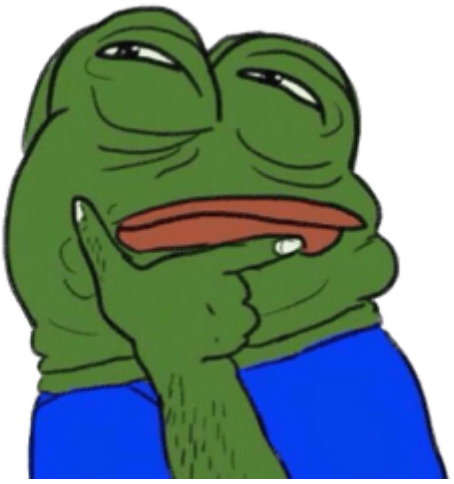
Why do I think that the blockchain is more efficient than the real world?



Spoiler -> No humans, no expenses.

But let's start slowly...

Blockchain is inefficient!

Let's start with an example: there are two supermarkets, one in the secure and chilly Switzerland, to be more precise, in **Zurich**. The other supermarket is in Palestine, specifically in the city of **Hebron**, which is a focal point for the rivalry between Palestinians and Israelis.

In these supermarkets, local people simply go shopping to buy food, but the **context** is totally different.

In the Zurich supermarket, there are only a **few employees**, just enough to assist customers during their shopping. In the Hebron supermarket, in addition to employees, there are also **armed guards** whose primary objective is to ensure the safety of customers. This is because there is a **trust** issue at the core of the system due to the tensions we all know exist in that territory.

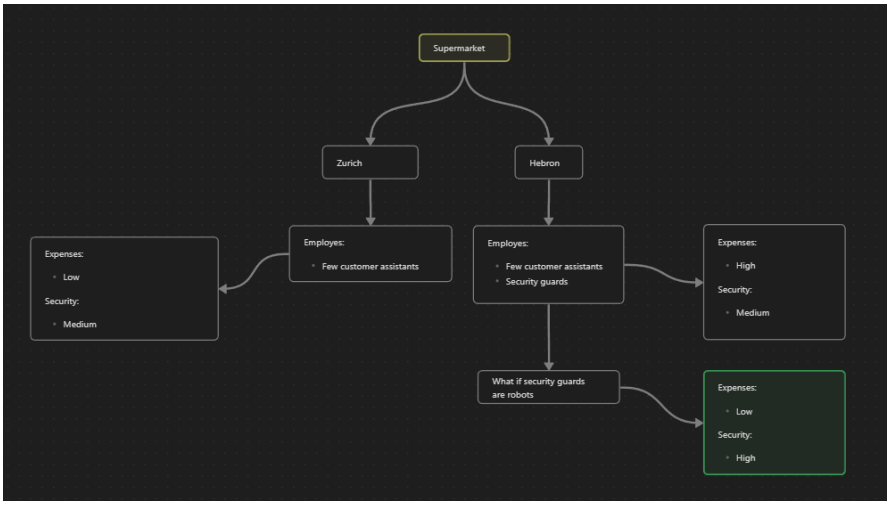
Trust is the keyword.

Now, let's pose a question: which supermarket incurs higher costs? (Costs that will ultimately affect food prices). Obviously, the supermarket in Hebron, due to security and trust issues, has to pay for security agents in addition to its employees throughout the service.

Well, within the blockchain, we are all considered malicious actors and it is, therefore, necessary to establish an extensive and expensive security system. This security system is achieved through **PoW** and **PoS**.

Given this **security system**, it can be said that the blockchain is **extremely inefficient** and that's true! Compared to a centralized server, where there is no doubt about the accuracy of data, the blockchain has an intrinsic trust problem against all the users.

Zurich -> centralized server
Hebron -> blockchain



The reward for this inefficiency

Let's go back to the supermarket in Hebron and imagine that, after an incident of violence, the supermarket management has increased the number of security guards to the point where there are even more guards than customers. Assuming that the guards are not corrupt, we find an **extremely high level of security**, so high that I could leave a suitcase with a million dollars at the entrance and pick it up after shopping, without any fear that anyone could steal it.

Blockchain networks, especially more advanced ones like those of Bitcoin and Ethereum, offer high security and no one can take our funds (unless we make mistakes by ourselves).

So, it's extremely inefficient but also extremely secure.

But then how is blockchain more efficient than the real world?

Well, the Hebron supermarket needs human security personnel, but what would happen if instead of hiring humans, they used robots governed by **algorithms**? Obviously, expenses, after the initial purchase, would plummet and approach zero and assuming that these robots can perform the job, security would remain at its highest.

In some cases, blockchain can be extremely efficient because **security and all required services are provided by algorithms** that do not require a monthly payment for their work.

When is a blockchain efficient? BANK vs BTC

We often hear that Bitcoin is extremely secure but not very efficient, well, I disagree.

Let's take the example of having **1 million dollars** and having to choose between depositing them in a traditional bank or within the Bitcoin protocol.

First example - Conventional bank deposit

The conventional route is to deposit the money in the bank and make bank transfers when needed. Perfect, maybe the transfers are even **free**, **instant**, and perhaps the bank even **pays you interest** on the deposited capital. So, they actually **pay you to put your money** in the bank and use their services, extremely efficient, right? NO!

The bank is definitely **not a charitable organization** and someone has to pay for all those employees and the coffee they “offer” you. And guess who pays, **YOU!**

🤨: "But they pay me to deposit money!" Yes, but no.

Let's consider the current days, which is October 2023. Almost all banks offer returns ranging from **2% to 3%** (let's take 3% as an optimistic value) to anyone who makes a deposit. Maybe the bank will add some fund-locking clauses for certain periods, but let's pretend there are no such clauses.

