

REPORT

DeFi User Research Report

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Executive Summary

Decentralized Finance (DeFi) on public blockchains is one of the most interesting and quickly growing technological innovations to happen in financial services, however user research is still quite scarce. The rapid growth of the blockchain ecosystem, specifically in regards to DeFi, has resulted in the influx of capital, entrepreneurs, and users to the ecosystem. By the end of 2019, [nearly 3 million Ether](#) was supporting or “locked” in various financial protocols built on Ethereum. However, in order to maximize DeFi adoption among mainstream users, it is imperative to understand how existing users behave and how their experiences can be optimized. The ideal catalyst for the growth of digital assets and decentralized finance is happy participants who then share their experience with friends, families, and others, creating sustainable growth.

In this effort, ConsenSys has conducted a qualitative user research study focused on understanding the world of current retail DeFi users: their behaviors, needs, pains and goals, how they choose between products, and what can improve their experience. Additionally, the research team has provided strategic and tactical recommendations for companies, engineers, designers, and any individual involved in building DeFi products or services.

Blockchain technology presents an inherent tension between trust and trustlessness. While smart contracts and protocols execute as programmed, users are well aware that these

instruments of automation are built by people, who are prone to error. As a result, trust is the major deciding factor for retail users who are contemplating entering the DeFi ecosystem, or hindering existing users from more confidently using DeFi products as their main investment and financial platform. Users seek social proof in the form of trusted individuals, smart contract audits, and other traditional means (i.e. reviews) to determine what products and services to use. Greater forms of authority or trust determination are required to provide newer users the confidence to participate and enable existing users to use DeFi to a greater degree.

DeFi products lure individuals with the potential for passive income, although currently these products and services do not solve the need for earning passively, as engagement for interest rate checking and liquidity management are necessary. DeFi protocols and smart contracts are still viewed as high- risk, high- reward opportunities, however, users are mostly experimenting with products and services in order to test what is possible with DeFi.

As entrepreneurs, developers, designers, and companies continue to build DeFi products and services it is important to find ways to appeal to more users. This report serves as a foundation for user research that can be utilized and built upon by ConsenSys and other members of the Ethereum ecosystem.

Objectives of Research

- Understand the world of current retail defi users (their behaviors, needs, pains and goals, how they choose between products, and what can improve their experience)
- Deliver recommendations for companies and individuals building DeFi products and services

Methodology and Participants

Research Objectives

The DeFi sector has become a focal point for activity on Ethereum. While DeFi users are also cryptoasset holders, we have yet to identify a catalyst that converts holders/traders into DeFi product users. DeFi has presented a more active way by which users can interact with Ethereum and the community at large.

Gathering Assumptions

Before designing the research, our team first identified and conducted approximately 30 stakeholder interviews from ConsenSys employees to further understand our questions and assumptions about the DeFi ecosystem. Additionally, we examined quantitative research from, [Alethio DeFi dashboard](#), [Binance DeFi reports](#), and usage data and thought pieces from [Messari](#), [Defipulse](#), and specific protocols.

Designing the Research Method

After conducting preliminary research about the DeFi ecosystem and user-base, our team evaluated the best approach for answering the research objectives. With these aims in mind, we decided to employ a generative research approach focused on gaining a deeper understanding of user needs and

desires within the decentralized financial industry. Our approach leveraged qualitative interviews over video calls with profiled users.

In an ecosystem awash with quantitative data, but very little qualitative, we concluded that there was a gap in our collective understanding about why users do the things they do, hence a qualitative approach was selected. The outcome is deep and narrow findings, to supplement the broad but shallow metrics already out there. Usage data tells us what a person is doing, but not why.

Study Participants Screening and Selection

Study participants (n=12) were recruited through a third-party platform with participants located in the United States. Participants were required to fill out a questionnaire answering the spread of DeFi platforms and protocols that they had used in the past 6 months, as well as provide information about their work, and crypto/blockchain experience. Additionally, subjects were required to self-disclose the cryptoassets that they currently own. Note, subjects were only required to disclose the individual assets (Ether, Bitcoin, Dai, etc) and not the quantity of cryptoassets in nominal value (e.g. dollars) or cryptoasset value (ETH).

Interviewing the Participants

After preliminary user screening, 12 users were selected and interviewed over video. Each interview lasted 60 minutes and Zoom video conferencing was utilized and all interviews recorded for review purposes. The interviews were conducted using a semi-structured guided discussion with questions based on research objectives.

Example of a portion of the Semi-Structured Questionnaire

You mentioned in your screening questionnaire that you used [X,Y,Z products].

Let's talk about X. Can you describe to me what it's about?

