



Alchemix Q4 2023 Report

Table of contents

Alchemix Q4 2023 Report	1
Table of contents	2
Introduction to Alchemix	4
Major Developments	5
Background to Curve Exploit Incident	6
Protocol Metrics	7
alAsset Prices	7
alUSD Price vs. USDC	8
alETH Price vs. ETH	9
alUSD Liquidity Pools	10
alETH Liquidity Pools	11
alAsset Utility	12
Premia	12
Holyheld	13
Curve & Convex	13
Stake DAO	13
Frax Finance	13
Velodrome	14
Balancer & Aura	14
RAMSES	14
Beefy Finance	15
ALCX Governance Token	16
Effective Annualized Inflation Rate	17
Projected ALCX Supply Growth Compared to 2024.01.01.	17
Change in the Emission Allocations	18
System Components	19
Elixir Contents	20
Elixir Ownership of Main Liquidity Pools	21
Treasury, Revenues and Expenses	22
Strategic Token Accumulation	22
CVX (Convex Finance)	22
ALCX-ETH 80/20 Balancer Pool	22
sdCRV (Stake DAO CRV)	23
VELO (Velodrome)	23
AURA (Aura Finance)	23
YFI (Yearn Finance)	24
RAM (RAMSES)	24
Treasury Contents	25

Protocol Revenue	26
Expenses	26
Ethereum and Optimism	28
Yield Harvests	29
Total Harvests in Q4 2023 on Mainnet	29
Total Harvests in Q4 2023 on Optimism	30
Deposits and User Metrics v1	31
Deposits and User Metrics v2	32
v2 Mainnet Stablecoin Deposits	32
v2 Mainnet ETH Deposits	33
Optimism Stablecoin Deposits	33
Optimism ETH Deposits	34
Net Deposits on Mainnet at Quarter End	34
Net Deposits on Optimism at Quarter End	34
Gross Deposits Mainnet	35
Gross Deposits Optimism	35
Number of Unique Depositors Mainnet	36
Tokens Minted Mainnet	36
Number of Unique Depositors Optimism	37
Tokens Minted Optimism	37
First-time depositors on Mainnet	38
First-time depositors on Optimism	38
Withdrawals Mainnet	38
Withdrawals Optimism	39
Self-Liquidations Mainnet	40
Self-Liquidations Optimism	40
Repayments Mainnet	41
Repayments Optimism	41
Transmuter Deposits Mainnet	42
Transmuter Deposits Optimism	42
Transmuter Withdrawals Mainnet	43
Transmuter Withdrawals Optimism	43
Transmuter Claims Mainnet	43
Transmuter Claims Optimism	44
Other Networks	45
Arbitrum Deployment	46
Other Information	47
Governance	47
Other Stats	49
Links	50

Introduction to Alchemix

Established in February 2021, Alchemix is a DeFi lending protocol that offers Self-Repaying loans without the risk of forced liquidations. Alchemix's value proposition is that it enables its users to access tokenized value against their deposits, while those deposits harness the power of DeFi to automatically pay down a borrower's loan balance over time. Conceived as a new tool for people to take advantage of the time value of money, Alchemix is tested and audited and then deployed on-chain using smart contracts to provide security, transparency, immutability, and uncensorable access to all.

A borrower's loan comes in the form of synthetic tokens known as alAssets. Alchemix currently offers alUSD to borrow against Dai, USDC, USDT and FRAX and alETH to borrow against ETH, rETH, stETH and frxETH. Alchemix establishes a 1:1 pairing between collateral types (Dai/USDC/USDT/FRAX and ETH/rETH/stETH/frxETH) and their pair alAssets via deep exchange liquidity and the Alchemix Transmuter, which provides a backstop for the alAsset price.

Alchemix is currently deployed on the Ethereum Mainnet and Optimism networks. A bridge to Arbitrum has been deployed as well, but no strategies have been implemented as of yet.

This report provides relevant data for Q4 2023, 1 October 2023 to 1 January 2024.

