



# AMPHORA

COMMODITIES ALPHA

## IN THIS EDITION:

### BITCOIN: THE MONETARY TOUCHSTONE

*Created in 2008 by the mysterious 'Satoshi Nakamoto', in the past few months bitcoin has gone from a fringe financial technology topic to a mainstream media phenomenon. The debate is now raging as to whether bitcoin is, or is not, a sound form of alternative money. As the Amphora Report has, from inception, focused regularly on monetary theory and the financial market implications of activist central banking, in this edition I survey a handful of prominent, diverging views on bitcoin and then share some of my own thoughts. In brief, I believe that bitcoin's 'blockchain' technology enables a low-cost payments system capable of disintermediating the banking industry, but I do not believe bitcoin presents a viable, alternative store of value on par with gold. In any case, bitcoin serves as a monetary 'touchstone' of sorts, distinguishing those who lean toward economic and monetary authoritarianism from those who favour market-based organisation instead.*

#### TO UNDERSTAND BITCOIN ONE MUST FIRST UNDERSTAND MONEY

Satoshi Nakamoto, the initially mysterious and now legendary creator of bitcoin, finally became a mainstream celebrity last week, having been 'outed' by US periodical Newsweek. Many who have followed the bitcoin story, however, find Newsweek's claim rather dubious and instead believe that 'Satoshi Nakamoto' is a pseudonym adopted by either a single individual or team responsible for researching and publishing the original 2008 paper describing the specific, 'blockchain' algorithm behind bitcoin.

I have no strong opinion on Newsweek's specific claims, nor on who, or what group, created bitcoin, although I am curious, for reasons that will become apparent. More important is to understand whether bitcoin could function as a sound, alternative money.

To begin, we need first consider why an alternative money would ever be necessary in the first place. Well, repeatedly throughout history, due to financial pressures, governments have chosen to debase their coins or inflate their paper currencies to service or settle their debts, by implication appropriating the wealth of prudent savers in the process. Wars, for example can be expensive and most large debasements in history have occurred either during or following major wars, in particular in those countries on the losing side of the conflict. But even the winners can succumb, as Rome demonstrated in the 3<sup>rd</sup> century or as the victorious WWI powers did in the 1920s and 1930s.<sup>1</sup>

<sup>1</sup> There are those who fail to draw the connection between WWI and the currency debasements which followed. While it is easy to understand why the defeated powers ended up hyperinflating in the period 1919-1924—they were broke and had reparations payments to make—it is harder to see how WWI contributed to the devaluations of sterling and the dollar in the 1930s. However, a close look at the 1920s reveals that inflationary policies, including the fractionally-reserved 'gold exchange standard' were implemented to soften the economic blow of the immediate post-war period.

Savers fearful of potential future currency debasement or inflation therefore naturally seek alternatives for protection. Gold and silver have historically been the most obvious choices. When governments sought to debase coins passing through the Treasury by clipping or by minting new coins with less gold or silver content, the higher quality coins would be hoarded out of existence by savers, who would subsequently transact using the inferior coins instead.<sup>2</sup> In time, this would push up prices, as more and more economic agents became aware that the quality of the coinage had declined.

Another option for savers was to hoard foreign coins, for example, that were not being debased. This could restrict the amount of circulating medium in foreign countries, however, with deflationary effects on prices and possibly on output, something that the foreign governments might then seek to offset with debasement of their own. This could also lead to an aggressive 'race to debase', or 'currency war', which occurred in the 1930s, for example, and which is also arguably occurring again today, as James Rickards and others have argued.<sup>3</sup>

Gold and silver hoarding is hardly the only way in which savers can go about trying to store wealth during periods of debasement and inflation. In theory, any goods of value can be hoarded. Wealthy individuals tend to hoard fine art and wine, or prestigious property. Middle-class individuals can

However, these led to asset bubbles, in particular in the US, which burst in the early 1930s, inaugurating the Great Depression. FDR finally succumbed to the urge to debase the dollar in 1933.

<sup>2</sup> This was observed in practice by Sir Thomas Gresham and became the basis for his eponymous 'Law', that bad money drives good money out of circulation and into hoards.

<sup>3</sup> James Rickards, author of CURRENCY WARS, also has a much-anticipated new book coming out, THE DEATH OF MONEY.

purchase a modest home, or perhaps even a second home. Farmers can hoard their harvests for a time rather than release them directly into the marketplace. Producers of energy can do the same with oil and gas. Indeed, practically any business that holds inventory of any kind has the option to hoard some portion of that inventory, not in anticipation of increased real final demand, but merely as a hedge against debasement and inflation. Withholding goods from the marketplace in anticipation of higher prices in future rapidly becomes a self-fulfilling prophecy as it constitutes a negative supply-shock, contributing to 'stagflation', such as that of the 1970s in the US, Britain and a handful of other economies.

The problems with hoarding inventory, however, are numerous, and it is far better in the event that confidence in the official money declines for savers to have the option of just switching to an alternative. International businesses have some flexibility in this regard, switching their trading and invoicing between dollars, euros, yen or, increasingly, the yuan.

