

CRYPTONATIVE ECONOMY REPORT H1-2023

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Abstract

This report looks into the structure of user paid onchain fees including blockchain protocols such as Ethereum, BNB-Chain, Bitcoin and dApps or onchain protocols such as AAVE, OpenSea, etc.

The goal of this report is to gain a comprehensive understanding of the economic demand for such services within this nascent and growing parallel economy we tend to call the Cryptonative economy.

Importantly, the effort here seeks to uncover the true patterns of onchain service usage and real revenue generation in the crypto industry, providing relevant insights even in a time of perceived decline in interest in cryptocurrencies and a prevailing bear market.

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1. Introduction

The Cryptonative economy report intends to uncover the actual economic demand for using various blockchains and various dApps as services, so essentially it's supposed to provide a comprehensive data overview about the onchain generated fees during the first half of 2023.

The goal of the report is to prove or disprove the existence of a self sufficient crypto economy or ecosystem, which provides enough value to its users so they are willing to accept the payment of a fee for both the blockchain transaction itself and the potential use of an onchain (smart contract) based protocol or a service. Such fees have to be paid entirely onchain, yet are not limited to a particular cryptocurrency or token.

At PWNDAO, cryptonatives are our primary target users and thus it's critical for us to understand their onchain economic behavior. In order to be able to distinguish real traction in terms of protocol generated revenue versus user growth from over-hyped token pumps and misaligned non-real-user captures through short-term incentives. As cryptonatives ourselves, we see it as our duty to further contribute to the ecosystem by sharing data and findings with the wider community.

The report is targeting intermediate crypto enthusiasts and professionals working in the cryptocurrency space. A base-level familiarity with the various protocols and dApps is assumed (thus not further explained in the report). Beginners in the cryptocurrency industry are advised to look up the industry specific terms and further research the functionality of the various protocols and dApps mentioned throughout the report.

The primary dataset comes from the Token Terminal, the full data sheet is provided as a public annex to this report (1). Our data has been cross-checked using Dune reports and Defillama.

Categories in section 3 are sorted by the amount of fees generated since 2013 from the highest to the lowest. In the last edition of our Cryptonative economy report (PWN) (2), we split the fees generated by the top 20 dApps according to the chain the fees were generated on. To keep the report concise, it focuses on fees generated without detailing the chain the fee was generated on. The report focuses on 149 projects featured by the Token Terminal. All the figures presented in the report are in millions of dollars.

2. Overall fees

Figure 1 shows the monthly evolution of onchain fees generated per category. Looking at Figure 1, we might deduct the following:

- The bottom of the bear market is behind us. From January to June 2023, the month with the least generated fees is January 2023, we could state that fees are in an ascending pattern.
- The selected projects generated 33% more in fees in Q2 than they did during Q1-2023.

Overall M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Blockchains (L1)	186	266	308	386	696	301	82%
Exchanges (DEX)	55	84	100	70	78	40	-21%
NFT marketplaces	68	56	35	23	15	14	-67%
Lending	13	16	25	23	21	19	13%
Derivatives	37	39	52	48	30	36	-10%
Asset Management	19	20	21	20	18	15	-11%
Liquid staking	34	37	50	51	66	50	39%
Stablecoin issuers	4	4	5	4	4	5	12%
Blockchains (L2)	3	5	9	16	20	9	153%
Infrastructure	10	10	11	8	12	6	-17%
Bridges	1	1	2	3	2	2	72%
total	430	538	617	652	961	498	33%

Figure 1: Overall fees per categories

3. Fees per category

In this section we will detail the following categories: Blockchains (L1), Decentralized exchanges (DEX), NFT marketplaces, Lending, Derivatives, Asset management, Liquid staking, Stablecoin issuers, Layer 2s, Infrastructure, and Bridges.

As mentioned, protocols/dApps in section 3 are sorted by the amount of fees generated since 2013 from the highest to the lowest.

Monthly generated fees are compared from Q1-2023 to Q2-2023 in the column "Q2-2023 vs Q1-2023". In this column, some projects are marked as " \bowtie ", which means that the projects were not launched in the beginning of 2023.

3.1. Blockchains (L1)

Unsurprisingly, the L1 Blockchains category generated the most onchain fees since 2013. As shown by Figure 2, Q2-2023 compared to Q1-2023 increased by 82%. There were two main trends.

First, there has been a transfer of transactions from L1s to L2s, as you will see in Figure 15.

