
I. Introduction

In subsequent chapters, we will discuss in great detail how the supply of money affects the economy. Here we turn our attention to understanding what money is and how it is measured. It turns out that the concept of money is not as clear cut as one might imagine. The notion of what is considered money evolved over time and geographical space. For example before the Civil War, gold and silver coins were the accepted forms of money in the United States. However, after the Civil War paper bills and coins were considered money. During World War II, cigarettes were considered money in Allied POW camps in Germany, while in the Island of Yap in the South Pacific, circular stones 12 feet in diameter were considered money (indeed it took 20 adult men to carry one such stone). Thus to start we must first clearly define what we mean by money.

II. What is Money?

A. Definition

Definition: **Money** is anything that is accepted as payment for goods and services or in the repayment of debt.

Clearly based on this definition, paper bills and coins (**currency**) would be considered money because I could go to a store with a dollar bill and it would be accepted in exchange for a good or service. But, it should also be clear by the definition, that money consists of more than just currency. I could also use a debit card and access funds from my checking or savings account to make a purchase. The fact that my debit card is accepted for payment means that my checking account and saving accounts are also considered money. Thus money is more than just currency.

You should be careful not to confuse money with concepts such as wealth and income. Saying that Oprah has a lot of money or that someone earns tons of money at her new job is not the same way that economists define money.

Wealth are assets that serve to store value (allows us to make purchases in the future). Money is part of wealth, but not all assets that form wealth are considered money. For examples, stocks, bonds, art paintings, cars, and houses are all considered part of wealth, but they are not money.

Income is a flow of earnings per unit of time. Income is measured as a time variable. Money on the other hand is fixed amount at a given point in time.

B. Functions of Money

Money has three important functions, it serves as a medium of exchange, a unit of account, and a store of value. In order for something to be considered money it must fulfill all three functions.

1. **Medium of Exchange:** One function of money is that it serves as a medium of exchange. A good that serves as a medium of exchange is a good that buyers can give sellers (and sellers will accept) in exchange for another good or service. Having a medium of exchange is much more efficient than the alternative of bartering. Imagine that you wanted eggs for breakfast and are willing to trade 4 tomatoes for 4 eggs. Without money acting as a medium of exchange, you would have to find someone with eggs that would also want the tomatoes that you are offering in exchange. This is known as the problem of **double coincidence of wants**. That is having to find someone who has a good that you want and are willing to accept what you have to offer. Having a medium of exchange eliminates the double coincidence of wants problem.

2. **Unit of Account:** One of the functions of money is that it must serve as a way to measure the value of goods and services. Money should serve as a consistent way of quoting prices. How is the price of an apple quoted? Apple prices are quoted in dollars, but there is no reason why dollars are the only way we can quote apple prices. For example an apple could be quoted as 1.5 oranges, or 3 bananas or 1/8 of an oil change, etc... If we lived in a bartering system, then each good would have thousands of relative prices. Having a standard unit of account makes it easier to quote prices and measure the worth of a good.

3. **Store of Value:** Money also serves as a store of value—money can be used to transport purchasing power from one time period to another. In other words, someone can hold on to money for a period of time and use the money to make purchase at a later period. This property would mean that perishable goods such as bananas could never be considered money because they would not have the store of value property.

Although money serves as a store of value, other assets may be more desirable as a store of value. Generally assets such as stocks and bonds will pay a higher rate of interest than a checking or saving account. So why do people hold money at all?

As we saw one of the functions of money is to act as a medium of exchange. Some assets such as houses are not a medium of exchange, although they do act as a store of value. One method to classify assets is by its **liquidity**. Liquidity refers to the ease one can convert an asset into the accepted medium of exchange. Since money is the medium exchange, money is the most liquid asset available. Stocks and bonds are relatively liquid, as it is easy to sell those assets for money. Other assets such as houses and rare paintings are less liquid as it takes a long time to sell those assets.

C. Types of Money

As mentioned in the introduction, what has been considered money has evolved over time. In this section we look at how payments for transactions have changed and look at some of the more recent innovations.

1. **Commodity Money:** Early forms of money had intrinsic value, examples are gold and silver. Intrinsic value means that these goods would have had value even if it were not used as money. However, one problem with commodity money is that its generally heavy and for large amounts it may be hard to transport.
2. **Fiat Money** (\$ bills, quarters, British Pound note, etc...). Initially paper money in the U.S. was backed by gold. That is one could walk into a Federal Reserve bank, present a paper bill and receive gold in exchange. The system eventually evolved into a system of **fiat** money, that is money without intrinsic value. It has value because some authority (the government) says it has value. If the authority behind the decree loses credibility then fiat money becomes worthless.
3. **Checks:** Checks allows one party to transfer money from his/her account directly into someone else's account. Checks main advantage is that it makes it easier to conduct large transactions. Just imagine having to pay for a new house in cash. A couple of disadvantages is that it takes time (usually a couple of days) after a check has been deposited before the funds can be accessed. Also there are costs associated with processing checks.
4. **E-Money:** A more recent innovation is the evolution of money into electronic form. The main example is a debit card which electronically transfers funds from a checking or savings account to a merchant's account. No physical forms of money are exchanged.

Note: Credit cards by definition is not considered money. Credit cards is not a payment for goods or services but rather a way to defer payment until a later time. When you purchase a good using a credit card, the bank that issued the credit card pays the store for the purchase. At a later date you must repay the bank the amount (along with interest) from your checking account. While credit cards are not a form of money, it does affect the demand for money. An increase in the use of credit cards reduces the need for individuals to hold money, at least until the credit card bill is due.

D. Measuring Money in the Economy

The Federal Reserve, the Central Bank for the United States, has come up with the following two measures of the amount of money supply in the economy.

- M1-The Narrower definition of money [More liquid]
 - Currency (paper bills and coins)
 - Traveler's Checks
 - Demand Deposits and Checkable Deposits: demand deposits are business checking accounts that do not pay interest, which checkable deposits include interest bearing checking accounts held by households.
- M2-Broader definition of money [Less liquid]
 - Everything in M1
 - Small denomination time deposits (CDs) (Less than \$100,000 deposit)
 - Saving deposits
 - Money Market deposit accounts
 - Non-institutional money market mutual fund shares

Generally, the measures of money move in the same direction. That is if M1 is relatively high, then we would expect M2 to be high as well. However, over time there has been some discrepancies between the two measures. For example, between 2004-2007, M2 grew slightly, while M1 actually had negative growth (that is the supply of M1 fell during the period). Thus it appears that choosing the correct measure of money does matter in determining monetary policy which. We will return to this issue later in the course.