

A History of "Money Creation": The Federal Reserve Bank of Chicago  
A Unit of a Private Banking Corporation

# Modern Money Mechanics

A Created Debt Money  
"How to \$teal the World"

*The purpose of this booklet is to describe the mechanical process of money creation in a "fractional reserve" banking system. The approach is to illustrate the changes in bank balance sheets that occur when bank deposits change as a result of monetary action by the Federal Reserve System—the central bank of the United States. The relationships shown represent potentials based on simplifying assumptions. They should not be interpreted to imply a close and predictable relationship between a specific central bank transaction and the quantity of money.*

*The introductory pages contain a brief general description of the characteristics of money and how the U.S. money system works. The illustrations in the following section describe two processes—how bank deposits expand or contract in response to changes in the amount of reserves supplied by the central bank, and how those reserves are affected by both Federal Reserve actions and other factors. A final section deals with some of the elements that modify, at least in the short run, the simple theoretical relationship between bank reserves and deposit money.*

Money is such a routine part of everyday living that its existence and acceptance are ordinarily taken for granted. A user may sense that money must come into being either automatically as a result of economic activity or as an outgrowth of some government operation. But just *how* this happens all too often remains a mystery.

What is money?

If money is viewed simply as a tool used to facilitate transactions, only those media that are readily accepted in exchange for goods, services, and other assets need to be considered. Many things—from stones to cigarettes—have served this monetary function through the ages. Today, in the United States, money used in transactions is mainly of three kinds—currency (paper money and coins in the pockets and purses of the public), demand deposits (non-interest bearing checking accounts in commercial banks) and other checkable deposits at all depository institutions, including commercial and mutual savings banks, savings and loan associations, and credit unions. Travelers checks are also included in the definition of transactions money. Since \$1 in currency and \$1 in checkable deposits are freely convertible into each other and both can be used directly for expenditures, they are money in equal degree. However, only the cash and balances held by the nonbank public are counted in the money supply. Deposits of the U.S. Treasury and vault cash in depository institutions are excluded.

This transactions concept of money is the one designated as M1 in the Federal Reserve money stock statistics. Broader concepts of money (M2 and M3) include certain financial assets, such as savings and time deposits and shares of money market mutual funds, which are relatively liquid but which are believed to represent principally investments to their holders rather than media of exchange. While transactions balances can easily be shifted into these other liquid assets, the money-creation process takes place principally through transactions accounts. In the remainder of this booklet "money" means M1.

The distribution between the components of money depends largely on the preferences of the public. When a depositor "cashes" a check, he reduces the amount of deposits and increases the amount of currency in circulation. Conversely, when more currency is in circulation than is needed, some is returned to the banks in exchange for deposits.

While currency is used for a great variety of small transactions, most of the dollar amount of money payments in our economy are made by check or by wire transfer between deposit accounts. Moreover, currency is a relatively small part of the money stock. More than 70 percent, or \$310 billion, of the \$440 billion total money stock at the end of 1981 was in the form of transactions deposits, of which roughly \$235 billion were demand and \$75 billion were other checkable deposits.

**"The Secret Of Credit": The "MONEY MONOPOLY" of the Federal Reserve, DICTATORIAL CAPITALISM. A "SYSTEM" which delivers "PROFITS" to THOSE WHO CONTROL THE CAPITAL! The MEANS: NATIONAL, PUBLIC & AGENCY DEBT!**

**NO SECURED VALUE: BORROWED INTEREST BEARING DEBT CREDIT, CURRENCY, AND COIN BY "DEPOSIT LENDING" OF "CREATED DEPOSITS" BY THE BANKS.**

What makes money valuable?

In the United States neither paper currency nor deposits have value as commodities. Intrinsicly, a dollar bill is just a piece of paper. Deposits are merely book entries. Coins do have some intrinsic value as metal, but generally far less than their face amount.

What, then, makes these instruments—checks, paper money, and coins—acceptable at face value in payment of all debts and for other monetary uses? Mainly, it is the confidence people have that they will be able to exchange such money for other financial assets and real goods and services whenever they choose to do so. This is partly a matter of law; currency has been designated "legal tender" by the government—that is, it must be accepted by creditors in payment of money debts, and paper currency is a liability of the government. Transactions deposits are liabilities of the depository institutions, which stand ready to convert such deposits into currency or transfer their ownership at the request of depositors. Confidence in these forms of money also seems to be tied in some way to the fact that assets exist on the books of the government (or central bank) and the depository institutions equal to the amount of money outstanding, even though most of these assets themselves are no more than pieces of paper (such as customers' promises to repay depository institutions), and it is well understood that money is not redeemable in them.

