carried sugarcane aboard his ships and the Spanish quickly discovered that sugarcane flourished in the West Indies. Sugar, like the spices of the Far East, was in great demand among the European elite because of its taste and the social status that its consumption denoted. In the fifteenth and sixteenth centuries, because of increasing demand and limited supply, sugar remained a luxury commodity, thus making its production highly profitable yet capital and labor intensive.

The Dutch intensified American sugar production, including its by-products of molasses and rum, when they became involved in the Portuguese possessions in Brazil and then carried their capital and improved production techniques into the West Indies, where the production of sugar flourished. While sugar grew well in the West Indies, the problem with growing sugarcane and then turning the cane into sugar, molasses, and rum was that it was an extremely labor-intensive process. The West Indian planters attempted to use the local indigenous people, and then European indentured servants, until they finally moved toward purchasing and utilizing African slaves, as this system allowed them to own the slaves' labor for their entire life, along with that of their children.

Molasses quickly became an important part of the mercantile system of the Americas, and its use increased as the price of rum decreased and its appeal spread. Molasses became especially important to the merchants of New England, who discovered not only its profitability, but also the opportunities the trade in molasses presented. These involved the continuous avoidance of England's mercantile system, especially its taxes, and the chance to participate in the transatlantic slave trade. The New England merchants had no problem avoiding Parliament's 1733 Molasses Act and in fact continually increased the amount of molasses they imported into New England and the amount of rum that they exported. By 1770, North American merchants imported over 6 million gallons of molasses per year that allowed them to produce 5 million gallons of rum in approximately 140 New England distilleries. The Sugar Act of 1764, which reduced the duty on molasses in North America, served as an example of the American argument concerning the relationship between taxation and representation, along with economic freedom.

*Ty M. Reese*

*See also:* American Revolution; Columbian Exchange; Illegal Trade; Indentured Servants; Labor; Mercantilism; Rum; Slavery; Spices; Sugar.

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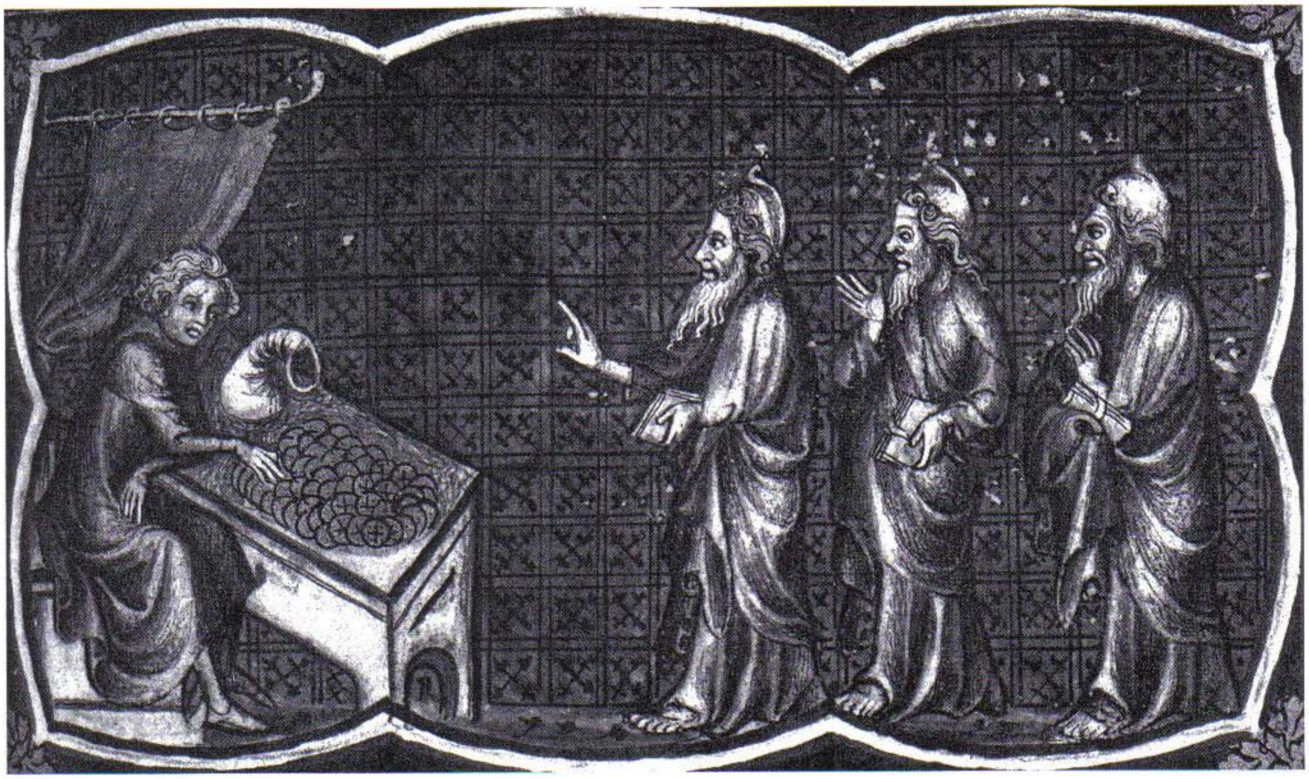
# MONEY

