

THE Q2 2020

# DeFi Report

An analysis of Ethereum's decentralized finance ecosystem in Q2 2020.



# Authors



## EVERETT MUZZY

Everett Muzzy is a researcher and product marketing manager at ConsenSys focusing on blockchain protocol evolution, data studies, and enterprise adoption. His past research has included [Ethereum DeFi reports](#), [decentralization quantification](#), and [system interoperability](#). Get in touch with [Everett](#).



## DANNING SUI

Danning Sui is a data scientist specializing in emerging decentralized systems, including Ethereum. Her analyses have previously included [ICO investigations](#), [non-fungible token mechanisms](#), and [decentralized finance protocol relationships](#). Get in touch with [Danning](#).



## BOGDAN GHEORGHE

Bogdan Gheorghe is a data scientist with a focus on emerging blockchain technology and Ethereum Decentralized Finance. His data analyses have provided insights into DeFi protocol mechanisms, including [MakerDAO's DAI migration](#), [Compound illiquidity risks](#), and [stablecoin functionality](#). Get in touch with [Bogdan](#).

With thanks to: [Tom Hay](#), Director of ConsenSys Academy and member of ConsenSys Developer Relations.

## About ConsenSys Codefi

ConsenSys Codefi is a product suite built for the next generation of commerce and finance. ConsenSys Codefi is utilizing blockchain technology to optimize business processes and payments, digitize financial instruments, and build customized decentralized applications.

ConsenSys Codefi enables institutions and businesses to accelerate blockchain development with configurable tools and modules providing shared data standards and common workflows. By leveraging the global reach of networks and markets at the highest level of industry, ConsenSys Codefi reduces infrastructure and operational costs.

[LEARN MORE](#)



# Outline

01. **Executive Summary**
02. **Introduction**
03. **ETH and USD Locked: Data Snapshot**
04. **DeFi Users: Data Snapshot**
05. **Protocol Performance: Data Snapshot**
06. **ETH and Total Value Locked: Deep Dive**
07. **DeFi Users: Deep Dive**
08. **Compound and COMP: Deep Dive**
09. **BTC on Ethereum DeFi**
10. **Emerging Protocols**
11. **The State of Stablecoins**
12. **Security in DeFi**
13. **Insurance in DeFi**
14. **Conclusion**
15. **Contributor Notes**
16. **About Codefi Data**
17. **Appendix**

# Executive Summary

Three events defined Ethereum DeFi during Q2 2020: 1) BTC on Ethereum overtaking BTC on the Lightning Network, 2) three major security incidents, responsible for \$26M being hacked, and 3) the release of COMP and the frenzy of yield farming.

## BTC TOKENIZED ON ETHEREUM

*The event:* In May, the amount of BTC on Ethereum (represented by tokenized BTC such as WBTC) surpassed the amount of BTC on the Lightning Network, Bitcoin's layer 2 scaling network.

*The importance:* Cross-chain interoperability is anti-maximalist, but is the more likely future of blockchain. The teams enabling the tokenizing of BTC on Ethereum have been embracing this belief, and it is paying off. Also, Ethereum's DeFi ecosystem has such a strong gravity that even BTC holders have been finding ways to use it.

## COMP AND YIELD FARMING

*The event:* Compound released its governance token COMP in mid-June. Tokens have been rewarded daily to borrowers and lenders on Compound. The result has been that enterprising DeFi users have been maximizing their COMP yield (i.e. "yield farming") by using DeFi mechanisms to unlock capital and then lending/borrowing on Compound.

*The importance:* Yield farming took the DeFi ecosystem by storm in the last two weeks of the quarter. Crucial metrics like ETH locked and daily active users soared after being fairly stagnant earlier in the quarter. However, data (discussed below) suggests the frenzy did not bring many new users into DeFi, demonstrating that DeFi's innovation must be paired with education and UX before we see the DeFi community grow beyond its current borders.

## 3 MAJOR SECURITY INCIDENTS

*The events:* Uniswap, Lendf.me, and Balancer all had high-profile security incidents this quarter, collectively resulting in \$26M USD stolen (most of which was returned, discussed below).

*The importance:* Security incidents are inevitable in emerging technology. The DeFi community continues to develop strategies to hedge against it, including: auditing services, security products, and insurance applications. All of this is benefited by the OS nature of DeFi, which allows third parties to monitor DeFi dapps, provide suggestions, and analyze attacks to help protect the entire community in the future.

\*\*A first publication of this report mistakenly said "Bancor" was part of the \$26M USD hacks this quarter. The report has been updated correctly to say "Balancer"



## Introduction: Q2 2020 DeFi

DeFi in the second quarter of 2020 has largely been defined by recovery of the crypto ecosystem following March's market events, which saw crypto prices drop 40% in one day on March 12. Though the DeFi community took a hit with regards to ETH price, the day also proved an important indicator of Ethereum's ability to handle a substantial spike in DeFi activity, as users rushed to protect their funds.

Since March, the DeFi ecosystem has not only recovered, but has seen a significant increase in activity due largely to the release of COMP in June 2020. Coupled with a number of high-profile security incidents, DeFi this quarter has clearly been experiencing the growing pains of new technology. Successive security challenges have highlighted the importance not only of robust security diligence, but of the utility of protective measures such as DeFi insurance apps. In parallel, continued growth and hype has proven that DeFi has a tremendous amount of innovation still up its sleeve and is prepared to continue growing in the quarters to come.

# ETH and USD Locked: Data Snapshot

## ETH Locked

Decentralized finance is run by smart contracts that automate new, blockchain-based financial instruments. A popular way to look at the success of DeFi is measuring the amount of “locked” funds in DeFi. “Locked” funds refers to the funds that consumers have trusted to send to the smart contracts that make up the DeFi ecosystem. A very simple and modern analogy might be looking at the cash people keep under their mattress compared to the cash they trust to banks and brokerage accounts. If people move more of their cash from their mattress to their bank, they trust their bank to safeguard or compound their wealth more than they fear their bank losing it. An increasing amount of funds locked in DeFi over time represents growing confidence among consumers to place their money in the hands of smart contracts in order to interact with these new financial tools.

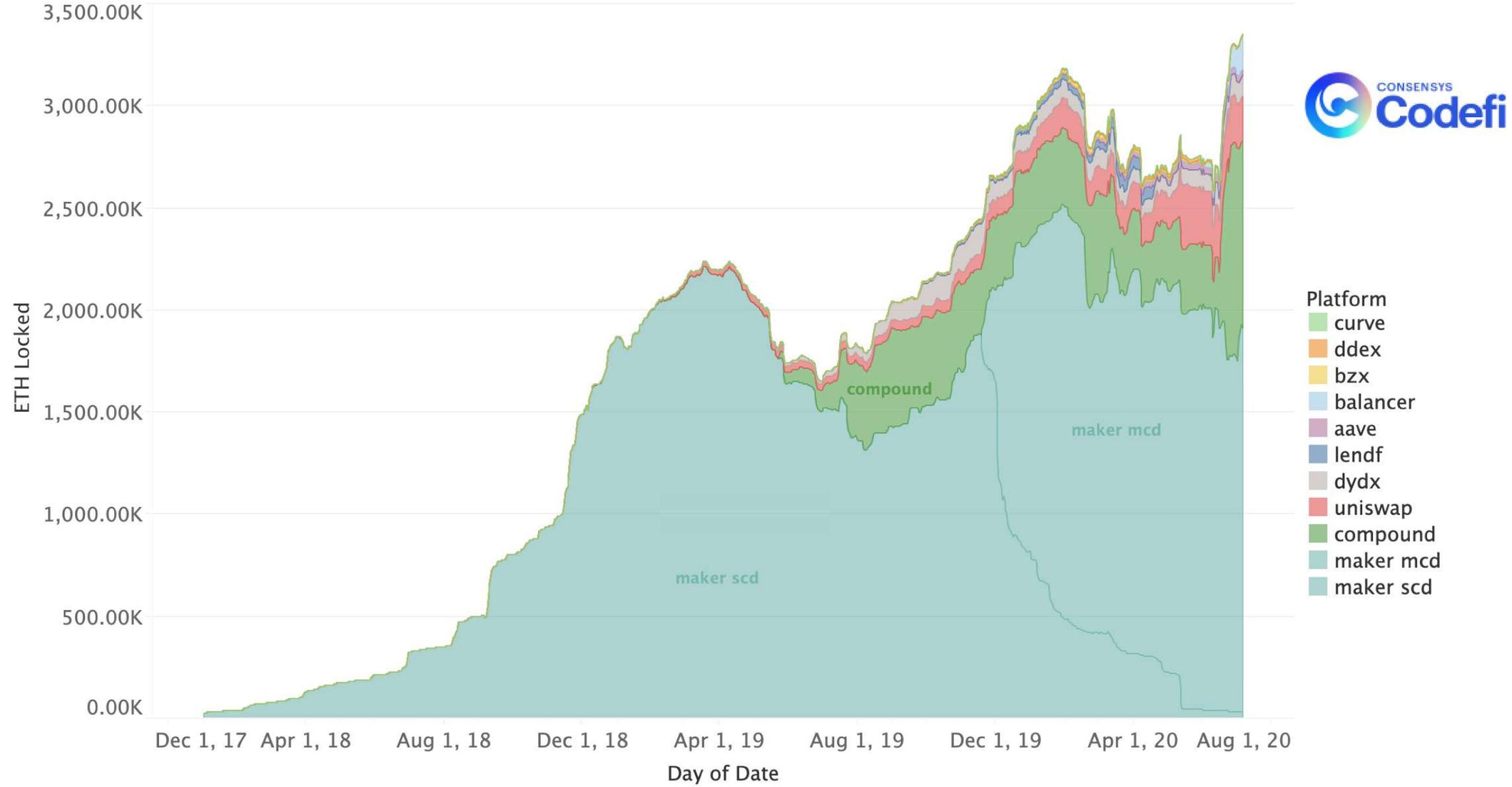
There are two ways to measure funds locked in DeFi: ETH locked and USD locked.

- ETH locked measures the amount of ETH and WETH (ETH represented as an ERC-20 token) that has been sent to these smart contracts.
- USD locked measures the USD value of the funds locked in DeFi smart contracts. USD locked is directly correlated with the market price of ETH. Even if the ETH locked in DeFi amount stays the same, the USD locked value would increase or decrease as the USD price of ETH changes.

Since early 2019, the amount of ETH locked in DeFi has been overall increasing, with the large majority attributed to Maker and Compound. The dominance of Maker with respect to ETH locked (which was nearly 100% of ETH locked until mid-2019, but still makes up the vast majority to this day) is due to Maker’s position as an early and pivotal player in the newest period of DeFi that began in 2018. Maker was the enabler for a new wave of financial protocols

that all depend on a decentralized stablecoin: SAI (called “DAI” when it was released). When Maker released SAI, it was essentially the only DeFi player using the unique capabilities of the stablecoin, so the influx of ETH locked in DeFi-related smart contracts was overwhelmingly concentrated in the smart contract that locked ETH in exchange for SAI. Starting in mid-2019, a new wave of DeFi protocols began to be released, many of which used the SAI stablecoin. Maker continued to account for the majority of ETH locked, but newer protocols began chipping away at its total market dominance by introducing new ways to leverage SAI (and now, multi-collateral DAI).

# Total ETH (&WETH) Locked Amount



After witnessing the greatest amount of ETH locked in history in Q1 (at that time), the total ETH locked on the network decreased and then stagnated for most of Q2 between 2.5M and 3.0M. In mid-June, however, Compound released its COMP governance token, which could be used in a complex yet highly lucrative mechanism known as yield farming [see “[Compound and COMP: Deep Dive](#)”].

The impact on ETH locked has been tremendous. After stagnating for most of the quarter, ETH locked increased by over 500k in less than a month. By the end of the quarter, it has reached all-time highs at 3.3M locked ETH (figure 2). This increase in ETH locked has been attributed almost entirely to Compound (in green).

Figure 1: ETH and WETH locked in DeFi - 2018 - 2020. The amount of ETH locked in DeFi has been following an net-upward trend since mid-2019.

# Total ETH (&WETH) Locked Amount - 2020 Q2

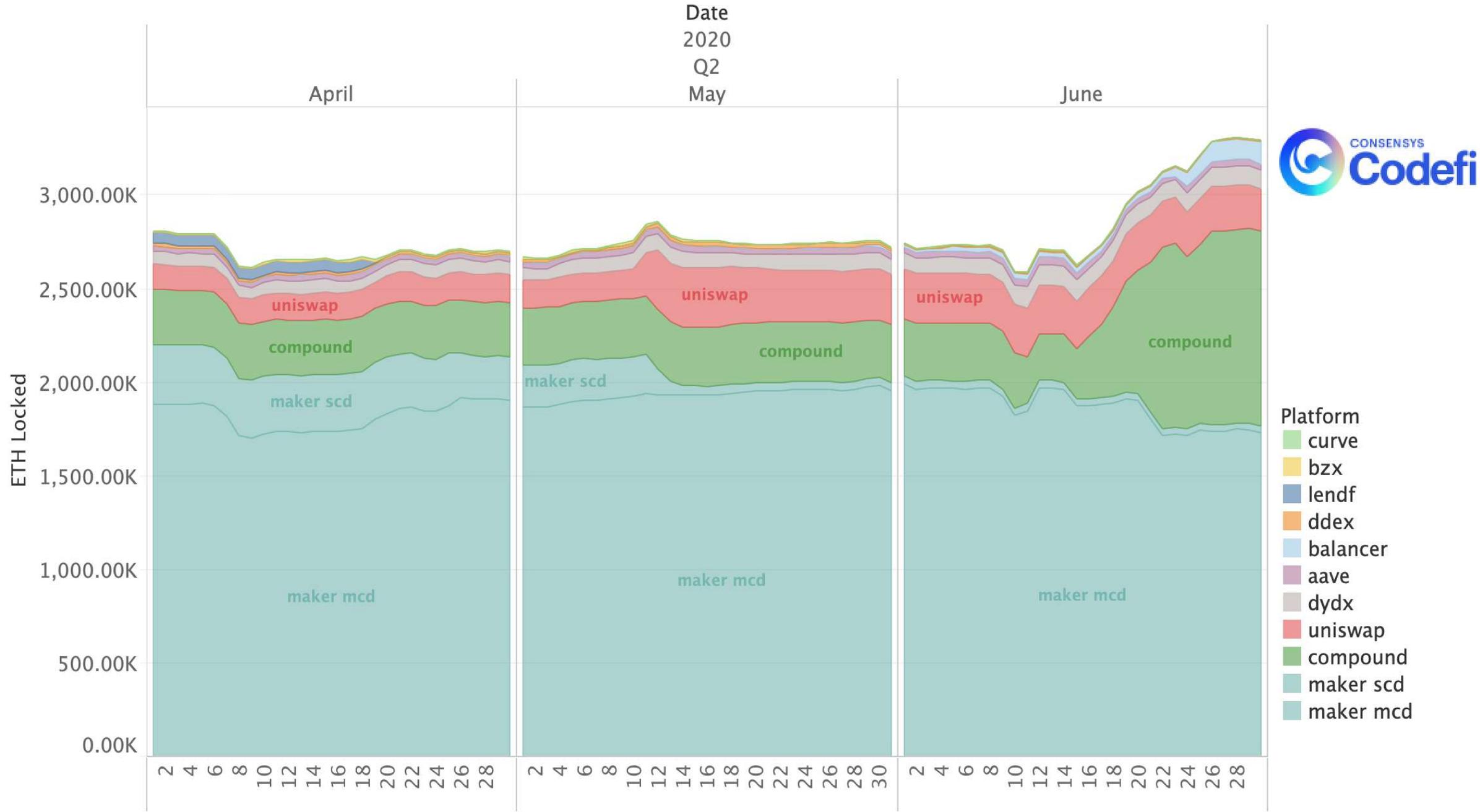


Figure 2: ETH locked in DeFi - Q2 2020.  
The sudden increase in ETH locked beginning in mid-June is due to COMP.

## USD Locked

DeFi gained headlines last quarter when, [on February 6, \\$1 billion USD](#) was locked in Ethereum open finance protocols. The \$1bn metric was measured by adding up the USD value of ETH and ERC-20 tokens. On that day, ~64% of the USD value was from ETH or WETH, and the remaining ~36% in USD value was in ERC-20 tokens.

In Q2, the USD value of locked ETH and WETH nearly doubled, from <\$400M in the beginning of April to ~\$750M by the end of the quarter. Much of that volume (about \$200M) emerged in the last two weeks of the quarter and can be attributed to Compound (figure 3).

One potential issue with measuring the USD value of ETH + ERC-20s is the possibility of double-counting. Should a user lock ETH in Maker, then take the generated DAI and lock it in Compound, measuring USD locked in ETH + ERC-20s would count both the locked ETH and DAI, whereas the true amount of locked funds is just the original ETH.

For more analysis into ETH locked on Ethereum, see [“ETH and Total Value Locked: Deep Dive.”](#) We explore the possibility that some locked funds are being double-counted, which could result in inflated statistics.

## Total ETH (&WETH) Locked Value In USD – 2020 Q2

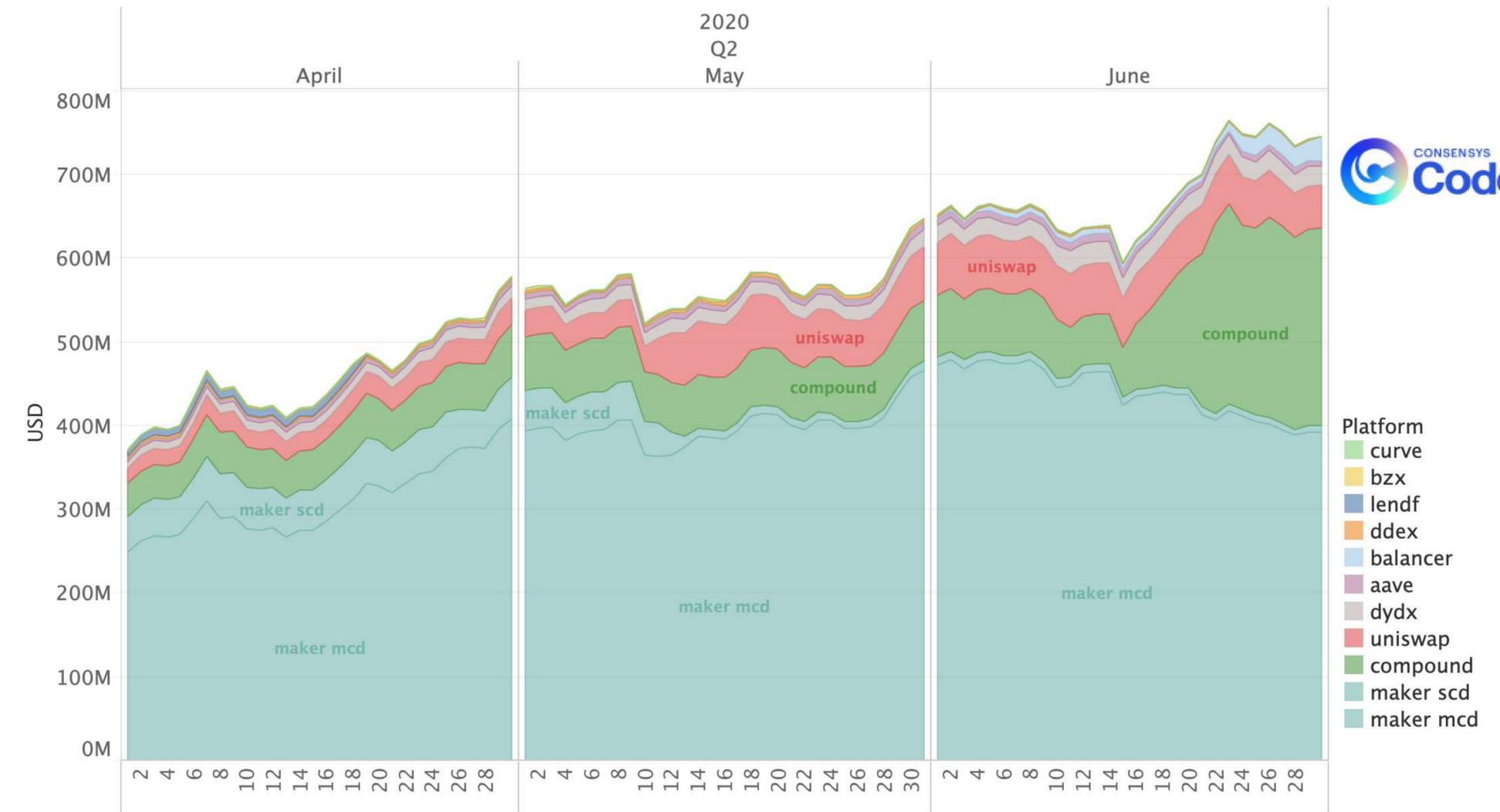
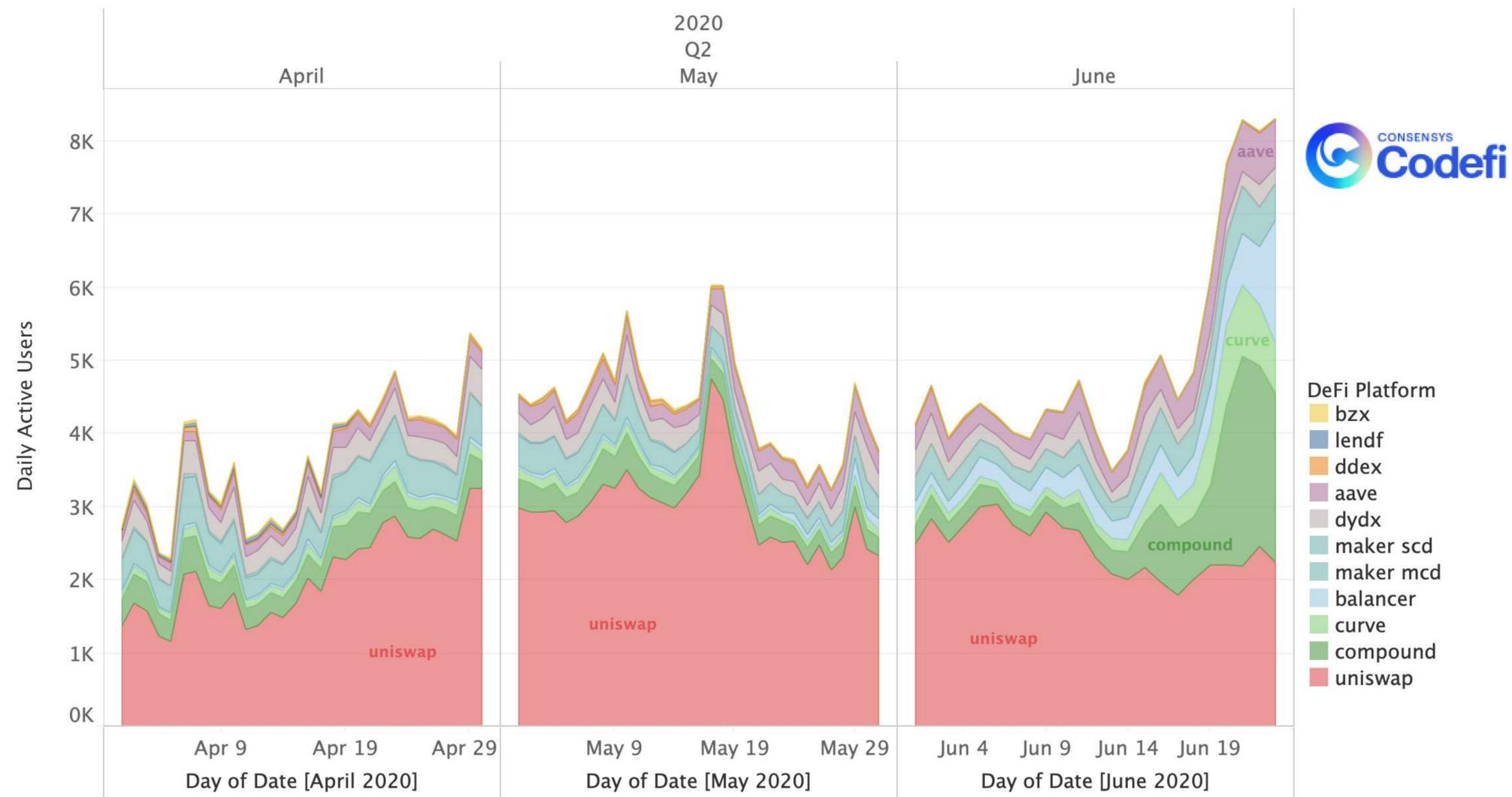


Figure 3: The USD value of locked ETH and WETH in DeFi, Q2 2020.