But the real source of money's value is neither its commodity content nor what people think stands behind it. Commodities or services are more or less valuable because there are more or less of them relative to the amounts people want. Money, like anything else, derives its value from its *scarcity* in relation to its usefulness. Money's usefulness is its unique ability to command other goods and services and to permit a holder to be constantly ready to do so. How much is demanded depends on three factors—the total volume of transactions in the economy at any given time, the payments habits of the society, and the amount of money that individuals and businesses want to keep on hand to take care of unexpected or future transactions.

Control of the *quantity* of money is essential if its value is to be kept stable. Money's real value can be measured only in terms of what it will buy. Therefore, its value varies inversely with the general level of prices. Assuming a constant rate of use, if the volume of money grows more rapidly than the rate at which the output of real goods and services increases, prices will

rise. This will happen because there will be more money than there will be goods to spend it on at prevailing prices. The increase in prices would reduce the value of money even though the monetary unit were "backed" by and redeemable in the soundest assets imaginable. But if, on the other hand, growth in the supply of money does not keep pace with the economy's current production, prices will fall, manpower, factories, and other production facilities will not be fully employed, or both.

Just how large the stock of money needs to be in order to handle the transactions of the economy without exerting undue influence on the price level depends on how intensively money is being used. Every transactions deposit balance and every dollar bill is a part of somebody's spendable funds at any given time, ready to move to other owners as transactions take place. Some holders spend money quickly after they get it, making these dollars available for other uses. Others, however, hold dollars for longer periods. Obviously, when some dollars remain idle, a larger total is needed to accomplish any given volume of transactions.

Who creates money?

Changes in the quantity of money may originate with actions of the Federal Reserve System (the central bank), depository institutions (principally the commercial banks), or the public, but the major control rests with the central bank.

The actual process of money creation takes place in the banks.<sup>1</sup> As noted earlier, checkable liabilities of banks are money. These liabilities are customers' accounts. They increase when the customers deposit currency and checks and when the proceeds of loans made by the banks are credited to borrowers' accounts.

In the absence of legal reserve requirements, banks can build up deposits by increasing loans and investments so long as they keep enough currency on hand to redeem whatever amounts the holders of deposits want to convert into currency. This unique attribute of the banking business was discovered sev-

<sup>1</sup>Under the Depository Institutions Deregulation and Monetary Control Act of 1980, all depository institutions are permitted to offer interest-bearing transactions accounts, and these transactions accounts and also nonpersonal time deposits at all such institutions are subject to the reserve requirements set by the Federal Reserve. Thus all such institutions have the potential for creating money. In order to describe this process as simply as possible, however, henceforth in this booklet "banks" should be understood to encompass all depository institutions.

**NATIONAL DEBT: A CLAIM UPON YOUR TIME OF LIFE & UNBORN GENERATIONS!**

**ALL POLITICAL DEBT IS CREATED BY BORROWING FOR DEFICIT SPENDING!**

TO THEIR BENEFIT "THE BANKS" CREATE OUR(?) "DEBT MONEY" OUT OF NOTHING BUT "BOOK-ENTRY" WHICH WE ARE FORCED TO PAY: "THE GOLDEN RULERS"!

eral centuries ago. At one time, bankers were merely middlemen. They made a profit by accepting gold and coins brought to them for safekeeping and lending them to borrowers. But they soon found that the receipts they issued to depositors were being used as a means of payment. These receipts were acceptable as money since whoever held them could go to the banker and exchange them for metallic money.

Then, bankers discovered that they could make loans merely by giving borrowers their promises to pay (bank notes). In this way, banks began to create money. More notes could be issued than the gold and coin on hand because only a portion of the notes outstanding would be presented for payment at any one time. Enough metallic money had to be kept on hand, of course, to redeem whatever volume of notes was presented for payment.

\* Transactions deposits are the modern counterpart of bank notes. It was a small step from printing notes to making book entries to the credit of borrowers which the borrowers, in turn, could "spend" by writing checks, thereby "printing" their own money.

**What limits the amount of money banks can create?**

If deposit money can be created so easily, what is to prevent banks from making too much—more than sufficient to keep the nation's productive resources fully employed without price inflation? Like its predecessor, the modern bank must keep available, to make payment on demand, a considerable amount of currency and funds on deposit with the central bank. The bank must be prepared to convert deposit money into currency for those depositors who request currency. It must make remittance on checks written by depositors and presented for payment by other banks (settle adverse clearings). Finally, it must maintain cash and/or balances at its Federal Reserve Bank (legal reserves) equal to a prescribed percentage of its deposits.

