# Money as Credit

By William F Hummel

Money does not exist in a pure *barter system*; trades are negotiated by the participants as a fair exchange of goods and services. If someone agrees to receive equivalent value later in exchange for his goods, he has accepted an *IOU*. An IOU is a credit for the seller and a debt for the buyer. If the IOU becomes negotiable, meaning others will accept it in exchange for goods and services, the IOU is money. In essence, *money is credit that is widely accepted as a medium of exchange*.

## The Basic Properties of Money

An IOU will be accepted in exchange for goods and services only if it is seen as a store of value. However it does not have to store value indefinitely to qualify as money. It is money if it retains value long enough to be generally accepted as a medium of exchange. Money is always a store of value, but a store of value is not always money. For example, a bond is a store of value, but bonds are seldom accepted as a medium of exchange, and therefore are not money.

Most of the money we use is denominated in the unit of account established by the government. That enables us to measure the value of a good or service against another, based on what each sells for in the market. How many quarts of milk are equivalent in value to a barbershop haircut can only be determined in the market place.

## IOUs as Money

Money is the credit side of a balance sheet relation. Every dollar of credit is matched by an equal amount of debt. A bank loan creates a credit for the borrower in the form of a *negotiable IOU* (the deposit) and a matching debt (the obligation to repay the loan). For the bank, it creates an often illiquid asset (the loan contract) and an equal liability (the negotiable IOU).

The term *money* is sometimes used in reference to high quality debt instruments nearing maturity. However such *near-money* is seldom acceptable as a medium of exchange. Besides being inconvenient to the seller, the monetary value of near-money is not really known until sold in the marketplace. The more restrictive definition of money will be adopted here.

## Fed Funds and Bank Money

When the Fed purchases a financial asset from the public, it credits the seller's bank with a deposit at the Fed, known as ***Fed funds***. Banks can exchange Fed funds for Federal Reserve notes, and vice versa, on demand. In either form, these Fed IOUs are the most negotiable in the economy. This is because the

private sector must surrender Fed funds in paying Federal taxes. Conversely the government pays in Fed funds when it spends.

Individuals usually pay taxes with bank money, i.e. a check against a bank deposit. However the bank must cover the check with its own Fed funds. It cannot issue an IOU to cover the check. The Fed accepts bank money at par with its own IOUs. Thus bank deposits are nearly as negotiable in the private sector as Fed funds. Private party IOUs may be legally binding, but they are of uncertain monetary value and seldom negotiable. They are simply private debt rather than money.

## Non-Bank Money

Money market mutual funds offer accounts similar to checking accounts at banks. They are actually shares in the ownership of short-term debt. When one pays with a draft on a money market fund, he is in fact selling shares in exchange for bank money that the fund must deliver. That means the fund must have sufficient bank money on hand, or acquire it through borrowing or sale of its own assets.

Although money market mutual funds are not insured or guaranteed to trade at par with Fed money, their acceptance is now so widespread that they have become de facto money. Thus *non-bank financial institutions (NBFIs)* can create money by selling an interest in short-term paper, and providing checking facilities against that paper.

## Banks as Intermediaries

Like other intermediaries, banks borrow to lend at a profit. However banks are a special kind of intermediary because of their role as depositories. When a bank lends, it creates a new deposit to fund the loan and thus expands the money supply. It may issue loans only up to a prescribed multiple of its capital, and it must hold *reserves* of base money sufficient to cover net daily withdrawals of its depositors.

Reserves refer to a bank's vault cash and its Fed funds. Under present rules, a bank must hold 10% in reserves against its demand deposits, averaged over successive two-week periods. Averaging allows a bank to run below its required reserves on any given day. Interbank lending serves to redistribute reserves lost to other banks due to ordinary checking activities.

A bank can acquire Fed funds by borrowing in the money market, but it cannot increase its capital (assets minus liabilities) through borrowing. Banks with sufficient capital sometimes create new deposits without adequate reserves, and count on borrowing to meet the reserve requirement. That may leave the banking system short of reserves, and thus apply upward pressure on the interest rate in

the Fed funds market. In order to defend its target interest rate, the Fed will supply the required reserves on its own initiative. Thus a net increase in credit issued by the banking system normally brings forth new base money.

## Non-Banks as Intermediaries

Banks were once the main source of credit. Today NBFIs such as mutual funds, pension funds, finance companies, and insurance companies issue far more credit in total than do banks. Indeed, deposits created by banks now comprise less than 20% of the total credit market debt.

NBFIs are ordinary intermediaries that lend by transferring their own bank money to the borrowers. For example, NBFI **B** borrows $1 million from investor **A** at X%, and lends $1 million to entrepreneur **C** at Y%. In effect, $1 million in **A**'s bank account is transferred to **C**'s bank account. No new money is created, but the total credit market debt increases by $2 million. **B** expects to earn (Y-X)% on $1 million. **C** expects to profit from its loan, pay regular interest, and pay off its debt to **B** when it comes due. **B** will then have funds to pay off its debt to **A**.

What matters in this scenario is cash flow. Intermediaries typically borrow short to lend long, taking advantage of the normally upward sloping term structure of the *yield curve* (yield versus maturity). Such an intermediary must be able to roll over short-term debt on a continuing basis at favorable interest rates. If its credit standing is suspect, it may not be able it to borrow at all.

Cash flow also depends on factors over which the intermediary has no control. Suppose the Fed raised short-term rates sharply. Not only might **B** be in trouble due to the higher cost of rolling over its short-term debt, but **C** might also find its income reduced. If **C** were unable to service its debt, **B** might also fail, in which case **A** could lose a good part of its investment.

## Systemic Risks

The Fed has virtually no control over the total amount of credit market debt. However the real danger to the financial system is not in how much credit is created. It is in the cascading of debt relations in which a single default can result in a system-wide reaction.

NBFIs are important players in a modern entrepreneurial economy, but they are not regulated as to their capital ratios or the type of assets they may hold. There is a constant danger of an over-leveraged NBFI having to default on a large debt. While the Fed or other financial institutions would likely come to the rescue, it is by no means certain that widespread havoc could be avoided under the rules that now exist. Future regulation in this market is required.