



PAGES ABOUT...

Crypto Currencies



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ABOUT OUR '8 PAGES' SERIES:

The Librarium Associates monthly '8 Pages About...' series is a publication created by our team focused on topical current issues that we feel warrants a deep dive where we can distill the key developments and provide an alternative view on such topics.

We are constantly engaged in active horizon scanning while adhering to our belief that students of the lessons of history and permanent features such as geographic realities can provide superior insights.

From these broad scenarios we work to identify investable trends and specific opportunities. We find that such a broad approach provides an 'early alarm' system for risk management and an indicator of attractive price/value situations across asset classes.

The intention of our research and the basic premise of this publication is to present rational perspectives based upon a diligent analysis of historical data. Through organizing the data logically, information is created. Through understanding and developing perspectives on the information, knowledge is generated. With knowledge, one can then start to make informed decisions.

The most practical way to imagine the future is to question the expected, this is best done making use of what we call 'critical thinking' – Critical thinking is the careful, deliberate determination of whether one should accept, reject or suspend judgment about a claim and the degree of confidence with which one accepts or rejects it. Critical thinking employs not only logic but a broad intellectual criteria such as the one outlined above. Critical thinking requires extensive experience in identifying the extent of one's own ignorance in a wide variety of subjects which is often captured in the following sentence: I thought I knew, but I merely believed.

As J.F. Kennedy put it: **"Belief in myths allows the comfort of opinion without the discomfort of thought."** Our aim is always to avoid this trap of the mind, when one attempts to look into the future one is better off exhibiting a more intellectually humble approach and challenge one's beliefs and opinions by asking the question: What if we took the opposite view? This leads to a more balanced set of insights in our view.

The insights and opinions offered in this document are meant as a summary of events and our views – not a conclusive or exhaustive overview or for that matter a specific investment recommendation.

We hope it will offer some food for thought and that it can form the basis of conversations between our clients, interested parties and ourselves.

Sincerely yours,

Mr. S.H. Sorensen
Senior Associate

LIBRARIUM ASSOCIATES LTD. – WWW.LIBRARIUMINSIGHTS.COM – NOVEMBER 2017.

WELCOME TO THE CRYPT

Digital Money, Crypto, Bitcoin, AltCoins, Etherum, BlockChain - The future of money (And the solution to everything) or just the same old 'emperor in new clothes'?

Let me start by sharing my personal introduction to this mysterious and fascinating phenomenon. In early 2011 I found myself sitting in a street café in the beautiful city of Barcelona. I had spend the last 5 years observing and making sense of the 'Great Recession', following history's lessons and my conclusions to gold – A place that provided me and my family, as it has for millennia, with a secure place to store wealth in volatile times, this in turn led me to a business project ("**Always eat your own cooking**") and as the gold price ran up, as the herd piled in, to some solid returns.

I was waiting to meet with an old friend, web developer and all around 'tech guru', who was as always running a little late – this is the nature of people who inhabit the tech space in my experience, he was the typical creature of the night, always in front of a screen but unable to read the time. As a curious soul I always enjoyed meeting my friend as he inhabited a different world than mine – a world of Serbian hackers, online gaming, endless possibilities with wild ideas of what Michael Lewis called; the 'New New Thing' in his book with the same title, published in 1999.

When we meet up we always drink too much espresso and the time flies with 'blue sky' conversations, it's never boring and always inspirational. This spring afternoon in the balmy Catalan sun was no exception, the last time we met he had been really into a combination of online communities and online gaming and the potential for a 'virtual world' with real estate and business deals all conducted online in digital currencies – **Dungeons and Dragons meets Monopoly in cyberspace!**

This time my tardy friend had the next level – A great tale of the future – A cyber currency, truly independent and finite in nature developed by an anonymous collective with a mysterious leader; who was known as Satoshi Nakamoto – who appeared to be a nerd version of the elusive Keyser Söze from the movie 'The Usual Suspects'.

