The real value of cryptocurrency

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Abstract[1]

Controversy surrounding whether cryptocurrency is a bubble and whether the price of bitcoin should be zero instead of $40.000 USD ignores a fundamental problem: cryptocurrency has been assessed based on the wrong assumptions. This article outlines a method for providing a more suitable and reasonable assessment of the real value of cryptocurrency. The main argument against cryptocurrency has been that there is nothing behind it. Backing a traditional currency is a national bank, a state and the right of taxation. When cryptocurrency is measured these traditional measures it falls short and the value calculation comes to zero. However, a cryptocurrency is not a traditional currency and should not be measured as such. Instead, it is the associated blockchain that provides cryptocurrency its real value and not its properties as a currency. A blockchain is a digital platform. A piece of software that supports the demand of different companies for a common independent ledger. The valuation of a cryptocurrency must, therefore, be based on the value of its blockchain. The right question to ask is "How valuable is the blockchain itself?" From that point of view, it is clear that a cryptocurrency must be priced more like the price of a digital platform company rather than as a regular currency. To demonstrate the usefulness of this approach the value of Bitcoin, Ethereum, Ripple, Solana, Filecoin, and Cardano is assessed, and it is suggested that several of these cryptocurrencies—when understood and priced as digital platforms—are priced low in relation to their business potential and application area.

About the author

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Introduction

Blockchain has so far been inextricably linked to Bitcoin, including its mysterious origins and the wild speculation going on in cryptocurrency. Cryptocurrency—a virtual currency unencumbered by a central monetary authority—has often been called a Ponzi scheme; all that seems missing is a witty boy (as in Hans Christian Andersen's Emperor's New Clothes) to exclaim "They have no value!" before the crypto universe collapses and the whole charade is revealed to be the largest scam since the Dutch tulip mania of the 1630s or, more recently, the American housing bubble that triggered the financial crisis of 2008.

[1] Thanks to Rina Asmussen, Ken L. Bechmann, Susanne Sayers, and Kalina S. Staykova for useful comments to earlier drafts of this paper

Ironically, the housing bubble was one of the catalyst of Bitcoin's birth. Bitcoin—the first and most infamous cryptocurrency—emerged partly as a reaction to many banks receiving state aid in the form of various rescue packages to cover the gigantic losses of overly lenient mortgage loans used for untamed financial speculation in house prices, while ordinary people received no help and many went bankrupt and had to leave their homes. Bitcoin was created as a currency out of reach of established authorities, institutions, and banks. It was designed and intended to give back the power and responsibility of money and payments to ordinary people who no longer had to worry that their money would be confiscated or devalued. With that origin, it is not surprising that the established financial world is greatly skeptical of Bitcoin and other cryptocurrencies. The distrust is reciprocated.

However, it is time to replace mistrust with openness, and hopefully this article will lead to more financial institutions taking an interest in, allowing trading in, and investing broadly in cryptocurrency and in blockchain. Blockchain and cryptocurrency are fast creating the next digital revolution on the Internet and forming Web3. Too many institutional and private investors are missing out on this investment opportunity because of the doomsday prophecies hailing down on cryptocurrencies from established institutions—doomsday prophecies that are based on erroneous premises.

Crypto critics and Comical Ali

Cryptocurrency challenges logic. How can something so complicated, so strange, and so *intangible* be worth so much? That's a really good question. Because it doesn't seem to make sense that a single internet coin—that you will never hold in your hand—can be worth several tens of thousands of dollars.

The main argument against cryptocurrencies has been that there is nothing behind it. There is no national bank to protect it and no national state to create trust. There is no right of taxation associated with cryptocurrency. There is also no real asset like gold to back its value. Therefore, some people perceive cryptocurrency as a mirage. The CEO of JP Morgan recently stated that "Bitcoins are worthless[2]." And the director of Elliott Management predicted that cryptocurrency will go down in history as one of the world's most spectacular scams.[3]

However, something is happening. A number of companies, including several global giants, have found good use of blockchain, and along with the rising exchange rate of Bitcoin and cryptocurrency´s popularity among ordinary people, it is getting harder and harder for the financial sector to keep ignoring and condemning the phenomenon. In the long run, the financial sector risks ending up being dubbed a "Comical Ali," like the Former Iraqi Information Minister Mohammed Saeed al-Sahhaf who during the invasion of Iraq in 2003, despite the presence of gunfire and U.S. tanks, stubbornly maintained that Iraq was not being invaded.

