The Chinese Monetary System:
From Ancient Times to the Early Modern Period

Sarah Gruen

Econ 401
Money and Banking
Dr. Herbener

December 15, 2004

"Recurrently over the centuries men have supposed that they have mastered the secret of [money's] infinite amplification… Invariably it involves the rediscovery, perhaps in slightly novel form, of some infinitely ancient fraud."[1]

China is the oldest civilization in the world, with a culture reaching four thousand years back into history. The country has been more or less centralized since 221 BC, when the emperor

[1] Galbraith (1975, p. 4).

Qin Huang-di consolidated rule and founded the Qin dynasty (221-206 BC). The Chinese have had the same written script for two millennia – oracle bones found dating from the Shang dynasty of the 16th to the 11th centuries BC are inscribed with characters that can still be read today (Clayre 1985, pp. 1, 5). This remarkable continuity of history and written language, unparalleled anywhere else in the world, played a key role in the development of the Chinese monetary system in ancient, medieval, and early modern times. The Chinese were the first to use paper money substitutes on a large scale and were also the first to rescind the redemption promise, granting China the dubious honor of being the first civilization to circulate fiat paper money, centuries before this "modern" monetary system came to the West. As China experimented with paper money and the concomitant features of inflation and depreciation, it experienced all the detrimental economic effects which modern societies have come to know so well. Although the concept of paper money emerged almost simultaneously in China and Europe, China was the first country to use paper money extensively. This is partly because paper was first invented in China, but primarily because China's cultural and political continuity throughout history enabled the Chinese government to become powerful and to maintain popular confidence in paper money for long periods of time, which was essential for the development and maintenance of a successful fiat currency.

Commodity money was the medium of exchange in ancient China. Three thousand years before the birth of Christ, the indigenous inhabitants of the area known today as China used copper as a medium of exchange. Gold cubes and silver ingots would later be used (Einzig 1951, p. 255). However, cowry shells were a far more common currency than precious and semi-precious metals in ancient China. Shells were valued for much the same reason as gold and silver—they were scarce and beautiful and could be used as ornaments (Kemmerer 1935, p. 9).

Because they were valued highly and were portable and durable, it is understandable that they came to serve as commodity money. In the 24th c. BC, the Han people migrated to China, dominated the native inhabitants, and adopted and regulated their shell currency. *Ya-King*, the oldest extant Chinese book, mentions the use of cowries as currency and states that tortoise shells were used for more expensive purchases. The use of shells as Chinese money in ancient times is supported by linguistic evidence, as the Chinese characters for many words relating to money, including "prices," (价格) "riches," (财) "buying," (买) "selling," (卖) and "thief," (贼) all contain the Chinese ideogram for "shell" (贝) in their traditional form (Einzig 1951, pp. 253-254). In the 20th c. BC, gold first came into use as a medium of exchange in China (Kemmerer 1935, p. 9), but cowries continued as the most widely used and important currency. During the 14th c. BC, cowry shells came to be perceived as a means of storing wealth, for in 1375 BC P'an Kang of the Shang dynasty (16th-11th c. BC) "rebuked his Ministers for their greed in hoarding cowries and gems" (Einzig 1951, p. 254). Sheep, tea, silk, grain, rice, and turquoise were other commodities used as media of exchange in China (Einzig 1951, p. 108).

In the 11th c. BC, the Chinese government began taking a larger role in regulating the currency. King Tcheng of the Zhou dynasty (11th c.- 221 BC) founded Treasury offices to make rules concerning the currency and copper rings began serving as money. Fines for some crimes were legally fixed in certain weights of metal and a government lending institution was set up to provide loans to both consumers and producers. The credit system became quite well-developed, and ancient Chinese writings often refer to lending laws. "The role played by the various Chinese governments was much more active than that played by the State in Ancient Egypt or even in Babylonia. Money as a medium of exchange evidently played a much more active part in Ancient China than in either of these two Empires" (Einzig 1951 pp. 254-255, 257). Silk,

another medium of exchange, also came under the sphere of government regulation in 1091 BC (Einzig 1951, p. 256). From ancient times, the Chinese state had a tradition of consolidating and regulating the currency, which would enable it to issue paper money successfully many years later.

