

seem like bad news for stabilization policy that pursues a specific target but even if wage setters have rational expectations, monetary policy can still be effective because it can respond to unexpected shocks while wages and prices may be somewhat rigid. Monetary policy can be used to ease the adjustment to shocks when wages adjust slowly. In this way, monetary policy can help to stabilize production and employment and compensate for the lack of flexibility in wages and prices.

The Instruments of Monetary Policy

In our analysis of monetary policy, we have assumed that the central bank can control the money supply, and thereby the interest rate. But exactly how does the central bank go about controlling interest rates?

In short, the central bank controls the short-term interest rate by offering to lend money at an interest rate which is decided by the decision-making board at a central bank. Since the central bank can create new money, or more specifically monetary base, it can always lend enough money to get the interest rate to where it wants it to be.

The interbank market for overnight borrowing:

The monetary base includes currency and banks' accounts in the electronic payment system that is managed by the central bank and used to transfer money between banks. Every day, banks make a large number of transactions and people deposit and withdraw money from their bank accounts in a way that is not perfectly predictable. Depending on the amount of withdrawals and deposits that come in, a bank may end up with a deficit or a surplus on its account in the payment system. A bank can have a deficit on its account during the day but it is not allowed to maintain this overnight. Therefore banks that are in deficit at the end of the day must borrow money overnight to bridge the gap. They can borrow from each other in the *interbank market* for overnight loans. In the US, this is known as the *Federal funds market*. If a bank has a deficit at the end of the day and has been unable to borrow in the interbank market, it is automatically converted to overnight borrowing from the central bank. This is usually seen as an unattractive option as the central bank will normally charge a higher interest rate than what is on offer in the interbank market. This is known as the *marginal lending facility*. Banks with excess reserves that have been unable to lend during the day can also deposit money at the central bank and they are paid an interest rate on this money by the central bank, again below the market level. This is known as the *deposit facility*. Together the interest rates on these facilities define an interest rate corridor within which the overnight bank rate must be. The Federal Reserve does not pay interest on overnight deposits and therefore the floor of this interest rate corridor in the US is 0.

The central bank can influence the interbank rate further through *open market operations*, that is the buying and selling of government securities. The simplest form of open market operation is an *outright open market operation* where the central bank buys or sells government securities, thereby increasing or decreasing the monetary base. *Repurchase agreements* are a more sophisticated form of open market operation whereby the central bank agrees to purchase a government security off of a bank on the condition that bank repurchase the security from the central bank at a set date in the future. The bank receives cash for the security during this period in which it can use the additional liquidity to make payments, the bank then pays a higher price for the security than it sold it for when the repurchase occurs thereby creating an interest rate. This cost is converted to an annualized rate and is called the *refinancing rate* by the ECB and the *repo rate* by the BoE. The central bank sets this rate by offering to make repurchase agreements at a specific rate of interest. The decision about the refinancing/repo rate is the main policy decision of the central bank. We can think of the repurchase agreement as a short-term loan with the government security as collateral and the refinancing rate