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A Beginner's Guide to the Interest Rates and the Operations of the Federal Reserve System[1]

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Objective

The purpose of this paper is to show what the Federal Reserve System (FRS) does and how its actions affect us. It is probably true to state that the FRS can affect the average U.S. citizen more than Congress and that the chairman of the FRS is more influential than the President. Consequently, it is important that people know a little about this institution.

The purpose of the FRS is simply to provide the U.S. with a safe, flexible and stable monetary and financial system (http://www.bog.frb.fed.us). It does this by focusing on four areas. First, by regulating the U.S. money supply to ensure full employment, balanced economic growth and stable prices. Second, by regulating banks to protect consumers and maintain a suitable cash reserve. Third, by maintaining the stability of our financial system through its influence on commercial and investment banks, brokerage houses, savings and loans, life insurance companies, credit unions, government agencies, pension funds and other financial intermediaries. For example, it sets margin requirements for buying shares on credit and guarantees savings accounts in some financial institutions up to $100,000 through the Federal Deposit Insurance Corporation (FDIC). Fourth, by providing financial services to the U.S. government, financial institutions and consumers (Ibid).

Structure

The FRS was created by Congress in 1913 to be the nation's central bank. It is, and must be, apolitical to function properly. It consists of a seven member Board of Governors, headquartered in Washington, D.C., and 12 Federal Reserve Banks (FRB) spread throughout the U.S. (Figure 1). Board members are appointed by the President and confirmed by the Senate to serve a single 14-year term. The appointees must be a reasonable representation of U.S. businesses and the georgraphy of the country. The President designates and the Senate confirms a Chairman and Vice Chairman from this Board to serve four-year terms. These two can be appointed to more than one term.

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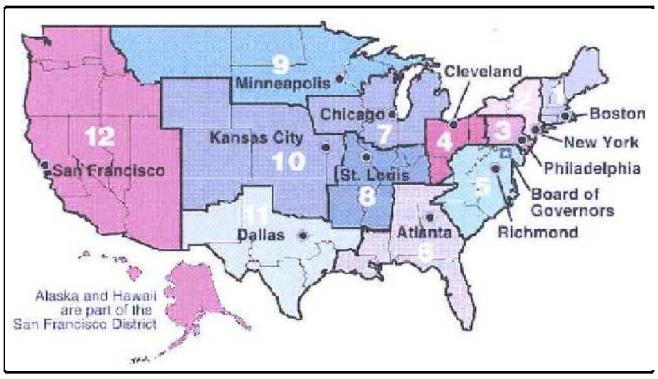

Figure 1. Map of the 12 Federal Reserve Districts and Banks.

The Board's main responsibility is to manage the money supply of the U.S. The seven members, along with five others, make up the Federal Open Market Committee (FOMC). This group meets every six weeks to analyze and manage the money supply and, consequently, may be the most influential committee in the country. The other five members are all presidents of the FRBs, with the president of the FRB of New York being a permanent member. The others serve one year on rotation between all the banks. The FOMC is chaired by the FRS chairman with the president of the FRB of New York as the vice chairman.

Regulating the Money Supply

The money supply in the U.S. is made up from money outside the banking system or in the economy. (Mescon, Bovee and Thill, *Business Today*, 9th Edition, Prentice Hall, 1999, p. 556). Its three components are currency, demand deposits and time deposits. Currency includes coins, notes, money orders and cashier's and traveller's cheques. Demand deposits are cheques. Time deposits are savings accounts, money market accounts and certificates of deposit. Economists also consider money as M1, M2 and M3. M1 is currency and demand deposits, M2 is M1 plus small time deposits (<$100,000) and M3 is M2 plus large time deposits and money market accounts held by institutions. So M3 plus Eurodollars, which are simply dollars deposited in banks outside the U.S., constitute the U.S. money supply. Interestingly, some two-thirds of U.S. currency is overseas (Ibid, p. 558), which makes money supply control a difficult operation.

There are four main ways of controlling the money supply. One way is to buy and sell Treasury bills, notes and bonds through Federally chartered commercial banks (i.e. member banks). All U.S. banks must be either federally or state chartered. If banks sell Treasuries, buyers pay money to the bank for them. This action removes money from circulation and reduces the money supply. In order to sell Treasuries, they must be made yield attractive for buyers. If Treasuries become attractive, then corporate paper and the like must also increase their attractiveness to compete for buyers. If there is too little money in circulation, the banks will buy Treasuries and therefore increase the money supply with the cash they spend.

