Gold Money

in a Digitalised World Economy

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PRELIMINARY VERSION, PLEASE DO NOT QUOTE

„Die Schwankungen im Weltpreise der Edelmetalle scheinen mir gegenwärtig immer noch geringere Gefahren in sich zu schließen als die Regelung des inneren Tauschwertes des Geldes durch Regierungen oder soziale und politische Parteien."

—Carl Menger

"The belief that a sound monetary system can once again be attained without making substantial changes in economic policy is a serious error. What is needed first and foremost is to renounce all inflationist fallacies. This renunciation cannot last, however, if it is not firmly grounded on a full and complete divorce of ideology from all imperialist, militarist, protectionist, statist, and socialist ideas."

—Ludwig von Mises

"Der Zustand des Geldwesens eines Volkes ist ein Symptom aller seiner Zustände."

—Joseph A. Schumpeter

"[S]ince the function of government in issuing money … involves a deliberate determination of the quantity of money to be issued, governments have … incessantly and everywhere abused their trust to defraud the people."

—Friedrich August von Hayek

1. WHAT THIS ARTICLE IS ALL ABOUT

The emergence of *new technologies* and their impact on peoples' lives – the buzzwords are *digitalisation* and *digital transformation* – brings far-reaching change. In fact, it may even revolutionise the world's current monetary system by giving *people a free choice of currency*. Needless to say that such a development could turn out to be fairly disruptive, inducing economic and political change on a possibly grand scale: The propagation of new technologies among consumers and corporates – distributed ledger technologies (DLT) in particular –could ultimately pose a challenge to the *prevailing state-controlled fiat currency architecture*.

At the very heart, a free choice in currency and its concomitant *competition among currencies*, if let loose, would presumably also affect the state as we know it today and with it the prevailing economic and political-social order. – The purpose of this article is twofold. First, it wants to explain that a free market in money is nothing to fear, that it is the '*natural* order of money' and as such highly desirable from an economic and social-ethical viewpoint. Second, the article attempts to outline that a free market in money is practicable and feasible, and that the idea of a free market in money has already gained quite some ground in recent years.

Right at the start I should emphasise that a free market in money is the direct result of what Ludwig von Mises (1881 – 1973) termed the *sound money principle*: "[T]he sound-money principle has two aspects. It is affirmative in approving the market's choice of a commonly used medium of exchange. It is negative in obstructing the government's propensity to meddle with the currency system."[1] And further: "It is impossible to grasp the meaning of the idea of sound money if one does not realise that it was devised as an instrument for the protection of civil liberties against despotic inroads on the part of governments. Ideologically it belongs in the same class with political constitutions and bills of rights."[2] This article has been structured as follows.

It starts with some fundamental insights into monetary theory (2.). To make a case for a free market in money, the economic and ethical deficiencies of today's fiat currencies will be highlighted (3.). Against this backdrop, the functioning of a free market in money will be outlined and its *potential for development* will be illustrated by (i) latest moves in various US federal states to officially treat gold and silver as money and (ii) recent attempts to provide a digitalised gold trading and payment system (4.). After some remarks about the economic and social-political consequences a return to a free market in money might entail (5.), the article concludes with some considerations as to whether a free market in money will (still) be possible (6.).

[1] Mises (1953), Theory of Money and Credit, p. 414.

[2] *Ibid*.

2. FUNDAMENTALS OF MONETARY THEORY

Let us start with a simple question: *What is money?* Answer: Money is the universally accepted means of exchange, and as such, it is a good like any other. However, it money the most liquid good: It has the highest marketability of all goods.

Monetary history informs us that precious metals, gold and silver in particular, have been the preferred means of money. Why is that so?

Well, a good that shall serve as money must have specific *physical properties*. For instance, the good in question must be scarce, homogenous, durable, transportable, divisible, mintable, and it must represent a relatively high value per unit.