A Columbus egg

So, what is the real value of cryptocurrency? Many have asked themselves that exact question. In late 2017, the Bitcoin rate skyrocketed, causing heated discussions about whether the cryptocurrency phenomenon was a bubble that would burst with a loud bang. The following two years were relatively quiet. The price of Bitcoin fell from around $20.000 USD to just $3.500 USD. Maybe the air was leaking from the balloon? But

[2] Jamie Dimon, JPMorgan Chase chairman and CEO on CNBC. https://www.cnbc.com/2021/10/11/jpmorgan-chase-ceo-jamie-dimon-says-bitcoin-is-worthless.html

[3] https://www.investopedia.com/news/hedge-fund-elliott-management-calls-cryptocurrencies-one-most-brilliant-scams-history/

at the beginning of 2020, the price of Bitcoin rose sharply and, in November 2021, reached a staggering $68.000 USD per coin. If it was a balloon, it just got pumped up.

It is difficult to justify the exchange rate of a cryptocurrency toward fiat currencies. The traditional principles for valuing a currency fall short. Clearly, cryptocurrencies is not just money, that are useful as a means of exchange and as value storage. In addition, there has also been a lack of a reasonable answer as to why one cryptocurrency should be worth more than the other. Sometimes one can get the impression that it is the cryptocurrency with the catchiest name that gets the most attention and the highest rate. Some highlight certain characteristics of cryptocurrencies, such as the fact that Ethereum supports smart contracts. But there are several cryptocurrencies that support smart contracts, so that alone cannot explain significant differences in the rate between cryptocurrencies. In short, there are no immediately rational and convincing explanations for a given rate or its movement. But what if the premise of trying to set the currency rate is basically wrong?

The main purpose of this article is to present a set of principles for a new and different way of pricing cryptocurrency, which rejects previous bubble speculations and pyramid scheme scenarios and instead provides a solid foundation for a proper and conservative perspective on how to value a cryptocurrency. The method is quite straightforward and, therefore, a bit of a Columbus egg, because it is quite an obvious solution to this hitherto difficult conundrum.

Cryptocurrency – just a means to an end

As the large and often random fluctuations in cryptocurrency suggest, there can be a big difference between the wild speculative value and the real value of a cryptocurrency. To get closer to the real value of a cryptocurrency, it is necessary to understand that cryptocurrency is an integral part of a blockchain—and vice versa. They cannot exist independently.

So far, it is the cryptocurrency itself that has been valued, while the blockchain has been seen as a less important by-product. But it is first and foremost the blockchain functionality that gives the cryptocurrency value. Not the other way around. The cryptocurrency itself is just the fuel that drives the exchanges on a blockchain-based platform. Cryptocurrency is simply a claim on a future use of a blockchain—an access ticket to use the functionality, if you will. Companies must purchase and pay in the appropriate cryptocurrency if they wish to use a blockchain. Simply stated, the only reason why someone should buy and hold cryptocurrency is that it is a critical and often limited resource for the future use of a blockchain.

A blockchain is platform software that matches the demand of different companies for a common independent ledger that all parties can trust. The valuation of a cryptocurrency must, therefore, be based on the functionality of its blockchain. The right question to ask is “How valuable is the blockchain itself?”

From that point of view, it is clear that a cryptocurrency must be priced more like the price of a platform company rather than as a currency. It is the cryptocurrency that is the by-product, while the blockchain with its features and business potential is the real attraction.

To illustrate, the blockchain Solana is worth $55 billion USD (end of 2021). Solana has the largest functional overlap with the platform company Spotify, a music service with a market value of $45 billion. Many believe that Solana has the potential to replace Spotify and other music streaming services. In that case, Solana's value is not speculative or inflated. It is this business potential that gives Solana value, and not the associated currency *SOL* (or Solana coin). The following sections elaborate on this perspective and provide several similar examples.

