

Expansionary/Contractionary Policy and the Multiplier Effect

by Sophia



WHAT'S COVERED

This tutorial will cover expansionary and contractionary policy and the multiplier effect, exploring how monetary policy works to speed up or slow down the economy.

Our discussion breaks down as follows:

1. Goals of the Fed
2. Tools of the Fed
 - a. Reserve Requirement
 - b. Open Market Operations
 - c. Fed Funds Target Rate/Discount Rate
3. Expansionary Monetary Policy
4. Contractionary Monetary Policy

1. Goals of the Fed

The Federal Reserve's main goals in managing our nation's money supply are the exact same goals as the federal government's in fiscal policy, which is to promote the following:

- Full employment
- Price stability

In this tutorial, we will focus on the actions of the Fed versus the federal government.

Today we will be discussing **monetary policy**, which is typically policy set by a central banking authority, whereby money supply access and the interest rate is varied to assist in stabilizing economic activity.



TERM TO KNOW

Monetary Policy

Typically policy set by a central banking authority, whereby money supply access and the resulting cost or access to money (interest rate) is varied to assist in stabilizing economic activity

2. Tools of the Fed

The Fed has different tools than the federal government does. The FOMC is part of the Federal Reserve and they meet eight times a year to manage our nation's money supply. The tools used by the FOMC include:

- The reserve requirement
- Open market operations
- Fed funds market
- Discount rate

Let's start our discussion with the reserve requirement.

2a. Reserve Requirement

Let's briefly review the fractional reserve system. **Reserves** are the portion of deposits required to be held by a bank. They are usually kept to maintain reserve requirements, as set by the Fed.

That **reserve requirement** is the required amount of depository liabilities as set by the Fed that a bank must hold, typically quoted as a percentage (e.g., 10%).

It is important to remember that the fact that banks can lend out a portion of customer deposits makes it possible for them to create money in our economy. This point is essential for understanding today's lesson on expanding or contracting the money supply, which we will cover later in the tutorial.

Now, it is the **money multiplier** that actually calculates the amount that the money supply can increase through banks' ability to loan funds.

The money multiplier is the increase in the money supply resulting from the ability of banks to loan deposits. Its value is equal to 1 divided by R, where R is the reserve ratio.



FORMULA TO KNOW

Money Multiplier

$$\text{Multiplier} = 1 / R$$

⇒ **EXAMPLE** Using the example of a 10% reserve requirement, expressed as .10, you can see that the multiplier becomes 10.

$$1 / .10 = 10$$

If we take an initial loan of \$1,000 in M0, which is the physical cash in our economy, times our multiplier of 10, it will lead to a potential \$10,000 increase in checkable deposits in M1.

Therefore, you can see that as we raise and lower the reserve requirement, it either makes the multiplier bigger or smaller.

If we lower the reserve requirement, this makes the multiplied effect, or the impact that banks could have on the money supply through their loaning, much greater. Conversely, if we raise the reserve requirement, it lessens this ability, because the multiplier would be smaller.



TERMS TO KNOW

Reserves

A portion of deposits required to be held by a bank; reserves usually are kept to maintain reserve requirements, as set by the Fed

Reserve Requirement

The required amount of depository liabilities as set by the Fed that a bank must hold, typically quoted as a percentage

Money Multiplier

The increase in the money supply resulting from the ability of banks to loan deposits; the value is equal to the reciprocal of the prevailing reserve ratio or $1/R$, where R is the reserve ratio

2b. Open Market Operations

Open market operations are another tool available to the Fed to regulate interest rates and the money supply. In this case, we are referring to the purchase and sale of U.S. Treasury securities.



TERM TO KNOW

Open Market Operations

One of the mechanisms available to the Fed to regulate interest rates and the money supply; open market operations refer to the purchase and sale of U.S. Treasury securities

2c. Fed Funds Target Rate/Discount Rate

The next tool is the **fed funds target rate**, which is used when banks need to borrow money because they have not met the reserve requirement for the night. In this situation, they can actually borrow from one another. The fed funds target rate, then, is the rate that Fed member banks charge other member banks for overnight loans, typically made to meet reserve requirements.

Now, if banks need to borrow from the Fed itself to meet their short-term liquidity needs, they would pay the **discount, or window rate**, to the Fed itself.



TERMS TO KNOW

Fed Funds Target Rate

The rate that Fed member banks charge other member banks for overnight loans— typically made to meet reserve requirements

Discount (Window) Rate

The rate the Fed charges member banks for short-term loans to meet temporary liquidity needs

3. Expansionary Monetary Policy

So, what does the Fed do when the economy is in a recession? Well, let's examine what happens during a recession.

