

# CHAPTER THREE

## ANCIENT AND MEDIEVAL ECONOMICS

**After reading this chapter, you should be able to:**

- a. Discuss the administrative and moral tradition.
- b. Analysis the economic interactions in the ancient and medieval economics.
- c. Interpret the Roman law and market theory.
- d. Explain the concepts of Money and the economy.

## **Introduction**

When dealing with the economic thought of ancient times, we must give primary attention to the ancient Greeks, whose writings have been preserved and form an integral part of our European intellectual heritage. Unfortunately, the two most prominent contemporary classical scholars who deal with the issue, M. I. Finley and Scott Meikle, emphatically deny that the Greeks had any relevant economic thought. The problem is, however, definitional. These writers insist on defining economics in terms of Marx's "bourgeois exchange," characterized by late-eighteenth-century international markets. They ignore the broader conceptual perspective of most modern economists and of the earlier political economists such as Marx with his interaction between the "relations" and the "factors" of production; paralleled by Veblen, the interaction between "institutions" and "technology," and Lionel Robbins, the interaction between "unlimited wants" and "limited resources."

This chapter focuses on the concepts reflected in policies and institutions applied to economic processes. Outright analyses framed in jurisprudential and political terms have also contributed to modern formulations of economic problems. We can best organize the discussion in terms of three categories – the administrative, the moral, and the analytic – that are frequently intertwined.

## **The administrative tradition**

Ancient administration emphasized personal leadership and decision-making involving labour, materials, and efficient organization. In retrospect, the best evidence shows that primitive human beings and their hominid ancestors evolved in East Africa as hunter-gatherers in simple extended family groups. In such a system, anthropological studies indicate that social bonding and informal leadership roles provided the organizational cohesion necessary for survival.

The first records of formal economic organization and accompanying intellectual frameworks come from the ancient river basin economies where grain was produced in coordination with the annual flooding that left raw mudflats as a seedbed. In the Nile and Euphrates Valleys, high yields and dry conditions for storage resulted in stable populations that required land measurement (geometry) and public regulation. The population concentrations and cultural accumulation made possible by this form of agriculture are reflected in the *Old Testament* account of Joseph, in the role of an economic advisor, administering the storage of surplus grain to withstand future famines.

Egyptian literature documents the annual accounting of keepers of the royal granaries, whose inventory was measured with giant scales that acquired the status of symbols of justice. Note that the "scales of justice" were an administrative tool for annual accounting, achieving a role as a religious symbol, not as a symbol of exchange.

In the Euphrates Valley, some recently studied clay tablets dating from about 2,200–2,100 B.C. give a clear picture of the administrative thought and practices of a Sumerian city-state. The Erlenmeyer Tablets, which became available for study in 1988, constitute a collection of 88 tablets found in a large jar. These tablets provide a set of written records of production for a three-year period. The records show yields from about 75,000 acres, with target amounts and shortfalls in yield from year to year. Average yields were about 12.5 bushels per acre, with three-quarters of a bushel retained for seed (6 percent).

In addition, records for a milling operation show grain and labour inputs, with product valued in "female labour days." The shortfall from the target efficiency for one year was carried over as a deficit to the next year and was measured at 7,420 female labour days. These records show the precision of administrative organization and the origins of both writing and arithmetic for identifying stored produce and its quantity.

Marx called this administrative tradition that dominated Near Eastern economic organization “the Asiatic mode of production”.

Most important are these mathematical, graphic, and administrative skills that passed from the Sumerians to the Babylonian culture, whose sexagesimal system has influenced modern measurement of degrees, minutes, and seconds. This administrative and mathematically sophisticated tradition continued in the Near East into the Islamic culture.

Note that since administration and mathematical procedures are products of human understanding and policy, they are clear repositories of the level of economic thought. Note as well that the development of the zero, was irrelevant to arithmetic as long as a placement system with columns was used. The zero only became important in Europe when northern African Arabic arithmetic and bookkeeping were brought into northern Italy from Algiers by Leonardo of Pisa (Fibonacci) in the early thirteenth century. When cumulative written records were kept, Roman numerals proved too cumbersome for running accounts in neat columns. It has also been argued that increasingly varied Arabic commerce led to the development of algebra and gave rise to the mechanistic generalization of economic processes in the late Middle Ages. In addition, the thirteenth century saw the shift from tally sticks to account books, and from the itinerant trader to the sedentary merchant who used credit instruments such as bills of exchange.