Internet bookkeeping

Blockchain has long cut ties with the financial sector and found application in sectors outside finance under the heading of Web3. Blockchain is in many ways the platform that the modern company needed in order to build a complete digital infrastructure. With blockchain, the infrastructure can meet the need for fast and efficient communication via the Internet (Web 1), it ensures that the company can market and sell its products and services over the Internet (Web 2), and with blockchain, the need to be able to accurately account for authenticity, traceability, and origin of production while protecting products and services from counterfeiting and illegal copying (Web 3).

A blockchain-based ledger can act as a common platform for companies that want to record events in a value chain. For example, the raw material producer registers its sales of organic products to a manufacturer on the blockchain. The manufacturer registers its climate footprint for the processing of the raw materials and then its sales to a wholesaler—also on the common blockchain ledger. The wholesaler registers its climate footprint from transport and storage as well as its sales to a store. In the store, the customer scans the product's QR code (or quick response code) with a mobile phone and can then unravel the entire supply chain as well as the product's climate footprint.

Blockchain business

Several global companies see the opportunities in blockchain and have already built advanced blockchain platforms. For most companies, blockchain allows them to have better control over their production, save time and money on transactions, provide clearer logistics, and guarantee authenticity. Systematic use of a blockchain platform reduces the need for control and at the same time gives companies greater credibility with customers. Thanks to blockchain, companies can provide documentation to back up claims of product authenticity and organic status because the entire process is registered on the blockchain platform.

Blockchain offers completely new possibilities for tracking and guaranteeing the authenticity of products. Consumers will soon discover this and then expect to be able to unlock the entire supply chain from raw materials over processing to transportation and logistics by accessing digital accounting using their mobile phone. Transparency becomes a requirement. Perhaps, initially, it will not be a legal requirement, but only expressed as an expectation from shops and consumers that cannot be ignored.

Investors are also increasingly demanding transparency and credibility, not least in relation to environmental, social, and governance (ESG) reporting. The companies that know how to use blockchain will be able to gain a competitive advantage. The companies that think it will probably go away make the same mistake as the companies that once dismissed the internet as a passing fad without any particular significance. Many of those companies no longer exist.

Blockchain has great potential, especially in the green transition. There is a huge need for a common ledger that can keep track of the origin of products and their climate footprint. Blockchain-based bookkeeping can prevent greenwashing (that is, deceptive marketing claims of environmentally-friendly practices) and prove that products are truly sustainably produced and not just labeled with slogans and unsubstantiated claims. Blockchain is perfect for handling this kind of bookkeeping.

Blockchain also finds novel applications in the art world, often in combination with the Internet of Things and smart contracts. Non-fungible tokens (NFTs) give blockchain an opportunity to address one of the Internet's big problems: when everything can easily be copied, “How do you reward and preserve authenticity?” An NFT documents originality and, therefore, gives artists and designers a unique opportunity to be both recognized and rewarded for their efforts. An NFT coupled with an smart contract

also guarantees that the original artist is compensated every time the artwork changes owner. This happens automatically when the blockchain is updated with information about the sale and who the new owner is. In this way, a work of art can also be followed throughout its history, which might further increase its value.

Blockchain accountants

There are a number of common features shared between the well-known Internet and the much newer blockchain technology:

- There is no central computer that can decide over the others—it is distributed
- There is no commercial company that has control – it is decentralized
- The technology is kept alive by all the computers that use the respective protocols

One might think that the above shared features would make such decentralized technologies vulnerable or volatile but, in fact, they are extremely robust, and the distributed architecture makes it difficult to seize control of them. It is particularly confidence-building for joint bookkeeping that no single company has the ultimate editing control or ownership. This architecture addresses the challenge that the Romans knew was the weakness of any centralized solution: “Quis custodiet ipsos custodes?”—"Who will guard the guards themselves?"

When multiple entities are involved in a blockchain and the bookkeeping is distributed, it becomes extremely difficult to falsify or change it. And thanks to mathematical hashing codes, any change is detected instantly. No one has to sort through millions of transactions to find the error. The chain “jumps off” if there are changes to transactions that have already been posted.

The term "Bitcoin miners," or simply "miners," refers to independent accountants armed with computers who check transactions and record them on a blockchain. They ensure consistency and identify attempts at "double spending" and ensure that there is consensus among the many accountants on the current status of the bookkeeping, so that there is never any doubt. But the accountants do not make their time and computing power available for free. They expect to be rewarded for their efforts.

