Bitcoin, Currency for a Finite World

What could be the future of Bitcoin, that cryptographic currency without centralized control whose rate jumped tenfold within a year, from 700 to about 7,000 €? BNP Paribas wrote a report concluding that the future of Bitcoin would be limited by its lack of lender of last resort as well as its deflationist character: as a currency, it would be condemned to fail.

By contrast with many other claims from financial institutions against Bitcoin, this one at least is based on structured arguments. Are they convincing? What will be the future of the queen of cryptographic currencies?

Bitcoin explained in a few words

The Bitcoin system is at the same time a currency and a payment system – meaning that a single instrument, a "wallet software" enables at the same time holding bitcoins and realizing payments through the Internet with this unit of account to any person having a similar software, wherever that person may be,.

It has this common point with classical currencies of being essentially electronic: only a very small part of euros or dollars exist in physical form as banknotes, most is made only of binary digits in computers, and that is also true of bitcoin which exists only as sequences of binary digits. Bitcoin is based on cryptographic algorithms, reason why it is called a cryptographic currency or crypto-currency. Just like classical currencies, it can be divided, a bitcoin (BTC) may be split in milli-bitcoins (mBTC), up to hundred-millionths of bitcoin, dubbed "satoshi".

Its originality is that it doesn't need any trusted third party and is not created by any institution that could act as a lender of last resort:

- What is a "trusted third party"? That is an institution or company acting as a middleman enabling a transaction. For example, any payment using a classical currency will need at least one bank (sometimes two) managing the account of the payer and the one of who receives the payment. By contrast, the bitcoin system does not need any middleman – it renders it possible to effect a payment or to keep holdings without help of any bank
- What is a "lender of last resort"? That is the issuer of the currency, the central bank that creates it at will. By contrast, it's the bitcoin network that automatically creates new bitcoins according to a predefined rhythm, without any individual nor group being able to manipulate it, not even its creator. The total number of bitcoins increases slowly from the 16.5 millions of November 2017 and will grow above a limit of 21 million

Bitcoin was initiated in January 2009 by a person or group of persons under the pseudonym "Satoshi Nakamoto", and the date – just after the great financial crisis – enables to easily guess the motives of the creator(s) and initial partisans:

- If they distrust « trusted third parties », which is to say banks, that's because many have disappeared because of the crisis while many others had to face accusations of questionable behavior
- If they see danger in any "lender of last resort", that's because the American central bank, followed by many others, began to create dollars by the hundreds then thousands of billions to distribute them to institutions whose only qualification for receiving them was to have lost gargantuan amounts of money in ill-thought loans

After the financial crisis, « too big to fail » large banks received practically unlimited credit from the US central bank, which created for that purpose every dollar that could be needed

Since its beginning in 2009, the bitcoin system expanded from a few groups of geeks to several tens of millions holders in the whole world, from buying pizzas at a friendly restaurant to acceptation by hundreds of thousands of merchants and from a value smaller than a eurocent to almost 7,000 € on November 22nd, 2017

Only an irrational financial bubble?

Many bank and other financial institution major executives took position against bitcoin. Jamie Dimon, CEO of JP Morgan Chase one of the largest global banks, no matter whether measured by assets managed or by stock market capitalization, has probably been the most strident, warning last September that bitcoin was "*a fraud*", bound to "*explode in flight*", and that he would "*fire in the second*" any employee "*stupid*" enough to buy some.

Dimon attracted more than a few sarcasms against him. For one, it wasn't the first time he was imprecating against bitcoin, since he had said much of the same thing two years sooner, claiming that partisans of cryptographic currencies were "*losing their time*", because "*no government (would) stand that for long*" – however, in the meantime, not only had bitcoin rate exploded from its then 300 € level, more important the number of its users had largely increased while the government of a large country Japan approved it as a recognized means of payment.

Also, JP Morgan Chase happens to be the bank that accepted to pay the highest total in fines so as to avoid trials following the financial crisis, more than 25 billion dollars as of 2014, not counting recent condemnations to pay several billions more for "*fraud*" and other crimes.

No need to say that when Jamie Dimon, who has been CEO of that very same bank since 2005, chose to use the same word of "*fraud*" to denounce a cryptographic currency such as bitcoin… damning mockeries were directed against him.

Jamie Dimon, CEO of JP Morgan Chase

Bitcoin: "a fraud"

However, no matter one or another person's ridicules, worries about bitcoin rate remain quite understandable. Increase by a factor of ten within one year looks very much like a bubble, that is a thoughtless race as many new buyers are attracted by the idea that the rate having gone up so quickly means it will have to continue, while most holders refuse to sell, hoping for the race to climb further, and unbalance between the ones and the others results in yet more increase. This kind of episode generally results in a thunderous crash.

Why it's not so simple - Bitcoin has real value

Interpretation of Bitcoin as a simple irrational bubble – on the model of speculation on tulip bulbs in the Netherlands in 1637 – has however several issues.

