



DK Analytics, Post #23: Precious metals versus cryptocurrencies (“cryptos”) and “good” money 12/11/2017 Trade weighted US\$: 89.34; US 10-yr: 2.38%; S&P 500: 2,665; Oil: \$57.930; Gold: \$1,245; Silver: \$15.75

The electronic positive feedback loop-based mother of all bubbles, which is still [bubbling](#)?

“[Bitcoins are intrinsically valueless; their worth is decided by those trading in them](#)”

“Meet CryptoKitties, the \$100,000 digital beanie babies epitomizing the [cryptocurrency mania](#)” (Beam me up, Scotty!)

All ▾	Coins ▾	Tokens ▾	USD ▾	Next 100 →	View All		
#	Name	Market Cap	Price	Volume (24h)	Circulating Supply	Change (24h)	Price Graph (7d)
1	Bitcoin	\$277,258,935,850	\$16,568.50	\$13,131,300,000	16,734,100 BTC	17.44%	
2	Ethereum	\$44,646,793,140	\$463.76	\$1,375,420,000	96,270,917 ETH	4.31%	
3	Bitcoin Cash	\$23,393,322,960	\$1,388.37	\$849,443,000	16,849,488 BCH	6.11%	
4	IOTA	\$11,879,378,886	\$4.27	\$470,895,000	2,779,530,283 MIOTA *	1.30%	
5	Ripple	\$9,598,281,701	\$0.247767	\$180,813,000	38,739,144,847 XRP *	4.89%	
6	Litecoin	\$8,841,611,239	\$162.97	\$1,121,380,000	54,252,333 LTC	17.97%	
7	Dash	\$5,568,691,213	\$718.86	\$172,898,000	7,746,559 DASH	5.82%	
8	Bitcoin Gold	\$4,139,879,029	\$247.89	\$240,396,000	16,700,199 BTG	13.51%	
9	Monero	\$4,026,486,961	\$260.63	\$135,864,000	15,449,232 XMR	9.22%	
10	NEM	\$3,838,437,000	\$0.426493	\$63,558,100	8,999,999,999 XEM *	14.07%	

Source: <https://coinmarketcap.com/>

Introduction:

What is money? It is the general medium of exchange, the thing that all other goods and services are traded for, the final payment for such goods and services in the marketplace. Money and currency are related, but not synonymous. Currency is a derivative of money. A good currency, in a fractional reserve banking world, is a “beefy” derivative of good money, i.e., is [substantially backed by same](#). Derivatives have no direct value in and of themselves.

Looking under the money and currency hoods:

Good money eliminates the need to barter. It is the [ultimate medium of exchange](#). Its worth is steadfast in a wobbly world. True money is backed by timeless confidence in it [established over generations](#). It has the following attributes:

1. It is a store of value for time spent engaged in productive labor; it holds its purchasing power and protects [property](#)
2. It represents or comprises [rare](#), universally aspirational, non-corroding/limitless “shelf life” goods/commodities
3. It has a well-established intrinsic value “on its own,” i.e., before “it” was used as money, such as gold and silver
4. It is fungible; it can be traded for something else of the same kind, e.g., “silver is silver” and “a buck is a buck”
5. It is divisible; unlike a work of art such as a painting or a statue or precious stones such as diamonds or rubies
6. It is readily portable, easy to use, and a rapid medium of exchange, unlike real estate or bulky commodities/goods
7. It is broadly accepted and sought after *globally* by bankers, makers, merchants, workers, and consumers alike
8. It is stable, simple, and efficient -- the antithesis of [complex](#), [unstable](#), and [inefficient](#) “[multi wallet](#)” concepts
9. It is an anonymous, secure medium of exchange protected by the [US Constitution](#); only those involved need know
10. It is not someone else’s liability, i.e., the antithesis of a modern-day fiat currency, *which is a debt-based token used illegitimately as money*; think of central banks’ monetary base expansion via bond purchases. If fiat currency is also digital -- 89% of [US M2](#) and a similar percentage in other OECD nations as of [12/2016](#) was non-notes/coins-based currency -- it, by definition, is also no longer [anonymous](#) nor property rights-protecting, and [getting ever less so](#)! Which brings us back to precious metals, the only good, true, and timeless forms of money.

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Historically, currencies were claims to money, not to debt, and money was **gold and silver**, which provided a **stable measure of value**. Historically, **precious metals-based monetary regimes** enabled **stout growth, productivity-based deflation** (the ultimate wealth of nations' trajectory -- and what a true growth stock is all about, "dear Keynesians"), and **sound property right protections**. The aforesaid is integral to a robust, free market capitalist system, itself known to create more wealth and freedom for more people than any other economic system in the world. Alan Greenspan explained it well long before he became the "spiked Kool Aid drinking," all-powerful, fiat currency Fed chairman:

In the absence of the gold standard, there is no way to protect savings from confiscation through inflation. There is no safe store of value. If there were, the government would have to make its holding illegal, as was done in the case of gold. If everyone decided, for example, to convert all his bank deposits to silver or copper or any other good, and thereafter declined to accept checks as payment for goods, bank deposits would lose their purchasing power and government-created bank credit would be worthless as a claim on goods. The financial policy of the welfare state requires that there be no way for the owners of wealth to protect themselves. This is the shabby secret of the welfare statist's tirades against gold. Deficit spending is simply a scheme for the confiscation of wealth. Gold stands in the way of this insidious process. It stands as a protector of property rights. If one grasps this, one has no difficulty in understanding the statist's antagonism toward the gold standard. [Alan Greenspan, 1966](#)

