Investment Navigator
Decentralized Finance

Q2 2023
Bitcoin Suisse Publication
by Dominic Weibel, Research Analyst

In the long run, I think DeFi will power a new global financial system that is much more open, transparent, and inclusive than the current one.
— Vitalik Buterin

After a promising first quarter that felt like spring, the second one was characterized by some retracements especially outside the Cryptocurrency Sector. Bitcoin kept the whole market afloat on the back of another wave of asset management giants entering the space. BlackRock's filing for a Bitcoin spot ETF has revitalized the market and triggered a rally for Bitcoin. The collective assets under management of entities that recently filed for an ETF totals approximately $15.39 trillion, a massive pool of assets that opens up to crypto if approved.

While Ethereum and its smart contract platform peers performed rather flat, other key Sectors such as DeFi, Utility and Culture slowed down and gave back some of their first quarter gains. As I experienced first-hand attending EthCC in Paris, the largest annual Ethereum community conference, the market performance does not necessarily reflect the progress happening at the protocol and infra level. While other bear markets led to apathy and low attendance, this year's EthCC had impeccable energy, a vibrant community, and an innovation pace at all-time highs. The key topics ranged from MEV, L2s, Account Abstraction, Distributed Validator Technology, Shared Sequencing and Verifiable Credentials to novel DeFi applications. Among Mantle, Linea, Starknet Appchains or Chainlink CCIP, other notable reveals and go-lives included Gnosis Pay, Lens V2 and Uniswap X. Overall, we observe substantial progress and breakthroughs across the industry.

Most of DeFi's key metrics are up in the second quarter and allow for excitement. As such, total active loans grew ~13%, decentralized exchanges brought more users on-chain and gained share of the total trading volume from centralized exchanges, staked assets went ballistic and are up almost 24% across the staking ecosystem while derivative volumes grew by ~5%.

Established and novel Dapps explore tuning their tokenomics and protocol mechanisms into more sustainable business models. First wave DeFi projects like Aave, Maker and Synthetix kept building while DeFi baskets lost ground against ETH in the months prior. These now experience a revival based on improved fundamentals and fresh capital allocation within their smart contracts. Some of them will become hubs with an extended range of USPs as they merge formerly isolated DeFi offerings into hybrid solutions in order to bootstrap flywheel effects. For instance, Frax, Curve or Aave now offer not only credit facilities but also proprietary stablecoins backed by multiple collateral types including LSTs.

As the SEC continues to pressure CEXs, users will increasingly turn to DEXs and Derivative platforms that are gaining momentum as I type. With scaling enabled perp design by Layer 2 technologies and an influx of innovation in the decentralized Exchange Sub Sector, decentralized trading tools are primed for growth.

Credit applications proved that they are moreover not limited to attractive interest rates for lenders while central bank rates are low, they are also capable of attractive rates for borrowers in an environment of tight monetary policy. While the 30 year mortgage rate recently hit a new decade high at 7.4 %, you can borrow at a rate between 2.7-3.8 % on Aave. Some of the more recent stablecoins such as Liquity can be even minted for zero interest rates at a one-time borrowing fee as low as 0.5 %. At the same time, CDP protocols such as Maker increase their exposure towards RWAs, now effectively lending $614 million to the U.S. government via tokenized Treasury products at near 5% risk-free rate. Novel LST backed stablecoins such as Prisma tackle that space by utilizing the risk free rate of the crypto industry, Ethereum's staking rewards, and bake them into highly capital efficient, liquid and yield bearing stablecoins. We expect LST backed stables to be a major pillar in crypto with the potential to flip centralized stables such as USDC.

With the Shapella upgrade and the emergence of Liquid Staking, a Cambrian explosion in Dapps is shaping up to heavily drive back momentum towards DeFi. Recent data highlights an increasing confidence in ETH as a productive, yield-bearing, and deflationary asset. On the back of that transformative narrative, we observe plenty of new developments such as LST backed stablecoins, new primitives such as restaking, novel business models and first attempts to establish fixed rates within the DeFi ecosystem. The potential growth for protocols utilizing this additional design space is substantial and it will likely act as structural tailwind for the entire technology stack.

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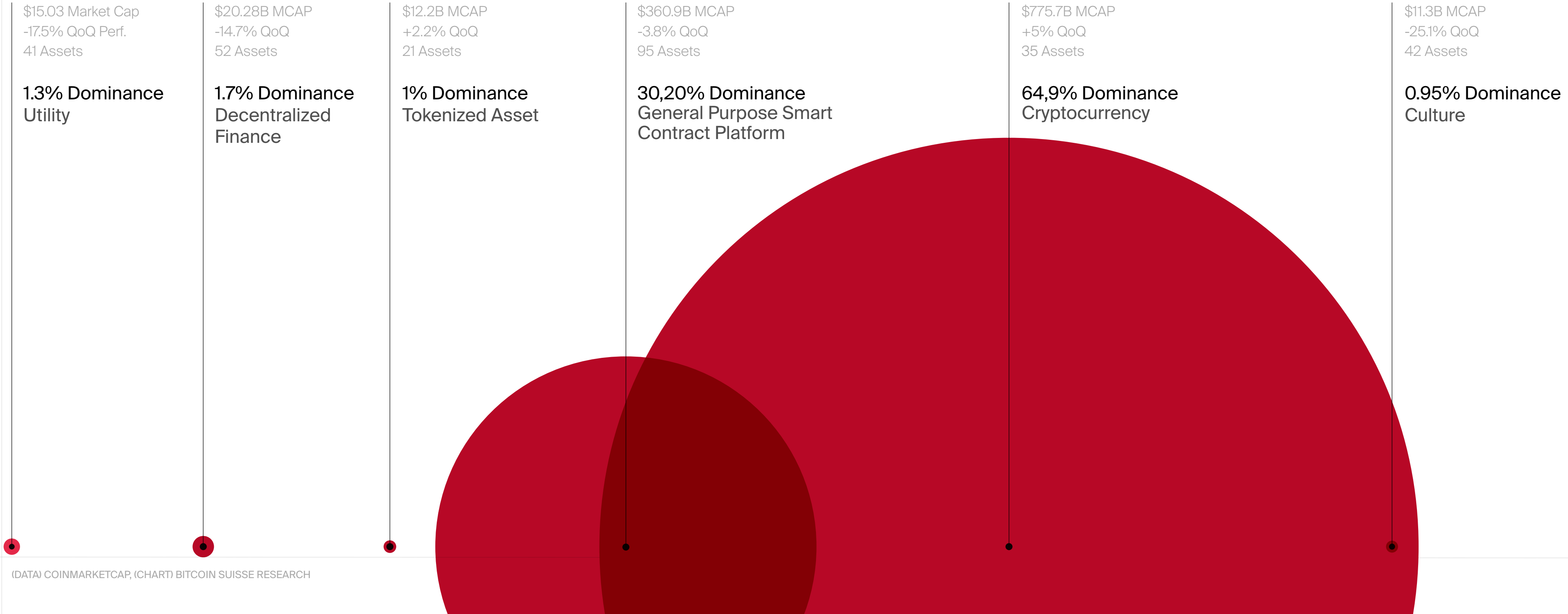
Overview of Sectors

While the Culture Sector struggles, combating its first ever bear market, the Cryptocurrency Sector keeps the market afloat carried by a robust Bitcoin performance

BlackRock's win-loss record on ETF applications (575:1) fueled positive sentiment and kept the market capitalization of the entire crypto market slightly up in the second quarter, now at ~$1.2 trillion. As such, the Cryptocurrency Sector with 35 assets performed best at 5.5% mainly led by Bitcoin and increased its dominance up to 64.9%, its highest level since early 2021. While the approval rate of BlackRock is more than impressive, its worth noting that the SEC has never approved a Bitcoin spot ETF (33:0). Regulatory developments in the U.S. such as the recent case against Ripple, alongside the surge of Bitcoin spot ETF filings, have contributed to this consolidation.

On the flipside, the Altcoin Season Index known from Blockchaincenter indicates a bottom in late May. The current Bitcoin dominance climbed from 46.42% to 49.53% in the second quarter while the Ethereum dominance is slightly up from 18.73% to 19.46%.

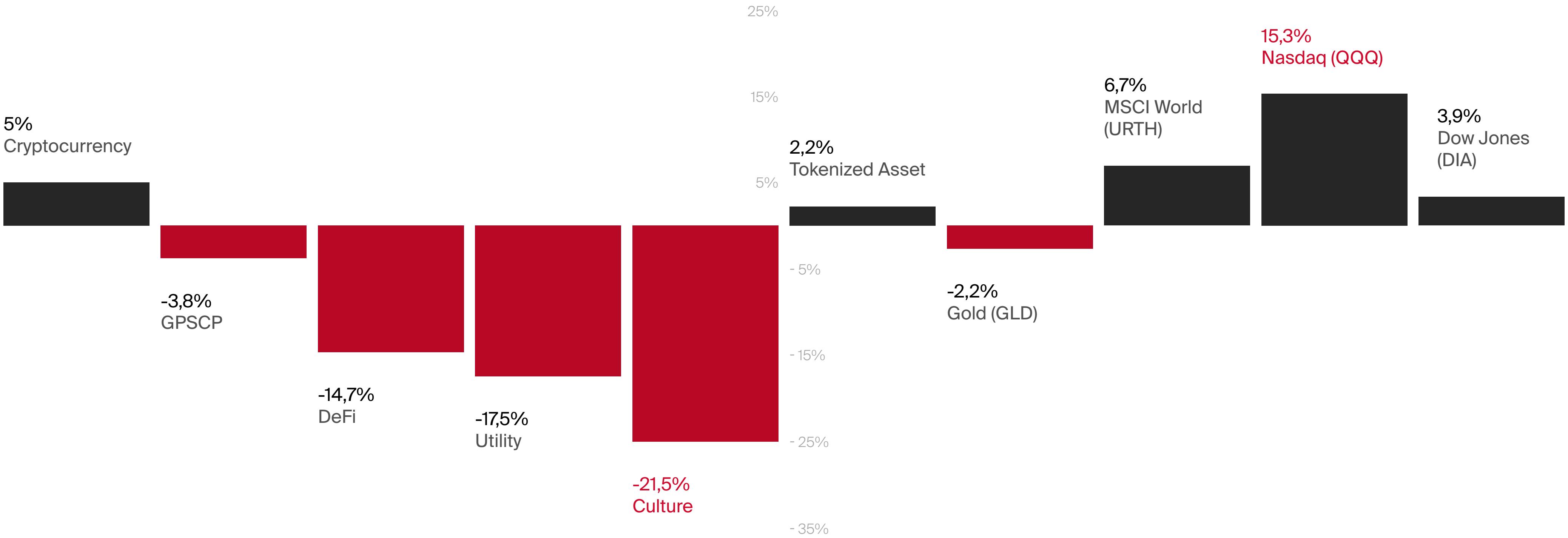


(DATA) COINMARKETCAP, (CHART) BITCOIN SUISSE RESEARCH

Traditional asset classes outperformed most GCT Sectors, the Cryptocurrency Sector however managed to beat Gold and the DoW Jones in Q2