The great invention was something called BitCoin and the story fascinated me enough to spend some time digging a little deeper online that same evening. Our conversation had concluded with us agreeing that it was a great story and that a movie should be made about it all. Furthermore that it might just find some traction outside of the 'hackers sphere' as people had just gone through a major financial crisis where the fabric of society had been torn and trust in governments and especially financial institutions was evaporating, people started to question everything and seek answers and solutions in alternative places. These were dynamics I had also seen at play in the precious metals space. Furthermore various forms of online precious metals based programs that provided some of the same principles and features that these 'digital currencies' supposedly would offer.

At the time as a value investor at heart, I could not really see its benefits over title held physical allocated gold held outside the banking system for wealth protection. As a means of payment its functionality appeared suboptimal compared with existing platforms such as Paypal and traditional players such as SWIFT and global credit card providers – too cumbersome, a little shady, with no real infrastructure, a limited network of dedicated but marginal participants and extremely volatile valuations.

The appeal, beyond playing with the 'new-new-thing' with the cool kids, seemed to be limited to money laundering and circumventing capital exchange controls. I put it on my mental 'Things to watch' list and moved on with my life and business projects.

Things has obviously changed since then (If only I had seen the light then and moved my profits from gold to this wondrous new thing I would have been able to set sail and head for a life of adventure traversing the globe).

Or have they? Is this real or is it just fantasy - Easy Come, Easy Go..?

We will explore the world of crypto, the associated developments such as Blockchain and ICOs – from both sides of the argument and you can come to your own conclusions. We do not pretend to be experts in this field and we would not really trust anyone who claimed to be, but we can take a look at it trough the lens of financial history and technological innovation.

WARNING: Fear Of Missing Out (**FOMO**) & Regret Over Missing Out (**ROMO**) ALERT - Both are natural tendencies that should not be indulged.

Enter Through the 'Rabbit Hole' - Exit Through the Vault...(BitCoin USD)

1h 12h 1d 1w 1m 3m 1y All Jul 18, 2010 to Nov 21, 2017

What is Cryptocurrency?

\$8000

"A cryptocurrency is a medium of exchange such as the USD. Bitcoin, the first cryptocurrency, appeared in January 2009 and was the creation of a computer programmer using the pseudonym Satoshi Nakamoto. Like the USD, cryptocurrency has no intrinsic value in that it is not redeemable for another commodity, such as gold.

\$6000

Unlike the USD, however, cryptocurrency has no physical form, is not legal tender, and is not currently backed by any government or legal entity. In addition, its supply is not determined by a central bank and the network is completely decentralized, with all transactions performed by users of the system. The term cryptocurrency is used because the technology is based on public-key cryptography, meaning that the communication is secure from third parties. This is a well-known technology used in both payments and communication systems." – Source: US Congressional Research Service.