In basically all countries and civilisations, two commodities have been dominant whenever they were available to compete as money with other media: gold and silver.

Money originated from the spontaneous actions in the free marketplace, as pointed out by the Austrian economist Carl Menger (1840 – 1921) in his landmark book *Grundsätze der Volkswirthschaftslehre* published in 1871.[3]

Endowed with a *minimum intelligence,* people will sooner or later engage in a *division of labour*, resulting in a *specialisation of production*. To reap the fruits of a higher productivity of labour fully, trading becomes necessary.

To make trading most convenient, people will take recourse to an *indirect means of exchange*. And the most commonly used indirect means of exchange will ultimately be voluntarily chosen as money.

Menger also pointed out that money has developed from *commodities* such as precious metals. This idea was later (praxeo-)logically explained by Ludwig von Mises, who put forward the so-called *regression theorem*.[4]

Three additional monetary theory insights should be noted here. – *First*, the *optimal number of monies in an economy is one* – for if all people use the same money, the efficiency of economic calculation is optimised.[5] That said, in a free market system there would be a tendency towards the emergence of a single money.[6]

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[3] See Menger (1871), Grundsätze der Volkswirtschaftslehre, Achtes Capitel, Die Lehre vom Gelde, pp. 250 – 260.

[4] See Mises (1912), Theorie des Geldes und der Umlaufsmittel, p. 97 – 123; also Mises (1998), Human Action, p. 405 – 406; Rothbard (2009), Man, Economy, and State, p. 268 – 276.

[5] See Hoppe (2006), How is Fiat Money Possible? – or, The Devolution of Money and Credit, p. 178 – 179.

[6] Assume there are two monies, *A* and *B*. If people consider them of the same quality, one of them is expendable. And if *A* is deemed to be better than *B*, *B* would be forced out of the market. Would the issue of *uncertainty* change this result? No, even under uncertainty one money would still be optimal. Polleit (2017), Die Blockchain-Disruption: Geld, Bitcoin und digitalisiertes Goldgeld.

Second, one should not be concerned about a potential shortage of the quantity of money.[7] The economic insight is that *the actual amount of the quantity of money does matter*, "[a]ny supply will do as well as any other supply."[8]

The quantity of money is *independent* of the economic services provided by the use of money as an indirect means of exchange.

If the quantity of money is, say, 12.000 billion USD, a given quantity of goods and services will be transacted at high(er) prices – compared to a situation in which the quantity of money is just 6.000 billion USD.

And *third*: Monetary history does provide us with relatively little paradigms in terms of how beautifully a truly free market in money would be working.

Most of the time Emperors, Kings, dictators and later (democratically) elected politicians have been tampering with money, trying to monopolise its production and determine its value according to political expediency.

The states' meddling in monetary affairs has brought about a situation in which all major currencies in this world – be it the US dollar, the euro, the Chinese renminbi or the Japanese yen – do no longer represent market-chosen commodities (such as gold or silver) but "fiat currencies".

In a rather prolonged and often obscure process states have succeeded in replacing commodity money – that is gold money – with their own *fiat currencies*. The final step was taken on 15 August 1971, when the US administration under President Richard Nixon suspended the last remains of the US dollar being exchangeable into physical gold.

As the US dollar was the international reserve currency in the *System of Bretton Woods*, the unilateral decision by the US government de facto forced the world into a fiat currency system, a system in which all major monies are no longer redeemable into anything, and their quantities can be increased by government at any time in any amount politically desired.

Political rather than economic reasons are to be held responsible why commodity (or gold) money has been replaced with fiat money.

3. ECONOMIC AND ETHICAL DEFICIENCIES OF FIAT MONEY

The term "fiat" stems from the Latin word fiat, meaning "so be it". Therefore, fiat money can be translated as "coercive" money – money that has been forced upon the people.

