

Chapter 33: Interest Rates and Monetary Policy

If the Federal Reserve has the power to control the money supply, can the Fed use that power to stabilize the economy during periods of recession or significant inflation? Yes! The Fed has a number of tools available to counteract significant changes in aggregate demand. Chapter 33 examines the Federal Reserve's use of monetary policy, changing the money supply and interest rates to affect real output, employment, and price levels.

Interest is the price paid for the use of borrowed money, as determined by supply and demand. People demand money for two uses: to make transactions or to hold as an asset. Transaction demand, used to make purchases, is primarily determined by the level of nominal GDP. Asset demand varies inversely with the interest rate, because the opportunity cost of holding money in cash is the interest forgone by not investing it. So the total demand curve for money slopes downward and can be shifted by a change in nominal GDP. The money supply is vertical, set by the Federal Reserve. The equilibrium interest rate is determined where the supply and demand curves for money intersect. An increase in the money supply reduces interest rates, while a decrease in the money supply increases interest rates. These changes in interest rates primarily affect investment decisions, because such purchases by firms are very expensive and involve long-term costs.

As with individual banks, it can be helpful to view the activities of the Fed on a balance sheet. The Fed's primary assets are securities it owns and loans to member banks. The Fed's liabilities include the reserves of member banks the Fed is storing, Treasury deposits (because the Fed serves as the federal government's bank), and the currency held by the public.

Open market operations are the most frequently-used tool of monetary policy because of their flexibility and immediate effects. Open market operations are the Fed's purchases and sales of government bonds with member banks and the public. When the Fed buys bonds from a bank, it creates reserves in the bank's deposit with the Fed, which the bank can then lend to customers. When the Fed buys bonds from the public, it puts a check in the hand of the consumer, who can deposit the funds in his bank. The two transactions are slightly different in effect, because the bank can loan the full excess reserves resulting from its sale of bonds to the Fed, but the bank must keep the required reserves from the customer's deposit, leading to a smaller increase in the money supply. In either case, the Fed increases the money supply when it buys bonds, and it reduces the money supply when it sells bonds.

The reserve requirement is the most powerful tool of monetary policy, so it is only rarely used. A change in the percentage of deposits the banks must hold in reserve directly impacts the bank's ability to increase loans and, therefore, the money multiplier. If the Fed increases the reserve requirement, banks cannot loan as much and the money supply falls. A reduction in the reserve requirement increases the potential growth of the money supply.

A third important tool of monetary policy is the discount rate, which is the interest rate the Fed charges member banks for loans. A reduction in the discount rate encourages banks to borrow from the Fed and, in turn, increase loans to their customers. As a result, the money supply increases. An increase in the discount rate discourages banks from borrowing from the Fed, reducing loans and the money supply.

Term auction facilities were added as a fourth tool of monetary policy during the Great Recession starting in 2007. Banks secretly bid to borrow money from the Fed, similar to the function of discount rates, but the secrecy helped to shield the banks from customer concerns about the banks' solvency. It is believed that this tool will primarily be used in times of economic crisis.

The Federal Reserve's policies primarily target the federal funds rate, the interest rate for overnight loans between banks to meet reserve requirements. The Federal Open Market Committee determines the desired interest rate, and then orders the sale or purchase of bonds necessary to achieve that interest rate.

The Fed uses expansionary monetary policy ("easy money policy") to expand the money supply during recessions. A decrease in the reserve requirement, a lower discount rate, or the Fed's purchase of securities can achieve this result. As the money supply grows, interest rates fall, and consumers and firms are more likely to undertake interest-sensitive purchases and increase aggregate demand. The increase in aggregate demand results in an increase in real GDP, employment, and price levels.

Contractionary or restrictive monetary policy ("tight money policy") is used to reduce the money supply during periods of significant inflation. An increase in the reserve requirement, an increase in the discount rate, or the Fed's sale of securities will reduce the money supply, increasing interest rates. This results in fewer interest-sensitive purchases by consumers and firms, reducing aggregate demand. As a result, real output will fall back to full-employment output and employment will fall. Because of the ratchet effect, however, prices are unlikely to decline.

Monetary policy holds advantages over fiscal policy in that monetary policy is very flexible and can be implemented quickly. Its policymakers are shielded from political pressure, allowing them to focus solely on what is good for short-run stabilization and long-run growth of the economy. But monetary policy also faces limitations on its effectiveness. It takes some length of time to recognize economic instability and to fully implement the monetary policies. But more importantly, while monetary policy works well to discourage borrowing during periods of inflation, it is not as effective in promoting investment during severe recessions. Firms consider return on investment as the benefit of investing, and when they have excess capacity as a result of lower consumer demand, they have little reason to invest even when interest rates are low. Banks may hesitate to make loans to firms that may close or households that may fall into foreclosure or bankruptcy, fearing the loans may not be repaid. A liquidity trap ensues, when even lower interest rates have virtually no effect on investment and aggregate demand.

Material from Chapter 33 is covered in a significant number of questions on the AP Macroeconomics Exam, and questions about the use of monetary policy are a part of a free-response question on nearly every AP Macroeconomics Exam. It is very important to be able to correctly graph changes in the money market and to interpret economic and policy changes on the aggregate supply-aggregate demand model. It is absolutely critical to fully understand how to use the tools of monetary policy to correct business cycles, and to be able to explain the linkages between the policy effects. This chapter is critical to success on the AP Macroeconomics Exam and should be a highlighted focus of study.