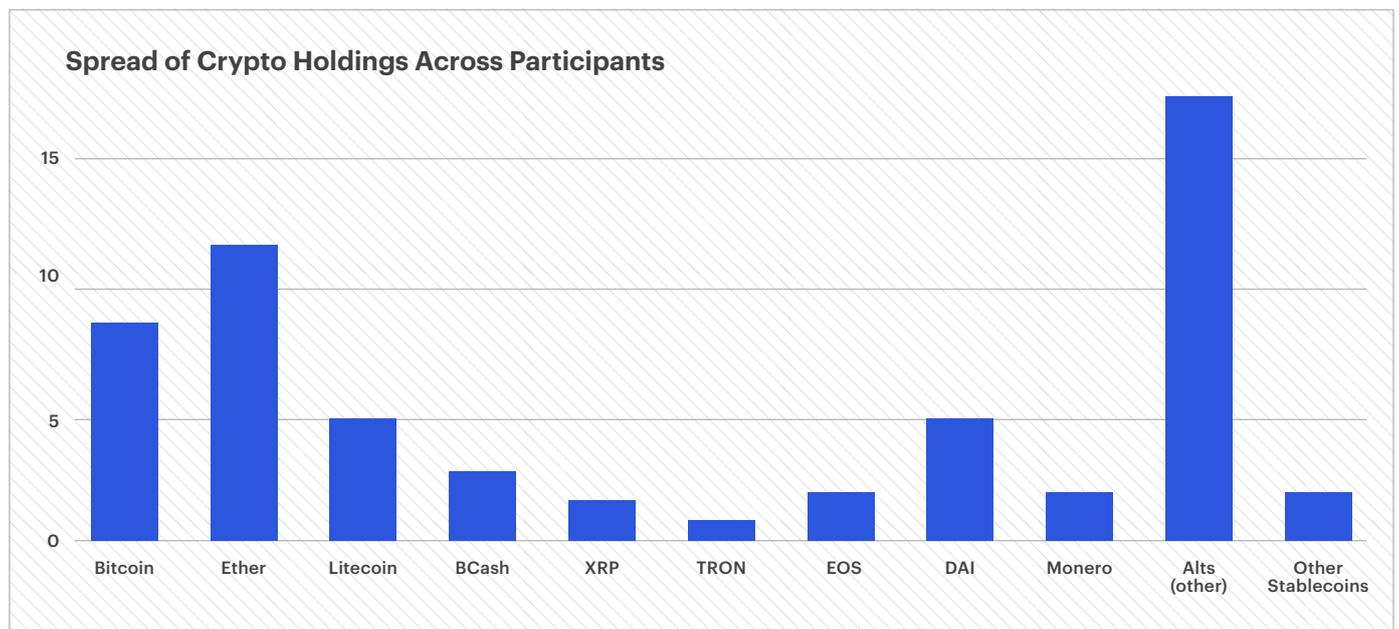
- What does it do?
- How frequently are you using it? What do you use it for?
- What's the best thing about it?
- The worst?

How did/do you learn about [these protocols]?

- Talk me through how you choose between [the different protocols].
- What helps you decide?
- When you're making a decision depositing money, what are the numbers or stats you're most interested in? Why?
- What's more important: having more control for yourself, or it being easy to use?
- Tell me about the requirement you have for storing your own keys...

Subjects were asked about their work life, their use of traditional finance products, and attitude/skills related to technology. Then they were asked about their experiences in crypto, when they first purchased any, whether they self-custody or used a custodian, and what activities (i.e. lending, mining,

staking) that they have participated in or attempted. This was followed by a deep-dive discussion into their use of DeFi products; which ones they use, why those, how they decide between them, what their motivations are, and why.



Source: ConsenSys Codefi Research

Results and Reporting Research Findings

After conducting thorough interviews and rewatching recorded interviews we were able to identify common goals, needs/wants, pain points, and other characteristics on the subjects which provide concrete evidence about the archetype of a retail decentralized financial user.

Identifying Common Characteristics of Retail Users

We identified most of the participants as lifelong learners, tinkerers, or those who can generally be classified as highly curious individuals. Continual education is a past-time. They have time to do their own research and like to consume knowledge around economics, science, and technology. These participants were crypto-savvy, were people who were familiar with making Ethereum transactions, and possessed good knowledge of blockchain technology. Some self-custody their assets while others used an exchange.

Participants had a range of jobs; some worked as software engineers while a few held less technical jobs but were extremely focussed on wealth creation. Others were generalists who were just fascinated by blockchain technology and wanted to be involved in the movement. Some had made their first purchase of crypto as early as 2011, and a few entered as late as 2018. In all cases, none

had entered the space during the 2017 all-time high. We hypothesize that when someone has entered crypto will affect their attitude to it, and that people who entered during the all-time high will have a negative outlook on the ecosystem. Those with a negative perspective will not have continued their research and interest in the crypto space, and therefore will not be using DeFi products. A quantitative study would be needed to validate this hypothesis.

The subjects could also be described as financially literate and either possessed financial knowledge prior to entering the crypto industry or gained financial literacy as a product of becoming interested in cryptocurrencies and blockchain networks. None of the participants indicated a bias or loyalty to any specific DeFi product or protocol, instead selecting the products that most fit their needs, and moving frequently between them.



[Investing in DeFi] is a vote of confidence. I'm giving you my money because I want this to work

Research Participant

User Motivations and Goals

The leading motivator for using DeFi products and services was to increase crypto portfolios and earn more crypto. Interestingly, most users specifically expressed their desire to increase their cryptoasset holdings rather than their dollar-denominated monetary value. As such it would be more apt to state that users favored making more crypto as opposed to making more fiat money (e.g. U.S. dollars).

