Discussion Handout 5: Chapter 16 The Monetary System

March 5, 2020

I. Money

Big Question: What is money? Why do we need it? Can we ever have too much money in the economy?

Money - the assets in the economy that people regularly use to buy goods and services from each other.

Functions of Money:

1. Medium of Exchange
2. Unit of account
3. Store of value

Liquidity - describes the ease with which an asset can be converted into a medium of exchange.

Kinds of Money:

- Commodity Money - when money takes the form of a commodity (like gold) with intrinsic value
- Fiat Money - Money without intrinsic value (dollar bills=paper which is not worth very much by itself)

Money Stock - the quantity of money circulating in the economy

What is included in the money stock? The most basic items are:

- Currency - paper bills and coins
- Demand Deposits - balances in bank accounts that can be accessed via check or debit card

Two Definitions of the Money Stock:

1. M1 - Currency, Demand deposits, traveler's checks, other checkable deposits
2. M2 - Items in M1 + savings deposits, small time deposits, money market mutual funds, some small categories

II. Banks and the Money Supply

Reserves - deposits that banks have received but have not loaned out

Fractional-reserve banking - when a bank holds a fraction of deposits as reserves and lends out the rest, increasing the money supply. While this increases the money supply, it also means people take on more debt, so total wealth does not increase. If a bank does not make loans and just holds deposits, it is called 100-percent reserve banking.

Reserve Ratio - the fraction of total deposits that a bank holds. Sometimes this is set as a requirement by the government to prevent bank panics (when many depositors want to withdraw their money at the same time but the bank has loaned it out and can't give it to them, so people freak out).

Money multiplier - the amount of money the banking system generates with each dollar of reserves. The money multiplier is the reciprocal of the reserve ratio. The higher the reserve ratio the smaller the money multiplier:

$$MoneyMultiplier = \frac{1}{ReserveRatio}$$

$$MoneySupply = MoneyMultiplier * Deposits$$

Bank Capital - The resources a bank obtains from issuing equity to its owners.

Leverage - Using borrowed money to supplement existing funds for investment purposes.

Leverage Ratio - Ratio of bank's total assets to bank capital

Capital requirement - Regulation that banks hold a certain amount of capital. Helps ensure that banks can pay off their depositors without borrowing from the government.

III. The Federal Reserve and the Money Supply

Federal Reserve - The central bank for the United States created in 1913. The Board of Governors in located in DC with 12 regional banks around the country. The organization is in charge of overseeing the banking system and regulating the amount of money in the economy by acting as a lender of last resort and conducting monetary policy. Decisions on monetary policy are made by the Federal Open Markets Committee (FOMC), which is made up the of the 7 Board members, the President of the NY Fed (NY is the traditional financial center and where monetary policy is actually carried out), and a rotating group of 4 of the other 11 regional banks.

Big Question: Why do we have a central bank? Why is it important?

Tools of the Fed:

1. Open-market operations - the Fed purchases (sells) U.S. government bonds on the open market to put (remove) money in the hands of people and increase (decrease) the money supply. As people sell (buy) bonds this also increases (decreases) bank deposits, which changes the amount of money supplied via the money multiplier channel described above.

2. Fed lending to Banks - Banks borrow from the Fed to insure they have enough reserves. They pay an interest rate called the discount rate. When the fed makes a loan, it increases reserves, banks can lend more, and the money supply increases. If the fed wants to increase (decrease) the money supply they would lower (raise) the discount rate.

3. Reserve requirements - can change the amount required for banks to hold. Influences how much money supply can increase for every dollar in deposits.

4. Pay interest on reserves - If banks deposit their reserves at the Fed they can get interest from the Fed.

Federal Funds Rate - The short-term interest rate that banks charge one another for loans. Although the Fed doesn't directly have control over this rate, it is usually the rate that it is trying to change through monetary policy. As the Fed achieves its target, it adjusts the money supply.