

GOLD STANDARD UNIVERSITY

Winter Semester, 2003

Monetary Economics 102: Gold and Interest

Lecture 3

THE JANUS-FACE OF MARKETABILITY

Two kinds of marketability • Space-time duality • The subjective theory of value • Marketability in the large or salability • The subjective theory of interest • Marketability in the small or hoardability • The paper boy and his silver dime • The Fullarton-effect • The chimaera of hoardability

Two Kinds of Marketability

It should not come as a surprise that the concept of marketability plays a central role in explaining both the origin of money and the origin of interest. The starting point of Carl Menger in studying the origin of money was the observation that the economizing individual who wants to exchange his surplus of X for Y may nevertheless exchange X for Z first, provided that Z is more easily exchangeable for Y than X , especially in large

quantities. Never mind that he has no need, or he has satisfied all his needs, for *Z*. He will be closer to his ultimate end because *Z* is *more saleable* than *X*. When the usefulness of a commodity for the purpose of facilitating exchange is widely recognized, more and more economizing individuals will proceed along the same lines and, finally, the commodity that is most saleable (or, as we shall also say, most marketable in the large) becomes money. The connection between salability and marketability in the large becomes clear if we think of the great medieval fairs. Producers from far-away places brought their accumulated surpluses to the fair city. It was natural for them to quote their prices in terms of the commodity that was most marketable in the large, because they were hoping to buy and sell in bulk.

Following in Menger's footsteps, we choose our starting point in studying the origin of interest with a similar observation. The economizing individual who is producing surpluses of *x* and wants to create a store of *y* may nevertheless decide to create a store of *z* first, provided that *z* is easier to exchange for *y* than *x*, especially in small quantities. Never mind that he has no direct need for *z* now or in the foreseeable future. He will be closer to his ultimate end because *z* is *more hoardable* than *x*. When the usefulness of one commodity for the purposes of hoarding and dishoarding is widely recognized, more and more economizing individuals will proceed along the same lines and, finally, the commodity that is most hoardable (or, as we shall also say, most marketable in the small) becomes money. The connection between hoardability and marketability in the small becomes clear if we think of the local craftsman who wants to save for his old age. It was natural for him to quote his prices in terms of the most marketable commodity in the small. He was adding small bits at a time to his retirement fund. And, after he started drawing on his fund, he would need to exchange small bits of it for food and other daily necessities.

Notice that the most hoardable commodity is generally not the most saleable one. This is the reason why throughout the ages, up to 1870, there existed two different kinds of money circulating side-by-side. In antiquity cattle became the most saleable commodity, and salt the most hoardable one. Later on these roles were taken over by others till, ultimately, the market has settled on gold as the most saleable, and silver as the most hoardable commodity.

Space-Time Duality

This discussion reveals that money has a dual nature. We can also derive the duality of money from philosophical principles, notably from the duality of space and time. In every treatise on money, in one form or another, the proposition is advanced that money (whatever else it may be) is a transmitter of value through *space* and *time*. The concept of money is therefore directly linked to these two absolute categories of human thought. The dichotomy of space/time explains the dualistic nature of money, explicitly observable

throughout the ages -- right up to the demise of bimetallism scarcely over six scores of years ago. In its first capacity money transmits value in space, that is, over great distances with the smallest possible losses. In antiquity cattle were particularly well-suited for this purpose and have become money.

However, cattle-money was not particularly suitable for transmitting value over time with the smallest possible losses. This explains the emergence of another kind of money, more suitable for hoarding and dishoarding, that is, to facilitate the transmission of value over time. This other kind of money was salt. Not only was it less perishable than other marketable goods; salt was also the most important agent of food preservation. In antiquity the threat of periodic food shortages loomed large, and the chief agent of food preservation was destined to assume a monetary role.