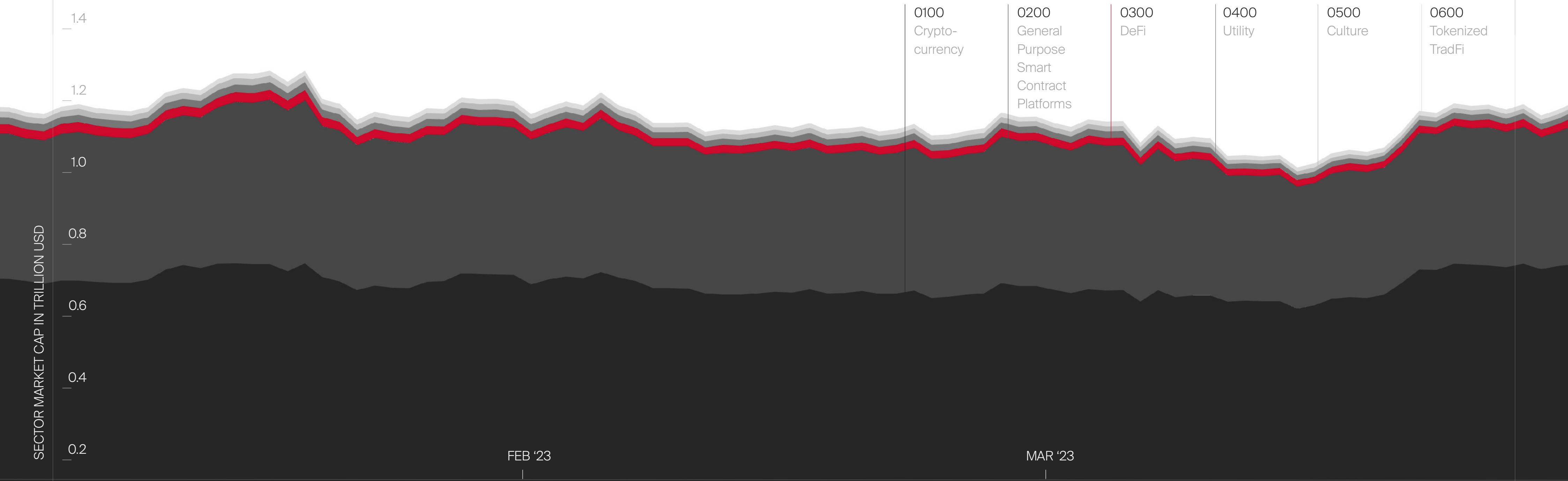
Traditional asset classes such as the Nasdaq or Dow Jones mostly outperformed crypto assets over the last three months. Especially tech stocks rallied substantially on the back of AI momentum and new developments such as AR. Notably, the Cryptocurrency Sector (+5.5%) outperformed Gold (-2.7%) on a quarterly basis.

From the top 300 in market capitalization at snapshot date end of June, we excluded 14 assets for this edition's analysis for various reasons such as double entries via wrapped assets or fake volume on decentralized exchanges. The overall industry remains highly dominated by the General Purpose Smart Contract Platform Sector and the Cryptocurrency Sector. The Sector with the highest drawdown in value was Culture given the aftereffects of the very first bubble pop in collectibles and a VC frenzy into metaverse projects. It is also the first time that we saw most of DeFi applications decouple from its Culture peers. With the recent quantum leaps in DeFi however, we expect to see significant growth in the months ahead.



(DATA) ETFREPLAY, COINMARKETCAP, (CHART) BITCOIN SUISSE RESEARCH

After DeFi saw the highest growth rate in Q1 2023, it gave back some value while General Purpose Smart Contract Platforms stayed almost flat given Ethereum's resilience



(DATA) COINMARKETCAP, (CHART) BITCOIN SUISSE RESEARCH

Sector Deep Dive

Decentralized Finance

Innovation is flourishing in the DeFi sector, fundamentals got stronger, the markets are yet to respond

0300

Decentralized Finance

The "Decentralized Finance (DeFi)" sector contains smart-contract-based protocols that may operate on their own or another blockchain and are powered by a native token. These protocols recreate existing (e.g., exchanges, loans) or create new financial instruments (e.g., prediction markets).

0301

SPOTLIGHT

Exchange

A DeFi protocol that allows the trading of token pairs across one or more blockchains using an automated-market maker (with single or multi-token pools) or an order book.

0302

SPOTLIGHT

Derivative

A DeFi protocol that creates tokens whose performance is based on the performance of another, underlying crypto asset.

0303

SPOTLIGHT

Credit

A DeFi protocol that allows users to borrow or lend tokens that are backed by locked-up tokens serving as collateral.

0304

Asset Management

A DeFi protocol that enables portfolio management activities such as asset allocation, weighting, etc. to build structured products, indices, or strategies based on crypto assets on-chain.

0305

Prediction Market

A DeFi protocol that implements a prediction market by allowing users to collaboratively bet on predictions for events.

0306

Insurance

A DeFi protocol that will pay out an insurance sum when a condition is met.

0307

SPOTLIGHT

Liquid Staking

A DeFi protocol that, in exchange for a staked token, issues an equivalent 'liquid' token that can be used elsewhere during the staking period.

0308

Payment Service

A DeFi protocol that enables on-chain payment services beyond the transfer of native crypto assets such as invoice clearance, merchant platforms, stablecoin minting (c.f. sub sector 103), and others.

Key Metrics
Q2 – Ending June 30, 2023

GCT Top 300 DeFi Market Cap
$18.9 billion
QoQ: -20.1%

Total Value Locked
$45.36 billion
QoQ: -7.1%

Lido Dao Dominance by TVL
$14.64 billion
Dominance 32.2%

Funds stolen by DeFi attacks
$2.85 billion
QoQ: +1.1%

Burned ETH by DeFi
23'954 ETH
35.6% of burned ETH (30d)

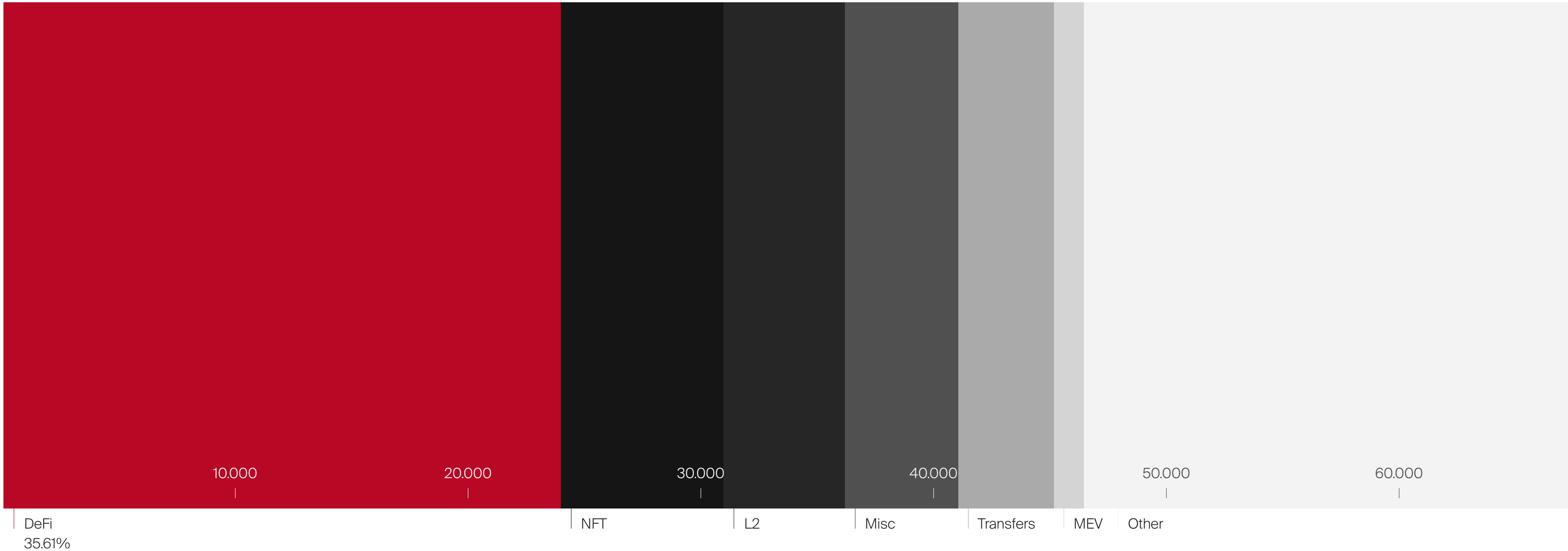
Credit sees revived momentum while Insurance bleeds, Exchanges remain the leading Sub Sector across DeFi

DeFi is a core pillar of decentralized technology and aims to enable a more permissionless, inclusive and globally available financial system. A financial system where the coordination of services and contracts happen outside of traditional financial institutions in a more transparent, trustless, auditable, interoperable, and decentralized fashion at lower cost, higher privacy and security. As DeFi democratizes access to financial tools and services, it revolutionizes the way we interact with financial services. Among the GCT top level Sectors, DeFi is the most diverse and dynamically evolving aside from Smart Contract Platforms. The DeFi Sector is made up of 52 assets and lost -14.7% of its market capitalization in in the course of the second quarter. However, it faces challenges such as regulatory hurdles, the need for user education, and potential vulnerabilities in smart contracts.