Plato’s contribution to administration acquires significance because he incorporated the Pythagorean mathematical tradition into a near-mystical formulation of ideal models. This view of a rational perfectible administration is elaborated below in the discussion of analysis. The Platonic theory of the “Ideas,” clearly expounded in Adam Smith’s inaugural lecture for his professorship in logic at Glasgow (*The History of the Ancient Logics and Metaphysics*) has its parallels in modern economic theory. Plato’s theoretical perspective produced the concept of a perfectible efficient state directed toward optimality through specialization and training. His concept of “justice” was colored by his premise of order and efficiency supervised by the prime intellect with a single value criterion. His famous image of the “ship of state” directed by the technically skilled pilot or captain (the philosopher king) was properly questioned by one authority, who pointed out that some of the passengers might want to have some influence on where they were going.

The concept of plural values introduced a dynamic into political economy. When irrational numbers were demonstrated in the Pythagorean societies in the late fifth or early fourth century B.C., Platonic absolutism was shaken to the core. It was partially salvaged by Eudoxus’ importation from Chaldea of a dialectical approach to irrationals that became a mathematical image for judicial, legislative, and bargaining processes, to be discussed under analyses.

The pseudo-Platonic dialogue *Alcibiades Major* (ca. 340 B.C.) discusses the need for formal training of those who presume to be “politicos” or “oikonomicos”; that is, politicians or economists in the city–state. This document influenced the Greco-Roman educational tradition for 900 years. The dialogue emphasizes Plato’s concept of individualistic authoritarian virtue, but it also discusses an apparently broader tradition that prescribed “looking into the eyes of others” to get a reflection or social criterion for managing one’s conduct as administrator. The concept became known as “the mirror for princes,” naming a rich body of literature on political and economic administration. A famous example was the Arabic pseudo-Aristotelian advice to Alexander the Great, the *Secretum Secretorum*, dating from the eighth century A.D. It reached England in Latin translation after the Crusades. Erasmus’s *The Education of a Christian Prince*, dedicated to the young Emperor Charles V in 1518, was also an influential example of the genre. These tracts emphasized leadership, human capital, personnel policy, taxation, trade, and control of the military.

### **The moral tradition**

The Eden story in *Genesis* provides basic imagery in the Judeo-Christian tradition. The dominant thesis is, however, the challenge to divine authority by the beneficiaries of the abundance of the Garden of Eden. When Adam and Eve ate the forbidden fruit of the tree of knowledge and asserted the right to choose for themselves, they were cast out of the world of abundance into scarcity; to “eat bread in the sweat of their faces.” The moral theme is that knowledge and the exercise of choice are burdens in a world of divinely imposed or natural scarcity. This picture of economics is usually found in the introductory chapter of sophisticated introductory economics textbooks, although contradicted by subjective relativism in later chapters. An unfortunate spinoff of the Eden story is the “curse of work” with its simplistic tension between work and leisure, in a world in which most people find fulfillment and self-definition in their work.

In contrast to the bounty of the Nile and Euphrates, the near-subsistence level in the small agrarian communities in Greece gave rise to a moral emphasis on allocation that is the real issue behind the more superficial concept of objective scarcity. Aristotle framed this issue very carefully in book I of his *Politics*. Consumption was the objective of production and the surplus should be allocated to rearing children. Aristotle found this natural moral commitment illustrated by the yolk in eggs that sustained the embryo.

In book VII of the *Politics*, Aristotle clearly formulated the concept of diminishing marginal utility and an ordinal hierarchy of values, an influential conceptual framework that has been attributed to Maslow in contemporary motivation theory. The importance of Aristotle’s distinction is its basis for the moral denial of usury, in which money loans are condemned as immoral and extortionate. As in Judaic doctrine, money cannot breed, and should not be expected to grow when a consumption loan is made to a needy person within the community. Medieval Muslims developed the justification for charging borrowers for the sacrifice suffered by the lender, adopted by Scholastics as “*lucrum cessans*.” The moral issue persisted when considering the extortion implicit in subsistence loans to the starving.

In commerce, however, the institution of the commendam partnership demonstrates the irrelevance of the usury issue and the sharing of surpluses generated by capital advances for trade. The “commendam” was a commercial partnership in which one party advanced the capital for a trading venture and the other provided the personal service. As in modern partnership law, profits were divided equally between the partners after the expedition. The commendam contract, of Arabian origin, neutralized the usury issue in commerce through the Middle Ages.