Data sources for the numbers provided below include, but are not limited to, the Alchemix SubGraph, the Etherscan API, Bitquery and CoinGecko.

This document is not investment advice, nor should anything herein be construed as solicitation to buy or invest. This is solely for informational purposes only. The discussions in this Quarterly Report may contain forward-looking statements reflecting Alchemix's current expectations that involve risks and uncertainties. The words "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "projects," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Alchemix may not actually achieve the plans, intentions or expectations, and you should not place undue reliance on Alchemix's forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that Alchemix makes. These forward-looking statements involve risks and uncertainties that could cause Alchemix's actual results to differ materially from those in the forward-looking statements. Alchemix does not assume any obligation to update any forward-looking statements. The numbers that are being provided below, as of 1 January 2024, as well as other information disclosed in this document, are unaudited. The numbers in this document are a result of a good faith effort to read past data from the pertinent blockchain or other relevant data source. Some values are not readily accessible, and best efforts were made to ascertain the most accurate numbers or estimates.

The preparation of this document requires estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses, and related information.

Due to the wars in Ukraine and the Middle East, there has been uncertainty and disruption in the global economy and financial markets which could impact Alchemix's estimates and assumptions. These estimates may change as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions.

This report was released on 2024.02.27.

Major Developments

The fourth quarter of 2023 brought many developments into the crypto space and into the Alchemix world, including the following:

- The Curve aLETH LP reimbursement contracts have gone live and affected LPs can now claim their reimbursement.
- aLETH incentives to mainnet Mainnet pools have been restarted.
- aLETH is now fully re-backed.
- Alchemix's Connex bridge for aLETH is operational again.
- The protocol earned approximately \$1.57 million in revenue for the quarter.

Given the scale and scope of the Curve hack and the measures taken to protect user and protocol funds, many of the metrics in this quarter are lower than they could have been had the hack not happened.

Background to Curve Exploit Incident

On 30 July 2023, a number of Curve pools were exploited to the tune of tens of millions of dollars. Among these exploited pools was the aETH-ETH pool that is used to support the Alchemix ecosystem. Some funds were able to be rescued minutes before the exploit hit the aETH-ETH pool. After a period of negotiations the exploiter returned all stolen funds, but because of how incomplete the exploit was, arbitrageurs and MEV bots swooped in and caused a permanent loss for the liquidity providers. This permanent loss amounted to 3,856 aETH in aggregate. Two MEV bots operators returned some of their profits, but a large gap remained. Read the full post-mortem of the exploit of the aETH-ETH Curve pool [here](#). Fund reimbursement to impacted users has since taken place.

The fallout of this exploit has included the following:

- Because of the lack of a functioning aETH-ETH pool on Curve, the Alchemix Elixir (AMO) had not been earning revenue for a while after the exploit.
- aETH liquidity on Mainnet had been very limited.
- The price of aETH on Mainnet and Optimism fell significantly from its soft price target of 0.991 ETH.
- Because of the general market uncertainty following the exploit, a larger amount of funds than usual were withdrawn from the Alchemists.
- Addressing the Exploit and its fallout took up time from all Alchemix contributors, resulting in less time available to spend on general protocol development.

Protocol Metrics

In this section we cover the most important metrics that indicate the sustainability and health of the protocol.

alAsset Prices

The main challenge for the protocol is to maintain a strong price for the alAssets, meaning that they converge towards the price of the assets with which they are paired. If the protocol is successful in achieving and maintaining a strong price, then it enables the Alchemist deposit caps to be increased. In turn, with growing deposits, protocol revenue increases.

In essence, a good alAsset price results in growing revenues and profit for Alchemix.

Without a robust and healthy price for the alAssets, Alchemix's value proposition diminishes, as a lower price would mean an effective lowering of the LTV ratio of a user's deposit. A sustained exact 1:1 peg between alAssets and their pairs is not possible, but the protocol aims to maintain a steady price close to 1:1 to enhance predictability and value for users.