\$4000

\$2000

\$0

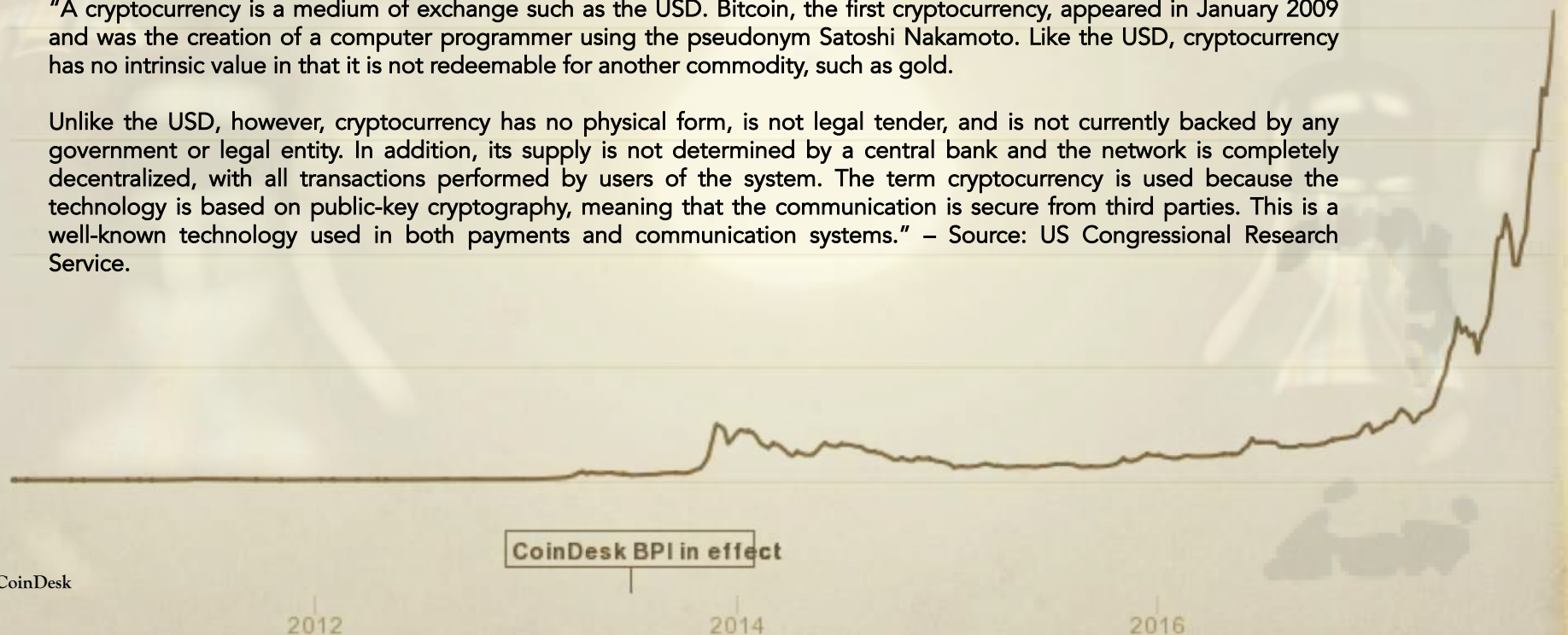
CoinDesk BPI in effect

Source: CoinDesk

2012

2014

2016



MEET THE BITBULL...

Mr. Dan Morehead – The Visionary of Pantera Capital...

"I can describe Bitcoin in 4 letters: It's MoIP – Money over IP. Blockchain is going to disrupt business models the same way that VoIP disrupted the telephony market. Back in the day, there used to be a monopolist in one country, a physical copper wire across the ocean, and a monopolist on the far end.

The only way a person in the US could call a person in the UK was to use those two monopolists and their copper wire. When we realized that you could route voice over the internet – and around these monopolists – the prices dropped over 99%, the quality went up, and the quantity exploded several orders of magnitude. (There isn't enough copper on Earth to transmit all the data that goes across fiber optic cables now on the internet.)

Bitcoin is MoIP – Money over IP. It's a way to route money around the oligopolists who have controlled correspondent banking for five centuries. It allows a person in any country to send any amount of money to anyone anywhere on Earth. For a technology to be disruptive it must be better, faster and cheaper than the legacy technology. For most of Bitcoin's history it has been essentially free, essentially real-time, and absolutely borderless. After Bitcoin's governance crisis, either Bitcoin will return to that or another blockchain which is essentially free and essentially real-time will replace it. Essentially free, essentially real-time, and borderless is very disruptive.

When a technology is disruptive it's called a category killer. Bitcoin is a serial killer – it's going to rip through dozens of different industries. We can foresee a handful of these applications already – cross-border money movement, secure online transactions, financial settlements, wealth storage. However, blockchain will also have use cases we can't imagine today, just as there were unforeseen use cases for the various internet protocols of the early 90s.