The next step in the development of Chinese money was a unique currency known as knife money. Around 1000 BC, small bronze agricultural implements became a popular medium of exchange. The shapes included hoes and sickles, but knives were the most common (Einzig 1951, p. 255). Although this currency may have had objective use-value at first, when the knives and other tools were valued not only for their bronze but also for their use as tools, the implements became smaller over time until they ceased to be effective and were "merely symbols of the objects of which they originated." By 852 BC, shells were becoming scarce, and by the end of the 7th c. BC there were so few available that they could no longer serve as an effective currency (Einzig 1951, p. 254, 256). Various commodities were used in addition to knife money to fill the gap. Around 700 BC, metal models of shirts known as *pu*, which represented cloth that had served as a commodity money, circulated as currency (Angell 1929, p. 80). In the 7th c. BC, salt was used widely as a currency, and some scholars claim that clay, cardboard, and deerskin were also used as money, although others disagree (Einzig 1951, p. 257).

In the late 7th and early 6th c. BC, under the Zhou dynasty, the Chinese used bronze money in the shape of spades and especially knives more widely. Bronze was used to cast these imitation implements instead of silver or gold because bronze was readily available and had been valued for social and religious purposes before the beginning of coining (Williams 1997, p. 135, 140). There are several legendary accounts describing the advent of knife money. In one

account, Prince Hwan, perhaps unable to pay his soldiers, told them to trade their metal knives for goods, and the Chinese people approved of the knife money and adopted it for commercial use. Another story claims that Prince Hwan legalized knives as payment for small fines and thus made knives more attractive as a medium of exchange. Finally, others claim that around 670 BC, traders from the Indian Ocean settled in Shantung and supplied standardized bronze knives for use as currency. The historical record is not complete enough to uphold one legend over the others, but in any case, bronze knives became a common medium of exchange (Einzig 1951, p. 255).

Chinese knife money was almost exclusively issued privately, especially by merchants who, perhaps in the face of the shortage of shells, perceived a need for currency which they could profitably fill. Paul Einzig claims that because the knives "circulated without State authority they cannot be regarded as coins proper" (Einzig 1951, p. 255-256), but this is incorrect. It is not a legal mandate which makes something a currency, but economic practice. The Chinese knife money was certainly an example of coinage, albeit private coinage. Again, linguistic evidence demonstrates that knives were used as currency, because the word *dao* (刀) originally meant "knife," but came to mean a monetary unit. Traditional Chinese coins, which were round with a square hole in the center, gradually developed from the ring handles of the bronze knives. As knives became smaller and smaller, the blade shrunk until it disappeared altogether and only the circular handle remained (Einzig 1951, p. 256).

One scholar, Norman Angell, claims that "money entered extremely little [into Chinese life] and was deliberately, for long period, practically abandoned," believing that money was little used by ordinary people and did not play a key role in everyday trade. He seems to take this perspective because the government did not engage in coining until the late 3rd c. BC and

precious metals such as gold and silver were almost never coined (Angell 1929, p. 18, 29). It is true that government-minted coins were not important until the Qin dynasty and that coins of precious metal were rarely used, but to claim that money was unimportant in Chinese society merely because the first coins were issued by private individuals and were not made of gold is to make the mistake of applying a legal definition to an economic phenomenon. The Chinese knife money was certainly money in the economic sense of the word—"a medium of exchange which is commonly accepted in payment for goods and services without reference to the character or credit of the person who offers it," as Edwin Kemmerer defines it (Kemmerer 1935, p. 8). And in fact, Angell is mistaken to think that the Chinese state was uninvolved in the coining process. Although strict regulations were not imposed and the state did not actually mint any coins during the Zhou dynasty, Prince Hwan did make laws about the proper weight of metal currency in 670-655 BC, and in 655 BC ring money was given an official stamp. Interestingly, this is the same era in which currency was first stamped by the governments of Lydia and ancient Greece (Einzig 1951, pp. 255-256).

An ancient Chinese book called *Guanzi*, or "Book of Master Guan," which was composed before 645 BC, provides an interesting perspective on the view Chinese people took of money. It says, "The early kings…saw pearls and jade as superior money, gold as medium money, and spades and knives as inferior money. You cannot wear money but you can be warm; you cannot eat money, but you can fill your belly."[2] The "superior" and "medium" monies were not widely used, but the "inferior" money of spades and knives, along with the coins which developed from the handles of knives, dominated Chinese exchange for many years. However, coins were not universally accepted right away. In 600 BC, metal in the shape of cowry shells also circulated as money, and in the 6th c. BC, the Prince of Ts'in refused to accept coins in

[2] Quoted in Williams (1997, p. 135).

payment and required them to be traded for silk first, which he then accepted. The government continued gradually expanding its practice of regulating the currency, and in 460 BC the King of Ts'u created three currency management boards, one for gold, one for gems, and one for coins and silk (Einzig 1951, pp. 254, 256-257).