To people of the antique world it must have appeared natural that two vastly different commodities answered their money-needs, and they took the coexistence of cattle-money and salt-money for granted. Our linguistic heritage clearly reflects this fact. The English adjective *pecuniary* and noun *salary* were derived from the Latin words *pecus* (meaning cattle) and *sal* (meaning salt). Even though gold and silver which have later replaced cattle and salt were far more similar to one another, the dual nature of money persisted throughout the ages. The main reason for that was the fact that the specific value of gold was high, and parceling it out in molar quantities added substantially to the cost of production. Only towards the end of the 19th century did advances in metallurgy make it possible that one single monetary metal, gold, could answer both monetary needs of man better than any other commodity. I refer to the development that has made it possible to produce or to recover gold in molar quantities at a cost competitive to the cost of producing the same value represented by silver (for which molar processes were not needed, thanks to the lower specific value of the silky metal). The practical outcome of this development was the recognition that the best monetary system was gold monometallism. As Bruno Moll put it in his book *La Moneda*, "gold is that form of possession which is of the highest elevation above time and space".

The Subjective Theory of Value

The dualism of the monetary system is the starting point of my investigations as I explore the two sources of man's need for money. The first, man's need to transfer value over space, was put by Carl Menger in the center of his subjective theory of value. The second, man's need to transfer value over time (or, as I shall more specifically describe it, man's need to convert income into wealth and wealth into income) is at the center of my 'subjective theory of interest'. This is the preferred name we shall apply to the new theory of interest to be developed in this course here at Gold Standard University. In developing his subjective theory of value Menger described the origin of money in terms of the evolution of the marketability of goods. The unit of value could be chosen only after the

most saleable commodity, gold, had been established as the monetary metal. Out of this monetary metal the unit of value, the standard gold coin, could be made.

But marketability, like the ancient Italian god Janus (in whose honor the first month of the year has been named) has two faces: marketability in the large (salability), and marketability in the small (hoardability). The former is synonymous with Menger's term *Absatzfähigkeit* which he has made the corner stone of the subjective theory of value. Hoardability has not been isolated before as a scientific concept. Ours is the first attempt to analyze its role in the conversion of income into wealth and wealth into income, so that it may become the corner stone of the subjective theory of interest.

Marketability in the Large or Salability

Menger observed that the market quotes not one but two prices: a higher ask price and a lower bid price (understood as unit prices). He placed the bid/asked spread, the difference between the two, right in the center of his analysis. We follow his insight and observe that as ever larger quantities of a commodity are offered for sale, the bid/asked spread widens. The market-maker takes a greater risk in buying or selling unusually large amounts. To work off a greatly expanded inventory, or to replenish a greatly reduced one, is time-consuming. In the meantime the price could change unfavorably for him. The market-maker compensates for his risks by quoting a wider spread. The behavior of the bid/asked spread is fundamental for the determination of salability.

A commodity *X* is said to be *more marketable in the large*, or *more saleable* than another *Y* if the bid/asked spread for *X* increases more slowly than that for *Y*, as ever larger quantities of *X* and *Y* are offered for sale in the market. For example, perishable or seasonal goods have a lower, while durable goods or goods for all seasons a higher, degree of salability. It is easy to see how cattle have become the most saleable good in antiquity. People had superb confidence that there could never develop a glut in the cattle market. Long before such a turn of events owners would drive their herds of cattle to regions where a shortage prevailed or, at least, there was no glut. The cost of transporting a given value represented in the form of cattle was lower than the cost of transporting the same value represented by anything else, due to the mobility of cattle. This fact is also preserved in our linguistic heritage. A herd is also known as a *drove* of cattle and the herdsman as the *drover* (both are derived from the verb *to drive*). Thus mobility or, better still, portability is an important aspect of salability. The more portable a commodity, the more easily it can seek out havens where it is in the greatest demand.

The term salability refers to the quality whereby a good is capable of being bought or sold in the largest quantities with the smallest possible losses -- explaining how this quality earns its name. Among the most saleable goods we find the precious stones and metals. A long historical process has promoted gold to become the most saleable of all

goods. For gold, the bid/asked spread is virtually independent of the quantity for which it is quoted. As we have seen, for non-monetary commodities different spreads are quoted for different quantities, and the larger the quantity the larger is the spread. For gold the spread only depends on the cost of shipping it to the nearest gold center. Under a gold standard the bid/asked spread is actually constant and is equal to the difference between the higher and lower gold points. (The lower gold point is that price at which it becomes profitable to melt down domestic gold coins in order to export the bullion; the higher gold point is that price at which it becomes profitable to import the bullion in order to have it coined at the domestic Mint.)