As an aside: When old-school skeptics say Bitcoin is a bad currency – because it's too volatile, they miss the entire point that Bitcoin will disrupt serially. Today Bitcoin **is** a terrible unit of account. That's the point – it's massively undervalued as a payment rail, post-currency, ledger, micropayment system, etc. So it's not a classically defined currency because it surges up too quickly. (This has got to be the first time in recorded history where people are complaining that a currency sucks because it gaps UP. Argentines and Zimbabweans should be so lucky.)

For the past 8 years Bitcoin has been an incredible vehicle to speculate/store/create wealth. One of the last things Bitcoin will do is be a stable unit of account. When it does – and the skeptics announce that it can now be considered a decent currency – it will probably be trading at USD500,000/BTC.

MEET THE BITBEAR...

Mr. Howard Marks – The Sage of Oaktree Capital...

"The discussion of innovative investments brings me to Bitcoin, Ether and other digital currencies. I'd guess these things have arisen from the intersection of (a) doubts about financial security – including the value of national currencies – that grew out of the financial crisis and (b) the comfort felt by millennials regarding all things virtual. But they're not real.

Some businesses accept Bitcoin as payment. Some buyers want to own Ether because it can be used to pay for computing power on the Ethereum network. Some people are eager to speculate on digital currency for profit. Others want to put a little money into these to-date-profitable phenomena rather than run the risk of missing out. But they're not real!

People tell me these currencies are solid, because (a) they're secure against hacking and counterfeiting and (b) the software used to generate them strictly limits the amount that can be created. But they're not real!!!! You can use these different digital currencies to buy other new imaginary currencies, or to invest in new companies that will create other new currencies. In my Memo, titled 'Bubble.com' I highlighted some illogical aspects of e-commerce by including some of my father's old jokes regarding how to make money. Here's another that seems 100% appropriate for the digital currency movement:

Two guys meet in the street, Joe tells Bob about the hamster he has for sale; pedigreed and highly intelligent. Bob says he'd like to buy a hamster for his kid; "How much is it?" Joe answers, "half a million", and Bob tells him he's crazy. They meet again the next day. "How'd you do with that hamster?" Bob asks. "Sold it" says Joe. "Did you get \$500,000?" Bob asks. "Sure," says Joe. "Cash?" "No," Joe answers, "I took two \$250,000 canaries."

One of my favorite quotes concerning the market's foibles, from J.K. Galbraith says that in euphoric times, **"Past experience, to the extent that it is part of memory at all, is dismissed as the primitive refuge of those who do not have the insight to appreciate the incredible wonders of the present."** Maybe I'm just a dinosaur, too technologically backward to appreciate the greatness of digital currency. But it is my firm view that the ability of these things to gain acceptance is just one more proof of the prevalence today of financial naiveté, willing risk-taking and wishful thinking. In my view, digital currencies are nothing but an unfounded fad (or even a pyramid scheme), based on willingness to ascribe value to something that has little or none beyond what people will pay for it. But this isn't the first time. The same description can be applied to the Tulip mania that peaked in 1637, the South Sea Bubble (1720) and the Internet Bubble (1999-2000).

Serious investing consists of buying things because the price is attractive relative to intrinsic value. Speculation, on the other hand occurs when people buy something without any consideration of its underlying value or the appropriateness of its price, solely because they think others will pay more for it in the future. It isn't unreasonable for someone to use Bitcoin to pay for something – or for a seller to accept Bitcoin in payment – based on an agreement between the parties; barter takes place all the time. But does that make it "currency"?

The New York Times notes that together, the outstanding Bitcoin and Ether are worth more than Paypal and almost as much as Goldman Sachs*. Would you rather own all of the two digital currencies or one of those companies? In other words, are these currencies' values real? They're likely to keep working as long as optimism is present, but their performance in bad times is far from dependable. What will happen to Bitcoin's price and liquidity in a crisis if people decide they'd rather hold dollars or gold?

