

# **VOLTAGE**

## **Every Company Will Be A Lightning Company.**

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“No One Loves Their Bank” is the motivation behind Angela Strange’s 2020 presentation, “[Every Company Will Be A Fintech Company](#)”. The premise is that any industry, regardless of the barriers to entry, will eventually succumb to innovation with such high levels of customer dissatisfaction. The vision for financial services of the fiat system focuses on the creation of SaaS companies to streamline the process of in-house banking functions. Such a system requires many disparate fee-charging companies to optimize; it is time to consider alternatives.

Bitcoin enables businesses to streamline the exchange of goods and services for currency, beyond just optimizing individual elements of a bloated system. This writing will explore, in the context of Angela’s presentation, why and how businesses are taking financial transactions in-house and demonstrate how doing so, through Bitcoin on the Lightning Network, is optimal for both the business and the consumer.

## What Taking Control Away From Banks In The Fiat System Requires

Apple, Uber, Starbucks<sup>1</sup>, and Shopify are examples of businesses undergoing a lengthy and costly<sup>2</sup> exodus from the banking system. They do so because controlling the flow of currency empowers businesses to capture various benefits, contingent upon their operating structure:

- Companies with large cash reserves prioritize retention of their existing customer base. For example, an Apple Cardholder is less likely to purchase, or even compare, an Apple competitor’s products when the need arises. Alternatively, companies can build large cash reserves through promissory notes, colloquially known as gift cards. With sufficient volume, this can act as an independent revenue stream for a business. Starbucks, for example, leverages over \$1 billion dollars in gift cards and account balances through its app to invest in money market accounts to accrue interest, similar to PayPal and Venmo.

<sup>1</sup> McCarthy, Niall. “Starbucks Holds More Cash Than Many Banks.” Forbes, 1 August 2016, <https://www.forbes.com/sites/niallmccarthy/2016/08/01/starbucks-holds-more-cash-than-many-banks-infographic/?sh=5abdf78231a>. Accessed 8 March 2023.

<sup>2</sup>Mohamed, Theron. “Apple Snubbed Goldman Sachs, Bank Spent \$300 Million to Build Apple Card: WSJ.” Markets Insider, 30 September 2019, <https://markets.businessinsider.com/news/stocks/apple-snubbed-goldman-sachs-bank-spent-300-million-apple-card-2019-9-1028563659>. Accessed 7 March 2023.

- Companies that desire a higher workforce stickiness can utilize financial services to create an ecosystem that keeps worker's funds aggregated on their platform, decreasing turnover. This is an iteration on the popularity of mobile banking in sub-Saharan Africa, an area with a high prevalence of under or unbanked areas.<sup>3</sup> This culture has proven that there is no requirement for a bank account, but instead, phone applications can act as the metaphorical mattress to stow money. Companies such as Uber and Lyft greatly benefit from being that mattress, especially when they are also the ones providing the funds, to create an ecosystem for their contractors to avoid the hassle of going to a competitor. If a contractor is getting paid not through the Uber app, but into it, the incentive to go to a competitor for a nominal increase in pay is lower.

These categories are not exhaustive of the benefits of in-house financial services but simply illustrate their value proposition. By creating an environment where businesses can leverage the value of the currency as a tool of transaction with upsides instead of one that incurs fees as a cost of doing business, businesses can leverage this upside to create competitive value propositions for their customers or employees.

## **Fintech Startups In The Fiat System Are An Insufficient Solution**

Vast sums of capital and time are being allocated to seize the opportunities in making this vision possible for more businesses. The perception is that at each stage of the complex process, for a business to claw back control of their finances, there is a space for startups to compete through small monthly fees in exchange for a simplification of that specific stage.

Though there is value in this thinking, the macro perspective is reminiscent of Kodak. An ex-behemoth, Kodak invented many elements of the digital age that ironically became its own downfall because the organization refused to think outside of its core printing business. Kodak created a Facebook-esque site with the objective of promoting individuals to print shared pictures. Kodak could not realize, "that online photo sharing was the new business, not just a way to expand the printing business"<sup>4</sup>.