Fiat money has three characteristics. (1) It is money monopolised by the state, i.e., its central bank. (2) Fiat money is created through bank lending out of thin air, through bank credit expansion that is not backed by any real savings. (3) Fiat money is dematerialised money. It has the form of bits and bytes and colourful paper tickets.

[7] See Mises (2006), The Causes of the Economic Crisis, p. 19 – 21.

[8] Rothbard (2010), What Has Government Done To Our Money?, p. 25.

As fiat money has not come naturally into this world, it may not be all too surprising that it suffers from economic and ethical deficiencies.[9] Let us briefly touch upon some of them.

(i) Fiat money is *inflationary*, that is, it loses its purchasing power over time. This is the result of central banks, in close cooperation with commercial banks, keep expanding the quantity of money relentlessly; and it is an 'iron economic law' that a rise in the quantity of money debases the purchasing power of the money unit (compared with a situation in which the quantity of money had not been changed).

(ii) Fiat money benefits some at the expense of others. The first receivers of the newly created money are the beneficiaries, while the late receivers (let alone those who do not receive anything from the newly created money) are left out in the cold: The former get richer at the expense of the latter. Fiat money can rightfully be called 'socially unjust'.

(iii) The issuance of fiat money causes "boom and bust cycles" – as thoroughly analysed by the 'Austrian Monetary Trade Cycle Theory'. While initially the economy enjoys an artificial upswing, such a "boom" turns out to be unsustainable, and it sooner or later turns into a downswing ("bust"). The boom causes *malinvestment* – resulting in a production and employment structure that is out of sync with consumer demand.

Boom and bust cycles also nurture an *anti-capitalist mentality* in the general public, as the free market system rather than the state and its fiat currency regime are being held responsible for the ensuing turmoil and crisis. This, in turn, empowers collectivist-socialist policies at the expense of the free market system – effectively threatening the survival of the free society model.

(iv) Fiat money causes the growth of the economies' overall debt levels to outpace income gains. The reason is that the income gains from credit-financed booms fall short of the build-up of debt among consumers, corporates (including banks), and public sector entities. In other words: Fiat money ultimately leads the economies into a 'debt trap', which entails economically and politically-socially devastating consequences.

4. HOW A FREE MARKET IN MONEY FUNCTIONS

Against this backdrop, the question arises: *What must, and can, be done to steer clear of fiat currencies and return to sound money?* In what follows, the concept of a free market

[9] At the most fundamental level, Rothbard (2001), The Case For A 100 Percent Gold Dollar, points out that the state's fiat currency is in violation of the free market and property rights (p. 22): "The market economy and the modern world's system of division of labour operate as follows: a producer supplies a good or a service, selling it for money; he then uses the money to buy other goods or services that he needs." With the state's fiat currency in place, the principle "production → "purchase" of money → "sale" of money" (p. 23) would be broken. Also Hülsmann (2008), The Ethics of Money Production; Polleit (2017), Zur Ethik des staatlichen Geldes.

in money (or you may say: the *denationalisation of money*) shall be outlined as a theoretical and practical solution.[10]

▶*A free market in money*

A free market in money is characterised by free demand for and free supply of money. *How could that possibly work?* To explain, let us start with *money demand*. In a free market in money, people are entirely free to choose the kind of money they wish to use for their transacting and savings purposes.

All money users have an economic incentive to demand a type of money that is expected to be demanded by others as well – as money is the universally accepted means of exchange.

For instance, I would gladly accept an indirect means of exchange that I expect will be accepted by my baker. My baker, in turn, will accept an indirect means of exchange that he expects the shoemaker will accept as money and so on.

The *congruence of motives* among individuals when it comes to the choice of money will *spontaneously* result in the adoption of a universally accepted money standard. It would thus be peoples' free demand for money that decides what money is.

But what about the money supply? Isn't a free supply of money to end up in monetary chaos? Wouldn't it result in thousands of monies being issued, causing high inflation and making economic calculation de facto impossible? The answer is no.