(DATA) COINMARKETCAP, (CHART) BITCOIN SUISSE RESEARCH

DeFi is the largest gas consumer on Ethereum and hence, burns most ETH among NFTs, Layer 2 and vanilla transactions

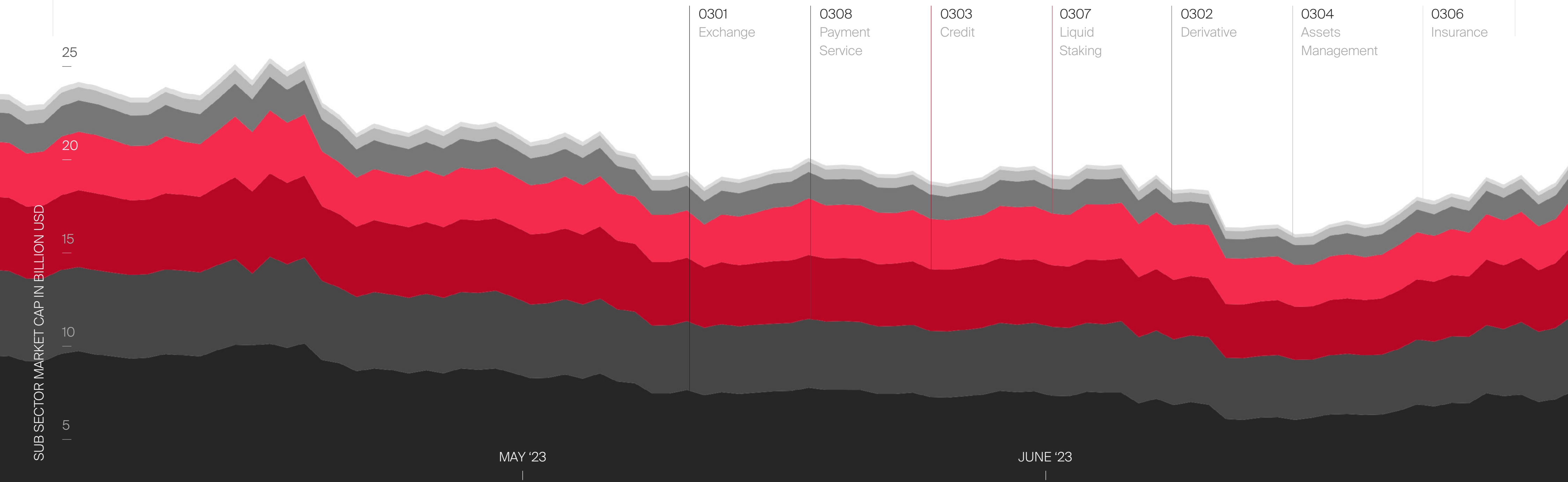
A recent survey conducted by Binance Research revealed that Infrastructure, L1 and L2 are the core areas of focus among institutional investors. 53.9% of investors found infrastructure to be the sector of most importance closely followed by L1 and L2 at 48.1% and 43.8%, respectively. In terms of usage, DeFi however was the most widely used Sector in recent months by far. 39% of the surveyed institutional investors reported that DeFi is very important, 47% somewhat important. This is very much reflected by on-chain activities. Hence, DeFi remains the Sub Sector that is responsible for the highest share of burned ETH. At 35.6%, it burned almost 24'000 ETH within the last 30 days.



(DATA) ULTRASOUND, (CHART) BITCOIN SUISSE RESEARCH

Layer 2s start to enable innovative protocols that rely on scaling and low transaction cost, while Liquid Staking enables a new dimension of yield protocols – DeFi is primed for growth

In Q2, the Credit Sub Sector was most resilient as new business models reattracted investors. Insurance saw the highest drawdown at -31.3% as adoption lacks traction. Moreover, the Sub Sector has only 2 assets within the top 300 and is thus highly influenced by few projects. The Exchange Sub Sector remains the largest by market capitalization with 38.34% dominance, $7.75b and 21 assets. Overall, DeFi is primed for growth based on new primitives such as Liquid Staking, Real World Assets (RWAs) coming on-chain and Layer 2 enabling DeFi solutions that rely on scaling and cheap transaction cost.

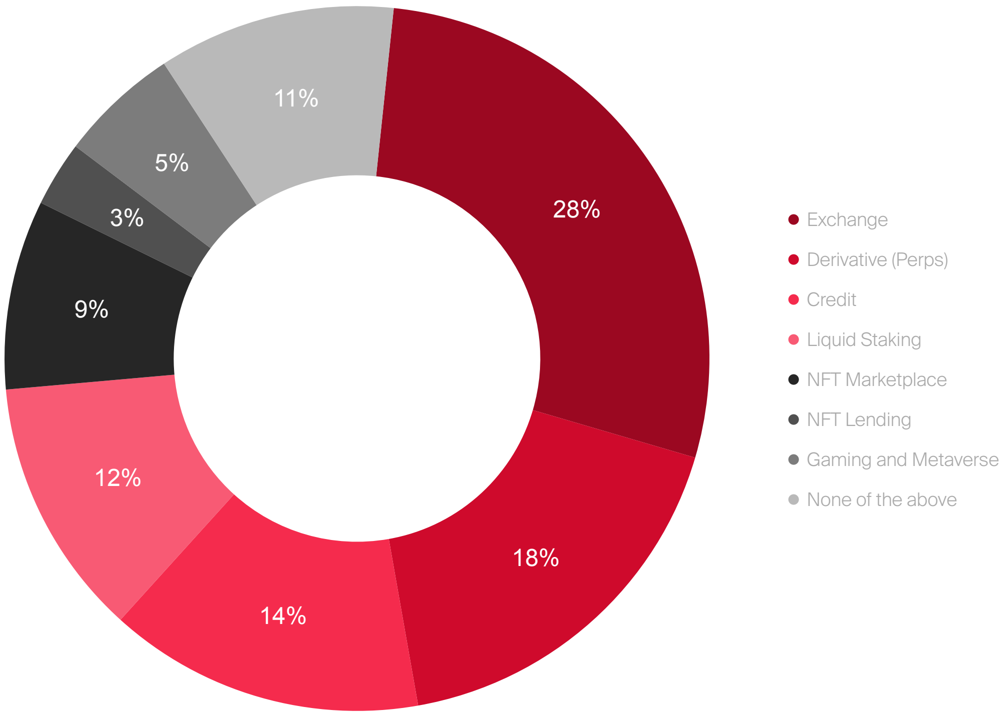


(DATA) COINMARKETCAP, (CHART) BITCOIN SUISSE RESEARCH

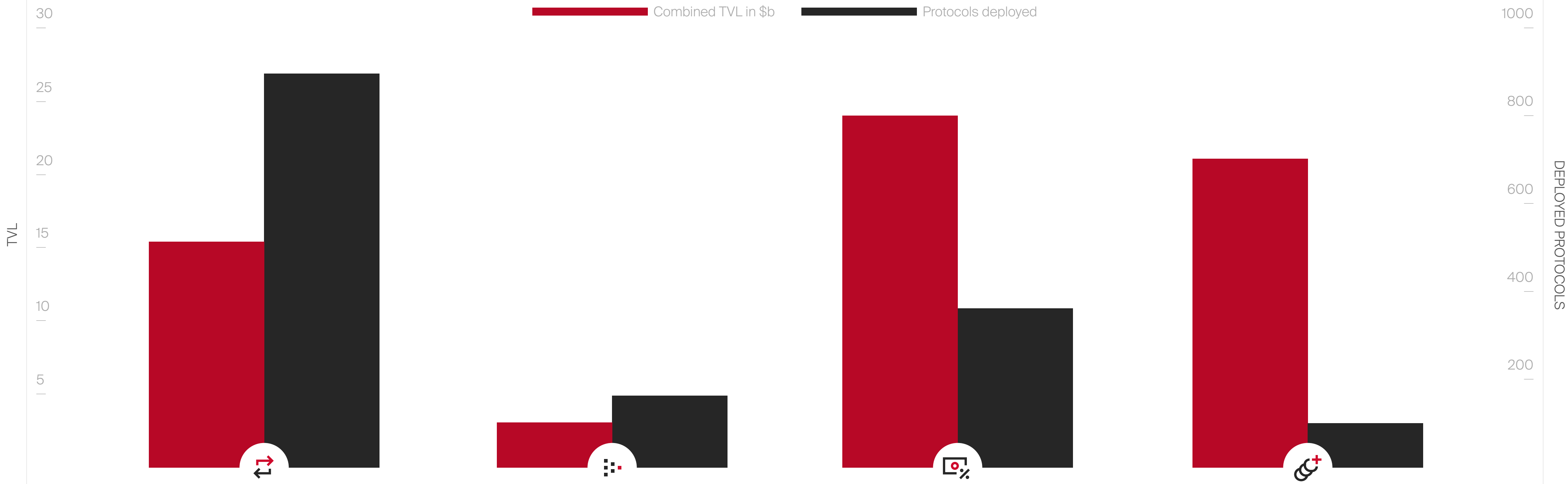
Sub Sector Spotlights

Institutional investors mostly use: Exchanges, Derivatives, Credit and Liquid Staking