# DeFi Users: Data Snapshot

## Daily Active Users – 2020 Q2



Over the course of Q2 2020, there were 79,648 unique addresses that interacted with an Ethereum DeFi protocol. In figure 4, we see that daily active users across DeFi protocols remained fairly consistent throughout the quarter until mid-June, which saw a sudden increase in active users due to the frenzy around COMP. June 21st was the busiest day of the quarter with respect to daily active users, with 6,333 active users on Ethereum DeFi. Compound alone accounted for 2,877 (45.4%) of those users. Note that the total number in figure 4 may include double counting of shared common users, and thus looks higher than the actual count of unique users in DeFi. Respective values for each protocol are accurate.

Figure 4: DeFi daily active users, Q2 2020.

Figure 5 shows ETH Locked, User Growth, and Daily Active Users (DAU) for a set of prominent DeFi protocols throughout the quarter. In figures 2 and 4, we have seen Compound account for a tremendous increase in ETH locked and DAU, which we can see confirmed in figure 5.

User growth, however, tells an interesting story about the impact of COMP on the DeFi ecosystem. With respect to ETH locked and DAU, COMP caused Compound to suddenly capture an outsized portion of the market when compared to previous ratios. User growth, however, did not experience the same sudden deviation from previous trends (figure 5). In fact, if we looked just at user growth in Q2 2020, we might presume nothing significant had happened the past few months. User growth increased steadily and each protocol appears to have gained new users at the same rate and within the same ratio as they had the entire quarter.

What figure 5 tells us is that although COMP has caused massive waves in the DeFi community and greatly impacted ETH locked and DAU, it has not brought many new users into the ecosystem. The increased activity caused by the activity around COMP has come from those already inside the ecosystem.

## DeFi Platform Stats – 2020 Q2

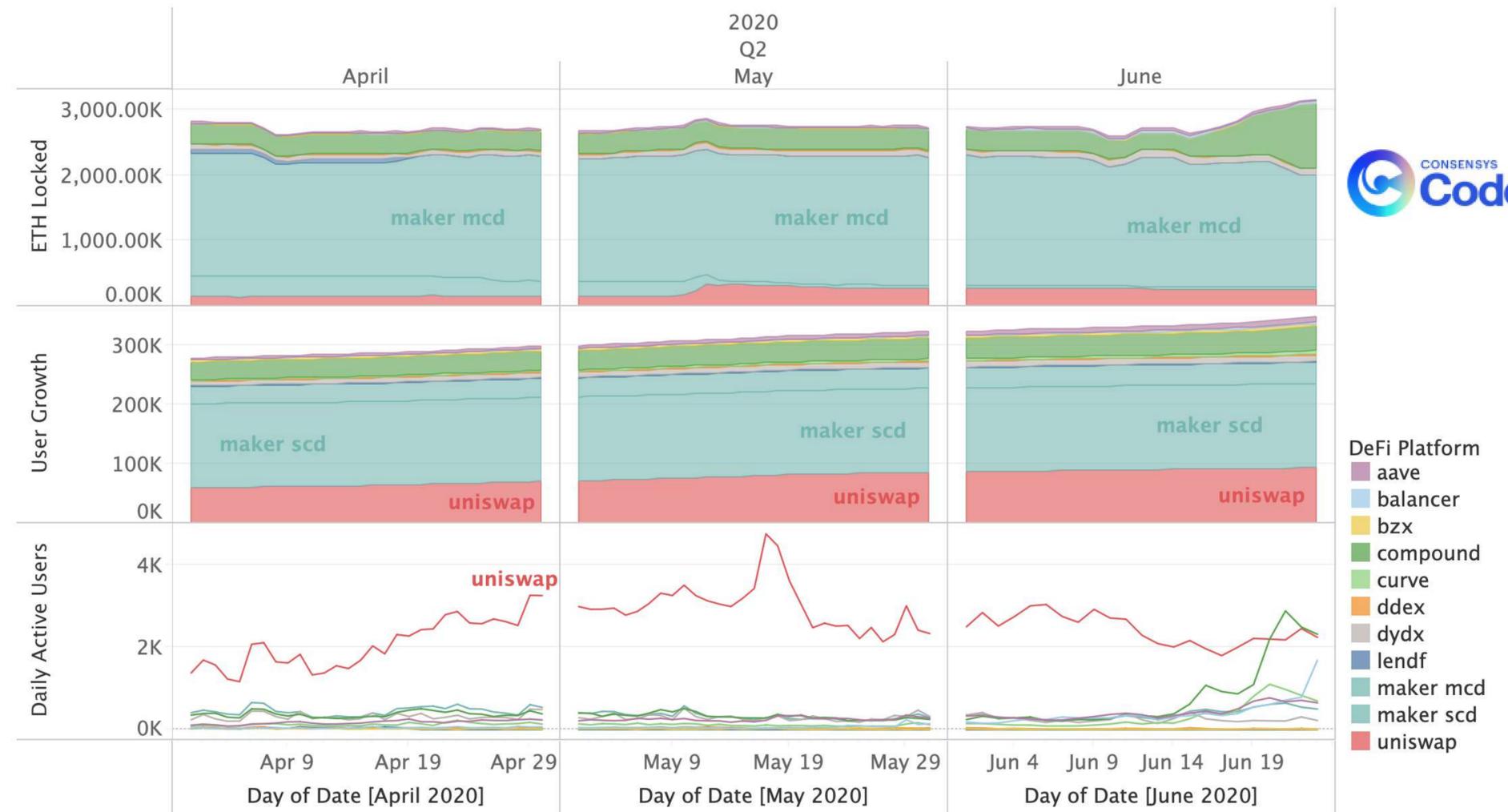


Figure 5: ETH locked, user growth, and DAU across DeFi protocols, Q2 2020.

# Protocol Performance: Data Snapshot

## Compound

ETH locked in Compound increased nearly 4x in the last two weeks of the quarter compared to its Q2 average of ~0.26M before COMP. It ended the quarter at ~1M ETH locked, which makes up for 30% of total ETH locked on the network. Additionally, DAU in the same time frame increased over 5x, from ~500/day before COMP to an all-time high of 2,877 on June 21st.

As discussed above, user growth for the DeFi ecosystem as a whole did not experience the same sharp increase as ETH locked and DAU. The aggregate number of just Compound users in Q2, however, increased from 30k to 40k. 50% of that increase happened in the last two weeks of the quarter, during which time user growth increased from ~35k to ~40k. Moreover, user growth rate - which measures how many new users interacted with compound day over day - skyrocketed, increasing over 28x from a monthly low of 0.12% in early June to an all-time high of 3.42% in late June.

Looking at the big picture, COMP did not impact DeFi user growth substantially - i.e. COMP did not bring significant numbers of new DeFi users into the ecosystem. However, Compound's own considerable increase in user growth in just the last two weeks of the quarter suggests that many DeFi users who may not have been using the protocol in the past chose to do so because of the new financial mechanisms allowed by yield farming.

For more about Compound and COMP, see "[Compound and COMP: Deep Dive](#)." We explain COMP in more detail and look at what went on behind the scenes.

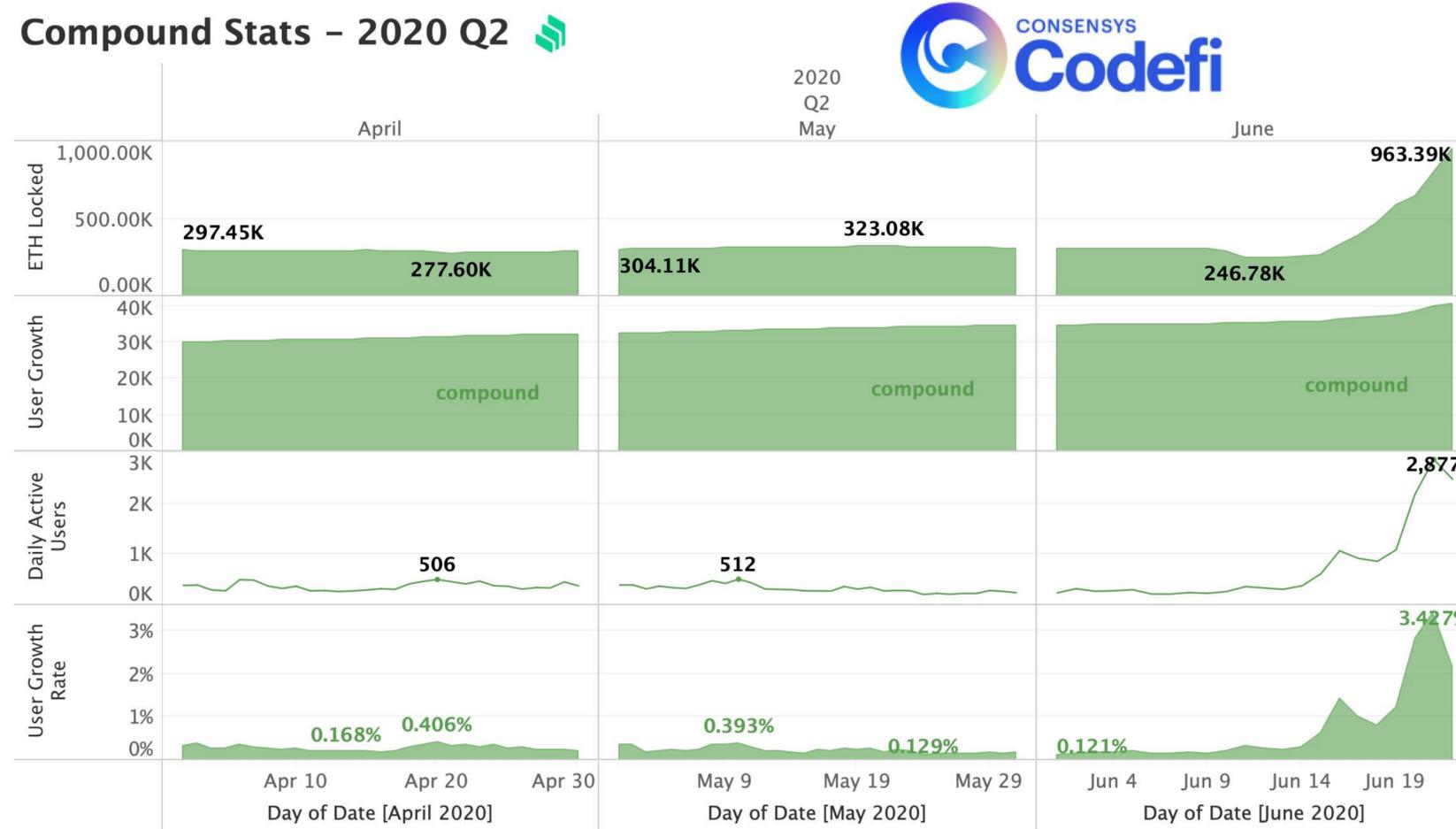


Figure 6: ETH locked, user growth, user growth rate, and DAU on Compound, Q2 2020.

## Uniswap

In Q1 2020, Uniswap had the greatest changes in ETH locked, user growth, and DAU of any DeFi protocol, due largely to the mid-March market events. We have not seen the same impact of COMP on Uniswap this quarter. Unlike most other protocols, which saw their busiest time period in June in at least 1 of the 3 major statistics (ETH locked, DAU, user growth), May was Uniswap's most active month across the board, and June was actually quite stagnant (figure 7). In May, Uniswap reached 0.32M ETH locked, which then decreased to 0.24M by the end of the quarter. In May, DAU also reached its quarterly high at 4,745. June's DAU high was lower than both April's and May's.

### Uniswap Stats – 2020 Q2

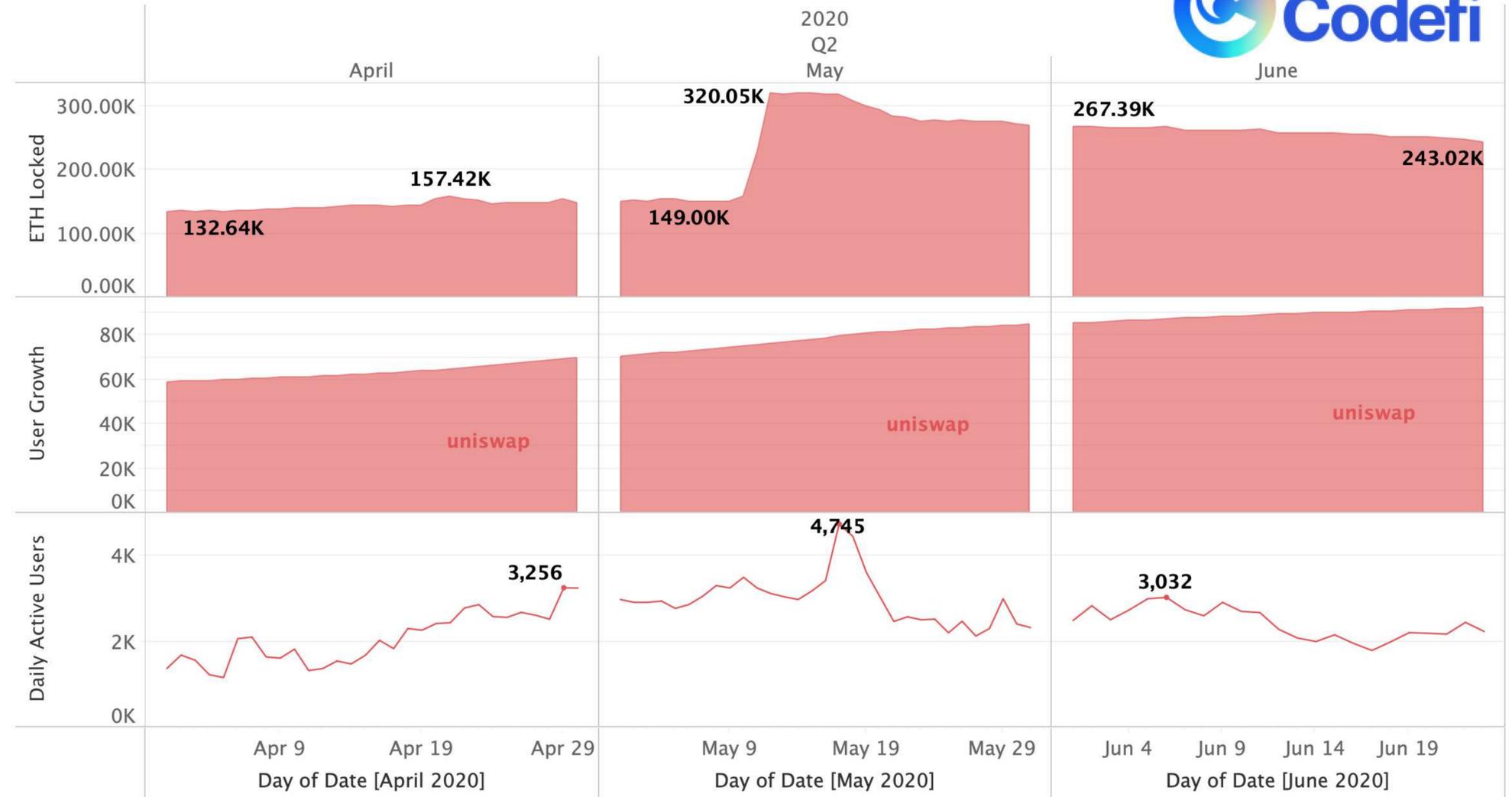


Figure 7: ETH locked, user growth, user growth rate, and DAU on Uniswap v1, Q2 2020.

## Maker

Maker remained fairly stagnant throughout Q2, with DAU remaining fairly consistent and user growth staying flat all three months (figure 8). We do see an increase in DAU in the last two weeks of June alongside increased ecosystem-wide activity, but the height of Maker DAU in June (643) was lower than April's high (656). Interestingly, we do see a decrease in Maker's ETH locked, from just over 2M at the beginning of the quarter to under 2M by the end. The majority of the decrease seems to have happened in the last two weeks of June, suggesting that some of the ETH locked in Compound came from Maker as people were scrambling to free up liquidity to invest.

## Maker Stats - 2020 Q2

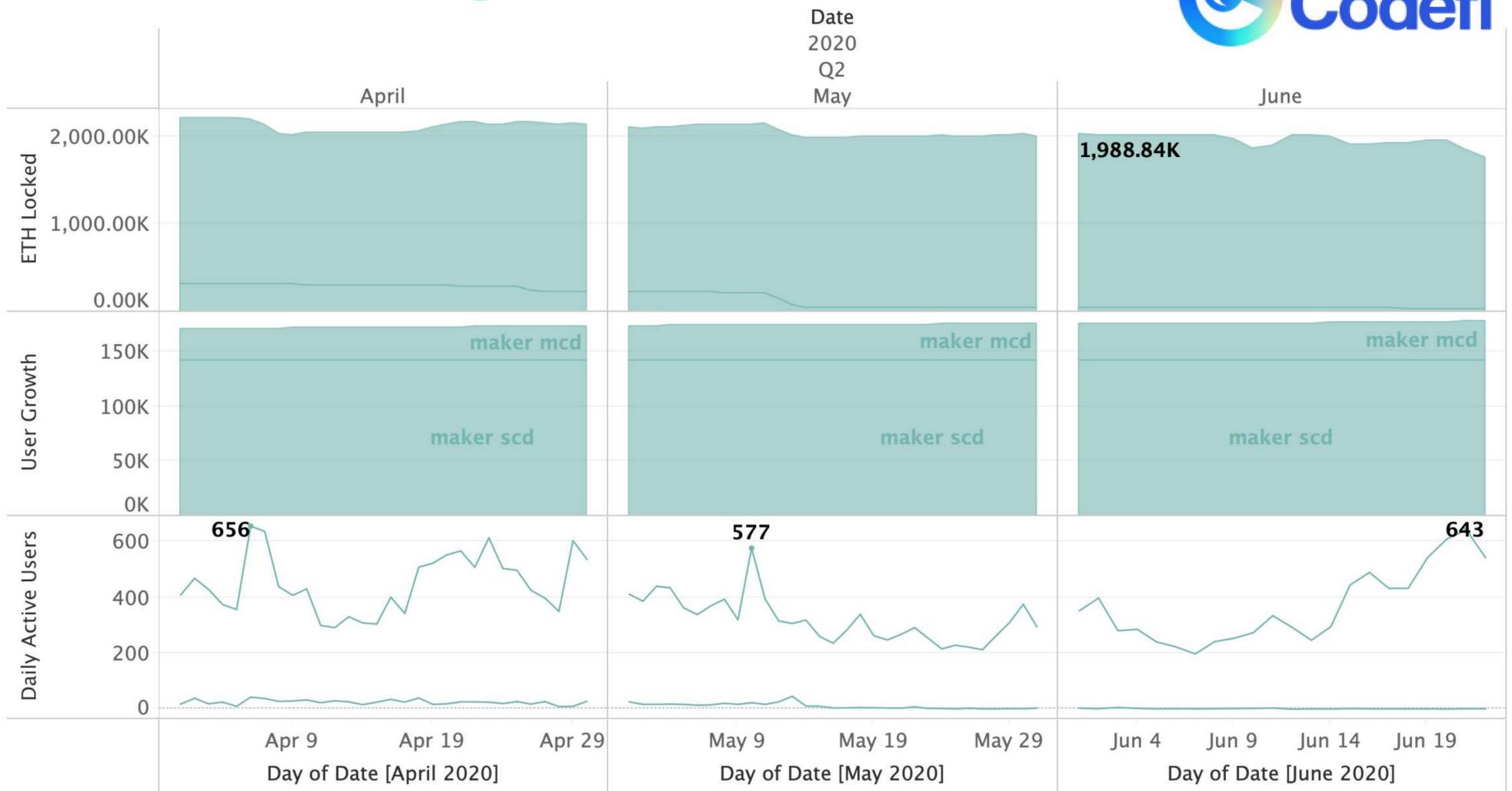


Figure 8: ETH locked, user growth, user growth rate, and DAU on Maker, Q2 2020.

# ETH and Total Value Locked: Deep Dive

When measuring ETH and USD locked, a frequent metric used to measure the long-term success of Ethereum DeFi is Total Value Locked (TVL). Whereas ETH locked just looks at ETH and WETH that has been locked in Ethereum DeFi, TVL aims to measure the overall USD value of all assets locked on Ethereum, which could include stablecoins such as DAI and USDT and other tokens such as wrapped BTC and BAT.

The TVL in DeFi climbed the last two weeks in June, ending the quarter at \$1.2B USD, 80.3% of which was attributed to Maker and Compound.

