

Money Supply

BY MIKE FINNEGAN

When the economist Milton Friedman said that “inflation is always and everywhere a monetary phenomenon,” he was highlighting the relationship between inflation and the supply of money in the economy. To see this relationship in action, we can look at famous cases of hyperinflation, such as the Weimar Republic of pre-World War II Germany. To pay reparations from World War I, the German government began rapidly printing money, thereby increasing the amount of money in the economy. The large increase in the supply of money caused the value of a single bill to become less than it was the day before. Storeowners raised their prices in response and so consumers needed more currency to buy the same quantity of goods; this process continued until eventually people would bring wheelbarrows of cash to buy simple household items. Even today, there are occasional cases of hyperinflation — such as in Venezuela, where the supply of money has recently increased by double digits in percentage terms on a weekly basis.

But what, exactly, is the money supply? Economists have used four main measures, known as M_0 , M_1 , M_2 , and M_3 . The four measures are nested: M_3 includes M_1 and M_2 ; M_2 includes M_0 and M_1 .

The main feature distinguishing the four measures is the liquidity of their components (how easily one can exchange the asset for cash). The smallest and most liquid measure, M_0 , is strictly currency in circulation and money being kept by banks in reserves; hence, M_0 is often referred to as the “monetary base.” M_1 is defined as all of M_0 plus the remaining demand deposits not in reserves as well as traveler’s checks; it is often referred to as “narrow money.” M_2 is everything included in M_1 plus savings accounts, time deposits (under \$100,000), and retail money market funds. M_3 is everything in M_2 plus larger time deposits and institutional money market funds. (Because the cost of estimating M_3 was thought to outweigh its value, the Fed stopped reporting it in 2006.)

Additionally, as pointed out by the monetarist economist Anna Schwartz, there is a relationship between the

components of these measures of money supply and how they are primarily used as a medium of exchange or a store of value. The components of the most liquid measures of the money supply, M_0 and M_1 , all act as a medium of exchange in the economy, while the components of M_2 are used primarily as a store of value; M_3 , in turn, can be thought of as a close substitute for money. Thus, the general idea is that there is a positive relationship between the medium of exchange property and liquidity.

The role of the money supply in the way that many economists think about inflation has evolved in the past decade as a result of changes in how the Fed conducts monetary policy. Before 2008, an increase in the monetary base was generally agreed to stimulate the economy in the short run and increase the price level in the long run. Today, monetary policy remains central in the determination of inflation, but the role of the monetary base is much reduced.

What changed is that the Fed received authority from Congress to pay interest on reserves (IOR) to banks for the reserves they hold at the Fed. The Fed responded to the 2007-2009 recession in part by engaging in massive purchases of Treasuries and mortgage-backed securities, adding greatly to the monetary base. By adjusting the interest rate on reserves appropriately, inducing banks to maintain high levels of reserves at the Fed, the Fed avoided the situation in which this infusion into the monetary base would lead to inflationary increases in bank deposits and lending and, therefore, in the money supply.

In short, in the post-2008 world, the Fed controls inflation by controlling the interest rate on excess reserves. Thus, an increase in the monetary base no longer necessarily leads to an increase in the money supply or, therefore, to an increase in the price level. Put differently, the familiar textbook relationship between central bank money creation and inflation has become less useful for understanding inflation.

M_1 and IOR might not be the best cocktail party conversation starters, but knowing about the money supply and its evolving role is important for monetary policy. **EF**



ILLUSTRATION: TIMOTHY COOK