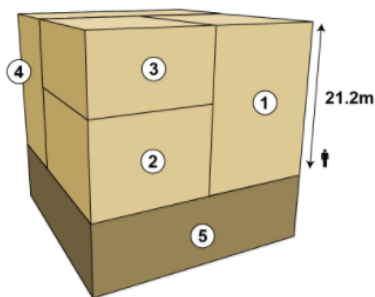
Moreover, since the industrial revolution hit its powerful stride in the US late in the 19th century, the global above ground gold and silver stock has been expanding at between 1% - 2% (albeit with large short-term fluctuations due to "gold and silver rushes"). This happens to parallel achievable long-term real economic growth of 1% - 2% p.a., itself a function of population growth and productivity, or lack thereof. Plus, going forward, we are highly unlikely to see, especially not at current precious metals (PM) prices and given current technology, a spike in PM extraction, arguably making monetary base expansion tethered to increases in newly available above ground PM supplies sounder still; let the money multiplier and the velocity of money determine tactically how much monetary base expansion will find its way into our fractional reserve banking-based money supply. (And if there is a hugely compelling need for central banks to increase the size of their monetary bases, let them Hoover up a portion of the substantial above ground gold holdings by bidding up its price, instead of bidding up the price of government bonds, agency bonds, and stocks!)

How much gold has been mined?

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The best estimates currently available suggest that around 187,200 tonnes of gold has been mined throughout history, of which around two-thirds has been mined since 1950. And since gold is virtually indestructible, this means that almost all of this metal is still around in one form or another. If every single ounce of this gold were placed next to each other, the resulting cube of pure gold would only measure around 21 metres on each side.

Total above ground stocks



Total above ground stocks: 187,200 tonnes

1. **Jewellery:** 89,200 tonnes, 47.6%
2. **Private investment:** 40,000 tonnes, 21.4%
3. **Official sector:** 31,500 tonnes, 16.8%
4. **Other:** 26,500 tonnes, 14.2%
5. **Below ground stocks:** 57,000 tonnes

Source: GFMS, Thomson Reuters, US Geological Survey, World Gold Council

Each year, global **gold mining** adds approximately 2,500-3,000 tonnes to the overall above-ground stock of gold. While gold production has shown an upward trend in recent years, this is likely to level off in coming years.

Source: www.gold.org/about-gold/gold-supply/gold-mining/how-much-gold-has-been-mined

Notable: 187.2K metric tons * 32,151 = 6.02bn Troy oz; current value: \$7.5trn; est. 57K MT of below ground stocks subject to revision at higher prices/improved tech.

If *global* monetary base growth is again tethered to the **discipline of above ground PM holdings growth, the invisible hand of Adam Smith** and Schumpeter's **creative destruction** will inevitably conspire to rein in excesses, misallocations, and destabilizing debt growth much more quickly than more statist or "politburo" interventions, which typically cause, sustain, and amplify economic distortions. It would also set the stage for renewed, productivity-laced growth -- much like forest fires **regenerate forests**. In a related manner, freed of the encumbrances of central planning, the demand for money (the multiplier) and the number of times a unit of money is spent (the velocity) will be far superior, "natural"

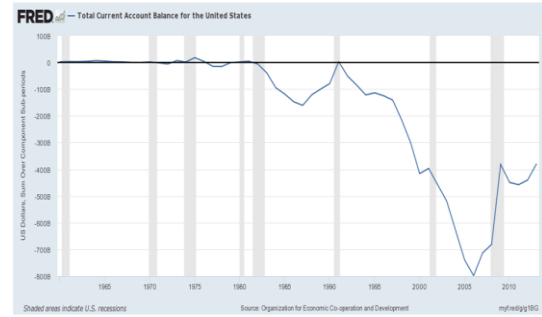
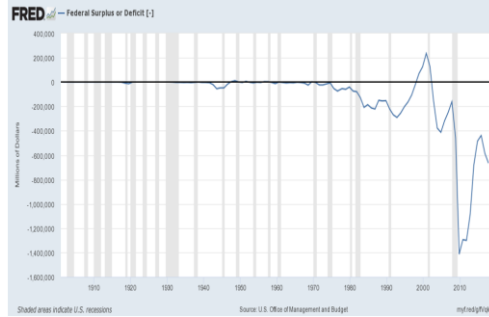
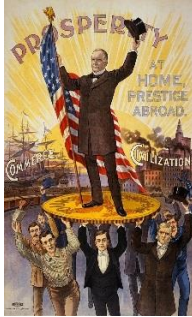
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economic distortion shock absorbers while preventing the accumulation of increasingly sizable economic deadwood -- misallocations, waning productivity, debt, etc. Call it avoiding a “toxic public policy stew harvest” from the outset!

In a nutshell,
back to this:

And away from this (since Nixon ended the dollar gold standard in 1971):



If fiat currencies at the monetary base level, the origin of the money supply in fractional reserve monetary systems, could again be collectively tethered to the discipline of above ground gold and silver holdings in place of the arrogance, ignorance, and despotism of statist central bankers/central planners, a return to a constructive “wealth of nations” trajectory would again be a possibility. While we don’t face the aftermath of WWI, we do face unprecedented “modern age” economic and political mismanagement. Let’s see how Keynes, the co-author of “Bretton Woods,” thought about reviving the global economy on the heels of WWI (yes, Virginia, we do see some parallels today!):

If gold standards could be reintroduced throughout Europe we all agree that this would promote, as nothing else could, the revival not only of trade and production, but of international credit and the movement of capital to where it is needed most. One of the greatest elements of uncertainty would be lifted. One of the most vital parts of prewar organization would be restarted, and one of the most subtle temptations to improvident national finance would be removed; for if a national currency had once been stabilized on a gold basis, it would be harder (because so much more openly disgraceful) for a finance minister to so act as to destroy this gold basis. John Maynard Keynes, 1922

Cryptos: can they become money or are they electricity junkies-based digital illusions of wealth?