Unlike physical inventory, major currencies are fungible. Indeed, this is one of the definitions of money, that it is a convenient, efficient medium of exchange. Historically this has most frequently been metallic coinage. Why metallic coinage? Because metals were the most marketable commodities, accepted by everyone, everywhere, subject to a quick check of weight and authenticity in the event they were of dubious provenance.

The desire for an alternative money, therefore, is entirely natural when economic agents become uncertain as to the future purchasing power of any legally-mandated tender. In this regard, we should not be so surprised why bitcoin has skyrocketed from obscurity to prominence in such a short period of time, notwithstanding its tiny market share as a globally-available alternative medium-of-exchange. The context is key, and the current context of unusually high global uncertainty as to the future purchasing power of dollars or other fiat currencies is the ideal environment in which an upstart alternative can have a disproportionate impact. When combined with the perennial technological innovations of modern times, resulting in all but the oldest individuals now being comfortable with digital commerce for all manner of goods and services, why not a truly digital currency, created by computational power itself, to serve as the 21<sup>st</sup> century alternative medium of exchange?

## THE MONETARY TOUCHSTONE

How one feels about bitcoin tells us much of how one feels about money itself, making bitcoin a monetary 'touchstone' of sorts. Those who embrace it likely do so out of some combination of uncertainty around existing legal tender and embrace of technological solutions to problems. Those who disparage bitcoin, by contrast, most probably do so either because they trust the legal tender, obviating any perceived need

for an alternative currency, and/or because they are distrustful of technology as a solution. This could be due to a general distrust of technology, say in the case of Luddites who would prefer a simpler world absent of much if not all modern technology, or perhaps a distrust of market-based solutions, technological or otherwise.

For example, there are some who oppose the US Federal Reserve on the (entirely justifiable) grounds that its actions appear to favour large financial institutions over other economic actors, including most households; yet rather than replace the Fed with a market-based solution to money creation and interest rate determination, they think that the Fed, a federal agency, should be replaced by another agency instead, say the US Treasury for example.

Several prominent commentators have recently weighed in on this bitcoin debate, spanning the entire range of approval to disapproval. Before we review a broad, representative set of examples, let's start with the mysterious 'Satoshi Nakamoto', whoever he or she or they might be.

Satoshi Nakamoto was not the first to propose a so-called cryptocurrency, an idea that has been occasionally discussed in tech forms for years. However, s/he was the first to publish a practical solution to a problem: that of proof of ownership. The bitcoin algorithm includes a 'blockchain' linking bitcoins back to their origin, so that as bitcoins pass from person to person, their ownership remains certain and prevents the possibility of what could be termed 'crypto-counterfeiting' in which an individual would fraudulently exchange the same bitcoin with two or more other individuals simultaneously.

The blockchain is thus an objective way to verify ownership comparable in principle to when a physical coin passes from one person's hand to another in exchange settlement. However, there is an important and controversial difference: When a coin passes between individuals, they can identify one another. When bitcoins pass between individuals, they need never know one another. Indeed, some argue that with a sufficient degree of encryption, bitcoin commerce can be 100% anonymous.

This potential for anonymity became a hot topic of debate around the controversial website 'Silk Road', an online marketplace for controlled substances, including various drugs, that transacted in bitcoins. For supporters of anonymity, it was disturbing to learn of the website's demise when its alleged founder was arrested on various criminal charges. If bitcoin guarantees anonymity, how did the authorities find the perpetrator? More recently, a prominent bitcoin advocate known in the community as 'Bitcoin Jesus' has gone into hiding, claiming to be on the run from the US government for some unspecified, presumably bitcoin-related crime.

On the other hand, for those non-Libertarians embracing activist government regulation as an essential form of social protection, the more recent

demise of prominent bitcoin exchange Mt Gox has led to the opposite concern, that bitcoin's anonymous nature enables wholesale fraud without possibility of compensation for victims. It is in this social aspect of the bitcoin debate that it becomes more than just a monetary touchstone: It becomes a social touchstone for how you feel about societal organisation itself, not just the role of money within it. Thus it should be no surprise that Libertarian and non-Libertarian types tend to have quite different views on bitcoin.

With that background, let's now begin exploring the views of a broad, representative handful of prominent bitcoin commentators.

## JON MATONIS

[www.themonetaryfuture.blogspot.co.uk](http://www.themonetaryfuture.blogspot.co.uk)

Currently serving as the Executive Director of the Bitcoin Foundation, and having worked for years in e-money research, Jon Matonis was one of if not the earliest (non-pseudonymous) prominent champions of bitcoin. Indeed, he was active in the cryptocurrency debate long before bitcoin arrived on the scene and is thus on the record having anticipated the modern cryptocurrency phenomenon.