Because in a free market in money, people will demand sound money. Out of self-interest, no one will be demanding bad money. And fortunately, we know (as was outlined in chapter 2) the necessary proper qualities of sound money.

We also know *how* money originates in a free market system: namely *spontaneously* and out of a commodity – a commodity that already has, before it is used as money, a market value solely determined by its non-monetary services.

So we can say that items such as colourful paper tickets, which can be produced at will and cannot be redeemed as anything, will not be accepted as money.[11] No one would accept them, for no one would know, or trust in, their purchasing power.

The competition among "money aspirants" would, therefore, boil down to commodities like precious metals, and potentially also types of crypto currencies (if and when these conform to the regression theorem).

▶*Free banking*

If there is a free market in money, there will also be *free banking*.[12]Under free banking, two kinds of banks would spring up: Deposit banks (as 'trusted intermediaries') and

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[10] See in this context the seminal work of Hayek (1990), Denationalisation of Money, and Hayek (1976), Choice in Currency; for a methodological critique of Hayek's concept of a free market in money see Polleit (2015), Hayek's 'Denationalization of Money' – a Praxeological Reassessment.

[11] See in this context Rothbard (1992), The Case for a Genuine Gold Dollar, p. 2 – 5.

credit banks would offer their services; there would be free entry into and exit from the market for banking.[13]

Deposit banks would offer storage, safeguarding, and payment services against charging a fee.

In the case people go for, say, gold money, they would deposit their physical metal with deposit banks against receiving a *warehouse receipt*. The latter would represent a *money certificate* (either in the form of paper or digital book entries), which serves as the means of payment and can at any time be exchanged at par into physical gold.[14]

Credit banks transfer already existing money from savers to investors. For instance, a credit bank issues a 5-year note yielding 4 per cent p.a. If an investor buys such a bond, his *money proper* or *monetary certificate* is handed over to the credit bank, and the credit bank then lends it onto the borrower.

Under free banking, you may have all kinds of banking businesses (retail banking, corporate banking, investment banking, M&A etc.), and there will also be markets for bonds, equities, commodities and derivatives.

The important point in this context is that *under free banking neither deposit banks nor credit banks affect the quantity of outstanding money* (as it is the case in a fiat money regime).

And as money is no longer created through credit expansion, the characteristic mark of fiat money, all the economic and social-political problems come to an end – such as chronic inflation, unfair redistribution of income and wealth, boom and bust cycles, and a relentlessly growing state at the expense of civil liberty and freedom.

▶*The tax issue*

A free market in money requires a ‘level playing field’, which makes it possible for money aspirants like, say, gold or silver or crypto units to compete with fiat currencies on equal terms.

Not only must be the state’s fiat money monopoly put to an end. Also, any taxation and regulation putting money aspirants at a disadvantage compared to established fiat currencies must be abolished.

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[12] See, for instance, Sechest (2008), Free Banking. On free banking, Mises (1998), Human Action, notes (p. 440): “Free banking is the only method available for the prevention of the dangers inherent in credit expansion. It would, it is true, not hinder a slow credit expansion, kept within very narrow limits, on the part of cautious banks which provide the public with all information required about their financial status. But under free banking, it would have been impossible for credit expansion with all its inevitable consequences to have developed into a regular-one is tempted to say normal feature of the economic system. Only free banking would have rendered the market economy secure against crises and depressions.”

[13] See, for instance, Hoppe (2006), Against Fiduciary Media. For an illustration of free banking transactions see Polleit, von Prollius (2014), Geldreform, Kapitel “Freies Marktgeld und Free Banking”, pp. 76 – 86.

[14] For clarification of Mises’s typology of money see Hülsmann (2012), The Theory of Money and Fiduciary Media, p. 32 – 34.

What is more, the principle of freedom of contract has to be secured. For instance, firms and employees must have the unrestricted freedom to agree about paying wages and salaries in, say, precious metals or any other ‘money candidates’ they consider desirable.