During a recession, economic activity is slowing, as measured by real GDP. Often, consumers and businesses are not spending as much money due to low confidence in the economy.

⇒ **EXAMPLE** If consumers are not confident in the economy, they might exhibit behaviors like putting off a summer vacation and saving the money instead, in case they lose their jobs. Likewise, they might choose to eat in this weekend instead of the usual restaurant meal out--again, saving that money.

Now, how do these behaviors impact the money supply? Well, when a consumer decides not to go out to eat this weekend, it does not just impact that consumer. It also reduces the amount of money the restaurant is making. In turn, that restaurant has less money to pay its workers, and those workers are then less likely to make purchases somewhere else.

As you can see, this has a multiplied effect in the economy--specifically, a multiplied *negative* impact in the economy.

So, how does this impact the money supply? Well, when consumers and businesses are not spending as much money or as frequently, it can reduce the size of M1.

There is now a risk for deflation since people are tending to hold onto money and save it, keeping it in the banks.

Therefore, in order to reduce this risk and get people spending money again, the Fed can enact **expansionary monetary policy**, by increasing the money supply. This is also known as an easy money policy.

Expansionary policy is either monetary or fiscal policy--here, we are focusing on monetary--that is enacted to stimulate economic growth.

In other words, it aims to get the economy moving again, and it achieves this by enticing people to take money out of the banks and spend it.

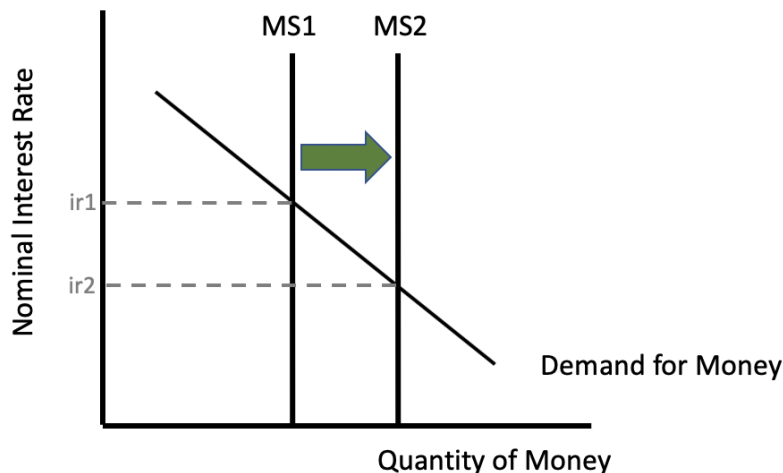
There are several actions that the Fed can take:

- Lower the reserve requirement. As shown in our multiplier example, as they lower the reserve requirement, it allows banks to make more loans, which gets money circulating versus staying in the banks.

- Buy Treasury securities. When someone buys something from you, you walk away with money, correct? So, when the Fed buys Treasury securities off of bondholders, bondholders have money, which is injected into the economy.
- Take measures to lower rates, like the discount rate and fed funds target rate. When rates are lower, loaning is easier and cheaper; thus, money leaves the banks instead of staying in.

Essentially, all of these policies work in the same way, but through slightly different tools.

Now, this is what it looks like when the Fed enacts easy money policy. When they increase the money supply, it will lower interest rates throughout the economy.



At lower rates, people and firms tend to take advantage of the lower rates by taking out loans for items like homes and cars. This is what has an expansionary effect on the economy.

Another way to think about this is when the Fed increases the money supply, essentially they are creating a little inflation. Now, this might sound like a bad thing, but the idea is since the purchasing power of money is falling, people will want to spend money sooner rather than continuing to hold onto it. During a recession, a little inflation is not necessarily negative, because generally, inflation is very low during a recession.



BIG IDEA

Again, the idea with expansionary policy is to encourage people to spend, spend, spend.

🔗 **EXAMPLE** During the housing crisis of 2007 to 2008, our Fed took many measures to ensure that banks would not fail and could continue to make loans. First of all, they purchased billions of dollars of Treasury and other securities, called credit easing. They drove the discount rate way down, essentially allowing member banks to borrow money from the Fed for free.



TERM TO KNOW

Expansionary Policy

Either monetary or fiscal policy that is enacted to stimulate economic growth (as measured by the GDP growth rate)

4. Contractionary Monetary Policy

Now let's discuss the opposite situation when there is inflation in the economy.

