The Preeminence of Gold and Silver as Shariah Money

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2017

The Preeminence of Gold and Silver as Money

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Abstract
Historically, money is gold and silver, supplied by the market on profit criterion. Everywhere, government inconvertible paper money arose from bankruptcy. A government with balanced budgets would never need it. Imposed by force, inconvertible paper is a taxation mean, highly inflationary, and causes impoverishment. Unjust and bankrupt governments will continue to force this despotic money. Islamic Monetary Economics refutes the idea of money as a policy tool. Fully convertible paper is Shariah compliant. Shariah requires a just government to balance its budgets and restore fully gold and silver as lawful money.

Key words Money, Gold-silver, Inconvertible paper, Inflation, Bankruptcy, Shariah.
JEL Classification E42, E5, F33

1. Introduction
Money is defined by people as the cash in circulation; it is perfectly liquid, unanimously accepted in all transactions. Previously, it included gold and silver coins. Presently, it is government currency. Money substitutes may be less liquid. They include credit, and bills of exchanges and commercial effects that are allowed by law to circulate through endorsement. Money was invented to circumvent barter trade and promote commerce and the specialization and division of labor within and across countries. Without money, any economy, regardless how advanced it be, will collapse into starvation and social disorder.[3] Throughout the centuries, governments have often debased money, a practice that dated back to the Roman Empire. By outlawing gold and forcing inconvertible paper money, governments have often resorted to excessive money printing, causing high price inflation. Oresme (14th century) and Copernicus (1526) opposed money debasement as it inflicted damage to trade and property. Shariah has set out divine rulings to preserve a sound money. It bans strictly interest transactions. Consequently, it bans interest-based debt money which displaced gold and silver (Gouge 1833, Carroll 1850). Shariah recognizes money as a commodity, an equivalent in labor and capital content to another commodity in exchange, which enters the circulation, as any other commodity, via production and exchange. Its price in relation to other commodities obeys strictly the laws of supply and demand. Likewise, the US Constitution was explicit that gold and silver were money.[4] Shariah bans inconvertible paper money; it recognizes no privilege for the government to emit non-commodity money such as fiat money; nor does it recognize the right acquired by any bank through legislation to emit debt money.[5] Shariah strictly forbids altering the standard of measure be it meter, ton, or liter. Once the standard of value has been defined in terms of weight and fineness, it should become

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[3] Starvation became widespread during the German hyperinflation (Bresciani-Turroni 1931). Starvation occurred also in France during the assignat hyperinflation.
[4] Article 1, Section 8 of the Constitution: (i) the Congress shall have the power: to borrow money on the credit of the United States; (ii) to coin money, regulate the value thereof, and of foreign coin, and fix the standards of weights and measures; (iii) to provide for the punishment of counterfeiting of securities and current coin of the United States.
[5] Inconvertible paper is not money as much as a horse in paper is not a horse and a house in paper is not a house. Government power cannot alter the nature of money as a traded commodity in as much as it cannot turn a horse in image into a true horse.

immutable (Locke 1691, Liverpool 1805). Hence a gold dinar defined at 4.25 grams should remain unaltered. Shariah prohibits the creation of money ex-nihilo by the government.[6] The latter may regulate money through minting, preventing counterfeiting, and insuring the quality of coin. Although many commodities served as money, gold and silver superseded all commodities, and became universal money throughout the centuries in all countries (Smith 1776, Gouge 1833, Mises 1953, Rothbard 1962).

Shariah considers money and financial intermediation as two related aspects of the payment mechanism in an economy or across economies. They were inseparable aspects of a money system. Financial intermediaries, which include non-interest banks, clearing houses, were needed to increase the efficiency of money and economize on its use. Financial intermediaries do not create money; they create substitutes for money, which have to be convertible, by law, into money.

The paper covers in Section 2 the origins of money: money as a commodity and a unit of account; Section 3 concerns that money is gold and silver; Section 4 is related to the nature of government inconvertible paper: inflation till the end of the world; Section 5 focuses on the debate Locke versus Lowndes. Section 6 exhibits the theories of optimum money and Section 7 shows Shariah money. We conclude in Section 8.

2. Origins of money: as a commodity and a unit of account

The origin of money explains its true nature. Money was not invented by any government and existed independently of any government. It was inherent to trade and emerged as a traded commodity selected by the market to economize on the transaction cost involved with barter trade. Merchants have devised instruments to facilitate trade, such as money, institutions for safekeeping money and financial intermediation such as banks, and instruments to save on the use of money such as bills of exchange, clearing houses, and credit cards.

Smith (1776) noted that trade preceded money, and money was a medium for advancing trade. He maintained that in any economy there are a large number of industries, products, and specialized producers. Each producer wants to sell his surplus product against other products, essential for his survival, which he does not produce. The shoemaker needs to sell his produce to obtain wheat, and medicines. Trade takes place between local and foreign producers. In barter trade, commodities are exchanged directly against each other, say a pair of shoes is exchanged against ten pounds of corn. The barter trade existed widely prior to the use of money, and may still exist in conditions where money becomes scarce due to inflation; however, it was found too inefficient. The information and transaction cost for making wants coincide was too high; moreover, there were divisibility issues, where some commodities could not be divided to fit commodities in exchange. Smith (1776) noted that traders, and not the government, had selected spontaneously a commodity, or a few commodities, that intervened in most of the exchange transactions to circumvent the inconvenience of barter trade and allowed the producers to specialize and exchange their products against all the rest of local and foreign products. Smith cited few examples of commodities used as medium of exchange; these were salt, cowry shell, tobacco, vampum, rice, fur, etc. Carl Menger (1892) contended that money was most saleable commodity, i.e., liquid commodity, whereby each trader would sell it instantly against any other commodity.

Money could be defined as a medium of exchange embodied in a marketable commodity that was willingly acceptable by all local and foreign traders to circumvent the direct barter trade and allow commodities to exchange indirectly via the commodity money. This commodity is sufficiently divisible, without losing its intrinsic value, to solve the indivisibility issue arising in barter trade. As a commodity, money may increase

[6] The US Constitution reserved death penalty for counterfeiters.

or decrease in quantity, but it is stable in value, and in adequate supply to enable an increasing number of exchange transactions.