Numerous pundits have remarked that the perpetually rising cryptos, led by Bitcoin, reflect hugely declining trust in (other) fiat currencies such as the dollar, the yuan, the euro, and the yen, which together currently comprise a dollar-based global M1 money supply of approximately \$26trn. With crypto speculation currently exceeding \$400bn amidst a 15-fold plus YTD rise in the market cap of quoted cryptos, truly declining confidence in the established fiat currencies would witness very sharply and broadly rising commodity prices and massively declining bond prices, both of which represent infinitely bigger markets (at current prices, over \$1.8trn of oil is traded annually and outstanding bonds are currently worth in excess of \$200trn). As this is NOT happening, it is obvious that crypto purchases are about “bubble chasing,” not about attempts to diversify away from exposure to global fiat currency debasement.

How does one value cryptos as assets? And, if select, currently extremely volatile, intensive energy usage cryptos become much less volatile and hence more suitable for commerce while managing to sufficiently increase energy efficiency related to perpetually larger “data crunching,” what will the P&Ls of such cryptos for the respective owners look like? How much earnings leverage is there? Will there be earnings at all? How will speculators realize ROIs once the crypto bubble mania subsides, and the wheat is separated from the chaff? What will sustain, much less propel, crypto unit valuations higher if a) they don’t become money, b) the crypto universe keeps growing via spin-offs (“forks” in crypto lingo) that dilute value-buttrussing supply constraints, and c) if, enticed by bubble valuations, the entire crypto unit universe continues to expand rapidly via ICOs (\$3bn raised YTD), making a mockery of scarcity even as cryptos defy any conventional -- yes, logical -- valuation assessment.

Beyond the analytical difficulty of valuing, much less quantifying, in an NPV sense, prospective future monetization prospects, analysis of early-stage growth industry participants usually fails to pick the winners and losers with anything better than a “monkey dart throw” success rate. History is replete with exactly this.

When crypto enterprises generate huge and growing electricity bills and deploy lots of smart young Turks to create what could well be the next digital illusion of wealth, you have nothing more -- actually, much less -- than any growth

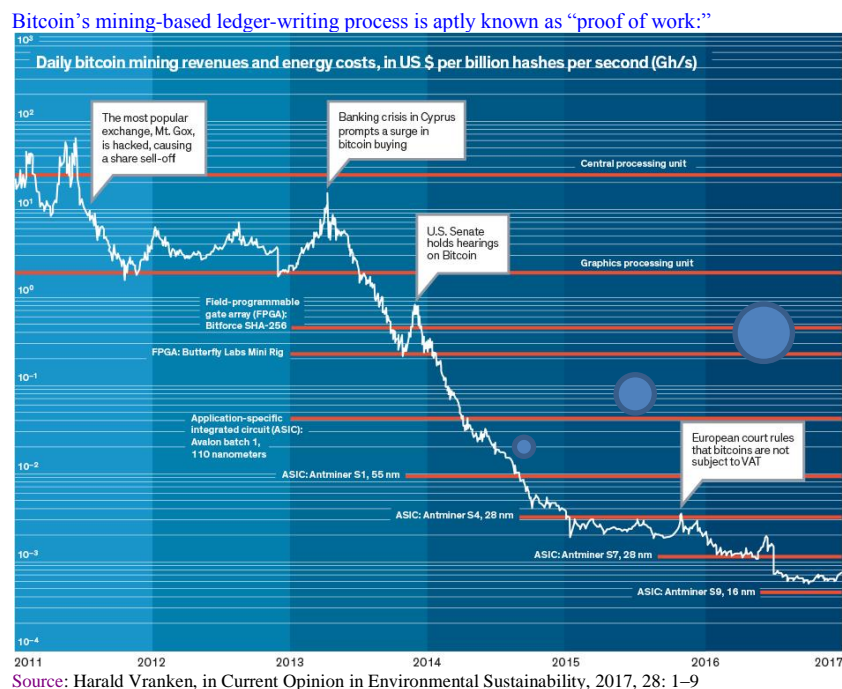
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industry enterprise: you've just invested a lot of money and energy in the hopes of coming up with the next "big thing," or a better mousetrap. Most all growth industry entrants fail and lose shareholders' paid in capital (and other capital providers' funds), whether the erstwhile growth industry was steel, chemicals, plastics, paper, autos, airlines, aerospace, semiconductors, dotcoms, etc.

The big difference with crypto enterprises, versus growth industry companies of yore, is this: when a crypto wannabe currency fails, there is no material "asset carcass" for either claimants or vulture capitalists to feast on. In fact, there are few tangible assets with any kind of material "economic life" (just think of [rapid real world server obsolescence](#)) to sell to provide claimants/owners "five or ten cents on the book value dollar." To add copious insult to injury, crypto market caps make the balance sheets (assuming they even have them), much less the book values, of crypto enterprises akin to a pea in a pond. In other words, given the double to triple digit billion dollar crypto market caps (p. 1) compared with the value of their servers, possibly some lease contracts likely signed at or near [commercial real estate bubble valuations](#), and hundreds of empty cans of [Red Bull](#) scattered about -- which would collectively likely constitute but a "market cap rounding error" -- there will be nothing material to distribute when crypto enterprises fail.