**The Memo is from July 26th 2017 and the price of both Bitcoin & Ether has more than tripled since so you could now buy both GS & Paypal & have cash to spare.*

BIT COIN OR A BIT CRAZY?

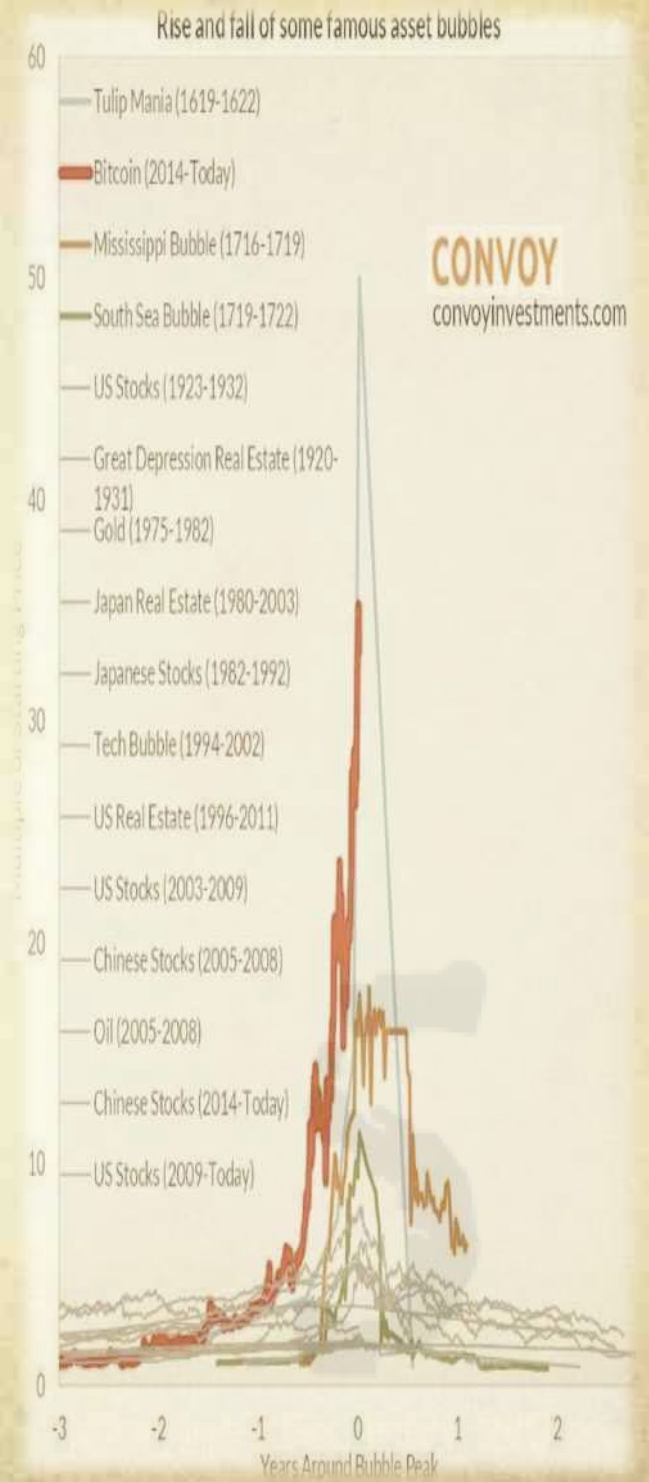
One can argue that in recent years, cryptocurrency – and in particular, Bitcoin – has demonstrated its value. Investors speculating in the technology have driven most of the current market capitalization and this is likely to remain the case until a certain measure of price stability and market acceptance is achieved. Apart from the declared price of cryptocurrency, those invested appear to be relying on a perceived “inherent value” of cryptocurrency. This includes the technology and network itself, the integrity of the cryptographic code, and the decentralized network. This instills confidence that this new form of value carries attributes in common with other longstanding stores of value, as well as some attributes unique to this new technology.