The price and liquidity for alUSD and alETH are achieved by establishing liquidity pools in Curve, Velodrome and RAMSES.

The alUSD and alETH price history charts can be seen below.

Shortly after the launch of Alchemix v2, the protocol deployed a new mechanic called the Elixir, which is intended to help bolster the prices of alAssets. The Elixirs have also been called the AMOs. The mechanisms by which the new Elixirs and the Transmuters help maintain alAsset prices is detailed in the *System Components* section below.



aUSD Price vs. USDC

Trade size

Oct 1st

Jan 1st

\$1M

0.9905 (-0.95%)

0.9911 (-0.89%)



aUSD price vs. USDC



aETH Price vs. ETH

Trade size

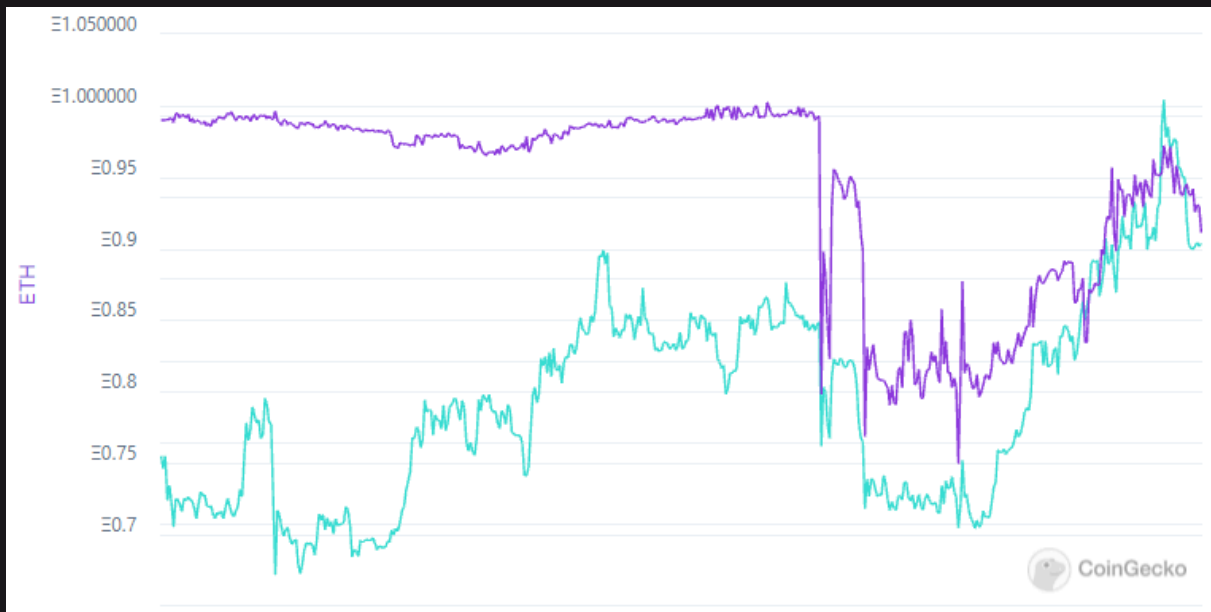
Oct 1st

Jan 1st

500 ETH

~0.7 (-30%)

0.9433 (-5.67%)



The Alchemix SubGraph is not fully functional at the time of writing this report, so CoinGecko is being used for the above chart. The purple line (left axis) shows the value of aETH relative to ETH.