Second, there is currently a surge in Bitcoin transactions enabled by the ordinals (Nelson, 2023) (3).

Blockchains (L1) M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Ethereum	116	161	180	242	448	157	85%
Bitcoin	8	14	23	23	126	38	311%
Filecoin	2	1	5	5	4	4	65%
BNB Chain	17	20	21	20	19	13	-7%
Tron	39	62	72	86	92	83	51%
Avalanche	1	1	1	2	1	1	148%
Solana	1	1	1	1	1	1	-6%
Fantom	0.2	0.3	0.4	1	0.3	0.2	26%
Cardano	0.3	0.2	0.2	0.2	0.3	0.3	11%
Dogecoin	0.1	0.1	0.1	0.2	0.1	0.1	75%
Litecoin	0.03	0.04	0.03	0.03	0.04	0.04	7%
MultiversX	0.04	0.04	0.1	0.04	0.04	0.03	-23%
Gnosis Chain	0.002	0.002	0.003	0.002	0.003	0.004	37%
NEAR Protocol	0.04	0.04	0.04	0.04	0.03	0.02	-20%
Polkadot	0.04	0.04	0.04	0.03	0.03	0.02	-32%
Tezos	0.1	0.03	0.01	0.01	0.01	0.01	-82%
Internet Computer	0.01	0.01	0.01	0.01	0.02	0.01	64%
Cosmos Hub	0.05	0.1	0.1	0.1	0.05	0.04	-15%
Algorand	0.01	0.01	0.01	0.005	0.004	0.003	-47%
Zcash	0.0005	0.0005	0.0004	0.0004	0.001	0.001	89%
Polygon	2	6	4	5	4	3	-3%
Total	186	266	308	386	696	301	82%

Figure 2: L1s fees per project

3.2. Decentralized exchanges (DEX)

Figure 3 shows the evolution of onchain fees generated by Decentralized Exchanges. Between Q2-2023 and Q1-2023, this category has seen a 21% decline. Uniswap maintained consistently the strongest position, including one of the lowest percentage declines in the category. The main trend in the DEX category is deployment to alternative chains (Token Terminal, 2023) (4). The increased competition among market players can be interpreted as a sign of market maturity.

Exchanges (DEX) M\$							
	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2 0 23
							VS
							Q1-2023
Uniswap	36	57	71	47	59	28	-18%
PancakeSwap	8	10	10	10	8	5	-23%
SushiSwap	3	7	6	5	5	1	-33%
Trader Joe	2	2	4	3	2	2	-19%
QuickSwap	1	1	1	1	1	1	-41%
SpookySwap	1	1	1	0.3	0.2	0.2	-67%
Biswap	1	1	1	0.5	0.4	0.5	-37%
Bancor	0.2	0.2	0.2	0.2	0.1	0.1	-46%
Tokenlon	1	1	1	1	1	1	7%
Osmosis	1	1	1	0.5	0.4	0.3	-49%
Pangolin	0.3	0.2	0.2	0.1	0.1	0.1	-62%
ApeSwap	0.1	0.1	0.2	0.1	0.1	0.1	-55%
1inch	0.5	0.3	1	0.3	0.3	0.1	-50%
CoW Protocol	0.3	1	1	1	1	0.3	34%
KyberSwap	1	1	1	1	0.5	1	-26%
DOD0	0.03	0.1	0.05	0.03	0.02	0.02	-49%
xExchange	0.2	0.2	0.3	0.2	0.1	0.1	-41%
IDEX	0.1	0.1	0.04	0.04	0.02	0.01	-67%
AirSwap	0.1	0.1	0.1	0.1	0.1	0.05	-38%
Clipper	0.05	0.05	0.1	0.03	0.02	0.01	-59%
Total	55	84	100	70	78	40	-21%

Figure 3: Decentralized Exchanges fees per project

3.3. NFT marketplaces

Figure 4 shows that NFT marketplaces are transitioning their models. This category became more dynamic with the launch of Blur and the subsequent changes in Opensea's pricing (Reeves, 2023) (5). It primarily led to a reduction in fees and a change in the structure of royalties.