In the beformentioned institutional investor survey, the most utilized areas stemmed from DeFi. In particular, Exchanges (28%) were the most utilized Sub Sector in the past three months, followed by Derivatives (18%), Credit (14%), and Liquid Staking solutions (12%). The combined TVL is highest for Credit ($24b), closely followed by Liquid Staking ($21b). The most protocols deployed however resides with Exchanges (897), which might offer an explanation why Exchanges hold the highest overall MCAP among DeFi Sub Sectors. Notably, Liquid Staking has the highest TVL/deployed protocols ratio at $0.21b/protocol. On the one hand it's a rather new Sub Sector with less protocols deployed than its peers, on the other hand its TVL is heavily concentrated in Lido. Comparing the dominant protocols in the most relevant metric across Sub Sector spotlights, Uniswap holds 54% dominance in Exchanges (Volume), Aave holds 24.5% dominance in Credit (Active Loans), Synthetix holds 18.03% dominance in Derivatives (Volume) and Lido holds 77.2% across Liquid Staking (Total Liquid Staked Assets on Ethereum). The top DeFi protocols by chain vary substantially, there is no single dominant protocol twice at the selected chains despite multi-chain deployments



While most protocols deployed are Exchanges, Credit remains the most capital heavy Sub Sector chased by the new kid on the block: Liquid Staking



CHAINS	Exchanges	Derivatives	Credit	Liquid Staking
	Uniswap	dydx	Maker DAO	Lido
	SUNswap	-	JustLend	STRX Finance
	PancakeSwap	ApolloX	Venus	Binance staked ETH
	Uniswap V3	GMX	Radiant V2	Tenderize
	Quickswap	Gains Network	AAVE V3	-

Top DeFi protocols by chain: they vary substantially as there is no single dominant protocol twice at the selected chains despite multi-chain deployments

(DATA) DEFILLAMA, (CHART) BITCOIN SUISSE RESEARCH

Exchange – DEX trading volume sees a relative shift to chains outside of Ethereum while the DEX to CEX dominance increased significantly

Key insights:

→ Curve and PancakeSwap have attractive MCAP/TVL metrics, Curve additionally captures most fees per MCAP. PancakeSwap (~120k) and Uniswap (~64k) both rank among the top 12 in daily active users in June across all Sectors.

→ Trading volume and TVL lost some momentum in Q2 given that March was an exception with more than $120b in volume, the highest volume since May '22. The March volume was mainly driven by Cirlce's USDC depeg and the ties to Silicon Valley Bank. The drawdown in TVL is also closely linked to stablecoin's decreasing supply, down almost 5% QoQ.

→ Trading volume on centralized exchanges fell by more than 40% with Binance's market share dropping to ~50%. The DEX to CEX dominance increased substantially amidst the regulatory clampdown in the U.S and hit an ATH at 22% in May. As such, Uniswap's volume repeatedly eclipsed Coinbase's daily volume, bringing more traders on-chain. The uptrend in DEX activity indicates a surge in interest of non-custodial infrastructure catalyzed by a frenzy of centralized failures.

→ While IL is still causing havoc and order book solutions become more sophisticated, AMM volume managed to chip in another bump, responsible for up to ~83% of volume.

→ DEX trading volume also saw a relative shift to chains outside of Ethereum, such as Arbitrum and BNB. Ethereum's monthly Dex volume dominance is down to 47.2% in June from 61.4% in March.

Things to watch:

→ Innovation is thriving in the Exchange Sub Sector. Uniswap just announced their V4, bringing "hooks" which are customizable smart contracts for pools, fees, and LP positions with specific integration rules to the underlying platform. For instance, It allows for on-chain limit orders, TWAMMs, or MEV capturing AMMs. Hooks create design space for applications to build on top and will likely yield strong network effects, less revenue burden, and a shift from protocol to platform akin to Airbnb or Uber.

→ Moreover, plenty of projects work on solutions to IL of AMMs. New ideas involve market making strategies for aiming for market neutrality (e.g. Swaap) or long straddle approaches to hedge volatility (Gammaswap). AMMs dominate the space, yet come with challenges to liquidity providers such as impermanent loss, an AMM characteristic stemming from the underlying pool equations. As such, liquidity providers basically sell short straddles on their positions while being compensated by trading fees.

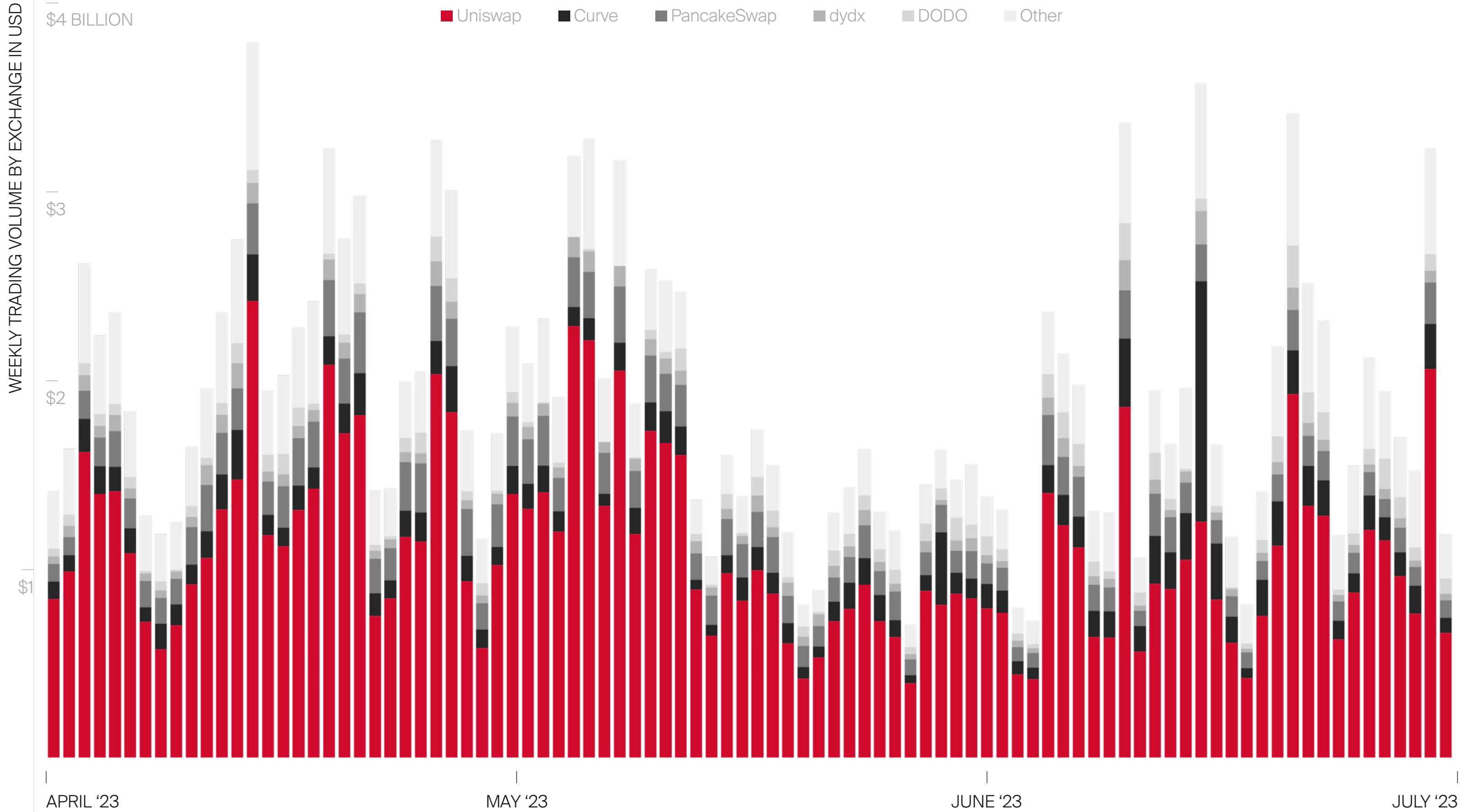
→ We also observe more mature order book design outside of AMMs e.g. Mangrove that just launched on Polygon or Carbon. dYdX V4 is utilizing the Cosmos SDK allowing for application specific modifications such as higher throughput, reducing or removing gas fees, or mitigating MEV and off-chain order book management from validators.. manage off-chain order books.

→ Uniswap X launched in beta an off-chain order routing dutch auction allowing for market competitiveness and order fullfilment similar to CowSwap. It aims to allow swapping gas-free across liquidity sources (even cross-chain) at better prices while protecting from MEV. Notably, it has a fee switch implemented, that might enhance the tokenomics of UNI. Since some parts of the mechanism are pushed off-chain, some voice concerns about potential centralization vectors.

→ Overall, substantial innovation creates the perfect storm for decentralized Exchanges amid regulatory scrutiny, likely yielding momentum in the following months.

(DATA) DEFILLAMA, TOKEN TERMINAL, COINGECKO, THE GRAPH, (CHART) BITCOIN SUISSE RESEARCH

Exchange – DEX trading volume sees a relative shift to chains outside of Ethereum while the DEX to CEX dominance increased significantly



Top 3 by Market Capitalization	MCAP	TVL	MCAP/TVL	Fees (90d)	MCAP/Fees
Uniswap (UNI)	$4.3B	$3.8B	1.13	$124.9M	35.8
Curve (CRV)	$0.5B	$3.5B	0.2	$19.3M	26.1
PancakeSwap (CAKE)	$0.32B	$1.5B	0.2	$9.0M	32.3

Key Metrics
Q2 – Ending June 30, 2023

GCT Top 300 Market Cap
$7.74 billion
QoQ: -19.2%

Total Value Locked
$11.6 billion
QoQ: -16.2%

DEX Trading Volume
$235.8 billion
QoQ: -23.7%

DEX to CEX Dominance
16.8%
QoQ: +17.8%

AMM Volume Dominance
82.92%
QoQ: +7.7%

Active Daily Users (30d avg.)
285'380 (June)
QoQ: +7.7%

(DATA) TOKENTERMINAL, THE BLOC , DEFILLAMA, MESSARI, (CHART) BITCOIN SUISSE RESEARCH

Derivatives – Derivatives thrive on Layer 2 solutions as user retention of the Ethereum ecosystem meets low transactions fees

Key Insights:

