Bitcoin Suisse | Decrypt

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# The Road to Mainstream

**The user experience is a pivotal factor in achieving widespread adoption for any technological advancement. What efforts are being made to simplify the "crypto experience"? And how can adoption be measured?**

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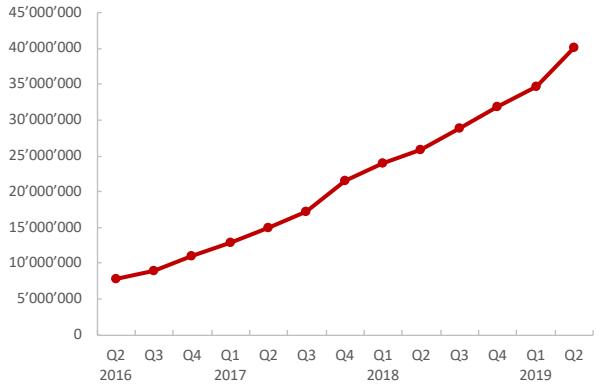
As highlighted in the last episode of Bitcoin Suisse Decrypt, widespread adoption requires blockchains to be technically capable to handle large throughputs. This means that blockchains need to be scalable to levels beyond what is possible in practice today. However, these are only the technological aspects – just as important is the **improvement of the user experience**.

Today's centralized banking infrastructure is designed for simplicity. The customer knows for certain that the funds cannot easily be "lost." In the case of fraud or theft, the user is protected – the responsibility to keep customer money safe lies largely with the bank.

Cryptocurrencies restore the power to transact monetary value freely between each other to the people. The sole ingredient to authorize a transaction from an address is a signature with the corresponding private key. With that comes the responsibility to safeguard this private key, since it often contains the access code to significant amounts of money. Having a piece of paper lying around with some words (*mnemonic phrases*) written on it that could, if stolen or lost, lead to financial ruin, does not exactly sound comforting. Even hardware wallets, which are among the safest ways to manage personal crypto assets, require the user to store such a recovery phrase in case the device is lost.

Trusted custodians currently are (and probably will remain) the go-to solution for storing large amounts of cryptocurrencies. However, for smaller amounts, recent technological advancements in crypto wallet software have alleviated the pressure that is put on the user by enabling modern ways to handle private keys and recovery procedures. This will potentially benefit a large portion of the more than 40 million wallet users today.

**Illustration 1: The number of wallet users has been constantly increasing in the past years.**




**Source:** statista.com, Bitcoin Suisse Research.

One improvement is the concept of **social wallet recovery**. The wallet owner assigns trusted parties, for example friends and family or a separate hardware wallet. These can then help to recover the account in case of loss or theft of the device (e.g. a mobile phone), while never being able to access the funds directly.

A second improvement, enabled by smart contract platforms, is the implementation of **withdrawal limits**. Rules for maximum withdrawals per day are encoded on the blockchain. Even in the case where a malicious third party gets access to the wallet credentials, the damage that can be caused is limited – a safety measure which is well-known from traditional banking.

Cryptocurrency addresses themselves are another hurdle to adoption. Every cryptocurrency user knows the insecure feeling of carefully double and triple checking each digit and letter of the receiver address when transferring larger amounts.

A project on Ethereum solves this by borrowing an idea from the Internet: Nobody accesses, for example, Google by typing "172.217.16.142" (one of its IP addresses) into the browser. Instead, typing "google.com" will automatically resolve to the correct IP address through a Domain Name System service provider. In analogy to that, the Ethereum Name Service offers the possibility to link addresses to a human-readable version such as **"bitcoinsuissedecrypt.eth" instead of "0x64107e18F9dC6dd97e92aF735a88a22aa804C42d."**

The user-friendliness of the "crypto experience" still needs to increase. In the end, using a dApp with a mobile phone crypto wallet should be as easy and secure as it is today, for example, to order food online and pay directly with a mobile banking app. Modern ways to leverage the power of cryptography can support this endeavor.

## The Decentralized Application Market

According to guidelines released by the Swiss Financial Market Authorities (FINMA), there are three main categories of cryptocurrencies including payment coins, utility coins, and asset-backed coins. Payment coins include coins like Bitcoin, Litecoin, Monero, Dash, and Bitcoin Cash. They can be used as a means of payment for goods or services or value transfer. The next category, utility coins, includes coins such as Ethereum, EOS, and Tron. They provide digital access to an application or service by means of a blockchain-based infrastructure. The final category, asset-backed, include tokens like the CryptoFranc (XCHF) and real estate-backed tokens. They are tokenized forms of investment contracts in physical or digital assets and traditional securities like debt, equity, revenue sharing, dividend or interest payments agreements.