First of all, a real bubble happens only once, and after it has popped no new fad will resume, especially not for the same product. Nobody ever heard of a new dot com bubble after the one which popped up in 2000, nor on subprime credits after the 2007 crash. But bitcoin has already experienced several bubbles… and survived them. Its rate:

- Reached a peak above 20 € in June 2011… then fell by more than half
- New rise to more than 200 € in April 2013… then brutal loss of more than 60% of that value
- New bubble almost to 900 € in December 2013… followed by collapse in the depths, less than 200 € in January 2015
- Finally, more or less continuous increase starting beginning 2016 to about 1,200 € in spring 2017, followed by rapid rise to 7,000 € on November 22nd, 2017

That is obviously not the structure of a mere bubble. Successive levels are reached, with phases of bubble and collapse between them, but every time bitcoin rate eventually resumes its ascent. Progression is comparable to a sequence of "three steps forward, one step backward" – or rather three leaps forward, one leap backward, for relative increases or decreases are each time massive. Either several millions people are being very wrong, and obstinately so because they do it again and again… either there is real underlying value to the Bitcoin system.

One needs also to remark that the cryptographic currency – and its "little sisters" built on similar principles – brings very concrete services, independently of its future or not as a currency. And those services give undeniable value to the bitcoin network. Indeed, it enables quick and very cheap money transfers anywhere in the world. While well-known money transfer services, which for example tens of millions of migrant workers from poor countries are using to support their families in home country, may charge fees of 2% up to more than 3% depending on destinations, the same transfer can be done for neglectible cost when using only bitcoin, and including transformation from and to a classical currency – both on the side of the sender and of the receiver – fees will total 0.5 to 0.6%. It is difficult to name "*fraud*" a money transfer service that is much cheaper than the competition.

Queuing in front of the office of a well-known money transfer company – in a poor country, and most customers are poor too

Depending on destinations, expense may top 3%

But the most important added value that creators and users of bitcoin hope it to bring is different. The aim would be that it takes its place alongside fiat currencies – that is, issued by a State and its central bank – as an alternative protected against any attempt to control and manipulate it. One could then pay a piece of cloth, a book or a diner at restaurant in bitcoin. One could spare and borrow in bitcoin. Is that credible?

Arguments from BNP Paribas - Has Bitcoin only "a limited future»?

By contrast with other bitcoin skeptics, the BNP Paribas study has put forth an organized argumentation. Although the complete report is not available online, its descriptions in the economic press are summing up objections to two essential points: the question of **lender of last resort**, the question of **deflation**.

The most important obstacle in the way of bitcoin generalization would be the question of "lender of last resort". Indeed, if one lends an institution bitcoins and that institution goes bankrupt, there won't be any remedy. At the time of the 2008 financial crisis, central banks have created new dollars, euros etc. but nobody would be in a position to create new bitcoins to compensate for bankruptcy of a "trusted third party", bank or any other financial institution, because the bitcoin system has been built for the very purpose of preventing it! No hope would be left to bitcoin holders that would have lent them to a bank, by contrast to euro accounts supposed to be guaranteed up to 100,000 € - although there is reason not to take this guarantee at face value.

But the arguments put forth in the study call for several remarks. Two points at least may gravely induce in error:

- If one is holding bitcoins, by contrast to what the study seems to imply, one doesn't have to lend them to a bank! Different from euros or any other fiat currency that cannot be held without lending them to a bank, which then makes them appear as "holdings" on a bank account (except possibly for a few banknotes kept at home, but this comes with severe limitations). Henceforth, if a bank or any other financial middleman goes bankrupt, consequences will only be for whom has lent them bitcoins, which in turn will have to have been a voluntary and free decision, since an alternative is available – just keeping them
- Suggesting that paying a house with bitcoins would endanger the borrower is pure and simple inversion of reality. On the contrary, it's the bank that lent the money that would be in danger! Indeed, in case of insolvency of too many house market borrowers, the bank won't be able to rest on the central bank just creating replacement bitcoins – if the loan was in bitcoins. Yet it's exactly this kind of monetary creation that had been necessary for large banks implicated in "subprime" loans to avoid bankruptcy after 2008

It remains of course that lending one's bitcoins may be desirable, because lending one's money is desirable so that it « bears fruit » while supporting economic activity, just as one may wish to buy securities or stock – which amounts in fact to lending money to institutions and companies so that they put it to use. And it's absolutely true that securities denominated in bitcoins could not benefit of any guarantee by a central bank – if the borrower cannot reimburse, well, the money is lost.

Yes, but… is it such a serious issue?

First, there is always a risk to lose one's money anyway – except if one is a "too big to fail" large bank and one is in a position to essentially tell States behind the central banks: "if you don't create and lend us money, the whole economy will collapse with us".

Then, what is wrong if the risk linked to any investment is made clear and unmistakable to the lender? That is no reason not to lend, however it's a sane incitation to lend with open eyes, and to explicitly accept the risk rather than to live in illusion that a "totally sure" investment can exist – an obvious impossibility. That also means one won't lend one's security reserve intended for unexpected events, and one will demand fair compensation for the risk.

Bitcoin is deflationist – a drawback, or an advantage in a finite world?

The BNP Paribas study also underlines deflationist consequences of bitcoin total number being capped in advance to a defined maximum.