In the 4th c. BC, small, round coins with square holes in the center finally developed fully. This style of coin spread throughout Asia and has been discovered in Australia, the Middle East, and even Africa. Although the shape of the coin was primarily due to the shape of the ring at the end of the knife money, it also came to take on a symbolic significance. The square hole represented earth, the circular circumference represented heaven, and the concepts of *yin* and *yang* were displayed by the two sides. There was also a practical use for the square hole in the middle of the coins, as it made them easier to mint and allowed them to be strung together for easier counting and transport (Williams 1997, pp. 135, 141). The copper coins came to be called "cash" and a thousand of them would normally be placed on one string and tied off, so that prices in later times came to be measured in 1000-coin strings of cash. The coins bore elaborate artistic calligraphy which initially stated how much metal the coin contained, but, unlike western coinage, rulers were not pictured on Chinese coins (Williams 1997, pp. 141, 143).

The absence of ruler figures on coins may be attributable to the fact that coinage remained largely private until 221 BC, an important year for Chinese history as well as for the development of money in China. In that year, Qin Huang-di consolidated rule and founded the Qin dynasty (221-206 BC), which sought to centralize all of China, including the monetary system. Emperor Qin declared that *banliang* ("half-ounce") bronze coins were the official money of China. For some time coins continued to differ markedly from region to region, but the beginning of true consolidation of state control over the currency had begun (Williams 1997,

pp. 136, 144). The emperor passed China's first legal tender laws, forbidding the use of shells, tin, gems, and pearls as money (Einzig 1951, p. 254).

The question of monetary policy now entered the considerations of scholars, as Chinese thinkers began to debate whether private enterprise should be permitted to coin or if currency was the sole prerogative of the state. Chinese philosophers who followed the school of thought known as Legalism were convinced that only the state should be permitted to coin money (Williams 1997, pp. 155-156). One such thinker, Jia Shan, explained his thinking in 175 BC by observing that "coins are useless things, yet we can exchange them for wealth and honor."[3] The Legalists recognized the power inherent in a coinage system and believed that only the state should wield such power. The Chinese government was not reluctant to enhance its power and prestige and in 135 BC outlawed private coinage, which had existed in China since at least the 7th c. BC. At the same time, implement money was declared illegal (Einzig 1951, p. 256). The Chinese people were now required to use the *banliang* coins sanctioned by the state.

Counterfeiting became a serious problem in China. In 118 BC, the Han dynasty (206 BC – 220 AD) issued a new type of coin, *wuzhu* ("five-grain"), which replaced *banliang* as legal tender (Williams 1997, p. 136). By 48 BC there were so many imitation *wuzhu* coins in circulation that the emperor considered demonetizing the coins and going back to the ancient commodity monies of grain, cloth, silk, and shells (Einzig 1951, p. 256). A disillusioned philosopher named Gong Yu blamed all social ills on coinage and, around 45 BC, lamented that "the rich hoard housefuls of coins, and yet are never satisfied. The people are restless. The merchants seek profit…That is why evil cannot be banned. It arises entirely from money."[4] Unfortunately, even when coins were replaced with grain and silk, people still engaged in fraud. Some traders soaked grain in

[3] Ibid., p. 156.
[4] Ibid., p. 155.

water to increase its weight and spun silk thinly to create a greater length of material, even though these practices ruined the goods and deprived them of their use-value (Williams 1997, p. 156). The blame for deception was to be laid not on the coins, but on human nature.

For the next several centuries, repeated efforts were made to eliminate counterfeiting and find a stable currency. In 10 AD, the emperor Wang Mang tried to bring back the old ways and decreed that shells should again be used as currency, with different varieties of cowries having different fixed values. This system was hopelessly outdated and was rejected by Chinese merchants, and the effort lasted only four years (Einzig 1951, p. 254). This demonstrates the economic principle that something will not be effective money unless it already has a generally accepted exchange value. Shells had lost their historical definition of value and could no longer efficiently fulfill the monetary function. In 24 AD, serious counterfeiting caused the state to adopt grain, unminted metal, and cloth as currency, but this effort too was soon abandoned. In 347, cloth made of silk and hemp briefly replaced copper coins. When this cloth was used as a medium of exchange, people tore it into pieces to create a fragment of the right size for the desired purchase, even though tearing the fabric eliminated its objective use-value. Again in 402 the government returned temporarily to commodity money due to serious counterfeiting. Eventually, however, the state realized that "even commodity currencies were not immune from debasement…It was decided, therefore, to revert to metallic coinage" (Einzig 1951, pp. 256-257).