NFT marketplaces M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
0penSea	36	24	9	9	6	6	-69%
LooksRare	2	2	1	1	1	0.5	-62%
Manifold.xyz	22	14	8	4	2	1	-85%
SuperRare	1	0.5	0.4	0.3	0.2	0.2	-55%
Blur	3	11	13	7	4	5	-41%
X2Y2	2	2	1	1	0.4	0.3	-73%
Foundation	0.2	0.2	0.1	0.1	0.1	0.1	-50%
Rarible	0.01	0.004	0.01	0.01	0.01	1	4927%
NFTX	0.1	0.1	0.1	0.1	0.1	0.04	0%
Zora	1	2	1	1	1	1	-47%
Art Gobblers	1	0.3	0.3	0.2	0.1	0.1	-67%
Sound.xyz	0.1	0.3	0.2	0.2	0.02	0.005	-69%
Sudoswap	0.3	0.3	0.1	0.1	0.1	0.04	-68%
Catalog	0.003	0.004	0.003	0.001	0.002	0.004	-37%
Botto	0.1	0.04	0.1	0.03	0.04	0.03	-62%
XOXNO	0.1	0.1	0.1	0.1	0.1	0.1	-27%
Lens Protocol	0.01	0.04	0.03	0.03	0.02	0.01	-27%
Quix	0.01	0.01	0.001	0.002	0.001	0.0002	-86%
Total	68	56	35	23	15	14	-78%

Figure 4: NFT marketplaces fees per project *Rarible steep increase is a catch up in the database

3.4. Lending

Figure 5 shows that the lending category grew by 54% quarter-on-quarter. Aave, as a main leader in the category, had a 12% increase from Q1-2023 to Q2-2023. Euler fees decreased can be attributed to a hack the platform went through in April 2023.

Lending M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Aave	6	6	10	7	8	8	12%
Compound	2	2	3	2	3	2	5%
Venus	2	2	6	6	4	2	19%
BENQI	0.1	0.2	0.2	0.2	0.2	0.2	7%
TrueFi	0.2	0	0	0	0.02	0.1	-10%
Goldfinch	1	1	1	1	1	1	4%
Radiant Capital	0.5	1	2	2	2	2	88%
Morpho	1	1	2	2	2	2	44%
Euler	1	1	0.4	0	0	0	-100%
BendDA0	1	1	1	1	1	1	-17%
Notional Finance	0.03	0.03	0.04	0.01	0.002	0.01	-82%
Sonne Finance	0.2	0.3	1	0.4	0.3	0.3	-9%
Gearbox	0.1	0.1	0.3	0.1	0.1	0.2	-16%
Total	13	16	25	23	21	19	54%

Figure 5: Lending fees per project

The Lending landscape is evolving as the NFT Lending subcategory is emerging. Figure 6 shows that NFT Lending grew at least fourfold since the beginning of the year. The main actors in terms of volume are NFTfi and Blur (Haig, 2023) (6).

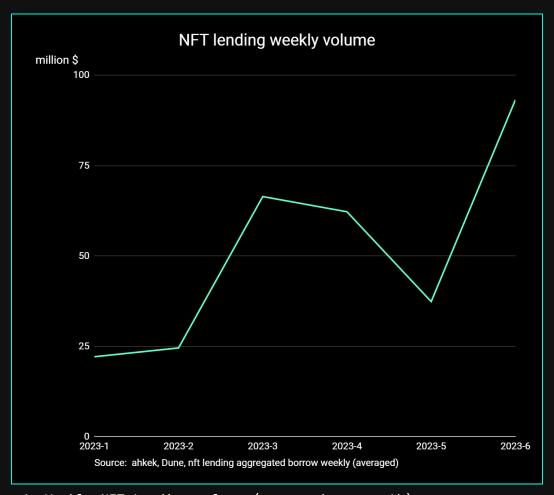


Figure 6: Weekly NFT Lending volume (averaged per month)

Figure 6 was made using a Dune dashboard (Ahkek, 2023) (7).

3.5. Derivatives

Figure 7 is showing the fees generated by Derivatives projects per month. Both major players (dYdX and GMX) experienced a decrease in generated fees, but significant QoQ growth can be seen in Level Finance, MUX and Cap.