The blockchain accountants are remunerated in two different ways: 1) with newly issued cryptocurrency or 2) with the “gas fee” that the companies attach to a transaction they wish to record in the ledger. In some cases, the payment may be a combination of the two. Both the newly issued cryptocurrencies and the gas fee are settled in the only form of payment available: the cryptocurrency that blockchain both creates and consumes as stipulated in the blockchain protocol that all accepts as the accounting practice.

Cryptocurrency – the chain’s lubricant

There is a big difference between technically constructing the blockchain software and getting its use widespread. In order to become popular and earn the trust of users, no single company can have control over or gain a particular advantage of a blockchain. If a blockchain is to be successful, it is necessary for the creators to relinquish control and make operations decentralized, so that it is distributed among a large number of accountants. And no single accountant or coalition must be able to achieve a dominant position.

Next, it is important to achieve a balance between users and accountants. If there are no users, there are no accountants either. And the other way around. It is a classic causality dilemma: “Which came first, the chicken or the egg?” It is, therefore, crucial that many find it attractive to use a blockchain so that together they create a demand. The demand drives the need for blockchain accountants.

Most blockchain initiatives are open source and are often launched by technology aficionados with limited resources. The associated cryptocurrency is really the only asset that a blockchain has at its disposal and, therefore, it becomes the cog that drives the exchange of services between the user companies that want to have transactions recorded on the blockchain ledger and the accountants who carry out the audit work.

Closing a block in a blockchain is roughly equivalent to closing a page in a classical paper-based ledger. A middle sum must be calculated that includes all the transactions on the page, the middle sum must match the sum from the previous page, and finally it must be transferred as the starting sum on the following page. In a blockchain, there must be a code identified, which is a combination of the code of the previous block, and which includes all the transactions in the new block. The code is also the reference for the next block. Finding the code requires large amounts of raw computing power, making it costly for accountants to audit transactions and close a block.

Paying the accountants

To entice accountants, an element from the gaming world has been added to the blockchain technology. The accountants, i.e., computers that maintain the ledger, will be rewarded with cryptocurrency when they find the code. Whoever first finds the code will receive a prize in the form of newly issued coins or gas fees, as described earlier. If the chance of winning is great, it entices hundreds of thousands of accountants, all competing to find the code first. The accountants who keep the ledger up to date and audit the individual transactions are, thus, remunerated for their efforts. However, if the cryptocurrency is worth very little or the chance of finding the code too small, it is not attractive for the accountants to contribute to the audit work and the bookkeeping stalls. If a blockchain stalls, all transactions recorded in the bookkeeping are lost. It is, therefore, crucial that a blockchain has the constant support of many accountants. If there is a declining support for a blockchain, users will have to increase the gas fees until a sufficient number of accountants again find it attractive to maintain the ledger and record new transactions.

In the Bitcoin world, accountants are motivated to keep the Bitcoin blockchain alive by the prospect of being the lucky one to find the code and be rewarded with the next Bitcoin. Currently, the lucky accountant is remunerated with 6.25 Bitcoin—which is equivalent to about $250.000 USD when the hash code is found. A new code must be found every 10 minutes. Once the code is found, the winner collects the entire win, while the rest of the network confirms the code and closes the page in the bookkeeping, thus, adding a new block to the Bitcoin blockchain. The other accountants work is wasted—a bit like investing in a lottery ticket that does not pay off. In this way, Bitcoin is both the purpose of Bitcoin accounting and the means to keep Bitcoin's blockchain going. However, this is not the only way to validate and audit blockchain accounting, and it is another aspect that should be included in the assessment of what the blockchain and its cryptocurrency are really worth. Bitcoin is in many ways atypical, as will be discussed later in this article.

The value of a platform

So far, attempts to value cryptocurrency have been based on how to value traditional currency. As mentioned earlier, however, that starting point is incorrect. Instead, crypto is the currency of a blockchain. The blockchain should be considered a digital platform, that is priced based on its market potential and business functionality.

Digital platforms are different from classical industrial companies. It is not valuable physical production apparatuses (for example, huge factories or fashionable shops in the most attractive places) that determine the value of a platform company. It is not the ownership of an oil field, electricity lines, or a nationwide

railway network that gives the world's most valuable businesses their enormous value. It is almost exclusively software bits and bytes appropriately organized as a platform—all intangible.

