Understanding How the Federal Reserve Creates Money

By

[SEAN ROSS](https://www.investopedia.com/contributors/53893/)

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Reviewed by

[MICHAEL J BOYLE](https://www.investopedia.com/michael-j-boyle-4799785)

Fact checked by

[VIKKI VELASQUEZ](https://www.investopedia.com/vikki-velasquez-5198872)

[How Does the Federal Reserve Work?](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-how-does-the-federal-reserve-work) [The Federal Funds Rate](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-understanding-the-federal-funds-rate) [Another Way the Fed Creates Money](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-another-way-the-fed-creates-money) [The Credit Market Funnel](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-the-credit-market-funnel) [FAQs](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-does-the-fed-print-money) [The Bottom Line](https://www.investopedia.com/articles/investing/081415/understanding-how-federal-reserve-creates-money.asp#toc-the-bottom-line)

The Federal Reserve System is the [central bank](https://www.investopedia.com/terms/c/centralbank.asp) of the United States. Referred to as the Fed, it is arguably the most influential economic institution in the world. One of the chief responsibilities set out in the Fed's charter is the management of the total outstanding supply of U.S. dollars and dollar substitutes.1 That means the Fed is responsible for the policies that create or destroy billions of dollars every day.

Despite being charged with managing the money supply, the modern Federal Reserve does not simply run new paper bills off of a machine. Of course, real currency printing does occur (with the help of the U.S. Department of the Treasury). However, the vast majority of the American [money supply](https://www.investopedia.com/terms/m/moneysupply.asp) is digitally debited and credited to commercial banks. Moreover, real money creation takes place after the banks loan out those new balances to the broader economy.

KEY TAKEAWAYS

* The Federal Reserve, as America's central bank, is responsible for controlling the supply of U.S. dollars.
* The Fed creates money by purchasing securities on the open market and adding the corresponding funds to the bank reserves of commercial banks.
* The Fed uses the federal funds rate to affect other interest rates and adjust the money supply.
* To combat the recession caused by COVID-19, the Fed lowered the reserve requirement for banks to zero.

Printing Money

*Printing money is the job of the Federal Reserve, but only figuratively speaking. When the Fed decides to stimulate the economy by pouring more money into the system, it electronically transfers additional credits to the deposits of its member banks.*

**How Does the Federal Reserve Work?**

The [Federal Open Market Committee](https://www.investopedia.com/terms/f/fomc.asp) (FOMC) and associated economic advisers meet regularly to assess the U.S. money supply and general economic conditions. If it's determined that new money needs to be created, then the Fed targets the amount of money needed and institutes a corresponding policy to inject it into the economy.2

It's hard to track the actual amount of money in the economy because many things can be defined as money. Obviously, paper bills and metal coins are money. Savings accounts and checking accounts represent direct and liquid money balances. Money market funds, short-term notes, and other reserves are also often counted. Nevertheless, the Fed can only estimate the money supply.

How the Fed Increases the Money Supply

The Fed could initiate [open market operations](https://www.investopedia.com/terms/o/openmarketoperations.asp) (OMO), where it buys or borrows Treasury bills from commercial banks to inject money. The central bank will add cash to the accounts, called bank reserves, that banks are required to keep. That increases the money supply. On the other hand, if the Fed sells or lends treasuries to banks, the payment it receives in exchange will reduce the money supply.3

Types of Money

The various types of money in the money supply are generally classified as Ms, such as M0, [M1](https://www.investopedia.com/terms/m/m1.asp), [M2](https://www.investopedia.com/terms/m/m2.asp), and the discontinued [M3](https://www.investopedia.com/terms/m/m3.asp), according to the type and size of the account in which the instrument is kept.45

Known as monetary aggregates, not all of the classifications above are widely used. Different countries may use different classifications. The money supply reflects the [liquidity](https://www.investopedia.com/terms/l/liquidity.asp) that each type of aggregate has in the economy. It is broken up into different categories of liquidity (or spendability).

Use of Monetary Aggregates

The Federal Reserve uses monetary aggregates as a metric for how open-market operations, such as trading in Treasury securities or changing the discount rate, affect the economy.

Investors and economists observe the aggregates closely because they offer an accurate depiction of the actual size of the country’s working money supply.5 By reviewing the monthly reports of M1 and M2 data, investors can measure the money aggregates' rate of change and monetary velocity overall.6

Aggregates

*The importance of the money supply as a guide for monetary policy isn't as great as it once was. However, the Fed still studies money supply figures regularly.5*

**Understanding the Federal Funds Rate**

The target federal funds rate is a suggested interest rate set by the FOMC based on its view of the country's economic health. It's used by banks as a guide for the interest rate to charge each other for overnight loans of excess reserves.7

The fed funds rate is an important tool used by the Fed to influence other interest rates and affect the money supply. For instance, by lowering the rate, banks follow suit and lower the rates they charge on products such as consumer loans and credit cards.

Due to the severity of the COVID-19 pandemic and its negative effect on economic activity, in March 2020, the Fed Board reduced to zero the reserve requirement ratio banks must use. This eliminated the reserve requirement for all depository institutions.8

**Another Way the Fed Creates Money**

In the early days of central banking, money creation was a physical reality. New paper notes and new metallic coins would be crafted, imprinted with anti-fraud devices, and released to the public (almost always through some favored government agency or politically-connected business).

Central banks have become much more technologically creative since then. The Fed figured out that money doesn't have to be physically present to work in an exchange of money for goods and services. Businesses and consumers could use checks, debit and credit cards, balance transfers, and online transactions.

Money creation doesn't have to be physical, either. It needn't be printed. The country's central bank can simply determine the new dollar balances needed and credit them to other accounts.