Notably, the participants also expressed a desire to remain first movers and be part of emergent technology and ecosystem. Many of the study participants also viewed being an early adopter as a chance to capitalize on the financial opportunity of the various cryptoassets that they own.

Participants indicated that staying up-to-date on new developments will allow them to find the best (financial) opportunities that emerge. Several participants conveyed that they have used DeFi protocols within the last six months as a means to earn passive income (i.e. lending), as well as experiment with products or protocols.

DeFi User Pain Points

After analyzing the responses from the interviews, we found that many of the pain points revolved around interfacing and information overload.

Commonly identified pain points:

- Not knowing how to make the most of my money/crypto
- Constantly a new protocol to check out
- Keeping on top of price volatility
- Keeping on top of the best earning/borrowing rates
- Fees associated with moving my coins around
- Having to give too much of my information away to sign up, sometimes
- Fiat onramp; I have to move my coins several times to even earn interest

Fees and On-ramps

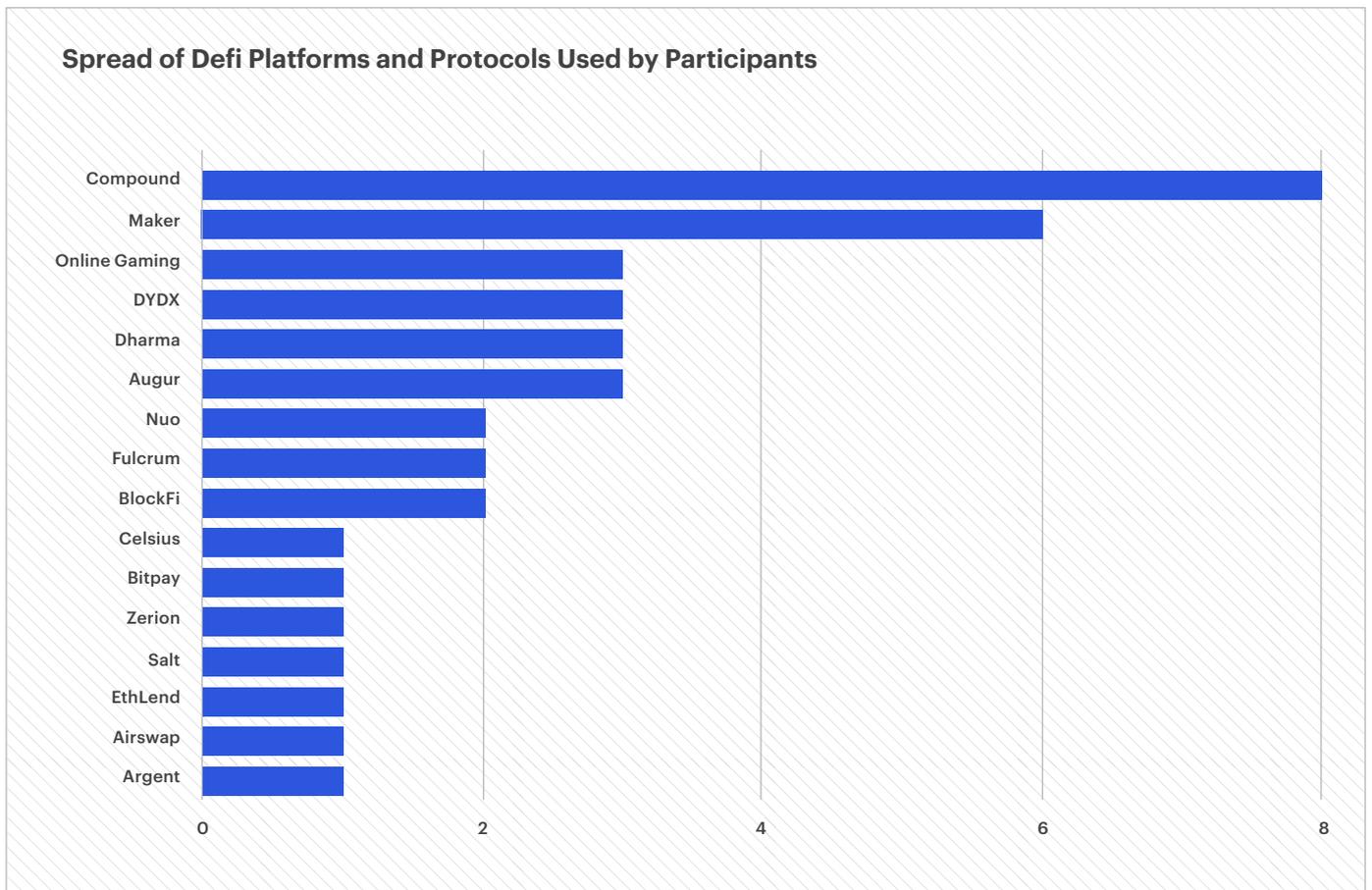
Participants identified dissatisfaction with the constant demand to manage fees associated with fiat-onramps as well as when transferring cryptoassets to various wallets, accounts, or protocols.

Volatility

Cryptoassets are more volatile compared to other speculative investments. Participants noted that staying informed regarding the top-earning/borrowing rates and price volatility were all annoyances.