On the surface, TVL is a crucial metric to judge the overall performance of DeFi since, after all, the ecosystem has long graduated from just being a set of ETH-centric protocols. The potential issue with TVL, however, is that of double counting. To provide a theoretical example: a user may lock 1 ETH in Compound and receive 250 DAI as a loan (assuming 1 ETH = \$250), then move to another protocol and lock that 250 DAI up. If we look at TVL, we would say that \$500 USD is locked in DeFi, when in reality the true locked USD value is just the value of the initial locked ETH, \$250.

## Total Value Locked (TLV) on DeFi

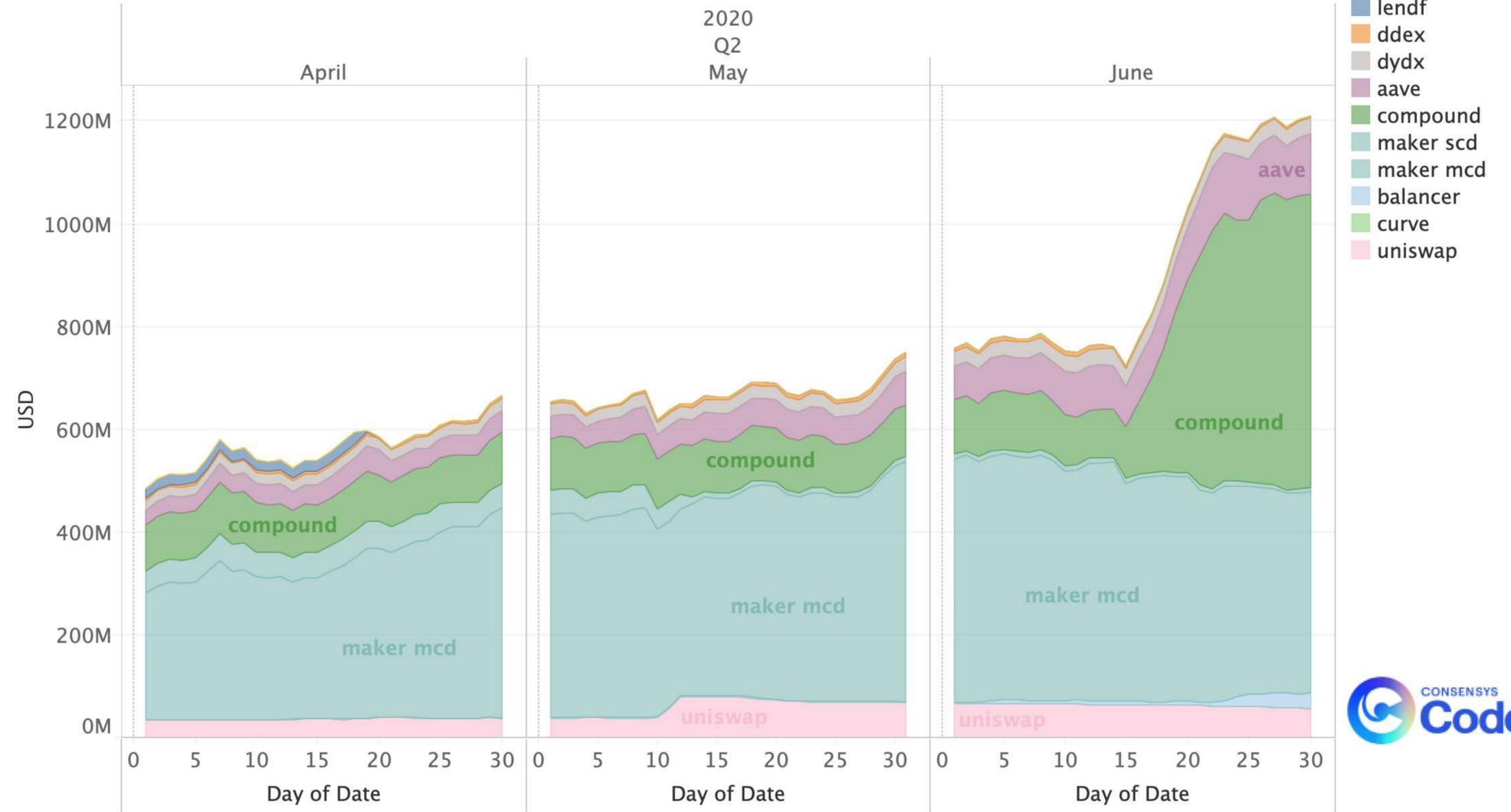


Figure 9: TVL (ETH + ERC-20) on DeFi, Q2 2020. See appendix for list of measured tokens.



On the surface, TVL is a crucial metric to judge the overall performance of DeFi since, after all, the ecosystem has long graduated from just being a set of ETH-centric protocols. The potential issue with TVL, however, is that of double counting. To provide a theoretical example: a user may lock 1 ETH in Compound and receive 250 DAI as a loan (assuming 1 ETH = \$250), then move to another protocol and lock that 250 DAI up. If we look at TVL, we would say that \$500 USD is locked in DeFi, when in reality the true locked USD value is just the value of the initial locked ETH, \$250.

A concrete example happened on June 8th, when a user ([0x...aa7a](#)) withdrew 12M DAI from Compound and AAVE, borrowed another 2.5M DAI on dYdX, and then deposited all of that DAI into a MakerCDP. With a rough estimate of ~200% collateral ratio for WETH deposit, we know that by the time that user moved those DAI into CDP, they locked at least \$5M USD on dYdX (in order to borrow the 2.5M DAI) and \$14.5M USD on Maker. That means they contributed to **\$19.5M USD in TVL in DeFi**, while the actual funds the user brought into DeFi is around \$17M USD (\$5M USD on dYdX and \$12M withdrawn from Compound and AAVE). The movement of this user's funds can be seen in figure 10.

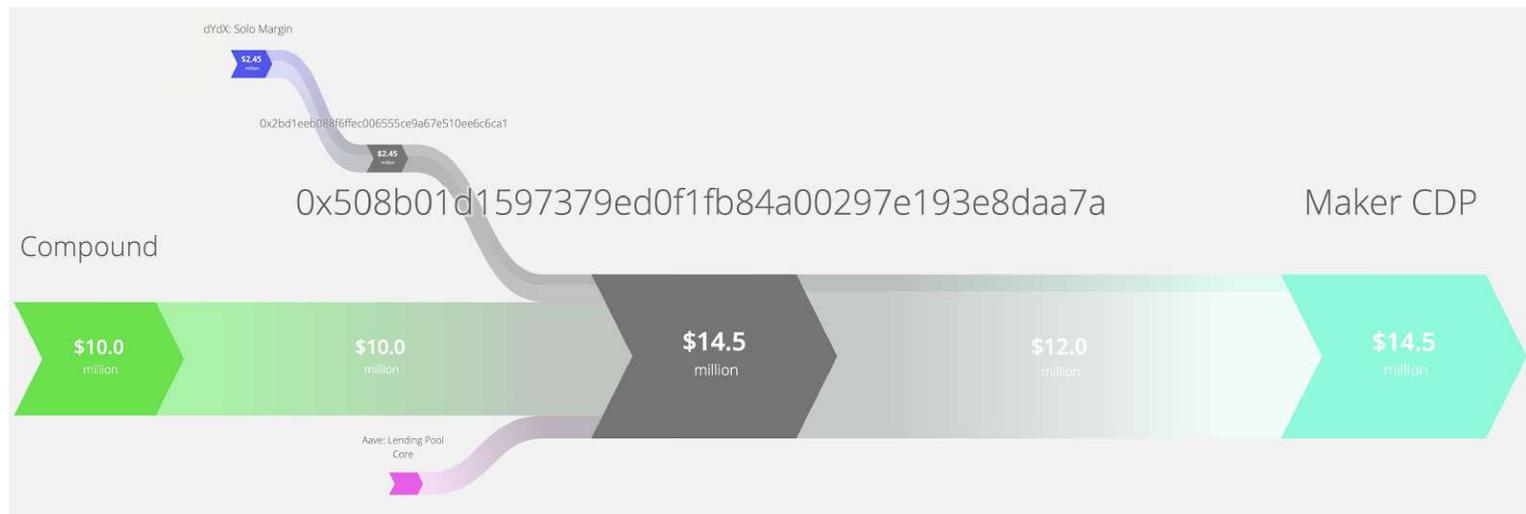


Figure 10: DAI Movements in DeFi on June 8th from user [0x...aa7a](#).

This individual user's locked value was inflated 14.7% due to double counting from activity happening within one day. We should try to imagine how that number may look like for the whole DeFi ecosystem. To get a comprehensive rate of double counting, more work and assumption needs to be done in further investigation.

What we propose instead is a measurement True Total Value Locked, or TTVL. This measurement identifies and removes double-counted funds from our equations when we talk about value locked in DeFi. It is not a perfect metric, but by identifying and removing as much duplicate counting as possible, we arrive at a picture of the DeFi ecosystem that is closer to the truth and more reflective of the ecosystem's evolution over time.

The datasets required to begin arriving at Ethereum DeFi TTVL (let alone TTVL that can be consistently tracked and updated) are large and complex. We will continue working on this problem and return to the community at a later date with our updates and, hopefully, conclusions.

**What we propose instead is a measurement True Total Value Locked, or TTVL.**

# DeFi Users: Deep Dive

When we looked at the skyrocketing usage of Compound in the last two weeks of June compared to the comparatively-consistent increase in user growth across Ethereum DeFi, we asked the question *who is really using DeFi?*

## DeFi Network Graphs

Much of the promised value of decentralized finance is the unique ability of DeFi to build networks of users between interoperable dapps. Existing financial applications often require third parties to facilitate the interaction between financial tools. This “seamlessness” is engineered, and though it appears simple to the end-user, it is often supported by high costs and liabilities. These are eventually passed down to the user as fees, long lead times (1-3 days and a 2% fee to deposit or send money, for example), and lack of sovereignty.

Building financial dapps off a shared technological protocol like Ethereum allows users to interact with a variety of financial tools without relying on these third parties. The result is a financial ecosystem that is considerably cheaper and more equitable to interact with. As more people interact with more protocols, this creates strong and compounding network effects that strengthen the ecosystem as a whole.

The value proposition of strong DeFi user networks is appealing - but just measuring overall user numbers does not show us the activity of the users. The transparency of the Ethereum blockchain, however, allows us to answer the question: are DeFi users actually taking advantage of the interoperability of Ethereum-based DeFi protocols?

Codefi Data’s DeFi user network graphs show DeFi protocols (labeled with their logos in figures 11 - 13) and users (addresses) alongside each other. Each dot represents a user, and users are connected to the DeFi protocol(s) with which they have interacted within a certain time period. Users who interact with just one protocol are collected next to the protocol (demonstrated by the ‘cloud’ of dots next to each logo). The size of the clouds demonstrates which protocols have large numbers of dedicated users. More interesting, however, are the users who interact with more than one DeFi project, which are represented by the yellow dots (users that interacted with 2 protocols) and the red dots (3+ protocols).

Figure 11 is the most comprehensive look at DeFi user behavior in Q2 2020. It shows all users who interacted with a DeFi protocol at least once between April and June. Cumulatively, we see Uniswap accounting for the largest user base across all DeFi protocols, followed by Kyber and Compound. The largest overlap in shared users is between Uniswap and Kyber (15,099 overlapping - up 37% from Q1), followed by Compound and Uniswap (4,678 overlapping).

# User of DeFi Platforms - 2020 Q2

- Users Shared by 2 Protocols
- Users Shared by 3 or more Protocols

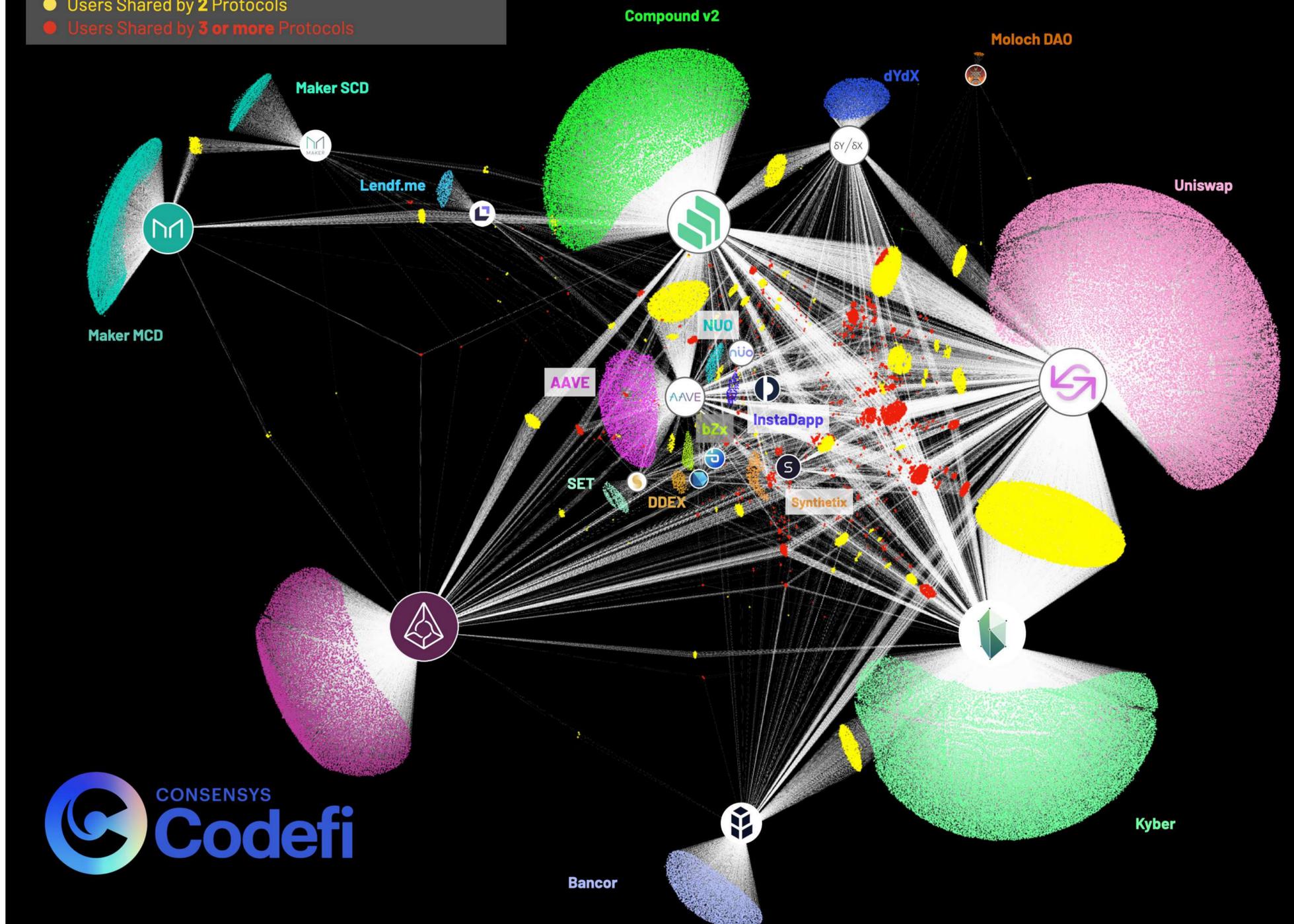


Figure 11: Users' interactions with DeFi protocols in Q2 2020. Depiction of all addresses (dots) that transacted at least once with a DeFi protocol in Q1 2020.

Analyzing DeFi networks over time provides insights into user behavior in response to ecosystem events. Figure 12 shows the DeFi user interactions for April, May, and June (left to right). As expected, we see the density of the cloud surrounding Compound grow in size and density slightly from April to May, then dramatically from May to June. As discussed in figure 7 above, we see Uniswap's cloud grow denser from April to May, then fade in June alongside a lower DAU count. Additionally, in June, we see a considerable increase in the user overlap between Compound and Aave (June = 2040 vs. May = 730)

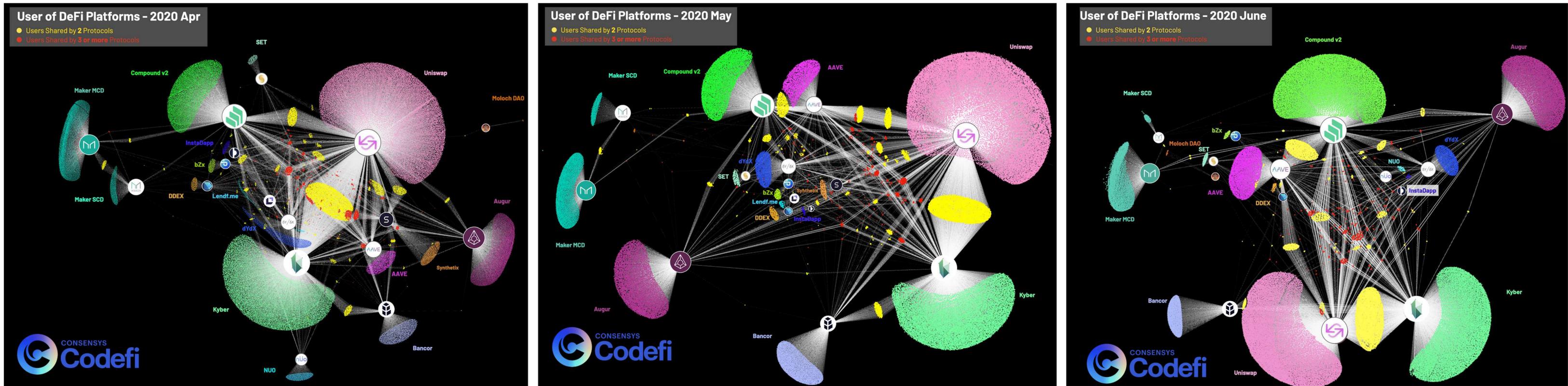


Figure 12: From left to right - April, May, June. Users who interacted with a DeFi protocol 1+ times.

“Super users” are individuals who are using the existing DeFi ecosystem to a more consistent and robust degree.

Figure 13 shows the DeFi user network graph for Q2 among super users - those who have made at least 100 transactions on DeFi protocols in the quarter. There were 1,884 super users in Q2, up 18.8% from Q1. Uniswap had the largest number of super users in Q2; 1,625 users making 100 or more transactions (including exclusive and overlapped users) within the span of 3 months (up 55% from Q1). There was no other protocol in Q2 with over 1,000 super users. Kyber had the next-largest super user base, with 916, followed by Compound with 367. The greatest overlap of super users between DeFi protocols was between Kyber and Uniswap (890 super users overlapped).

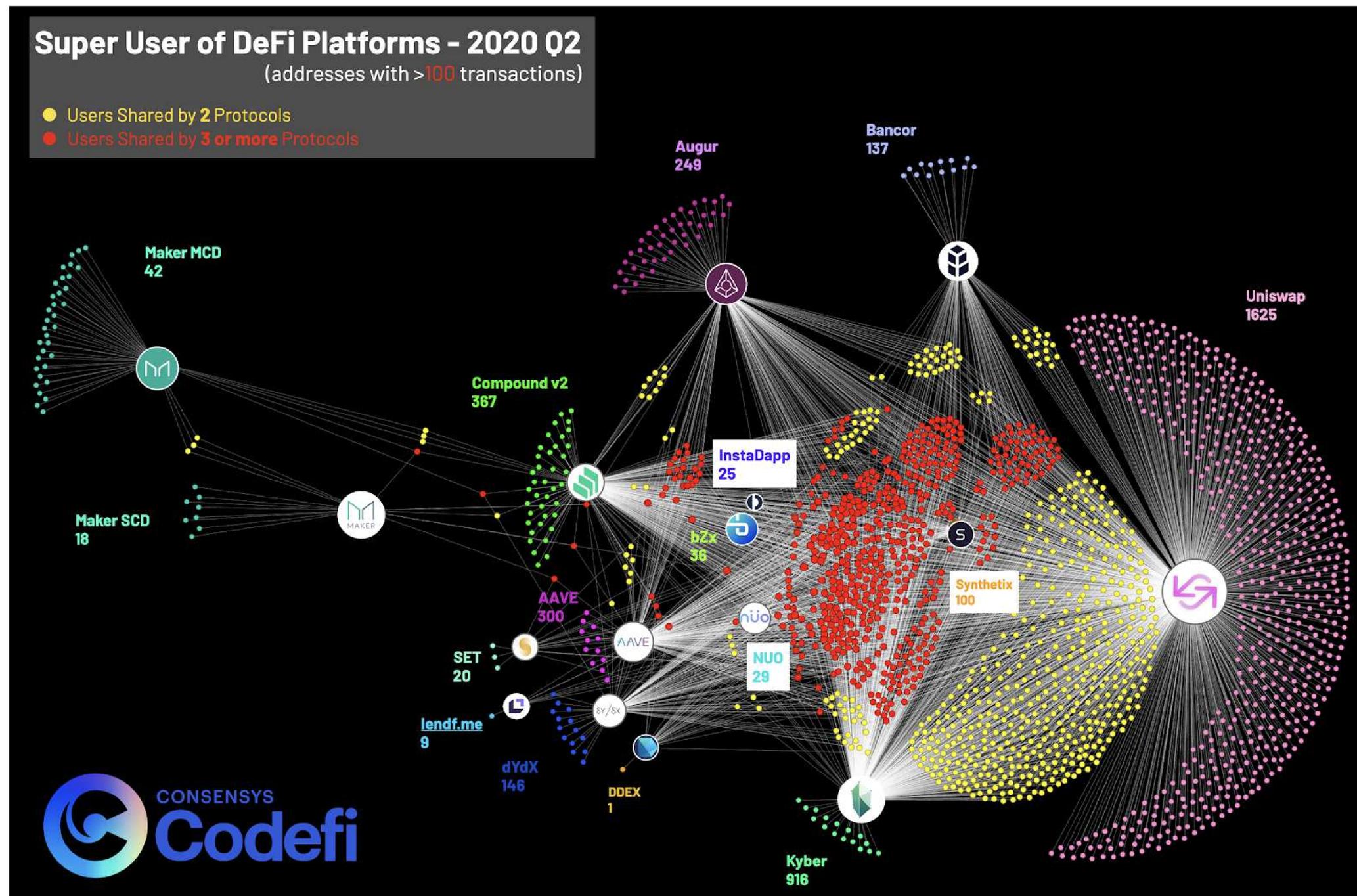


Figure 13: “Super Users” with 100 or more interactions on DeFi protocols in Q2 2020.

# Compound and COMP: Deep Dive

In mid-June, Compound made its governance token COMP available for purchase, use, and trading. The token was released as part of Compound's ongoing attempt to decentralize itself as a company. COMP gives token holders the ability to vote on Compound mechanisms and protocol decisions. Compound has been distributing ~2,800 COMP each day.