In 621 AD, the Tang dynasty (618-907 AD) issued a new coin to replace the hopelessly debased *wuzhu*. This coin was called *Kaiyuan tongbao* ("new beginning, circulating treasure") and was no longer inscribed with the weight of metal it contained, but with four characters stating the concept of the money and the date of the issue (Williams 1997, p. 136). This marks

an important transition in Chinese thinking about money. Instead of the coins being defined by the amount of metal they contained, they were defined by the state. This step may have been in response to the extensive private counterfeiting which had plagued the Chinese economy for so many years. In addition, the new Tang dynasty doubtless wanted to demonstrate its power and prestige by issuing a new coin.

China and nearby Asian countries often influenced one another. In 708 AD Japan issued coins called *Wado kaiho* ("beginning treasure of the Wado [soft copper] period") in imitation of Chinese money. Similar coins were minted in Vietnam in 970 AD and also in Central Asia, Uzbekistan, and Korea (Williams 1997, p. 136). Meanwhile, the Chinese economy was being affected by an outside influence of its own. Buddhism came to China from India and won many converts, and by 702 AD many Chinese were melting down copper coins and using the metal to make Buddhist idols. This led to a shortage of copper coins and to the adoption of tin and iron as currency in some areas (Einzig 1951, p. 285). The Chinese government had difficulty adjusting to this new situation, as can be seen by the somewhat contradictory policies it pursued. In 734 the government issued a law requiring cloth or silk, instead of precious metal, to be used in the purchase of servants, horses, and manor homes (Williams 1997, p. 145). However, in 739, the emperor actually demonetized silk as well as wheat (Einzig 1997, p. 285). It seems that the Chinese government tried a series of policies in an attempt to find some solution to the currency problems besetting the Chinese economy.

A solution was found during the reign of Hien-Tsung from 806-821, when the state issued paper money for the first time in human history. This paper was a money substitute, fully backed and redeemable in metal coins from government banks. Merchants had been demanding a new system because the copper and especially iron money in use at the time was too heavy and

inconvenient, and they were delighted by the new "flying money"—so-called because paper was so much lighter and easier to use (Ederer 1964, pp. 91-92).

Felted paper had been invented in China in 177 BC (Angell 1929, p. 238) and so it is not surprising that paper would first be used as a money substitute in the area where it was first made. What is surprising is the little-known fact that, at almost precisely the same historical moment, "paper money" serving a quasi-monetary function was introduced in Europe. Of course, Europeans could not manufacture paper in the 9th c. AD, but in 862 Ruric the Goth, ruler of the European state of Novgorod, issued leather, or parchment, money which Rupert Ederer claims was "sufficiently uniform and stamped to be considered as state-issued notes." He adds that in Europe, "Leather money issues would appear to be the closest approximation to state-issued paper money allowing for the absence of an adequate supply of paper…Leather, being a very durable substance and pliable enough for an imprint, would seem to differ in no essential detail from paper money" (Ederer 1964, pp. 92-93). Some scholars also claim that Edgar, King of Wessex, used leather money in England from 959-975 (Groseclose 1961, p. 119), although the evidence for this is scanty (Einzig 1951, pp. 259-260). It is difficult to ascertain if this leather was actual money accepted as a medium of exchange in normal trade or whether it was merely a redeemable claim to future payment which happened to be stamped on leather. It is clear, however, that the issue of this parchment money in Europe was a step towards the emergence of a true paper money substitute, and this first occurred in Europe at almost the same time that the idea emerged in China, although in China the use and acceptance of paper money was far more widespread.

During the Song dynasty (960-1279), paper money substitutes became far more popular, especially since the Song emperors encouraged free trade between different regions of China.

These different regions often used different monies, and in some places local officials outlawed export of the regional currency. Paper notes accepted by Chinese all across the country made trade between two such regions possible. Where iron was used as a medium of exchange, paper money substitutes were almost essential for transactions of any size because the low value-to-weight ratio of iron made it prohibitively heavy to transport. Also, the government began using paper money substitutes to finance military expenditures, which increased the amount of paper money in circulation and generally contributed to the widespread acceptance of the paper. The Chinese adopted paper notes eagerly and soon defined prices in terms of them (Williams 1997, p. 149).