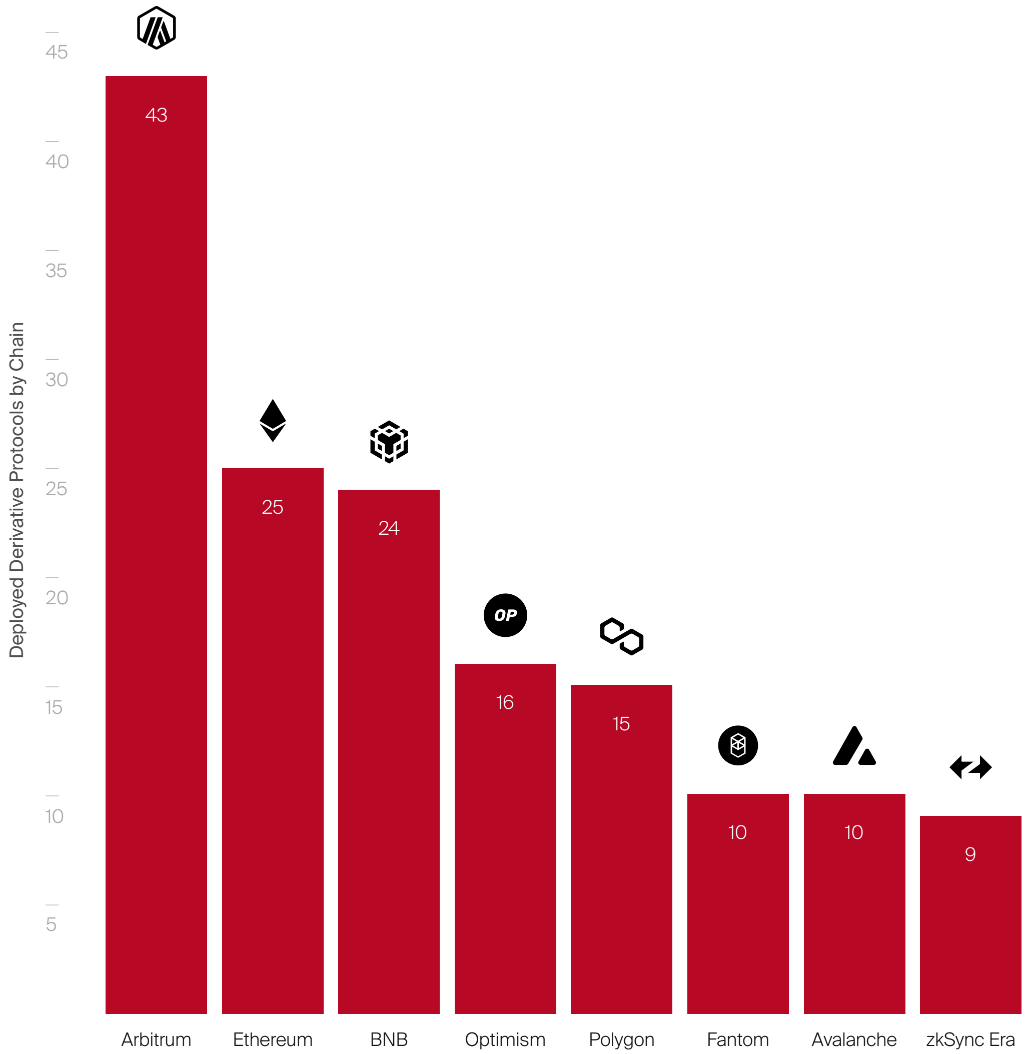
→ Decentralized Derivatives have seen a steady increase in activity and a move towards on-chain stacks based on scaling solutions and major blowups among centralized competitors. While still dwarfed by their centralized counterparts, Synthetix, GMX or Gains Network gain adoption and spark new emerging protocols, innovation and competition.

→ The diverse market sector of on-chain Derivatives offering perpetual contracts, options contracts, interest rate swaps, and more continued to show strong product market fit as trading volume (+4.7%), the DEX to CEX futures dominance (+32.8%) and Options volume (+21.1%) increases. GMX is leading the field in volume within June (note that dYdX is classified as Exchange and would otherwise be in leading in volume) followed by Voltz, Level Finance and Gains Network. The cycle volatility in trading volume correlate with their centralized peers.

→ While Synthetix dominates in MCAP, GMX has the lowest MCAP/TVL metric (lower is better) and also attracts the highest fees per MCAP. GMX is also the 7th largest in protocol revenue across the entire crypto ecosystem.

→ Perp innovation is at its peak with Synthetix V3, GMXV2 upcoming and other substantial progress in other relevant protocols. They mainly thrive on L2 solutions enabled by cheap and fast transactions while running into Ethereum's network effects, an ideal environment for Derivatives. Arbitrum and Optimism are the most popular rollups, where they host 43 and 16 Derivative protocols, respectively. We expect that to be a sustained trend indicated by trending contracts on both Arbitrum and Optimism.

→ SynthetixV3 allows for multiple collaterals, seamless cross-chain implementation and a permissionless liquidity layer. As such, Kwenta that is leveraging Synthetix is frequently on par with GMX or Gains Network in daily volumes with more competitive fees, more seamless in-protocol bridging and sophisticated price impact functions. Synthetix moreover teased Infinex, a new DEX mimicking centralized exchanges but running on a noncustodial setup. As more protocols build on Synthetix, flywheel effects might come into play that in return, benfetis SNX stakers.



Derivatives – Derivatives thrive on Layer 2 solutions as user retention of the Ethereum ecosystem meets low transactions fees

Things to watch:

→ One of the most interesting areas to monitor right now is sparked by Liquid Staking. Thus, we observe substantial innovation in interest rate derivatives or swaps as well as fixed and variable rates markets (e.g. Pendle, Flashstake, Spectra or Voltz). These protocols are able convert floating interest rates into fixed interest rates or vice versa, a massive market in TradFi. where they allow to hedge large financial institutions against interest rate volatility. The global fixed yield market is massive and estimated to be worth over $128 trillion dollars. Hence, these protocols face an absolutely vast TAM.

→ For instance, Pendle's TVL went ballistic and shot up from $42m to $120m QoQ. Like many others, it utilizes vePendle tokenomics. Pendle serves as a yield-trading protocol and recently introduced Pendle Earn, a fixed-rate product tailored for mass adoption. You can now either trade yield (long or hedge yield exposure) on its platform or earn a stable rewards among volatile yields without lock-up periods. Its liquidity pools notably do not inherit IL if held to maturity.

→ On the perp side, GMX launched their V2 testnet in May inheriting a more competitive fee structure and price impact features. The new features include market orders, limit orders, stop loss orders and funding mechanisms. In addition, V2 will implement funding fees to balance long and short positions. As many forks of GMX emerged with its success, a governance proposal passed to chase a license in order to protect their market share. Given all these catalysts, we expect the perp market to be a venue of growth for the months ahead.

→ The most overlooked niche within Derivatives however are Options, GMX on its own does 10x the volume of the entire Options area. We expect DeFi options to be primed for explosive growth. While options are overall a rather complex tool, they allow for advanced trading and hedging strategies. Robinhood is a role model, doing almost 50% on their fees on the back of Options. They gamified their UI to open up the complex world of options trading to retail. Notably, Premia just launched an educational series to bootstrap adoption. We expect similar momentum senn in TradFi to hit the Derivative sector as well, especially since centralized platforms such as Deribit indicate that there is substantial demand – likely a matter of time until it takes off on-chain too. The top protocols to watch out for are Lyra, Dopex, Opyn, Premia or Hegic.

Key Metrics
Q2 – Ending June 30, 2023

GCT Top 300 Market Cap
$1.30 billion
QoQ: -18.2%

Trading Volume (30d avg.)
$66.8 billion (June)
QoQ: +4.7%

DEX to CEX Futures Dominance
2.02% dominance
QoQ: +32.8%

Fees (30d avg.)
$36.8 million (June)
Dominance -22.8%

Options Volume
$138.5 million (June)
QoQ: +21.1%

Active Daily Users (30d avg.)
4'300 (June)
QoQ: -28.3%

Top 3 by Market Capitalization	MCAP	TVL	MCAP/TVL	Fees (90d)	MCAP/Fees
Synthetix (SNX)	$876M	$483.8M	1.86	$9.5M	92.2
GMX (GMX)	$504M	$588M	0.86	$32.2M	15.75
Gains Network (GNS)	$139M	$51.9M	2.68	$4.8M	28.9

Credit – The comeback of Credit: new business models allow for more sustainable tokenomics with elevated rewards

Key Insights:

→ Credit platforms have considerably low MCAP/TVL ratios across the Sub Sector. Aave is able to attract most fees per MCAP. Aave also managed to increase its dominance outside of CDP platforms to 55.1%. While Compound lost some ground in TVL, newer protocols like Radiant and Morpho were able to attract substantial capital. Notably, Radiant's daily active users surpassed Aave multiple times in Q2. Its TVL almost rests at ATH ($277m) with an upcoming launch on Ethereum.

→ The Credit Sub Sector increased its TVL +10% QoQ, despite a decrease in core collateral assets outside of stablecoins. Mostly Liquid Staking collateral is responsible for the strong TVL performance. As such, Credit remains the highest capitalized Sub Sector by TVL across DeFi.

→ Total Active Loans across major protocols is up +13%, a major health indicator for Credit markets.

→ Aside from composability, or capital efficiency, liquidity remains the key feature for most protocols and attracting it often demands to not drive down LP revenue by taking fees from them. As such, the open nature of DeFi and less competitive barriers than TradFi result in an ever-decreasing fee revenue for protocols, a race to the bottom. Hence, plenty of protocols adjust their business models, offering a broader range of products akin to a bank without additional burden for LPs and more sustainable tokenomics with elevated rewards seen from Aave, Maker, or Curve.

→ Maker managed to heavily increase its protocol revenue in June, up 44%, ranking 5th behind Lido, dYdX, Tron and Ethereum due to an increase in MakerDAO's RWA exposure. We expect more protocols to follow that path. It's "Endgame" roadmap is also materializing with Spark, a new lending facility for DAI, allowing LST collateral, the BlockTower Andromeda upgrade, or the Smart Burn Engine deployment.