The price of aETH normalized after the Curve hack, but it is still below target levels.



aUSD Liquidity Pools





Total size in all pools

	Oct 1st	Jan 1st
	\$65.87M	\$65.19M
 Curve FRAXBP	Oct 1st \$45.46M	Jan 1st \$43.19M
 Curve aUSD3CRV	Oct 1st \$16.75M	Jan 1st \$15.78M
 Velodrome USDC-aUSD	Oct 1st \$2.21M	Jan 1st \$5.17M
 Velodrome MAI-aUSD	Oct 1st \$0.24M	Jan 1st \$0.25M
 Velodrome FRAX-aUSD	Oct 1st \$0.44M	Jan 1st \$0.16M
 Bunni FRAX-aUSD	Oct 1st \$0.4M	Jan 1st \$0.11M
 RAMSES FRAX-aUSD	Oct 1st \$0.37M	Jan 1st \$0.4M
 RAMSES GRAI-aUSD	-	\$0.13M



aLETH Liquidity Pools

Total size in all pools

	Oct 1st	Jan 1st
	3096 (\$5.18M)	14442 (\$35.06M)
 Velo WETH-aLETH	Oct 1st 2798 (\$4.68M)	Jan 1st 2560 (\$6.21M)
 Velo frxETH-aLETH	Oct 1st 298 (\$0.5M)	Jan 1st 185 (\$0.5M)
 Curve frxETH-aLETH	Oct 1st -	Jan 1st 11697 (\$28.35M)
 Ether price	\$1,727	\$2,424

alAsset Utility

Becoming embedded as part of the DeFi ecosystem substrate is of paramount importance for Alchemix.

Without a direct use for the alAssets (alUSD, alETH), the only action for users after taking an Alchemix loan is to swap their alAsset into something more “usable.” This puts the protocol under constant pressure to devote resources to maintaining the price and liquidity of these alAssets by utilizing ALCX emissions or its own non-native assets, both of which are value extractive for the protocol and for ALCX holders.

However, if the alAssets themselves can be used in a productive manner without requiring a swap, then it makes sense for users to hold these alAssets, which in turn takes pressure off of the protocol to maintain the prices. The fewer resources that Alchemix needs to devote to maintaining alAsset liquidity, the more resources are available to grow the protocol and generate revenue.

The following protocols provide direct use-cases for alAssets, where the assets themselves can be used in a productive manner, or simply allow Alchemix to provide cheaper liquidity.

Please note that we decided to exclude aggregator services that allow users to invest in the base alUSD and alETH liquidity pools, but which otherwise provide no additional incentives or special use-cases.



Premia

Premia is a decentralized options protocol, enabling anyone to buy and sell options in a fair and liquidity-efficient way.

In Premia V2 there were two pools available for Alchemix, the ALCX-Dai and the alETH-alUSD options pools. Users were able to deposit ALCX, Dai, alETH and alUSD and become the underwriters for these assets.

Traders buy options to speculate on the price of ALCX and alETH, and the depositors earn the fees paid by the traders.

With the launch of their v3, v2 pools have been deprecated. New alUSD-alETH pools will be launched soon, pending alAsset oracles.

Website: <https://premia.blue>



Holyheld

Holyheld focuses on bridging DeFi and traditional finance via the crypto debit card. It allows holders to top up their debit card balance using aUSD, aETH, ALCX and gALCX.

A product potentially funded by an Alchemix grant is being worked on that would provide an even closer integration.

Website: <https://holyheld.com>



Curve & Convex

Through the Curve/Convex gauges, \$1 of ALCX spent as bribes provides more than \$1 worth of CRV/CVX emissions to liquidity providers. Curve and Convex are the most important protocols, as the main aAsset liquidity pools reside on Curve.

Websites: <https://curve.fi> and <https://www.convexfinance.com>



Stake DAO

Stake DAO allows Alchemix to increase its veCRV voting power by the usage of their own veCRV tokens.

For more details please refer to the *Strategic Token Accumulation* section in this document.

Website: <https://stakedao.org>



Frax Finance

Frax Finance has been a partner for Alchemix for some time, setting up and rewarding liquidity pools together. Multiple aUSD and aETH pools are operational with a FRAXBP (FRAX Base Pool), FRAX and frxETH pairings on Ethereum, Optimism and Arbitrum where Frax essentially pays for their own side of the liquidity.