Lord Liverpool (1805) defined money in terms of two properties: a standard of value and an equivalent in exchange meaning that it is as valuable in exchange as the commodity for which it is exchanged. For instance, the buyer of a computer finds the computer as worthy as an ounce of gold he possesses. Lord Liverpool defined these two properties of money as follows: "The Money or Coin of a country is the standard measure, by which the value of all things is regulated and ascertained; —and it is itself, at the same time, the value, or equivalent, for which goods are exchanged, and in which contracts are generally made payable." Gold is an equivalent commodity because it embodies labor time and material cost. It is a standard measure because its unit weight and fineness are fixed; and its exchange value is not subject to frequent fluctuations.

There are two notions of money: money as instrument of trade and money a unit of account (Einaudi 1936). In any country, money has a unit of account as well as a physical shape in form of a paper or commodity. The money of account could be the same or different from money as an instrument of trade. The money of account in the US is the dollar. All prices and values of merchandise and property and all accounts are expressed in dollars. The relation between commodity money and the money of account is a fundamental characteristic of the money system of any country. The physical unit of the commodity money has to be defined in terms of units of money account. In case of gold or silver, this relation is called the mint price of gold or silver, whichever is the standard of price. The unit of commodity money and the unit of account could be the same, i.e., one unit of money is equal to one unit of account; or they may differ, i.e., one unit of money is equal to a number of units of account. Locke (1691), Liverpool (1805), Mises (1953), and Rothbard (1962) maintained that money of account is an imaginary name, and money is a real commodity, and that once the relation between money and unit of account is set by law it should never be altered by the government or by traders. Thus, if a sovereign is defined as 7.32 grams, the US dollar as 25.8 grains, and the Islamic dinar as 4.25 grams (696 AD), this relation should become invariant. The UK law retired all sovereign coins which lost 0.747 grains from their mint weight. Money cannot be a measure of value if this relation becomes variable. Money becomes necessarily a mean for stealing property by those who intentionally alter this relation.

Shariah strictly forbids the altering of weights and measures. According to the Quran: Chapter 11, Hud: verses 84-85: "And to Midian[7] people, we sent their brother Shuaib. He said: O my people, worship Allah; you have no deity other than Him, and do not decrease from the measure and the scale. Indeed, I see you in prosperity and verily I fear for you the punishment of an all-encompassing Day. And O my people, give full measure and weight and do not deprive the people of their due, and do not commit abuse on the earth, causing corruption.". This Shariah ruling is repeated often in Quran and Sunnah. Also in the Quran: Chapter 6, Al-anaam (The Cattle): verse152: "… and give full measure and full weight with justice…". Quran: Chapter 17, Al-isra (The night journey): verse 35: "And give full measure when you measure, and weigh with balance that is straight. That is good and better in the end." Quran: Chapter 55, Al-rahman (The Most beneficent): verse 9: "And observe the weight with equity and do not make the balance deficient." Because of their rejection of Shuaib messages, Allah destroyed the people of Shuaib and wiped them out for their cheating in weights and measurements. Quran: Chapter 7, Al-araf (The Heights) verse 93, Shuaib said: "O

[7] The people of Madyan were from the early Arab tribes that had settled in the area between Hijaz and Palestine. They were known for their prominence in business activity, and their town was a commercial center. But, they lacked faith in Allah and didn't reckon the hereafter, thus they fallen into cheating and injustice, which became the norms in their business dealings. No one examined this way of life, and Allah sent to Madyan people their brother Shuaib (PBUH). Shuaib condemned the wrong norms in Madyan, and warned against depriving people from their material and moral rights and social dues.

my people, truly did I deliver to you the messages of my Lord and advise you, so how could I grieve for a disbelieving people?" Shariah ruling in regard to integrity of measures and weights is part of the ruling regarding the sanctity of property rights, often emphasized in the Quran and Sunnah. Money, if corrupted, can be turned into a grandiose stealing scheme, which would deprive victims from substantial real wealth. For instance, if a creditor made a loan in money equivalent to a farm of 1000 hectares and if repaid in counterfeited money that buys him four eggs, as in the German hyperinflation (1923), then he lost unjustly his wealth.[8]

Commodity money performs essential functions. It is a medium of exchange that circulates commodities within and across countries. It is a standard of value. To serve as a medium of exchange, money has to be a standard of value; that it measures the value of a commodity or a service against which it is exchanged. Hence, each commodity is priced in terms of money; the value of each commodity is defined as the number of units of that commodity that exchange for one unit of money; or the number of units of money that are exchanged for one unit of the commodity. By being a standard of value, money becomes a common denominator for all commodities in the economy.[9] To be a standard of value, money has to preserve value. Gold and silver were stable standards of value; meaning that the value of gold or silver was relatively stable. Hence, a unit of money plays the same role as a meter. The latter has to keep the same length to fulfill measurements. If it shrinks or extends, traders will no longer accept it as a standard of measurement. It causes chaos in transactions and designs and mappings. If money depreciates, traders will reject is as a standard of value.[10]

Money cannot be a medium of exchange without being a store of value and standard of deferred payments.[11] Money cannot be simply a medium of exchange as illustrated by hyperinflation experiences. Since exchanges are not instantaneous transactions and varying time intervals occur between sales and purchases operations, i.e., payments are deferred to the future, the medium of exchange has to be a store of value and a standard of deferred payments. The property of store of value cannot be dissociated from that of medium of exchange. If some commodity losses its value, as measured against all the rest of commodities, during the time interval separating sales and purchases, or loan disbursement and repayment, it would not qualify to be a medium of exchange. For instance, paper money in hyperinflation becomes worthless, simply because it does not hold any value through depreciation. Any holder of money will lose wealth during the time interval he is holding the money. If money loses value at a regular or fast speed, it will end up by being rejected and will be extinguished as happened as the end of many hyperinflations.

Money substitutes are distinctly different from money. Money can be coin or paper and circulates from hand to hand among traders; the identity of traders is totally irrelevant. Money substitutes are personal credit, in form of offsetting credit, checks, credit cards, bills of exchanges, financial papers, and are far more efficient than money in large transactions. They are promises to pay money. They are expressed in money terms.