The gold standard is seen as the result of a market process in search of the most saleable commodity. Some authors deliberately confuse the issue insisting that the constant spread for gold is due to institutional factors such as the statutory requirement that the central bank stand ready to buy or sell unlimited quantities of the metal, namely, buy at the lower and sell at the upper gold point. But this argument is putting the cart before the horse. Institutional constraints would sooner or later break down if another metal with less than perfect salability were substituted for gold as the monetary metal -- as indeed happened to silver in the 19th century, to copper in medieval times, and to iron in antiquity.

The Subjective Theory of Interest

We have studied the first source of man's need for money: his need to transfer value over space. The second source, man's need to transfer value over time or, as we have more specifically described it, his need to convert income into wealth and wealth into income, is at the center of the subjective theory of interest. The duality between the subjective theory of value and the subjective theory of interest is remarkable. The two are related through monetary duality that has prevailed through millennia.

It is common knowledge that, although precious stones have a high degree of marketability in the large, their marketability in the small is poor. The process of cutting up a large stone into a number of smaller pieces often results in a permanent loss of value. This is an example of the paradox that the value of a parcel may actually be greater than the value of its component parts. Even for precious metals, whose subdivision into smaller parts is fully reversible, marketability in the small cannot be taken for granted. A penetrating example due to a 19th century traveler is cited by Menger.

When a person goes to the market in Burma, he must take along a piece of silver, a hammer, a chisel, a balance, and the necessary weights. 'How much are those pots?' he asks. 'Show me your money', answers the merchant and, after inspecting it, he quotes a price at this or that weight. The buyer then asks the merchant for a small anvil and belabors his piece of silver with his hammer until he thinks he has found the correct weight. Then he weighs it on his own balance, since that of the merchant is not to be

trusted, and adds or takes away silver until the weight is right. Of course, a good deal of silver is lost in the process as chips fall to the ground. Therefore the buyer prefers not to buy the exact quantity he desires, but one equivalent to the piece of silver he has just broken off." (*Op.cit.*, p 281.)

I have in my possession the remnants of a heavy gold chain that had once held the pocket-watch of my grandfather. The watch itself was bartered away for food by my mother during hard times before I was born. But I remember very vividly the delicate hands of the dentist as he was clipping off an agreed weight from the chain with his fine pair of clippers in the year 1945. He would not take paper currency in exchange for doing dental work. Instead, his clippers went a long way to help my mother to discharge our debt. Examples such as these justify the isolation of the concept of hoardability as the corner stone of the subjective theory of interest. The buyer of pots in Burma, and my mother in Hungary, were converting wealth into income. They must have been painfully aware of losses due to chips of the precious metal falling to the ground.

Marketability in the Small or Hoardability

The precious metals are more hoardable than precious stones, as the losses involved in parceling them out into ever smaller pieces are smaller. It is this common-sense experience that we want to generalize. Our first observation is that, as ever smaller quantities of a commodity are offered for sale, the bid/asked spread widens. A wider spread compensates the market-maker for the lack of incentives to deal in unusually small quantities. The bid/asked spread is of fundamental importance for the determination of hoardability as well.

A commodity x is *more marketable in the small*, or *more hoardable* than another y if the bid/asked spread for x increases more slowly than that for y , as ever smaller quantities of x and y are offered for sale in the market. For example, non-perishable foodstuff such as grains are more hoardable than perishable ones. Horse meat is more hoardable than live horses. It is easy to see how salt has become the most hoardable commodity in antiquity. People were confident that disturbing surpluses of non-perishable foodstuff would not develop. Everybody who could afford it would be happy to hoard them. They realized that seven lean years would soon follow the seven fat ones. For the stronger reason, people were superbly confident that their hoard of salt, this foremost agent of food-preservation before the age of refrigeration would not lose its value, come rain or shine. Value could not be transferred over time with smaller losses than through the stratagem of hoarding salt. Other examples of highly hoardable commodities are: grain, tobacco, sugar, spirits, silver. It is interesting to note the heavy government involvement, at one time or another, with the production or trade of all these.