It also provided a mechanism for limiting liability to achieve economies of scale –a device that fueled the development of the modern corporation. Several persons could invest money in a commendam partnership with a broker, who would then advance the sum to a trader in another commendam partnership. The initial investors were insulated from personal liability for losses beyond their specific investment.

The moral reinforcement of this system was provided by the “unwritten law,” an ancient Near Eastern custom that guaranteed hospitality to strangers, the honoring of parents, and respect for gods. In *Memorabilia* (IV, 4, 19–20), Xenophon argues that the unwritten law must have come from the gods, since it was universal among all peoples, who could not have met together and agreed on it. The point emphasizes that the rule of hospitality made merchant travelers safe and gave people a source of news, trade goods, and entertainment provided by roaming bards. It supported the institution of “guest friendship” that served to initiate exchange through reciprocal gift giving. Through the Middle Ages, much trade was supported by special relationships between commercial families, with long traditions reminiscent of the ancient “guest friendship” relationship.

It is important to emphasize that the Near Eastern tradition of personal honor, associated with the early Persians, provided a basis for commercial exchange using tokens or tallies as credit instruments. Deposits could be left with an individual and the depositing party could take a split piece of the tally stick, the dividend. The split could be transferred to an agent or third party who could claim the deposit with the unforgeable match of the dividend with the stock. This system was also used as a record of payments or simple accounting by notching the matched pieces. The personal pledge behind letters of credit and bills of exchange became the foundation of commercial relations in a world in which transfers of bullion were risky. By the thirteenth century, annual fairs for clearing bills of exchange were held in Champagne. The growth in importance of bills of exchange under the “Law Merchant” is documented in Gerard Malynes’s *Lex Mercatoria* of 1620. The moral force behind the personal pledge to honor the claim represented by the paper document permitted transferable paper to circulate internationally in the late Middle Ages under the rules of the Law Merchant. Every endorser added his personal pledge to the paper and the acceptor took his rights “from the face of the document.” By the sixteenth century, the Common Law of England was enforcing “actions on account,” providing a remedy beyond the merchant courts.

### THE ANALYSIS OF ECONOMIC INTERACTIONS

The earliest economic relationships were distributive or allocative within the family. Without food collection and distribution to dependent children as unearned increments, there would be no surviving progeny. Beyond the family there evolved a formal system of distributive economics, geared to interactions between unrelated individuals or groups. The basic arrangements, divide and choose, were well developed in olden days and presaged the analysis of exchange.

In Hesiod’s *Theognis* (335–60), the myth of Prometheus dividing an ox with Zeus is presented. As with myths generally, this account is multi-layered and sometimes contradictory, but it is one of the earliest presentations of the formal system used to divide game, booty, and inheritances.

Prometheus skins the ox and divides the meat into two piles. He then invites Zeus to choose the pile he prefers. The beauty of the system is that both parties receive shares based on voluntary choice, which limits the likelihood of disputes. As indicated in the myth, however, the system contains elements of exchange. Prometheus aggregates the bones under a layer of fat in one pile, and the lean meat covered by the stomach and tripe in the other. As anthropologists remind us, Zeus, as with other Near Eastern gods, could only receive his share of sacrificed animals via “burnt offerings,” which was best achieved by burning the bones and some fat. On the other hand, humans of that era highly valued a dish similar to the Scottish “haggis” and also used the lean meat grilled on spits. The result was a voluntary exchange of subjective preferences. The system established the principle of volition as the measure of fairness that was transferred to exchange, despite the many subtleties in the inequality of informed choice in most exchanges for necessities.

Some of Aesop’s *Fables* elucidate the way in which this system, as with exchange, could be corrupted by the exercise of raw power. One fable presents the case of a lion and three other animals participating in a joint hunt. One of the animals divides the meat into four piles. The lion chooses the first share as “the King of Beasts,” the second as leader of the hunt, the third as a participant, and, finally, he places a paw(hand) on the fourth pile and, after hesitating, he dares anyone to try and take it away from him. This and a similar fable are the source of the adage “taking the lion’s share.”

In Xenophon’s *Oeconomicus*, subjective value or individual use value is specifically analyzed and compared with exchange value. If a man owns a horse and does not know how to handle it, and is even likely to be injured by it, is it useful to him? But if he knows how to sell it, it

has exchange value. This idea broadens the concept of individual use value to a general social use value that the individual can reach through exchange. It is not, however, a market theory of value.