3. Money is gold and silver

Gold and silver are not by nature money, but money consists by its nature of gold and silver. Gold and silver have been used as universal money, common to all countries, throughout history. Monetary organization was similar across nations: it consisted of adopting a monetary law defining the unit of

[8] Hjalmar Schacht, President of the Reichsbank, (1967) said the price of one egg in 1923 would have bought 500 billion eggs in 1913. Frank Graham (1930) reported that nominal mortgages were 1/6 of Germany's wealth in 1913; they were less than one US cent in 1923, meaning that one US cent in 1923 was more than enough to pay off all 1913 nominal mortgages.

[9] In a barter economy of 100 commodities there are 4950 exchange ratios. If one commodity is chosen as money, there will be only 99 exchange ratio yield the price of each commodity in terms of the money commodity.

[10] The indexing of contracts, as a standard of value, was used in rent contracts in England where part of the rent was indexed to corn prices. Today, many contracts, such as wage contract, are indexed to price indices.

[11] Mises (1953) stressed that medium of exchange and store of value functions of money were inseparable.

account, the standard of value in weight and fineness, and types of coins in terms of weights and shapes to be allowed to circulate. To circulate as money, gold and silver had to be coined in a standard and authentic shape. Coins were standardized and stamped, so they became instantly identifiable and circulated with perfect confidence in trade. Coinage saved on transactions cost and enhanced the confidence in money. We emphasize here that the King, or the government, did not create money. Money was created by the producer of the commodity money on pure profitability basis and with no subsidies such as the silver subsidies under the Bland-Allison Act (1878); he brought it to the market and surrendered it in exchange for other commodities or properties. The gold and silver are produced as long as they are profitable. Bullion may be brought to the mints and turned into coins; or to a bullion dealer and exchanged for coins. The government only certified the conformity of the coin to the prescribed law and protected traders against counterfeiting, or money debasing. In any modern economy, if the government withdraws from being a money supplier, and let the private economy again supply money, as it did in the 19th century, then the market will choose no other money except gold and silver. Paper money will circulate only as a pure representative of gold. It will never circulate as a privately produced money.

The market verdict settled spontaneously over centuries for gold and silver money. Only government tyranny changed this verdict. For Gouge (1833), money is gold and silver, saying that: "The high estimation in which the precious metals have been held, in nearly all ages and all regions, is evidence that they must possess something more than merely ideal value. It is not from the mere vagaries of fancy, that they are equally prized by the Laplander and the Siamese. It was not from compliance with any preconceived theories of philosophers or statesmen, that they were, for many thousand years in all commercial countries, the exclusive circulating medium. Men chose gold and silver for the material for money, for reasons similar to those which induced them to choose wool, flax, silk, and cotton, for materials for clothing, and stone, brick, and timber, for materials for building. They found the precious metals had those specific qualities, which fitted them to be standards and measures of value, and to serve, when in the shape of coin, the purposes of a circulating medium. No instance is on record of a nation's having arrived at great wealth without the use of gold and silver money. Nor is there, on the other hand, any instance of a nation's endeavoring to supplant this natural money, by the use of paper money, without involving itself in distress and embarrassment. All writers are agreed that six requisites are essential to a good kind of money, viz., portability, uniformity, durability, divisibility, cognizability, and stability of value. Long experience has taught mankind that these qualities are best embodied in the metal gold."

Gold and silver were natural commodities and became money from a natural market process. The producer of gold was as any other producer who operates on profitability, with no subsidies; gold and silver were produced only at a normal profit. In case of loss, their production is discarded. The producer brought gold to the market in the same manner as a car manufacturer brings cars to the market. The laws of value control both gold and cars. In contrast, the issuer of paper money brings nothing to the market; he exchanges his bits of paper against cars, food, houses, etc. His bits of paper obey no laws of value and no natural control process, other than counterfeiting or coercion (Walker 1873). The market chose gold and silver as money essentially because of their scarcity. Gold's value and purchasing power are stable over time, as its supply grows slowly and it cannot be created ad infinitum, as paper or digital currency can be. The scarcity of gold and silver was never an impediment to trade. Instead, it enabled trade to flourish among nations over the centuries, simply because trade was an exchange of commodities against commodities, and it was the volume of commodities that determined trade, and never the volume of gold or silver.

Gold and silver are scare metals. Very few countries produce these metals. In contrast to paper, scarcity of gold and silver is a basic property that makes them suitable as money. Gold and silver cannot be produced in millions of metric tons, as can wood, stones, gravel, and coal. If men wanted an inflationary commodity, they would never have chosen gold or silver. Because of the stability of their stocks, gold and silver provided a stable measure of value. An inflationary commodity cannot serve as a measure of value as much as a shrinking rod cannot be used to measure length or distance. With gold or silver, prices were stable and did not change violently. Durability is an essential property of a currency. Without this characteristic, there can be no exchange, saving, and capital formation. Durability means that money remains a store of value until it is used again in trade. A commodity, used as medium of exchange, has to be durable and capable of storing value. In fact, a medium of exchange has to store value. There is always a time period of varying length between transactions. A worker saves part of his income with a view to buying a house in the future. Gold and silver are durable, unalterable, and have a stable and predictable value. They can be stored even in the ground and cannot be altered. In fact, quantities of gold were found in ships that sunk deep in the sea decades or even centuries before; the gold thus found had practically no erosion. Refined metals, such as gold, silver, copper, or nickel, have historically taken center stage as money because they are extremely durable materials.