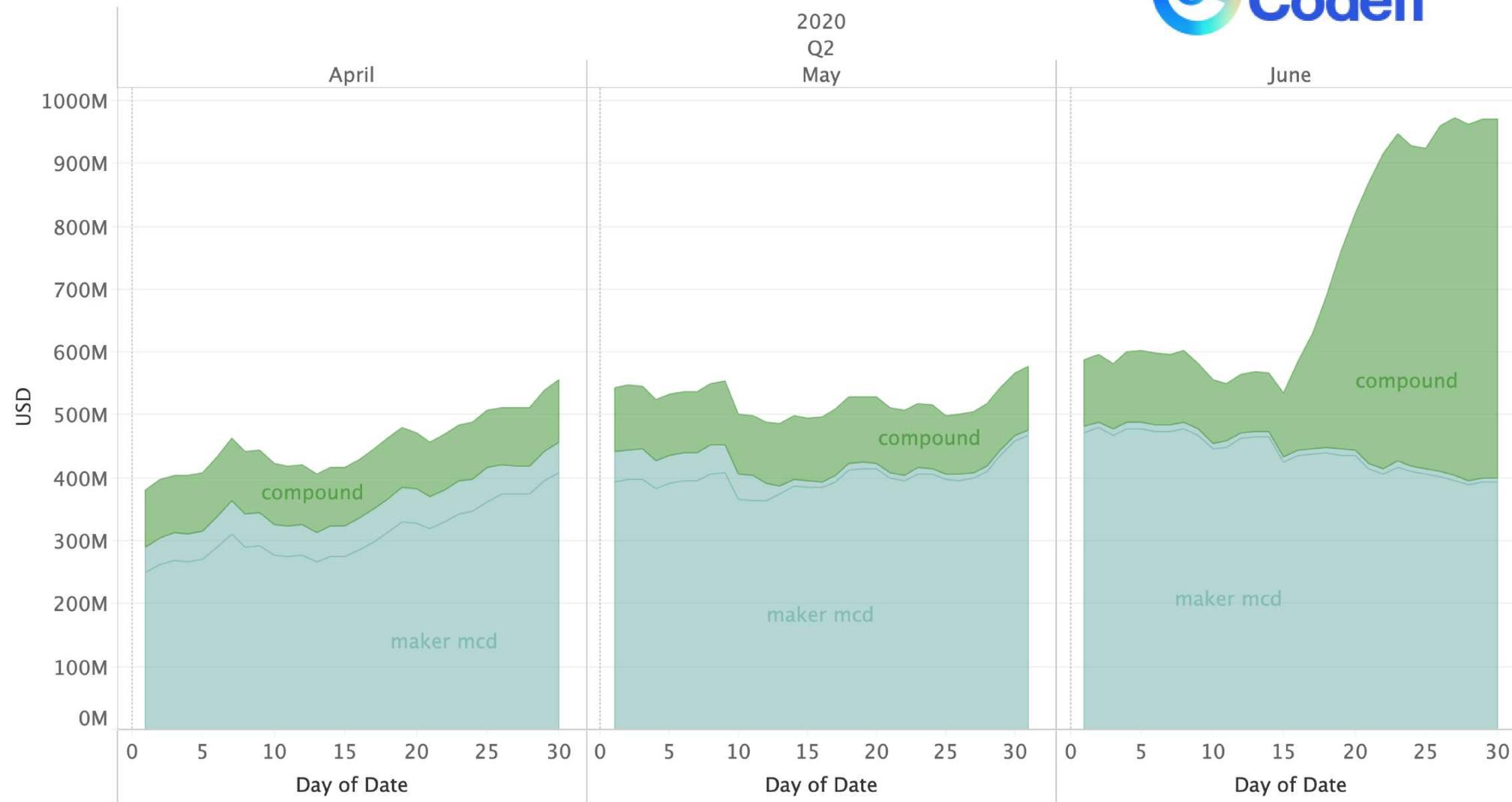
When someone uses Compound - when they borrow or lend assets on the protocol - they earn COMP as an incentive reward. This action has become colloquially known as "yield farming." The concept of yield farming is not necessarily new. In the words of [DeFi Dad](#):

**"In its simplest form, yield farming means to put idle assets to work. Often, it involves receiving rewards by providing liquidity, because many of the protocols rewarding liquidity providers are trying to bootstrap liquidity to kickstart their DeFi application. Yield farmers are people who look for and maximize those opportunities. They measure yield as the amount of interest or rewards 'grown' on top of underlying crypto assets like DAI, USDC, and USDT when put to use in DeFi platforms like Compound."**

To maximize COMP rewards, DeFi users began lending and borrowing simultaneously on Compound. This activity was aided by protocols like InstaDApp, which released a feature called "Maximize COMP Mining" to help users more easily take advantage of Compound's distribution mechanism.

DeFi users continued to lock funds in Compound - often by unlocking increasing amounts of capital through other DeFi mechanisms such as flash loans - and earning portions of the COMP distributed each day. As the price of COMP increased from <\$100 on June 16 to a high of \$341 on June 21 (and now ~\$220), memes about yield farming began circulating on crypto Twitter and Reddit.

## TVL – Compound vs Maker



The impact of Compound yield farming on total value locked (TVL) has been significant. Traditionally, Maker has accounted overwhelmingly for the majority of locked value on Ethereum. For most of the quarter, Maker accounted for over 80% of Compound and Maker’s combined TVL (figure 14). Starting in mid-June, Compound’s TVL began to increase quickly. On June 21, for the first time, Compound’s TVL surpassed that of Maker’s. By the end of the quarter, \$392M USD was locked in Maker and \$570M USD was locked in Compound.

Figure 14: TVL in Maker and Compound, Q2 2020. See appendix for list of tokens.

## \$COMP Redemption

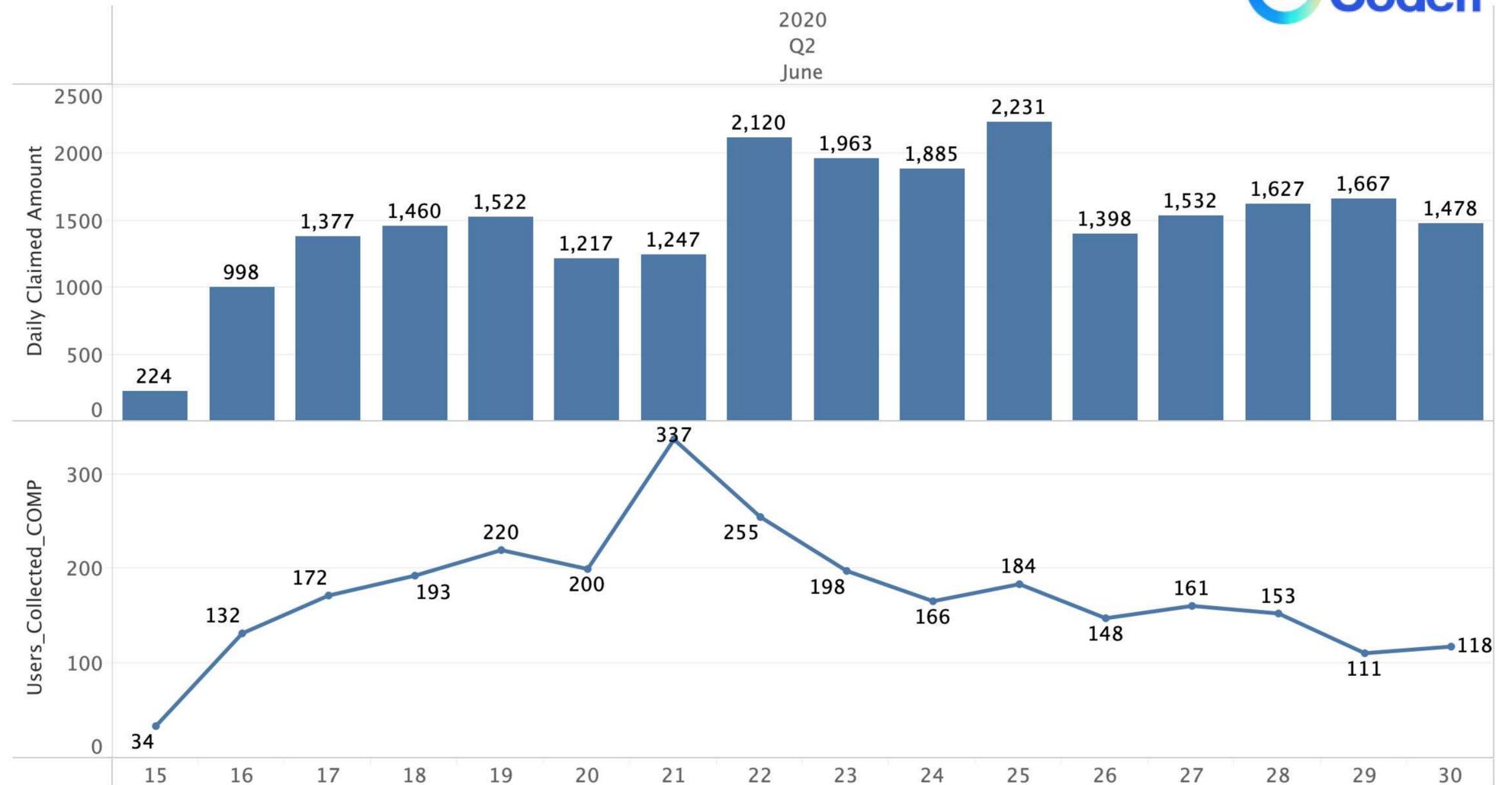


Figure 15: The daily claimed amount and recipient count of COMP, June 2020.

The ‘frenzy’ of COMP yield farming can be seen in figure 15, which shows the amount of COMP collected each day and the number of users (addresses) to which the funds were distributed. At the height, 337 addresses received payouts of COMP on June 21. Both data sets - daily claimed and daily rewarded users - have been decreasing in the last week of June. The downward trend, combined with the risk of yield farming and Compound’s announcement about changing the distribution mechanism of COMP, means perhaps we will see Comp’s share of the TVL market return to historical ratios during Q3.

## BAT Volume on Compound

\* volume unit is token amount

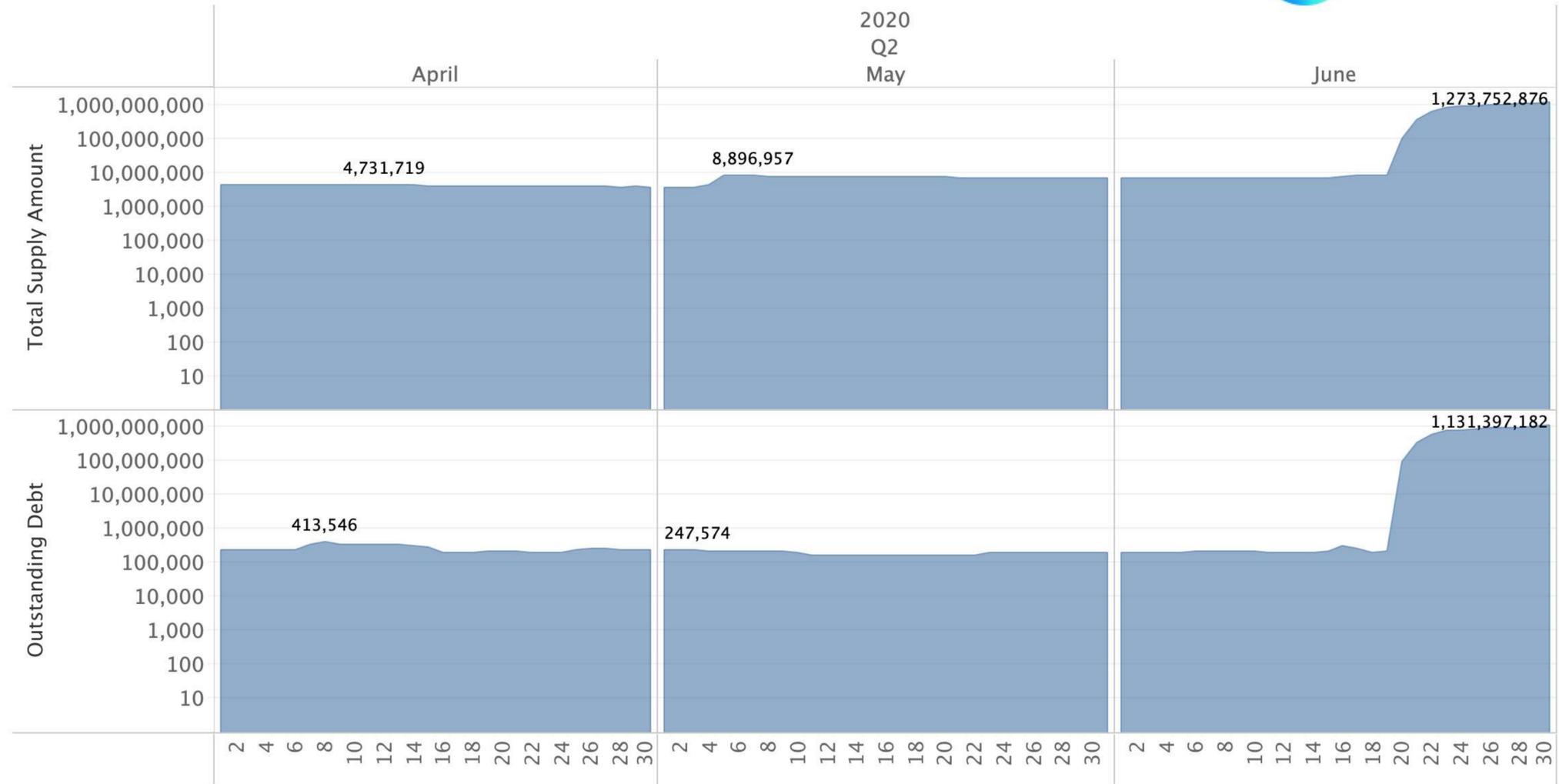
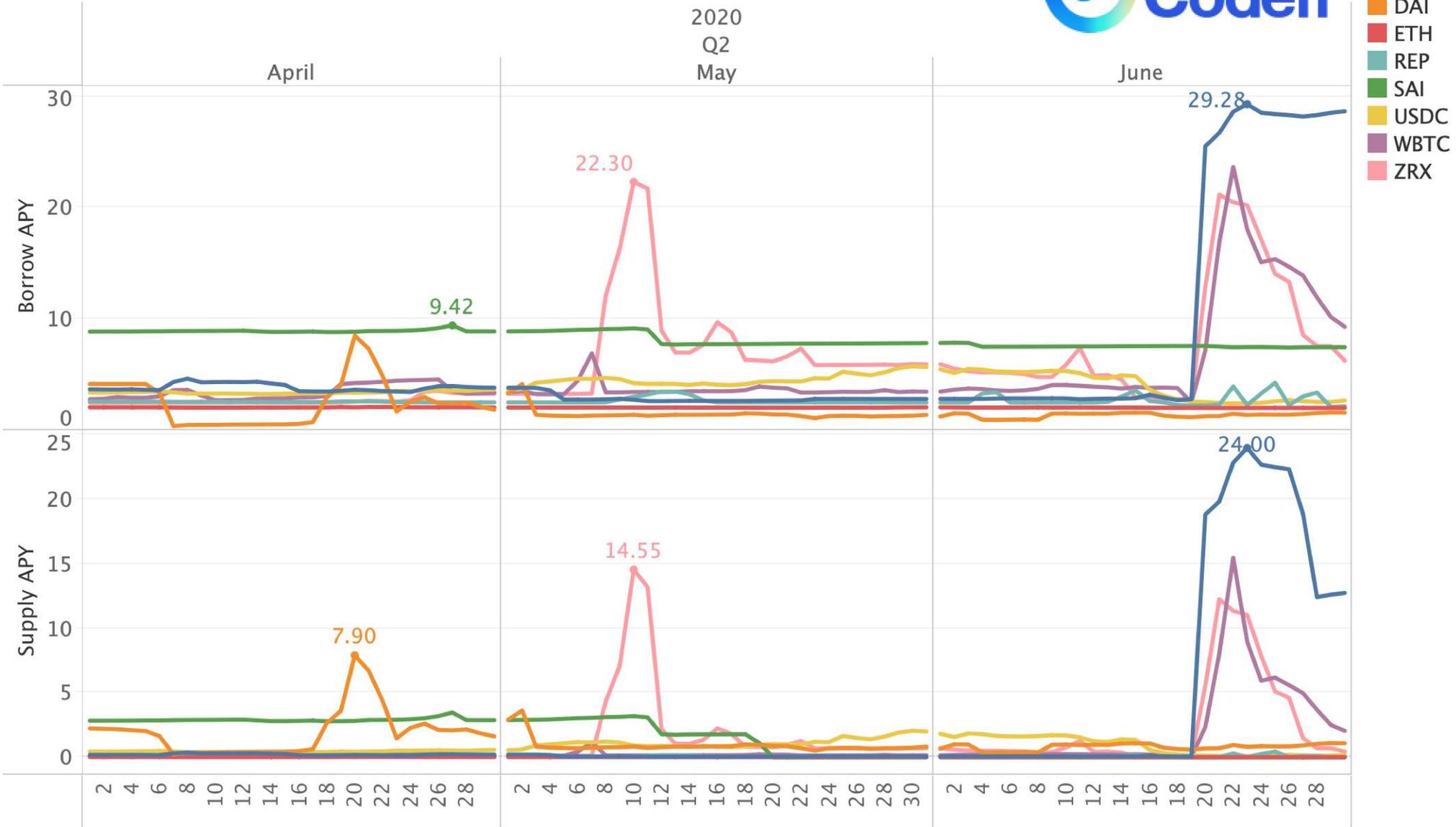


Figure 16: Borrow and supply volume of BAT on Compound, Q2 2020. (Logarithmic).

Many types of collateral are possible to lend or borrow on Compound. The BAT token made up for a fairly small amount of loaned or borrowed collateral for most of the quarter (figure 16). The total supply amount had stayed below 5M in April and 10M in May. The total borrow amount had remained below 500k in April and under 250k in May.

Unlike locking up stablecoins like DAI and USDC in Compound, locking up BAT exposes a user to significantly more risk. Simultaneously, however, the opportunity for COMP yield rewards is much higher given that it is a smaller pool and smaller amounts of funds can push up the borrow rate of the BAT pool (at the time yield farming launched, initial COMP reward distribution rate depended on borrow rate). DeFi users were clearly not shy about accepting this risk for the reward. In the two weeks after COMP's release on June 15th, the borrowed amount of BAT on Compound rose 526,315.8%, from 209K BAT on June 14th to 1.1B BAT on June 30th. Supply volume also went up, from 7.4M BAT on June 14th to 1.3B BAT on June 30th.

# APY on Compound



The annual percentage yields (APY) of crypto assets on Compound are shown in figure 17. The release of COMP did not notably affect the APY of most of the assets on Compound, including DAI and USDC. As expected, however, the BAT APY rose from close to 0% to ~30% for borrow and 24% for supply. A similar trend was seen in ZRX and WBTC, two other assets with high potential upside but a riskier potential downside while being used to yield farm.

Figure 17: APY on Compound, Q2 2020.

# Bitcoin on Ethereum DeFi

The most popular layer 2 scaling mechanism for the Bitcoin network is the Lightning network. In May, [Decrypt Media reported](#) that there was more BTC on the Ethereum network than the Lightning network.

Just as ETH can be wrapped as an ERC-20 token (WETH) to be used in a greater variety of token mechanisms, BTC can also be represented as an ERC-20 token on the Ethereum network. These “wrapped” or “tokenized” bitcoins can be put to use in a broad number of DeFi protocols that are not available on the Bitcoin network.

Figure 18 shows the cumulative wrapped bitcoin volumes on Ethereum among 7 of the most common tokens. By the end of the quarter, there was 11,140 BTC on the Ethereum mainnet. 8,165 of that BTC was WBTC, followed in prominence by renBTC and hBTC. In the beginning of the quarter, WBTC accounted for just under 50% of the total wrapped BTC on Ethereum. By the end of the quarter, WBTC accounted for 73.3%.

This quarter, there has been between about [900 and 960 BTC on the Bitcoin Lightning network](#). We see in early April that the amount of WBTC alone on Ethereum reached ~1,000, surpassing the BTC balance on Lightning, and increasing since then.

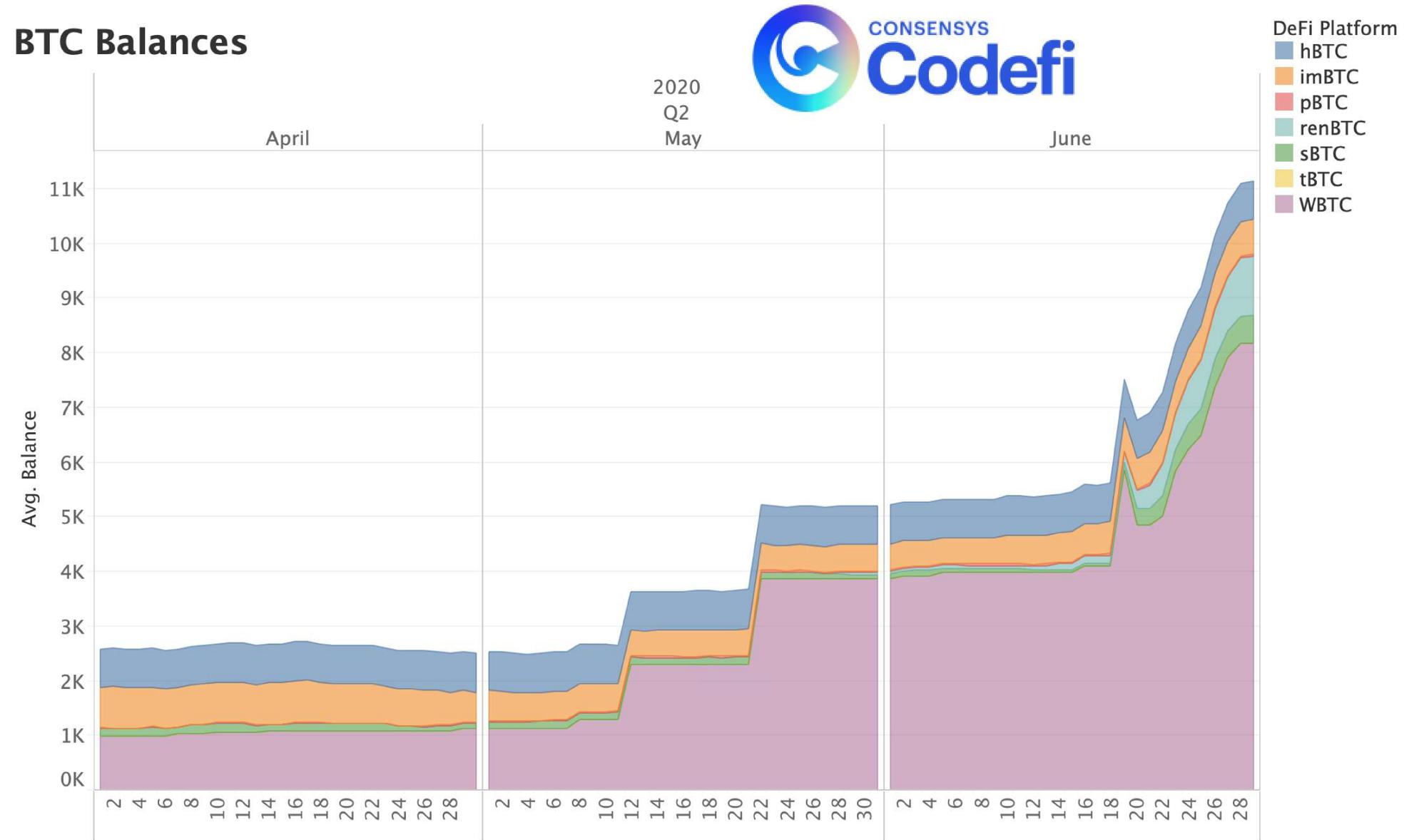


Figure 18: The amount of wrapped BTC locked in Ethereum DeF, Q2 2020.