Paper money substitutes were not the only currency circulating in addition to copper coins. *Sycee*, ingots of silver in the shape of shoes, first circulated during the Song dynasty. They were the currency of wholesale trade and were measured in a traditional, fictional unit of weight called the *tael* (Einzig 1951, p. 285). One *tael* of silver was roughly equivalent to one bolt of silk or to 1000 copper cash coins, which was the same as one string of coins. Silk could be used to pay taxes and was a measure of value but was not normally used in exchange. As always, private counterfeiting, especially of copper coins and paper notes, was a serious problem (Mote 1999, p. 116). Unfortunately, the existence of paper money substitutes also created the possibility of another form of monetary depreciation, infinitely more serious since it was sanctioned by the laws. It did not take the Chinese government long to realize it could issue unbacked or fractionally backed paper money substitutes and increase its purchasing power, and during the reign of Chengtsung in 997-1022, the first unbacked fiduciary media in the world was issued in China. These paper notes could only be redeemed every three years, not on demand at

par. The Chinese people called these notes “changelings” to describe their uncertain character (Ederer 1964, p. 92).

Government-caused inflation became a serious problem, especially during wartime. Military expenditures exhausted approximately three-fourths of the Chinese government’s annual tax revenue, and the expense of maintaining the bureaucracy of civil servants and the imperial household was also a financial strain, so the government felt intense pressure to increase revenue in any way possible. Producing more paper money than it had metal in the government vaults seemed to be a plausible way to solve this problem (Mote 1999, pp. 116-118). From this time on, whenever paper money was issued by the state, the Chinese would face the threat of monetary inflation.

Governments had far less power in Europe and so inflation did not occur there for many years, although there continued to be isolated instances of the use of leather as a means of payment and possibly as an early money substitute, in Europe. In 998, Olaf of Norway issued leather money (Mote 1999, p. 119), and from 1060-1103 leather money was used by Philip I of France (Groseclose 1961, p. 119). However, the European states issuing these money substitutes lacked the power and historical roots which the Chinese government enjoyed. In China, paper money continued circulating even when the government rescinded redemption (Ederer 1964, p. 92). It would be many centuries before the West was able to imitate China in this way.

Chinese monetary policy developed even farther in 1069-1073, when Chinese emperor Wang Anshi created a plan to help farmers. He decided to mint more copper cash and to give state loans to farmers at planting time, claiming that if ordinary people were more prosperous, the state would be enriched as well (Mote 1999, p. 140). In an agricultural society like China, without government intervention small farmers were “not induced to borrow as a rule with the

view of employing the capital so obtained at a greater profit, but compelled of necessity to borrow as a last resort" (Angell 1929, p. 182). Thus, government-issued loans meant the artificial creation of credit in circumstances where credit would not be provided by the market—a situation that is oddly reminiscent of government policy in the 21st century.

In 1074, the export of Chinese coins, which had formerly been prohibited, was legalized, and vast quantities of coins flowed to Korea, Southeast Asia, Japan, and Vietnam (Williams 1997, p. 150). This is an example of Gresham's Law at work. Paper was legally overvalued in terms of metal coins, and thus the undervalued coins were transferred from China to surrounding areas where they could trade at the market rate.

In 1122, in one of the more famous instances of European leather money, the Venetian Doge Michieli led his soldiers in a siege against Tyre in one of the Crusades and was unable to pay them. With his troops demanding money and on the verge of rebellion, in desperation Michieli created leather money and stamped it with his family coat of arms, promising to redeem the leather in silver after the battle was won (Groseclose 1961, p. 119). Einzig states that this leather money was "a rather advanced form of currency, a forerunner of paper money" (Einzig 1951, p. 268). What is unclear is whether these leather notes were accepted from the soldiers by merchants in trade. If they were, then Einzig's claim is correct, but if they were not, then the soldiers were merely accepting a promise of future payments from Michieli, and this promise happened to be stamped on leather. The situation is similar to that of the Massachusetts colony in 1690, when the legislature was unable to pay a returning band of militiamen and sought a solution by giving them paper notes—except that Michieli redeemed the notes, while Massachusetts never did and they circulated in the colony as a general medium of exchange.

The redemption promise was broken much sooner in China than in the West. In 1189, the Jin, a foreign dynasty which ruled northern China during the Song period, issued the first modern fiat paper money, with no date of promised redemption whatsoever (Williams 1997, p. 149). People lost confidence in this money almost immediately and its value began falling during the 1190s. From 1197-1200, the Jin minted silver coin in an attempt to restore popular confidence, but price inflation continued to worsen (Mote 1999, p. 284). It is an irony of history that in 1189, the same year the Jin issued the world's first fiat paper, the first paper mill in Christian Europe was built at Herault (Groseclose 1961, 119). It was only a matter of time before European governments would take advantage of paper-making technology to produce fiat paper money in the same way as the Chinese.