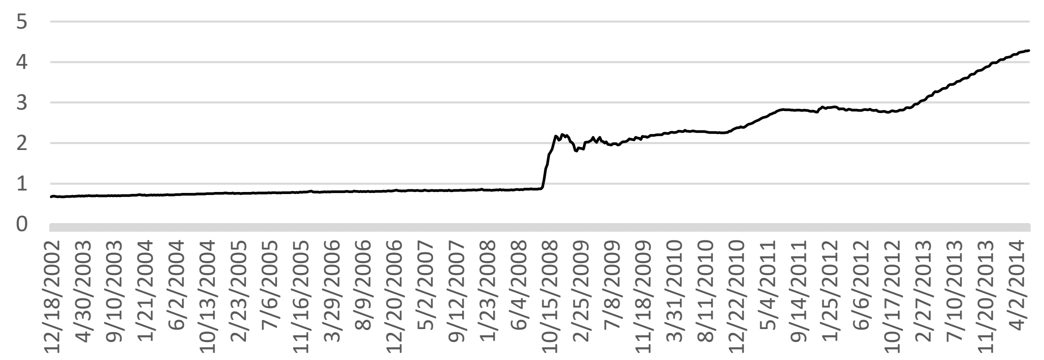
Divisibility of money is an important property of money and made possible coinage of money in different shapes, weights, and fineness. Divisibility is one reason why metals, such as gold, silver, copper, and nickel, have been widely used as money throughout history. As pure elements, each can be divided into small units. The seller of a horse may use his gold coins for all small transactions. In a barter economy, this is not possible; the horse owner cannot trade his horse for a loaf of bread. Gold and silver bullion can be divided into coins and then can be reassembled again without losing any value. A kilogram of gold or silver has exactly the same value as a collection of 100 coins of gold or silver each of 10 grams of weight. Diamonds are far more valuable than gold or silver. However, diamonds do not possess the divisibility of gold and silver, and they are of different qualities. Platinum also is more valuable than gold and silver; however, it is not as malleable as gold and silver. Liquidity and salability are important qualities of money. The latter has to be a most liquid commodity, meaning that every trader will accept it in trade, voluntarily and not because they are legally obligated to do so. Portability is another important and required quality of money. Money has to be portable at low cost.

Gold and silver cannot be counterfeited. Gold and silver bullion are assayed and certified by specialized agencies and banks and cannot be counterfeited. Similarly, gold and silver coins were milled and stamped and could not be counterfeited. Paper can easily be counterfeited on a large scale. Gold and silver possess the main properties of a money that are: value in exchange, intrinsic value; stability of value; homogeneity of material; durability; divisibility without diminution of value; large value in small compass; and adaptability to coinage. Gold and silver fulfilled five essential functions of money as they are recognized today: a medium of exchange; a common denominator; a standard of value; a store of value; a standard of deferred payments. Because of these properties, gold has always been considered an ideal store of value and thus, and ideal medium of exchange.

4. Nature of government inconvertible paper: inflation till the end of the world

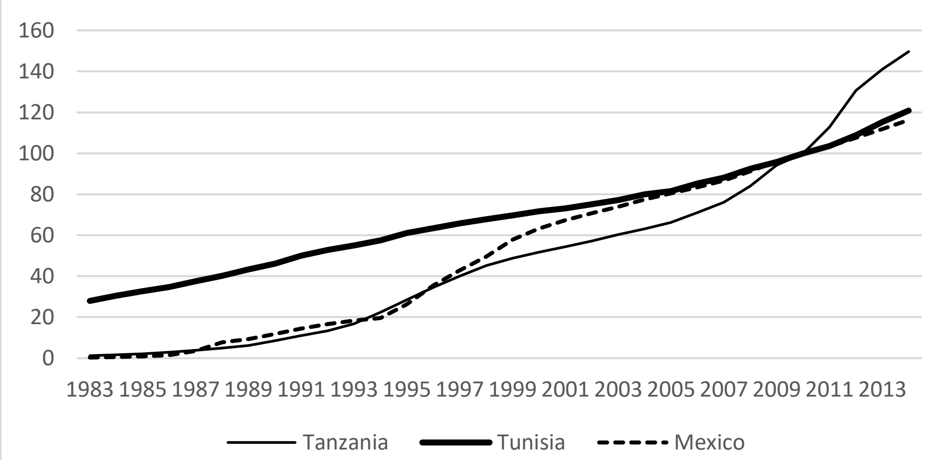
Everywhere, government inconvertible money arose from bankruptcy. A government with balanced budgets would never need it. Imposed by force, inconvertible paper is a taxation mean, highly inflationary, and causes impoverishment. Unjust and bankrupt governments will continue to force this despotic money. Government inconvertible money is a form of tyranny whereby the government decrees, by force, paper as money, and taxes at its own discretion. By its nature, inconvertible paper cannot circulate, except by compulsion. In the 18th-19th centuries, banks unable to convert notes into gold had to vanish. The United Kingdom Parliament imposed the convertibility restriction during 1797-1821, and made Bank of England inconvertible notes with unlimited legal tender. Paper money allowed the government to become giant in size, wage wars, interfere in all aspects of the economy, maintain an endless inflation tax, spread poverty, and become an obstacle to human and economic development. Inconvertible paper cannot circulate along gold. Therefore, the government had to banish this natural money out of circulation, and made it a crime to use it as a currency. In contrast to gold coins which were defined in terms of weight and fineness, paper money is a "thing-in-itself" and has no legal definition. Paper money is emitted by a simple procedure: print and spend, a 100% seignorage. Governments debased metallic money;[12] with paper, they faced practically no limit in debasing money.

Figure 1. The Federal Reserve Credit, 2002-2014 (Trillions of dollars)
Source: The Federal Reserve



The unrestrained paper issuance may be illustrated by the quantitative easing of the US Federal Reserve (Fed), who went on a rampage of money creation during 2009-2014, expanding its credit from $0.7 trillion to about $4.4 trillion, to re-inflate the economy (Figure 1); this credit hyperinflation was out-of-thin air and undertaken at near-zero interest rates. It was a monetization of fiscal deficits as well as purchase of toxic assets. The distortions and uncertainties created by this unrestrained money are immense. Debt has been pushed to record level; and asset prices soared at about 23% per year during 2009-2015. Beneficiaries would enjoy free wealth from this expansion.

Figure 2. Consumer Prices in Mexico, Tanzania, and Tunisia, 1983-2014, Source: IMF, International Financial Statistics



Inconvertible money is inherently inflationary. Figure 2 portrays the inherent inflationary feature of inconvertible paper in Mexico, Tanzania, and Tunisia. Inflation tax has become permanent, penalizing the holders of the currency, workers, pensioners, and creditors. The inflation tax benefits the government, debtors, and speculators. To the extent that nominal wages adjust with long delay, real wages are permanently reduced through inflation.

[12] In England, a silver pound was initially coined into twenty shillings, then later into sixty-six shillings.