The term hoardability refers to the quality whereby a good is allowed to be bought or sold in the smallest quantity with the smallest possible losses -- explaining how this quality earns its name. It is this property that matters most when the economizing individual is trying to convert income into wealth or wealth into income. It is this property that is most crucial for him in solving the problem of transferring value over time most efficiently. He will succeed best if he employs the most hoardable commodity.

The Rise and Fall of Bimetallism

An historical process similar to the one making gold the most saleable has promoted silver to become the most hoardable commodity. Gold was the money used to pay princely ransoms and to buy vast territories such as Louisiana and Alaska. Silver, by contrast, was the money used by people of small means to buy food, or to accumulate capital (*cf.* the silver penny and Maundy money of England). As long as the necessary technology was lacking, gold could not challenge silver's position as the most hoardable commodity. The cost of producing or verifying a small fraction of the unit of value as represented by gold could involve expensive molar processes. As I have already observed, the same small fraction of the unit of value represented by silver incurred no such extra cost: the amounts involved were no longer molar, due to the lower specific weight of silver.

This explains the rise of bimetallism under which the dual monetary system that has prevailed since time immemorial assumed a highly symmetric form. The most saleable commodity, gold, and the most hoardable, silver, have become monetary metals spontaneously through the market process. Gold and silver coins continued to circulate side-by-side for millennia. As long as governments adhered to a "hands off" policy, the dual monetary system was highly successful. In the end it was government meddling, in trying to enforce a rigid exchange ratio for the monetary metals, that brought the system down. For thousands of years the bimetallic ratio has been remarkably stable, in fact, more stable than any other economic indicator. It was not constant, however. There was a secular trend making gold relatively more valuable with the passing of time, as the bimetallic ratio was slowly rising from 10 in antiquity to about 15 at the beginning of the Modern Age. Paradoxically, the reason for the secular rise in the bimetallic ratio was the fact that gold has become more widely available for monetary uses, partly through the violent dispersal of ancient hoards (*e.g.*, the rape of Persian gold by Alexander the Great, and the rape of the gold of the Inca by Pizarro), and partly through increasing output from the gold mines. However, it is important to note that the volatility of the bimetallic ratio has been so small that it has never provided speculators with an opportunity to make a profit. The wild orgy of speculation in precious metals, making windfall profits available, first started with the fixing of the bimetallic ratio which has destabilized the dual monetary system.

In fixing the official bimetallic ratio governments were led by greed. They thought that they could make their vast hoards of silver more valuable by stopping the slide in the relative value of the silvery metal. It is not in the power of earthly governments, however powerful economically and militarily, to create value at will. Unfortunately, this simple lesson has not been learned even today, as governments are engaged in a mad race to flood the world with their own irredeemable currency before others could do it with theirs.

The measure to fix the official bimetallic ratio backfired. It signaled to people that time has come to switch from silver-hoarding to gold-hoarding. In response, people started dumping silver at the door of the Treasury while depleting its gold hoards. Governments solemnly declared that they would defend their official bimetallic ratio through thick and thin. However, eventually, they had to eat their words. Once more, the market proved to be stronger than governments. They were forced to replace bimetallism with gold monometallism. As the history of bimetallism is widely misunderstood and even misrepresented, I plan to return to it in a later Lecture to set the record straight.

The Paper Boy and His Silver Dime

The mechanism of direct conversion of income into wealth worked as follows. A wage earner aspiring to become his own boss would, on every payday, put aside a silver dime or two not just for a rainy day but, more importantly, for the day when he would quit the labor force and become a businessman. Silver dimes were the agent of capital accumulation. Financial annals tell us about success stories such as that of the shoeshine boy setting up shop at the main entrance of the department store that he would eventually buy out. His secret was the silver dime which he could hoard with confidence. Some countries, especially poor ones, had even smaller silver coins in circulation, *e.g.*, the half-dime of Newfoundland. Mr. Warren Buffett started his own fortune, reportedly among the greatest in the world today, as a paper boy in the streets of Washington, D.C. where his father the Hon. Howard Buffett served as a member of the U.S. House of Representatives from Nebraska. It is an interesting question to ask why paper boys are no longer on track to become multi-billionaires. Could it have something to do with the government's denying the silver dime to people? Ask Mr. Buffett whether he thinks that paper boys still had a chance of ending up as the owner of the newspaper empire whose papers they used to sell on the streets, by hoarding the 'clad' dimes of today?