During a rapid expansionary period, economic activity is growing. Consumers and businesses are spending a lot of money--and very quickly--due to high confidence and prosperous economic times.

⇒ **EXAMPLE** When consumer confidence in the economy is high, they might make choices such as definitely taking that summer vacation, or going out to dinner instead of eating in.

When people are making these kinds of decisions, like eating out, this is increasing the amount of money the restaurant is making. In turn, the restaurant pays its workers, and those workers can go on to make purchases elsewhere. This has a multiplied positive effect on the economy.

However, this shows that when consumers and businesses are spending a lot of money, it increases the size of M1, leading to a risk for inflation. People are not holding onto money and it is changing hands very quickly.

Now, a little inflation is fine. However, it is possible for the economy to get overheated.

Sometimes, when that risk is high, the Fed will step in and enact **contractionary monetary policy** to try to slow down an overheated economy.

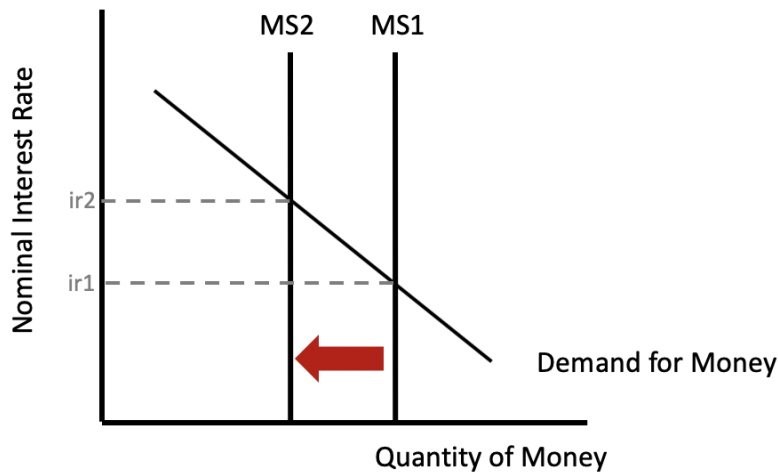
In this situation, the Fed will do all the opposite things and decrease the money supply. This is known as a tight money policy. Contractionary policy is a monetary or fiscal--in this case, monetary--policy that is enacted to slow economic growth.

Contractionary policy aims to slow down the economy. It can achieve this by enticing people to keep money in the banks and spend less.

The Fed can do this by taking the following actions:

- Raise the reserve requirements
- Sell Treasury securities, thereby taking money out of people's hands
- Take measures to raise rates.

When we enact tight money policy, it decreases the money supply and raises interest rates in the economy.



At higher rates, people and firms tend to keep money in the banks and take out fewer loans. This has a contractionary or slowing effect on the economy.

⇒ **EXAMPLE** In the late 1970s and early 1980s, our economy experienced significant, double-digit inflation. The Fed sold securities and raised rates in an attempt to contract the money supply and slow down the rate of inflation.



TERM TO KNOW

Contractionary Policy

Either monetary or fiscal policy that is enacted to slow economic growth (as measured by the GDP growth rate)



SUMMARY

Today we reviewed the **goals of the Fed**, which are to promote full employment and price stability. We also discussed the **tools of the Fed**, including the **reserve requirement**, **open market operations**, and the **fed fund target rate** and **discount rate**. We learned that during a recession, the Fed could enact **expansionary monetary policies**, including lowering the reserve requirement, lowering rates, and buying securities. We also learned that during inflation, the Fed could enact **contractionary monetary policies**, such as raising the reserve requirement, raising rates, and selling securities. Remember, these policies work by encouraging people to either take out loans and spend money, or to keep money in the banks.

Source: Adapted from Sophia instructor Kate Eskra.



TERMS TO KNOW

Contractionary Policy

Either monetary or fiscal policy that is enacted to slow economic growth (as measured by the GDP growth rate).

Discount (Window) Rate

The rate the Fed charges member banks for short-term loans to meet temporary liquidity needs.

Expansionary Policy

Either monetary or fiscal policy that is enacted to stimulate economic growth (as measured by the GDP growth rate).

Fed Funds Target Rate

The rate that Fed member banks charge other member banks for overnight loans— typically made to meet reserve requirements.

Monetary Policy

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The increase in the money supply resulting from the ability of banks to loan deposits; the value is equal to the reciprocal of the prevailing reserve ratio or $1/R$, where R is the reserve ratio.

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Reserve Requirement

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Reserves

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