How Users Choose Between Protocols

Many factors go into deciding what protocol to use. Users will spend a large amount of time researching, or self-educating. They bring with them existing mental models from web 2.0 (such as interest rates and aspects of reputation), which serve as a scaffold/foundation for the extensive research they then conduct about web 3.0 (newer) factors that go into their decision making. Comprehension of the product and ease of use are important for fast user onboarding and continued user satisfaction.



Source: ConsenSys Codefi Research

While all the participants had a desire to invest and realize speculative gains, not all participants showed a strong preference for decentralization or privacy. Some users identified that it was of importance, but didn't state that the level of decentralization or privacy altered their decision making processes or choice in DeFi applications. Of note, most of the subjects conveyed their long-term optimism for crypto while a portion perceived DeFi apps and protocols as a unique and short-term financial opportunity.

Discussion

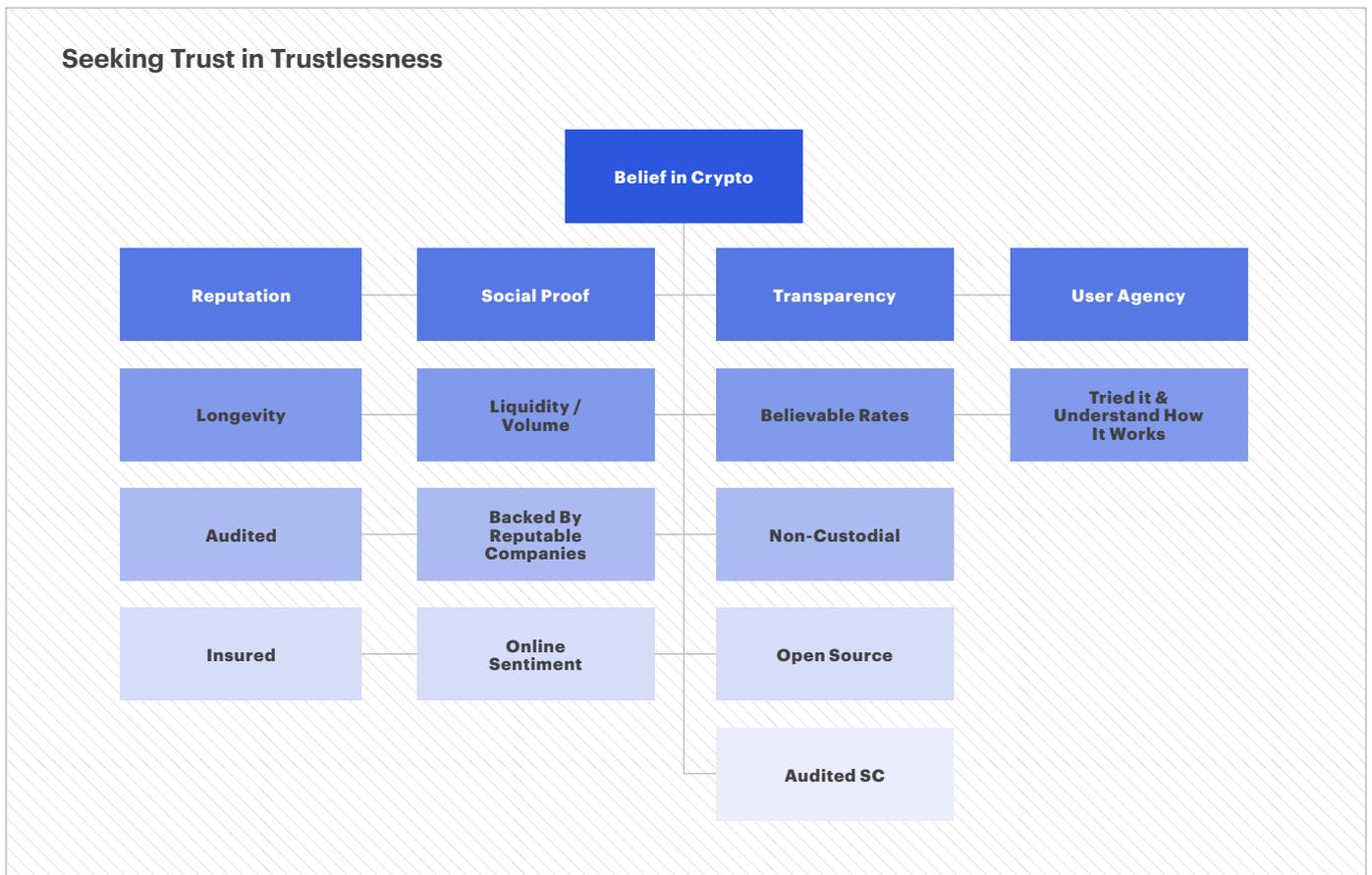
After analysis of the subject interviews, we've identified a few key themes that represent how DeFi users select and interact with applications and protocols.

Trust

Participants perceive trust in different forms and draw from a selection of trust attributes to determine what protocol they put their money

in. All the participants identified that they must fundamentally believe in the viability of the crypto ecosystem in order to use it although to varying degrees, expressed by their short or long term view.