<sup>3</sup>Zandt, Florian. "Which global region uses mobile money providers the most? | World Economic Forum." The World Economic Forum, 14 September 2021, <https://www.weforum.org/agenda/2021/09/mobile-money-africa-prevalence-economics-technology/>. Accessed 8 March 2023.

<sup>4</sup>Anthony, Scott D. "Kodak's Downfall Wasn't About Technology." Harvard Business Review, 15 July 2016, <https://hbr.org/2016/07/kodaks-downfall-wasnt-about-technology>. Accessed 7 March 2023.

In this same vein, “SaaS-ifying” every step of the current financial system is just a way of expanding the financial services business, instead of realizing that in-house financial services are the new business.

An entirely new means of currency is necessary for this evolution. The current system is not designed to provide consumers with control. Even if a business becomes large enough to act as a financial intermediary with government approval, its dominance would create a non-competitive marketplace that would hurt customers who simply have no other choice.

This lack of competition would also permit the business to accept the larger risk of downtime to save costs. Kakao, a Korean technology conglomerate, is such an example. An outage in 2022 due to their outsourcing of servers led millions of Koreans that were reliant on their payment system through their app to be unable to access, or transact, with their funds.<sup>5</sup> The high barrier to entry of competing with Kakao’s platform due to sheer size and government patronage has led to no real repercussions and therefore Korea continues to suffer from, “the inherent weakness of the trust-based model.”<sup>6</sup>

## **Fintech Startups in the Bitcoin System Will Win**

A business that utilizes Bitcoin as the means of payment through the Lightning Network does not need to have any prerequisites. This is because the steps necessary for a business to act as a bank in any capacity are significantly reduced and desired complexity is an option, not a requirement. Two steps brought up in Angela’s presentation on the consumer side of becoming a “bank” that is not necessary for this system are licensing and fraud. Core Systems, Data, Regulatory, User Interface, and Payments do exist as elements for a business to become a “bank”, but the capital and time pale in comparison.

<sup>5</sup>Hye-jin, Byun. “Kakao suffers worst server outage, with no complete recovery in sight.” The Korea Herald, 16 October 2022, <https://www.koreaherald.com/view.php?ud=20221016000104>. Accessed 8 March 2023.

<sup>6</sup>Nakamoto, Satoshi. “A Peer-to-Peer Electronic Cash System.” Bitcoin.org, 31 October 2008, <https://bitcoin.org/bitcoin.pdf>. Accessed 8 March 2023.

Unlike fiat currencies, there are no additional governmental licensing requirements for transacting in Bitcoin. Bitcoin has no reliance on the trust index of the government and therefore neither party is subjugated to concern over the other. This point is easy to understate – let’s return to the example of the Apple Card. A company worth over \$3 Trillion<sup>7</sup> found it cheaper to partner with Goldman Sachs than to go through the licensing process. Despite the claim, there is no company credit card to date that has the ability to be created by the company, instead of a bank.

While individual and business wallets can be hacked, fraudulent transactions through the Lightning Network are extremely challenging. Bitcoin is a public ledger, so by its very nature, it is transparent. Though mixing is a method of degrading the origins of specific coins, the risk of fraud is completely in the control of the business and its tolerance to risk. Therefore, there is absolutely no base requirement to spend any capital on fraud management, if one so chooses.

## **The Better Financial Ecosystem for Business**

Fiat systems requires the separation of core systems and data because banks require communication with each other to transact. The Lightning Network does not have these communication requirements. An additional benefit to this is that Bitcoin has been able to close the gap of time between transactions and when they are settled. Although the financial industry today is a vast improvement from the days of individuals manually moving transactions across different books, the core problem of closing the gap between transaction and settlement times has not been addressed, just drastically improved with technology and complex systems such as SWIFT.

