A HISTORY OF ECONOMIC CRISES IN THE U.S.

Tools the Federal Reserve uses to Influence Interest Rates, the Price Level, and Macroeconomic Activity

1) Reserve Requirements

Reserve requirements are the amount of cash that banks must have, in their vaults or at the closest Federal Reserve bank, in line with deposits made by their customers. Set by the Fed's board of governors, reserve requirements are one of the three main tools of monetary policy — the other two tools are open market operations and the discount rate.

KEY TAKEAWAYS

- Reserve requirements are the amount of funds that a bank holds in reserve to ensure that it is able to meet liabilities in case of sudden withdrawals.
- Reserve requirements are a tool used by the Federal Reserve to increase or decrease money supply in the economy and influence interest rates.

Basics of Reserve Requirements

Banks loan funds to customers based on a fraction of the cash they have on hand. The government makes one requirement of them in exchange for this ability: keep a certain amount of deposits on hand to cover possible withdrawals. This amount is called the reserve requirement, and it is the rate that banks must keep in reserve and are not allowed to lend.

The Federal Reserve's Board of Governors sets the requirement as well as the interest rate banks get paid on excess reserves. The Financial Services Regulatory Relief Act of 2006 gave the Federal Reserve the right to pay interest on excess reserves. The effective date on which banks started getting paid interest was Oct. 1, 2008. This rate of interest is referred to as the interest rate on excess reserves and serves as a proxy for the federal funds rate.

2) The Federal Discount Rate

The federal discount rate is the interest rate set by central banks—the Federal Reserve in the U.S.—on loans extended by the central bank to commercial banks or other depository institutions. The federal discount rate is used as a measure to reduce liquidity problems and the pressures of reserve requirements.

KEY TAKEAWAYS

- The Federal discount rate is the interest rate the Federal Reserve charges banks to borrow funds, while the federal funds rate is the rate banks charge each other.
- The Fed discount rate is set by the Federal Reserve's board of governors, while the federal funds rate is set by the Federal Open Markets Committee.
- The Federal Reserve is considered a lender of last resort, to be sued when the interbank overnight lending system is maxed out, which is why the Fed discount rate is higher than the Fed funds rate.

The discount rate, as it's sometimes shortened to, allows central banks such as the Federal Reserve to control the supply of money—also known as monetary policy—and is used to assure stability in the financial markets.

How the Federal Discount Rate Works

Over the course of each day, as banks payout and receive funds, they may end up with more (or fewer) funds than they need to meet their reserve requirement. Banks with excess funds typically lend them overnight to other banks that are short on funds, rather than leaving those funds in their non-interest-bearing reserve accounts at the Fed or as idle vault cash.

Depository institutions and commercial banks that are in generally sound financial condition are eligible to borrow from their regional Federal Reserve banks at a primary credit, or discount, rate. These loans are normally extended on an overnight basis so that banks can meet short-term liquidity needs. Funds for commercial banks borrowed from the Fed to improve their money supply are processed through the discount window, and the rate is reviewed every 14 days. The federal discount rate is one of the most important indicators in the economy, as most other interest rates move up and down with it.

Borrowing from the central bank is a substitute for borrowing from other commercial banks, and so it is seen as a last-resort measure once the interbank overnight lending system has been maxed out. The Federal Reserve sets this interbank rate, called the Fed funds rate, which is usually set lower than the discount rate.

Both the Fed funds and discount rates adjust to balance the supply of, and demand for, currency reserves. For example, if the supply of reserves in the fed funds market is greater than the demand, then the Fed funds rate falls, and if the supply of reserves is less than the demand, the rate rises. As long as the Fed funds rate is lower than the discount rate, commercial banks will prefer to borrow from another commercial bank rather than the Fed.

3) **The Federal Funds Rate**

What is the Federal Funds Rate?

The **federal funds rate** is the interest rate banks charge each other on loans used to meet reserve requirements. The federal funds rate is often confused with the discount rate, which is the interest rate the Federal Reserve charges on loans directly from the Federal Reserve Bank. But they are not the same.

How Does the Federal Funds Rate Work?

Banks derive income from loans and it is beneficial to them to loan out as much as possible. But if a "run on the bank" occurs and a large number of depositors suddenly want to withdraw their money, the bank risks failure because it lacks the actual cash to pay all depositors at once. To prevent the chaos that would naturally occur in this situation, the Federal Reserve maintains a fractional reserve banking system. The fractional reserve banking system requires banks to keep a certain percentage of their deposits liquid to accommodate withdrawals from a normal number of depositors at any given time.

When a bank is unable to meet reserve requirements, it may get a Federal Funds loan. These loans are unsecured and are for very short periods (typically overnight).

An increase in the *federal funds rate* discourages banks from borrowing to meet reserve requirements, which encourages them to build up reserves and lend out less money. A reduction in the overnight rate has the opposite effect: it encourages banks to borrow to meet reserve requirements, which makes more money available for lending. Because

the increase in the supply of funds available for lending puts downward pressure on interest rates, changes in the overnight rate can have widespread economic effects.

Why Does the Federal Funds Rate Matter?

Although the Federal Reserve cannot set the federal funds rate, it can manipulate it indirectly. This is primarily done by changing the "discount rate," which is set directly by the Federal Reserve. If the discount rate is lower than the federal funds rate, banks will probably prefer to borrow from the Federal Reserve when they need loans. This puts downward pressure on the federal funds rate. Conversely, if the discount rate is higher that the federal funds rate, banks will probably borrow from each other rather than from the Federal Reserve. This puts upward pressure on the federal funds rate. In either case, the Federal Reserve can trigger a change in the federal funds rate by changing the discount rate. This is why the discount rate and the federal funds rate are generally closely correlated.

Manipulation of the federal funds rate is one of three primary methods the Federal Reserve uses to control the money supply. The other two involve changing reserve requirements and buying or selling U.S. Treasuries on the open market.