# WBTC Locked In DeFi

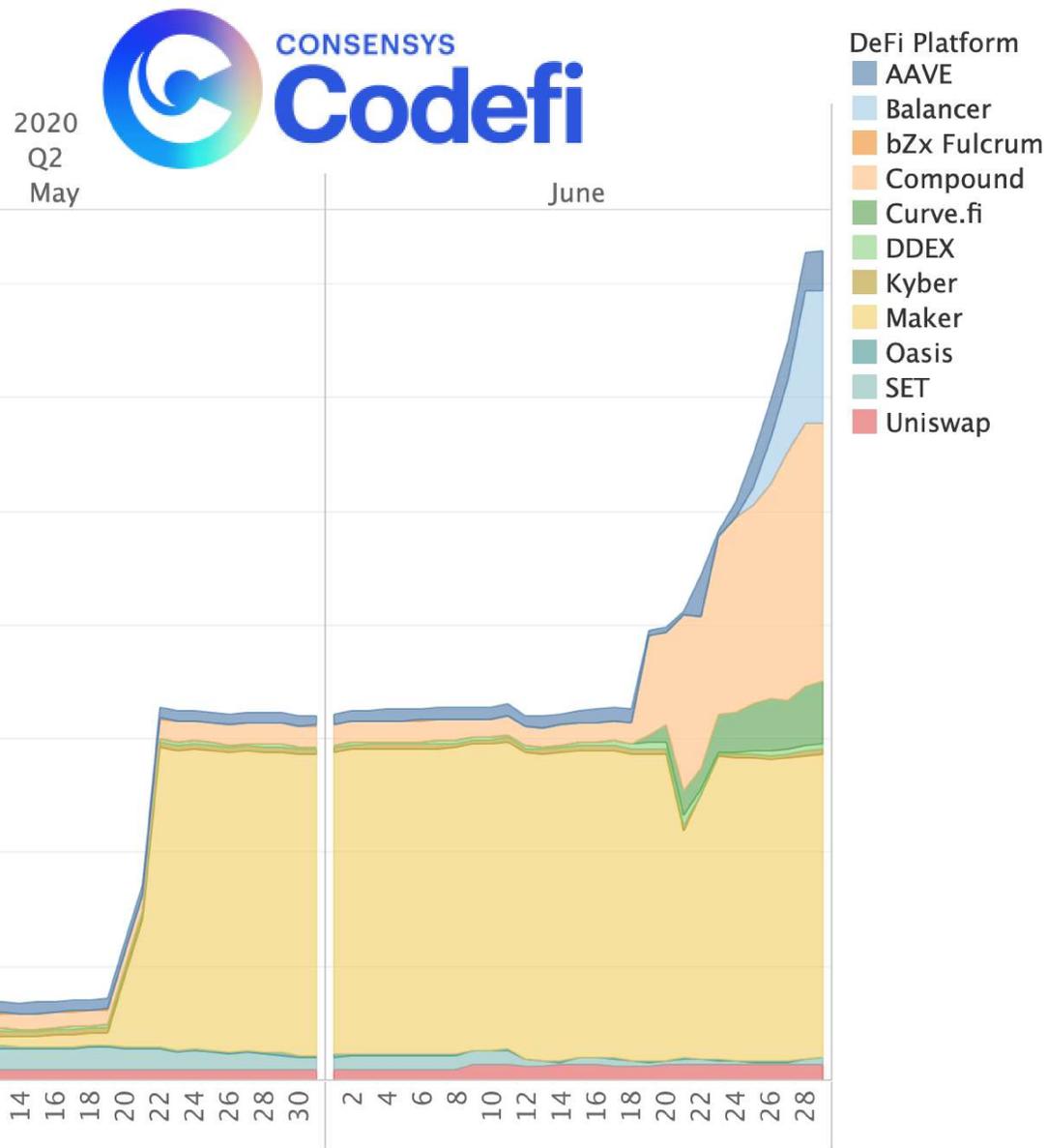


Figure 19 looks at the distribution of just WBTC across the most prominent DeFi protocols. We see a sudden increase in WBTC on Ethereum starting in mid-May and attributed entirely to Maker. This is due to the vote in early May by Maker to begin accepting WBTC as collateral on the platform.

Beginning in mid-June, as we have seen throughout the DeFi statistics this quarter, the market share of Compound began increasing steadily. With the release of COMP and the frenzy of yield farming on Compound, the amount of WBTC went from a fairly negligible amount (167 WBTC on June 15, for example) to 2,273 WBTC by June 30, an increase of 1,261%. We see similar increases happening in late June on Balancer (in light blue) and Curve (in darker green).

Figure 19: The amount of wrapped BTC locked on specific Ethereum DeFi protocols, Q2 2020.

# Emerging Protocols (AMMs)

In Ethereum DeFi, Automated Market Makers (AMMs) are liquidity pools of two or more assets. These liquidity pools adhere to a smart-contract controlled pricing mechanism that determines the price of each asset in the pool relative to one another based on the volumes of each asset in the pool. Uniswap is one of the earliest and most successful AMMs on Ethereum.

In 2020, we have seen the rise of two new DeFi protocols, Balancer and Curve. Both of these emerging protocols are AMMs (or serve as AMMs along with other DeFi functions), signaling that the next wave of DeFi growth and adoption may be driven by these sorts of markets.

In June, the amount of ETH locked in Balancer increased 370% from 9.6K to 45.4K (figure 20). This coincided with a steady increase in users in June and a significant jump in DAU during the quarter (up 2,107% from April). The attack on Balancer happened towards the very end of the quarter, but the data from the few days after the attack did not show a significant reduction in user activity or ETH locked, suggesting the opportunities Balancer provided DeFi users in June outstripped any considerable doubt. This is most likely due to the BAL governance token. In the midst of the yield farming fever set off by COMP in mid-June, Balancer released its own governance token on June 23. Similar to COMP, BAL is rewarded to users that provide liquidity to the Balancer protocol. Balancer was already growing steadily in the last weeks of the quarter, but the specific sharp uptick across all metrics in figure 20 is almost certainly due to the ecosystem's response to BAL.

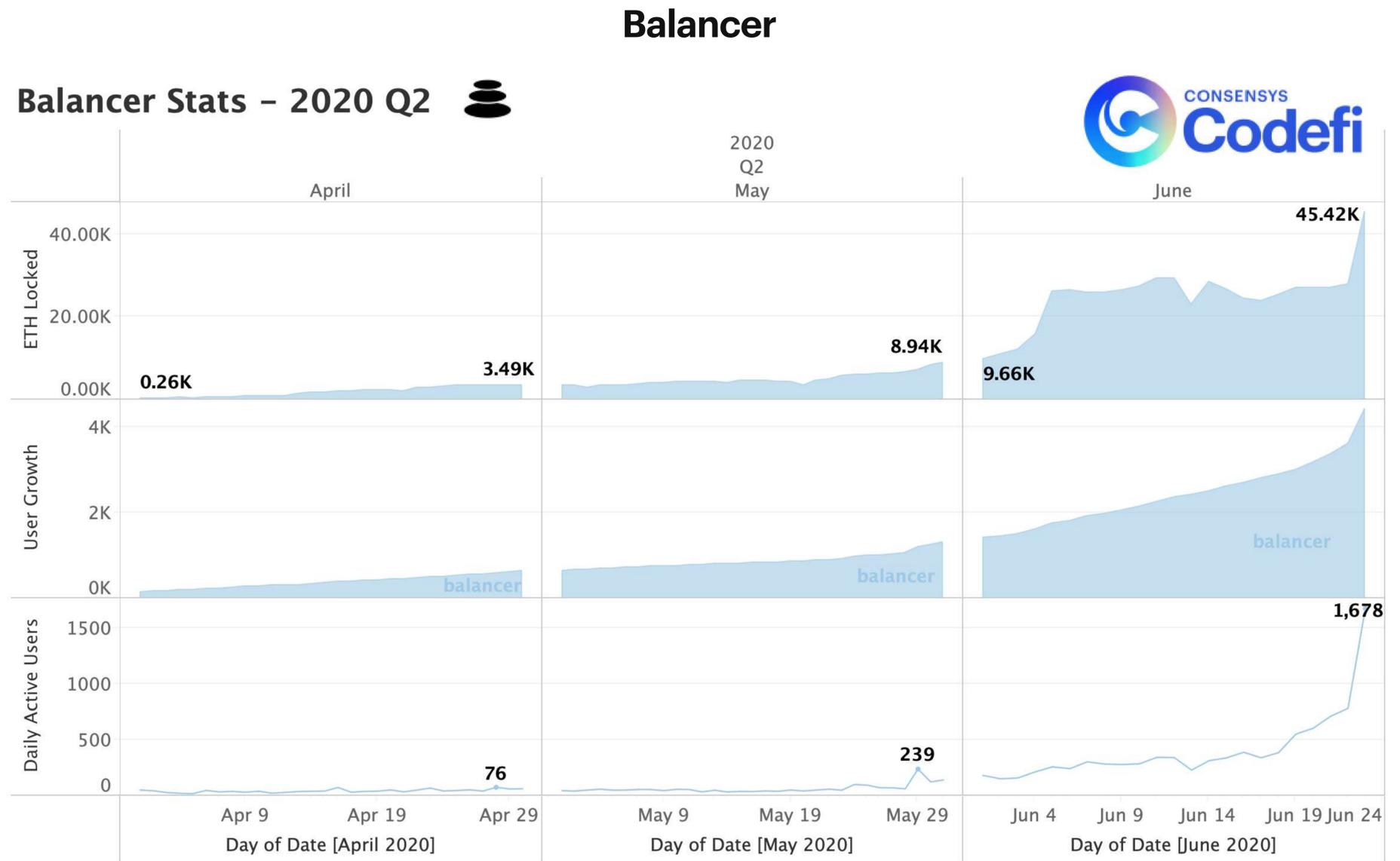


Figure 20: ETH locked, user growth, and DAU for Balancer, Q2 2020.

## Curve

Curve's quarterly performance metrics were more in-line with what we've seen from other protocols. Cumulative users and DAU rose steadily throughout the quarter and then rapidly starting in mid-June directly alongside the launch of COMP. Soon after the COMP release, Curve reached its quarterly DAU high of 1,098 users, up 565% from May's high of 165. Curve ended the quarter with a cumulative 7,258 users throughout the quarter. After reaching a quarterly DAU record, Curve's daily user count was reduced to ~400 by the end of June.

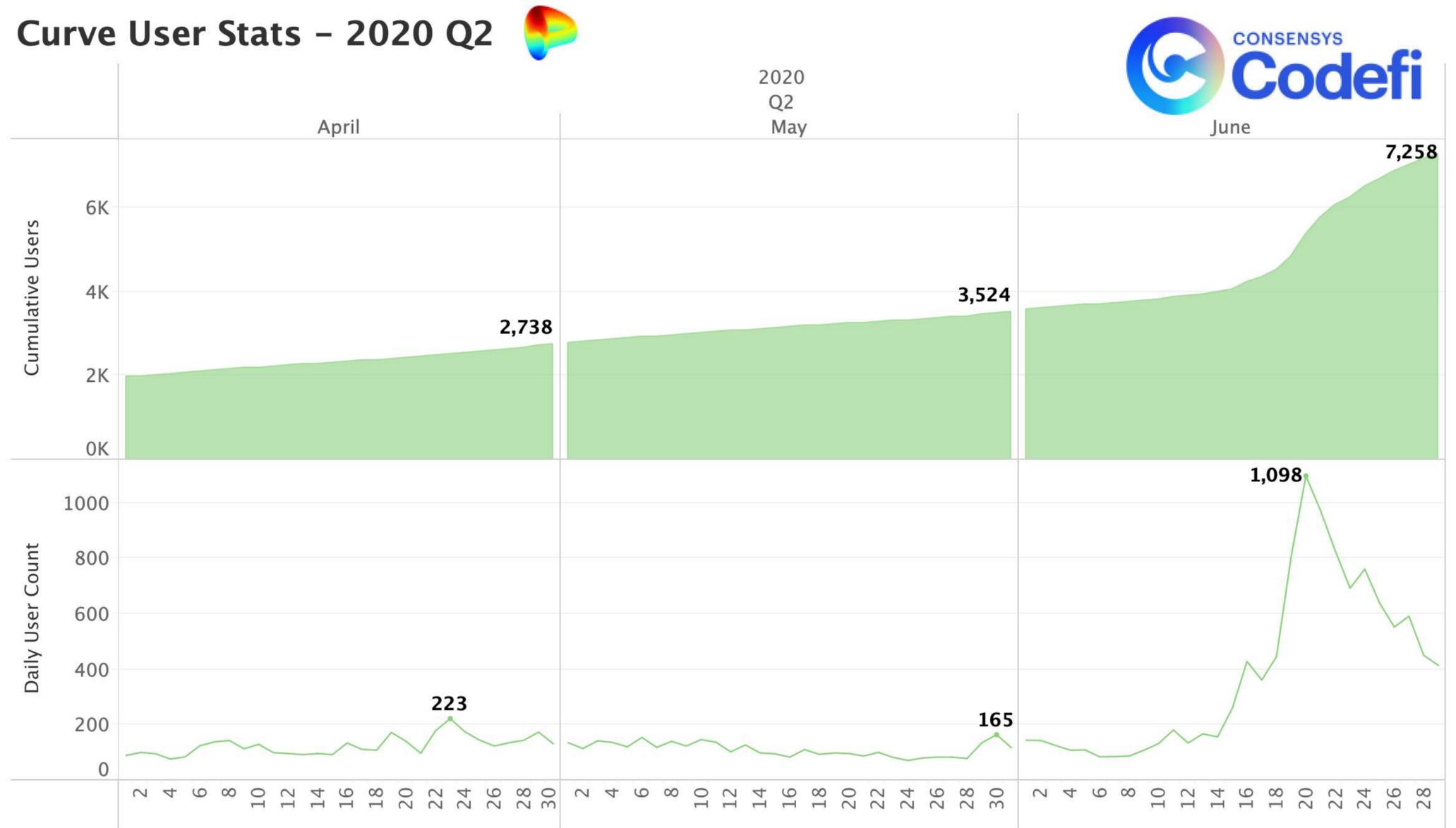


Figure 21: User growth, and DAU for Curve, Q2 2020.

# The State of Stablecoins

## Stablecoin Trading Volumes

Last quarter, on March 13, we saw a tremendous amount of DEX volume occurring in stablecoins. On Uniswap alone, over 80% of the day's trades were in DAI and USDC, compared to February 14, when 17% of the day's trade was in stablecoins (the volume traded high of that month).

This quarter, stablecoin trades have not caught up to February or March levels, but have remained higher than historical monthly levels. Figure 22 shows the stablecoin trading volumes on DEXes for 2020. As we can observe last quarter, DAI made up for well over half of the stablecoin trading volume in Q1. In Q2, the distribution of stablecoin trading volume has evolved, with ~ 1/3 of trading volume split between DAI, USDT, and USDC.

## Stablecoin Trading Volume

*\*On 21 DEXes by June 30th*

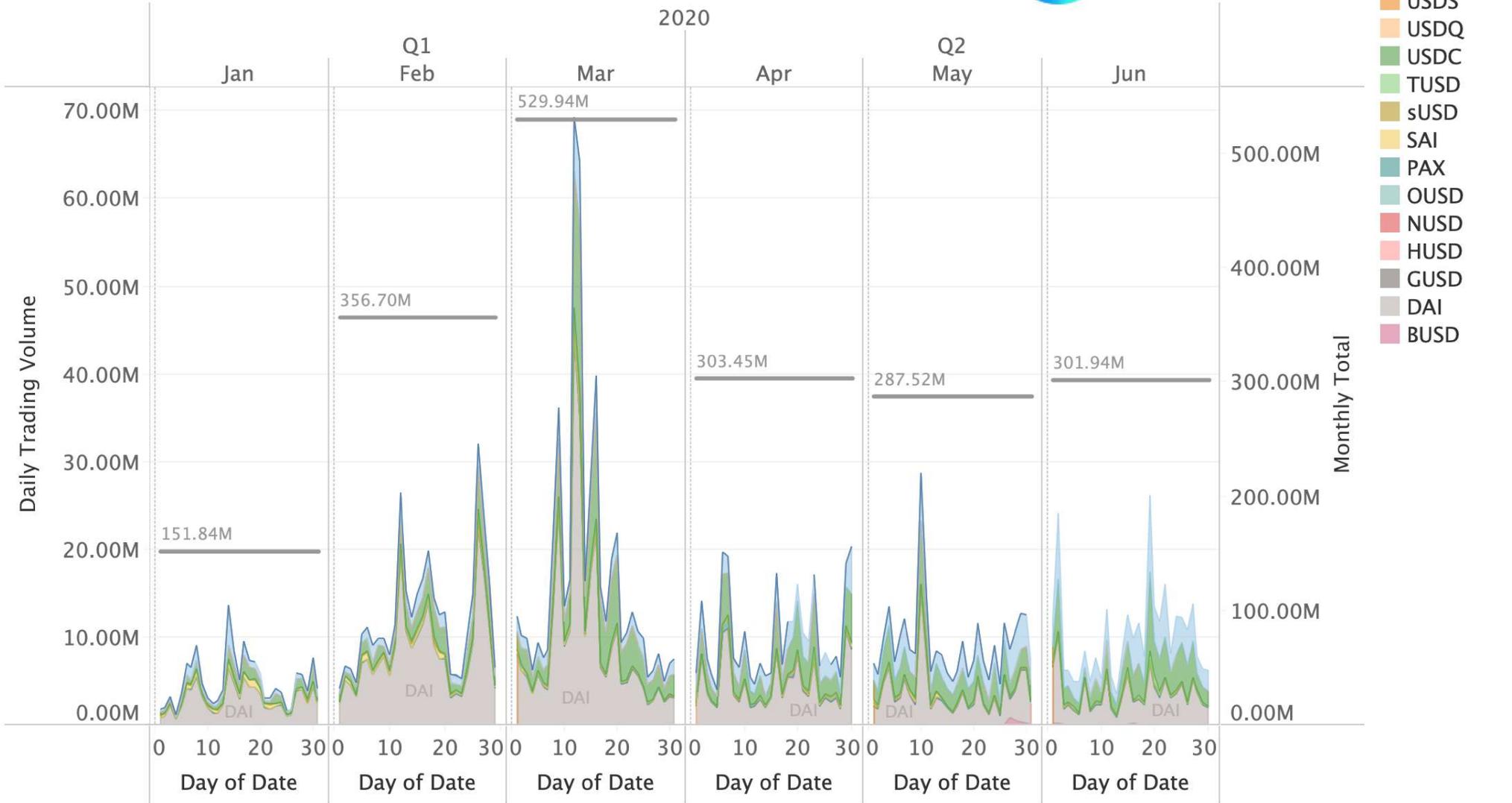


Figure 22: Trading volume of stablecoins across DEXes, 2020.

The reduction in DAI's trading volume market share in Q2 could be due to the increase in USDT trading volume in Q2 compared to Q1, alongside DAI's reduced trading volume in Q2 compared to Q1. Figure 23 shows USDT trading volume in 2020. We can see that following March - which for other stablecoins was a yearly high in their trading volume - USDT's trading volume has stayed above (or close to) March's trading volume. This increase in USDT trading volume, combined with DAI's reduced trading volume (from ~\$300M in March to ~\$100M in June - figure 24) has contributed to the "evening out" of stablecoin trading volume between DAI, USDT, and USDC seen in figure 22.