Seeking trust in a technology that embodies trustlessness is quite challenging for users of the applications. Below are some of the trust attributes that were vocalized by the participants:



Source: ConsenSys Codefi Research

Importantly, all of the study participants discussed the importance of decentralization and even articulated many of the benefits. Yet when it came to actual behavior, we found that lack of trust gets in the way of this belief. This manifests in behaviors such as: using centralized services in addition to decentralized ones, extensive research and self-education, and seeking trust through other means. DeFi users while clearly knowledgeable about the benefits of removing middlemen and disintermediation, opted for the most convenient processes.

Some of the more notable trust attributes were, having tried an application and understanding how it works, social proof, and reputation. The participants conveyed uncertainty with how to trust smart contracts because participants understood that the technology was built by people which could lead to flaws in the smart contracts.

The human element is both a cause of distrust in technology, but also a means by which users find trust. Lack of trust manifests in seeking social proof that is satisfied by reaching out to other humans and using centralized services (i.e., Coinbase) which provide some of the web 2.0 experience. Other forms of social proof come as security audits conducted by third parties or an existing threshold of people already interacting with the smart contract.

“You don’t need to trust Compound because every aspect of how the platform works is transparent and has been audited. I look for security audits and opinions from people who know how to read code.”

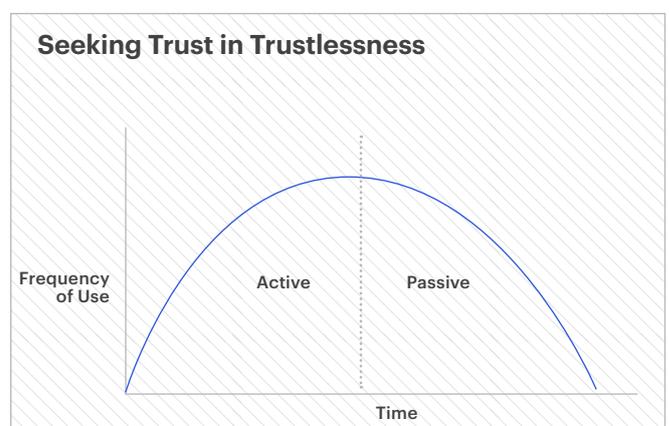
- Research Participant

All of the trust attributes identified by subjects suggest that there is a threshold of knowledge before acting (e.g. feeling comfortable enough to put money into a lending protocol). The participants in the study focused on staying up-to-date and remaining educated on DeFi applications. The high level of education, both financially and regarding crypto, helps mitigate risks from user error, under collateralization, and more.

Passive Income

Passive income is the promise of DeFi lending protocols such as Compound, Fulcrum, dydx, and more. Participants are searching for a mechanism to earn passively from their existing crypto portfolio.

For a user seeking passive income in DeFi, their frequency of use (through learning and experimenting) should reach a point at which their knowledge is sufficient to apply it and achieve their financial goals in a passive manner. As a result of their familiarity with protocols they should eventually be able to perform fewer actions to achieve their passive income goals.



Source: ConsenSys Codefi Research



The foundations of new economies
start with borrowing and lending,
in 2019 the blockchain industry
enabled these necessary primitives
in what has become DeFi

Collin Myers

Global DeFi Product Strategy Lead, Codefi

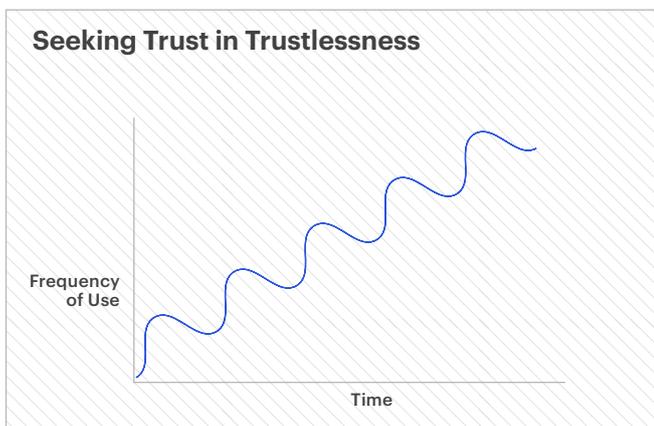


However, due to the state of the DeFi protocol space (nascent and ever-changing), it is unlikely that the goal of generating steady passive income will be achieved in the near future. While participants identified passive income as a goal, nearly all were speculating on a various portfolio of cryptoassets, remaining highly engaged, and taking many actions, often daily. Price volatility plays a part in this behavior.

“I’m checking all the time, to make sure things [generally] in the space aren’t blowing up”

- Research Participant

We term this “pseudo-passivity.” Users right now are not truly passive and likely will not be for a long time, as trust in the technology and the people building it are low.

