

# The Monetary Base

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Credit is the lifeblood of the economy. The amount and quality of credit market debt is a measure of the size and vitality of a nation's economy. All such debt rests like an inverted pyramid on a small foundation of money known as the *monetary base*. The implicit assumption is that credit market debt is convertible at maturity into *base money*.

The monetary base is the definitive money of a nation, meaning the Government has no obligation to convert it on demand into some other form of money. The Government defines the unit of account in base money, makes it *legal tender for all debts, public and private*, and requires that payments to the Government be in base money. In the following, we deal mainly with base money of the U.S.

## A Brief History

During the era of gold as money, gold coins comprised the monetary base. The production of money was basically in the hands of the private sector. The Government minted it or printed the certificates used in trade to represent it, while private enterprise mined the ore and reaped the benefits of doing so. The total amount produced was not under Government control, but the relative scarcity of gold acted to maintain its exchange value at an acceptable level most of the time. The Government had to acquire a share of the base money by levying taxes and fees on the private sector.

Today the monetary base is created in the form of nonconvertible notes issued by the Federal Reserve and bank credits at the Fed, which can be exchanged for notes on demand. When the U.S. ended the use of gold for domestic currency in 1933, any constraint on the issue of base money was effectively removed. The Government now has unlimited spending power in base money, and necessarily holds a monopoly on its issue.

## Bank Credit and Base Money

A private enterprise with sufficient financial capital may obtain a charter that permits it to accept deposits of base money from the private sector, and to issue loans in the form of *credit* convertible to base money on demand. These depositories, commonly known as *banks*, must hold sufficient base money, called *reserves*, for that purpose.

When one deposits a check or cash in his account at a bank, he receives credit in exchange which we will refer to as *bank money*. We expect banks to redeem those credits for cash on demand.

Most of the money in use today exists as credits issued by private banks. However when one pays by drawing on his bank account, if the check is deposited in another bank, the payer's bank must transfer an equal amount of reserves to the payee's bank. Thus *base money is the foundation of the bank money system.*

### Base Money as Credit

In reality, base money itself is a form of credit. In the same way a *contract* can be viewed as a *document* or the *agreement* it represents, *money* can be viewed as a *token* or the *credit* it represents. And since credit for the holder is debt for the issuer, money can also be viewed as a token representing *third party debt*. In the case of base money, the third party is the Fed.

All base money originates with the Fed. For the most part, it is issued in exchange for securities the private sector bought from the Treasury with base money previously acquired from the Fed. This circular system of credit is difficult for some to understand, especially for those who think of money only in terms of the token itself rather than the credit represented by the token.

If base money is simply a form of credit backed by Treasury securities, which are another form of credit, then what assures its viability as money, and what is the real basis of its value?

### The Viability of Base Money

A token qualifies as money when it is widely accepted as a medium of exchange. To be accepted in that way, it must be seen as a *store of value*, even though its value may decrease before its planned re-use. Notes and coins are convenient tokens because they are easy to use and reasonably durable. Bank deposits, which are claims on base money, can easily be transferred by wire to or from any bank. It remains to explain then why those tokens have value. Their status as legal tender in the discharge of debts is not sufficient because it says nothing about their value in ordinary use.

The viability of base money ultimately depends on the government enforcing tax collection, and acting to maintain a modest rate of price inflation. Base money acquires value because that is what the private sector must deliver in paying Federal taxes. Those who have no tax liabilities readily accept payment in base money because so many others need it. *In essence, base money is a tax credit.*

The Fed's base money liabilities are closely matched by its assets in the form of Treasury securities that it previously bought from the private sector. But what prevents the real value of those Treasury securities from being diluted by continued deficit spending? As will be explained, the purchasing power of base money has very little to do with the amount of deficit spending. However it does

depend, in the long run, on the cost to banks of acquiring base money, which the Fed itself controls.

## Fed Operations

Since base money is a monopoly of the Government, the Fed must issue enough to avoid a shortage of what the private sector must use to pay its taxes. In practical terms, that means it must provide whatever reserves the banking system needs to ensure the liquidity of the payment system.

When the Fed needs to increase aggregate reserves, it buys Treasury securities from the private sector and credits the sellers' banks with additional deposits at the Fed. Conversely the Fed sells Treasury securities to the private sector from its own portfolio when it needs to decrease aggregate bank reserves. Bank reserves are only a small part of the monetary base, but they play a key role because they are the grease that enables the bank credit system to function.

These transactions by the Fed are designed to balance supply and demand for bank reserves at the Fed's target interest rate on overnight loans between banks, otherwise known as the *Fed funds rate*. The Fed funds rate is the benchmark for all short-term interest rates. It has a significant influence on the amount of bank money issued, and thus the liquidity of the private sector. In controlling the Fed funds rate, the Fed necessarily relinquishes control of the amount of base money it issues. The private sector itself determines the net amount issued.

## Treasury Operations

The Treasury spends out of its account at the Fed. It continuously replenishes that account with transfers from its accounts in commercial banks where it deposits its receipts from taxes and the sale of bonds. These so-called *Treasury Tax and Loan* accounts in commercial banks are backed by deposits at the Fed, which are reserves of the banking system.

Treasury operations simply recycle base money previously issued by the Fed. It approximately balances its receipts from taxes and the sale of bonds against its spending in order to avoid large variations in the demand deposits of the private sector which could significantly affect liquidity. It targets a fixed balance in its account at the Fed in order to minimize variations in the aggregate reserves of the banking system. The Fed compensates for the variations by adding or draining reserves on a short-term basis through its *open market operations*.

If the private sector as a whole holds more base money than it needs, it will normally use the excess to purchase interest-earning Treasury securities, since base money earns no interest. Thus the Treasury will always be able to recapture its deficit spending through the sale of securities, since it can pay whatever interest the market demands.

## Managing Inflationary Expectations

The interest rate the Treasury must pay to borrow is a market rate that is influenced by Fed policy. The short-term rate closely tracks the Fed funds rate due to arbitrage. Longer-term rates include a premium over the Fed funds rate, which varies with inflationary expectations. Although many diverse factors affect those expectations, the Fed itself has considerable influence through its monetary policy decisions.

It is therefore up to the Fed to keep inflationary expectations within acceptable limits. By doing that well, it protects the purchasing power of base money, and ensures that interest rates on long-term borrowing will not become so burdensome as to prevent economic growth.

**Contrary to conventional wisdom, the historical record shows no significant correlation between the amount of deficit spending and the inflation rate or interest rates.** Most central banks now target a small positive inflation rate to provide a margin against a *deflation trap*. Deflation hurts aggregate demand by creating a money-hoarding psychology which is difficult to overcome, and may result in a prolonged recession. Under the gold-based system, the Government's ability to counter inflationary and deflationary pressures was very limited.

## In Summary

Base money is simply another form of credit. The Fed issues base money in exchange for credits issued by the Treasury, which the private sector previously bought with base money. This circular system of credit works as long as the Government broadly enforces tax collection. Price inflation varies in the short run for a number of reasons not directly under the control of the Government. In the long run, Fed policy, in setting the cost to banks of acquiring base money, is the key to controlling the average inflation rate.