→ In the scope of exploring new business models, Aave launched its own stablecoin GHO ($6m MCAP), enabling Flashmints and depositors to borrow GHO using their collateral. So, Maker becomes a money marketlike lending facility with Spark, and Aave as well as Curve add a liquidity issuance business like Maker. Maker moreover plans to issue EtherDai, which will be pegged to ETH and backed by LSTs.

→ Similarly, Curve launched crvUSD with its Lending Liquidating AMM Algorithm (LLAMMA) that replaces liquidations with special-purpose rebalancing AMM and enables soft liquidations, arbitrage opportunities, and collateral rebalancing. Curve also made a whopping $4.3b LST trading volume so far in 2023.

Things to watch:

→ It's all about optimizing business models either by inheriting RWAs, a trillion USD opportunity, or LSTs. The key native development in the Credit Sub Sector is implementing Liquid Staking flavors into novel business models. Thus, LSTs have a growing share in most CDPs like Maker and or Aave at the cost of WETH. Users now power their borrowing with yield-generating assets alongside a massive boost in capital efficiency.

→ As most relevant Credit protocols converge to hybrid and extended business models to bootstrap revenue, their tokenomics and competitive advantages, the markets will arguably reevaluate their current market position.

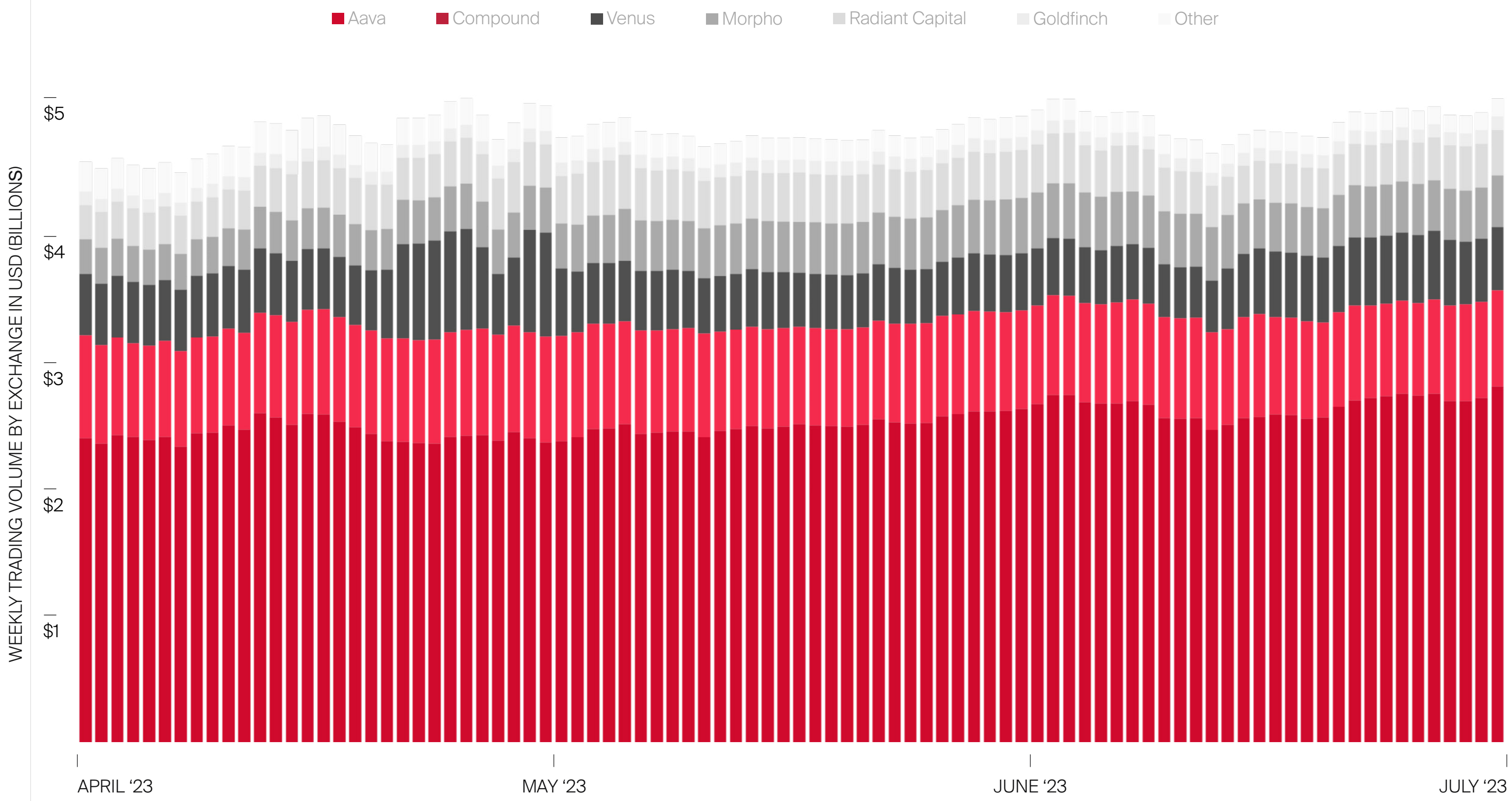
→ Frax bootstrapped a widely successful liquid staking product and revealed details about frxETH V2. V2 is tailored to prioritize performant node runners (V1 ran their own validators), hence boosting decentralization and enhance capital efficiency. They also teased their upcoming rollup which utilizes frxETH and arguably enhances FXS's tokenomics.

→ New Credit platforms like Gravita or Raft maximize the value of LSTs by borrowing against them interest-free, Tapioca and others are building omnichain platforms utilizing LayerZero.

→ Yield generating stablecoins on the back of LSTs are the most important development across DeFi, watch out for Origin DeFi, Prisma, Lybra or Liquity V2.

→ Oracle free systems like Ajna enter the space, removing a point of failure stemming from trusted intermediaries and vulnerabilities in oracle solutions.

Credit – Despite an overall decrease in value of core collateral assets outside of stablecoins, Credit managed to increase its TVL



Top 3 by Market Capitalization	MCAP	TVL	MCAP/TVL	Fees (90d)	MCAP/Fees
Aave (AAVE)	$1.1B	$6.1B	0.19	$24.0M	45.8
Maker (MKR)	$0.9B	$5.6B	0.16	$11.4M	78.9
Compound (COMP)	$0.54B	$2.3B	0.24	$7.9M	68.4

Key Metrics
Q2 – Ending June 30, 2023

GCT Top 300 Market Cap
$3.81 billion
QoQ: -3.1%

Total Active Loans (30d avg.)
$4.94 billion (June)
QoQ: +13%

Total Value Locked
15.26 billion
QoQ: +10%

Total Liquidatable
$1.8b
7d: -0.7%

Aave Dominance
55.1%
QoQ: +10.2%

Active Daily Users (30d avg.))
24'794 (June)
QoQ: -21.3%

Liquid Staking – After Shapella, the Liquid Staking sector absolutely dominates in all significant growth metrics

Key insights:

→ Deposits outpaced withdrawals heavily after Shapella with a very obvious market preference for LSTs, we saw 5m ETH net inflow into the staking contract and with it, the Liquid Staking Sub Sector (now almost 40% market share) became the fastest growing sector by far and emerged as a capital-efficient way to stake without large capital commitment and technical requirements of vanilla staking. Liquid Staking also enters other chains outside Ethereum. For instance, Lido or Ankr offers services for several chains such as Polygon or Solana. The Cosmos ecosystem also starts to embrace LST solutions.

→ Almost all key metrics are positive in the second quarter, total assets staked on Ethereum are up a whopping +36%, and 23.3% across the industry. The Ethereum staking ratio is up ~44% to 20.1% and active users of LSTs are up +18.2%.

→ The top three players are Lido, Rocket Pool and Stakewise (note that Frax is classified as Credit and would otherwise be in the top three LSTs). Lido and Stakewise have impressive MCAP/TVL metrics, Stakewise managed to capture most fees per MCAP.

→ Lido retains an overwhelming dominance with stETH receiving inflows of almost $4b in Q2. Lido boasts the highest supply, liquidity, fees, and network effects when it comes to integrations. They currently command a 77.2% market share of LSTs and have a TVL of $15b. Notably, stETH liquidity is declining on Curve and Balancer, indicating a structural utilization shift in LSTs to Credit platforms and other venues, more below.

→ Rocket Pool and other competitors also saw impressive growth. They even outgrew Lido, since its dominance is slightly down (-0.6%) in the LST Sub Sector. Overall, all decentralized solutions have seen growth at the expense of CEXs. The fastest growing Liquid Staking providers to watch are Ether.fi, Stader and Swell. Frax Ether has emerged as another fast growing player mainly due to their best in class APR stemming from additional returns via Curve and Convex. As competition grows, we will arguably see protocols pivoting on their current taker fees to attract more capital.

Things to watch:

→ While Lido solidified its market lead, competitors are entering the space en masse trailing the hottest narrative in '23. If ETH hits a 50% staking ratio and hence parity with the industry average, it will be a $4-5b annual revenue opportunity for LST and LSTfi protocols alike where the application layer is recently outgrowing the staking layer. Meanwhile, Liquid Staking protocols, being highly accessible and capital efficient will likely trigger a paradigm shift where yield bearing LSTs becomes the baseline collateral across DeFi.

→ As such, we observe a new wave of DeFi primitives building on rather predictable, low-risk real yield, an emerging area known as LSTfi. These protocols bake ETH's nominal yield into their products by integrating LSTs into lending and CDP protocols, DEXs, interest rate swaps and derivatives, LST aggregators, index LSTs and other innovative platforms (be aware of associated risks such as slashing, third party and smart contract risks).