Derivatives M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
dYdX	8.7	8.3	10.2	7.4	4.9	6.2	-32%
GMX	13.3	18.8	18.6	17.2	7.6	13.7	-24%
Synthetix	1.3	1.1	5.1	3.6	3.1	2.2	19%
Perpetual Protocol	0.6	0.7	0.9	1.0	1.0	0.8	29%
SynFutures	4.0	0.3	0.0	0.0	0.0	0.0	-100%
Lyra	3.3	1.3	3.7	2.0	1.9	1.5	-35%
Level Finance	0.4	2.6	4.6	8.5	4.9	5.1	145%
Gains Network	1.9	2.3	2.6	1.9	1.4	1.7	-25%
Kwenta	0.7	0.8	2.5	1.8	1.8	1.4	25%
Premia	0.3	0.3	0.4	0.4	0.3	0.3	-1%
MUX	0.3	0.3	0.8	1.5	1.2	1.6	219%
Hegic	0.9	0.7	0.7	0.6	0.4	0.3	-41%
Cap	0.1	0.1	0.6	0.6	0.4	0.3	66%
Mummy Finance	0.2	0.4	0.7	0.7	0.5	0.3	10%
Pika Protocol	0.2	0.2	0.1	0.1	0.1	0.1	-42%
Mycelium	0.3	0.1	0.1	0.1	0.0	0.0	-77%
Metavault.Trade	0.1	0.1	0.2	0.1	0.1	0.1	-28%
Solv Protocol	0.0	0.0	0.0	0.0	0.0	0.0	-70%
UniDex	0.1	0.1	0.1	0.0	0.0	0.0	-61%
ApolloX	0.0	0.0	0.0	0.0	0.2	0.6	∞
total	36.6	38.5	51.9	47.6	30.0	36.4	-10%

Figure 7: Derivatives fees per project

3.6. Asset Management

Figure 8 shows that the Asset Management category is down 11 percent from Q1-2023 to Q2-2023.

Asset Management M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Convex Finance	15	16	16	16	14	12	-9%
Ribbon Finance	0.5	1	1	0.4	0.3	0.3	-47%
Alchemix Finance	0.4	0.2	0.4	0.3	0.2	0.2	-29%
Aura Finance	2	2	3	2	2	2	-14%
Idle Finance	0.2	0.2	0.1	0.04	0.1	0.1	-69%
Gamma Strategies	0.04	0.4	1	1	1	1	42%
Tokemak	0.02	0.03	0.03	0.02	0.01	0.005	-57%
Index Cooperative	0.1	0.1	0.1	0.1	0.1	0.1	-5%
PoolTogether	0.03	0.02	0.02	0.03	0.01	0.02	-5%
Thetanuts	0.1	0.1	0.2	0.1	0.1	0.1	-10%
Unipilot	0.1	0.1	0.2	0.1	0.1	0.02	-43%
Cryptex	0.00000	0.0003	0.001	0.0002	0.001	0.00002	-28%
Alongside	0.001	0.002	0.002	0.002	0.002	0.0003	21%
Total	19	20	21	20	18	15	-11%

Figure 8: Asset Management fees per project

3.7. Liquid staking

Figure 9 highlights the strong performance of liquid stakers, the fees generated by this category have increased 39% in between Q1-2023 and Q2-2023.

Liquid staking M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Lido Finance	34	36	48	50	64	48	38%
StakeWise	1	1	1	1	1	1	36%
Frax Ether	0.3	1	1	1	1	1	109%
Total	34	37	50	51	66	50	39%

Figure 9: Liquid stakers fees per project

3.8. Stablecoin issuers

According to Figure 10, the quarterly fees generated by stablecoin issuers increased by 12% from Q1-2023 to Q2-2023. Figure 11 highlights the decrease in total stablecoin supply, from Q2-2022 to Q2-2023 the total supply decreased by about 40%. Due to limitations mentioned at the end of the report, issuers of USDC and USDT are not listed in this table.

Stablecoin issuers M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
MakerDA0	3	3	3	3	3	4	18%
Abracadabra.money	0.3	0.3	0.5	0.4	0.4	0.5	10%
Liquity	0.4	0.1	1	0.2	0.1	0.1	-67%
Origin Protocol	0.1	0.1	0.2	0.1	0.2	0.3	47%
0vernight	0.1	0.3	0.4	1	1	0.3	83%
Reflexer	0.02	0.01	0.02	0.01	0.004	0.004	-67%
Vesta Finance	0.1	0.1	0.1	0.02	0.01	0.01	-84%
Total	4	4	5	4	4	5	12%