Given this background, it should be no surprise that Matonis is a huge fan of bitcoin and sees enormous future potential for a complete transformation of our monetary and financial system. He has a vision of a future in which spontaneous market competition creates competing cryptocurrencies and that perhaps, eventually, only a handful survive and become the dominant global media of exchange, entirely displacing today's national fiat currencies. For all intents and purposes, banks as we know them today will disappear, including central banks. The creation of money and the determination of interest rates would be largely unregulated, international and de-politicised. The bitcoin phenomenon is thus comparable or perhaps of even greater historical significance than the original, Lydian invention of coinage; the subsequent invention of deposit banking; and the more recent introduction of the modern, electronic money we all use today in some form, the credit (or debit) card.

Matonis goes even farther, however, envisioning what some detractors might disparagingly call a utopian 'monetary nirvana' in which bitcoin enables a comprehensive economic and social evolution to a new stage in civilisation, to the great benefit of humanity generally.

Regardless of whether you share Matonis' bitcoin enthusiasm and optimism, his website is a treasure trove of information and divergent opinions about bitcoin, not merely his own. As a first step for those genuinely interested in not only a thorough introduction but essentially comprehensive exposure to all things bitcoin, I strongly recommend you visit his website.

## MARC ANDRESSEN

As one of the most prominent innovators in the early internet age, Marc Andressen's view of bitcoin, when published recently in the New York Times, drew much attention from the wider tech community.

As an inventor of a famous disruptive technology in his own right—the Netscape browser—Andressen perceives a similar potential in bitcoin as an ideal internet-based payments system:

Bitcoin is the first Internetwide payment system where transactions either happen with no fees or very low fees (down to fractions of pennies). Existing payment systems charge fees of about 2 to 3 percent – and that's in the developed world. In lots of other places, there either are no modern payment systems or the rates are significantly higher.<sup>4</sup>

Even bitcoin's detractors normally acknowledge as much, as bitcoin does appear to have some promise as a low-cost payments system. We all know how broadband technology sank telecommunications costs to essentially nothing. Why shouldn't internet payments also cost essentially zero?

Andressen sees much potential for bitcoin and thinks it may catalyse a general transition from e-commerce based in dollars (or other national currencies) to e-commerce based in bitcoin. He is far from as sweeping in his perspective as Matonis, but this could be down to a relative unfamiliarity with the broader social concepts of money. That said, he does share a monetary insight which echoes that of founding Austrian School economist Carl Menger from the late 1800s:

It is perhaps true right at this moment that the value of Bitcoin currency is based more on speculation than actual payment volume, but it is equally true that that speculation is establishing a sufficiently high price for the currency that payments have become practically possible. The Bitcoin currency had to be worth something before it could bear any amount of real-world payment volume. This is the classic "chicken and egg" problem with new technology: new technology is not worth much until it's worth a lot. And so the fact that Bitcoin has risen in value in part because of speculation is making the reality of its usefulness arrive much faster than it would have otherwise.

Those familiar with the Austrian School will notice immediately in this quote that Andressen has apparently stumbled upon one aspect of the monetary 'regression-theorem' concept formalised by Ludwig von Mises in the early 20<sup>th</sup> century but originally postulated by Menger.

Andressen lists several other reasons to be bullish on bitcoin's future and his explicit endorsement has almost certainly influenced a

<sup>4</sup> Please see Andressen's NYT article [here](#).

sizeable portion of the tech community, long-since acclimated to the concept of disruptive technologies. As Andressen himself acknowledges, however, his views are less likely to have much influence if any on the mainstream economics community. And so it is to that we now turn.

## ROBERT SHILLER

As one of the best-known mainstream economists of his generation and a Nobel laureate to boot, Robert Shiller's take on bitcoin has naturally been the subject of much consideration within the academic and financial market community. He also recently published his views in the *New York Times*. His perspective is that of a mainstream neo-Keynesian economist, albeit one who has spent as much or more time studying financial markets specifically rather than the economy generally. (As an aside, isn't it curious that the *New York Times*, hardly an innovative, cutting-edge tech source, seems to have gone on a bitcoin binge of late. One wonders why.)

Shiller is not at all optimistic about bitcoin specifically and in fact thinks that the current level of hype is misguided. The ultimate reason for this view he explains early in his article thus:

The central problem with Bitcoin in its present form...is that it doesn't really solve any sensible economic problem. Nor should it substitute for banks and the governmental institutions that regulate them. They are reasonably effective institutions, despite their flaws, and should not just be scrapped and replaced by a novel electronic system.

He then goes on to specify that existing currencies work well as both media of exchange and stores of value. Well, if one doesn't see a problem with state-mandated legal tender in the first place, then naturally one sees little if any value in an alternative, in particular one that has invited a huge degree of pure speculation relative to any current practical use.

Somewhat curiously, perhaps, despite these sentiments, Shiller does see value in the broader debate around bitcoin. He draws particular attention to the concept of money as a unit of account and believes that there is substantial future promise for synthetic units that can serve valuable social functions. As an example, he cites Chile's inflation-indexed *unitado de fundato* (UF) or unit of development. This national reference point permits coordinated indexing to domestic price inflation, simplifying certain forms of economic calculation in which price inflation is a material risk factor.