Which is what makes the crypto "mining claim" so disingenuous. The so-called "mining" aspect of cryptos, using gobs of power and young tech cracks to create unchangeable blockchain transaction history makes your author laugh. When you mine for gold and silver and you are successful, you have unearthed globally recognizable, indestructible, perpetual stores of value/mediums of exchange. When you "mine" for cryptos, there is no indestructible, highly portable, widely coveted tangible asset with a recognized intrinsic value that results, only "in the Matrix" algorithms and outsized, growing overall power usage just to eventually underpin sought-after medium of exchange relevance:



Sisyphian Slide:

Daily revenues for mining bitcoins [white], in US dollars per unit of computational power, are generally somewhat higher than the daily energy costs [red] of running the computers.

In June, the world's bitcoin miners were generating roughly [5 quintillion](#) 256-bit cryptographic hashes every second, according to the all-things-Bitcoin website [Blockchain.info](#). That's a 5 with 18 zeros after it, every second. No entity tracks how much power it takes to sustain that level of computation. But estimates by independent researchers suggest it's around 500 megawatts -- enough to supply [roughly 325,000 homes](#) [PDF] -- with the activity concentrated in China and a few other countries with cheap energy and, in some cases, loose regulations on emissions.

Because of all that calculation, the energy cost of Bitcoin is high in comparison with that of conventional financial transactions. For example, according to one estimate, processing a bitcoin transaction consumes [more than 5,000 times as much energy as using a Visa credit card](#).

Mining power is high and getting higher, thanks to a computational arms race (italics DK Analytics author's). Recall that the required number of zeros at the beginning of a hash is tweaked biweekly to adjust the difficulty of creating a block -- and more zeros means more difficulty. The Bitcoin algorithm adds these zeros in order to keep the rate at which blocks are added constant, at one new block every

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10 minutes. The idea is to compensate for the mining hardware becoming more and more powerful. When the hashing is harder, it takes more computations to create a block and thus more effort to earn new bitcoins, which are then added to circulation.

“If you try to work harder, the algorithm makes it more difficult,” says Harald Vranken, a computer scientist at [Radboud University](#), in Nijmegen, Netherlands. “It’s a very circular game.”

Vranken says doing today’s calculations would “consume way more power than is generated on the entire planet” if it were done using the CPUs available when Bitcoin launched in 2009. What has prevented such disruption is a series of hardware upgrades: miners began abandoning the CPU for the more-efficient graphics processing unit around 2011, and by 2013, chipmakers were producing application-specific integrated circuits (ASICs) just for bitcoin mining.

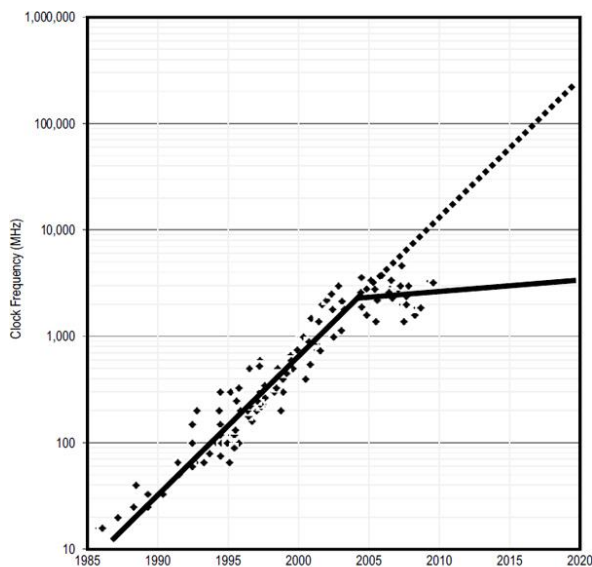
Today’s state-of-the-art [Bitcoin ASICs](#) complete a 256-bit hash 100 million times as fast and with one-millionth the energy of a 2009-vintage CPU, Vranken says. Yet more efficiency gains are possible by optimizing data centers [from the ground up to power and cool bitcoin-mining ASICs](#) [PDF] [see “Why the Biggest Bitcoin Mines Are in China,” coming soon in this issue].

The problem is that [chip efficiency gains are slowing](#) and, according to Vranken, are losing ground against Bitcoin’s exponentially rising exchange rate and rates of hash computation. Another Dutch researcher, Sebastiaan Deetman, says an “enormous increase in hash rate” over the last year or so has likely pushed Bitcoin’s global draw closer to 700 MW.

And if the hash computations accelerate further? In that case, Deetman, who is a doctoral candidate in industrial ecology at Leiden University, sees Bitcoin power demand ballooning 20-fold—to 14 gigawatts—by 2020. If that happens, Bitcoin will be using as much electricity as Denmark.

So, will “Moore’s Law” ride to the rescue? Apparently not, as per the graph and the sage “When parallel lines meet” commentary below:

Historical growth in single-processor performance; dashed line represents expectations if single-processor performance had continued its historical trend



Source: <https://www.nap.edu/read/12980/chapter/3#8>

[When parallel lines meet.](#) Economic constraints are being felt as physical limits approach.

The overriding assumption that when technological hurdles get in our way, we will always find a solution, simply does not bear up to scrutiny. The deeper you look at the IT sector, the more you realise that we are clinging to an illusion or memory of how things were, rather than how they are now.

Whether it is Moore’s Law, Dennard Scaling, Multicore Processors and Parallelism, or “More that More” etc, the IT scaling advances that we have grown to expect are no longer happening.

This is having real effects. Rather than driving growth and productivity that people assume, IT is becoming **dependent** technology. Rather than adding to capital stock, new technology is increasingly at the expense of more debt and thereby the depletion of capital across the broader economy. New products are increasingly a tax on the economy.

Rather than IT being immune from the slowdown in productivity, for anyone who cares to look in detail, as this note tries to do, IT is becoming one of the constraints to productivity.