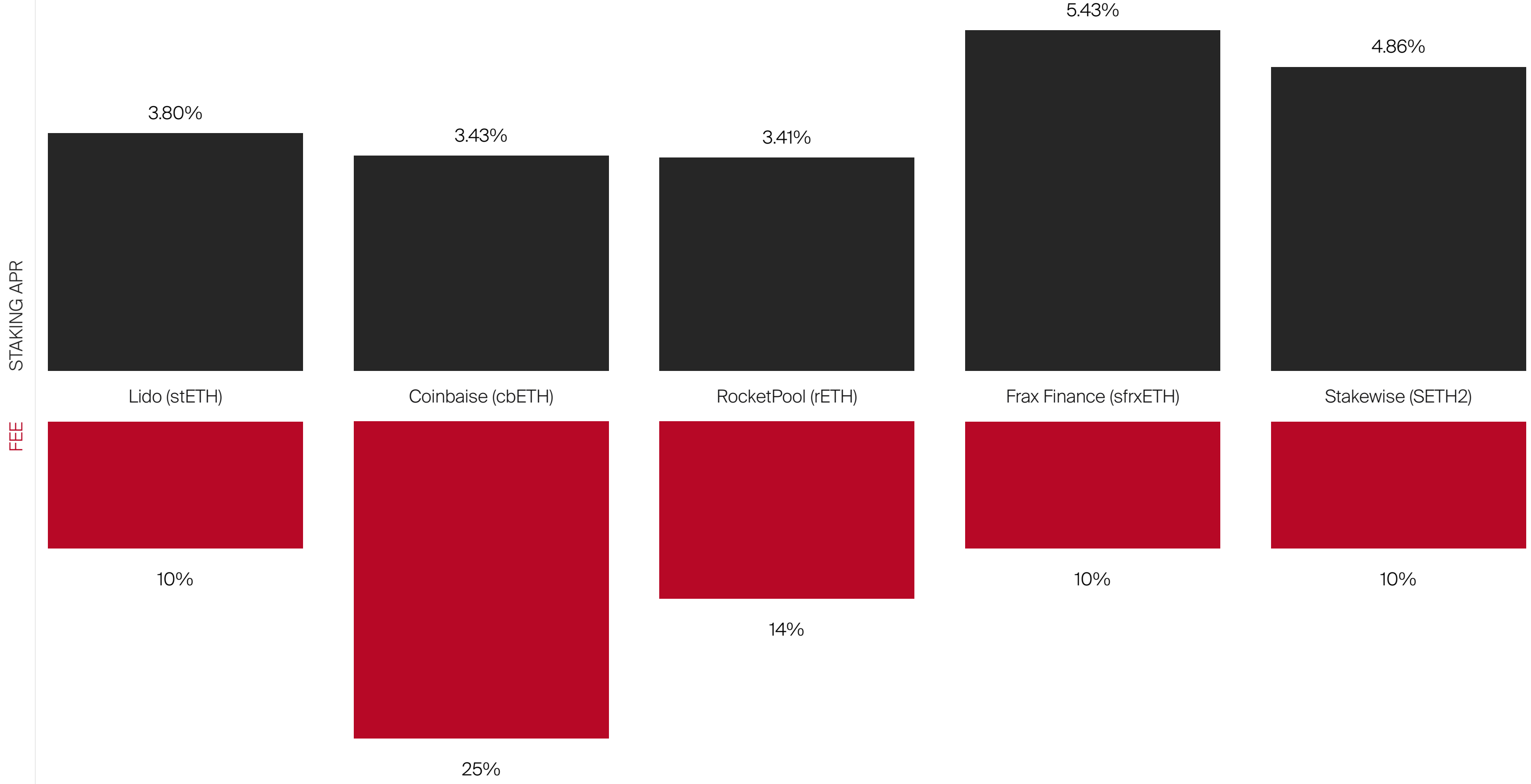
→ As we project more tailwind for the Liquid Staking Sub Sector (validator activation queue still at 35 days pending), we expect LSTfi protocols to see explosive innovation and growth especially since the TAM is currently resting at a mere ~4.3% (TVL of LSTs).

→ One entirely new primitive to watch is restaking. It offers pooled security and a marketplace with validators and services as it allows staked assets to be restaked. These assets then secure additional services such as oracles, relays or sequencers. It increases capital efficiency and staking rewards, yet also comes with additional risk akin to rehypothecation. As restaked assets are non-liquid, some projects such as Stader have already explored liquid restaking solutions similar to LSTs. EigenLayer, the leading protocol, just catapulted to $90m TVL and showed impressive social metrics. EigenLayer enables restaking for both ETH and LSTs.

→ In our view, decentralized and LST backed stablecoins (e.g. Lybra, Prisma, Liquity V2) will become a core pillar of DeFi and even a major catalyst for broad crypto adoption. Low risk, yield bearing stablecoins minted via CDPs at peak capital efficiency will now compete with centralized stablecoins (USDC/USDT) and on/off-chain RWAs such as bonds. crvUSD and Lybra alone make up for ~$500m in TVL. Gravita, Raft, Lybra, Prisma or Liquity V2 are building an entirely new class of CDPs and with it, we inch closer solving the stablecoin trilemma.

→ The benefits of integrating a yield bearing asset with semi stable rewards have deep second order effects. With ETH being gradually replaced by LSTs as prime collateral, LSTs and the emerging ecosystem of Dapps surrounding them thus have a transformative effect across DeFi. With fast paced innovation, a huge TAM and their centralized competitors facing headwinds, we expect explosive growth for the Sub Sector.

Liquid Staking – After Shapella, the Liquid Staking sector absolutely dominates in all significant growth metrics



Top 3 by Market Capitalization	MCAP	TVL	MCAP/TVL	Fees (90d)	MCAP/Fees
Lido (LDO)	$2.0B	$15.0B	0.14	$162M	12.3
Rocker Pool (RPL)	$0.7B	$2.3B	0.44	n.a.	n.a.
Stakewise (SWISE)	$0.02B	$0.18B	0.13	$2.3M	10

Key Metrics
Q2 – Ending June 30, 2023

GCT Top 300 Market Cap
$2.56 billion
QoQ: -13.7%

Total Assets Staked (Ethereum)
$19.75 billion
QoQ: +36.2%

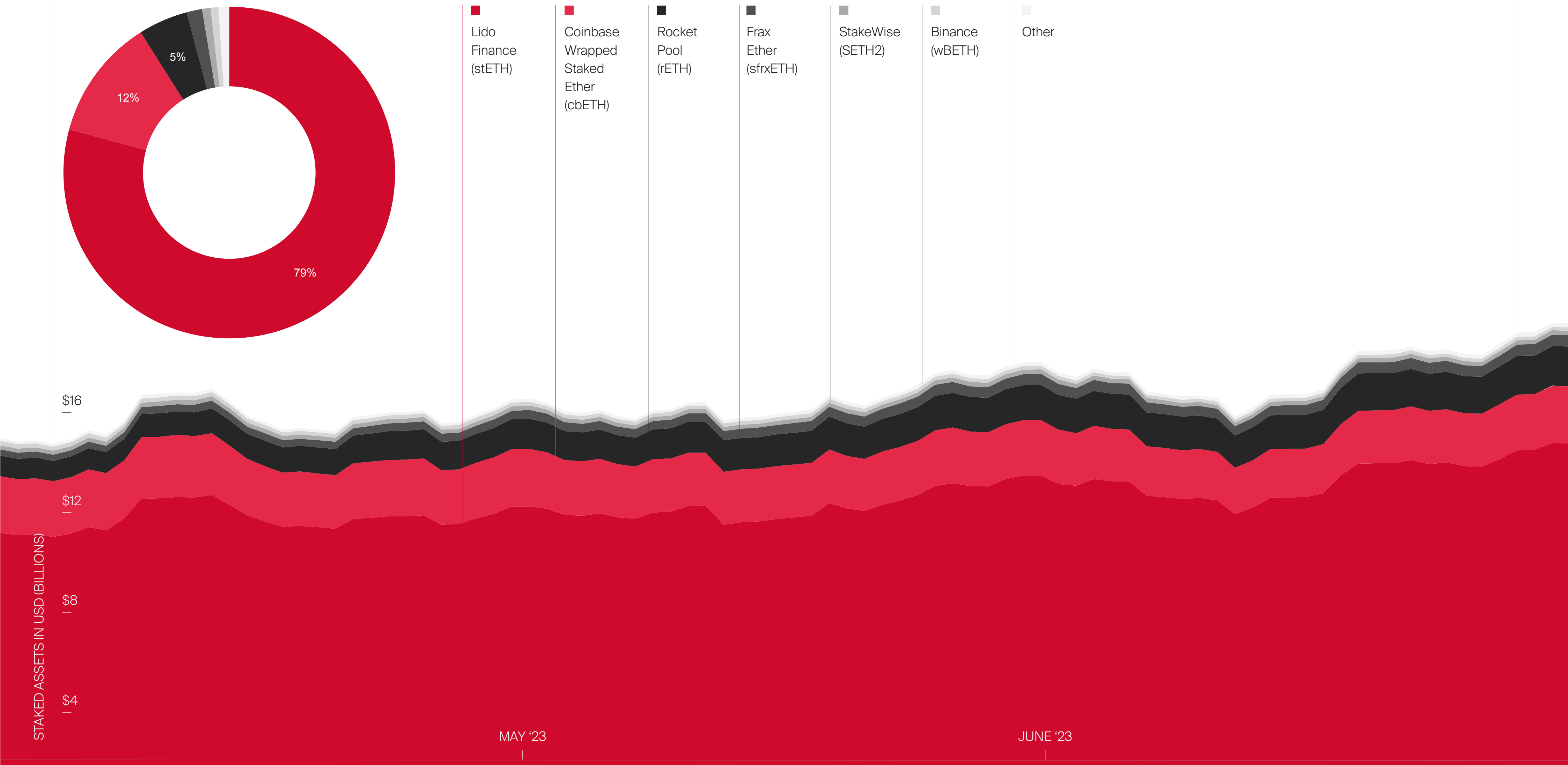
Lido Dominance Overall / LSTs
32% / 77.2%
QoQ: +18.9% / -0.6%