Shiller then suggests that price baskets in general could be used as units of account. He thus appears to be drawing from Keynes, who advocated a commodity basket currency he termed a 'bancor' and from Prof Jeffrey Frankel, who has done much theoretical work in the commodity-basket-currency area. He then goes one step further, suggesting that

a useful electronic unit of account could also reference national account statistics, such as GDP or GNP, which rank among the most complicated economic statistics of all, subject to a large amount of estimation error and other possible flaws.

All of Shiller's proposed electronic units of account are, therefore, artificial constructs that would need to be specified and subsequently updated by some person or group of persons relying on an agreed statistical sample of certain identifiable and estimable if not precisely measurable variables. He indicates no role whatsoever for a natural, market-based process to determine the units most desired. As such, he is coming from a most different perspective than Andressen or Matonis, one that requires a thick layer of bureaucratic intermediation.

Those distrustful of bureaucrats—always subject to some degree of political influence—to determine monetary convention and set interest rates are likely to reject Shiller's view from the outset. However, the current academic and policy mainstream, focused as it is on the core Keynesian precept of the necessity of a bureaucratic- rather than market-based money and monetary policy, is likely to consider Shiller's observations as a potentially useful way to incorporate bitcoin's technological innovation into their existing economic paradigm.

## HUGO SALINAS-PRICE

(www.plata.com.mx)

A highly successful Mexican businessman, Hugo Salinas-Price has been active for decades in the cause of promoting sound money for Mexico. In more recent years he has broadened his activities to promote sound money around the world, drawing up plans for how governments could remonetise gold or, as he would recommend, silver.

Back in early 2012, while on business in Mexico, I conducted an interview with Mr Salinas-Price for publication in a special edition Amphora Report. He explains his silver plan thus:

My focus is on silver, because silver was formerly always the money of the great majority of the population in every country of the world. It has been and can again be money for everyday use and which can be saved by almost everyone. Silver is the ideal medium for 'micro-savings', for millions upon millions of savers who can put away small amounts, day by day, and build up a personal or family capital which can be passed on to the next generation.

We have a tragic impoverishment of enormous numbers of humanity whose attempt at savings is continually undermined by the devaluation of paper money - its loss of purchasing power. We have to put a stop to this, out of justice and - self-interest, too: the wider the breach between rich and poor, the more dangerous life becomes for all. (Ed. note: Eminent historians Will and Ariel Durant observed that

nearly all revolutions have occurred alongside extreme disparities in wealth.)

The above quote should make clear why, in principle, Mr Salinas-Price is a strong advocate of a monetary alternative to the national fiat currencies of today. QE and related stimulus policies have coincided with a tremendous surge in wealth disparity across most of the developed world, as money has flowed primarily towards those who already held substantial assets when the global financial crisis arrived in 2008.

However, as he has made clear in a recent comment, bitcoin is not a satisfactory monetary alternative. Indeed, he argues that bitcoin is not money at all, nor is there any realistic chance of it becoming so:

An interesting point about the Bitcoin is that it is so important for it to have a price in dollars; it has had various prices, all totally speculative.

I should like to point out that when real money – gold – was in use in the world, *it had no price*. All national currencies were only certain various amounts of gold, with various national names.

The Bitcoin as a “digital currency” is an example of the enormous confusion which reigns in the world, regarding what money is and must be. Money – authentic money – must be the most marketable of all commodities. This is why gold is money! Silver follows in second place. The Bitcoin cannot be money because it is digital. Since it is merely a digit, which is as close to nothing as one can get, it cannot *settle* any debt.<sup>5</sup>

Well that is a rather categorical critique of bitcoin and I think it would be difficult to convince Hugo Salinas-Price or anyone dismissing the entire concept of intangible money that bitcoin has any future as a monetary alternative. As it happens, there are many prominent economists of the Austrian School who completely agree and insist that, were money determination left to the marketplace, rather than imposed by governments from above, gold and silver would invariably be chosen as money, as indeed they have been since the beginning of recorded history.<sup>6</sup>

## DETLEV SCHLICHTER

www.detlevschlichter.com

There are prominent Austrian School economists, however, who do not dismiss bitcoin out of hand but rather see it as something that, in key respects, satisfies the core Austrian School requirements for sound money.

<sup>5</sup> OF PAPER MONEY, DIGITAL MONEY AND GOLD, by Hugo Salinas-Price, 7 March 2014. The link is [here](#).

<sup>6</sup> It is true that there is much evidence of relatively primitive societies using local commodities as a form of money, in particular agricultural products such as carob, cocoa or soyabeans. Seashells have also served. However it should be noted that in every single historical instance in which these societies came into commercial contact with other societies, they quickly adopted gold and silver as the preferred stores of value, even if they continued to employ the domestic commodity for day-to-day domestic trade.