Website: <https://frax.finance>



Velodrome

Velodrome Finance is the largest AMM by TVL on the Optimism L2 chain. As part of their launch campaign, they airdropped NFTs that provide voting power to notable projects, including Alchemix. Subsequent to receiving this NFT, Alchemix purchased additional VELO and uses this voting power to direct rewards to the alAsset pools that have been set up in Velodrome. Alchemix also provides bribes on Velodrome to help incentivize other veVELO holders to vote for Alchemix's liquidity pools.

For more details please refer to the *Strategic Token Accumulation* section in this document.

Website: <https://velodrome.finance>



Balancer & Aura

Balancer hosts the 80/20 ALCX-ETH liquidity pool, which is going to form the basis of the upcoming veALCX system. Through Balancer and Aura gauges, the protocol will be able to collect revenue by using its AURA stake to vote for the pool. If needed, these votes can be used for alAsset pools as well in the future.

Websites: <https://balancer.fi> and <https://aura.finance>



RAMSES

RAMSES is a DEX on the Arbitrum L2 chain. As part of their launch campaign, they airdropped NFTs that provide voting power to notable projects, including Alchemix. Alchemix uses this voting power to direct rewards to alAsset pools.

Website: <https://www.ramses.exchange>



Beefy Finance

Beefy Finance is a yield aggregator.

Beefy makes it easy to earn compounding yields on deposits, when one does not have the time to compound it daily or the gas fee is too high for frequent compounding to be done.

Beefy currently supports the ALCX-ETH 80/20 Balancer pool on Mainnet and the aLETH-ETH, aLETH-frxETH, aUSD-USDC, aUSD-FRAX and aUSD-MAI Velodrome pools on Optimism.