The inherent value of cryptocurrency as an alternative method to store and transmit units of value has by now gained acceptance from a critical mass of investors, technologists, regulators, merchants, entrepreneurs and consumers. It's clear that cryptocurrency is more than a passing phenomenon. Many smart people believe that it represents the beginning of a new phase of technology-driven markets that have the potential to disrupt conventional market strategies, longstanding business practices and established regulatory perspectives – all to the benefit of consumers and broader macroeconomic efficiency. The growth has been driven largely by venture capitalists investing in technology infrastructure and other investors seeking to profit from price fluctuations, rather than by consumers actually using cryptocurrency.

So are the prices real or just fantasy? Might Mania have set in and engulfed, what appears to be a kernel of real technological progress, in a big juicy bubble?

Let's see what we can glean from history on this subject. Speculative bubbles are rooted deep in human nature, and have been widely studied, amongst the most famous are; 'Memoirs of Extraordinary Popular Delusions and the Madness of Crowds' by C. Mackay written in 1852. History's most infamous bubble took root in the Netherlands almost four centuries ago – for tulips. The Semper Augustus, a delicate tulip with blood-red flares, was then all the rage and immediately before the crash it was said to have an asking price of 10,000 guilders, enough to buy a luxurious house on the canals of Amsterdam. As the graph on the right shows Bitcoin is racing into the same steep territory, will it reach a 'permanently high plateau' or will it find the same fate as Icarus and come crashing back to earth? Let's look at some of the common elements of history's speculative bubbles:

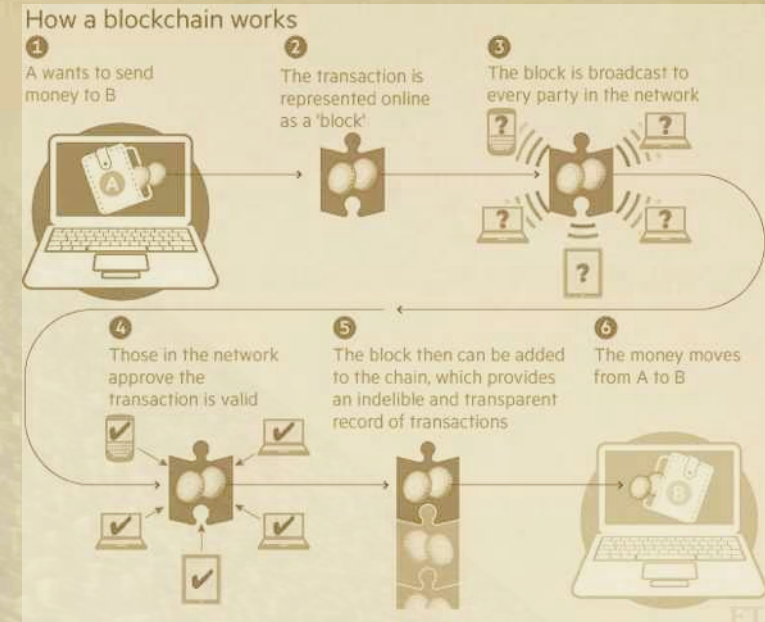
A) An exciting & new “disruptive technology that is difficult to value in the short-term and whose long-term value is uncertain. **B)** Easy liquidity of markets so that shares or other securities can change hands quickly. **C)** The provision of cheap credit to pay for it. These classic elements were visible in the speculative bubbles of the 19th century, namely the Canals & Railroad Bubbles. Again in the 20th century, economic history was marked by a series of huge bubbles – 1929 DOW, 1990s Nikkei, 'Dot-Com' - all followed almost identical patterns. In 2007 we saw even larger bubbles burst and all the elements have since been on steroids with record low interest rates & QE. Is it likely that 'easy money' has again flooded our 'new-new-thing'?



MEET THE MIGHTY BLOCKCHAIN...