In a recent article, *BITCOIN HAS THEORY AND HISTORY ON IT'S SIDE*, Detlev Schlichter lays out what I believe is the correct framework for considering the prospects for bitcoin and for cryptocurrency technology generally:

Any proper analysis has to distinguish clearly between the following layers of the Bitcoin phenomenon: 1) the concept itself, that is, the idea of a hard crypto-currency (digital currency) with no issuing authority behind it, 2) the core technology behind Bitcoin, in particular its specific algorithm and the ‘mining process’...

Before we look at recent events and recent newspaper attacks on Bitcoin, we should be clear about a few things upfront: If 1) does not hold, that is, if the underlying theoretical concept of an inelastic, nation-less, apolitical, and international medium of exchange is baseless, or, as some propose, structurally inferior to established state-fiat money, then the whole thing has no future. It would then not matter how clever the algorithm is or how smart the use of cryptographic technology. If you do not believe in 1) – and evidently many economists don’t (wrongly, in my view) – then you can forget about Bitcoin and ignore it.

If 2) does not hold, that is, if there is a terminal flaw in the specific Bitcoin algorithm, this would not by itself repudiate 1). It is then to be expected that a superior crypto-currency will sooner or later take Bitcoin’s place. That is all. The basic idea would survive.<sup>7</sup>

We can use Schlichter’s framework, (1) and (2), to summarise the previous bitcoin advocates and detractors:

- Jon Matonis clearly sees the need for a monetary alternative and believes that both the concept of cryptocurrencies generally (1) and the specific properties of bitcoin are solid and have a bright future (2);
- Marc Andressen sees vast potential for bitcoin as a disruptive financial technology (2). He is agnostic, however, as to whether there is a need for an alternative money (1);
- Robert Shiller sees no need for an alternative money (1) but does see a role for widespread use of price- and other index algorithms in facilitating the use of existing state-fiat media of exchange (2);
- Hugo Salinas-Price sees a vital need for an alternative to state-fiat but dismisses the entire idea of intangible money (1), thus the specific qualities of the bitcoin algorithm (2) are irrelevant to any monetary application.

Schlichter then goes on to offer his own thoughts on bitcoin’s potential. First, he observes that several recent attacks on the bitcoin concept are essentially baseless in that they assume that the existing

<sup>7</sup> This article can be found at [www.detlevschlichter.com](http://www.detlevschlichter.com).

monetary order is functioning well. This assertion is increasingly tenuous post-2008 even though the economic mainstream continues to defend it. Robert Shiller falls into this category but he did leave open a door to algorithms augmenting the core of what he believes is a robust monetary system.

Second, as is the case with Salinas-Price, Schlichter points out that our current monetary system is quite young and that some historical perspective is in order. Unbacked state fiat money has existed for only about 40 years, a mere bat of the historical eyelash. Indeed, the human eye has regarded gold (or silver) as money for 99% of history, and all previous experiments with unbacked fiat, without exception, have ended in failure and a subsequent *de jure* or *de facto* remonetisation of gold and silver. Contemporary economists, including Shiller, who claim that state fiat is a robust system, have scant historical evidence at their disposal. Indeed, any objective look at the evidence strongly implies the opposite is true.

Third, and this is really the key point, Schlichter cogently argues that bitcoin far more closely resembles gold than state fiat money, subject as the latter is to state manipulation and control:

Bitcoin – just like a proper gold standard – does not allow for discretionary manipulation of the monetary base. There was no ‘monetary policy’ under a gold standard, and there is no ‘monetary policy’ in the Bitcoin economy. That is precisely the strength of these concepts, and this is why they will ultimately succeed, and replace fiat money.

It should be no surprise that Schlichter sees through all the rhetoric and hyperbole on all sides of the bitcoin debate. His first book, *PAPER MONEY COLLAPSE*, begins with the theoretical observation that what separates paper money from gold or silver is the elastic nature of its supply. This opens up paper money to political manipulation and, sadly, corruption. As discussed above, the historical record on this is as clear as can be.

Regardless of how one feels about an intangible money, you can’t deny that the bitcoin algorithm strictly determines its supply according to an inviolable and entirely transparent rule whereby new bitcoins are ‘mined’ into existence. Applying Schlichter’s approach, the entire bitcoin debate thus reduces quickly, to those like Shiller, who simply regard bureaucratic money as superior, and those like Matonis or Salinas-Price, who would prefer to do away with the monetary bureaucracy completely.

Schlichter does not go so far in his article as to advocate bitcoin specifically as a preferred monetary alternative (although over lunch a few weeks back he did refer to bitcoin as ‘ingenious’). But it appears that he would in principle prefer a bitcoin-centric monetary system over that we currently have.<sup>8</sup>

<sup>8</sup> I should disclose at this point that Detlev is a personal friend with whom I maintain a regular correspondence. The reader is free to

By ‘in principle’ I refer to another key point on which I completely agree: If you hold, as Schlichter and other economists of the Austrian School do, that the ideal money is that determined spontaneously by market-driven exchange processes, rather than by state edict, then it becomes not just presumptuous but even theoretically inconsistent to claim precisely what that money should be.