A platform operates by matching two or more types of users, each benefiting from the platform by supplying or demanding what the other needs. The value of a platform company can be calculated according to the value of its software as well as the ability and competence of its employees to continuously maintain and develop the platform. To this must be added any Intellectual Property Rights (IPR) as well as the value of hosting the many users who use the platform. This applies to Alphabet (Google), Apple, Meta Platforms (formerly Facebook), Uber, Netflix, TikTok, and many other of the world's most valuable platform companies. The real value of a cryptocurrency must be calculated in a similar way.

A two-sided platform

A blockchain is a two-sided digital platform with a certain functionality. The two sides are the users on the one hand and the accountants on the other. The accountants behind a blockchain have the skills, competences and computing power to uphold the blockchain, just as the employees of a platform company maintain and develop the platform. Platform employees are remunerated based on their input—i.e., number of working hours—and are paid wages in a fiat currency, e.g., dollars or euros. The blockchain accountants are exclusively performance-paid, and the salary is paid in cryptocurrency. This is somewhat similar to the common historical practice of paying potato field workers with potatoes.

To the value of the blockchain platform itself, a value depending on the number of users and the number of accountants who maintain the ledger must be added. This is similar to the tech giants. It is not just the Facebook software that creates Facebook's value, but to a large extent the three billion users of the platform. The collective value of a network is expressed in Metcalfe's law. Here, the value is calculated on the basis of the number of relationships that can be created within a network with a number of users.

$$v = n \, x \, (n-1)/2$$

where

v is the value

n is the number of users

In addition, there is also a "lock in" value for a blockchain, as there are switching costs for users that wish to switch from one blockchain to another. Users cannot easily take their data with them as data is locked in the ledger and is part of an unbroken chain of transactions.

Valuation of crypto

The real value of a cryptocurrency and a platform is, as described in the previous section, a combination of a number of different factors—software, IP, number of users, and their switching costs. However, these factors are hard to quantify individually in monetary terms. A simple way to estimate the total value of a platform is its market value. In addition, the market value is assumed to contain all available information about the platform. In a similar way, one could argue that the market value of a blockchain is the market value of its cryptocurrency traded on a cryptocurrency exchange and, further, that the value reflects all available information about the blockchain and cryptocurrency.

Currently there is an explosion in the development of decentralized applications (*dapps*) that provide functionality for various blockchains. Existing platforms and blockchains with *dapps* often have a functional overlap. In these cases, it is straightforward and simple to make a comparison between the market value of

a cryptocurrency and a platform. Then, one can determine if the valuation of the cryptocurrency is reasonable by trying to estimate how large a share of the market a blockchain has and will be able to conquer in the future.

Solana – for music sharing

A good example of this type of calculation is the Solana blockchain. Solana is particularly good at acting as a platform for music sharing *dapp* Audius, where artists can upload their music and users can listen. One consequence of this possibility is that it eliminates the middleman, as is often the case with digital platforms. In this case, the music services Spotify and Apple Music are disrupted. To estimate whether the market value of Solana is reasonable, one must first calculate the market value of the existing music streaming services. Second, one must find the market value of Solana. Third, one must compare with how much of the music services market Solana can potentially overthrow.

The market value of Spotify is $45 billion USD (end of 2021), and it should be compared to the market value of Solana on the crypto exchanges, which is $55 billion USD (end of 2021). With this calculation, Solana's rate may not be as speculative and out-of-bounds with a reasonable valuation as some might suspect. At a minimum, the presence of Solana and Audius puts the market for music services under strong price pressure.

Ripple – the SWIFT killer

Another good example that is closer to the financial sector is Ripple. Ripple has been nominated as the SWIFT killer, and although Wise (formerly TransferWise) has already challenged SWIFT (a payments and securities transactions platform), the Ripple blockchain platform may make it even cheaper, faster, and easier for banks to transfer money across borders and make the middleman—SWIFT—redundant. In a response to the challenge from Ripple and Wise, SWIFT launched SWIFT Go. Ripple has a market value of $41 billion USD (end of 2021). Wise has a market value of $10 billion USD (end of 2021). SWIFT is estimated at around $50 billion USD (end of 2021). In the light of this comparison, Ripple's market value is not entirely fictional and can be justified.