**Any object that is generally acceptable in payments by sellers of goods and services or by creditors.**

Money may take the form of coins, bills, currency notes, or checks (representing bank balances). Ancient societies used gold nuggets, wooden tallies, cattle, shells, dried cod, salt, tobacco, and sugar (among other things) as "money" because at some point in time and in some place each of these was generally accepted in payments. General acceptability is established when a large proportion of the community, major sellers or creditors, or the government agree to accept payments in a particular form of money. For instance, if the government accepts a particular form of money in payments of taxes, then everyone else in the community will be willing to accept it in payments because they know they can use it to pay taxes. It is this general acceptability (not the intrinsic value) that makes money a social convention and gives it value over time.

## HISTORICAL ORIGINS

Historically, most societies established the "universal equivalent" (money) based on two characteristics. First, it must be nonperishable so that people can accumulate it and use it over an extended time period, and second, it must be divisible in small units so that people can use it to



In a scene from a fourteenth-century manuscript, a man counts a pile of money on a table. Money is a near-universal concept, for it allows societies to create mutually acceptable equivalents for goods and services, thereby enabling economic exchange. *(© The British Library/ Topham-HIP/The Image Works)*

acquire goods and services of different values. Throughout history, money has played three functions. First, money is a unit of account: it is a means by which a comparable wealth of commodities is measured. It is a standard or a measure of value. Second, money is a medium of exchange: it is both a means of purchase (money is exchanged directly for goods and services) and a means of payment (it is used to settle debt). Third, money is a store of value: it is a means of accumulating wealth (it is an end in itself).

Money is one of the most controversial issues studied by all schools of economic thought. Economists cannot agree on the basic questions related to its origin, its nature, and its primary functions. Is money created by the government or by the market? The answer to this question is of critical importance for understanding the business cycle and finding the appropriate policy tools to eliminate unemployment and reduce inflation. Orthodox (neoclassical) economists believe that money is a "veil" hiding the "real" economic activities. In their view, money is just an arbitrary *numeraire* used as a medium of exchange to facilitate trade, reduce transaction costs, and eliminate the inconvenience of barter. Therefore, they claim that money was created only after the development of markets.

In the Walrasian model, which assumes the existence of perfect competition and perfect knowledge, firms are price takers and quantity makers. The auctioneer announces a vector of relative prices and collects information about the quantities that consumers are willing to buy, as well as the quantities that firms are willing to supply, at that specific vector of prices. Trade can only take place when the auctioneer finds the price vector that eliminates excess supply and demand. In such models, money is added *only* by artifice, hence it is neutral and does not have any long-term real effect on the economy. According to monetarists, money is exogenously supplied by the central bank. Believing in a positive relationship between money supply and inflation, monetarists advocate a steady and low rate of increase of the money supply (e.g., 3 percent per year).

On the other hand, Chartalists (nonorthodox economists) argue that the creation of money goes back to King Pheidon of Argos, who issued the first coin in the seventh century B.C.E. Coins, however, were created neither to reduce transaction costs nor to facilitate markets operations. L. Randall Wray argues that it is unlikely that coins were invented to facilitate trade, for many ancient civilizations with sophisticated trade managed without any coins for centuries, and their markets had always operated on the basis of credits and debits.