The public's demand for currency varies greatly, but generally follows a seasonal pattern that is quite predictable. The effects on bank funds of these variations in the amount of currency held by the public are usually offset by the central bank, which replaces the reserves absorbed by currency withdrawals from banks. (Just how this is done will be explained later.) For all banks taken together, there is no net drain of funds through clearings. A check drawn on one bank

normally will be deposited to the credit of another account, if not in the same bank, then in some other bank.

These operating needs of individual banks, therefore, are of relatively minor importance as a restraint on aggregate deposit expansion in the banking system. Such expansion cannot continue, however, beyond the point where the amount of reserves that all banks have is just sufficient to satisfy legal requirements under our "fractional reserve" system. For example, if reserves of 20 percent were required, deposits could expand only until they were five times as large as reserves. Ten million dollars of reserves would support \$50 million of deposits. The lower the percentage requirement, the greater the deposit expansion that can be supported by each additional reserve dollar. Thus, the legal reserve ratio together with the dollar amount of bank reserves are the factors that set the upper limit to money creation.

**What are bank reserves?**

Currency held in bank vaults may be counted as legal reserves. More than half of bank reserves, however, are in the form of deposits (reserve balances) at the Federal Reserve Banks. Both are equally acceptable in satisfaction of reserve requirements. A bank can always obtain reserve balances by sending currency to its Reserve Bank and can obtain currency by drawing on its reserve balance. Because either can be used to support a much larger volume of deposit liabilities of banks, currency and reserve balances together are often referred to as "high-powered money" or "the monetary base." Reserve balances and vault cash in banks are not counted as part of the money stock held by the public.

For individual banks reserve balances also serve as clearing accounts. Banks may increase their reserve balances by depositing checks as well as currency. Or they may draw down these balances by writing checks on them or by authorizing a debit to them in payment for currency or customers' checks.

Although reserve accounts are used as working balances, each bank must maintain, on the average for the relevant reserve-maintenance period, deposit balances at the Reserve Bank and vault cash which together are equal to its required reserves, as determined by the amount of its deposits in the reserve calculation period.

\* FALSE: A "check" is not money. It is an ORDER to transfer a given amount from one account to the ACCOUNT or PERSON of another. The only time YOU "print" your own money IS WHEN YOU OVERDRAW YOUR CHECKING ACCOUNT!

# OUR(?) ENTIRE ECONOMY IS UNDER THE CONTROLS OF THE FEDERAL RESERVE!

## Where do bank reserves come from?

Increases or decreases in bank reserves can result from a number of factors discussed later in this booklet. From the standpoint of money creation, however, the essential point is that the reserves of banks are, for the most part, liabilities of the Federal Reserve Banks, and net changes in them are largely determined by actions of the Federal Reserve System. Thus, the Federal Reserve, through its ability to vary both the total volume of reserves and the required ratio of reserves to deposit liabilities, influences banks' decisions with respect to their assets and deposits. One of the major responsibilities of the Federal Reserve System is to provide the total amount of reserves consistent with the monetary needs of the economy at reasonably stable prices. Such actions take into consideration, of course, any changes in the pace at which money is being used and changes in the public's demands for cash balances.

The reader should be mindful that deposits and reserves tend to expand simultaneously and that the Federal Reserve's control often is exerted through the marketplace as individual banks find it either cheaper or more expensive to obtain their required reserves, depending on the willingness of the "Fed" to support the current rate of credit and deposit expansion.

While an individual bank can obtain reserves by bidding them away from other banks, this cannot be done by the banking system as a whole. Except for reserves borrowed from the discount window, as is

shown later, the supply of reserves in the banking system is controlled by the Federal Reserve.

Moreover, a given increase in bank reserves is not necessarily accompanied by an expansion in money equal to the theoretical potential based on the required ratio of reserves to deposits. What happens to the quantity of money will vary, depending upon the reactions of the banks and the public. A number of slippages may occur. What amount of reserves will be drained into the public's currency holdings? To what extent will the increase in the reserve base remain unused as excess reserves? How much will be absorbed by time deposits or other liabilities not defined as money but against which banks must also hold reserves? How sensitive are the banks to policy actions of the central bank? The significance of these questions will be discussed later in this booklet. The answers indicate why changes in the money supply may be different than expected or may respond to policy action only after considerable time has elapsed.

In the succeeding pages the effects of various transactions on the quantity of money are described and illustrated. The basic working tool employed is the "T" account, which provides a simple means of tracing, step by step, the effects of these transactions on both the asset and liability sides of bank balance sheets. Changes in asset items are entered on the left half of the "T" and changes in liabilities on the right half. For any one transaction, of course, there must be at least two entries in order to maintain the equality of assets and liabilities.

**DO YOU HAVE ANY DOUBTS?**

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