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And:

Energy and power constraints play an important -- and growing -- role in computing performance. Computer systems require energy to operate and, as with any device, the more energy needed, the more expensive the system is to operate and maintain. Moreover, all the energy consumed by the system ends up as heat, which must be removed. Even when new parallel models and solutions are found, most future computing systems' performance will be limited by power or energy in ways that the computer industry and researchers have not had to deal with thus far.

For example, the benefits of replacing a single, highly complex processor with increasing numbers of simpler processors will eventually reach a limit when further simplification costs more in performance than it saves in power. Constraints due to power are thus inevitable for systems ranging from hand-held devices to the largest computing data centers even as the transition is made to parallel systems.

Even with success in sidestepping the limits on single-processor performance, total energy consumption will remain an important concern, and growth in performance will become limited by power consumption within a decade. The total energy consumed by computing systems is already substantial and continues to grow rapidly in the United States and around the world. As is the case in other sectors of the economy, the total energy consumed by computing will come under increasing pressure.

Plus, the electricity-guzzling, exponentially rising blockchain computation growth may run into looming **power cost and outright energy availability issues**, another potentially material constraint keeping cryptos from achieving widespread and sustainable transaction status. This is no idle concern, especially when contrasting cryptos to above ground precious metals-based money, which represents *spent* energy instead of the discounting back of future available energy with which to value (at some point) not just ultimately cryptos, but stocks and bonds as well.

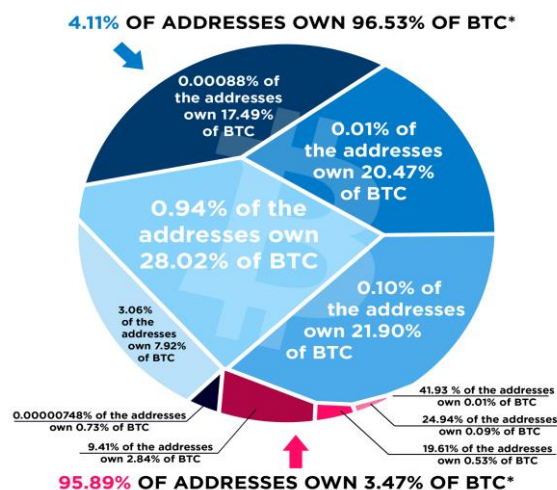
Furthermore, when you consider that the most pivotal energy source by far for our leveraged global economy, oil -- which is key to sustaining agriculture, construction, mining, transportation, just-in-time inventory, and full retail shelves -- is becoming **increasingly difficult and costly to extract**, then the valuations of many assets dependent upon adequate and available energy with which to generate income also become highly suspect. And, to repeat, if you are dealing with "in the Matrix" speculations known as cryptos that lack any quantifiable valuation metrics (top line, bottom line, involved assets, deployed leverage, etc.), then the capital at risk dynamic is even much more substantial.

Which again begs the question: what is cryptos *raison d'être*? Juxtaposed against an ever faster rise in cryptos' "tulip mania" valuations, this query is more apt than ever for a) the currently fortunate speculators exposed to this "asset class" courtesy of much lower purchase prices, b) given purportedly marked liquidity constraints when selling cryptos, and c) for would-be speculators pondering purchase. Dotcom bubble "eyeball days," revisited, but on steroids?

Just what, then, gives individual cryptos intrinsic value or a shot at sustainable differentiation as viable currencies?

- A rapidly growing carbon footprint juxtaposed against mounting **power generation** supply and **cost** issues due to ever more profound **geological depletion** (p. 6) of affordable dense energy as worsened by green crony capitalism?
- The fact that the crypto posterchild, Bitcoin, a ballyhooed, decentralized/distributed network, is very closely held, which casts a long shadow on both the virtues of decentralized architecture and on minority owner interests?

The Bitcoin Wealth Distribution



* Data as of September 12th, 2017

Sources: <https://bitcoinprivacy.net> ; <https://howmuch.net/articles/bitcoin-wealth-distribution>

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■ Potentially “fatal” design flaws/shortcomings?

[Bitcoin, the first digital currency to gain widespread acceptance](#), sprang up during the financial crisis about nine years ago. Its attraction, early proponents maintained, was that it offered a way to bypass banks and governments, and to conduct financial transactions more cheaply. Every transaction is validated and recorded on a public ledger called a blockchain that is maintained by a network of computers. While anonymous, the individual transactions are available for all to see on the internet. They are secured by cryptography, the computerised encoding and decoding of data.

Mike Hearn, an early bitcoin developer, said the currency was initially viewed more as a hobby than a serious alternative to traditional money. “People didn’t really think it could take off and get big,” he said. “It was a thought experiment that happened to have some code.”

Though bitcoin turned out to generate huge attention and media coverage, it is still not widely used by ordinary consumers. Few retailers accept it, and processing transactions on the blockchain remains much slower than payment card networks, despite some recent technical changes.

The computer maker Dell, which announced in 2014 that it would accept bitcoin payments, has stopped “due to low usage”, a spokeswoman said. At the US online retailer Overstock, only a fraction of one per cent of sales are transacted in bitcoins, according to the company.

“Most of the cryptocurrencies right now are more commodities than currency,” said Dan Schulman, chief executive of payments company PayPal. “You trade them based on what you think will happen to their value. They’re not really accepted by many merchants as a currency.”

