Mishkin Chapter 10

1. What is the monetary policy curve? Why does it slope upward?

The monetary policy curve represents the relationship between the inflation rate and the real interest rate. It slopes upward because monetary policymakers who wish to keep actual inflation and expected inflation stable will follow the Taylor principle and respond aggressively to a given increase in the inflation rate by raising nominal interest rates by an even greater amount so that the real interest rate also rises.

2. How does an autonomous tightening or an easing of monetary policy by the Fed affect the MP curve?

An autonomous monetary policy tightening occurs when the Fed decides to raise the real interest rate at any given inflation rate. This shifts the MP curve upward. An autonomous monetary policy easing—a decision to lower the real interest rate at any given inflation rate—shifts the MP curve downward.

3. How does an autonomous tightening or an easing of monetary policy by the Fed affect the aggregate demand curve?

When the Fed tightens monetary policy by raising the real interest rate at any given inflation rate, this means that the quantity of aggregate output demanded at any given inflation rate will be lower, and so will the equilibrium quantity of aggregate output. This shifts the aggregate demand curve to the left. Conversely, an autonomous easing of monetary policy lowers the real interest rate at any given inflation rate, increases the equilibrium quantity of aggregate output, and shifts the aggregate demand curve to the right.

4. Assume the monetary policy curve is given by \( r = 1.5 + 0.75\pi \).

   a) Calculate the real interest rate when the inflation rate is 2%, 3%, and 4%.

   When the inflation rate is 2%, the real interest rate is given by:
   \[ r = 1.5 + 0.75\pi \to 3 = 1.5 + 0.75 \times 2. \]

   For inflation rates of 3% and 4%, real interest rates are 3.75% and 4.5% respectively.
b) Plot the monetary policy curve and identify the previous points.

![Monetary Policy Curve Diagram]

5. What would be the effect of an increase in U.S. net exports on the aggregate demand curve? Would an increase in net exports affect the monetary policy curve? Explain why or why not.

An increase in U.S. net exports directly affects the IS curve, since planned expenditure increases at every real interest rate. Assuming the goods market is in equilibrium, aggregate output increases, shifting the IS curve to the right. The monetary policy curve does not shift, since net exports are not a determinant of the monetary policy curve. The monetary policy curve represents the monetary authorities’ willingness to set a given real interest rate in the short run according to current inflation rates. Given the same monetary policy curve, and a new IS curve, the aggregate demand curve shifts to the right. This means that aggregate output increases at every inflation rate.