Figure 10: Stablecoin issuers fees per project

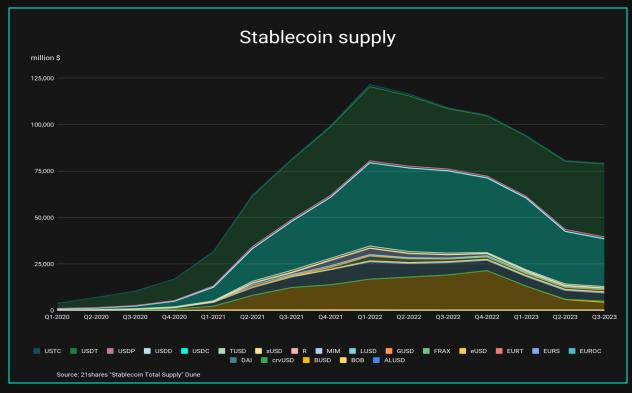


Figure 11: Stablecoin supply on Ethereum

Figure 11 was made using a Dune dashboard (21shares, 2023) (8).

3.9. Layer 2s

As shown in Figure 12, Layer 2s is the second category in terms of fee growth leading with Arbitrum which generated 23 M\$ in fees in Q2-2023 compared to 10 M\$ in Q1-2023. Starknet had a quarter-on-quarter growth of 729%.

Layer 2s M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Arbitrum	1	3	6	9	10	4	129%
OP Mainnet	2	2	2	4	6	2	94%
Starknet	0.1	0.2	1	2	4	2	729%
Total	3	5	9	16	20	9	153%

Figure 12: L2s fees per project

3.10. Infrastructure

In Figure 13, we can note a 17% decrease in fees generated by the Infrastructure category from Q1-2023 to Q2-2023.

Infrastructure M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Ethereum Name Service	2	2	2	2	1	2	-18%
Flashbots	7	7	8	5	9	3	-20%
Helium	0.3	0.2	0.3	0.1	0.1	0.1	-58%
Tornado Cash	0.1	0.1	0.2	0.2	0.3	0.2	55%
DeFi Saver	0.1	0.1	0.2	0.2	0.2	0.3	54%
Instadapp	0.4	0.4	1	1	1	0.4	23%
Livepeer	0.03	0.03	0.03	0.03	0.02	0.02	-20%
The Graph	0.03	0.1	0.03	0.04	0.02	0.02	-35%
Kleros	0.001	0.002	0.002	0.002	0.0004	0.001	-42%
Rook	0.002	0.005	0.01	0.004	0.0001	0.002	-59%
Toucan Protocol	0.01	0.002	0.004	0.004	0.001	0.0002	-56%
Zerion	0.01	0.01	0.03	0.03	0.03	0.02	73%
Swarm	0.0001	0.01	0.04	0.0002	0.003	0.01	-71%
Total	9.6	9.9	10.9	7.7	11.6	6.0	-17%

Figure 13: Infrastructure fees per project

3.11. Bridges

As shown by Figure 14, the Ren bridge generated fees decreased dramatically after being accused of money laundering last year (Katte, 2022) (9). The winner of the category is the Stargate bridge, it's a decentralized bridge on top of the Layer Zero protocol which had a 357% increase in quarterly generated fees from Q1-2023 to Q2-2023.

Bridges M\$	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Q2-2023 vs Q1-2023
Ren	0.002	0.001	0.002	0.0004	0	0	-91%
Synapse	0.3	1	1	0.5	0.4	0.2	-33%
Hop Protocol	0.2	0.3	1	0.6	0.6	0.2	19%
Stargate	0.1	0.2	1	1	1	2	357%
Across	0.1	0.1	0.3	0.3	0.2	0.1	3%
Connext	0.003	0.01	0.01	0.01	0.02	0.01	46%
Allbridge Core	0.0005	0.005	0.02	0.001	0	0	-94%
total	1	1	2.3	3	2.4	2.3	72%

Figure 14: Bridges fees per project

4. Layer 2 contract fees

L2s are having a tremendous impact on the user experience. The increase in fees generated by L2s as shown in figure 15 is a clear signal of a spreading adoption. Figure 15 shows the percentages of gas fees spent on L2 contracts compared to the total maximum daily available Ethereum gas. We take into account the 37 contracts using the most gas*. Over the last 5 quarters, the amount of gas spent on L2s went from 1.7% to 9.1%.

Quarter	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q2-2023 vs Q1-2023
% gas used L2 / L1	1.7%	1.9%	3.4%	5.1%	9.1%	80%

Figure 15: Table of percentages of gas used by L2s on Ethereum per quarter

*The prover contracts included: Arbitrum, Optimism, dydx, ZkSync Lite, StarkNet, Arbitrum Nova, Apex, ZkSpace, Boba Network, Metis Andromeda, Rhino.fi, Aztec, PolygonHermez, ImmutableX, Sorare, Loopring, ZkSpace, Aztec connect.