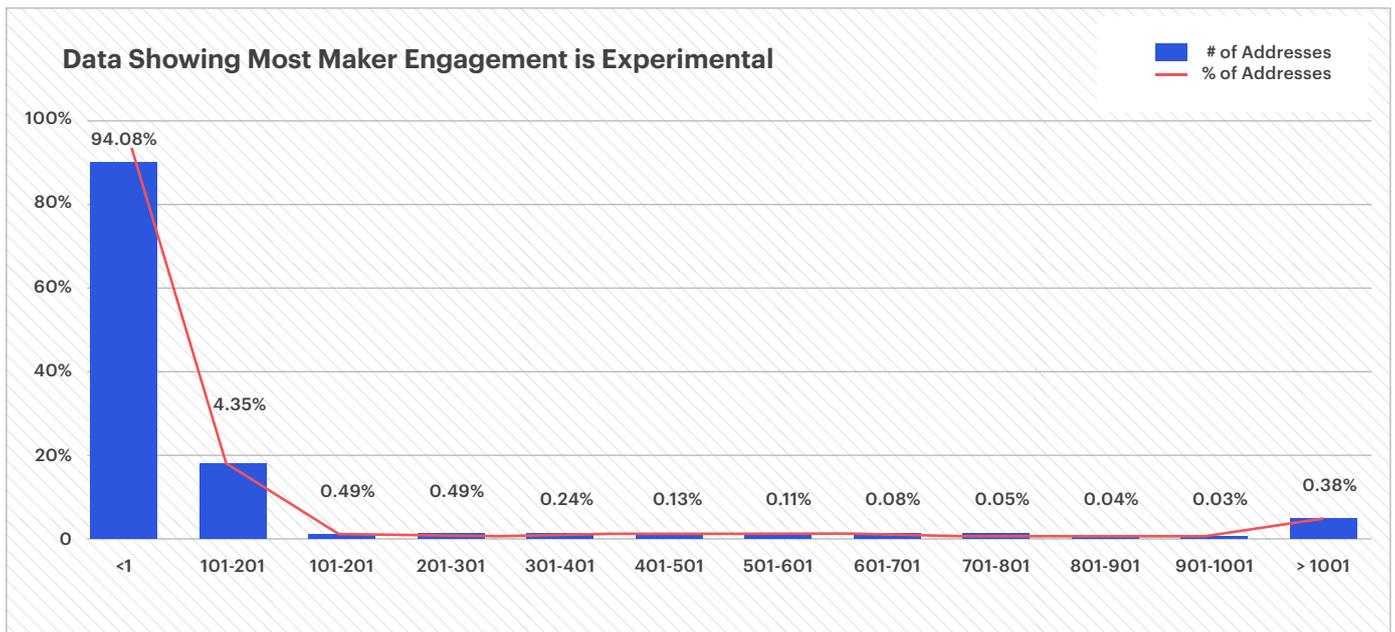


Source: ConsenSys Codefi Research

Experimentation & Risk Tolerance

Participants were well aware of the risk factors and potential for significant capital loss that results from using DeFi protocols. Understandably, DeFi participants have a different risk tolerance for crypto than compared to traditional savings and investments. Subjects considered the crypto ecosystem to be very risky and are not comfortable investing their main savings into DeFi. Quantitative data from Alethio shows that 94%(>125K) of Maker CDPs opened in the 3 months before the study completed used an experimental amount: less than 1 ETH (with ~82% using between 0.0057-0.0058 ETH to open a CDP; a specific amount promoted through the Coinbase Earn program). Analytically, many users are experimenting with limited funds and it appears that our qualitative research backs up these findings that DeFi users do not feel comfortable investing larger amounts of money.

However, participants displayed a willingness to tolerate more risk with crypto DeFi investments compared to dollar-based investments. Since many of the study participants have previously earned a profit on their crypto investment, they were more comfortable taking on more risk with those profits. The initial amount users were investing in DeFi applications, as a means of educating themselves, was minimal; a few dollars. Once they were more comfortable, they might invest a small amount; ranging from one-hundred to a few thousand dollars.



Source: ConsenSys Codefi Research

Of all CDP's opened on the Maker, 94% (>125k) are an experimental amount: less than 1 ETH (~82% between 0,0057-0.0058). Alethio 10/23/19

Therefore, while some participants were focused on earning some passive income, most were more aptly using “play money” to experiment with DeFi protocols and crypto in general. Note, this is not stating the value of participants’ total portfolios but rather the amount used for lending. Although users generally do not feel comfortable investing a significant amount of money in DeFi, most of the participants felt comfortable enough to experiment with specific products or applications.

Other Insights

Staking Ether

With the launch of many Proof of Stake (PoS) blockchain networks over the past few years, staking as a concept is becoming more prevalent. Many centralized cryptocurrency businesses such as Binance and Coinbase offer staking services for users. Most users we spoke to understood the concept of staking, and a couple had tried it in the past. One was currently staking TRX.

However, there was a common theme that users will only stake cryptocurrencies that they perceive as possessing long term speculative value. In other words, users will not purchase and stake cryptocurrencies just because of staking rewards and will likely stake assets they currently own and believe in. Some participants mentioned that they were aware ETH was moving to PoS and expressed enthusiasm for participating in staking. Supporting the network is in line with their belief in the technology and so staking ETH is an attractive proposition for those who hold ETH and should be part of DeFi product offerings that currently enable staking user assets.

DeFi applications that develop a means for users to join staking pools easily (if they don't hold sufficient ETH), as well as stake 32 of their own ETH, may be positioned to provide a strong user acquisition opportunity for other DeFi products and services.