SALES AND CAPITAL GAINS TAXES

In many countries, gold and silver are subject to sales and capital gains taxes. To start with, subjecting gold and silver to sales taxes puts them at a disadvantage compared to official fiat currencies.

If you exchange, say, US dollar into euro, you do not have to pay any sales tax. However, if you exchange US dollar or euro into gold and silver, you would have to pay sales tax. This certainly discourages the use of gold and silver as a means of exchange (or as a medium for savings purposes).

Let us move on to the issue of a capital gains tax and consider the following example. You buy 1 oz of gold for 1.200 USD. Subsequently, the price of gold rises to 2.400 USD per oz. Your capital gain is 1.200 USD. If the capital gains tax is, for example, 28%, your tax bill is 336 USD, thus reducing your gain to 864 USD.

Example: Capital gains tax on gold

	[1] In nominal terms	[2] Price level	[3] In real terms
Gold (USD/oz) in t_0	1.200	1	1.200
Gold (USD/oz) in t_1	2.400	2	1.200
Capital gain	1.200	2	0
Tax rate	28%	...	28%
Tax bill	336	2	168
Profit after tax	864	2	–168

Legend: Own calculations.

Let us take our example one step further. Assume that after you bought one oz of gold for 1.200 USD, there is a great inflation which doubles all prices for goods and services in the economy, including the price of gold, which moves up to 2.400 USD per oz. Your relative wealth position has not changed (the gold you hold is still worth 1.200 USD in real, inflation-adjusted, terms), but the state imposes a tax of 168 USD on you – as calculated on your nominal inflation gain, and so you and up with a real loss of 168 USD.

If nominal values are subject to a capital gains tax, gold doesn’t provide an effective inflation hedge. Under such a tax regime, gold would not protect you against the inflationary machinations of monetary policies. To unlock gold’s inflation insurance properties, therefore, it needs to be exempted from any capital gains tax.

▶ *US states remove taxation from gold and silver*

In the last couple of years, a number of US states have passed legislation ending taxation on precious metals, gold and silver in particular; some have even assigned *legal tender* status to gold and silver. These US states wish to offer their citizens an alternative to the US dollar, thereby having *de facto* dismantled the Federal Reserve’s monopoly of money production within their respective state borders.

For instance, the Utah Legal Tender Act (HB317[15]) was passed in March 2011. It says “The exchange of gold and silver coin issued by the federal government for another form

[15] See HB317, Currency Amendments, State of Utah (https://le.utah.gov/~2011/bills/hbillint/hb0317s01.htm)

of legal tender is exempt from sales and use taxes." The state of Utah has thus recognised gold and silver coins as legal tender – while these precious metals were made *voluntary* legal tender ("A person may not compel any other person to tender or accept gold and silver coin").

In May 2017, the governor of Arizona signed HB2014[16] into law. It removes state capital gain taxes on income "derived from the exchange of one kind of legal tender for another kind of legal tender," encouraging the use of gold and silver as currency.

In March 2018, the Wyoming State Senate passed the Wyoming Legal Tender Act (HB0103[17]), removing all state sales taxes from gold and silver bullion (Wyoming doesn't have an income tax). In addition, gold and silver (specie) were declared a legal tender on a voluntary basis ("Unless specifically provided by law or by contract, no person or legal entity shall have the right to compel any other person or legal entity to tender specie or to accept specie as legal tender").

On 7 September 2018, the Monetary Metals Tax Neutrality Act[18] was introduced at the federal level. The bill states that "no gain or loss shall be recognized on the sale or exchange of (1) gold, silver, platinum, or palladium coins minted and issued by the Secretary at any time or (2), refined gold or silver bullion, coins, bars, rounds, or ingots which are valued primarily based on their metal content and not their form." The underlying argument is that gold and silver coins are legal tender, US money, and, as a result, there should be no taxes on them, neither at the state or federal level.

