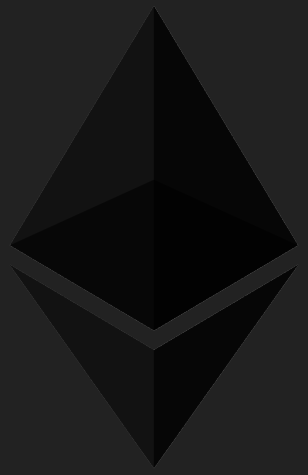


ETHEREUM (ETH) VS. BITCOIN (BTC)

WHY INVEST IN ETHEREUM?

By Paul J. Moriou®

PLAN

WHAT IS A CRYPTOCURRENCY?

- A cryptocurrency is a digitally hold currency that cannot be hacked, manipulated or altered.

Source: insidermonkey.com

« IF YOU WOULD HAVE BOUGHT $100 WORTH OF BTC BACK IN 2010, YOUR PROCEEDS TODAY WOULD BE OF $74,000,000 »

Bloomberg, May 2017

THE RISE OF BITCOIN

- BTC was first introduced in Jan. 2009.
- At this time, the price for one BTC was $0.0025.
- Today (30.05.17), it has reached a value of $2,440.7439.
- It is backed by investors during times of crisis when « reliable » fiat currencies such as the US$ become more unstable (e.g. when Trump became president of the USA or during BREXIT).
- From 2011 to 2017: Arrival of new cryptocurrencies (e.g. Ethereum, Ripple, Litecoin, NEM, Dash, Monero, Zcash…etc.

A CRYPTOCURRENCY

- Bitcoin is a cryptocurrency and a digital payment system.
- It is already accepted by numerous companies such as PayPal, Microsoft, Dell, Expedia…etc. and even nonprofit organizations such as Greenpeace and others.
- However, nowadays people seem to be less interested in the currency than in the technology behind it: the Blockchain.

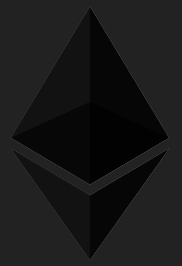
THE BLOCKCHAIN

- The Blockchain is created by several very powerful computers around the planet. These computers can be bought by just anyone who wants to « mine » Bitcoins i.e. participate in Bitcoins transactions. The interested people will exchange high fixed costs of expensive computers plus very high electricity expenses against several fractions of Bitcoins. These computers will be verifying every transaction made in the system. When a transaction is fully verified, it is added to a « block » with other transactions to the whole Blockchain. Thus, the Blockchain is simply a **public distributed ledger** that registers every transaction made and distributes it to every nod of the network i.e. the « mining computers ». We can view it as a giant decentralized database.

THE BLOCKCHAIN

- With **fiat currencies**, when we pay someone through a bank, we trust the bank as a reliable third party that plays the role of an intermediate between the issuer and the receiver: the transaction is **centralized.**
- **Bitcoin** is different. Whenever a transaction is made, every mining computer in the network starts to compete to solve very difficult mathematical equations in order to verify this transaction. When one computer finds the solution, all the others engage in a process of verifying this solution. The transaction has to be accepted by +50% of the mining computers to be registered: the transaction is fully verified but **decentralized**, it is a peer to peer process (person to person).

ETHEREUM



- Ethereum was first introduced in early 2016.
- At this time, the price for one ETH was around $7.
- Today (30.05.17), it has reached a value of $256.5493.

ETHEREUM: AN EXTENDED USE OF THE BLOCKCHAIN

- Ethereum uses the same technology as BTC does, i.e. the Blockchain. However, it does not stop there and settle for just being a cryptocurrency. Ethereum is a platform taking the blockchain globally. It uses the Blockchain to certify contracts in the quickest and safest way possible (smart contracts) and is an ecosystem allowing the creation of decentralized applications. It is said to be « the future of internet ».

« THE FUTURE IS A DECENTRALIZED INTERNET »

TechCrunch, Jan 2017

ETHEREUM: AN EXTENDED USE OF THE BLOCKCHAIN

- Internet as we know it is a centralized system. Our personal datas are centralized in Facebook databases when we set up an account. Our WhatsApp messages are going through WhatsApp servers before being delivered to the recipient. Yet, some very powerful tools are decentralized such as Wikipedia: everyone can contribute to the online encyclopedia.
- Ethereum is the basis to a new totally decentralized internet. A decentralized internet would basically mean that every people is the owner of the his/her personal datas, that the information is free, and that frauds are almost impossible.