Finally, knowing what a poor token for good money fiat currencies are, let’s revisit our “ten good money criteria” shortlist, honing in, one by one, on how well cryptos fulfill these hopefully sound and logical principles:

1. It is a store of value for time spent engaged in productive labor; it holds its purchasing power and protects [property](#)
Cryptos: an encrypted IP address consisting of letters and numbers (digital keys) existing in cyberspace is no store of value; there is no value to store!
2. It represents or comprises [rare](#), universally aspirational, non-corroding/limitless “shelf life” goods/commodities
Cryptos: as long as there’s power, there’s nothing rare about a) anything in the digital realm or b) “forks”/splits
3. It has intrinsic value “on its own,” i.e., before “it” was used as money, such as above ground gold and silver
Cryptos: they represent intrinsic costs as they depend on material and growing energy consumption for relevance
4. It is fungible; it can be traded for something else of the same kind, e.g., “silver is silver” and “a buck is a buck”
Cryptos: as long as digital brokers such as [Coinbase](#) aren’t shut down by the authorities, speculators can trade cryptos, or sell them for dollars or other viable fiat currencies, with which real goods and services can be bought
5. It is divisible; unlike a work of art such as a painting or a statue or precious stones such as diamonds or rubies
Cryptos: they definitely are as divisible as they are digital illusions of wealth
6. It is readily portable, easy to use, and a rapid medium of exchange, unlike real estate or bulky commodities/goods
Cryptos: they offer the ultimate portability called a virtual reality valuation roller coaster, which makes them a poor medium of exchange for buyers and sellers alike, no matter how rapid cyberspace transactions can be
7. It is broadly accepted and sought after *globally* by bankers, makers, merchants, workers, and consumers alike
Cryptos: they are increasingly well-recognized and sought as speculative assets, the antithesis of money
8. It is simple, stable, and efficient -- the antithesis of [complex](#), [unstable](#), and [inefficient](#) “[multi wallet](#)” concepts
Cryptos: simple for nerds downing Red Bull, but that’s not how roller-coaster, wannabe “currencies” “bubbling” into thousands of USD per unit and consuming perpetually more power in an increasingly “[brown-out](#),” [misallocated world](#) (just ask the Puerto Ricans after Irma) gain “7-Eleven” or commercial traction viability
9. It is an anonymous, secure medium of exchange protected by the [Constitution](#); only those involved need know
Cryptos: they are not as [anonymous and secure](#) as you may think -- and just what can’t ultimately be [hacked](#)?
10. It is not someone else’s liability, i.e., the antithesis of a modern-day fiat currency, *which is a debt-based token used illegitimately as money*; think of central banks’ monetary base expansion via bond purchases. If fiat currency is also digital -- 89% of US M2 and a similar percentage in other OECD nations as of [12/2016](#) was non-notes/coins-based currency -- it, by definition, is also no longer [anonymous](#) nor property rights-protecting, and [getting ever less so!](#)

Cryptos: while they are nobody’s liability (other than ongoing prodigious energy needs), *they are fiat units in the mother of all fiat “ecosystems,” cyberspace*, and thus don’t comprise true money or, we would argue, viable and sustainable future mediums of exchange. Plus, they are speculatively valued “assets” in an increasingly massive bubble. Bubble valuations render both constructive ROI and capital preservation prospects as unlikely as substantially negative returns and/or loss of capital are likely. Finally, picking the ultimate (few) winners in any fledgling growth industry without tremendously diluting your overall exposure returns by buying the duds is not much easier than holding the winning Powerball ticket. Historically, the biggest winners from “growth industry manias” are not euphoric speculators, but the overall economy and consumers due to overcommitment of funds.

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(And for those exposed to Bitcoin and other crypto currencies, on top of fundamental risks such as the difficulty of picking a winner, bubble valuations, lacking commercial viability/stability, lacking track records, lacking intrinsic value, not supply limited, the likelihood of waxing tax and regulatory compliance liabilities, etc., crypto speculators have additional loss of capital exposure. Specifically, today's leading crypto names could become academic and hence worthless. This could be thanks to potential central bank/BIS/IMF adoption of a blockchain-based currency technology to replace the dollar in international trade. Being effectively locked out of "re-engineered" multi-trillion dollar daily currency transactions would not bode well for our current crypto green shoots, no matter how Orwellian statist cryptos would be, i.e., fully digital currencies with zero anonymity and no way out of the statist "digital pen.")

Silver and gold juxtaposed against cryptos:

The [Coinage Act](#), passed by the US Congress in April of 1792, established gold, silver, and copper coins as units of money in the United States. Silver certificates (below), payable to bearer on demand, were printed from 1878 to 1964 (redeemable until 1968 in silver) as an integral component of [constitutional \(Article 1, Sections 8 & 10\) money](#). The other vital component was gold, with gold certificates printed from 1863 until 1933. Needless to say, despite marked "bimetallic," 15:1 silver to gold challenges, precious metals-based and backed currency served the erstwhile federalist US republic and its previously booming economy very well.



Bimetallic implementation issues and competitive fiat currency challenges notwithstanding, precious metals-anchored currency long provided privacy, timeless inherent value, and [purchasing power protection](#). Said differently, a PM-backed currency disabled rampant cronyism, untenable [corporate welfare](#), serial redistributionism, entrenched warfare, sustained deficit spending, and (monetary) inflation. A PM-backed currency underpins [property rights \(Sec. 14\)](#) and individual liberty, which are not only tied at the hip, but are integral to a robustly functioning economy, such as America's free market capitalist dynamo economy in the 19th century.