▸*Digitalised gold offered by The Royal Mint and The Perth Mint*

The Royal Mint, in cooperation with the Chicago Mercantile Exchange (CME), has built "a new, cost-effective, convenient and secure way to trade physical gold" using blockchain technology.[19] It gives customers the possibility to own physical gold vaulted by The Royal Mint (in Llantrisant, South Wales). If a customer buys physical gold, London Good Delivery gold is allocated in The Royal Mint vault, and the accounting unit Royal Mint Gold (RMG) is credited to the buyer's account held with The Royal Mint.

One RMG represents 1 gram of 9999 fine gold (at the time of writing worth around 40 USD). Economically speaking, The Royal Mint offers a *digital warehouse claim to gold*. Tradable on a platform, the RMG can be transferred into the wallets of other participants in The Royal Mint network. (Note that The Royal Mint runs a privately permissioned network, so you need permission to join it.) That said, The Royal Mint does actually not only offer a convenient way to hold and trade gold, it also provides something like a gold-based payment system.

[16] See Arizona House Bill 2014 (https://legiscan.com/AZ/text/HB2014/2017)

[17] Original House Bill No. HB0103

[18] See Monetary Metals Tax Neutrality Act, 115th Congress, 2D Session.

[19] See The Royal Mint (2018); also Coghill (2017), Where Bullion Meets Blockchain.

On 25 October 2018, however, The Royal Mint announced that the launch of its digital gold token would be cancelled for now "after a partnership with U.S. exchange group CME failed, and the government vetoed a plan to have the tokens trade on a cryptocurrency exchange."[20]

The Perth Mint, Australia, in cooperation with the private firm InfiniGold, has announced to offer "a flexible digital gold product compatible with a wide range of technology platforms including blockchain."[21] The idea is to offer *InfiniGold digital gold certificates*, which represent direct ownership of physical gold that is stored in The Perth Mint's network of secure vaults. The Perth Mint has launched a smartphone App, GoldPass, which allows buying, selling and holding gold in a convenient way. It also gives the opportunity to transfer gold to other approved GoldPass users. The Perth Mint's transferrable digital gold certificate thus also amounts to a gold-based payment system.

▶*Trustless transfers not possible in the 'real world'*

Digitalised gold money on the blockchain raises a conceptional question, though. Bitcoin, which circulates in the so far best-known distributed ledger technology (DLT) network, does not exist outside the blockchain. In contrast, a commodity like gold represents a 'real thing' in the real world. While the digitalised claim to gold can be transferred via DLT, its migration onto the blockchain depends on the existence of a 'trusted custodian' or deposit bank to link real, off-ledger gold with the digital world.

The idea that DLT can make trustless transfers a reality is thus confined to the purely virtual realm. However, one advantage provided by blockchain is this: The owner of digitalised gold can transfer his/her claim to gold most easily and at low costs. Potentially also anonymously – because P2P transfers of gold money of the kind seen on *public ledgers* do not allow participants to be identified. While the gold sits in a money warehouse, it can be used for financing purposes, keeping the transaction confidential (provided data will not be decrypted at some point).

▶*Requirements for a gold-based payment system*

In recent years, quite a number of entrepreneurial efforts have been made to design a gold-based electronic payment system, some of them using the blockchain technology.[22] To develop into a serious alternative to fiat currency payment systems, however, they have to meet a couple of requirements.

(i) An important issue concerns the *name* of the gold money. As was noted earlier, in a free market money originates spontaneously from a commodity, which is then exchanged against other vendible items *in terms of its unit of weight*.[23] If, say, gold

[20] Reuters (2018), Wary of crypto, UK government blocks Royal Mint's digital gold.

[21] See The Perth Mint, Press Release, 31 January 2018 (www.perthmint.com/media-release-InfiniGold-and-TPM-digital-gold-cert.aspx).