5. The debate Locke versus Lowndes: Sound versus Inflationary Money

The debate Locke-Lowndes constitutes, till today, a main controversy on the nature of money and monetary policy. It opposed two fundamentally different beliefs: sound money versus inflationism. It took place in 1692-1696 when Great Britain considered re-coining its clipped silver coins; it opposed John Locke (1632-1704) versus William Lowndes (1652-1724), who was the Secretary of Treasury. Locke proposed a re-coinage at an unchanged mint parity of 62 pennies per ounce of silver. Lowndes proposed a re-coinage at a new mint price of 75 pennies per ounce of silver, a devaluation of the currency by 20%. Hence, Locke wanted to keep the silver content of a unit of account unaltered; Lowndes wanted to diminish it by 20%. He observed rightly that the market price of silver bullion, at 75 pennies/ounce of silver, was significantly above the mint price of 62 pennies, which created arbitrage opportunities, and discouraged traders from bringing silver to mints. Locke's view that a money of account was a convention fixed by law as a physical quantity of silver rejected Lowndes' view that a unit of account was a nominal unit of value with no physical reference. Locke maintained that clipped coins lost about 30%-40% of its silver and could not be exchanged for bullion at face value. He dismissed money illusion. It was natural that an ounce of silver could be exchanged only for another ounce of silver; hence, if all coins were clipped and lost 50% of their silver weight, an ounce of silver would exchange for one ounce of silver, which meant twice the number of clipped coins. This never meant that silver bullion's market price had risen above the mint price.

Locke recognized that coins have several values: intrinsic, extrinsic, and exchange value. The intrinsic value of a unit of currency is the value of that unit's raw material when not used as currency. In the case of specie, the intrinsic value of a coin is the market value of that coin's metallic content as bullion. The currency's extrinsic "value" is its denomination (e.g. shilling, guinea, pence, etc.) as determined by the stamp placed on it by the monetary authority. The currency's exchange value is its market value when used as money.

Locke stated against Lowndes that the monetary names were not names of definite quantities of value, but of definite quantities of a particular commodity, such as silver. Locke argued: "for it is silver by its quantity and not denomination that is the measure of commerce and it is the weight of the silver in it and not the name of the piece that men estimate commodities by." Merely increasing the quantity of denominations was chimerical. Wealth can only be increased by increasing the quantity of goods and services available. Money, after all, was only valuable as a means to secure real wealth.[13]

The relation between silver and shilling is that of law, not of value. Shilling is the name of a particular amount of silver, and silver is the standard of price. Clipping, then, explained the "fact" of the high nominal price of bullion in England. Bullion cost more in terms of nominal units because the nominal units had come to represent less silver. Locke clearly defined the function of the Mint: to maintain the standard of weight of silver; any debasement, any change of standards, would be as arbitrary, fraudulent, and unjust as the changing the definition of a foot or a yard. Locke put it dramatically: "one may as rationally hope to lengthen a foot by dividing it into fifteen parts instead of twelve, and calling them inches." Lowndes stressed a fact that the market price of silver was consistently higher than the mint-parity for a period of time. About this fact there was no debate. He intended to show that this fact was the consequence of another fact, which was the rise in the value of silver. Seemingly, to account for the two facts observed, Lowndes introduced the theoretical principle that the unit of money is a unit of value.

[13] The expansion of money supply may depend on the economic growth, and on the available quantity of gold. Even if there are no new quantities of gold in the monetary market managed by the central bank, the economic activities will continue to be expanded, but accompanied by a decreasing process of the prices. Barro (1979) showed that the effects of reduced prices in the long-run could be accompanied by a positive economic growth. These findings are based on some stylized facts historically observed during the gold standard rule between 1821-1914, contradicts the conventional economic theory.

On the theoretical principle that a monetary name is the name of a definite quantity of exchange value (and not of silver) Lowndes concluded that the purchasing power of money remained constant as long as the monetary names of the values of the commodities remained constant. From this principle, Lowndes intended to show that a reduction in the silver content of the coins regulated by the excess of the market price of silver over the mint-parity would not involve any redistribution of wealth. All prices remain unchanged, no inflation to occur; only coins become lighter in terms of silver. For him, traders considered only the denomination of the coin and not its silver content; a loan of £100 is fully paid at maturity by a money equal £100.[14] He was an early projector of today's inconvertible paper money, where the intrinsic value of money is zero. He argued that a devaluation of 20% will only realign the mint price with the bullion price and will have no inflationary or redistributive effect.

Based on nominal standard, Lowndes argued that the changes in the silver content of the coins and even the changes in the value of that silver content were irrelevant for the determination of the purchasing power of the coins. In this theory, all that counted in money was the monetary names. As long as one receives the same amount of coins with an invariable stamp upon them, one is always receiving the same amount of money. If the name of money remains the same, money remains the same. This means that the amount of silver contained in each crown coin is irrelevant to determine its purchasing power. According to Lowndes, 1 light shilling represents the same money as 1 heavy shilling as long as the stamp upon the coin remains the same. According to Locke, by contrast, 1 light shilling represents less money than 1 heavy shilling because it contains less silver. Locke maintained that the debasement of the English shilling could not be the consequence of the rise in the purchasing power of silver against the monetary name shilling, because "shilling" is just the name of a definite amount of silver and not the name of the value of that silver.

6. Theories of Optimum Money

Theories of optimum quantity of money addressed quantity as well as cost of money. How much money an economy should have? What is the cost of money? Views were diverse since the 16th century. There were the mercantilists who viewed gold and silver as wealth and should be prevented from being exported. The more a country accumulated gold and silver, the better it was. This doctrine was exploded by Hume (1752), Smith (1776), and Ricardo (1817), showing that money was an international commodity and was distributed among countries in such a manner that no country could have a surplus or a shortage of it. Prohibition of exports of gold and silver were futile. Hume established the monetary approach to the balance of payments, the specie-price flow mechanism, and the law of one-price. Gold and silver will leave countries where they are cheaper to countries where they are more expensive. Smith contended that if an economy requires a given quantity of money to circulate its produce, then any additional money will flow to other countries.