In 1206, Mongols from the north invaded northern China, and from 1279-1368 they ruled all of China in the Yuan dynasty. Much as the ancient Chinese invaders had adopted and regulated the shell currency of the native inhabitants thousands of years before, the Mongols gladly employed paper money during their rule, first issuing paper money in 1260 (Angell 1929, p. 239). They passed legal tender laws which forbade the circulation of gold, silver, and copper and required paper money to be used (Williams 1997, p. 149). The Yuan paper was denominated in copper cash for smaller bills and silver ingots for larger bills although copper and silver were not legal media of exchange. The money was ostensibly backed by silk floss or gold and silver reserves stored by the government, and "the government was careful to keep it convertible, making it widely acceptable within China and throughout bordering countries" (Mote 1999, p. 766).

From about 1275-1295, the Venetian traveler Marco Polo lived in China during the reign of the Mongol emperor Kublai Khan, and the record he left of his time there provides a

fascinating European perspective on Chinese monetary practice. Marco Polo tells us that paper was made from the skin found between the bark and wood of mulberry trees and was cut into different-sized pieces, which were then signed by the officials and stamped in red by the Khan. He writes that "the way it is wrought is such that you might say he hath the secret of alchemy in perfection, and you would be right" (Polo 2004, pp. 336-337). Marco Polo also recognized the importance of legal tender laws for maintaining the circulation of the paper currency, observing that

> nobody, however important he may think himself, dares to refuse them on pain of death. And indeed everybody takes them readily, for wheresoever a person may go throughout the Great Kaan's dominions he shall find these pieces of paper current, and shall be able to transact all sales and purchases of goods by means of them just as well as if they were coins of pure gold. (Polo 2004, p. 337)

Other travelers, including Roger Bacon, Josafat Barbara, William de Rubruquis, Pegollotti, and Hayton, also described the paper money in use during the Yuan dynasty (Groseclose 1961, p. 118 n. 2). The inflation of the money supply practiced by the Yuan rulers had the same results of price inflation and loss of confidence which are experienced in modern inflationary monetary regimes, and "Ma-Twan-lin, the Chinese historian, writing from personal experience in the thirteenth century, has described its manifestations in terms which make his account seem of contemporary times" (Groseclose 1961, p. 118). However, for many years the Mongol rulers were careful to redeem the paper money on demand, and indeed they would not have needed to do so very often, for with gold and silver outlawed as currencies, the only reason a person would attempt to exchange paper notes for precious metal was to use the metal for ornament (Williams 1997, p. 149). This practice of redemption maintained popular confidence for many years.

Fiat paper was not the only currency used in China during this time. According to Marco Polo, salt served as a unique currency for small transactions. Boiled salt water was poured into a

mold which, once the water hardened, yielded half-pound bars of salt. This currency was sanctioned by the government, which stamped the bars. In areas where salt was plentiful, such as near salt springs, 80 salt bars were equivalent to one gold bar, but in the mountains where salt was in short supply, only 40 salt bars were necessary to equal one gold bar. This salt money had direct use-value as well as exchange value, for when the bars crumbled, Chinese living in cities added the salt pieces to their diet. Cowry shells also continued to circulate in some areas, especially in Yunnan province, and were described by Marco Polo as "white porcelains found in the sea" (Einzig 1951, p. 285).

In Europe during this time period, various European rulers continued to experiment with leather "money," although again the exact economic nature of this phenomenon is unclear. In 1237, Frederick II of Germany used leather (Ederer 1964, p. 93), and in 1285 leather money was issued by Edward I of England (Groseclose 1961, p. 119). This money bore his picture and name and an official stamp and was used to finance the building of Conway, Carnavon, and Beaumaris Castles (Einzig 1951, p. 260). The craft of paper-making also spread, as a paper mill was built in Montefano, Italy in 1276, and another followed in 1293 in Fabriano, Italy (Groseclose 1961, p. 119). Still, European rulers did not have the centralized power of the Chinese emperors, and paper currency remained an anomaly.