The Fullarton Effect

By far the most important example of gold hoarding in the modern world is furnished by the so-called Fullarton effect. This important topic I shall study in full details in a future course, Monetary Economics 202: *The Advanced Theory of Interest -- The Bond Market and the Formation of the Rate of Interest*. John Fullarton of England published a book in 1844 entitled *On the Regulation of Currencies* in which he described the reaction of bondholders to a falling interest-rate structure. They would certainly not let the rate of interest fall through the floor. They would take profits in selling their overpriced bonds, and put the proceeds into gold, until bond prices have come back to earth once more. I shall refer to this market action as the gold/bond arbitrage of the marginal bondholder. He is guided by time preference. (Together with the productivity of capital, time preference is one of the regulators of the rate of interest, as we shall see in full details later.) It is important to understand that the sale of the bond is not in itself sufficient to bring about the desired effect: a reversal of the fall in the market rate of interest. For that it is necessary that the proceeds of the sale be held in the form of gold. The Fullarton effect depicts gold hoarding as a protest vote against interest rates being pushed down to unreasonably low levels through institutional means by the banks or by the government. Holding gold as opposed to holding a promise to pay gold is absolutely essential, to make the protest effective.

Mises on Gold Hoarding

Ludwig von Mises ridiculed gold hoarding calling it "the regular *deus ex machina*" in Fullarton's work (see *Theory of Money and Credit*, p 169). Mises maintained that secure and mature claims to gold money are *complete* substitutes for it and, as such, are able to fulfil *all* the functions of money in those markets in which their maturity and security are recognized. Mises has committed a great error in refusing to accept the fact that the gold coin, but no claims to it, is the indispensable agent of the marginal bondholder to validate his time preference. We may assume that the maturity and security of circulating claims to gold coins are fully recognized in the bond market. Even so, felt uneasiness on the part of the marginal bondholder caused by the abnormally low rate of interest (the flip-side of which is the abnormally high bond price) will not be assuaged if he exchanges the bond for another piece of paper. However mature and secure a claim may be, he wants to hold the metal (a present good), and not a mere claim to it (a future good). His ultimate end is to raise the rate of interest to the level of his time preference. It would be counter-productive (not to say foolish) to exchange the bond for bank notes. Such an exchange would mean extending credit at zero interest while forgoing the positive interest on the bond he had sold. By contrast, holding the gold coin does not involve *extending* credit -- in fact it is the only way of *denying* it! The gold coin must be seen as the indispensable agent of the marginal bondholder in asserting his marginal time preference. No fiduciary media can ever be a substitute for the gold coin in this capacity. Time preference would be little more than a pious wish if it was not for the cutting edge of the gold coin which

alone could validate it. In fact, time preference lacks any concrete meaning outside of the arbitrage-nexus between the bond and gold markets.

Mises categorically states that the bank note is just as much a present good as the gold coin. "A person who accepts and holds bank notes grants no credit -- he exchanges no present good for a future good... A bank note is a present good just as much as gold money." (*Op.cit.*, p 304-305.) I must part company with Mises over this point. The issue whether a bank note is a present or a future good goes right to the heart of the theory of interest. My view is that *holders of bank notes or gold certificates are (voluntary or involuntary) grantors of credit, furthermore, their greater or lesser willingness to continue to hold the paper is an important component of the force determining the rate of interest.* The only way for the individual to deny credit to the banking system is to divest himself of his holdings of bank notes and deposits in excess of his indebtedness. If we admitted that a bank note were a present good, then we would also have to admit that Keynes was right after all in suggesting that governments have the power to create wealth out of nothing, simply by sprinkling some ink on little scraps of paper. Gold hoards are far from being a *deus ex machina*. They are, rather, a sharp tool of human action by means of which the marginal bondholder can validate his time preference under a gold standard. They are the very mechanism through which savers exercise their franchise to regulate the rate of interest. It was precisely for this reason that governments first sabotaged and, finally, destroyed the gold standard. They wanted to disenfranchise the savers.