The foundation for a theory of fair exchange in the market is laid out in the widely cited incident from the *Cyropaedia* where Cyrus, as a boy, is assigned the responsibility of judging the fairness of a forced exchange. A tall boy with a short tunic forcibly exchanges tunics with a short boy who has a long one. Cyrus rules that the exchange is fair because it results in both boys having better fitting tunics. His mentors flog him for his decision, pointing out that he was asked to judge the justice of the case, not the enhanced use values involved. To be just, an exchange must be voluntary.

The most important legacy of Xenophon's thought in the history of economic ideas is his formulation of the division of labour. In the *Cyropaedia*, Xenophon comments on the quality of the different dishes prepared by the specialized cooks in Cyrus' kitchen. He then describes a shoemaking workshop in which standard parts are cut out and assembled in stages by different workmen. The discussion is extended to remark on the fact that carpenters are "jacks of all trades" in small communities, but specialists in larger cities. Adam Smith's discussion was in this context that he elaborated the point that specialization is limited by the extent of the market.

The increment in entertainment value is trivial, while the increased risk of injury to the boy is great. This comparison of marginal revenue with marginal cost as a formal analytic contribution has been ignored by modern classicists and economists alike. However, the principle was repeated as an abstraction in a sixteenth century English agricultural manual, where it is pointed out that when one has a great number of things to do on the farm, priority should be given to those that would result in the greatest loss in the shortest time if not done. In the context of choice, the marginal nature of costs and benefits is formulated clearly.

Another analytic contribution in Xenophon's writings that has been strangely ignored is a remarkable presentation of mutual advantage from exchange. The *Cyropaedia* (III. 2. 17–33) contains an account of Cyrus administratively structuring an exchange of lands, surplus farmland from a herding people and surplus pasture from a farming people. The Armenians and the Chaldeans both benefit, demonstrating a productive surplus from exchange that can also support the necessary administrative superstructure.

Plato's most important and enduring contribution to formal thought was his elevation of mathematics to a primary position in scientific inquiry. All sciences, including economics, which use mathematical analyses must comprehend the essence of Platonic idealism in order to properly evaluate the significance and limits of mathematics in their disciplines. Plato was basically elaborating the ideas of the secret Pythagorean societies. They held that the world was a rational entity built by the "great Geometer" from the basic unit; that is, the point or the "one."

A series of points made a line, a series of adjacent lines made a plane, and a series of superimposed planes made a solid. All shapes or "forms" were divisible by the unit, the "one" or the "point," and definable in terms of each other by "whole number ratios," and therefore "rational" and commensurable! By the same token, the integer "1" was the building block of all numbers, paralleling the materialist's atom. All physical entities and social structures, therefore, existed as ideas or forms – in essence, blueprints – developed by a divine power. As a result, inquiry into physical and social relationships was more effective through mathematical formulations and analyses. The theory was that worldly expressions of things were somewhat imperfect and observation was unreliable, so it was preferable to go straight to the essence toward which dynamic processes gravitated dialectically.

By medieval times, this perspective had become known as Platonic "realism" and it lies behind the somewhat erroneous tradition that the Greeks in general did not believe in

experimentation. The Pythagoreans experimented extensively with musical intervals, seeking to “discover” natural proportions. Of course, this attitude flies in the face of those who consider mathematics a synthetic science, artificially elaborating rational consistency. Plato’s and the Pythagoreans’ influence was very persistent, but it primarily appealed to an elitist perspective. Since there was only one true reality, the most discerning and intelligent person was the best source of supervision. Efficiency was an absolute with only one true measure of rational utility and departures from it occurred only through ignorance.

Of course, the ignorant who could not accept revealed truth should be dismissed. Jeremy Bentham absorbed this perspective as the basis for neoclassical utility theory. As discussed above, the discovery of irrational numbers upset Pythagorean absolutism, but the problem was resolved by embracing the Eudoxan dialectic that approached the “truth.” The most famous of these number ladders, the Fibonacci Series, approaches the “Golden Section” (0.618 . . . /1). The dialectic is formed by the series 1/2, 2/3, 3/5, 5/8; each fraction being alternately a “little more” and a “little less,” but closing on the irrational, 0.618. . . . This ratio occurs in nature, was accepted aesthetically in art and architecture, and was revived in the Renaissance.