According to Abba P. Lerner, the most important feature of money is its general acceptability by the public. Sovereign governments originally created money as a standard way to pay tax and other debts. Lerner argues that the state could make anything generally acceptable (and call it "money"), as long as the state "is willing to accept the proposed money in payments of taxes and other obligations to itself. [Furthermore], in a normally well-working economy, money is the creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state."

In orthodox theory, the money supply is exogenously determined by the central bank. There is no increase in the quantity of money in circulation in the system unless the central bank decides to do so by way of its three policy tools: discount rate, open market operations, and required reserves ratios. Monetarists argue that an increase in the rate of growth of the money supply causes a rise in the nominal rate of interest. Thus, they attribute high inflation and nominal interest rates to an "easy-money policy" implemented by the central bank. Monetarists also believe it is difficult to fine-tune the economy with an expansionist monetary policy; rather, they advocate a tight and nondiscretionary monetary policy to prevent high inflation and nominal interest rates.

In the conventional theory, the central bank can control the money supply (thus, it can control inflation) by its control over the required reserve ratios. Given a stable deposit multiplier, the supply of deposits is determined by the amount of loans demanded and the available reserves in the banking system. Banks supply loans (thus create money) to the economy because they want to grasp any opportunity of future returns and because they always have an incentive not to have any excess reserves, which do not earn any interest. The central bank, recognizing this and the current money multiplier, can, therefore, closely control the expansion of the money supply (and inflation, of course).

Basil J. Moore calls the monetarist approach the "verticalist" approach as opposed to his "horizontalist" approach. He argues that the supply of credit money is *never* quantity-constrained by central banks (hence, the deposit multiplier *is not* stable in post-Keynesian theory). Firms have access to credit lines provided by private banks; therefore, firms are always able to use their credit lines (at some price), and by doing so they reduce the excess reserves of the banking system. This makes banks turn to the central bank (the ultimate supplier of fiat money) for funds to cover their reserves. At this point, the central bank finds itself obliged to accommodate the demand for money to prevent the collapse of the banking industry. This implies a perfectly elastic supply of credit-money in the short run as a necessary condition of the perpetuation of liquidity in the system.

According to Moore's approach, a horizontal money supply function implies that an increase in the demand for money will only increase the quantity of money in the system, but will not raise the interest rate (unless the central bank decides to do so). Moore argues that "short-term interest rates over some range are an exogenous policy variable. They are not endogenously determined by real forces in the economy, but are administrated exogenously within wide limits by the central bank."

Wray provides a critical review of the monetarist theory with regard to the relationship between interest rates and the rate of growth of the money supply (and inflation). He studies two interest rate regimes in U.S. history. The first low interest rate regime (from World War II to 1965) had a "tight monetary policy" and tended to slow the rate of money supply, as monetarists believed it would. This "regime was characterized by low inflation and interest rates, a moderate rate of growth of money supply effective interest rate ceilings, and quantity rationing in the financial sector."

The second low interest rate regime (1966–1992), which also had a tight monetary policy that was associated with a slow growth of the money supply, was increasingly ineffective. This regime, however, was characterized by rising interest rates and prices, rapid growth of money supply, abandonment of the interest rate ceiling policy, and increasing reliance in credit markets on price rationing rather than quantity rationing.

Wray concludes that, counter to the monetarist theory, in which "money causes inflation," high interest rates cause rapid growth of the money supply. He argues that high interest rates and slow growth of the money supply are consistent only with financial crisis. He also shows that the development of the financial system (i.e., financial innovation), abandonment of interest rate ceilings, and lower credit standards eroded the quantity rationing; and, as a result, the central bank lost its primary constraint on bank lending (i.e., disintermediation).

The neutrality of money is an important feature in orthodox models. However, most economists agree that since the 1970s money has played a major role in output fluctuations. Yet, they do not agree on the causation and transmission mechanisms. Monetarists are convinced that the causation of the quantity theory of money (QTM) goes from money to output and that monetary instability lies in the heart of real instability. On the other hand, advocates of the endogenous money approach (i.e., post-Keynesians) argue that the money supply simply responds to economic activity, rather than the reverse. According to this approach, the evidence shows a *reverse causation;* that is, expectations of *future* increase in output leads to a *current* increase in the money supply. Joan Robinson suggests that the QTM equation (MV = PQ; in which M stands for money supply, V for velocity of circulation, P for price level, and Q for quantity of goods and services sold during the year) should be read in causal terms from right to left; that is, an increase in the level of output is more likely to be *preceded* by a rise in the money supply.