5. Top Blockchains (L1) and Top dApps

In Figure 16, we can see that the top performing Blockchains (L1) in H1-2023 are: Ethereum, Tron, Bitcoin, BNB Chain, and Filecoin. From 2022 to H1-2023, Avalanche was replaced by Filecoin in the top 5 Blockchains (L1).

Blockchains (L1)	T0P5 2022	fees generated TOP5 (musd) H1-2023		fees generated (musd)	
1	Ethereum	4305	Ethereum	1304	
2	BNB Chain	417	Tron	433	
3	Tron	334	Bitcoin	233	
4	Bitcoin	142	BNB Chain	109	
5	Avalanche	95	Filecoin	21	

Figure 16: Top performing Blockchains (L1)

In Figure 17, we can see that the top performing dApps in H1-2023 are: Uniswap, Lido Finance, GMX, Opensea, Convex Finance, Manifold.xyz, PancakeSwap, dYdX, Aave, and Blur. From 2022 to H1-2023, LooksRare and SushiSwap were replaced by Blur and Manifold.xyz in the top 10 dApps.

RANK	2022	fees generated (musd)	H1-2023	fees generated (musd)	
1	0penSea	1,591	Uniswap	300	
2	Uniswap	793	Lido Finance	279	
3	LooksRare	604	GMX	89	
4	Convex Finance	364	0penSea	89	
5	Lido Finance	325	Convex Finance	89	
6	PancakeSwap	319	Manifold.xyz	51	
7	Aave	190	PancakeSwap	51	
8	SushiSwap	134	dYdX	46	
9	dYdX	128	Aave	45	
10	GMX	111	Blur	42	

Figure 17: Top performing dApps

6. Conclusion

If for simplicity we doubled the Q1-2023 and Q2-2023 fees to estimate the total fees collected in 2023, Figure 18 would be showing the total onchain fees generated in 2023. This year would then be the new low for the current bear market cycle as it would have generated 36% lower fees compared to 2022.

Year	2019	2020	2021	2022	2023	YoY	2023 vs 2021
Fees from selected projects (M\$)	195	1,415	21,364	11,512	7,422	-36%	-65%

Figure 18: Forecasted fees for the Cryptonative economy for the year 2023

Please note, Figure 18, is only speculation and should not be used for any future predictions. The state of the Cryptonative economy is evolving and hard to predict.

The Cryptonative economy is not uniform. There are a variety of protocols and dApps serving distinct user groups, following different trajectories in terms of market demand. As we have seen above, Layer 2 blockchains and Liquid staking providers are currently leading the rejuvenation of the Cryptonative economy. The competition in the DEX and NFT marketplaces categories is lowering the onchain fees. This trend should be interpreted positively as the price for value for onchain services is improving.

All things considered, in H1-2023 the bear market continues to persist, and the cryptonative economy is experiencing a contraction.

7. Limitations

The report in its current form does not include any of the following revenue sources which could be considered part of the Cryptonative economy based purely on relation to the industry:

- Fees from centralized entities (Such as Coinbase, Kraken, Binance, Circle etc.)
- 2. Crypto-related SaaS (such as Alchemy, Moralis, KYC services)
- 3. Mining rewards (as such not considered to be "paid by a user" revenue)
- 4. Token farming (as such not considered to be "paid by a user" revenue)
- 5. Developer or Consulting services
- 6. Bounties or Grants
- 7. onchain asset purchases (physical or digital goods sales)
- 8. DAO compensations are not included

Further limitations:

- 1. This report is denominated in USD
- 2. We didn't detail the Gaming, Prediction market and Insurance categories as there were too few projects in each category to bring a truthful perspective over the category
- 3. The landscape of the Lending category is also limited as we are missing a split between the nature of the collateral (ERC-20 versus ERC-721) and we are missing a split by nature of the lending mechanism (Peer-to-Peer versus Peer-to-Pool). Also, we don't have all the actors of this category as we are missing, for example, Blend by Blur or PWNDAO
- 4. Figure 6 includes only selected NFT lending protocols: Bend, Nftfi, Pine, Arcade, Jpegd, Drops, X2Y2, and Paraspace
- 5. The landscape of stablecoins could be further split between overcollateralized and algorithmic stablecoins

8. Sources

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