If the market chooses gold, fine. If both gold and silver, fine. If cocoa beans, peppercorns or seashells, fine. And if bitcoin or another cryptocurrency, well that’s fine too. If it so happens that a given money isn’t performing adequately, well then the market will sort that out in short order, just as it does with uneconomic activities generally, rendering inefficient firms bankrupt, reordering the capital and labour stock, and moving on via creative destruction to more efficient production and innovation. Money is no exception to the fundamental laws of human action and free exchange: As with all economic goods, it is best provided by the marketplace itself, not by a government agency.

## NOW, IT’S MY TURN

Having evaluated these various pro-, anti- and maybe-bitcoin arguments, it is now my turn to weigh in. Although I do agree with Detlev that fiat money is flawed and that a non-manipulable, non-state money is highly desirable, I strongly believe that, when one goes one step farther and directly evaluates bitcoin and gold as potential monetary rivals, a free society, absent legal tender laws or other restrictions on money, would favour gold (or silver) over bitcoin and cryptocurrencies generally.

**First, I think it is important to distinguish clearly between the medium-of-exchange and store-of-value roles of money.** Indeed, this was one of the first topics I covered in the *Amphora Report* back in 2010.<sup>9</sup> There can be no doubt that bitcoin is an innovative medium-of-exchange that, in principle, can bypass the existing payments system. In this sense, **bitcoin is a disruptive technology that, if so allowed by regulators, would render a huge portion of transactional banking unprofitable**, ranging from credit cards to bank transfers. Unless your bank charges you for making deposits and withdrawals, how could it make money from your future transactions if you first withdraw funds, purchase bitcoins and transfer them instead? And if the counterparty, on receipt of the bitcoins, sells them and deposits the currency proceeds in the bank, then their bank can’t earn any transactional fees either.

**It is highly likely that some smart people working in strategic planning at banks are already aware of this danger. They are probably also aware that, if banks can’t make money from**

determine whether my comments here are in any way so biased in his favour.

<sup>9</sup> Please see IS MONEY A STORE OF VALUE? *Amphora Report* vol. 1 (March 2010). The link is [here](#).

**processing transactions, they will have to make more money from idle deposits.** But with interest rates on most types of accounts already near zero, how are banks going to do that, absent charging depositors to keep their money? And if banks start charging depositors, what are depositors going to do? Why, they will look for alternatives to traditional banking, such as using bitcoins or other cryptocurrencies instead!

**Do you see the vicious circle here? Absent regulatory action to impede or prohibit cryptocurrency use, or to somehow subsidise the banks, cryptocurrency-based payments services are going to disintermediate the existing, bank-centric payments system.** And it doesn't really matter which services gain market share. Indeed, the fact that bitcoin has invited as much competition as it has, as fast as it has, is strong evidence that **those entrepreneurs familiar with the economics of disruptive technologies are now behaving like sharks that smell blood (profit).**

**For all their promise as highly efficient means of payment, however, I am unconvinced of cryptocurrencies' collective role as a store of value. In fact, it is precisely their suitability for use as an inexpensive, alternative payments system that, in my opinion, undermines their ability to provide a store of value.**

**Why should that be? Although bitcoin and other cryptocurrencies are based on entirely transparent algorithms that strictly regulate their supply, there is nothing that regulates their replication. There might be only one blockchain for each currency, but there is no limit on the number of blockchains that can be created at will to satisfy growing demand.** As one blockchain is preferred and gains market share, speculators may enter and drive the price higher. But beyond a certain point, around the speculative margins that exist in all markets, substitution effects will kick in and some will switch into a rival cryptocurrency, programmed into existence at minimal cost, then another, then another... in a process that need never end.

This process, if market-driven, can be entirely self-regulating, providing for an endlessly growing supply of nearly costless-to-create, competing media of exchange, based on replicate algorithms, each with its own blockchain. But do you now see the problem? **A dynamic aggregate of replicate, competing blockchains would have a highly ELASTIC supply, not one strictly limited. In fact, the supply is theoretically infinite, more infinite than grains of sand, drops of water, molecules of oxygen or, indeed, any other substance on earth or, for those who think even more broadly, in the entire universe. The cyber 'universe' is, by its very nature as a creation of the human mind rather than a naturally occurring substance, infinitely larger than the physical universe, vast as it is.**

Gold or silver, by contrast, are strictly limited in supply, regardless of price, and cannot be replicated. Sure, they can be exchanged for one another and also for other substances, such as copper or nickel, to use two real-world coinage examples. But regardless of which of these are used, note what they all have in common: They have a production cost. Indeed, they are expensive to locate, pull out of the ground, refine and cast. Only when their market prices are sufficiently high does their production expand and, as supply rises to meet demand, their prices then stabilise. In other words, metallic monetary systems are also self-regulating, but in a context of real-world physical supply constraints and associated costs, rather than a cyber-world of no theoretical supply constraints and the minimal costs associated with a few strokes on a keyboard and the imagination to conceive a new crypto 'brand'.<sup>10</sup>