As soon as you deposit the money, the “smart” investors at the bank look for ways to use your money and generate a return. Currently, 5 or 10 year U.S. bonds offer a **5% annual return**. Practically, it's a risk-free return.

So, on your million dollars, they earn **$50,000** per year and only give you **$30,000**. That's how you discover who pays for all those coffees, YOU, along with your remaining **$20,000.**

You're leaving at least $20,000 a year in exchange for what?

- Coffee offered by the secretary when you arrive.
- **FREE** and instant transfers.
- The apparent security of deposited funds.

A bad deal since you could achieve that 5% return with a few clicks on your computer in a couple of hours of work or, if you're not an investment expert, by paying an expert to do this work for you in very little time.

Cost of the service for one year: at least $20,000.

Second example - Bitcoin deposit

Now let's take the example where you deposit 1 million dollars within the Bitcoin protocol.

Opening a bitcoin-account will take you 10/15 minutes, but I admit that it could not be easy to understand the process to save the 12/24 words. This first part is the **most complicated**

and the reason why people still not use bitcoin. Is still **too difficult** to understand how to manage within the bitcoin network but I think in the future there will be solutions that will do this process for you if you don't know how to create and save your seed phrase.

Let's suppose you pass this first difficult step.

Now that you have deposited your million dollars in BTC, you'll have to pay for **each transaction** (at least $5), and furthermore, it will take **10 minutes,** the time it takes for a block to be executed by miners. What a SCAM! Yes, but...

The only cost required is the transactional cost if you want to make transactions; If you don't want it's all **free**. There's no cost to "open a bank account" on the Bitcoin network, as the only ones to pay are the miners, who work only when you send a transaction.

What do you have in exchange for being in the bitcoin network?

- Max security on your funds.
- Funds are always available and no one uses them to make profit in the market.
- A low-inflation supply with a cap of 21 million units.

Cost of the service for one year: number of transactions x $5 (estimated average cost).

There is no doubt that the "banking" service offered by BTC is **more efficient** than traditional banking, and the reason is quite simple. Banks somehow have to make a profit, pay employees, cover heating, building rent, and buy the latest **lamborghini** for the bank's CEO. The Bitcoin network just needs to pay the mines.

Some possible and reasonable criticisms of this argument:

👩‍🦰: "In the example that you bring, who deposit money in the bank don't actually pay $20,000; in fact, he/she is paid 30.000$ through interest."
👩‍🦰: "Actually, he/she could do that work by his/her self with a few simple clicks, so yes, he/she is paying $20,000 for that service. Additionally, those $30,000 of interest profit will likely be eroded by inflation, estimated at 3.5% over the next 2 or 3 years."

👨‍🦰: "With Bitcoin, I can't receive 5%, so in the end, it's still worth depositing money in the bank."
👩‍🦰: "Firstly, the 5% yield from bonds is something that hasn't been seen in 20 years. Since the early 2000s, 'risk-free' yields on U.S. bonds were at 0.5%/1%. Secondly, we need to discuss the **'risk-free'** rhetoric because no investment is risk-free, especially at a time when America is not doing well and is raising its debt to unprecedented levels. Leaving money in the bank exposes you to this risk unknowingly. With Bitcoin, the risk is close to zero."

👨‍🦰: "Anyway, the bank provides me security and even pays me, so I choose this option."
👩‍🦰: "As you wish, but consider that you have an asset, the dollar, which loses at least 2% to inflation (estimates for the next few years are 3.5%), effectively canceling out all the profits the bank pays you. Furthermore, be aware that if it happens that you and all the other clients of your bank want to withdraw money because, for some reason, the bank no longer convinces you or for some external reason, everyone needs liquid cash, the cash **won't be available** because it will be invested/tied up somewhere, and you will have to wait to get it back (in the optimistic case that the bank doesn't fail). Lastly, know that BTC has had an average increase in its value against the dollar of **71.43%** over the last 10 years, not a calculated and secure loss like the dollar."

*I don’t want to say that I suggest putting all the available liquidity in Bitcoin, neither do I have all my money in bitcoin.I just wanted to offer this point of view where the bitcoin network is more **efficient** than the bank solution.*

Bringing on-chain financial services with greater efficiency thanks to smart contracts

“Big investors don’t give a shit about pure decentralization, they care about efficiency and security. Decentralization is a way to have more security.” cit. ME

Putting aside the Bitcoin discussion, let's move on to the topic of **Ethereum** and why, in my opinion, the story here is even more interesting. Bitcoin can be a more efficient "banking" system, but Ethereum can be (indeed, it already is) the economic foundation of a new, **more efficient and secure financial system.**

In the blockchain world, decentralization is often discussed as if it were the holy grail of blockchain, the ultimate goal to achieve. I agree, but I see things from a different perspective. I believe that people don't fully grasp **why** decentralization is necessary, and the answer is very simple. Blockchain technology requires decentralization, not as an end in itself, but as a parameter to enhance the SECURITY of the network.

So let's stop advertising dApps by saying, "This new dApp is completely decentralized!" and shift to a narrative like, "Here's the new dApp that offers the most efficient and secure solution in circulation for this financial instrument”.
Ethereum can provide a more efficient and secure solution compared to the traditional world, and I like to call this narrative thread "**DeFi = an efficient and secure framework.**"
The underlying assumption is quite simple but disruptive: **smart contracts are much more efficient and work better than humans.**

In the next essay, I will analyze some dApps that are leveraging DeFi as a framework and positioning themselves more efficiently and securely than traditional solutions.

Hola hola

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