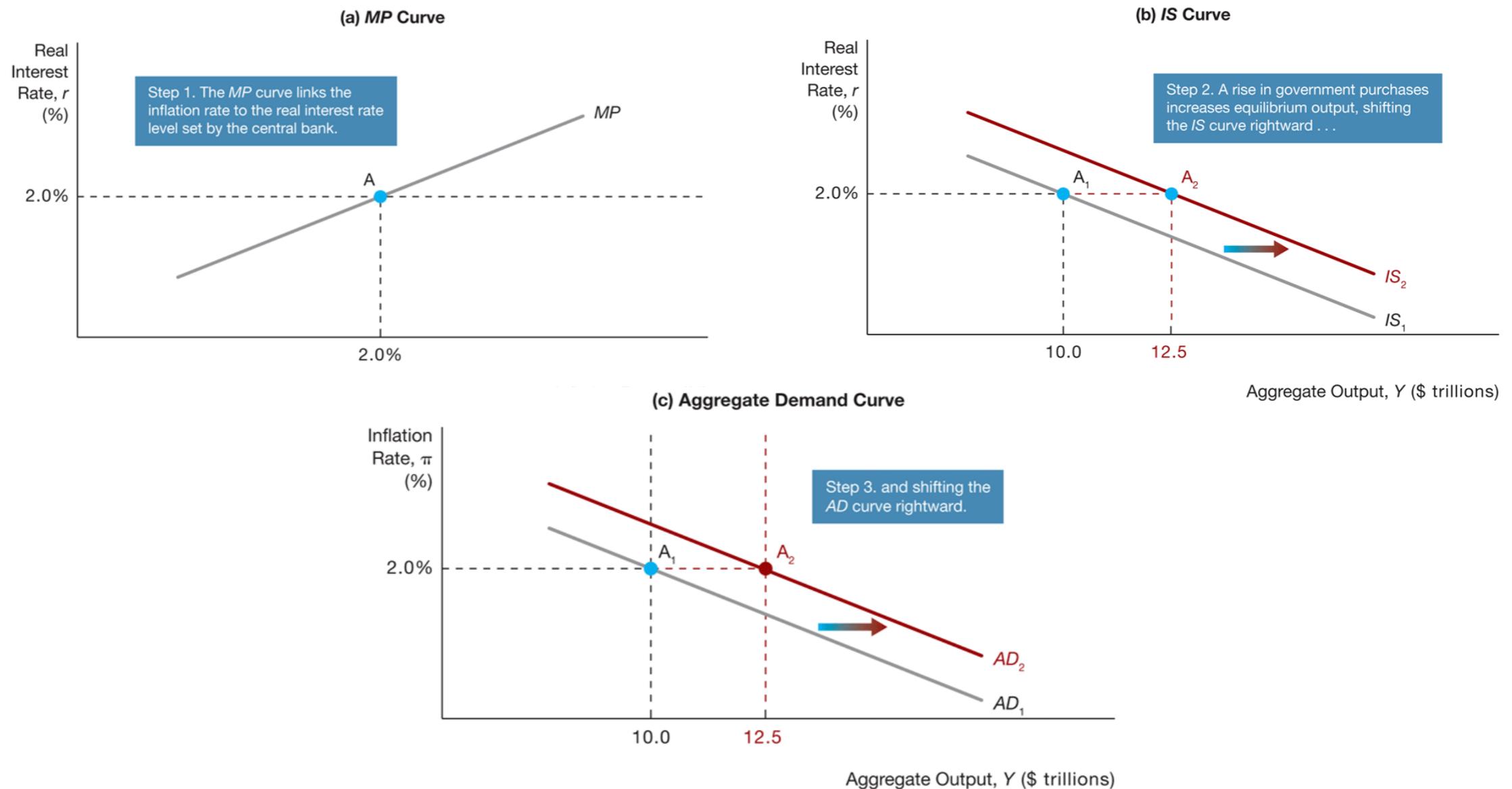
Figure 4: Deriving the AD Curve



Factors that Shift the Aggregate Demand Curve

- Shifts in the IS curve
 - Autonomous consumption expenditure
 - Autonomous investment spending
 - Government purchases
 - Taxes
 - Autonomous net exports
- Any factor that shifts the IS curve shifts the aggregate demand curve in the same direction

Figure 5: Shifts in the AD Curve from Shifts in the IS Curve



Factors that Shift the Aggregate Demand Curve (cont'd)

- Shifts in the MP curve
 - An autonomous tightening of monetary policy, that is a rise in real interest rate at any given inflation rate, shifts the aggregate demand curve to the left
 - Similarly, an autonomous easing of monetary policy shifts the aggregate demand curve to the right

Figure 6: Shifts in the AD Curve from Autonomous Monetary Policy Tightening