[22] For an analysis of some of them see White (2017), Blockchain + Gold.

[23] As Rothbard (2001), For A 100 Percent Gold Standard, notes (p. 25): "Commodities on the market exchange by their unit weights, and gold and silver were no exceptions." For making a case that money

emerges as money, the prices of goods and services would preferably have to be denominated in units of weight such as, say, ounces or gram; a free market money would therefore *not* have a name (such as dollar, euro, or franc).[24]

(ii) When gold is freely chosen as money proper, digital claims to physical gold must represent *money certificates*, that is digital warehouse claims to physical gold 100% backed by physical gold[25]; (iii) payments in gold must be transferable securely, and with finality, from the payer's account to the seller's account at *low costs*; (iv) an international settlement system in physical gold among gold warehouses (deposit banks) needs to be put into place; and (v) the gold-based payment system must be scalable, that is it must be able to handle a growing number of (small amount) payment transactions.

5. CONSEQUENCES OF A FREE MARKET IN MONEY

It is self-evident that the emergence of a free market in money would have far-reaching economic and social-political consequences. Three aspects should concern us in the following: (1) the push towards a single world currency, (2) the drive towards deconstructing the state (as we know it today), and (3) the effect on the purchasing power of money.

Re (1): THE PUSH TOWARD A SINGLE WORLD CURRENCY. – Let us assume that the state would agree that free market money can effectively compete against its own fiat currency. The first thing that comes to mind is: Well, as long as the state's fiat money is sloshing around this isn't a free market for money at all. Point well taken.

In practice, however, precisely this situation (with the world's state of affairs being as it is) would be the point of departure: Money aspirants would have to compete against established fiat currencies. While we do *not* know what kind of money would emerge in a free market in money, we *do* know that a tendency towards establishing a single money would kick in.

In a world characterised by a growing division of labour and free trade among regions and nations, a single world money would be the *natural outcome*. Competition would make one single money prevail, and that is either a state's fiat currency or free market money. This brings us to the second aspect.

Re: (2) THE DRIVE TOWARDS DECONSTRUCTING THE STATE. – As we have heard already, the money production monopoly is key for the financial power of the state. On the one hand,

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should represent actual units of weights rather than national names see, for instance, Say (1971), A Treatise of Political Economy, p. 256 – 262. He notes (p. 256): "For what is a dollar, a ducat, a florin, a pound sterling, or a franc; what, but a certain weight of gold or silver of a certain established standard of quality?"

[24] See Rothbard (2019), What Has Government Done To Our Money?, II. 5. "The Money Unit", pp. 12 – 15. What about a cyber unit like bitcoin – which quite a few people see as the new form of money? Assume bitcoin becomes money; prices would be expressed not in units of weight but in *quantities* of bitcoin – with the total amount of bitcoin being limited to 21 million units.

[25] For the case of a 100% reserve banking see Huerta de Soto (2006), Money Bank Credit, and Economic Cycles, Chapter 1 "The Legal Nature of the Monetary Irregulare-Deposit Contract", p. 1 – 36.

issuing inflationary fiat money redistributes (more or less stealthily) resources from the people into the state's coffer. On the other hand, fiat money provides the state with credit funding at most favourable terms, increasing its financial means well beyond the *regular* tax base.

Fiat money is an *elixir of growth* for the state par excellence. It therefore shouldn't come as a surprise that a free market in money would actually challenge the state (as we know it today).

In the case that the state's fiat currency succeeds in competing side by side with free market money, the state's scope for using fiat money for its aggrandizement would at least be reined in: The issuance of fiat currency would induce people to lower their demand for fiat currency and increase their demand for free market money.

To keep its fiat currency marketable, the state has to reduce its spending financed through fiat money– which puts at least a limit to the state's expansionary drive.

However, in the case that free market money becomes the preferred money, the state's fiat currency would be driven out of the market. The state loses a very important source of financing and political power.