The democratic school of thought in antiquity, articulated by Protagoras, held that human understanding was best achieved by a dialectic between two perspectives as in the opposing sides in a law suit, an assembly, or a bargaining process. In this view, good laws and justice were a popular consensus, not an abstract absolute.

The most economically provocative analytic writing in ancient Greece was book V.v of Aristotle’s *Nicomachean Ethics*, which discusses justice in exchange. Aristotle surveyed justice in distribution, correction, and exchange. He contended that the mathematics of proportion illustrated these relationships.

There are two relevant mathematical insights into Aristotle’s analysis of exchange. Both are ignored by most modern classical scholars. The first is the dilemma of irrational numbers and commensurability that was ameliorated by Eudoxus. Secondly, Aristotle’s statement that he was using three different proportions to analyze distributive, corrective, and reciprocal or exchange transactions has strangely mystified most classical scholars. Only a few have recognized the harmonic proportion as the one that Aristotle intended to use to illustrate exchange. What is mystifying is that all the ancients knew three major proportions – the arithmetic, the geometric, and the harmonic – and used them to elucidate social and political relations. The harmonic is frustrating because it implicitly assimilates the concept of subjectivity.

Another nuance in Aristotle’s analysis of exchange is the concept of consumer’s surplus. This is not strange, since he was not burdened with the presumption of a single market exchange price. His point was that parties were drawn together because they both saw a potential advantage in exchanging. There was, therefore, a zone of surplus that had to be divided by a judge. Aristotle indicated that this mutual advantage should be “halved” when settling an exchange in arbitration. The idea was clearly articulated by Xenophon in his discussion of the arrangement that Cyrus negotiated between the Armenians and the Chaldeans, described above.

## ROMAN LAW AND MARKET THEORY

It must be observed that modern neoclassical economic theory frames transactions as simple sales. Early Greek and Judaic law, following the voluntaristic principle of just exchange, held that a party could back out of an arrangement before its execution; that is, the point of sale. Roman law developed contract. Contract recognizes that the economy requires planning and that without commitments over time, complex chains of production and trade cannot take

place at an individual level. Contract discounts the presumption of a stable market and builds commitments as isolated exchanges, similar to modern international trade agreements.

The massive body of Roman law was brought together in the 530s A.D. by Justinian, Emperor of the Eastern Roman Empire in Byzantium from 527–65 A.D. Along with the *Digest*, he also produced a one-volume text, *The Institutes*, which served as the basic legal text in the universities in the Middle Ages. The Roman law nominally identified a “natural law” or “*jus gentium*,” but this was a concept in the Protagorean and Aristotelian tradition, where “natural” meant what people tended to develop for themselves or that which was inherently rational. This is echoed in Judaic literature, where Jewish elders, debating a point of theological doctrine, rejected the arguments by an individual who demonstrated divine authority by calling down a heavenly sign. A sage, supporting rational discourse, quoted the Torah, “After the Majority one must incline.(Ex.23:2)”. Stein has succinctly analyzed the Sabinian school of Roman law with its institutionalist orientation, and after his definitive compendium of Scholastic thought, Odd Langholm has abstracted the institutional aspects of Scholastic thought that carried on into modern economics.

Further comment should be made on the spirit of trade and the alleged suppressive influence of the prohibition of usury. The respectability of the merchant was well established in the medieval Islamic world. The commonality of commercial culture in the Mediterranean was demonstrated by the development of trade languages, *lingua franca* in the eastern and *sabir* in the western Mediterranean. As cited above, most trade was organized under the façade of the commendam partnership system.

Joel Kaye has demonstrated the emerging concept of the market process reflected in literature and scholastic writings in late medieval times. It is also important to recognize the municipal organization from the Greco- Roman world that was indigenous in Muslim North Africa, Italy, and Spain. This tradition provided a prototype for the small medieval commercial towns that flourished in eleventh- and twelfth-century Europe. The municipal commitment to regulating prices of subsistence goods for the poor was part of the tradition.

Also, the English rules that specify market locations and days, with provisions against “forestalling, cornering, and regrating,” dating from the thirteenth and fourteenth centuries, are replicas of North African market regulations.

In his compact but detailed summary of the debates over Scholastic economic influences, Julius Kirshner reminds us that medieval doctors followed the Roman law on just price. The rule is stated in Justinian’s *Institutes* (3.305); “*tantum bona valent, quantum vendi possunt*” (“goods are worth as much as they can be sold for”). The theory, however, assumes a rational market atmosphere and, as Kirshner reminds us, there was no hesitation in assuming that anybody of rational individuals, whether buyers, judges, or legislators, could arrive at a rational price.