### Stablecoin - USDT Trading Volume

\* Across 21 DEXes by June 30th

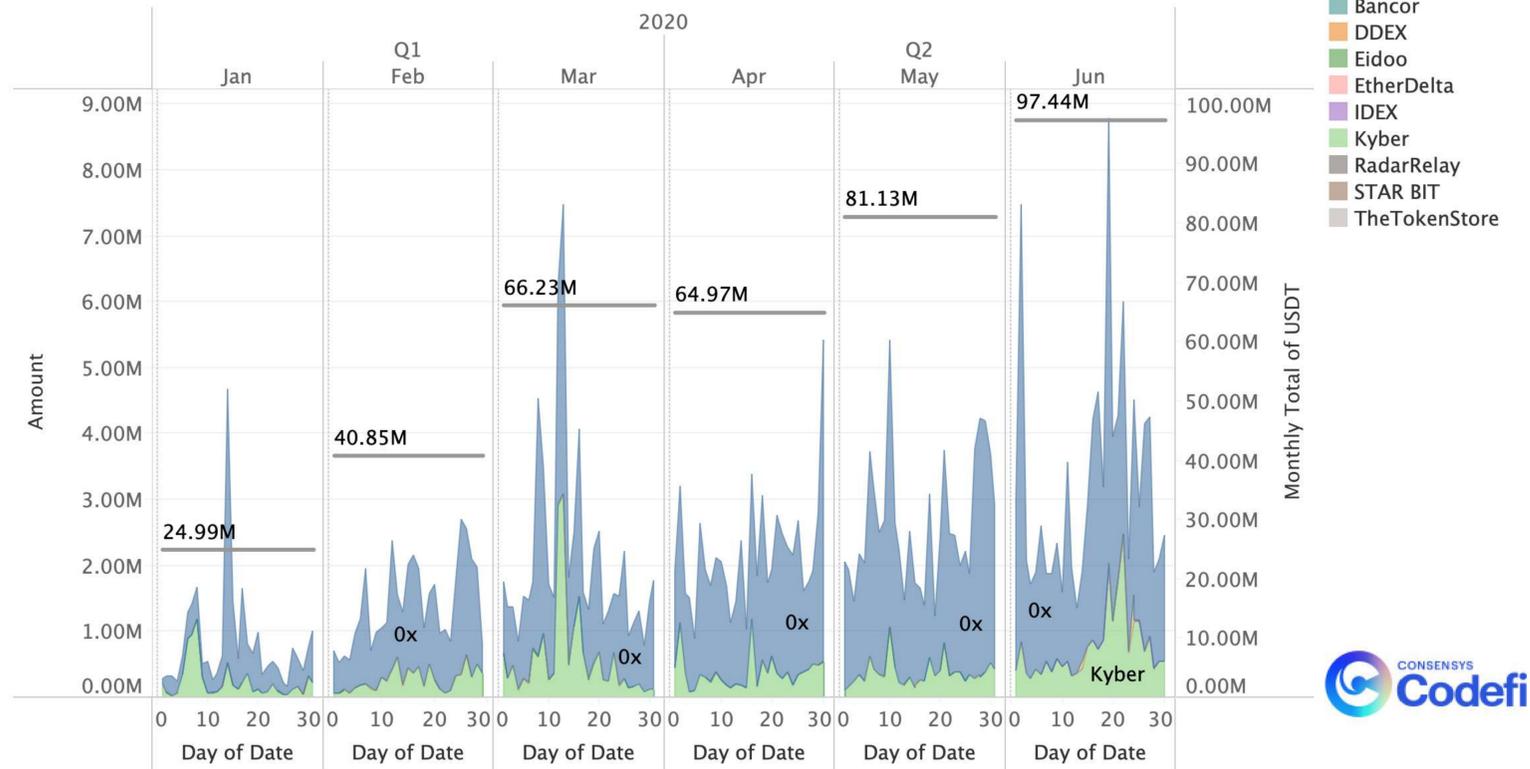


Figure 23: Trading volume of USDT stablecoin across DEXes, 2020.

### Stablecoin - DAI Trading Volume

\* Across 21 DEXes by June 30th

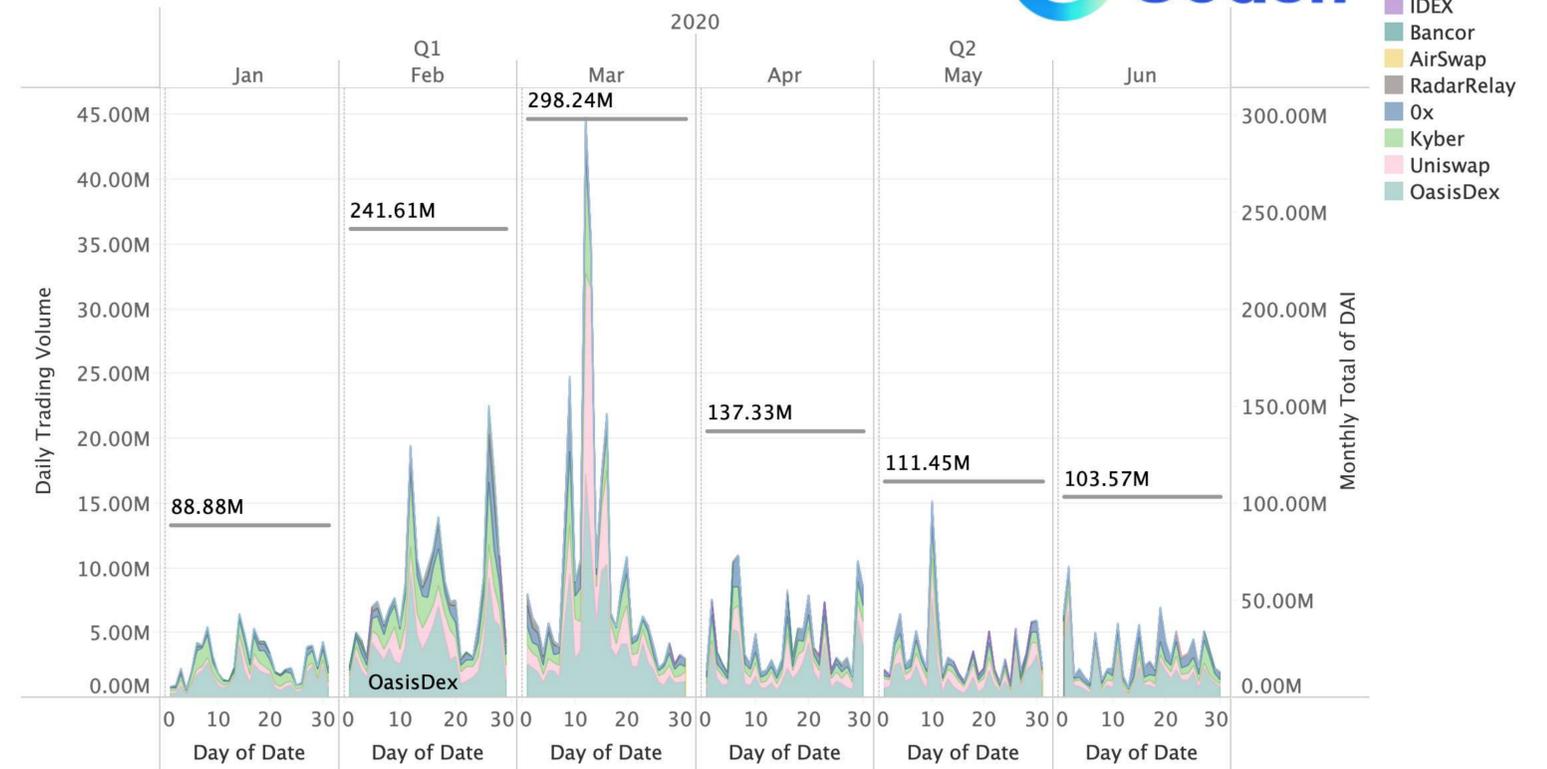


Figure 24: Trading volume of DAI stablecoin across DEXes, 2020.

The stablecoin trading volume on DEXes is captured almost entirely by just four protocols: Uniswap, OasisDEX, Kyber, and 0x. By the end of Q1, it appeared Uniswap may continue to account for a larger and larger percentage of stablecoin trading volume, and the quarter ended with the trading volume divided evenly between the four DEXes. In Q2, however, Uniswap began to account for less of the percentage of overall stablecoin trading volume, and has returned to a percentage more comparable to 2019 levels.

The data in figure 25 accounts only for on-chain stablecoin trading volume. Overall, DEXes make up for a small percentage of trading volume in the crypto ecosystem. The overwhelming majority of volume is captured by CEXes. Our approach to our DeFi reports is to analyze as much on-chain data as possible with the belief that the ability to objectively audit an ecosystem like DeFi is one of its greatest attributes as a new financial paradigm. Messari maintains a [Stablecoin Index](#), which tracks trading volume across CEXes. Overall, we see CEX trading volume trends matching that of DEXes - a significant increase in March followed by a notable decrease this quarter.

## Stablecoin Trading Volume – by DEX

*\*On 21 DEXes by June 20th*

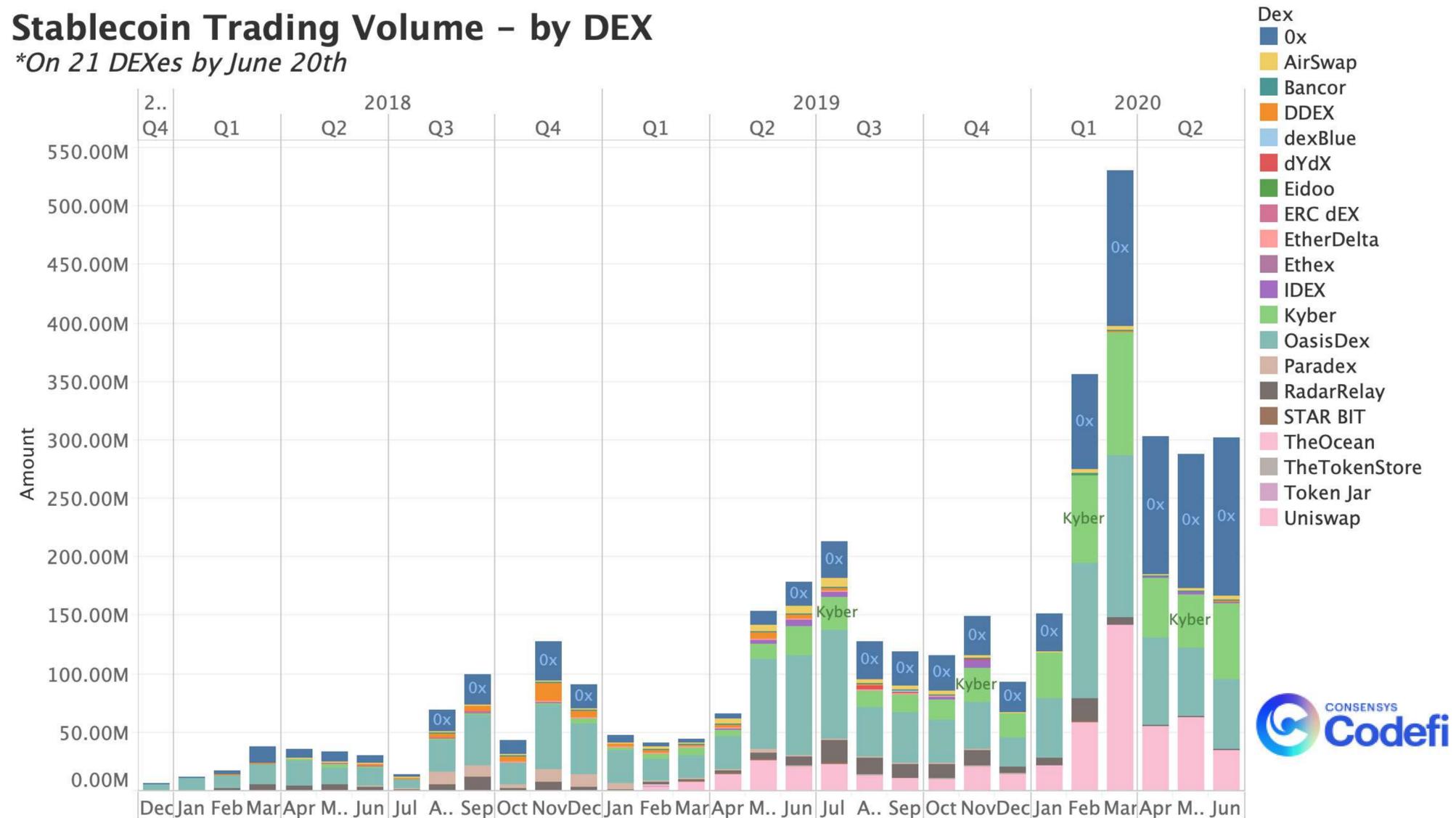


Figure 25: Stablecoin trading volume across major DEXes, 2018 - 2020.



## Stablecoin Whales

Stablecoin whales are an interesting subset of the crypto-ownership. Unlike owning ETH or other cryptoassets, owning a stablecoin provides little in the way of long-term inflationary gain through direct ownership. Rather, stablecoins are a financial vehicle providing access to and utility of other DeFi protocols. Additionally, stablecoins have proven themselves as a haven against market volatility (as demonstrated by the stablecoin trading activity in March).

The concept of a stablecoin whale, therefore, is different from that of an ETH whale. Whereas an ETH whale is an individual who can have an outsized influence on an already highly volatile market, a large stablecoin ownership by an address would be a better indicator of someone protecting themselves against a volatile market or someone who desires significant liquidity on-hand to interact with protocols. Because there is no value to holding on to a stablecoin (versus locking it up and putting it to use, say), we would expect stablecoin ownership to be more diversified than that of other major crypto assets.

Figure 26 shows the distribution among top 100 stablecoin holders for DAI, USDC, and USDT. As we can see, USDT has the most distributed ownership among addresses, with the top 100 token holders having 46.5% of the total volume. The top USDT holder has 6.6% of the total supply. USDC appears to be the least distributed stablecoin. The top 100 token holders account for 74.8% of the total supply, and 22.8% of the total supply is held just by Compound.

Among the “others” - i.e. all other token holders excluding the top 100 - the average holding of DAI = 0.0003% of total supply, USDT = 0.00004%, and USDT = 0.0001%.

# Stablecoin Top-100 Holders

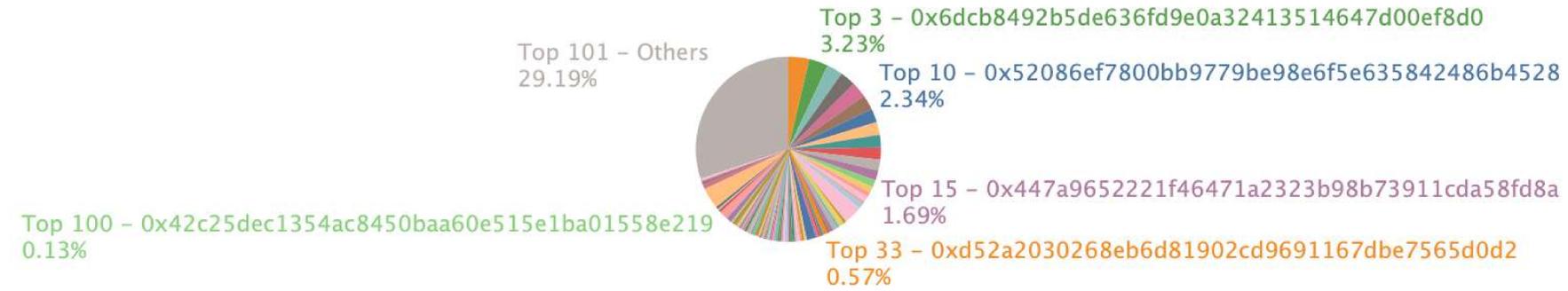
\* by July 1st

\*\* Labels are collected from etherscan.io

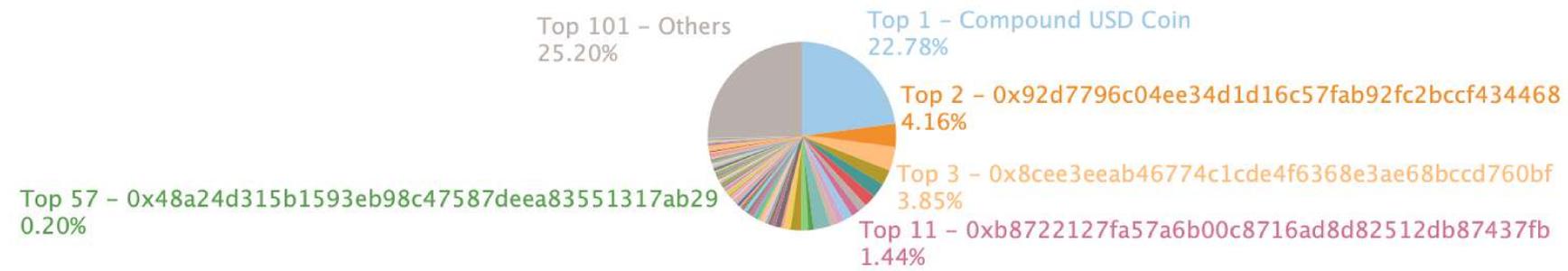


Token

DAI



USDC



USDT

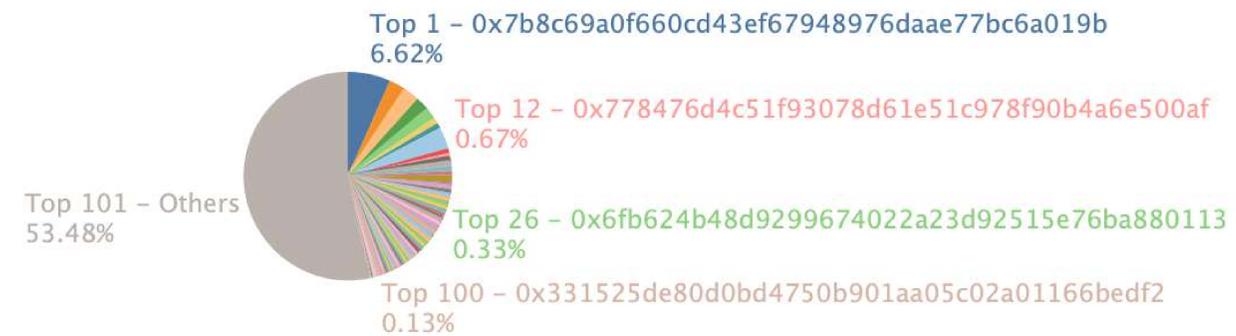


Figure 26: Stablecoin ownership by % of total supply among top 100 addresses as of July 1, 2020.

# Security in DeFi

2020 has proven a critical year for the Ethereum DeFi ecosystem. In addition to celebrating over \$1bn USD locked in DeFi and significant platform milestones, the industry has been subject to frequent occurrences of minor and major security incidents across both new and established DeFi applications.

3 significant on-chain DeFi security incidents have happened this quarter:

1. Uniswap: on April 18, \$340k USD was stolen through a reentrancy attack vector.
2. Lendf.me: on April 19, \$25m USD was stolen through a reentrancy attack vector; funds were re-issued after team's negotiation with hacker.
3. Balancer: On June 28, \$450+ USD was drained from Balancer, a DeFi liquidity provider protocol.

## Uniswap and Lendf.me - Reentrancy Attacks and ERC-777

On April 18th and 19th, hackers drained \$25m from the Uniswap and Lendf.me protocols by compromising the ERC-777 token standard.

The imBTC token is an ERC-777 token released by Tokenlon, a DEX running on the 0x protocol. In both the Uniswap and Lendf.me incidents, the hacker(s) exploited a reentrancy vulnerability that arose from the incompatibility between the ERC-777 token standard and the DeFi protocols. Broadly speaking, the reentrancy vulnerability allowed the hacker to essentially re-spend initial deposits of imBTC, effectively providing them with unlimited capital to enact trades or borrows.

## UNISWAP

The attack was made possible because Uniswap V1 does not have measures in place to guard against this type of reentrancy attack when interacting with the ERC-777 standard. In total, the hacker made away with ~\$300k USD in imBTC and ETH (~\$141k ETH + ~\$160k imBTC).

Interestingly, this attack vector was not unknown to Uniswap or to the crypto community at large. Almost exactly a year before the Uniswap attack, ConsenSys Diligence - the security audit service offered by ConsenSys - identified and published the ERC-777 reentrancy attack vector. Uniswap had plans to address the attack vector, as outlined in their March 23 blog post about the features of Uniswap V2.

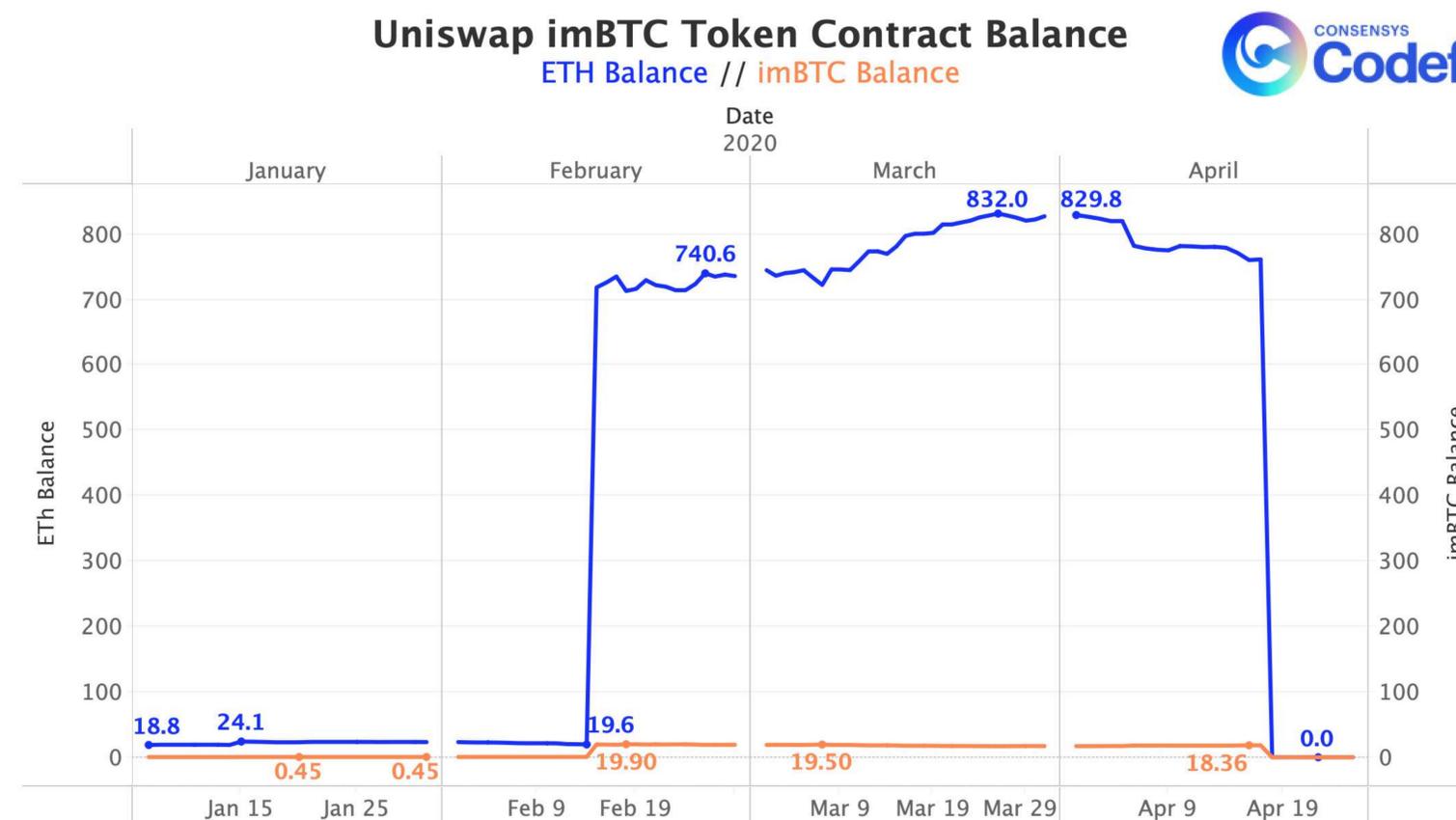


Fig 27: Uniswap imBTC Token Contract Balance

## LENDF.ME

The Lendf.me incident exploited the same reentrancy vulnerability made available by the incomplete compatibility between the lending protocol and the ERC-777 token standard, but to a far more extensive degree of success. Nearly 100% of Lendf.me's funds - over \$24m USD - was drained during the attack on April 19.