The confusing part of classifying tokens is that the blockchain technology enables one coin to be used for multiple purposes. For example, a smart contract-based utility coin like Ethereum can also be used to make payments, and therefore, does not neatly fit into the utility coin category.

Investing in each category of coins represents different advantages and risks. Payment coins represent a speculative bet on the purchasing power of the asset increasing overtime i.e. the asset becoming a currency one day, hence the name "crypto-currency". This represents a capital gain for the investor similar to selling a piece of gold for more than one initially paid. Popular valuation methods for cryptocurrencies include scenario analysis with Fisher's Quantity Theory of Money, as we wrote in the previous episode of Bitcoin Suisse Decrypt. In contrast, blockchain-based investment contracts like asset-backed coins can be analyzed with traditional valuation strategies, such as P/E ratios and discounted cash flow analysis.

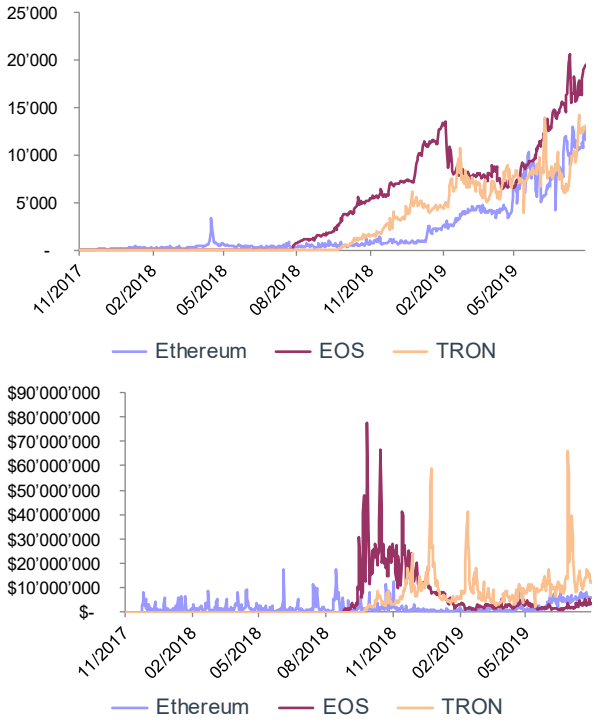
The success of a utility coin depends on that coin's ability to gain widespread adoption. Adoption can be estimated by measuring size of the network of users that use the utility coin. The investment pitch for utility coins is that the value of the coin will increase if more applications are built on top of the platform. This will increase the demand for the underlying token and early investors will be able to realize a capital gain if they sell. Therefore, an interesting way to compare different utility coins is to measure the use of applications built on top of each utility coin blockchain.

Ethereum, EOS, and Tron are the three largest smart contract platforms when measured by decentralized application use. The most common way to measure adoption of decentralized applications is by tracking the number of daily users and the monetary volume of daily transactions (Illustration 2).

There are several inferences that can be drawn from the data. First, EOS appears to be the blockchain with the highest number of users and Tron appears to be leading in terms of USD value of daily decentralized application transactions. The data only includes the top 10 decentralized applications for each blockchain and does not include transactions from initial coin offerings. Another interesting observation is how relatively new decentralized applications are. Most dApp activity began during the last week of August in 2018. Another point to consider is that many dApps on ETH, EOS, and TRON rely on low and stable transaction fees, therefore, the original investment pitch of utility coins is inconsistent. Early investors are speculating on the price of the coin going up, but the price of the coin going up hurts dApp adoption, and dApp adoption is needed in order to make the price of the coin go up! As we mentioned in Bitcoin Suisse Decrypt episode 5, this illustrates again that scalable blockchains and low fees are important for adoption. Some of the new dApps have their own utility token that are independent of the ETH/EOS/TRON price. In this case, the utility token could theoretically benefit from increased usage of the platform due to the demand increase.

The evolution of this market over the next few years will be relevant for investors and companies interested in using the blockchain technology. However, the current players in the utility coin market have a lot more work to do.

**Illustration 2: Daily users (top) and volume (in USD, bottom) of top 10 dApps for ETH, EOS, and TRON since late 2017.**




**Source:** dappradar.com, Incrementum AG.

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