Total Assets Staked Across Industry
7103.5 billion
QoQ: +23.3%

ETH Staking Ratio
20.1%
QoQ: +43.7%

Active Daily Users (30d avg.)
752 (June)
QoQ: +18.2%

Liquid Staking – New LSTfi primitives such as Stablecoins, Restaking and Yield Derivative protocols emerge



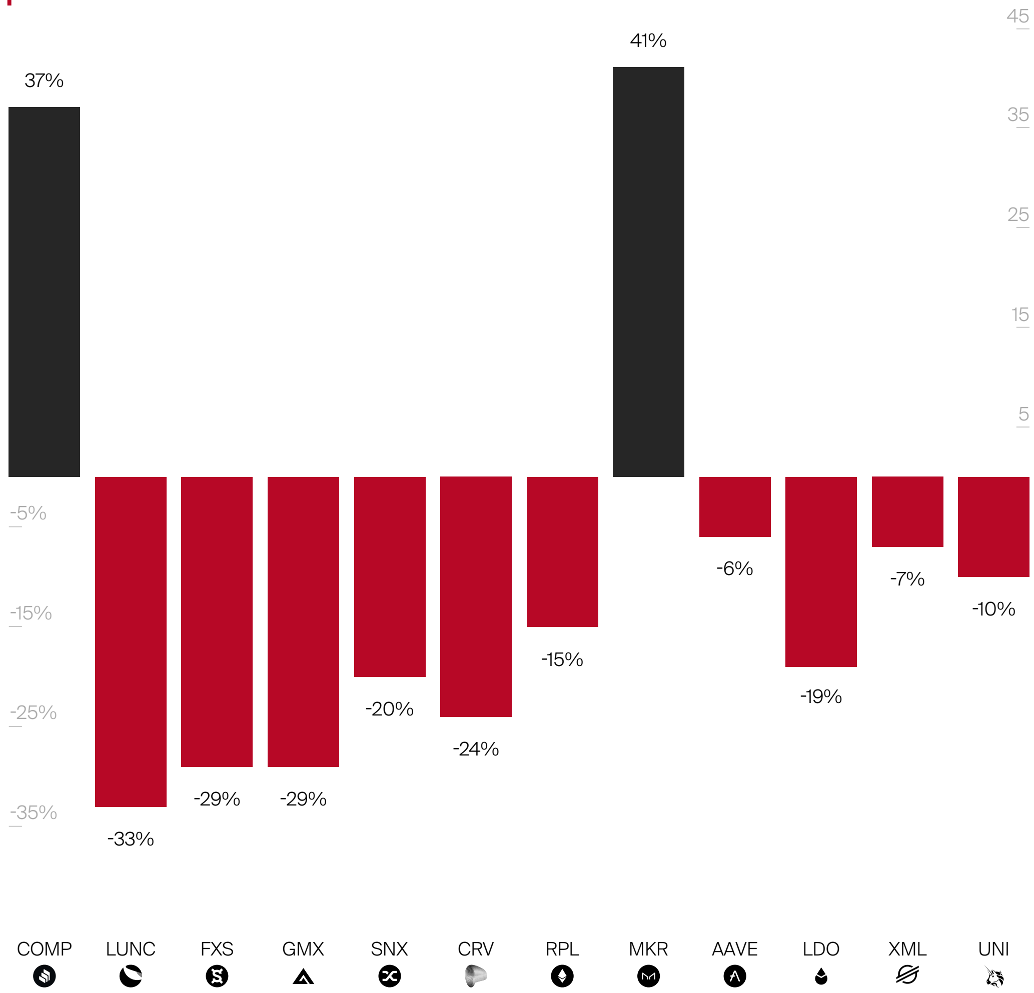
(DATA) CRYPTOQUANT, PRISMA, TOKENTERMINAL STAKING (CHART) BITCOIN SUISSE RESEARCH

Key Metrics of Top DeFi Protocols

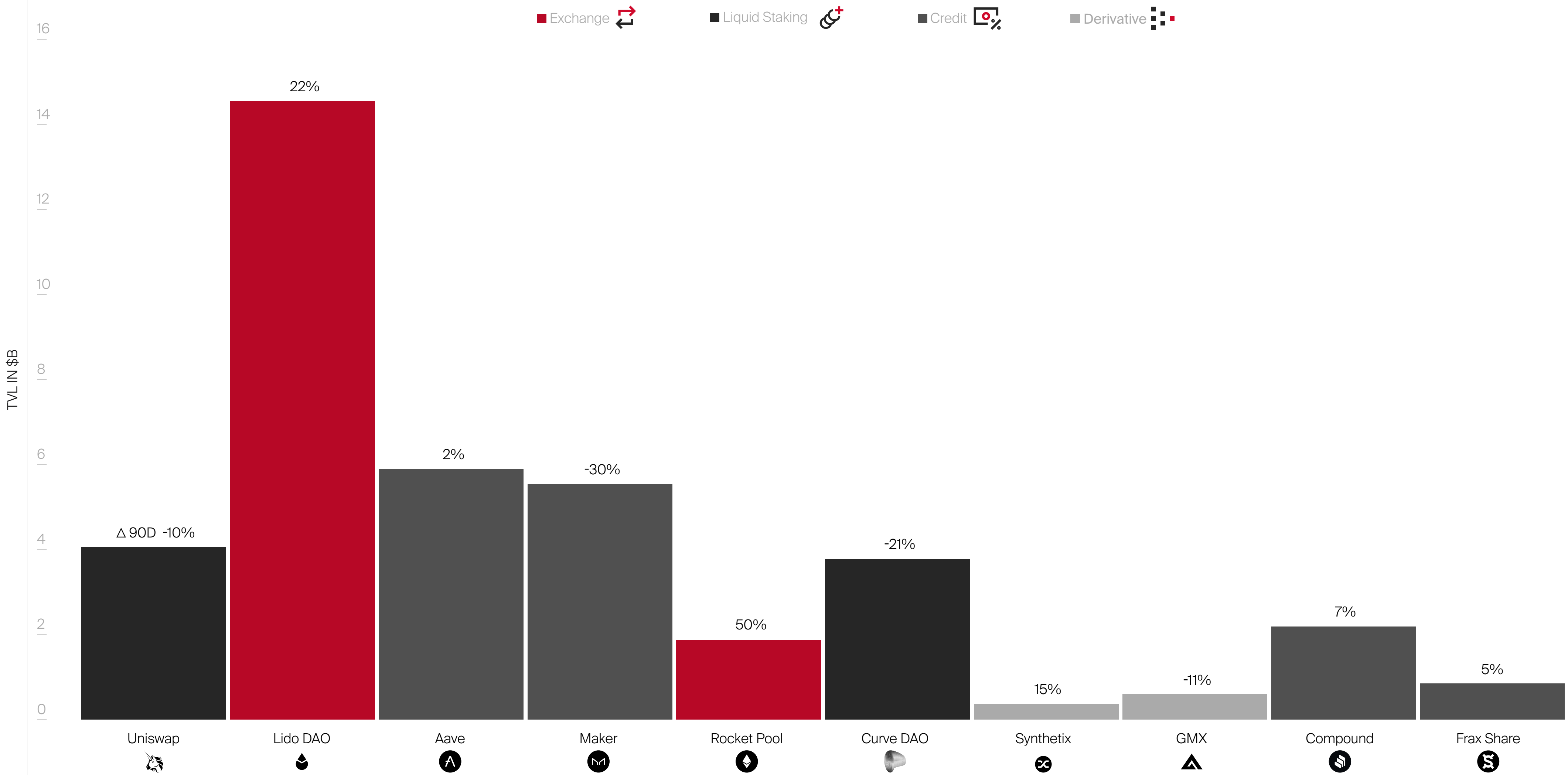
Curve DAO pushes the multi-chain boundaries with most deployed chains while Frax excels with the pace of launching novel and sophisticated products

The top 12 DeFi protocols across Sub Sectors are rather diverse (2x Exchange, 2x Payment Service, 2x Liquid Staking, 4x Credit, 2x Derivative) indicating demand in any of the previously mentioned Sub Sectors. Some of the DeFi Sub Sectors such as Asset management, Insurance or Prediction Markets are not present at all among the top protocols. It's interesting to see that most of the most capital heavy protocols chose to deploy on multiple chains in order to leverage network effects and thwart competition on chains outside their genesis chains. Based on refined and optimized business models, especially veteran protocols managed to achieve a good performance across key metrics and market valuation in Q2. As such, protocols like Maker and Compound surprise with an outstanding performance after a harsh multi-month decline in their MKR/ETH and COMP/ETH ratio.

Protocol	Ticker	Subsector	Launch	MCAP	Price	Deployed On
Uniswap	UNI	Exchange	2018	$4.3b	$5.21	
Stellar	XLM	Payment Service	2015	$2.65b	$0.098	
Lido DAO	LDO	Liquid Staking	2020	$1.75b	$1.90	
Aave	AAVE	Credit	2020	$1.1b	$70.45	
Maker	MKR	Credit	2017	$0.96b	$942	
Rocket Pool	RPL	Liquid Staking	2021	$0.73b	$37.2	
Curve DAO	CRV	Exchange	2020	$0.56b	$0.84	
Synthetix	SNX	Derivative	2018	$0.87b	$2.1	
Terra Classic	LUNC	Payment Service	2019	$0.49b	$0.00008	
GMX	GMX	Derivative	2021	$0.54b	$0.56.2	
Compound	COMP	Credit	2018	$0.54b	$61.4	
Frax Share	FXS	Credit	2020	$0.40b	$6.34	



Highest TVL by protocol is situated in the Liquid Staking Sub Sector, critical as it poses centralization risks for Ethereum's validator set



(DATA) TOKEN TERMINAL, (CHART) BITCOIN SUISSE RESEARCH

The Author thanks Vinicius Bloise for the valuable data support.

at time of writing, the author holds ETH, ARB, MATIC, AVAX, SWISE, RPL, GMX, PREMIA.

Designed by Jonas Leupe for Bitcoin Suisse.