Re (3): THE EXCHANGE VALUE OF THE CURRENCIES. – If people prefer free market money over fiat currency, people would reduce their demand for the fiat currency and switch into free market money. As a result, the exchange rate of fiat currency would depreciate against free market money.

What is more, as soon as goods are traded in free market money (which appreciates against fiat currency), goods prices denominated in fiat currency would go up, thereby debasing the *internal* purchasing power of fiat currency.

The state's fiat currency could be pushed out of the market, and in the extreme case it would be losing its purchasing power altogether if and when free market money turns out to be peoples' preferred money,

6. THE IDEAL OF SOUND MONEY

Sound money is an indispensable requirement for productive and peaceful cooperation of men under the division of labour, nationally and internationally; economic, social and cultural progress requires sound money, and so do individual freedom and liberty.

As Ludwig von Mises noted, sound money is the "[d]efence of the individual's liberty against the encroachments of tyrannical governments … ."[26] Viewed from this perspective, today's state-controlled fiat money regime is actually an assault on the free and liberal society. This is the rather uncomfortable truth revealed by a rigorous economic analysis.

The solution to the 'fiat currency problem' is, as is argued in this article, a free market in money, as envisaged by Hayek who noted: "I have come to the conclusion that the best

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[26] Mises (1953), The Theory of Money and Credit, p. 414.

the state can do with respect to money is to provide a framework of legal rules within which the people can develop the monetary institutions that best suit them. It seems to me that if we could prevent governments from meddling with money, we would do more good than any government has ever done in this regard. Moreover, private enterprise would probably have done better than the best they have ever done."[27]

The greatest hindrance towards a free market in money is undoubtedly not technological or economic feasibility but the *interest of the state*. The critical question is, therefore: *Will the state* (as we know it today) *ever agree to a free market in money, is a return to sound money actually possible?*

To answer this question, let us consider three conditional scenarios very briefly.

(1) In a world of 'many small and open states', with all of them ascribing to productive and peaceful cooperation, we can expect a healthy competition to unfold for capital and talents among the respective political entities. In such a world, there should be room for a free market in money to develop – as each small state has, in principle, an economic incentive to engage in the discovery of the 'best money'.

(2) In contrast, in a world of a 'few big states', the chance for a free market in money emerging appears to be relatively small: The few big states could easily cooperate and succeed in effectively suppressing the emergence of a free market in money (via taxation and regulation policies, for example). In the extreme case of 'one world state', the chances for a free market in money would be very small.

(3) If, however, a cryptocurrency becomes (*gradually over time*) a 'wholesale means of exchange', any state – whether large or small – would (*increasingly*) lose control over monetary affairs. This would also apply if commodity money such as gold (or silver) is made available for holding and transfer purposes on, say, the blockchain: Neither could the state manipulate the quantity of money proper, nor could it track the turnover.

Against this backdrop, we may conclude that a free market in money is possible as long as not all states in this world walk in lockstep; then there should remain some breeding ground which can bring forth sound money.

Perhaps just one smoothly-functioning prototype of free market money may suffice to inspire more and more people around the globe, making them wish to follow suit – especially when the next fiat currency crisis hits and people look out for sound money.

While digitalisation and digital transformation are by themselves powerful forces for monetary reform, we should by no means overlook that, at the end of the day, a return to sound money is an intellectual endeavour.

In this context we may wish to quote Hayek again, who wrote: "What we now need is a Free Money Movement comparable to the Free Trade Movement of the 19th century"… .[28] No doubt: A thorough understanding of the economic and ethical deficiencies of fiat

[27] Hayek (1976), Choice of Currency, p. 22.

[28] Hayek (1978), Denationalisation of Money, p. 133.

money, and the economic and ethical benefits provided by a free market in money, should increase the chances that people will ultimately succeed in returning to sound money. One of the most promising ‘money aspirants’ in a free market in money is, I dare to think, digitalised gold.

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