From the period 1260 to 1294, the Yuan dynasty issued paper money every year. The lowest annual issue of paper was 228,960 silver *taels*' worth in 1267, while the highest annual issue was 50,002,500 silver *taels'* worth in 1290. Over the entire period, 249,654,290 *taels* of paper money were issued. Confidence in the paper money began to decline and in 1351 the Yuan sought to reform the system, but public confidence was too badly eroded and paper money

ceased to be a valued medium of exchange (Angell 1929, pp. 239-240). In 1368, the Yuan dynasty fell and was replaced by the Chinese Ming.

The Ming dynasty (1368-1644) decided to follow the example of their predecessors and issued paper currency of their own, despite the recent collapse of the inflationary Yuan paper money system. In 1374, the *Da Ming baochao* ("precious note of the Great Ming") was issued. It was denominated in copper cash, with 1 note = 1 string = 1000 copper cash = 1 oz. silver = ¼ oz. gold. This paper was money by fiat and could never be exchanged for precious metal. The Ming emperors passed legal tender laws outlawing the use of gold and silver as money and even tried to prevent the use of copper cash. Paper was required for payment of taxes and a portion of government officials' salaries were paid in paper (Mote 1999, p. 766). This policy created a use for the fiat paper and gave it value it would not have otherwise had.

By 1399, the Ming paper notes had seriously depreciated, as the market exchange rate was 35 notes = 1 oz. silver, while the legal rate was 1 note = 1 oz. silver (Mote 1999, p. 766). Hung-Wu of the Ming dynasty brought specie back to some extent at the end of the fourteenth century in an effort to stave off this depreciation, but his efforts were not ultimately successful (Ederer 1964, p. 92). In 1450, depreciation had become extreme and 1000 notes were required to buy one ounce of silver. The government was forced to admit that hyperinflation had occurred and that paper was no longer a viable medium of exchange, and silver became the legal currency for taxes and salaries. Silver was legalized in the market for large transactions and copper for everyday exchange (Mote 1999, p. 766). In essence, the Chinese government was forced to ratify the market and place a legal stamp on what was already happening, since it was unable to force people to accept the wildly depreciated paper notes any more. Silver ingots continued to be exchanged by weight and fineness instead of being coined. The Chinese copper and silver

mines were becoming exhausted, however, and this, combined with a flow of copper coins to Japan and other nearby countries in response to Gresham's Law, depleted China's stock of currency. Once again, the Chinese people turned to counterfeiting and debasement of the coins to meet their need for currency (Mote 1999, p. 767).

In the late fifteenth and sixteenth centuries, China became partially integrated into the world market, as Japanese and Europeans eagerly sought Chinese goods, especially porcelains and silks. Japan used raw copper and especially silver to buy Chinese goods, and in the mid-sixteenth century, silver from the rich mines of the New World also came to China by the shipload. This "movement of silver was one-way; it was exchanged for Chinese goods…and it remained to accumulate and be circulated in China. Chinese importers bought virtually nothing for which they spent silver. China began to be the great repository of the early modern world's newly discovered wealth in silver" (Mote 1999, p. 767). This massive influx of silver greatly increased the available money stock in the Chinese economy, which decreased silver's value relative to goods and to copper cash. There were several economic effects from this market-caused inflation. Various parts of the economy, especially the sector which manufactured goods for export, were stimulated, as the new silver mines gave foreigners greater purchasing power and thus greater ability to exercise their demand for these goods. However, this integration also made China vulnerable to fluctuations in the price and quantity of silver on the world market. This meant that China, once so self-sufficient and little affected by the small economies of its neighbors, was now subject to economic problems caused by factors utterly beyond its control (Mote 1999, p. 767-768). During the seventeenth century, foreign trade continued to increase, particularly in exports of silk and tea, and silver continued to flow into the country and became an even more common medium of exchange (Einzig 1951, p. 311).

The glory days of the Ming dynasty did not last indefinitely. By March 1644, the Ming dynasty was crumbling. The desperate rulers considered issuing paper money again in a last effort to save the state, but the politician Jiang Dejing ridiculed the idea, pointing out that a weakened state such as the Ming could never inspire the necessary confidence. He said, "The common people have simple minds, but who would be willing to exchange his hard cash for a piece of paper?"[5] The Ming rulers recognized the truth in his words and decided to not even attempt the issue of paper currency (Mote 1999, p. 807). The dynasty fell and was replaced by the Qing dynasty (1644-1911), which ruled until the revolutions of the twentieth century wrenched China into the modern political world.