The problem is the following: if the economy grows while the number of monetary units remains constant or quasi-constant, the value of each monetary unit will tend to increase, which is to say that the price of goods expressed in this monetary unit will tend to decrease. This phenomenon is the inverse of inflation, hence its name: deflation. But deflation tends in turn to slow the economy, because everybody is induced to postpone as much as possible their purchases so as to take advantage of lower prices, hence a reduction of demand, less activity and employment, less revenue, therefore a further reduction of demand etc. in a negative spiral.

That consequence of potential bitcoin generalization is a credible scenario. So, should one wish for Bitcoin to fail its transition to full-fledged currency status recognized in the whole world instead of only in Japan, so as to avoid slowing of growth and economic activity?

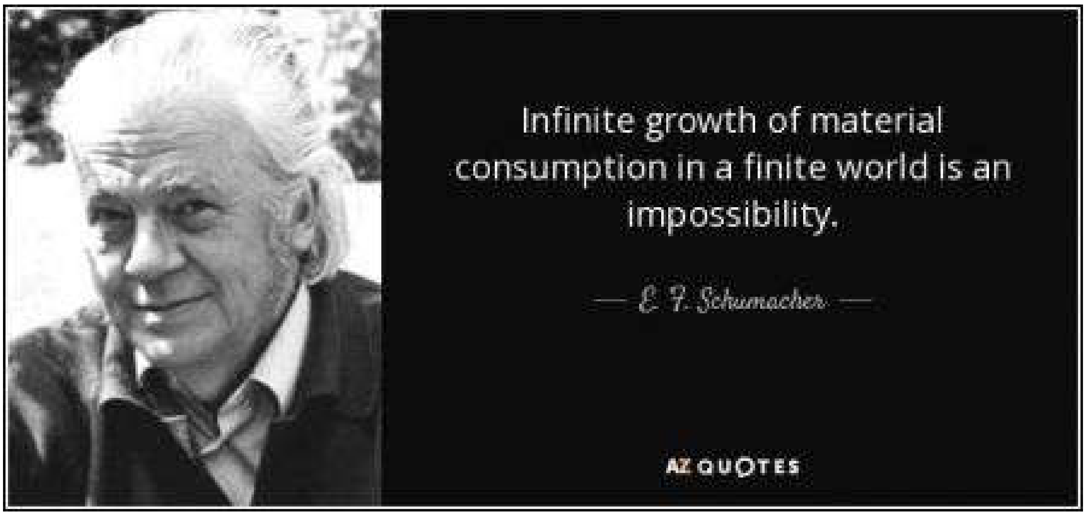
But what if the deflationist pressure resulting from bitcoin generalization was in fact not a drawback… but an advantage?

A fiat currency, indefinitely extendable, like dollar or euro is quite adapted to an era of quick economic growth like the years 1945-2008, but since the great financial crisis humankind has slowly been entering a period of slower growth, that should be followed by further reduction of growth, if not economic decline pure and simple, this for fundamental reasons that have nothing to do with currency:

- Progressive exhaustion of resources, especially resources in energy, with continuous and structural increase in cost of extracting energy that is increase of energy that needs to be invested so as to extract a barrel of oil or a cubic meter of gas (EROEI) – which tends to lower the fraction of extracted energy that really is profit
- Deficient ability to master increased complexity, which is more and more apparent in the enormous difficulties to take strong decisions on a global scale – increase in political disorder – as well as in striking drifts in many "great projects"
- Not to speak of environmental impact, since the growing drawbacks of damage caused in nature by industrial activity, including for people, tend more and more to offset its advantages

In short, humankind is encountering and will more and more encounter in the future limits stemming from that simple fact that **our world is finite, and its resources too.**

And Bitcoin, being structurally available only in limited quantity is well adapted to a finite world, to a global economy whose growth is more and more limited, and that in truth will have to adapt if it is to avoid any brutal and catastrophic decline. This is a currency that may be suitable to a world that would adapt so as not to collapse – henceforth, a world where networks would remain operational, in particular electric and internet networks, since the very existence of the bitcoin system obviously depends on them.



Only if some global economic collapse resulted in brutal reduction of complexity – parallel to post-Soviet economic collapse after 1991, albeit for different reasons – putting in danger the existence and dependability of networks could bitcoin no longer serve as currency and payment system. In this admittedly extreme scenario, only precious metals could take over.

Final note: Bitcoin as an investment...

In the current period of quick increase in bitcoin rate, the question of « should I buy? » or « should I sell? » (if one already holds bitcoins) will definitely look interesting. Let's insist on two essential points:

- The Bitcoin system is rapidly developing, it has already reached a measure of success and offers attractive prospects for the future, but it remains experimental. Possibility to extend it on a scale not of millions, but of hundreds of millions or billions of participants has not yet been demonstrated. Failure of bitcoin to become a fully accepted currency is quite possible, just incidentally as advent of another crypto-currency that would displace it
- Bitcoin rate has already seen at least three bubbles since 2011, like already explained. Nobody can guarantee that one day's rate will still be valid the next day, month or year

In any case, no sensible person will invest in an innovative but experimental system more than he or she could "afford to lose".