Smith and Ricardo's views on gold were conflicting with their anti-mercantilism and laisser-faire doctrines. Both viewed gold and silver as expensive commodities absorbing labor and capital in mining which could be diverted to socially more useful industries if replaced by costless paper money. Smith pretended that paper money would not exceed the quantity of metal it displaced. Smith thought that banknotes of reputable bankers would be less costly than gold. He also seemed to approve the credit bills of the American colonies that reduced significantly the need for gold. Ricardo initiated the gold-exchange standard claiming that perfect currency is attained when paper replaces specie. Both Smith and Ricardo maintained the convertibility of paper; however, Ricardo wanted it be restricted to bullion, not coin, at a minimum of 20 ounces of gold. Carroll (1850) virulently attacked Smith's money theory: "The truth is: an expanded and consequently cheap currency is the most costly and wasteful machinery a nation can possess; the history of the world shows it to be uniformly unprofitable or disastrous…. There was never a greater mistake in any science, and never one so fatal to the stability of property and the well-being of society."

[14] The German hyperinflation (1919-1923) showed that nominal values of debt caused a huge real wealth redistribution from creditors to debtors.

Prior to Smith and Ricardo, costless paper appealed to many projectors who proposed landed banks that would monetize real estate property based on mortgage loans. The doctrine underlying these schemes, plainly stated by John Law (1705), is identical to today's US Federal Reserve unorthodox policy. Law noted that plenty of resources in land, factories, and labor were idle; only money was lacking; if land banks supplied in abundance costless paper, interest rates would be negligible, and great wealth would be created accordingly to the principle of turning stones into bread. John Law managed to establish such scheme; although it created a tremendous speculative boom, it collapsed in a disastrous ruin. This delusion dominates policymakers continuously.

Optimal money was the aim of Sir Peel's Act (1844) which reorganized the Bank of England into an Issue Department and a Banking Department. The Act showed the pre-eminence of the currency school versus the banking school. The currency school maintained that banknotes in circulation should be tied to the gold flows at 100 percent; however, it put no restriction on demand deposits which were close substitutes to banknotes, convertible to gold, and their expansion will drain gold and create risk for banks. The banking school maintained that credit money would not expand beyond the needs of commerce, and that convertibility will preclude over-issue of banknotes. The inability of the currency school to restrict demand deposits led to brief suspension of the Act in 1847, 1857, and 1866; on each suspension, Bank of England rediscounted papers at high interest rates in order to prevent a crash of financial assets.

Many theories of optimal inconvertible money were propounded. Keynesians and adepts of Phillips curve urged a rate of inflation that reduced unemployment. This policy has been implemented in many advanced countries who use money policy to create employment instead of removing structural rigidities impeding employment in taxation, wage and interest rate policy, and trade policies. Mises and Rothbard exploded these theories which ruled out flexible wages. They led to unjust redistribution of wealth, recurrent financial crises, and total money and fiscal disorders as fully established by the conditions of the United States, Japan, and other countries since 1930s.

A theory of optimal policy addressed the welfare cost of inflation. Bailey (1956), based on Cagan's analysis of hyperinflation, showed that inflation caused a social welfare loss, because it increased the cost of holding real money and reduced the holding of real money. As money neared its death, and barter was re-emerging, transactions cost became high. By definition, there is a conflicting effect of money printing: gains to government in seignorage revenues, and simultaneous loss to money holders in form of inflation tax on their real balances. An optimum money can only maximize one effect at the sacrifice of the other. Friedman (1969) proposed an optimum money for costless paper which required setting the opportunity cost of money, measured by the nominal interest rate, equal to the marginal cost of paper, i.e., zero. To make the nominal interest rate zero, the government has to engineer a deflation until the rate of deflation is equal to real rate of interest. Phelps (1973) criticized Friedman's rule on the grounds that it ignores considerations related to taxation. Phelps pointed out that inflation is a source of tax revenue for the government and that if inflation were reduced other taxes would have to be increased in order to replace the lost revenue. He also argued that some inflation would be desirable if distortions associated with inflation taxes were less costly than distortions associated with other taxes to which the government might resort; and therefore, the nominal interest rate has to be positive. Based on statism and costless paper, both Friedman and Phelps' doctrine were fallacious. In a commodity money, the economy decides on optimum money without perturbations in price levels; moreover, the state would need no inflation tax if it restricted its domain and undertook mostly productive expenditure.

Last, but not least, a theory of optimum costless paper addressed stabilization of the price level at a desired rate of inflation ranging from zero upward. Fisher (1936) and Simons (1947) proposed an optimum money which yields zero inflation. Graham (1944) advocated commodity price stabilization, with money issued by a commodity storage bank. When commodity prices trend downward, the bank issues money, buys and stores commodities to maintain stable prices. In reverse, if prices trend upward, the bank dumps commodities to chock off price increases.

Bastiat (2011) noted "it is a very unimportant circumstance whether there be much or little money in the world. If there is much, much is required; if there is little, little is wanted, for each transaction: that is all." Mises (1953) and Rothbard (1992) maintained that once a commodity has been established as money and considered to be in sufficient supply to be so, there is no social benefit from increasing its quantity. Hence, there is a benefit to increase the supply of wheat, oil, fruits, etc., since every addition of these goods enhances consumers' living standard; an increase in money has no benefit since no consumer consumes money; it only dilutes the purchasing power of money. The issue of the optimal quantity of money is dismissed as the economy adjusts to any nominal quantity of money, as illustrated by Hume (1752). The latter claimed that if four-fifths of the United Kingdom's money were destroyed overnight, the economy would simply adjust to a new money supply equal to one-fifth of the initial stock.[15] Moreover, under high inflation or hyperinflation, the economy adjusts to an ever-rising money supply and develops deep-rooted inflationary expectations. The real quantity of money is an endogenous variable.

7. Shariah Money

Shariah is a set of immutable rules and stands against all forms of fraud, and injustice by rulers or individuals. The origin of money as a valuable and borderless commodity in the exchange against other valuable commodities, based on free choice, cannot be altered. Locke stated that: "It is the interest, of every country that the standard of its money, once settled, should be inviolably and immutably kept to perpetuity. For whenever that is altered, upon whatever pretense so ever, the public will lose by it. Men in their bargains contract, not for denominations or sounds, but for the intrinsic value." The State cannot arrogate itself above divine laws and spread financial and economic disorders through costless paper creation. Gold and silver money were not superseded throughout centuries and never vanished as money. Costless inconvertible paper was not chosen freely by the market as a better money than gold and silver, and often died in ruins. Gouge (1833) maintained that: "You may say what you will, paper is paper, and money is money." A horse in paper is not a true horse. He rejected also government paper stating that: "Government issues of paper would be incentives to extravagance in public expenditures in even the best of times; would prevent the placing of the fiscal concerns of the country on a proper basis, and would cause various evils. Further than this, Government should have no more concern with Banking and brokerage than it has with baking and tailoring."