Filecoin – an interplanetary file system

Filecoin is nothing less than an interplanetary file system that challenges Dropbox, Google Drive, and some other Cloud services. Should the Earth ever cease to exist, the files on Filecoin will survive because of their presence on various satellites that orbit the Earth. Dropbox alone has a market value of almost $10 billion USD (end of 2021) while Filecoin has a market value of $5 billion USD (end of 2021). However, it is an open question how much of this market Filecoin can conquer, but Dropbox's position as an intermediary is being challenged. Filecoin´s market value is also not a random number or fictional.

Cardano – the peer-reviewed blockchain

Another example is Cardano, which is the first blockchain to be built on academically peer-reviewed research. Cardano is a multipurpose blockchain with the most prominent dapps in issuance of academic certifications (education), use against product counterfeiting (retail), use for know-your-customer (KYC) and anti-money laundering (AML) (finance), and against counterfeit and substandard medications (health care). Cardano's cryptocurrency, *ADA*, must be priced based on a calculation of the size of these markets and Cardano's expected share of the markets. To this must be added the value of the number of companies that already use Cardano in their business (Metcalfe's law) and are, thus, tied to Cardano (switching costs). Add to this a value that stems from Cardano's governance structure that enables future development of the blockchain protocol by a fee on what users pay for each transaction that is recorded on the Cardano ledger.

The community behind Cardano proposes and decides on improvements and upgrades to be carried out and the resources are taken from the common pool. In this way, Cardano's development is future-proof as long as it is popular. Cardano's current market value is $45 billion USD (end of 2021).

Ethereum – programmable smart contracts

Ethereum is a multifunctional blockchain platform, and it is the second most valuable cryptocurrency. It was the first blockchain to introduce a programming language to design smart contracts in association with the blockchain. The contract is executed as soon as the conditions in it are met. There are endless dapp opportunities for such a blockchain with built-in smart contracts. Most NFTs are based on Ethereum; many initial coin offerings (ICOs) and most of the existing smart contracts are also recorded in the Ethereum ledger. The market value of Ethereum is $500 billion USD (end of 2021). There is no single digital platform that matches Ethereum's many features and wide range of applications. The closest comparison is Apple's IOS platform with the app store or Android with its Play Store. Hence, it is difficult to immediately determine whether the value of Ethereum is inflated, but even a conservative bid based on the prescribed method with the business potential as a focal point arrives at a figure well in excess of $500 billion USD (end of 2021).

Bitcoin – the original

Bitcoin is the original cryptocurrency and somewhat odd. It was basically conceived as a substitute for money but blockchain have since developed a lot. There is not much functionality in the associated Bitcoin blockchain. The platform part is limited to buyers and sellers of Bitcoin coins as well as a myriad of accountants. Bitcoin, like gold, is a passive investment and is rather a store of value than a functional digital means of payment. The valuation should, therefore, be compared with gold rather than with a software platform. The total value of the 197,500 tons of gold in circulation is about $11 trillion USD (end of 2021); the value of Bitcoin is about $1 trillion USD (end of 2021). To date, gold has functioned as a timeless and universally-accepted currency. In recent years, many more private and institutional investors have wanted to invest part of their wealth in Bitcoin. El Salvador is the first country in the world to recognize Bitcoin as an official currency, and several companies are ready to receive Bitcoin as payment for their products. Several banks accept deposits in the form of Bitcoin. And so, Bitcoin is on its way to achieving a status as a universal storage medium. That's the real value of Bitcoin.

Discussion

One of the objections against cryptocurrency is that there is no one or anything behind the value of a cryptocurrency. Behind the U.S. dollar is the United States, the federal bank, and the right to tax American citizens. In contrast, there are thousands of accountants behind a cryptocurrency, all working to maintain the blockchain platform. There are millions of companies that need a common ledger that everyone can trust that adds further backing. Add to this, the thousands of companies currently building and deploying *dapps*. A cryptocurrency is not an independent currency, but merely the fuel for a particular blockchain platform.