PROBLEMS OF BTC: (1) THE SPECULATIVE BUBBLE

- 1 BTC is already worth around $2,440 and is expected to reach $3000 at the end of 2017. However, its market capitalization is already around $35,716,635,696. Such amount of money put into the system in such a small period of time seems very large for an asset that is just a cryptocurrency in limited supply. Investing in BTC therefore might be more a speculative move than an actual investment in a project expected to grow.

source: tradingview.com

PROBLEMS OF BTC: (2) NO ADDITIONAL FEATURES THAN BEING A CRYPTOCURRENCY

- As specified before, BTC's sole feature is to be a a cryptocurrency, i.e. a fast and secured mean of exchange. However, unlike ETH, it is not a technology that has decided to get the best of the Blockchain system. BTC might remain in the market for the following years as the first cryptocurrency using the Blockchain but we do not expect it to disrupt any other potential market.
- Also, one of the main cons of BTC regarding its expansion in the future is that it uses the blockchain as a general public ledger accessible to everyone. As it may be very convenient and safe for any individual, companies have, however, been skeptical about freeing all their transactions to the eyes of the general public. On the contrary, ETH allows some transactions to remain totally personal (using private Blockchains).

PROBLEMS OF BTC: (3) THE TRUST IN MONEY

- The expected scenario of investors backing cryptocurrencies is that, someday, those will disrupt the banking system and as a consequence, replace it. Even if it might be more complicated and take a bit more time, we might imagine a world where most of the people will be holding cryptocurrencies in their virtual portfolios and use them for basic shopping and expenses. However, if this happens to be true someday, it would mean that the general public **trust** the money they are using. With BTC being known as the mean of exchange for illegal transactions on the Darknet (this has been globally confirmed during the « wannacry » malware spreading, the May 2017's cyberattack that reached +100 countries worldwide and asked cyber victims to pay ransom in BTC), we hardly imagine how it will manage to clear its name in order to reach the general public.

HISTORICAL DATAS

- Basically, from 2010 to 2017, and with its main activities in the last year, BTC went from a fraction of a cent, to $1,000 then sank to $300 to finally rocket to +$2,000. This was mainly explained by the growing unsecured political atmosphere around the globe that led investors to escape to safer haven like gold and cryptocurrencies.

- ETH started at around $7 in early 2016 and grew progressively to a maximum price of $40-50 where it remained more or less stable until last month. At the very beginning of May 2017, it skyrocketed to $170 and then to $250 as of today. This exponentially growing interest might be explained by a following in the trend of BTC, but also by a spread general awareness around the benefits of a next generation 3.0 decentralized internet.

ETH: WHAT TO EXPECT NOW?

- With a current supply of 92,070,011 ETH, it would take its market capitalization to go from the current $20,262,031,454 to around $184,000,000,000 for ETH to reach a unit price of $2,000 (i.e. an 800% return on investment as of today). Such a market capitalization can seem unreachable, but if ETH goes on towards its aim of becoming the backbone of a new 3.0 internet, we can expect it to grow even more and allow its currency to reach unit values exceeding $10,000. Think of it as the aggregation of just any e-commerce's market capitalization. (e.g. Apple's is $802,88 billion, Alphabet's is $657,73 billion, Amazon's is 463,96 billion and Facebook's is $429,63 billion…etc.).

INVESTING IN ETH… AT WHAT RISK?

- The Decentralized Autonomous Organization (DAO) that runs the ETH ecosystem is accessible to just everyone. If a very skilled hacker takes part in it and finds a breach in the protocol (the code) that is exploitable, he/she can be able to redirect ETH from transactions directly into his/her wallet. This is what happened on the 17th of June, 2016 when a hacker within the DAO managed to redirect $50 million to his wallet (legally). To avoid the breach to happen, the DAO decided to « hard-fork » the protocol, i.e. change the protocol in order for the hacker not to be able to access the money. But such a change in the protocol disturbed the blockchain and a new one had to be created. Since then, the protocol has been revised. The conclusion on this is that a totally decentralized system is very secured and not « hackable », as long as the code is perfectly written for no one to be able to take advantage of it.

INVESTING IN ETH... AT WHAT RISK?

- Unlike BTC, which lacks a central point of failure, the ETH foundation is a clear potential central point of failure for ETH. A regulator that wants to thwart the advancement of the ETH project can take a clear choke point on the foundation. This would severely cripple the progress of the project, as a developer platform is only as strong as the developers behinds it.
- Also, there exists the risk that ETH will at the end not become the backbone of a 3.0 internet, but in this case, we cannot predict if this would instantly devalues its currency ETH, or if ETH would still persist as a safe haven for investors (during times of crisis for example).

INVESTING IN ETHEREUM

Pros	Cons	Expected Returns	Risks
Cryptocurrency with 2nd highest market cap. behind BTC	High volatility, ETH follows a normal investment path, « but 10 times quicker »	A 200% to 800% ROI is possible if ETH remains at the state of a cryptocurrency	Offering a decentralized system from a « centralized » foundation. The protocol should be perfect not to be breached
Allows smart contracts and created an ecosystem for totally decentralized applications: « the future of internet »	Is the world ready for a decentralized internet? It will happen for sure because it is extremely more performing, but when?	+800% is possible if ETH evolves as the backbone of a 3.0 internet	We cannot be sure that ETH will become what it aims to, i.e. the next generation applications development platform
Allows some private transactions: currency highly backed by companies			
Did not suffer from a real speculative bubble yet			

ETHEREUM