

Econ 103 Money and Banking – Dr. Douglas Rice Week 3 Lecture - The FED



Make sure you read the money supply definitions in the first part of Chapter 5 of FMI. For the most recent money supply data (it is updated every week), check out the Federal Reserve's website at <http://www.federalreserve.gov> Look under the research and data category, then click on statistics, and retrieve money stock data.

Looking at the Fed web site, you can also gather data on monetary growth and many other interesting areas. During most of the 1990s, the Fed allowed the money supply to expand and today's monetary policy (including the 8 Fed interest rate increases in the last year or two) is still considered to be accommodative.

The Fed does it's best to try to influence the economy so that it grows constantly at a steady pace. They do this primarily through Open Market Operations and the setting the Fed Funds rate. But raising and lowering this rate they control how much money is in circulation as they are either removing funds from circulation (tightening) or increasing funds in circulations (loosening). This is the gas and the brake (so to speak) of the economy. Basically, if the economy overheats it leads to inflation and to avoid that they will raise interest rates until the economy cools a bit, in other words hit the brakes. If the economy is sluggish or slowing, they will lower interest rates to get it moving again, essentially stepping on the gas. That may sound easy, but with an economy the size of the US we don't really turn on a dime. It's more like a huge tanker on the ocean, you must anticipate what's a head and act accordingly or you'll find yourself in trouble.



Many pundits will second guess the Fed and their decisions about when to move rates and how to act with regard to the economy. This is especially true in an election year and with those running for office or those stumping for those running for office. Try to ignore that noise. The Fed is a group of very smart dedicated individuals doing their very best to make good decisions for the entire economy. They are appointed for 14 years and are not reappointed. They are almost completely independent of all outside influence. They have their own budget that Congress can't mess with, the President nor Congress can't mandate they do something, and this allows them to do unpopular things such as rising interest rates to slow the economy to avoid inflation just as everyone is feeling so good about what's going on. They have to avoid inflation so they kill the party with higher rates and that's never popular. But they do it anyway. Other countries don't have a separation between the Central Bank and the President. The President is the Central Bank and he can do what he wants.

Leaving a politician to their own devices in running monetary policy creates a horrible situation because as the politician panders for votes, they are very likely to have a loose monetary policy and that leads to inflation. We see this all the time, often in South America. Although recently President DaSilva in Brazil has stepped in to the limelight as an economically intelligent leader, previous South American



countries have had out of the world inflation. Some of that is due to the fact that there wasn't an independent Central Bank that could say no to the President. Here the Fed Chairman is the most visible part of the Central Bank and he has no problem telling the administration or Congress exactly what he is thinking nor do the other members of the Fed, although it's often done behind closed doors.

Currently, the Fed is currently focused on keeping our economic growth going but removing the highly accommodative monetary policy that gave us the lowest interest rates in 40 years. They aren't stepping on the brakes so much as they are just taking their foot off the gas. Once that goal is accomplished, the Fed will probably stop raising rates and allow the economy to just roll along until it sees a pattern of it slowing or speeding up and then it will adjust accordingly. The last series of interest rate hikes weren't intended to slow the economy so much as just removing the excess and return it to a more neutral environment. But if they see the economy start to take off, they won't have any problem at all continuing to raise rates to slow it.



One other thing. You will notice that the Fed almost always moves in very slow steps with $\frac{1}{4}$ point rate moves. This is for many reasons but one is so they won't jar the markets and create a major problem for the firms and traders in them. They have learned over the years to signal the markets very subtly about what they are going to do and then stick to their word. If they move too fast or change their mind, it could have a significant impact on those in the market leaving them with large losses which can be avoided if everyone just gets on the same page. So Greenspan and company try to do things at a measured pace while telegraphing their moves for the most part. Now on occasion when they want to send a strong signal to the market, they move in between meeting and sometimes abruptly. This is done knowing that they will be the talk of the trading floor and they will certainly get their point across. For example, when the dot com bomb was going off, they sent a clear signal that they were going to move interest rates significantly lower by dropping $\frac{1}{2}$ point in between

meetings in a surprise announcement. This settled equity markets and allowed a slower steady decline without a collapse. The message was that the Fed was on the job and fully aware that the economy needed a boost.

What they are shooting for is stable prices with as much employment as can be maintained. In other words, low inflation and low unemployment. Inflation usually takes precedent as inflation affects all of us and unemployment affects far fewer. A balance between the two is difficult as one seems to offset the other ala the Phillips Curve. More on the Fed next week also. So go to their web site and check out all the great information.

Supplementary Lecture – Money, Velocity and Amount

You may have studied the equation of exchange in previous economics courses. I will review some of the basics here.

The equation of exchange is an economic identity that states that $M*V=P*Q$. M is the money supply, V is the velocity of money, P is the price level, and Q is the level of output. In the national income accounts, $P*Q$ is equivalent to nominal Gross Domestic Product (GDP), and Q is equivalent to real GDP (e.g. GDP absent the effects of inflation).

The equation of exchange is fairly straightforward in its meaning if you think of V as the rate at which money turns over to support a given level of spending ($P*Q$) in the economy.

Many economists assume that Velocity (V) is fairly stable over time. Most economists also assume that Q, which is output or real GDP, has a fairly steady long-run (or trend) potential growth rate. Let's assume that the potential growth in U.S. output (Q) is about 3.5% per year and V is constant. Then if the Fed expands the money supply (M) at 5.5% per year, we will get inflation (P) of about 2.0%. Here's the math.



$M*V=P*Q$ implies:

$\% \text{ change in } M + \% \text{ change in } V = \% \text{ change in } P + \% \text{ change in } Q$

Substituting the above numbers:

$5.5\% + 0\% = \% \text{ change in } P + 3.5\%$

As you are probably aware, there is a lot of controversy about what the correct estimate of U.S. potential economic growth is. Until a few years ago, most economists (and central bankers) thought that the long-run potential growth of U.S. real GDP was somewhere around 2.5%. Now, due to the recent surge in productivity growth resulting from the application of information technology, many have upgraded their potential growth

estimate. Several Fed Governors have stated that they believe potential real GDP growth may now be near 3.5%, implying that monetary growth of near 5.5% would be appropriate to keep inflation near 2%. (All of this assumes, of course, that the velocity of money is constant, an assumption which a number of economists question.)

So when you are running a company someday and you read that GDP was 3.5% last year, that's about what it should be. Higher and it's inflationary and lower it's sluggish. That is a reasonable benchmark to compare whatever is currently going on.

The Federal Reserve does not explicitly set monetary growth targets, but over most of the past decade the Fed has kept M2 growth at an average of around 5-6% per year. The European Central Bank sets an explicit target for M3 growth of 4.5% per year.



Some central banks, such as those in Canada, Britain, Sweden, Australia, and New Zealand, operate monetary policy by setting strict inflation targets. The thinking is that it is very difficult to hit monetary growth targets and, even then, to know how changes in the money supply will impact the economy. So central banks should continually adjust monetary growth to hit a desired inflation rate. There is some good logic to this trial-and-error approach, given the imprecision of monetary policy in practice.

Make sure to browse the fed site and bookmark it for future use as it contains wonderful information about the economy that has the benefit of less biased than viewing the economy through some reporter or analysts eyes.