Prediction Markets and Gambling

Most of the users we spoke to who previously used prediction markets like Augur no longer continued to engage with such platforms. Participants explained how they were initially interested in exploring prediction markets, but stopped because they didn't see a high monetary benefit to betting on predictions or grew bored with the types of markets. Engagement with prediction markets from our participants was most frequent during major political events, such as the 2016 US election. Overall, prediction markets were viewed by participants as entertainment, and less as an earning strategy.

Several users spoke about using crypto gambling games or casinos because they were easier to use than existing gambling websites due to U.S. regulations. Blockchain-based gambling presented a means of entertainment and a chance of making more crypto which appealed to users. However, experimental use of such platforms reduced for these participants, and they moved to DeFi protocols instead.



Strategic and Tactical Recommendations

In order to benefit the Ethereum ecosystem, we've come up with some strategic and tactical recommendations for those who are building or otherwise seeking to increase the adoption of DeFi applications, protocols, or services.

Strategic Recommendations

Authority on Trust

Trust is the main value proposition that can be offered to DeFi users, which is obviously challenging considering the trustless nature of blockchain technology. Companies that are building DeFi products and services should be dedicated to user's needs and build products that make users feel confident. DeFi and crypto users want to feel secure that products and services won't be switched off overnight and that there will be continued support for products and services.

A strong user base, active communication, referrals, and other commonly referenced "Web 2 social proofs" can be adopted to expand user trust in crypto and DeFi products. Providing a way for users to easily reach out for help is also highly beneficial. Other forms of social proof include liquidity and volume as well as any reputable partnerships or backing from known venture companies.

Education and Information

Like any revolutionary technology, the learning curve for blockchains, cryptocurrencies, and DeFi is quite steep due to the inherently complex topics involved (i.e. computer science, finance). Educating users about how products work and being open about the downfalls is necessary to improve long-term user adoption. Companies and protocols can reduce the information asymmetry by providing transparency regarding fees and risks associated with platforms, and providing regular push updates when there is something new or important changes occur.

ConsenSys Codefi has started to provide tools for users in the DeFi ecosystem with open source projects such as the DeFi Score, an open-source methodology to evaluate the technical and financial risk in DeFi lending markets. DeFi Score provides a single, consistently comparable value for measuring platform risk, based on factors including smart contract, centralization, and financial risk. The tool outputs an easy to understand 0-10 score and ability to compare across different DeFi lenders, including a summary of the attributes that contribute to the score such as strong technical properties, poor liquidity, and high regulatory risk. Understanding the risk factors associated with crypto has the potential to develop long term users who advocated for greater DeFi adoption, as opposed to users that experience financial loss from a single interaction with a poorly understood DeFi product.

Given that we know that many crypto users are dipping their feet in the water with DeFi, the ecosystem would benefit from sandboxed experiences which allow a user to “try before they buy”; so that they can understand all the steps involved in something without having to spend their crypto in the process.

Retail users may not be ready for automation (yet)

While a robo-advisor in the DeFi space aligns with the goal of earning passive income, the level of trust regarding these automated advisors remains extremely low. As a result, we do not believe users are currently ready to trust a robo-advisors on top of a trustless protocol. Automated financial advisors, protocols, or wallets that are insured or provide mechanisms to prevent user error may be able to earn the trust of newer users.

Of course, more experienced retail or semi-professional users with technical knowledge may feel more comfortable with robo-advisors. From our research, it appears that less experienced and knowledgeable users will require more time before trusting highly automated DeFi products. However, automation in the form fee calculation, models of different possibilities, and associated earnings may provide benefits welcomed by newer users.

Tactical recommendations

Mobile experience

While the crypto industry has predominantly prioritized web-based DeFi products and services, some participants identified as favoring mobile-based apps. DeFi initiatives that the crypto ecosystem develops must take this into account and possibly focus on even being “mobile-first.”

Speak the user’s language

Retail investors frame desires differently than most crypto companies and individuals. “Lending” is not a consumer need, but rather it’s to earn interest in a high yield savings account. The DeFi ecosystem is not semantically user-centric right now and should focus on describing products in a way that people can associate with their own needs and desires. It is imperative to focus on language that is understood from a potential user perspective and not the crypto-native viewpoint. For instance, [Dharma](#) provides a better example of user communication. [The Rumble design system](#) for dApps contains language guides (and design modules) that can be repurposed by anyone building blockchains applications.

Be (re)active online

Users will use Reddit, Twitter, Telegram, Discord, and other social channels to determine the attitude and experience of others. Social proof comes from social channels and how companies communicate with new users. Potential DeFi users want to see engagement between a company and its end users. Being responsive to questions, and providing substantial and transparent answers will help build trust and product adoption.

Email marketing

Though some users care for anonymity, the option to provide an email address as a way to keep updated about the performance of their deposits would be beneficial for many. Not every user will prioritize privacy, instead preferring communication and simplicity. This means that DeFi products can and should look at marketing opportunities that enhance user engagement.