Although both the potential of and the need for blockchain are great, there are a number of caveats. For example, many cryptocurrencies have extremely low trading volumes on the crypto exchanges, and the market value is, therefore, highly volatile. Some of the more than 8,000 cryptocurrencies offered on the various crypto exchanges are purely speculative and offer only a very limited functionality. There one can reasonably speak of a Ponzi scam. Investing in an initial coin offering (ICO) is also extremely risky. It is still too early to decide whether in the future there will be a market for many specialized blockchain platforms

or if there will be a race over the next few years in which a few cryptocurrencies and their blockchain platforms will dominate.

Bitcoin stinks

Another caveat is that in the first 10 years of cryptocurrency, criminals were among the first to adopt and use Bitcoin in their illegal activities, including through ransomware attacks. The saying "Pecunia non olet"—"Money doesn't stink" doesn't apply to Bitcoin and cryptocurrency. It is important to point out that in the Bitcoin world, it is possible to see where all Bitcoin are and where they have all been. This is due to the linked transactions in the bookkeeping, where one can see all previous ownerships all the way back to the creation of Bitcoin as an audit prize. One can, therefore, unravel where Bitcoin come from and to what extent they have been involved in dubious activities. In addition, the crypto exchanges have begun to reject cryptocurrencies that have been involved in criminal activities. The company Chainalysis offers to analyze Bitcoin and other altcoins (a common name for all cryptocurrencies other than Bitcoin), so that both private and institutional customers can protect themselves against "stinky" coins before a possible purchase—not unlike tracking the red dye that previously made cash from bank robberies virtually useless.

A third concern against Bitcoin and altcoin is their monstrous electricity consumption required to find the code that closes a block in the blockchain. This is only a problem in the original first generation blockchains. The new generation of blockchains are using alternative ways that do not affect the climate in any comparable way. Some of the existing blockchains—e.g., Ethereum—are in development to become climate-friendly. Unfortunately, there is nothing to suggest that Bitcoin is evolving in the same direction.

Lost keys

Every time the price of Bitcoin rises to new heights, stories are repeated in the media about unlucky investors digging in landfills for their decommissioned computer that contains the lost "keys"—code that gains them access to the huge sums in Bitcoin. It is probably the fourth concern against cryptocurrency that, unlike in the established financial world, investors are not protected if they lose the keys to the online bank. In the crypto world, losing your keys is like throwing something in the trash. We've become accustomed to the risk when it comes to gold and cash, but it will probably take several more years before everyone has understood the similar danger in the crypto world. About 20 percent of all Bitcoin is considered lost because the "keys" are missing.

The green transition

Currently, large sums of money are pledged in support of the green transition of society and the economy. However, the money is mainly invested in well-known green products such as solar and wind, where prices are already high. Unfortunately, the large amount of money that is invested narrowly erodes the expected return and does not considerably accelerate the green transition. The market for sun and wind may already be overfunded and saturated. Investors could kill two birds with one stone by investing in blockchain and cryptocurrency. It will help accelerate the green transition by creating credible internet accounting for climate footprints and preventing greenwashing. And it will ensure a far better return on investments by investing in the next internet revolution. Much of that return is untapped today because of misunderstanding of what cryptocurrency is and can be.

This article proposes a method to calculate the real and basic value of cryptocurrency—a functional value that excludes wild speculation. What is gold really worth? It has no excess value than what we attach to it. The value of gold is due to a common and historical perception that gold is valuable and will remain so in the future. It is not logical. We just became accustomed to thinking of it as logical.

There is much speculation in cryptocurrency and it is not exclusively negative. It helps to add resources and attention to the blockchain phenomenon, so that the spread and development accelerates. With the method described in this article to calculate the real value of a cryptocurrency, there may be a better understanding of the value and function of a cryptocurrency.

Conclusions

The claim that cryptocurrency is worthless must be rejected outright, as the real value of cryptocurrency can be calculated using the method indicated in this article. Granted, it is difficult to comprehend blockchain and cryptocurrency and what they mean for businesses and the economy. But it is risky for financial companies to ignore cryptocurrency. If the financial sector wants to remain relevant, it must deal with cryptocurrency and blockchain in a constructive way for many reasons, not least of which because finance customers are increasingly eager to use the functionalities of blockchain both privately as concerned consumers and as companies concerned with the changing climate.