The culmination of these courses here at Gold Standard University will be a demonstration of my thesis that *the apparent success of governments to disenfranchise savers and to usurp their prerogative to regulate the rate of interest will ultimately turn out to be a failure, and may even be the cause of an unprecedented economic catastrophe. Savers, frustrated, turn en masse from gold hoarding to marginal hoarding, that is, the hoarding of other highly hoardable commodities, with disastrous consequences. The Brave New World of synthetic credit, manufactured out of inextinguishable debt, is unworkable. While gold hoarding is self-limiting, marginal hoarding is not. It destabilizes the system of production and distribution and generates a long-wave cycle, also known as the Kondratyeff cycle, complete with ruinous deflations and depressions alternating with ruinous inflations, ultimately self-destructing in a crack-up boom.*

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A Forgotten Anniversary

Other economists have also condemned gold hoarding. John Maynard Keynes said that he was prepared to pass the pathology of gold hoarding along to the psychiatrist for examination "with a shudder". Politicians were jubilant in welcoming this verdict. Seventy years ago, in 1933 during one of his fire-side chats F. D. Roosevelt declared that

he wanted to put an end to the "senseless practice" of shuttling gold back and forth between the banks and individual depositors. What he did not say was that he was going to rob *both*. He appealed to the people to yield control over gold *temporarily* to the government so that it may restore confidence in the monetary system. People responded, and surrendered their gold out of patriotic zeal. No sooner had Roosevelt plundered the gold belonging to the banks and their depositors than he wrote up the value of the loot. There was no more talk about the temporary nature of the measure. Today, 70 years after the event, there is still no talk about guilt or reparation. The bad faith in this particular chicanery cries to heaven for justice.

References

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(originally published in German in 1871 under the title *Grundsätze der Volkswirtschaftslehre*).

John Fullarton, *On the Regulation of Currencies*, New York: A. M. Kelley, 1969
(originally published in London, 1844).

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GOLD STANDARD UNIVERSITY
SUMMER SEMESTER, 2002

Monetary Economics 101: The Real Bills Doctrine of Adam Smith

- Lecture 1: Ayn Rand's Hymn to Money
- Lecture 2: Don't Fix the Price of Gold!
- Lecture 3: Credit Unions
- Lecture 4: The Two Sources of Credit
- Lecture 5: The Second Greatest Story Ever Told; (Chapters 1 - 3)
- Lecture 6: The Invention of Discounting; (Chapters 4 - 6)
- Lecture 7: The Mystery of the Discount Rate; (Chapters 7 - 8)
- Lecture 8: Bills of the Goldsmith; (Chapter 9)
- Lecture 9: Legal Tender. Small Bank Notes.
- Lecture 10: The Revolt of Quality
- Lecture 11: The Acceptance House; (Chapter 10-11)
- Lecture 12: Borrowing Short to Lend Long; (Chapter 12)
- Lecture 13: The Unadulterated Gold Standard

WINTER SEMESTER, 2003

Monetary Economics 102: Gold and Interest

- Lecture 1: The Nature and Sources of Interest
- Lecture 2: The Exchange of Income and Wealth
- Lecture 3: The Janus-Face of Marketability
- Lecture 4: The Principle of Capitalizing Incomes
- Lecture 5: The Structure of Capital Markets
- Lecture 6: The Rate of Interest
- Lecture 7: The Gold Bond
- Lecture 8: The Bond Equation
- Lecture 9: The Investment Banker
- Lecture 10: Lessons of Bimetallism
- Lecture 11: Aristotle on Check-Kiting
- Lecture 12: Bond Speculation
- Lecture 13: The Blackhole of Zero Interest

IN PREPARATION:

Monetary Economics 201: The Bill Market and the Formation of the Discount Rate

Monetary Economics 202: The Bond Market and the Formation of the Rate of Interest