By its nature, inconvertible paper originated in bankruptcy of government due to wars as well as bankruptcy of debt-based banks.[16] By force, the government acquired the mean to bail itself out as well as falling banks. Inconvertible paper caused continual alterations of the measures of value, uncertainty in trade, inflation tax, consumed capital, undermined growth, and often extinguished real money. Its disasters need no elaboration.[17] Countries are trapped in high inflation, impoverishment, and social disorders. It is only tyranny that maintains inconvertible paper.

[15] Real money balances are all what matters for the economy. The nominal money is determined by the central bank. However, market participants determine real money by way of changes in the price level. In fact, if prices and wages adjust downward, the economy is able to create larger real money balances for its needs. In contrast, inflation creates a money shortage; real money was in dire shortage during the German hyperinflation (1922-23).

[16] The suspension of the Bretton-Woods accords in 1971 testified to bankruptcy as much as did the suspension of gold standard by the United Kingdom in 1931.

[17] The US Constitution (1789) was explicit regarding the illegality of inconvertible paper; the coinage law of 1792 circulated only gold and silver coins.

In Shariah, money is what it was at the time of the Prophet peace be upon Him; gold and silver coins, common to all countries, a medium of exchange and store of value, and not a mean of taxation. It is distributed among countries via trade. No prohibitions can prevent money's departing from those countries where its amount is beyond what their trade and industry require. No country can be deprived of its just proportion of the precious metals, except by the use of paper, or by such causes as ruin the commerce and the industry of a nation. No obstacle, except spurious money, can prevent the precious metals from flowing into countries where wealth is increasing. A government that undertakes productive spending has no need for inflation tax. Money is not a discretionary policy tool to overcome government rigid laws such as minimum wage laws, impediments to trade, and free foreign exchange market.[18] The government may emit gold and silver money if it owns these metals from mining deposits or buying them with other minerals such as oil.

Shariah strictly forbids interest rates, which led to fraudulent inconvertible paper. Such interdiction has far-reaching implications on the nature of money and banking. Money is a traded commodity obeying the laws of value. How much money an economy requires is as irrelevant a question as saying how much fish or copper an economy needs. The market determines via price information efficient allocation of resources. The government has a regulatory duty in asserting the quality of coins. It should have no taxes and impediments to gold and silver trade and free minting of coins according to established standards.[19] Depository and safekeeping banks, with 100% reserve banking,[20] in the image of the Bank of Amsterdam (1609), is Shariah compliant. Shariah allows a convertible paper money to be issued by a monetary agency with 100% gold backing.[21] It allows non-interest money substitutes such as clearing operations, credit, bills of exchange, and credit cards are Shariah compliant. Risk-sharing equity investment banks that mobilize capital, and intermediate between savers and investors are fully Shariah-compatible.

Shariah requires a just government to balance its budgets and restore fully gold and silver as lawful money. Government with balanced budget never needs inconvertible paper. Shariah refutes the idea of money as a policy tool. Only despotic and unjust rulers stand against restoring gold and silver money. Gouge (1833) maintained: "The history of mankind, in all ages of the world, shows that they will never labor for subsistence, so long as they can obtain it by plunder; that they will never labor for themselves, so long as they can compel others to labor for them." Rulers and their privileged groups such as bureaucracy and welfare recipients need costless paper to raise taxes. Ideologues believe it is a policy tool.[22] General people are ignorant about fraudulent money and think there is no better system to it. Gouge asserted that: "Certain individuals who have never caught a glimpse of a more improved state of society, boldly affirm that it cannot exist: they acquiesce in established evils, and console themselves for their existence by remarking that they could not possibly be otherwise-in this respect reminding us of the Emperor of Japan, who thought he should have been suffocated with laughter on hearing that the Dutch had no king."

Ibn Khaldun (1332-1406), considered as the father of economics, stated that in the Islamic monetary system money should be made up of gold (Dinar) and silver (Dirham) due to less volatility and resist more to

[18] Benjamin Franklin said: "Tim was so learned, that he could name a horse in nine languages; so ignorant, that he bought a cow to ride on." Statists would never understand that money is not an arbitrary policy tool as much as a cow is not to ride on; a horse is not a cow, and vice versa; confusing both leads to madness. Only despotism and corruption make money a policy tool.

[19] Voltaire (Pen name, 1694-1778, his real name Arouet Francois-Marie, French philosopher) called the decree restricting the legal possession of metal coin the most unjust edict ever rendered and the final limit of tyrannical absurdity. Voltaire stated that Paper money eventually returns to its intrinsic value which is zero.

[20] El Diwany (2003, Chapter 7) explained easily that the Profit Lose Sharing (PLS) system without fractional reserve banking and with gold standard currency would be the basis of a stable creating wealth in the economy.

[21] In such system the money will have a smoothing effect on the economic life; this effect is due to the reduced risk of inflation.

[22] Von Mises (1953) rejected money as a policy tool such as to achieve full-employment. He stressed this objective should be attained by dismantling all legislations hampering competitiveness in labor and goods markets.