While many are doubtful about the future of cryptocurrencies, diverse players from the BIS – the Central Bank of Central Banks, global banks such as UBS, Goldman & JP Morgan sees the underlying so-called 'BlockChain technology as having vast potential with the ability to impact industries ranging from finance to manufacturing, healthcare and utilities. Investing in the Blockchain wave is akin to investing in the internet in the mid-nineties, it could lead to significant disruptive technologies in the coming decade especially in the financial sector which appears ripe for changes.

As always when a new innovative term becomes popular the narrative inevitably gets ahead of itself and dubious characters aim to take advantage of the next "gold-rush". As was the case with the 'Dot-Com' craze companies are rushing to associate themselves with this new-new-thing; A biotech 'penny stock' recently decided to add 'blockchain' to its name and invariably its stock price subsequently surged 394% in a day. And as you listen to the increasing number of industry titans, joining the choir of believers with 'boilerplate' statements such as; "While I have my doubts about the Bitcoins, I really think that the Blockchain is very important." one can't help but think of the popular Dilbert Cartoon meme below.



Cryptocurrency opens the door for revolutionary technological possibilities



US Congressional Research Service,
"Bitcoin: Questions, Answers, and Analysis of
Legal Issues," January 28, 2015; PwC Analysis.



What is blockchain technology?

The blockchain is a ledger, or a list, of all of a cryptocurrency's transactions, and is the technology underlying Bitcoin and other cryptocurrencies. This decentralized public ledger keeps a record of all transactions that take place across the peer-to-peer network. Users can contribute to the network by providing computational power to assist with the verification of transactions in real time (known as "mining"). This technology allows market participants to transfer assets across the internet without the need for a central third party. Specifically, the buyer and seller interact directly with each other and there is no need for verification by a trusted third-party intermediary. Identifying information is encrypted, and no personal information is shared. However, a transaction record is created. For this reason, transactions are considered pseudonymous, not anonymous. As shown on the left the blockchain has the potential to disrupt a wide variety of transactions.

Source: US Congressional Research Service.

The Buzz:

"The prospect of blockchain technology remaking financial services just moved a step closer to reality after banks including GS & JPM completed a successful 6-month test in the \$2.8 trillion equity swaps market"

- Bloomberg

A SUMMARY FOR NOW...FOLLY OR THE FUTURE OR A BIT OF BOTH?

As we claw our way out of this 'rabbit hole' let's have a look at some of the conclusions that can be drawn.

Digital currencies are here to stay and they have in many ways been here for a long time – most of the world's financial transactions have been electronic for decades. Economists estimate that only around 8% of the world's currency exists as physical cash, the rest exists only on a computer hard drive in electronic bank accounts around the world.

What is new, with so-called crypto, is the exclusion of the third-party intermediary for verification, the central bank for issuance controls (or lack of) and the various government institutions for regulatory factors.

Though people are right to question - the competencies of these actors based on past performance, the unnecessary monopolies Mr. Morehead railed against in his 'bull case' and the need for evolution in our financial infrastructure – it is not clear that Bitcoin, the mighty Blockchain or any of its current offspring are the solutions in their current format.

That is fine. It is undoubtedly a positive thing that the debate about these important - yet somewhat arcane - aspects have been brought into the open, away from the 'Tower of Basle', government committees and self-serving Wall Street bankers.

To channel Mr. Marks, our 'Bear Case'; Is it Real? As Mr. Marks has commented, most of his criticisms of crypto are also true of the USD and all fiat currencies – It's a matter of practicality and belief in the system that ultimately determines its viability and its ability to scale. In the words of R.W. Emerson; **"Build a better mousetrap and the world will beat a path to your door."**

Q: Has Mr. Nakamoto build a better 'mousetrap'? **Q:** Is the 'decentralization' real or has the costs & energy required driven the 'mining' into the hands of a few large operators in China & Russia? **Q:** Will the establishment relinquish power without a fight? **Q:** How will it be taxed? **Q:** Will K.Y.C requirements take the anonymous aspect out of the equation?