Unlike in the Uniswap event, the stolen funds were not limited to just ETH and imBTC. Though the majority of stolen funds were WETH (\$10.8m), USDT and HBTC made up for an additional \$9.7m, followed by at least 16 other tokens. Figures 28 and 29 show the asset distribution of compromised funds and the monthly token volumes on Lendf.me leading up to the attack on April 19.

### Percentage by USD Value

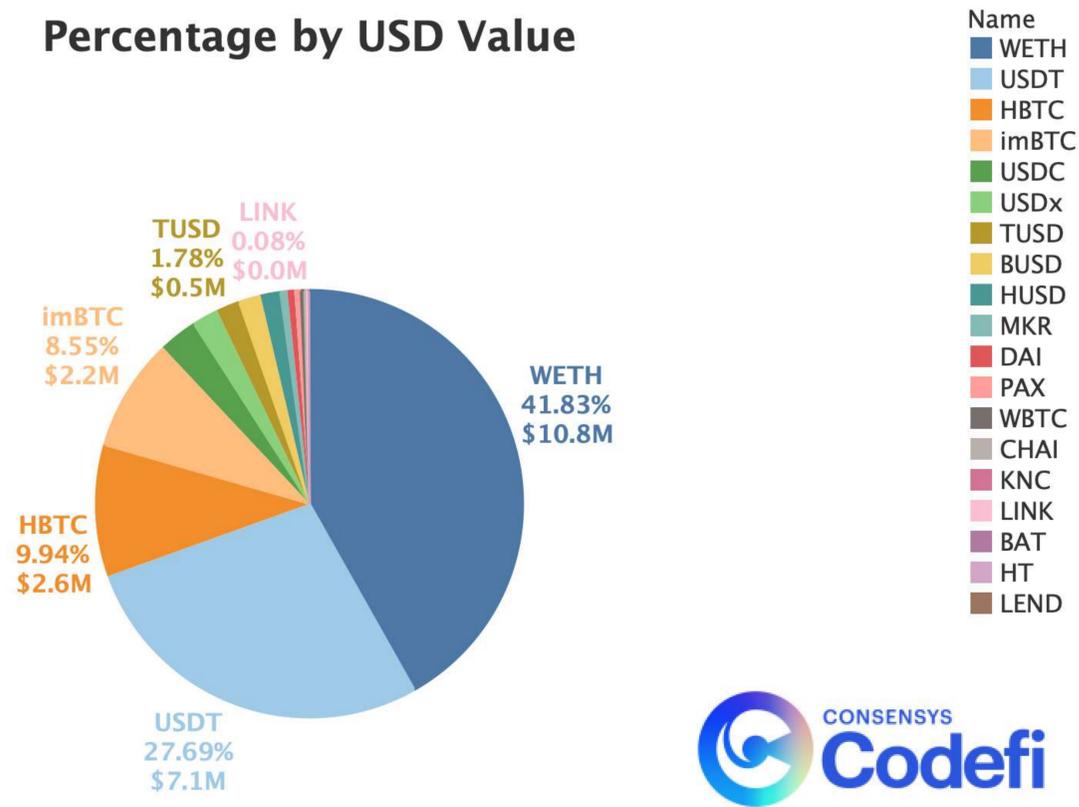


Fig 28: Distribution of Lost Funds by Token Type

### Lendf.Me Contract Balance

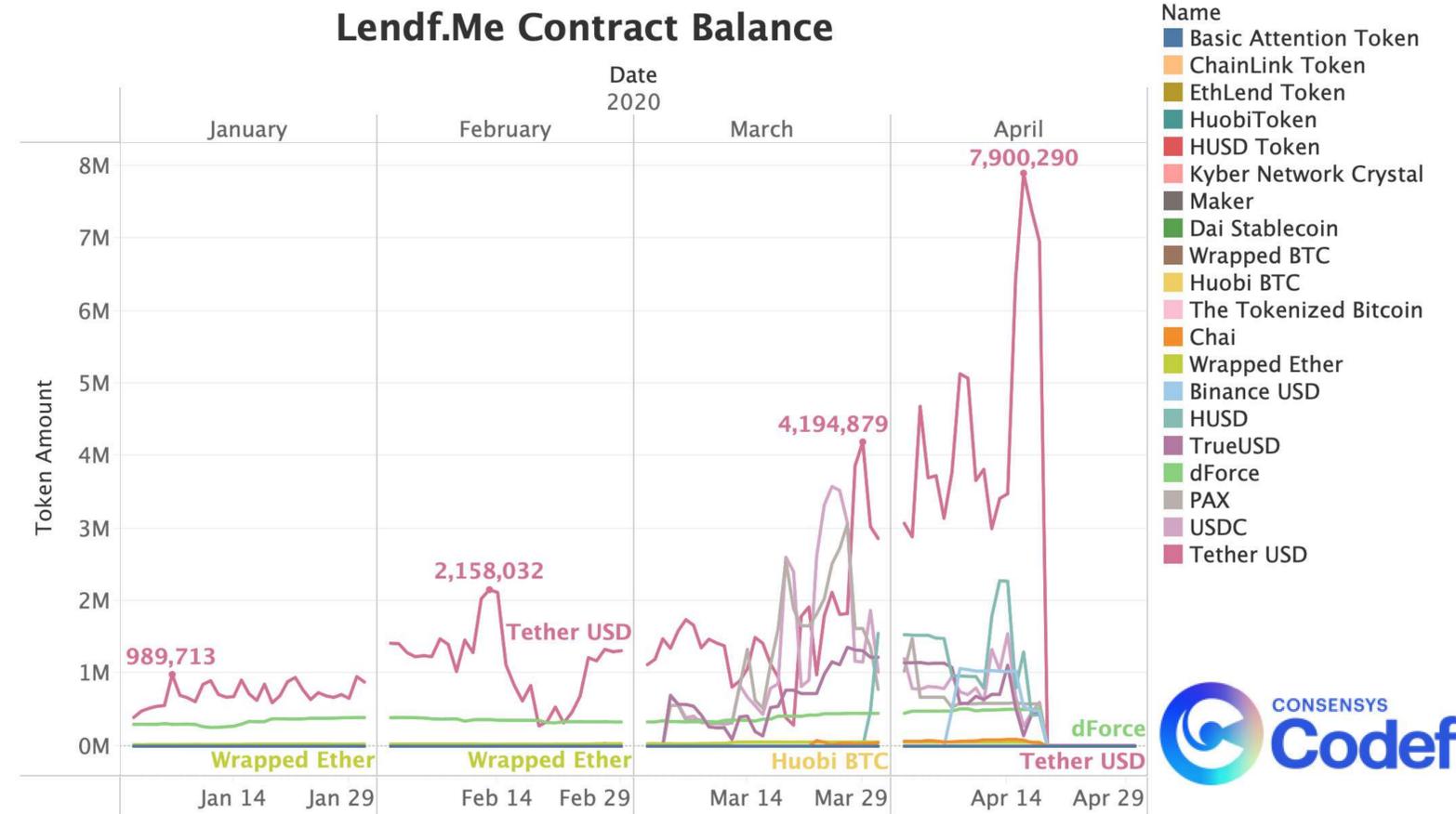


Fig 29. Lendf.Me Contract Balance

In an unexpected turn of events, the Lendf.me hacker(s) returned the stolen funds to the protocol, reportedly because they accidentally exposed an IP address during the attack. The Sankey diagram in figure 30 shows the flow of funds after the hack. Funds left the Lendf.me contract (green), went through the handler contract (gray), and to the hacker's address (black). After the IP was revealed, the hacker transferred the funds back to the Lendf.me admin address, which then transferred the funds to a recovery address (both in purple). The far right of the graph, where the diagram flows out into many individual fund streams, marks the moment when Lendf.me returned funds to individual users.



0x538359785a8d5ab1a741a0ba94f26a800759d91d



Fig 30. Funds Flow Throughout Lendf.Me Incident

## BALANCER DEFI ATTACK

On June 28, Balancer CTO Mike McDonald [published a blog post](#) outlining an incident that allowed an individual to drain ~\$450k USD worth of crypto earlier that day. STA and STONK are ERC20 “deflationary tokens” and the attacker exploited an incompatibility between the Balancer contract and the deflationary token mechanism. Key to understanding the attack is that as a deflationary token, every transaction of a STA token will also incur a 1% fee. Over time, the 1% fee will deplete the total supply of the token (hence “deflationary”).

PeckShield has a more [in-depth review of the incident](#), but an overview is that the attack consisted of four steps: 1) *acquisition of a flash loan*, 2) *depletion the STA pool and pump of STA price on Balancer*, 3) *manipulation of pool mechanism and theft of funds*, and 4) *repayment of flash loan*.

The attacker began by borrowing a flash loan of 104,331 WETH from dYdX and then performed 24 swaps between STA and WETH, effectively draining the STA liquidity pool to nearly 0 (precisely, the pool was drained to  $1 \cdot 10^{-18}$  STA, which is the smallest possible denomination of the token).

At this point, the hacker owned a large amount of WETH and there was a Balancer pool that had  $1e-18$  STA, meaning Balancer’s smart-contract-controlled price curve made the remaining amount of STA in the pool extremely valuable (meaning one could buy a lot of WETH for not much STA). The attacker then made a trade of  $1e-18$  STA for WETH. STA had to take a 1% fee for the transaction, but the pool only had  $1e-18$  STA and deducting 1% of that amount caused a ledger mismatch in the Balancer contract’s function.

This meant that Balancer’s records (that the pool now had  $2e-18$  STA) did not match with reality (that the pool actually received 0 STA from the hacker and still had only  $1e-18$  STA). At this stage, a better practice for protocols is to revert the transaction. Balancer’s contract, however, was written to reset the previous state snapshot and *let the transaction go through*. That means the hacker got their WETH for just  $1e^{-10-18}$  STA, and could perform the transaction over and over again. The hacker executed the same series of transactions on multiple pools including WETH, WBTC, LINK, and others.

The hacker then repaid the loan of 104,331 WETH to dYdX, kept the remaining assets, and made away with ~\$450k USD.

## Protecting DeFi Assets

The Uniswap attack in April was [foreshadowed by the audit service ConsenSys Diligence](#). Moreover, the incidents in 2020 seem to have sparked a new era of transparency among DeFi developers regarding security issues. A developer from the trading protocol Hegic [published an open 'post-mortem'](#) about a bug in her code that rendered some funds inaccessible. Exchange protocol Loopring identified a front-end vulnerability, paused the exchange, [announced to the community](#), and worked to fix the issue. In May, [Keep Network paused deposits of BTC](#) into an ERC-20 wrapped coin known as tBTC just two days after its launch after a critical bug was found. This sort of transparency is crucial to building trust among new and existing users and to scaling a more secure network of DeFi protocols.

As DeFi protocols grow in number, complexity, and interconnectedness, more security vulnerabilities and compromises are likely to occur. Though regrettable, these incidents are crucial to the secure development of any emerging technology. The more we can use services and tools available to us to identify and protect against these attack vectors, the more confidently people will interact with the emerging open financial ecosystem. [Learn more about monitoring network health and protecting against security incidents](#) for both individual users and DeFi protocols.

**The more we can use services and tools available to us to identify and protect against these attack vectors, the more confidently people will interact with the emerging open financial ecosystem.**

# Insurance in DeFi

Despite critical security incidents in the past few months, the DeFi ecosystem marches on. Partially responsible for the continued use of DeFi despite the risk of losing funds is the recent emergence of a robust DeFi insurance product suite growing alongside the DeFi ecosystem.

[Opyn Insurance](#), which launched in February 2020, is an Ethereum insurance protocol providing protection for DeFi users and ETH speculators. Opyn's existing products let users buy or sell protection for Compound deposits (USDC and DAI) and hedge against ETH price volatility by either buying or selling ETH protection.

Data shows that at least 46 options have been created for the ETH price hedge market since the launch. The stacked area chart in figure 31 shows the individual balance of each option token contract and the total sum of value locked in Opyn's platform. Locked value hit its all time high of \$1.6m USD on 23rd April, and currently sits at ~\$600k USD. The chart also shows the lifecycle of each option; when each colored stacked bar disappears, it means the option reached its expiry date and was exercised.

Typically, around four options have existed at the same time so far in 2020, and each locks an average of ~400k USD. The usual mature length is around 15–40 days.

## Total Locked Value in Opyn Options

\* Opyn only allows USDC deposit, so the locked value (in USD) = total amount of USDC locked  
 \*\* The balance from each option are stacked

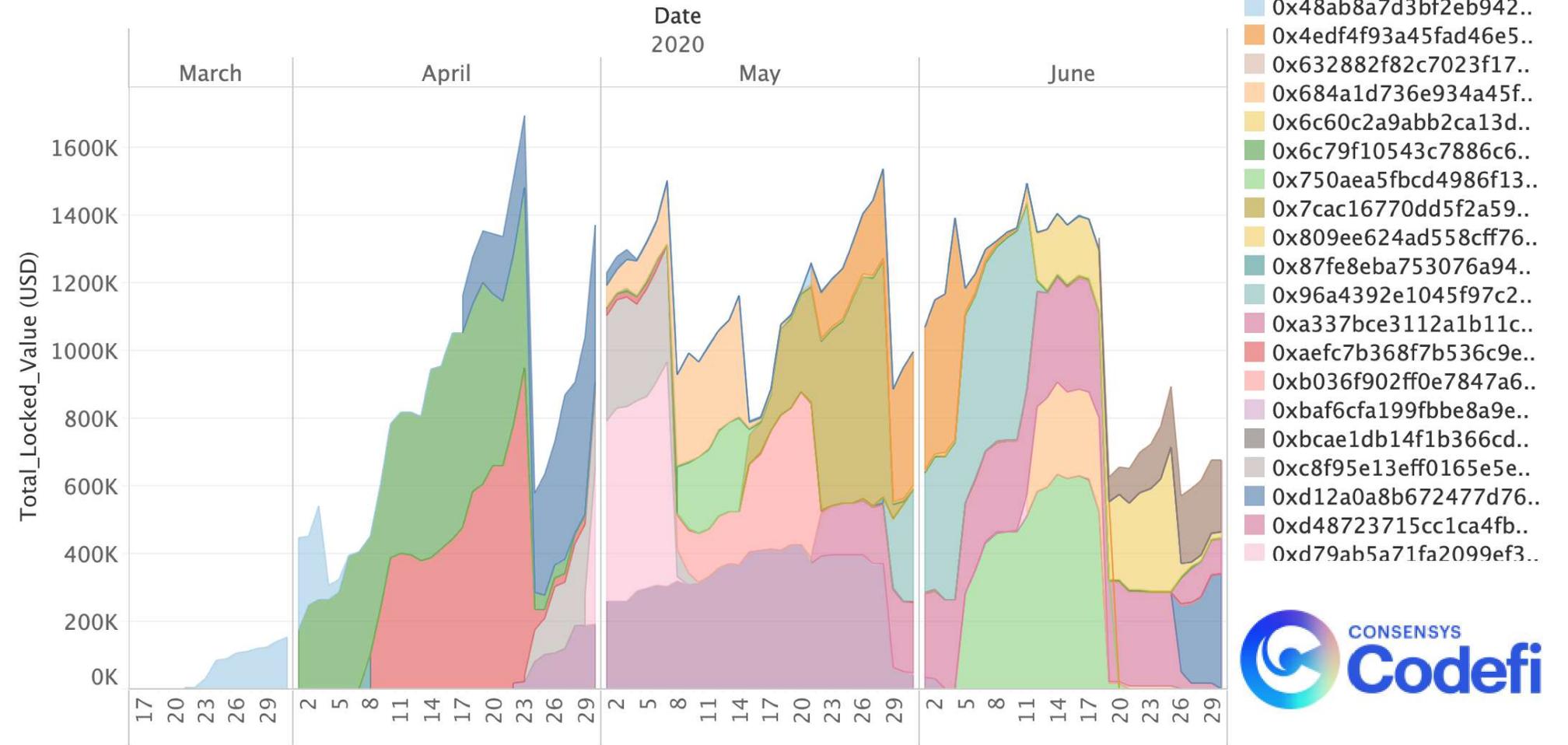


Figure 31: Total value locked (TVL) in Opyn, March - June, 2020.



# Daily Liquidity Deposit & Provider Count

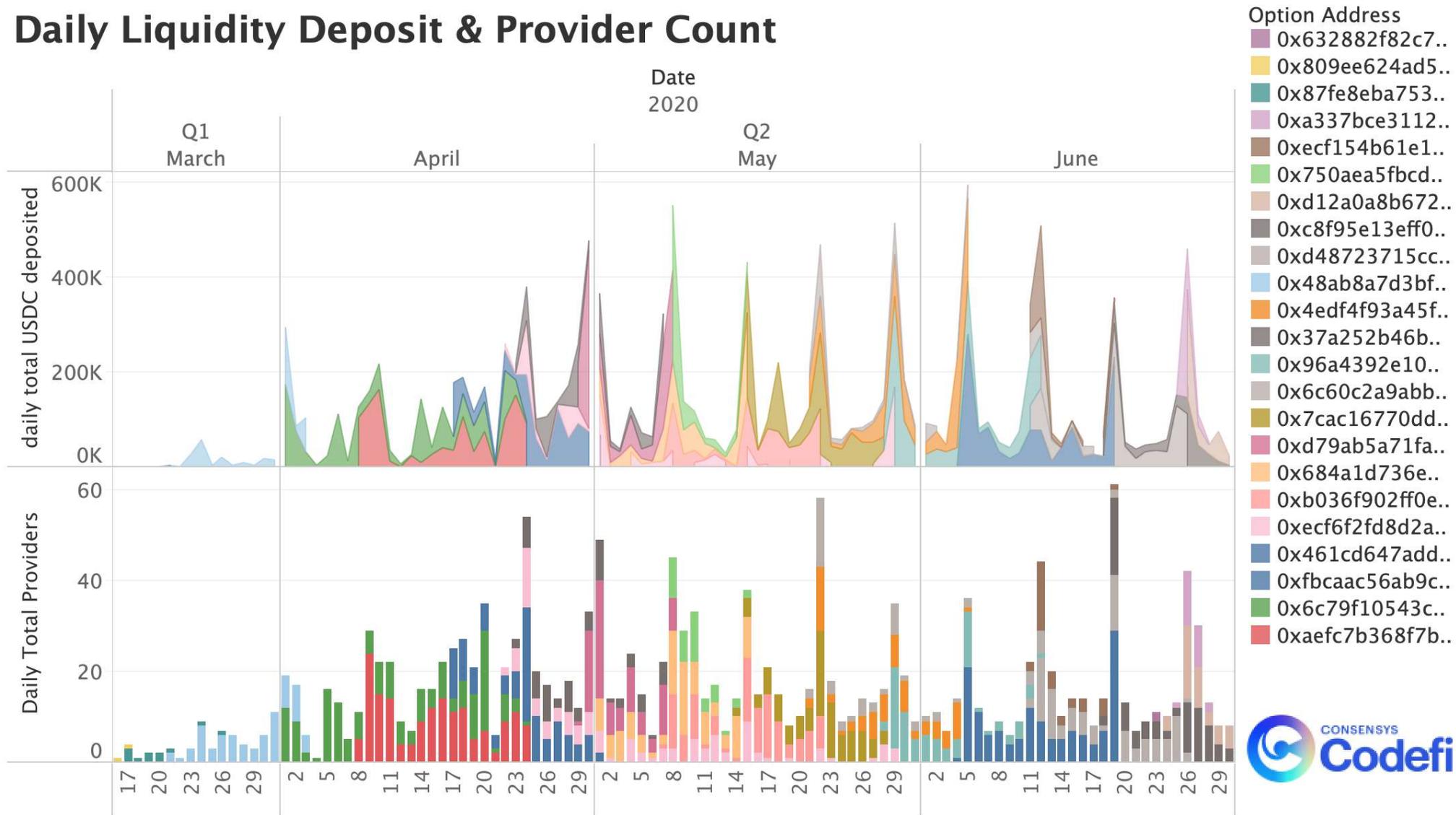


Figure 32: Liquidity deposit volume and provider count on Oplyn, March - June, 2020.

USDC liquidity providers are the people who have deposited USDC into Oplyn’s insurance protocol in order to provide liquidity to people wishing to buy ETH. These USDC depositors are betting that the ETH price increases, and aim to be able to withdraw USDC at a later date for a premium. The people who are buying ETH with the available USDC are protecting it against a price decrease.

Notably following the mid-March market crash — after which people may have been more interested in finding ways to protect their ETH holdings — the number of daily providers and the amount of USDC deposited have been increasing. Since April, there have been nearly 25 days with more than 20 liquidity providers, and four days with greater than 40 liquidity providers. Moreover, these liquidity providers are depositing larger amounts of USDC. In April, the end of the month saw records with just under \$500k USDC deposited. May volumes reached even higher, with two days during which USDC deposits surpassed \$500k USDC.