In conventional theory, velocity is believed to be constant; therefore, the aggregate price level is determined by the quantity of money commodity. Post-Keynesians, however, do not consider velocity a fixed variable, and for them what matters is nominal, not relative, price (which is mainly "administered," given the existence of long-lived and expensive capital equipment). In such cases, the QTM equation is reversed. As such, it is unlikely that the economy will ever be in "equilibrium." Even if that were to happen the system would inherently generate forces to cause the economy to move away from it, says Hyman P. Minsky.

## INFLATION

Mainstream economists assume that "inflation does not matter," for their estimations show that even an inflation rate of 40 percent does not have a measurable effect on gross domestic product (GDP) growth. Paradoxically, they even advocate some costly policies in terms of high unemployment and slow GDP growth (in the short run) to fight inflation. From a post-Keynesian perspective, inflation results from a wage bargaining between workers and firms. If workers have a stronger bargaining position, they can push wages up, which will oblige firms to raise their prices to maintain their profit levels; this will result in a wage-price spiral, or "cost-push" inflation. On the other hand, if firms increase their markup over wage costs, this will result in markup, or profits, inflation. Wray argues that "in a monetary production economy, inflation is more benign than deflation . . . it tends to redistribute shares toward economically powerful groups . . . it also tends to reduce debt burdens. . . . On balance, the effects of inflation may encourage investment and economic growth." Therefore, post-Keynesians do not agree with orthodox economists on the issue of fighting inflation.

Orthodox economists believe that tax revenues finance government spending; that is, the government may spend whatever tax amount it collects from the public, to "balance its budget." Furthermore, they claim that the government could and should run a fiscal surplus. Believing in the "invisible hand" of the market and in the ability of the market to "self-adjust" and tend toward "equilibrium," orthodox economists argue that government investment would "crowd out" private investment. However, Wray believes that tax payments *do not* and *cannot* finance government spending, for at the aggregate level, only the government can be the "net" supplier of fiat money. As a result, the starting point of this mechanism is government expenditure. Once government spends (creates or supplies) fiat money to purchase goods and services, it provides the public with the necessary amount of money to meet tax liabilities.

According to Wray's analysis, the government can (theoretically) have a balanced budget, meaning that the public's net money receipts are equal to tax liabilities. However, if the government attempts to run a surplus, the public would be in a situation where its net money receipts are less than its tax liabilities. Therefore, the only way for households to pay their tax liabilities is either to use their hoarded money from previous government deficits or to present government bonds for payment. On the other hand, the government can safely run up a deficit to the point where it has provided the quantity of noninterest-earning fiat money and interest-earning bonds desired by the public.

Finally, one could argue that even though the concept of money seems to be extremely controversial as to its historical origins and first use, its modern conception (within a credit-money system) is more accurate in the post-Keynesian paradigm. The endogenous money approach is empirically consistent with the features of the current banking system. The "neutrality" of money is a more basic issue, for it relies on the basic assumptions of orthodox theory, which assumes away all the imperfections of the market system; therefore, it reaches a "logical" conclusion that money is just a means of transaction that facilitates trade and reduces transaction costs. It is mainly because of these basic methodological differences that post-Keynesians and orthodox economists disagree on virtually everything related to money (e.g., inflation, fiscal policy, money supply, and so on). As a result, the debate on money remains an open issue on which there will be no agreement between them.

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*See also:* Banks; Keynes, John M.

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# MONGOL INVASIONS

**Mongols were pastoral tribes in eastern Eurasia that, from the thirteenth through the fifteenth centuries, came to control a large portion of the Eurasian continent.**

Near the beginning of the thirteenth century, a group of Mongol tribes were united into a powerful confederacy by Temuchin, better known as Genghis Khan. The superior military organization and mobility of their cavalry proved unbeatable as they embarked on a century of conquest. In 1211, Genghis launched his grand invasion of China, capturing Beijing in 1215. Although the conquest of China was not completed until 1234, after Genghis's death, the Mongols were now firmly present as conquerors there.

In 1219, Genghis invaded the Kwarezm empire of Central Asia, destroying it in a single campaign and sending out large reconnaissance forces farther west. Following his death in 1229, Genghis's descendants went on to conquer Persia, Russia, Volga Bulgaria, and parts of the Middle