Q: Will it be 'tamed' and co-opted so it can be used as a 'Trojan horse' for luring people away from the last vestiges of physical assets and the related freedoms?

Q: Can the fragile intersection between the 'old' and the 'new' systems be done in a secure manner that doesn't erode the inherent benefits of the Blockchain?

Q: Will it drown in hubris, boom and busts, the pure chaos of competing visions, shady pump and dump schemes and poorly thought out security measures at the exchange level?

Q: To use Emerson's analogy; Are people flocking to 'crypto' because it's really a better 'mousetrap' or are most there to speculate in a self-reinforcing infatuation with the rocketing prices? **Q:** Is it a classic historic bubble story or is this the Internet 2.0?

A: Only time will tell.

In the affairs of mankind the pendulum has a habit of swinging from one extreme to the other, yet the 'truth' often resides in the middle.



For investors we can only recommend that you stay curious and open minded but as always do your due diligence, use a commonsense approach for the security of your wealth such as; "If you don't understand it, don't do it" and "If it sounds too good to be true, it most likely is."

Most global assets are trading at record levels today, mostly supported by historically low interest rates, QE magic of the world's central banks, rising financial alchemy of the corporate sector and unsustainable levels of debt for consumption by individuals - as they run on the hamster wheel of consumption-for-the-sake-of-consumption. So is it such a surprise that the 'new-new-thing' may have joined the party and is showing some signs of irrational exuberance? Caveat emptor – time to turn down the 'noise' and come to your own well informed conclusions.

As a fiduciary, who takes their responsibility seriously, can you really signoff on an investment into this space?

The answer should be yes, if you have done your due diligence and found supporting fundamentals that match your mandate. It, crypto and related ventures, should in our opinion be considered akin to traditional VC investing – high risk/high return with increased illiquidity risk - and once the boom/bust cycle clears out the hubris it may very well turn out to be one of the great wealth creation opportunities of our time.

As Shakespeare put it: **"There is a tide in the affairs of men, which taken at the flood leads on to fortune. Omitted, all the voyage of their life is bound in shallows and in miseries. On such a full sea are we now afloat. And we must take the current when it serves, or lose our ventures".**

However it may, as is often the case when new innovation and discovery interrupts, be that the real opportunity is around the edges, in the less spectacular and the more mundane. It was Mr. Levi and the sellers of shovels and provisions who rode the California Gold Rush to fortune. The institutional segment has so far focused on the blockchain technology and its potential for smaller incremental improvements to existing systems especially in the financial sphere. **Revolutions often lead to spectacular episodes of wealth destruction whereas the quieter cousin, evolution, with the benefit of compounded interest dynamics, often ends up the real wealth creator.**

A generational wave will eventually drive all things electronic to new levels, my kids navigate a digital world with the swipe of finger and I recently discovered that they were making virtual money in the online game; Minecraft by selling their constructions and innovations to players around the world. **We live in interesting times, stay curious yet with an all important sense of critical and independent thought. It has served mankind well for millennia.**

ABOUT LIBRARIVM:

Librarium Associates Ltd. is an independent research company focusing on global macro and geopolitical monitoring and analysis. **We are committed to delivering distinctive insights on global trends enabling our partners and clients to make informed decisions in a changeable world.**

We offer global accredited investors such as asset managers, family offices and institutional investors with quarterly and annual publications providing an independent overview of global macro economic and geopolitical events and their implications on the world of investing.

We also provide intra-monthly event driven insights as a part of our constant horizon scanning services.

Our services can also be employed on a retained basis, providing the client direct & always confidential access to our team on an on-going basis allowing us to act as an independent sounding board for our clients ventures.

Furthermore, we can also produce exclusive client commissioned stand-alone reports across a number of broad areas.

We prefer to work with a relatively small and select group of active clients allowing us to provide them and their projects with our full attention and as such we operate a limited amount of such partnerships.

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