The desire for a World Clearing House - a single head bank that all other banks would use as a third party to transact - has been a philosophical question since at least the 1800’s, when London was sought after to take the role. In that world, where carrying around gold and silver coins to transact was necessary, the greats, such as Jevons, could only grasp the potential we have today:

**“All that is needed to secure economy of money is centralization of transactions, so that there may be the wider scope for the balancing of claims.”<sup>8</sup>**

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<sup>7</sup>Smith, Zachary S. “Apple Becomes 1st Company Worth \$3 Trillion - Greater Than The GDP of The UK.” Forbes, 3 January 2022, <https://www.forbes.com/sites/zacharysmith/2022/01/03/apple-becomes-1st-company-worth-3-trillion-greater-than-the-gdp-of-the-uk/?sh=64ff6c425603>. Accessed 8 March 2023.

<sup>8</sup>Jevons, M.A., F.R.S., William S. Money and the Mechanism of Exchange. New York, D. Appleton And Company, 1897. Pg. 298.

The unification of transactions on a single ledger through Bitcoin is the World equivalent of where the vision of the London Bank was headed. The requirement here from a business is just participation in the network. Compared to the monthly fees in perpetuity from at least one startup in both the core systems and data steps under the fiat model, the nominal effort in getting on-chain in terms of capital investment is free in comparison. **Neither a startup nor a bank will ever be able to cost-effectively compete on a global scale with the Lightning Network.**

Regulatory uncertainty is the largest concern as it relates to governmental cooperation and taxation. With companies such as Strike that enable instantaneous conversion of Bitcoin into fiat from both ends of the transaction, taxation is simplified by eliminating capital gains or losses. There are no hard requirements from a regulatory perspective and the complexity of events such as tax events are determined by the sliding scale desire of capital allocation of a business up front, through an accountant on staff or in-house software, or at the time of the event, through a third party.

One of the most significant challenges in competing against the fiat system is user interface. Altering established consumer habits is challenging but there are obvious trends that provide optimism. The COVID-19 pandemic created a strong drive to encourage contactless payment globally. Though there is still a significant portion of consumers that use credit cards, the mass adoption of smartphones continues to drive change in consumer habits to tap their phones. Creating a positive payment experience is not a new issue and innovation is likely to continue. That is especially true now with the Lightning Network as a means of drastically decreasing transaction latency. Just as with every other step of the process for a business to adopt the Lightning Network, the importance of latency is driven on a per-company basis.

Payment processing fees are the unfortunate reality of running a business in today's world and the Lightning Network is a solution to this. Processing fees can range widely but generally follow the structure of a flat percentage, as well as a flat few cents, charged per transaction. With few dominant players in the space and the complex steps these businesses need to go through in the fiat system, it is simply an accepted reality. Given the low barrier to entry for a business to begin participating on the Lightning Network and to even become its own host, competition among nodes attempting to claim your transactions will lead to significantly lower fees.

The very nature of being on the World's public ledger also permits the Lightning Network to instantaneously be superior as a global payment processor compared to anything the fiat system is capable of. Given the lack of a unified global banking system, it is not due to competition that international fees exist, but instead a consequence of the fiat system. [Utilizing Voltage](#), to spend even less capital and time in the beginning and optimize the payment process is, like every other step, a choice, instead of a mandate. Voltage simply allows any business to become an instantly global business at a significantly more affordable cost than any of the incumbents in the fiat system.

The Lightning Network is the superior option for any business with the desire to become involved in Fintech to improve. The current fiat system is not designed to permit businesses to take this control back. Individual companies might boast simplicity in improving one of the processes in the fiat system for a business to do so, but when the objective is actually completed and a business finally feels in control, there are at least seven companies that are being paid, often monthly, for the privilege of financial "control". With the Lightning Network, becoming an individual business in complete control of your business finances is free and the fees to be a participant are so minimal that going global from a transaction standpoint is readily accessible. Voltage offers the benefit of lowering the cost of time to onboard and begins your journey by leveraging the most optimal usage of the Lightning Network.