During the nineteenth century, some remote parts of China such as the Gobi region were still reluctant to accept modern coins, and primitive monies such as gamblers' counters made of bamboo or base metal were still used in some areas (Einzig 1951, p. 108). The measurement system was not standardized for all of China, so trade was hampered because silver had to be assayed and weighed in every exchange. Einzig claims that "the State abstained from interfering and left it entirely to local authorities and private trading interests to run their own monetary system. This system handicapped trade" (Einzig 1951, p. 312). However, given the Chinese people's history of being defrauded by both private counterfeiters and government inflators repeatedly over the centuries, market participants were quite justified in their desire to examine every silver ingot for themselves.

The Chinese were reluctant to open their economy to outside interests, but the British forced them to open their ports with the Opium War and the subsequent Treaty of Nanjing of 1842. The rest of Chinese economic history up to the present time is the story of a country which for thousands of years was a self-sufficient world unto itself struggling to find its proper

[5] Quoted in Mote (1999, p. 807).

place as one participant in a global economy. In 1892, Zheng Guanying wrote *Words of Warning to a Flourishing Generation*, warning the Chinese government and people that foreign banks were issuing fractional reserve notes. The Chinese were well aware of the detrimental consequences of this practice, having gone through the whole course of inflation several times already in their long history. But Zheng's words went largely unheeded, and the Chinese government itself was inflating the money supply more than the West and actually engaged in secret forgeries of European silver dollars. Thus it is unsurprising that people engaged in exchange were careful to examine the weight and fineness of the silver they received, and foreign silver circulated on the basis of metal content alone without regard for the legal exchange rate (Williams 1997, pp. 145, 147, 156-157).

The Chinese government began taking steps to create a modern system of state coinage. In 1889 a western-style mint was opened at Canton, and in 1893 Zhang Zhidong opened the Hubei Government Mint in Wuchang, which issued silver dollar notes. The government caused the notes to be accepted as a medium of exchange by means of the same ploys governments everywhere use to usher in a new currency they can then inflate: they promised redemption in silver on demand and made the notes legal tender for taxes and other official payments. In 1897, the Imperial Bank of China (*Zhongguo tongshang yinhang*) was founded and issued government paper. Numerous private banks and organizations were still issuing their own paper currencies, and the currency situation in China at the turn of the twentieth century was, to an outsider, hopelessly confusing (Williams 1997, p. 157, 161). China would not have a truly modern monetary system until after the Revolution (Einzig 1951, 312).

The concept of a paper currency was not unique to China. The first instance of paper currency appeared at almost the same historical moment in China during the Tang dynasty and in

Europe during the reign of Ruric in Novgorod, although there is some doubt about the exact nature of the European leather "money." What was unique to China, however, was the ability of the Chinese government to implement paper currency on a large scale and to issue and sustain fiat paper money centuries before any European government had the power to do so. The experiments in currency manipulation all ultimately ended in inflation, depreciation, and a loss of popular confidence, but these results were rarely immediate. The Chinese monetary system of medieval and early modern times was made possible because of the foundations laid in ancient China. The existence of a uniform writing system and a long tradition of cultural continuity, as well as state control since the consolidation of power under the Qin dynasty in 221 BC, allowed Chinese governments of later years to maintain popular confidence in paper money and to issue that money on a scale that European governments would not be able to match for many years.

References

Angell, Norman. 1929. *The Story of Money*. Garden City, NJ: Garden City Publishing Co., Inc.

Clayre, Alasdair. 1985. *The Heart of the Dragon*. Boston: Houghton Mifflin Co.

Ederer, Rupert J. 1964. *The Evolution of Money*. Washington, DC: Public Affairs Press.

Einzig, Paul. 1951. *Primitive Money in its Ethnological, Historical, and Economic Aspects*. London: Eyre and Spottiswood.

Galbraith, John Kenneth. 1975. *Money: Whence it Came, Where it Went*. Boston: Houghton Mifflin Co.

Groseclose, Elgin. 1961. *Money and Man: A Survey of Monetary Experience*. New York: Frederick Ungar Publishing Co.

Kemmerer, Edwin Walter. 1935. *Money: The Principles of Money and Their Exemplification in Outstanding Chapters of Monetary History*. New York: The Macmillan Co.

Marco Polo. 2004. *The Book of Ser Marco Polo*. In *Sources of World Civilization* Vol. 1 3rd ed. Olivia A. Johnson and James L. Halverson, eds. Upper Saddle River, NJ: Pearson Prentice Hall.

Mote, F.W. 1999. *Imperial China: 900-1800*. Cambridge: Harvard University Press.

Williams, Jonathan, ed. 1997. *Money: A History*. New York: St. Martin's Press.