**A second theoretical problem I have with cryptocurrencies as stores of value is that of physical security.** I'm not talking here about the potential for fraud and abuse, which exists and will always exist where human exchanges take place. Rather, **I'm talking about the ability of an authority of some sort, say one with the ability to operate entirely in secret, to trace blockchains as desired, from place to place, and to hack in to systems as required to effectively confiscate these in the event that the authority deems their use to be criminal or politically undesirable.** While I don't in any way condone criminal behaviour, I appreciate why criminals prefer physical over electronic cash, or physical gold or silver for that matter, as these exchanges are anonymous vis-à-vis third parties, even if not at all anonymous between the two parties involved in the transaction.

**Some claim that encrypted bitcoin ensures complete anonymity vis-à-vis not only the parties to a transaction but also third parties. In my opinion the opposite is true. The blockchain, if traced by sufficient computing power, provides a complete record of all transactions that can then be used or abused as desired by the authorities, who most probably could also covertly confiscate bitcoins or render them effectively unusable.**

**However, if the authorities want to confiscate your gold, for whatever reason, they are going to have to make a rather public matter out of it.** If you keep some gold in a safe at home, they are going to have to break into your house. If you have it buried in your garden, they are going to have to trespass on your property in order to dig it up. **Physical gold stored in a neutral jurisdiction, such as Singapore or Switzerland, will not be released to foreign authorities without extensive, public evidence of criminal wrongdoing.** And even

<sup>10</sup> For those familiar with the concept of elasticity in economics, gold and silver supply are demonstrably highly price inelastic, whereas theoretical blockchain supply is highly price elastic. As stability of supply is an essential feature of sound money, this factor alone argues strongly in favour of precious metals generally vis-à-vis blockchain technology as an alternative store of value.

then, it might only be released following public trials in public courts. In this sense, **gold is a sort of monetary *habeus corpus*: There is no easy way for authorities to confiscate physical gold short of extensive, public legal action, including a presentation of the specific charges. Bitcoins, however, can be electronically ‘reassigned’.**

**Finally, I believe that there is a third important reason why gold and silver are likely to win out over bitcoin in the marketplace for money, namely culture and religion.** Cultures don’t change overnight, they evolve through the generations. The same could be said of major religions, each of which has a core canon of beliefs but one that, around the edges, can change over long spans of time. **As Hugo Salinas-Price observes correctly, you don’t just convince people overnight to use something new as money.** Referring to Austrian School economist Ludwig von Mises, he writes that:

[N]o fiat currency has ever been successfully introduced into circulation without a monetary value ultimately derived from when that currency was gold or silver money. Bitcoin does not fill the bill; it cannot circulate along with the established fiat currencies of the world because it has no history, no ancestry reaching back to its parent, gold or silver.

The late Roy Jastram, who’s magnum opus *THE GOLDEN CONSTANT* is regarded as a modern classic amongst the gold investment community, opined that the reason why of all substances gold came to be money went beyond any purely rational explanation as to gold’s unique physical properties.

I believe that Jastram was on to something. And I believe that Hugo Salinas-Price, Detlev Schlichter and Austrian School economists generally are on to something too. That something is human nature. **As Lord Acton observed, power tends to corrupt; absolute power corrupts absolutely. By corollary, monetary power tends to corrupt; absolute monetary power corrupts absolutely. So now I lay my monetary cards on the table: As I write in *THE GOLDEN REVOLUTION*, no form of money “can possibly replace that which transcends all government, all laws, and, indeed, all things created by man.”**

## CONCLUSION: TOWARDS A CRYPTO-GOLDEN SYNTHESIS?

While I fully acknowledge bitcoin’s vast potential as an alternative payments system to disintermediate much of the increasingly archaic, dysfunctional, ‘too-big-to-fail’ banking system, I have also described several reasons why I do not believe that it will displace gold or precious metals generally as the preferred alternative stores of value, at least not on a relevant time horizon. This raises the question, therefore, of whether it might be possible to somehow combine the two in a way that instantaneously

‘sweeps’ cryptocurrency proceeds directly into allocated gold, at some market-determined exchange rate. That is, if you would like to transact in bitcoin but save in physical gold, is there a way in which to do so without using a fiat currency as an intermediate step?

While the technology to provide for some form of ‘gold-backed’ bitcoin almost certainly already exists—or if it does not, a patent application is probably pending—the question is whether the legal-tender authorities would ever allow this. After all, payments systems compete with banks but don’t compete with purely monetary power, at least not directly. Gold does. It will be interesting to see what happens when the first ‘crypto-gold’ service is launched, perhaps in a friendly monetary jurisdiction such as Singapore or Switzerland. If the local authorities allow it to go ahead, will residents of other countries adopt the service? If they do, will their domestic authorities try to prevent them in some way?