Of course our global central banker cronies, after having banished precious metals-backed currency, now want to do away with our fiat bills/notes/currency in order to corral us into [a full-fledged digital pen](#). The reasons for this are not difficult to divine. The globalist kleptocrats want to make "currency-enabled" bank runs (and thus [bank insolvency](#)) totally impossible prior to more widespread NIRP, in which you will be **paying** to lend your money to someone else, thus "cementing" the fact that your deposited money makes you an unsecured creditor of the bank versus an owner of the deposited funds. To add insult to injury, [globally promulgated bail-in laws](#) make it possible, should governments or their central banker brethren determine that "systemic solvency risks" require it, for mismanaged banks with hundreds of billions of dollars of derivative exposure to "legally" convert depositors' accounts into bank equity (which will be a fraction of depositors' erstwhile "savings" if they are fortunate). Add to this "cashless destiny" the fact that the statists will know and control everything we buy and sell. It will be a system in which they will ultimately determine what we *get to* buy and sell. In short, naked, broad-daylight disenfranchisement and tyranny in the making.

But who is to say that the crypto gatekeepers and their de facto fiat electronic currencies, which conveniently fork and/or multiply via [ICOs](#) like fiat money rabbits as a sector, will become a viable transaction mechanism (retailers with razor thin margins and lots of other industries want to deal with at least somewhat stable currencies, as do pinched consumers)? Savers, businesses, and consumers want money to be a good store of value, simple and efficient to use (to reiterate, the opposite of the convoluted, [multiple digital wallet stuff](#)), widely accepted, and steady. They already risk capital to earn a decent return or to generate a profit, or they commit much of their lives to achieving an adequate

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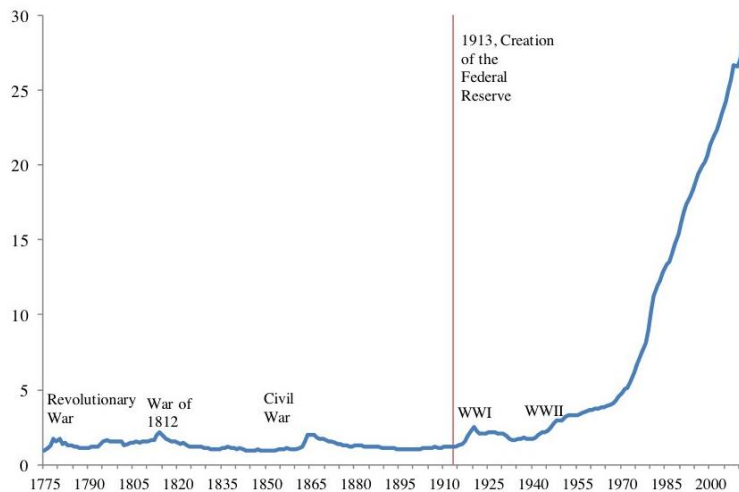


wage, respectively. Consequently, they want to “lock in” their newly acquired purchasing power in a great medium of exchange. They’re not going to want to deal with “roller coaster” money, so how is any crypto going to become a viable currency, especially once this unprecedented bubble pops. Hence, if cryptos’ utility isn’t transactions strength or becoming **viable, secure money of the future**, then just what is their *raison d’être*? And how does one explain any leading crypto’s valuation other than that this is the biggest bubble ever?

In sharp contrast to cryptos short history, precious metals have been long been fiercely suppressed and **rigged**, mainly via **massive**, naked shorting of paper gold and silver contracts, such as on the COMEX. This and more has been done via cooperation between exchanges or markets (e.g., the LBMA) and money center (bullion) banks, which collectively do the destructive bidding of fiat money central banks, as led by the **Fed**.

The mission: to keep precious metals prices suppressed while everything else, cryptos included, can go to bubble valuations, i.e., divorced from any kind of favorable ROI prospects or capital preservation sanity. If the age-old thermometer of the health of our global economy and finances, scarce gold, was no longer manipulated, the global oligarchs, a.k.a. kleptocrats, would be exposed. Their engineered **train wreck** of debt, misallocations, impoverishment, a constantly shrinking circle of liberty, dwindling property rights, and disappearing national sovereignty & solvency could no longer be hidden behind their asset bubbles, their pseudo recoveries, their budget deficit-based redistributions from makers to takers and K Street, and their monetary inflation-based redistributions from Main Street to Wall Street. Speaking of central banks and inflation, we would be remiss if we didn’t include this chart:

Figure 1. Consumer Price Index, United States, 1775-2012
(level, 1775=1)



Sources: BLS, Historical Statistics of the US, Reinhart & Rogoff (2009), www.businessinsider.com/chart-inflation-since-1775-2013-1

Conclusion:

When the **global oligarchs**’ Main Street impoverishing, kleptocratic, financial repression-enabled toxic public policy is overwhelmed by an overdue recession, we believe that shareholders holding nose-bleed P/E stocks as well as global bond vigilante giants (**over \$217trn in debt instruments/bond holdings**) dealing with yield starvation will severely test “**central bank puts**.” Our despotic central planners will then, inevitably, double down on even more unprecedented money printing around the globe. A flight into scarce and vital real assets (lead by dense energy and ag assets) and into true safe havens that can’t be “electronically printed/debased” or “bailed in” and won’t be caught in the “**digital pen**” being erected globally will eventually ensue. Said differently, an escape into **assets** that aren’t someone’s liabilities and/or don’t depend on the vagaries of discounting back increasingly ill-defined future income streams.

The flight into very supply limited physical PM -- at current prices, only about \$14bn of silver and some \$125bn of gold are mined globally p.a. while all above ground silver is worth only about \$39bn and all above ground gold some \$7.5trn -- will feed on itself. This is all the more true given that global investable assets of \$300trn plus (over \$217trn in bonds and **over \$78trn in stocks**) feature *historically low* -- 0.5% or about **\$1.6trn** -- “*paper gold/PM*” exposure.