economic fluctuations compared to other commodities. He stated that the weight and purity of these coins should be strictly tracked as a religious function. Ibn Khaldun thought out that there is a physical relationship between the quantity of money and the transactions in markets, and that the increase in the commodities prices required more quantity of money (Ibn Khaldun 1377, Rosenthal 1958, translation, pages 456 and 460). Thus, he indicated implicitly that there is no effect of the money quantity on the commodities prices. Such idea suggests an economic theory of money which is different from the quantity theory of money; this latter implies that the prices move following the money supply movement. According to many historical economic facts revealed by Ibn Khaldun, we suggest that the economic theory of money could be formulated as follows:

$$M_G \cdot v^{\alpha} = \sum_j T_j P_j \equiv N \cdot (T \cdot P)$$

where M_G is the quantity of gold-money; v is the velocity of gold-money depending globally on the economic and financial activities, describing the circulation of gold-money between the active agents in the economy; j stands for each transaction. The parameter α indicates the elasticity of the gold-money speed between the members of the economy to the variables on the right-hand side (RHS) which are the active population (N), the price level index (P), and the transactions that are done in the economy (T).[23] The virtual nominal value of all transactions is $(T \cdot P)$. Since M_G has an intrinsic value and considering a level of the velocity, thus the RHS of the equation corresponds to a totalized value of all the transactions as spending and sales in the economy. Ibn Khaldun (Rosenthal 1958, page 204) stated that the urban population paid the Bedouins by coined money (dinars and dirhams) to get their commodities needs. Also, according to Ibn Khaldun (1377, Rosenthal 1958, page 456): "… The only reason for this is the difference in the labor (available) in (the different cities). They all are a sort of market for their labor (products), and the money spent in each market corresponds to (the volume of business done in it). The income of a judge in Fez suffices for his expenditures, and the same is the case with a judge in Tlemcen. Wherever income and expenditure (combined) are greater, conditions are better and more favorable." Page 460: "… As a result, the expenditures of the inhabitants increase tremendously in proportion to the civilization of (the city). A great deal of money is spent. Under these circumstances, (people) need a great deal of money for expenditures, to procure the necessities of life for themselves and their families, as well as all their other requirements. The income of the Bedouins, on the other hand, is not large, because they live where there is little demand for labor, and labor is the cause of profit." The previous sequence of phrases shows that Ibn Khaldun (1377) stated that the velocity of money in the cities is largely great than in the villages and that there is a correspondence between the value of the business-volume and the silver-gold-money in the economy.

The availability of the gold-money and the commodities demand of the active members in the cities led to increasing the commodities prices mainly for the luxurious products. Such behaviors eroded gradually the social solidarity and the life of cities changed and became riskier. Ibn Khaldun (1377) revealed no more than five successive stages in the life of dynasties until the dynasty dissolves and disappears. Vico (1725) summarized, what corresponds approximately to Ibn Khaldun theory of the five stages of cyclical society changes that "it is the first crude, then severe, next generous, later delicate, and finally dissolute." These stages, detailed in Rosenthal translation (1958, pages 233 and 234) are related to three steps of satisfaction layers of necessities, conveniences, and luxuries. We expect that during the first three stages the parameter α of the gold-money equation would exhibit more elasticity due to an increased demand of gold-money as

[23] This elasticity of velocity corresponds to the acceleration of the money circulation depending on the position of the economy inside the cyclical fluctuations that characterize the dynasty evolution.

a consequence of economic growth and a business boom. At the third stage, the economy would reach an optimal quantity of gold-money; the private sector should be expanded to be the principal engine of the economy. The main objectives of the rulers i.e. the public sector consist to stabilize the gold-money system, to regulate the social, economic and financial relationships between the society-members and between these latter and the foreign-members, and to establish more justice in all dimensions of the life. But, when the society-members mainly the rulers and the wealthy families have a tendency in satisfying their needs to use non-necessities and non-conveniences of the commodities, the society is shifted toward a delicate and sensible stage by focusing on building palaces, spending in bureaucracy, and financing mercenary armies, causing then a generalized inflation process and more lose confidence in the economy. Without any correction process of such deviations in spending that could help to revert to an equilibrium position, and if the rulers through non-independent monetary authorities played with the money value, the inflation will increase more, and there will be spreading of economic and social injustice in the society. As Ibn Khaldun distinguished between nominal and real values, the real wealth will drop its value following the markets perturbations. Consequently, during the decline of the economic activities and the irrational behavior of the rulers of the dynasty and their followers, the velocity becomes inelastic to all the factors of the RHS of the gold-money equation. Due to the wrong strategy of the rulers, the contraction of businesses and the social and economic crises, the prices dynamic could lead to deflation processes, and the quantity of gold-money will shrink considerably.

8. Conclusions

Governments cannot change natural laws such as the law of gravitation; they cannot change the nature of money which originated as a commodity and settled into gold and silver. These precious metals are not money; but money is gold and silver. No instance is on record of a nation's having arrived at great wealth without the use of gold and silver money. Nor is there, on the other hand, any instance of a nation's endeavoring to supplant this natural money, by the use of paper money, without involving itself in distress and embarrassment. Money as an inconvertible paper is the culmination of government absolutism, bankruptcy, and inflationism, which confuses money and wealth, and considers printing money paper as creating wealth. For instance, in a poor country, the central bank can print tons of money paper, but it can add not one gram of wheat or one drop of oil. This confusion dominates policymakers who consider money as a policy tool and can print unlimited quantities of it and setting interest rates at near zero. All money printed is a confiscation of an existing wealth from a group of beneficiaries at the expense of a group of losers, zero-sum game. The debate Locke-Lowndes opposed views of sound versus inflationary money. Statists maintain that government has absolute right over money, it is a sovereignty attribution, and is free to print as much money as it wishes as clearly stated by John Law, and later by his adepts. Locke, in line with Oresme and Copernicus, condemned the alteration of the mint price and the standard of measure as a sheer violation of property rights which should never committed by a government which has been trusted by the public to preserve property and justice. The dismantlement of gold standard was due to government bankruptcy. The experiences of hyperinflation show how governments make a lottery of all private property, and prints money to finance unproductive spending until money dies.

Shariah does not grant the government supremacy over divine laws and recognizes no sovereignty over borderless money; borders on money are forced by government to prevent escape from its inflation tax. Shariah does not condone a bankrupt institution or individual to confiscate property to solve bankruptcy. It does not condone the alteration of standards of measure. If an individual counterfeits money, the government would certainly punish the crime; why should it itself commit such a disdainful crime? The answers are too many: promote full-employment, provide welfare benefits to the poor, finance public investment, wage war, etc. All these considerations are fallacious and are refuted by Shariah as a pure confiscation and redistribution of wealth that will never achieve their presumed goals. Moreover, inflation alters constantly the value of money, causes injustice, and falsifies all economic calculations. At some stage of inflation, traders use a different money or resort to barter. Shariah considers money as a commodity, determined by the market, and attributes to the state a regulatory mission similar to any regulation aimed at preventing fraud. Shariah does not agree with the inherent inflationary feature of paper money. Only a commodity money is immune from discretion and obeys market laws.

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