Further Considerations

Next Phase of Research

Understanding DeFi users and their existing experiences are vital to continue to advance the Ethereum ecosystem. As foundational research, this report presents considerations for not only ConsenSys, but other DeFi companies to conduct in order to learn more about DeFi users, their behaviors, desires/wants, and pain points. Some of the next phases for DeFi users research should be conducted around the following:

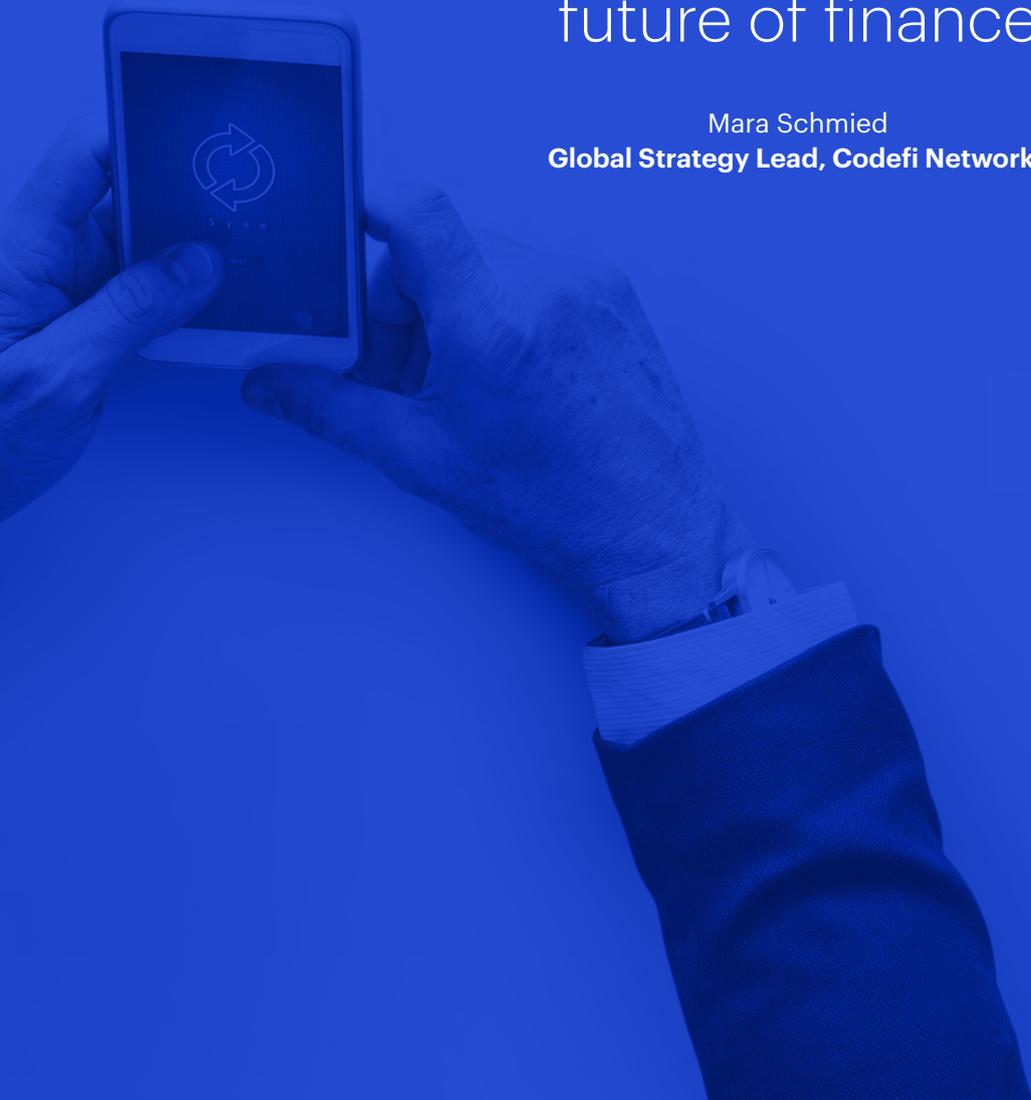
Potential retail DeFi users – current Ethereum or crypto holders who have never found a use for their cryptoassets nor partake in decentralized finance.

- Financial institutions – Tier 1 and 2 banks and investment companies
- Non-English speaking markets – E.g. South Korea and Japan
- Non-crypto holding potential retail investors – Individuals who invest in stocks, use prediction markets, but don't use crypto



With \$1B value locked in DeFi, it is clear that the Ethereum ecosystem has established a protocol-market fit and leading foothold to redefine the future of finance

Mara Schmied
Global Strategy Lead, Codefi Networks



Author



Georgia Rakusen

Global Design Research Lead at ConsenSys

Georgia is a seasoned user and design researcher, working to help ConsenSys products and blockchain organizations within the ecosystem understand their users and help them build genuinely useful and delightful experiences. At ConsenSys Georgia delivers high value strategic insights to our range of product teams building for developers, institutions, and general consumers, such as ConsenSys Codefi. In addition to running research for product teams globally, she also leads the ConsenSys research coaching program, and spends much of her time evangelizing for the voice of the customer in the web 3 space.

Georgia has an extremely broad background across a number of both scaled and start-up technology companies including Europe's leading usability testing company, and products in ecommerce, government services, finance, travel, publishing, gaming, and B2B.