## MONEY AND THE ECONOMY

Money is reputed to have emerged shortly before 600 B.C. in Lydia, possibly to pay soldiers in pre-measured amounts of precious metals. Minted money, however, spread over the Mediterranean basin during the following century as a convenience in local trade. Ed Will has contended that the concept of credit preceded minted money. This is supported by the early references to tally sticks and tokens that suggest fiat money.

Aristotle’s discussion of money has been widely recognized. He identified the uses of money as a medium of exchange, a unit of measure, and a store of value for future purchases. In listing these concepts, Schumpeter contended that Aristotle failed to identify money as a means of deferred payment, and labeled him a metalist.

In addition, the many discussions of fiat money in Aristotle’s time suggest that the pervasiveness of eighteenth-century naturalism and bullionism has influenced moderns to



refuse to give credence to earlier monetary sophistication. We recognize Gresham's Law in Aristophanes' *Frogs*, and fiat money in Plato's recommendation of a cartel money system for domestic trade in his *Laws* (742a–b) and in the pseudo-Platonic dialogue, *Eryxias*.

An additional example of monetary theory that shows an amazing macroeconomic grasp is Plutarch's biography of Lycurgus, the legendary Spartan lawgiver (Plutarch's *Lives*, I; *Lycurgus*, VIII–X). Lycurgus introduced the iron obol as part of an economic reform. The iron money had its commodity value destroyed with vinegar and its exchange value was less than the commodity value of iron, so that counterfeiting was let down. Foreign trade was limited to barter, stimulating domestic production since outsiders would not take the money. In his *Politics*, Aristotle built an economic system based on aggregations of human units into families, villages, and cities. Associated with these levels were “goods of the body” (consumption), “amenities” (traded for in the village), and “psychic goods” (products of city culture). The first two of these are limited by natural satiation or diminishing utility and the third, although unlimited, requires no money since it involves improving the mind. This ordinal hierarchy of values is concisely developed in book VII of the *Politics* and closely follows Maslow's groundbreaking ordinal analysis of human motivation.

Marx understood Aristotle's distinctions clearly. Foreign merchants bought commodities and sold them for more money. They were not subject to any natural limit, because there is no limit on the desire for money. Aristotle's emphasis on satiety or diminishing utility is echoed in Adam Smith's contention that landlords consume a limited amount and therefore, as if guided by an invisible hand, they contribute the balance for productive investment.

After the deaths of Alexander the Great in 323 and of Aristotle in 322 B.C., the Hellenistic period was characterized by economic thought oriented toward kingship and administration. War was the primary source of imperial wealth, supported by agriculture and people. Ultimately, in Imperial Rome, a breakthrough occurred in fiscal policy as productive land was taxed as the source of wealth instead of relying on booty and levies on the assets of wealthy citizens. The assumption that agriculture was the source of surpluses for investment dominated economic writings through Smithian times and was theoretically structured by Quesnay and the physiocrats.

The medieval literature on money is characterized by nascent nationalism, with the imagery of the body applied to the kingdom, and of money as the blood moving through its parts. Nicole Oresme's *De Moneta* pointed out that if money is accumulated in the king's treasury and withdrawn from circulation, it constitutes an abscess in the body.

Three significant phenomena further indicate the economic understanding of the time. First, discussions of “vellon” or “billon” that initially referred to debased copper money (black money) began to note the importance of small coins to foster beneficial exchange among the common people. Secondly, imaginary monies of account began to be used as common denominators for the dozens of coinages in circulation. Thirdly, bills of exchange were developed that replaced tally sticks as merchants ceased to travel with money and goods. Annual fairs were held in Champagne as early as the thirteenth century for clearing or settling accounts based on bills of exchange, thus minimizing the hazardous physical transfer of minted money.

These financial instruments were pledges of credit from responsible merchants and circulated widely with endorsements before being presented for payment. This created a paper currency that strengthened with each additional endorsement. *Cambio secco* and *cambio fictitio* were names given to bills that did not grow out of a substantive exchange of goods. These synthetic bills circulated with their pledge of credit, anticipating nineteenth-century bank notes. Bills were enforced by the Law Merchant, an international fraternal system, and negotiable instruments.