A second way of controlling the money supply is to change the reserve requirement, which is the money that the FRS requires member banks to keep available at all times. This sum is usually decreed as a percentage of a bank's deposits. For example, if the reserve requirement is 10% (which it currently is) and the bank has $10 million in deposits, it must therefore keep $1 million on reserve. Lowering the reserve requirement will increase the money supply, raising it will decrease the supply. This system is rarely used because of the multiplier effect which ramifies through the economy and makes this an uncertain method of control.

A third way, also rarely used, is with selected credit controls such as margin requirements or setting terms for various loans. The current margin requirement is 50%, which means that an investor must have at least half the cost of the market price of shares in a corporation in order to buy them. This margin requirement has not changed in over 25 years. In recent years, particularly with Alan Greenspan as chairman of the FRS, the most common method of controlling the supply of money has been through manipulating interest rates.

Interest Rates in the United States of America

Raising rates decreases the money supply because loans become more expensive. Lowering interest rates increases the money supply because borrowing becomes cheaper. On June 30, 1999, the

FOMC raised interest rates for the first time in two years. By May 16, 2000, they had raised interest rates for the sixth time (Figure 2, *Investment Digest*, Summer 2000, American General Financial group, p. 2).

Figure 2. Interest Rate Changes 1999 to Mid-2000. (Source: *Investment Digest*, Summer 2000, American General Financial Group)

The FOMC raised interest rates mainly because of four sets of numbers. First, economic growth was a huge 5.4% for the first quarter 2000, following the final quarter's even larger 7.3%. Growth is measured using Gross Domestic Product, which is the value of all the goods and services produced in the U.S. in a year, including consumption, government purchases, investing and exports minus imports. Second, unemployment at 3.9% in April was at its lowest level in 30 years, followed by May's figure of 4.1%. Third, consumer spending went from 5.9% in the fourth quarter of 1999 to 7.5% in the first quarter of 2000, the largest jump in 15 years (Ibid, pp. 2 and 3). Consequently, these three factors all affected the fourth, namely inflation, as measured by the Consumer Price Index (CPI). The CPI was 2.7% in 1999 but went to an annualized 5.8% in the first quarter of 2000. Hence the six increases in interest rates and the 50 basis points or largest increase in May 2000.

There are three interest rates that are relevant to managing the money supply. The discount rate is the interest rate that the FRBs charge their member banks when they lend money to them. This is currently around 6%. The federal funds rate is the overnight rate that banks charge each other for overnight loans, which is now about 6.5%. The prime rate is the rate that large commercial banks use as a base for lending short-term money to low risk borrowers such as corporations. Typically, the FOMC adjusts the federal funds rate although, as the chart shows, they have tended to adjust both this and the discount rate recently.

If banks have to pay more interest to borrow money, via the federal funds rate and/or the discount rate, they will, in turn, pass this increase on to their borrowers via the prime rate. The prime is now 9.5% and is the key rate for consumers. For example, a mortgage may be listed as prime plus 2.5% for a risky borrower and prime plus 0.5% for a low risk borrower. Car loans, credit cards and basic loans all work with the same calculations. Raising interest rates slows down the economy because potential borrowers want to borrow at lower, rather than higher, rates. As rates are increased by the FOMC, only the more optimistic borrowers continue to expand their debt, thus dampening the pressures on the economy.

Concluding Remarks

The greatest influence on the U.S. economy comes from the FRS, despite the claims by Congress and the White House. Its role is to keep the economy humming nicely. The 15 plus years of expansion in the U.S. economy is a direct result of increased labor productivity and confidence in the financial markets. Productivity results from education and using the right tools. The tools are derived from rewards received through risky investing in new ways to do things. All of it takes money. Too much money induces inflation, which dilutes rewards and discourages innovation. Too little money strains the economy and can produce depression, which also discourages innovation. Consequently it is sad that, according to a recent poll, fewer than 2% of Americans know anything about their FRS. The paper attempts to rectify this situation a little.