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When a bond market implosion-triggered stock and real estate valuation reset “well beyond the mean” occurs (we always have reversion *beyond* the mean!), the only thing that will matter for many accounts is raising precious metals (PM) exposure. And the only way to achieve this, even with collapsing bond and stock prices, will be through massively higher PM prices, i.e., a demand curve -- juxtaposed against a very “steep” supply curve -- shifting very substantially to the right, resulting in a new, sharply higher PM price equilibrium. In other words, the private investors, who are typically “strong hands/strategic” PM holders, and control about **21% of all above ground gold**, will sell their gold (and silver), but only at significantly higher prices.

Eventually, even the fractional reserve, OECD central bankers will “get it.” They will ultimately revisit PM backing at the monetary base level to a) re-establish fiat currency confidence once it gets lost, b) to enable viable monetary base expansion once confidence has been shattered, and c) to endeavor to prevent either debt-induced deflation or monetary expansion-induced hyperinflation. Revisiting PM currency backing will conspire to shift the demand curve for PM even further to the right. This will drive gold and silver prices higher still.

Domestically, backing the **monetary base** (\$3.91trn currently) by US’s *claimed* gold reserve of **261.5m Troy oz.** (8,134 MT) would yield a gold price per Troy oz of \$14,914. Note that the bloated monetary base in the US is currently 7.1% larger than the current **US M1 money supply** of \$3.64trn. If the US would instead revert to backing only 40% of M1 money, as it did until 1968, that would result in a \$5,568 gold price per Troy oz. Considered globally, arguably *the* correct lens, if 40% of current “world M1” of **\$26trn**, or \$10.4trn, was covered by “official sector” gold holdings of **31,500 MT** (1.013trn Troy oz), it would result in a gold price of \$10,266 per Troy oz.

In short, OECD central bankers will have to go where their Russian and Chinese colleagues have already gone, or have been forced to go. The good news is that private sector investors, likely led by global asset valuation determining bond vigilantes with absolutely unprecedented debt instrument holdings, will probably look to reduce unprecedented value at risk, i.e., holdings of de facto government junk bonds featuring no real yields and huge exposure to a) rising interest rates given their **zero coupon-like durations**, b) to substantial sovereign insolvency loss of capital risks, and/or c) to inflation-triggered capital losses. If only a small portion of the resulting bond proceeds get reallocated to PM, ...

And, the best news by far is the fact that retail investors can still avail themselves of the *ultimate portfolio insurance* at very attractive prices (top of first page of post); become your own hard money central bank! We are course referring to purchasing physical precious metals prior to the “asset valuation reset.” As concerns the PM arena, this may take place courtesy of large institutional investors or family office accounts or industrial accounts insisting on physical delivery (there is little registered gold and silver stocks for delivery yet **huge short positions***) instead of settling for **paper gold** or **paper silver** (of which unlimited amounts continue be created). If push comes to shove, the fine print associated with their PM purchase/futures contracts will force them to accept fiat currency instead of precious metals. But the message that the precious metals aren’t there will resonate, potentially unleashing a scramble to purchase the real scarce thing, especially as regards industrial demand for increasingly **scarce and vital silver** (you can’t use “paper silver” in electronics!). Therefore, it is not a question of “if,” only a question of “when.” The stuff of strategic allocation opportunities. *

Number of Traders in Each Category											Total Traders: 284	
20	10	15	9	62	42	19	101	19	10			
Disaggregated Commitments of Traders- Options and Futures Combined Positions as of December 5, 2017												
Reportable Positions												
Producer/Merchant												
Processor/Issuer												
Swap Dealers												
Managed Money												
Other Reportables												
Long Short Long Short Spreading Long Short Spreading Long Short Spreading												
SILVER - COMMODITY EXCHANGE INC. (CONTRACTS OF 5,000 TROY OUNCES)												
CFC Code #084691												
Open Interest is 200,139												
16,393	59,202	38,639	41,959	12,785	58,140	36,085	8,763	25,755	17,747	16,332		
Changes from: November 28, 2017												
1,932	-12,561	6,421	-5,795	2,711	-11,771	22,678	1,510	5,932	-551	1,170		
Percent of Open Interest Represented by Each Category of Trader												
7.9	28.4	18.6	20.2	6.3	27.9	17.3	4.2	12.4	8.5	7.8		
Number of Traders in Each Category											Total Traders: 238	
19	20	15	12	19	39	45	26	65	29	30		
Disaggregated Commitments of Traders- Options and Futures Combined Positions as of December 5, 2017												
Reportable Positions												
Producer/Merchant												
Processor/Issuer												
Swap Dealers												
Managed Money												
Other Reportables												
Long Short Long Short Spreading Long Short Spreading Long Short Spreading												
GOLD - COMMODITY EXCHANGE INC. (CONTRACTS OF 100 TROY OUNCES)												
CFC Code #088691												
Open Interest is 642,172												
34,263	194,259	81,265	118,516	85,415	170,671	30,724	57,569	83,984	43,864	80,224		
Changes from: November 28, 2017												
2,189	-21,100	7,453	-29,489	5,421	-43,523	20,733	3,584	3,203	-5,911	-2,039		
Percent of Open Interest Represented by Each Category of Trader												
5.3	30.3	12.7	18.5	13.3	26.6	4.8	9.0	12.1	6.8	12.5		
Number of Traders in Each Category											Total Traders: 300	
23	27	19	22	81	44	62	117	62	78	1		
Disaggregated Commitments of Traders- Options and Futures Combined Positions as of December 5, 2017												
Reportable Positions												

Source: http://www.cftc.gov/da/options/other_sof.htm

Dan Kurz, CFA, DK Analytics (www.dkanalytics.com), December 11th, 2017

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