Today's Federal Reserve buys new, readily liquefiable accounts, such as U.S. Treasuries, on the open market from financial institutions to add funds to their existing bank reserves.9 This has the same effect as printing new bills and transporting them to the banks' vaults (but it's cheaper). The newly credited balances count just as much as physical bills in the economy. They can also be just as [inflationary](https://www.investopedia.com/terms/i/inflation.asp).

During its March 2022 meeting, the FOMC directed that the federal funds target interest rate be raised by 0.25% to a range of 0.25% to 0.50%. This is the first increase since 2018 and was undertaken in an effort to combat record-breaking inflation.10 A couple of months later at the next FOMC meeting, the committee raised the rate again to a range of 0.75% to 1%.11

**The Credit Market Funnel**

Suppose the U.S. Treasury prints $10 billion in new bills. In addition, the Federal Reserve credits $90 billion in readily liquefiable accounts. At first, it might seem like the economy just received a monetary influx of $100 billion. However, that's only a very small percentage of the potential total amount of money created.

This is because of the role of banks and other lending institutions that receive new money. Nearly all of that $100 billion enters banking reserves.

The credit markets have become a funnel for money distribution. In a [fractional reserve banking system](https://www.investopedia.com/terms/f/fractionalreservebanking.asp), new loans actually create even more new money. Despite a legally required reserve ratio of, normally, 10%, the new $100 billion in bank reserves could potentially result in a nominal monetary increase of $1 trillion.12

*The Federal Reserve Bank must destroy currency when it is damaged or otherwise fails to meet its standard of quality.13*

Does the Fed Print Money?

No. The actual printing of paper money is handled by the Treasury Department's Bureau of Engraving and Printing. The U.S. Mint produces the country's coins.14

Do Banks Create Money?

Yes. Every time banks loan funds to consumers and businesses they create new money. That loaned money, in turn, gets deposited back into the banking system where it gets loaned again, creating more new money.

How Much New Money Is Created Each Year?

That depends on decisions made by the Fed that concern the country's economic well-being and whether the money supply should be increased to affect it. As for the actual amount of printed money, the Board of Governors of the Fed provides the Treasury Department with an order each year for the amount of paper money to print.15

U.S. Federal Reserve System. "[The Fed Explained: What the Central Bank Does](https://www.federalreserve.gov/aboutthefed/files/the-fed-explained.pdf)," Pages 99-100.

Who Is the Chair of the Federal Reserve Board?

Jerome Powell is the current Chair of the Board of Governors of the Federal Reserve. He took office in February 2018. In February 2022, the Board named Powell Chair Pro Tempore pending the Senate confirming him for a second four-year term.16

**The Bottom Line**

The Federal Reserve creates money when it decides that the economy would benefit by it doing so. It creates money not by printing currency but by effectively adding funds to the money supply.

The Fed does this in various ways, including changing the target fed funds rate with the goal of affecting other interest rates. Or it may buy Treasury securities on the open market to add funds to bank reserves. Banks create money by lending excess reserves to consumers and businesses. This, in turn, ultimately adds more to money in circulation as funds are deposited and loaned again.

The Fed does not actually print money. This is handled by the Treasury Department's Bureau of Engraving and Printing. The U.S. Mint makes the country's coins.

*Correction—Dec. 2, 2022:*This article was corrected from a previous version that referred to the now obsolete money multiplier approach. The central bank doesn't determine the quantity of loans and deposits in the economy by controlling the quantity of reserves, but by setting the price of reserves—that is, interest rates.

he money supply in an economy is categorized into different types based on the liquidity and type of account in which the money is held. The primary classifications used by the Federal Reserve are M0, M1, M2, and the discontinued M3. Here's a breakdown of each category:

**M0 (Monetary Base)**

* **Definition**: The most liquid form of money.
* **Components**: Physical currency (coins and paper money) in circulation and reserves held by banks at the Federal Reserve.
* **Significance**: Represents the base level of money supply, directly controlled by the central bank.

**M1**

* **Definition**: A narrow measure of the money supply that includes highly liquid forms of money.
* **Components**:
  + Currency in circulation (physical coins and paper money).
  + Demand deposits (checking accounts).
  + Other checkable deposits.
  + Traveler's checks.
* **Significance**: Indicates the money available for immediate spending and transactions.

**M2**

* **Definition**: A broader measure of the money supply that includes all elements of M1 plus additional forms of money.
* **Components**:
  + All of M1.
  + Savings deposits.
  + Small-denomination time deposits (certificates of deposit under $100,000).
  + Retail money market mutual funds.
* **Significance**: Reflects the money that is readily available for spending and also near-money that can be quickly converted to cash.

**M3 (Discontinued)**

* **Definition**: An even broader measure of the money supply that included M2 plus larger and less liquid forms of money.
* **Components**:
  + All of M2.
  + Large-denomination time deposits (over $100,000).
  + Institutional money market funds.
  + Short-term repurchase agreements.
  + Other larger liquid assets.
* **Significance**: Provided a comprehensive view of the money supply, including large-scale deposits and institutional money. It was discontinued by the Federal Reserve in 2006 due to the cost of collection and the belief that it did not provide significant additional information compared to M2.

The discontinuation of M3 was officially announced in the Federal Reserve Statistical Release titled "Discontinuance of M3" .

**Summary**

* **M0**: Physical currency and reserves, most liquid.
* **M1**: M0 plus demand deposits and checkable deposits, immediate spending money.
* **M2**: M1 plus savings deposits, small time deposits, and retail money funds, broader measure including near-money.
* **M3**: M2 plus large time deposits and institutional money funds, discontinued in 2006.

These classifications help economists and policymakers understand the different layers of money supply, liquidity, and their potential impact on the economy.