The incentive for liquidity providers is to gain a premium on their USDC deposits if the ETH price increases. The top USDC premium recipients have received between 700 and 22k USDC. The largest premium recipient – 22.3k USDC – has accounted for more than 30% of the total premiums on the Opyn platform.

reviews, and open source architectures will undoubtedly help – but security events will continue to occur. Insurance is the only way to hedge against both security and volatility. Opyn and Nexus Mutual – the two largest players in the Ethereum insurance game – have both come to market to help the ecosystem remain even more resilient in the face of (un)

### Premium Income Breakdown

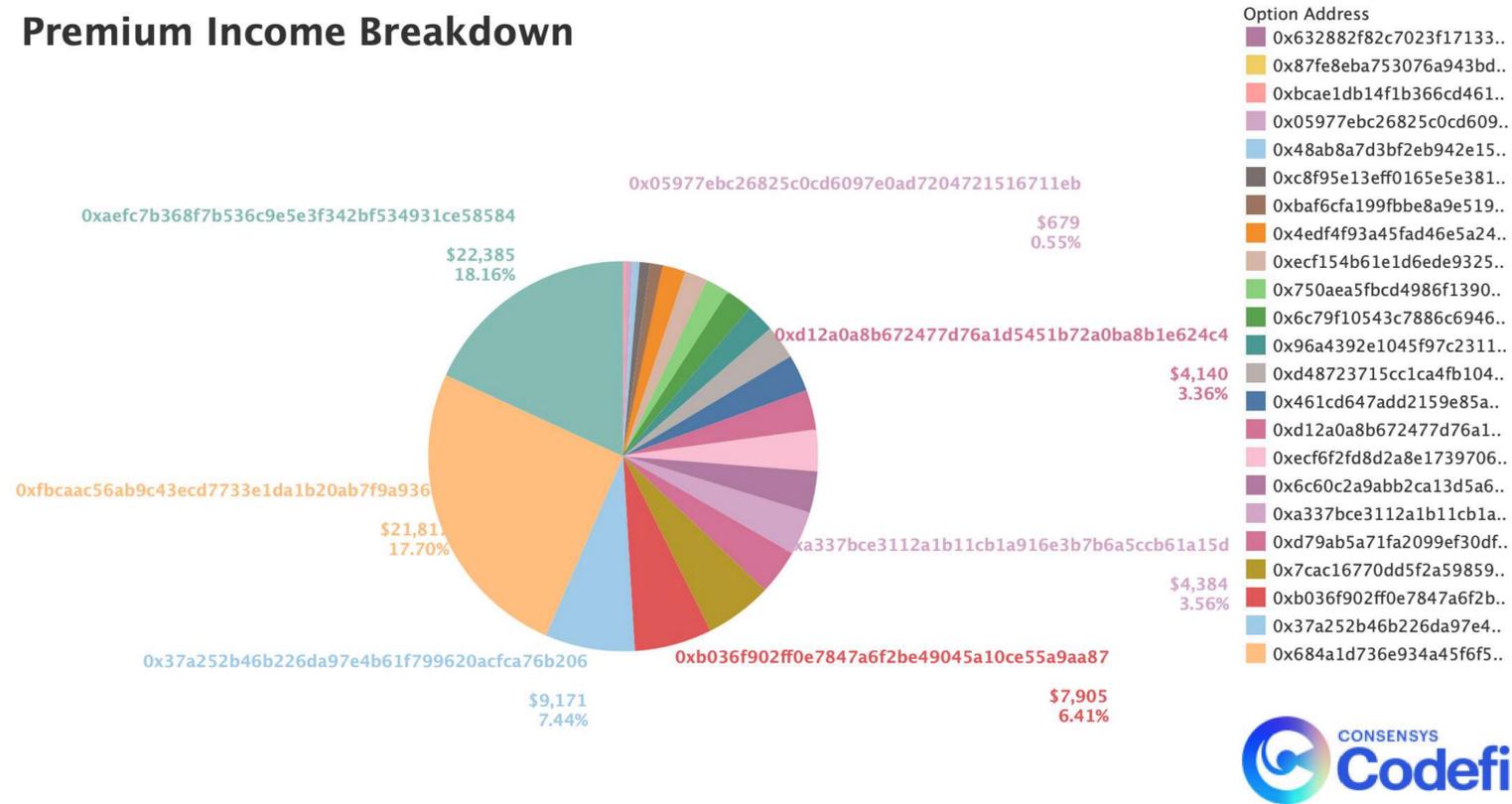


Figure 33: Breakdown of premium income recipients on Opyn, March - June, 2020.

**Among a host of security and market events in the past two quarters, Ethereum users are looking for better ways to ensure their funds are protected as they work with these new platforms.**

Opyn’s platform launch in February came at a time when the blockchain, Ethereum, and DeFi ecosystem in particular has paid closer attention to security. Among a host of security and market events in the past two quarters, Ethereum users are looking for better ways to ensure their funds are protected as they work with these new platforms. Audits, strict security

# Conclusion

Thanks for checking out this Q2 2020 DeFi report. Last quarter, we made a few assumptions about what we could expect “looking down the road” at DeFi in Q2 and beyond. We suggested the decrease in ETH locked in early 2020 was a “blip in the radar” - and now we’ve seen ETH locked volumes increase to all-time highs with the frenzy of yield farming. We suggested after the bZx events that flash loans would continue to play an important role in the ecosystem. Though the greatest impact of flash loans this quarter (the Balancer attack) does not tell the most positive story, it is still an indication of the power of that financial mechanism. Lastly, we said the ecosystem should pay close attention to insurance protocols, and we have seen Oryn take center stage this quarter as DeFi users looked for more ways to protect themselves and their assets.

So, from the datasets discussed in this report, what could we say about looking down the road at Q3 2020 and beyond?

## **GROWING THE COMMUNITY: UX AND EDUCATION**

The COMP and yield farming action in the last two weeks of Q2 shook the DeFi ecosystem out of a bit of stagnation (from a data perspective) of the previous 14 weeks of the quarter. ETH locked, DAU, and transactions all skyrocketed with the increased attention towards this specific mechanism of revenue generation. The data suggests, however, that the frenzy stayed within the walls of the existing community. The likely conclusion is that many DeFi innovations run the “risk” of increasing adoption only within the community of knowledgeable DeFi users (“risk” assuming our collective goal is to grow the size of the DeFi community). The solution is not a direct one, but rather a commitment from the community to focus on UX and education, perhaps by taking lessons from some of the more successful Web2 fintech applications.

## **AMMS: THE NEXT WAVE**

The explosion of activity on Balancer and Curve (as well as the continued high activity on Uniswap) suggests that AMMs will adopt an increasingly significant role in the growth of DeFi. To the previous point about UX and education, this could be a good sign for DeFi adoption. AMMs are not new to the traditional financial world. If education is directed at explaining the risks and benefits of moving from traditional AMMs to smart-contract-dictated AMMs, we could see external AMMs drive not only the next wave of protocol activity, but of community growth as well.

# Contributor Notes

## DEFI DAD

*DeFi Dad is a DeFi enthusiast and super user, and host of the [Ethereal Podcast](#).*

Years from now, I believe Q2 2020 will be looked upon as a turning point in the rise of DeFi and a cementing of Ethereum's inescapable network effects. Everything worth building is being built on Ethereum, and the narrative fueling this sentiment is the drive to build a new alternative p2p finance system. We're talking about money legos that stack together to save us time, save us money, and enable greater global access in applications with remarkably low fees, remarkably high yield, and the absence of middlemen. Q1 already brought about the very public milestone of \$1 billion total value locked TVL deposited into DeFi applications, but it was unexpectedly followed by the global economic downturn associated with the coronavirus pandemic. I could have never predicted that after a near 50% drawdown in prices across cryptoasset markets to end Q12020, Q2 would rebound to a new historic milestone of \$2 billion deposited into DeFi applications and protocols.

Beyond the flashy numbers above and hard hitting data you'll discover in this report, there's a simple explanation for all this growth: there's something for everyone in DeFi. The composability of DeFi money legos combined with the largest community of Ethereum developers by many orders of magnitude has resulted in new p2p money applications for lending, borrowing, trading, stablecoins swaps, DEX aggregators, margin trading, futures, BTC futures, tokenized BTC, options, derivatives for commodities and forex, and newly launched ETF-like exposure thanks to Balancer. Most of this was either launched or made widely available for use in Q2--over just 3 months.

DeFi on Ethereum sees more innovation in 3 months than legacy finance has seen in 3 decades. It's not complicated when you use these applications regularly and recognize not only do they work, but they impart an asymmetric value that our community would be devastated to lose access to. If you can recall having first experienced the likes of email, AOL Instant Messenger, and Napster, you cannot un-see such revolutionary value. DeFi is doing to money what email did to the postal service. Thanks to the variety of DeFi applications built on Ethereum, there's something for everyone to benefit from. It would be a shame for you to read this report of rich data and insights and not follow up by actually trying one of many DeFi applications revolutionizing how future generations will transact peer-to-peer, but one quick warning: once you see this, there's no turning back.

## EVERETT MUZZY & DANNING SUI

*Everett Muzzy is a Researcher and Product Marketing Manager at ConsenSys.*

*Danning Sui is a Data Scientist at ConsenSys Codefi.*

What we've seen in the past two quarters are moments of immense tumult in the DeFi ecosystem. In Q1, it was the bZx attacks and March 13 "Black Thursday" - both of which caused DeFi protocols to undergo immense stress and for some people to lose funds and positions. In Q2, the release of COMP and the excitement of yield farming caused its own form of tumult - albeit, with the opposite result of Black Thursday. Though the 30,000 foot view of DeFi is that of gradual adoption and growth since 2018, the quarter-by-quarter picture tells the more compelling story that DeFi is propelled forward by moments of immense network pressure. Q1 reminded us of the importance of security audits, open communication, and hedging risk. Q2 has reminded us of the extraordinary innovation of DeFi and the opportunities of new financial paradigms. There cannot have been the success of Q2 without the sobering impact of Q1, and we will continue to see that relationship until we reach a yet-undefined threshold of adoption and stability. Fundamental to our ability to weather this pattern of DeFi evolution is robust data availability.

**Everett**

In the past 2 quarters, we've seen DeFi products opening up a variety of new financial functionalities, including flash loans, insurance options, liquidity mining, and wrapped BTC. A much wider spectrum of colors are added in the ecosystem. We are thrilled to see that most new DeFi products incentivized existing and new DeFi users to explore new ways of playing the "DeFi Legos" in Q2. Especially in the \$COMP example, we've seen how prices of \$COMP were hyped just in a week, and how BAT volume rise and drop, and then how DAI locked amount in Compound insanely exceeded its total supply - all these are just due to one tweak in the rewarding model. All these dynamics and synergies show the vitality of the DeFi and Ethereum community, from both the user base and developer side.

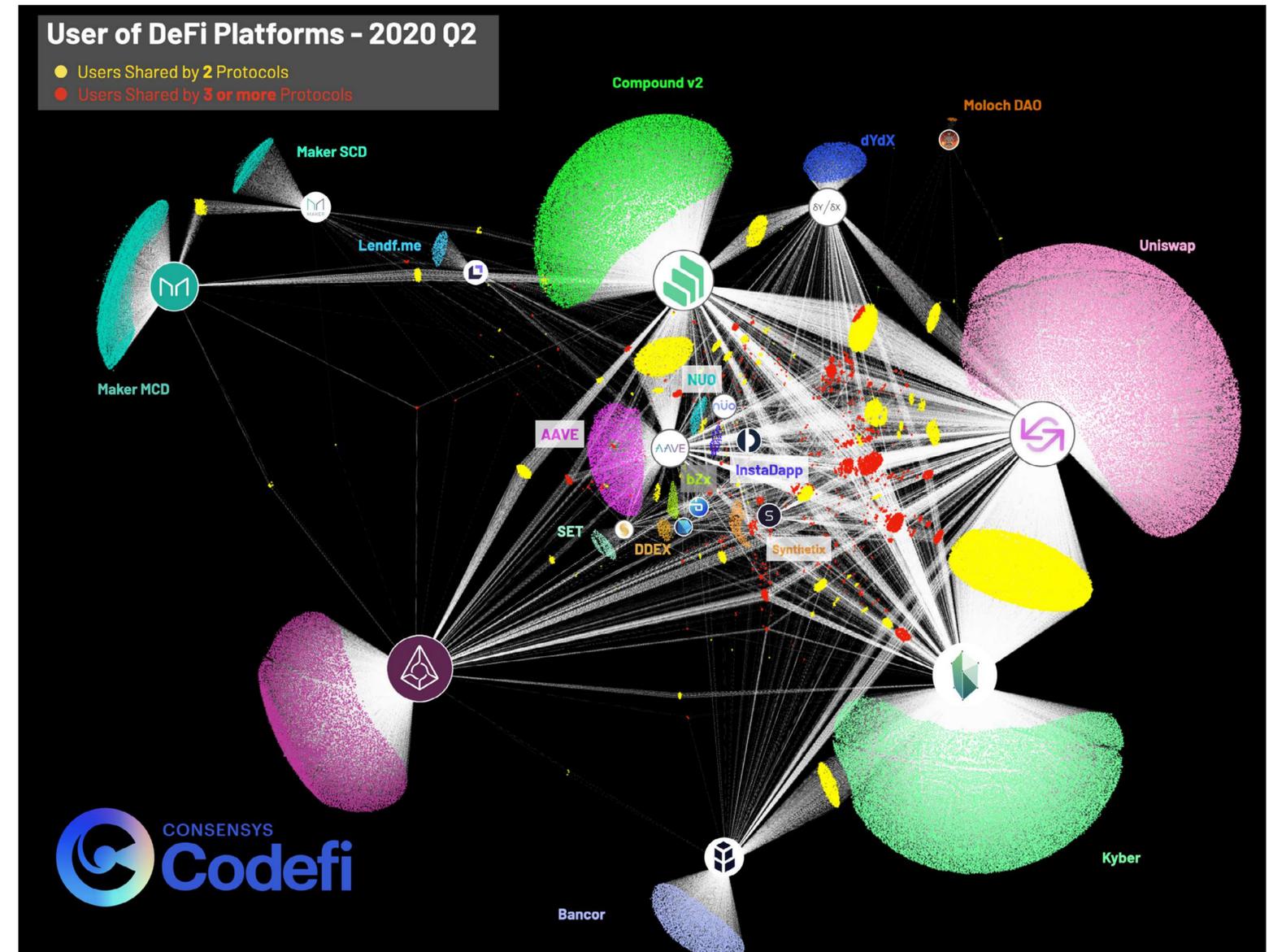
**Danning**

## LEX SOKOLIN

Lex Sokolin is *Global Fintech Co-Head* of ConsenSys.

The DeFi network graphs in this report show you the user growth, evolution, and interconnectedness between an emerging blockchain-based financial software industry (i.e., DeFi) between 2018 and 2020. Digital currency is collateralized on the left, invested across lending products in the middle, and then sent to multiple trading and derivative exchanges on the right. There is growth in the number of services providers, their specialization, and their users. There is also growth in the connection between these services, and the economic activity between them. This is both a strength and weakness. Systemic risk comes from too much interdependence. But so do network effects and a community.

As more activity from real world economies is able to shift to public blockchains, this snapshot could be the seed from which the financial machine emerges. Of course, that transition is a massive assumption, and to date much of the economic activity of the digital world remains digital and aloof. However, there is evidence of movement. EY, Microsoft, and ConsenSys recently announced the launch of a protocol that allows for private transactions on Ethereum, packaged in a way that large technology integrators can use for their own engagements with corporate clients. If big consultancies can get around scalability and privacy challenges, and deploy core infrastructure on the Ethereum network, this will bring the necessary mana for DeFi to flourish.

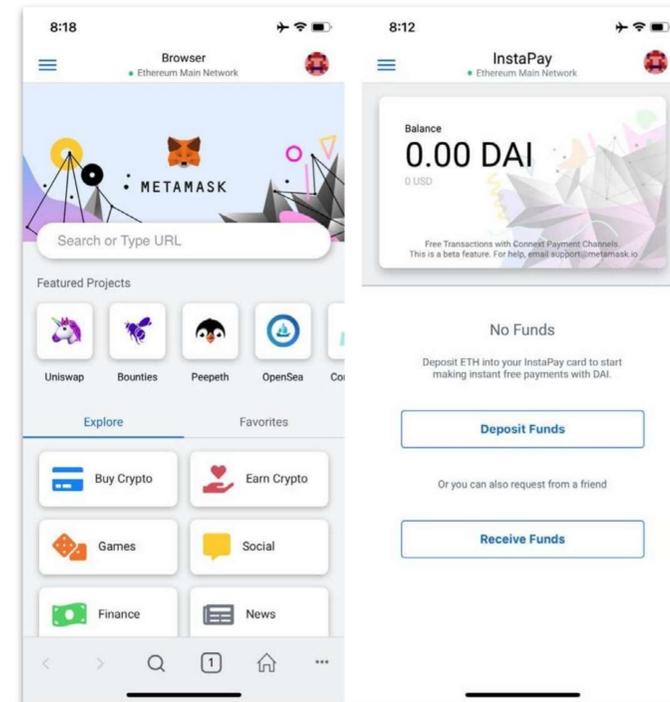
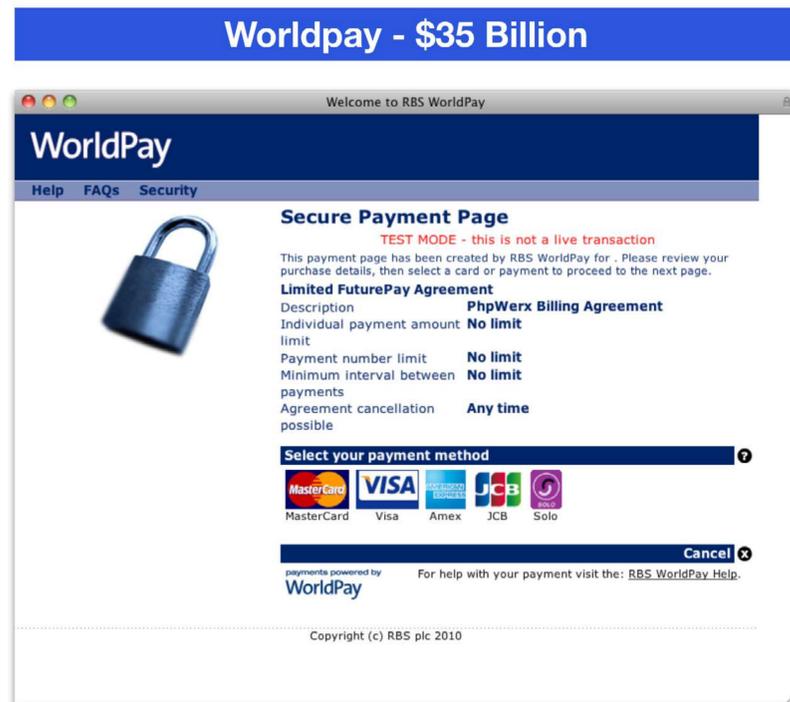


We are getting a bit far in the weeds, but I want to make one last point. As you research these issues more deeply and think about the new software providers, do not treat them as investment managers, creating streams of return. The mistake would be to evaluate the investment quality of some particular subscale network token as unattractive and miss the bigger picture. You might spend too much time thinking about the Ethereum token, and not about its ability to power an asset allocation software like TokenSets (social trading) or PieDAO (roboadvisor). To that end, the visualizations below give you the directionally correct comparison of a technology enabler, rather than the asset itself.

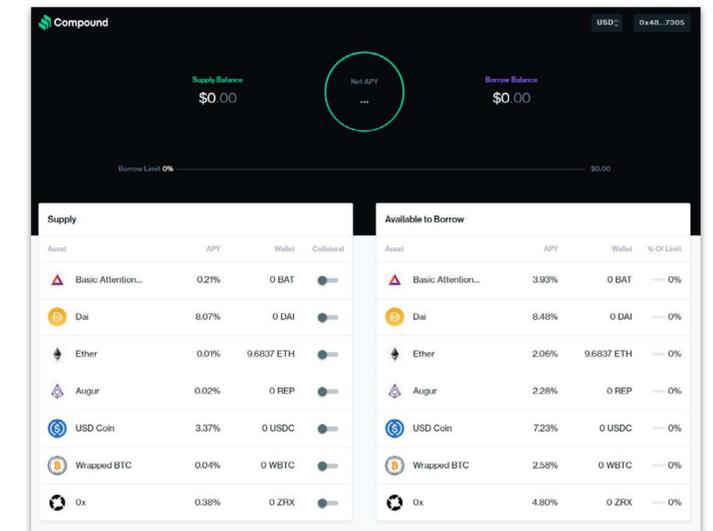
The stunning thing about each of these offerings is not just that they are targeting a familiar use-case. Of course they are! Human nature does not change. Rather, it is that they target these use-cases while running on a common software infrastructure, being interoperable, and open source.

To repeat -- we are a stone's throw away from the global financial industry running on a common software infrastructure across asset classes, being natively interoperable, and open source. Sounds good to me!

## Payments processing – tech for making a payment



## Lending / underwriting – tech for managing loan books



# ConsenSys Codefi Products for Decentralized Finance

If there is an overarching lesson from Q2 2020 for emerging and veteran blockchain technologists alike, it is the importance that data availability and transparency play in the success of decentralized finance. Insight into the breadth of the DeFi market allowed the ecosystem to capitalize on the opportunities of COMP and yield farming. In the wake of Uniswap, Lendf.me, and Balancer, data transparency also allowed DeFi participants, researchers, and developers to all independently review where these financial systems buckled. Instead of needing to trust in the results of a few centralized entities given access to a financial system's data, the DeFi community as a whole was able to identify the stress points of an open financial system, and come together to build a stronger foundation.

Codefi Data is a leading provider of data access and analysis for Ethereum mainnet activity, and for DeFi in particular. Our suite of products provide the groundwork for any investor, developer, or enthusiast to interact with DeFi in a more confident, data-driven manner.

VISIT CODEFI DATA

## Our products include:

### **CODEFI DATA API:**

Machine readable digital asset and DeFi data available as a data feed for developers, analysts, third party applications, and websites. [Learn More.](#)

### **DEFI SCORE:**

A single, consistently comparable value for measuring protocol risk, based on factors including smart contract risk, collateralization, and liquidity. [Learn More.](#)

### **CODEFI COMPLIANCE:**

Codefi Compliance builds trust in cryptocurrency and digital assets by delivering reliable AML-CFT solutions using know-your-transaction (KYT) mechanisms to protect against fraud and financial crimes. [Learn More.](#)

# Appendix

## Stablecoin Trading Volume, All Time

Relevant to figures 22 - 25.

### Stablecoin Trading Volume - 2020

\*On 21 DEXes by June 30th

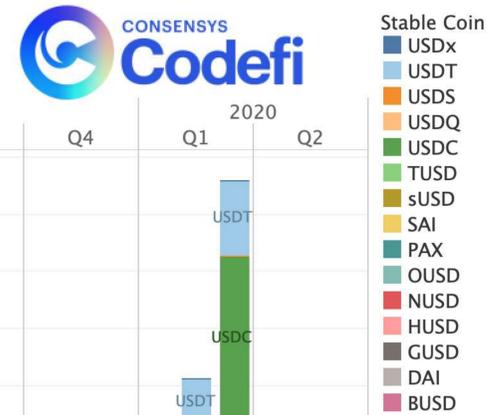


Figure 34: Stablecoin trading volumes on DEXes, 2018 - 2020.

## Stablecoin Top 100 Holders

Relevant to figure 26.

See this [google sheet](#) for a complete list of the top 100 holders of stablecoins.

## List of Tokens Tracked in TVL

Relevant to figures 9 and 14.

sai, wbtc, imbtc, usdx, usdc, chai, bat, mkr, susd, link, hbtc, dai, husd, tusd, lend, pax, snx, busd, usdt, knc, rep, mana, zrx