From the perspective of the state, the power to inflate is the power to tax. States do not take kindly to a reduction in their power to tax. Arguably, blockchain technology, if employed as state-mandated legal tender, would in fact *increase* the power of the state to tax, as taxes could be automatically withheld from the blockchain for each and every transaction according to some algorithm; or alternatively the blockchain authority could earn seignorage income as the supply grew.

*Aspiring totalitarian regimes (and science fiction writers) take note: Use of physical cash or any unauthorised form of electronic exchange can simply be criminalised with severe penalties and replaced by ‘PatriotCoin’. The PatriotCoin withholding algorithm can be modified so as to exempt favoured individuals or qualifying transactions. State employees can share out any seignorage income, as befits their privileged status. Children can be assigned personalised PatriotCoin serial numbers at birth and retain these until death, when they pass to their children...*

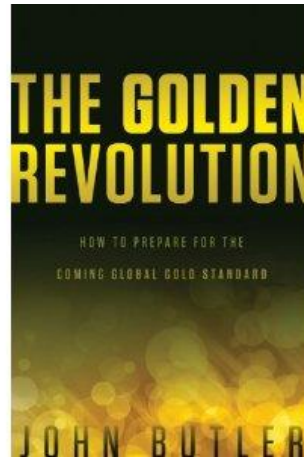
Is this where we are going? Who knows? As is the case with gold and silver on the one hand, and debasement and fiat on the other, the war between economic liberty and authoritarianism never ends. And it certainly won’t end with bitcoin.

## A QUICK WORD ON AMPHORA

Regular readers of this Report are aware that Amphora provides a commodity-focused advisory service to institutions and high net worth investors around the world. Having added new resources of late, we are looking to accelerate our growth and are open to the possibility of a strategic partnership to expand our client base. We encourage those who see value in a potential collaboration to consider reaching out to us at [info@amphora-alpha.com](mailto:info@amphora-alpha.com)

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*"John Butler provides much illuminating detail on how the world's monetary system got into its present mess. And if you're wondering what comes next, this is the book to read."*

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More Praise for *THE GOLDEN REVOLUTION*:

*"John Butler has written an indispensable reference on the subject of gold as money. His book is a combination of history, analysis, and economics that the reader will find useful in understanding the use and misuse of gold standards over the past century. He breaks the book into a long series of essays on particular aspects of gold that the reader can take as a whole or in small bites. It is technical yet accessible at the same time. The Golden Revolution is a useful and timely contribution to the growing literature on gold and gold standards in monetary systems. I highly recommend it."*

—James Rickards, author of the *New York Times* bestseller *Currency Wars: The Making of the Next Global Crisis*

*"In The Golden Revolution, John Butler makes a powerful case for a return to the gold standard and offers a plausible path for our nation to get there. Enlightened investors who blaze the trail will likely reap the greatest reward. For those still wandering in the dark, this book provides necessary light to keep you headed in the right direction."*

—Peter Schiff, CEO, Euro Pacific Precious Metals; host of The Peter Schiff Show; and author of *The Real Crash: America's Coming Bankruptcy—How to Save Yourself and Your Country*

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—Axel Merk, Merk Funds; author of *Sustainable Wealth*

*"The Golden Revolution is another indispensable step on the road map back to sound money. John Butler's experience of the modern 'fiat' banking world, combined with his understanding of the virtues of a disciplined monetary system, allow for genuine insight into the practical steps that could, and surely will, be taken to reestablish gold as money."*

—Ned Naylor-Leyland, Investment Director MCSI, Cheviot Asset Management

*"Ex scientia pecuniae libertas (out of knowledge of money comes freedom). John has used his exemplary knowledge of money to lay out a cogent framework for the transition of society based on fiat money to a more honest society forged by gold. He has taken complexity and given us simplicity. Monetary economics and its interrelationship with geopolitics, finance and society is extraordinarily complex, but he has managed to assimilate a vast array of information and distill it in a simple and thoughtful framework. That is an art many academic writers never achieve."*

—Ben Davies, cofounder and CEO, Hinde Capital

## AMPHORA: A ceramic vase used for the storage and intermodal transport of liquid and dry commodities in the ancient Mediterranean.

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John Butler, a former managing director at Deutsche Bank and Lehman Brothers, has advised many of the world's largest institutional investors, sovereign wealth funds and central banks on macroeconomic investment and portfolio strategy. He is the founder and managing partner of Amphora Capital, a boutique investment and advisory firm. He has 20 years' experience in the global financial industry, having worked in London, New York and Germany and has been a #1 ranked research analyst in the annual Institutional Investor research survey. He is the author of *The Golden Revolution* (John Wiley and Sons, 2012), and his research has been cited by the *Financial Times*, *Wall Street Journal*, *Frankfurter Allgemeine Zeitung*, *De Telegraaf*, *Milano Finanza* and the *Nikkei Shimbun*. He is a regular contributor to various financial publications and websites and also an occasional speaker at investment conferences around the world.

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