Website: <https://beefy.finance>

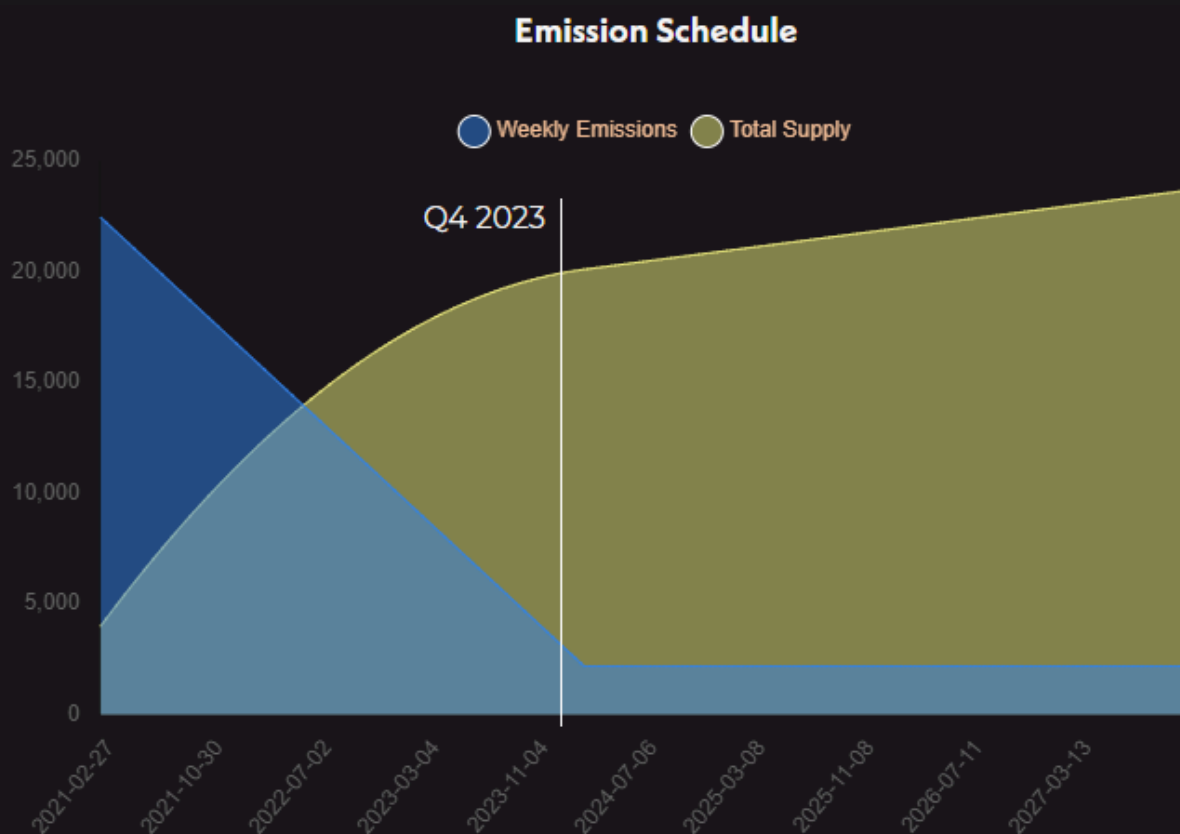


ALCX Governance Token

The governance token of the Alchemix protocol is ALCX. It allows users to influence protocol direction by voting on submitted proposals. The continuous issuance of the ALCX token follows a pre-defined schedule. Alchemix provides various staking options for holders to minimize the effects of token inflation.

Below, we provide information on current inflation numbers, future total supply expansion and the emission allocation.

A portion of ALCX emissions are currently being redirected to the treasury, effectively reducing the amount of new ALCX that enters circulation.



As shown on the chart, the initial high token issuance rate decreases in a linear fashion, dropping to the baseline 2200 tokens emitted per week at the 3-year mark, which is in March this year.

At this date, annual inflation will be ~4.7%, very slowly decreasing in perpetuity.

Effective Annualized Inflation Rate

This calculation compares new ALCX issued vs. the total supply. This includes all ALCX in existence, including treasury holdings that are outside of circulation.

2023.10.01.	2024.01.01.	2024.04.01. (Projected)
10.97%	6.75%	4.72%

Projected ALCX Supply Growth Compared to 2024.01.01.

2025.01.01.	2026.01.01.
4.93%	9.71%

ALCX emissions are used to support the strategic goals of the protocol. The biggest challenge, as laid out in the sections above, is sustaining a stable price for alAssets. In order for the protocol to be sustainable long term, it cannot rely solely on token emissions to support the alAsset prices. For this reason, the treasury started accumulating strategic assets, such as CRV, CVX, VELO, AURA and RAM to be able to support the liquidity pools without emissions.

The protocol is still incentivizing single-sided staking, ALCX liquidity, and alAsset liquidity by using ALCX emissions. However, it has begun the transition to using emissions for the purpose of accumulating strategic assets.

Direct liquidity incentives through emissions will be decreased while the protocol becomes self-sustaining.

Change in the Emission Allocations

Because of the Curve exploit aftermath, as well as ALCX soon entering tail emissions, the Alchemix team is in the process of rethinking and restructuring emission distributions. Please see [prior reports](#) for prior ALCX distribution splits.



System Components

Three main components work in tandem to provide the functionality for the Alchemix system. These are the Alchemists, Transmuters and the Elixirs (AMOs).

User deposits are held by the Alchemist contracts. The Elixir and Transmuter contracts also hold a significant amount of funds that are responsible for providing a backstop for alAsset redemption. The Transmuters redeem alAssets for their underlying collateral pairs 1:1, but do this slowly, over a longer period of time.






The Elixirs, on the other hand, own a portion of the main alAsset liquidity pools and can take action to ensure that trades in their respective liquidity pools can be fulfilled at a reasonable level that is determined by governance. The Elixirs also provide a large portion of protocol revenue by farming the liquidity pool tokens.

Both the alUSD and alETH Alchemist contracts permit a maximum Loan-to-Value ratio of 50%. This means that users can borrow up to half of the value of their stablecoin deposits as an alUSD-denominated loan or half of the value of their ETH deposits as an alETH-denominated loan.

Excess funds are being deployed in the Transmuters or in the Elixirs to provide price stability and to earn additional protocol revenue.

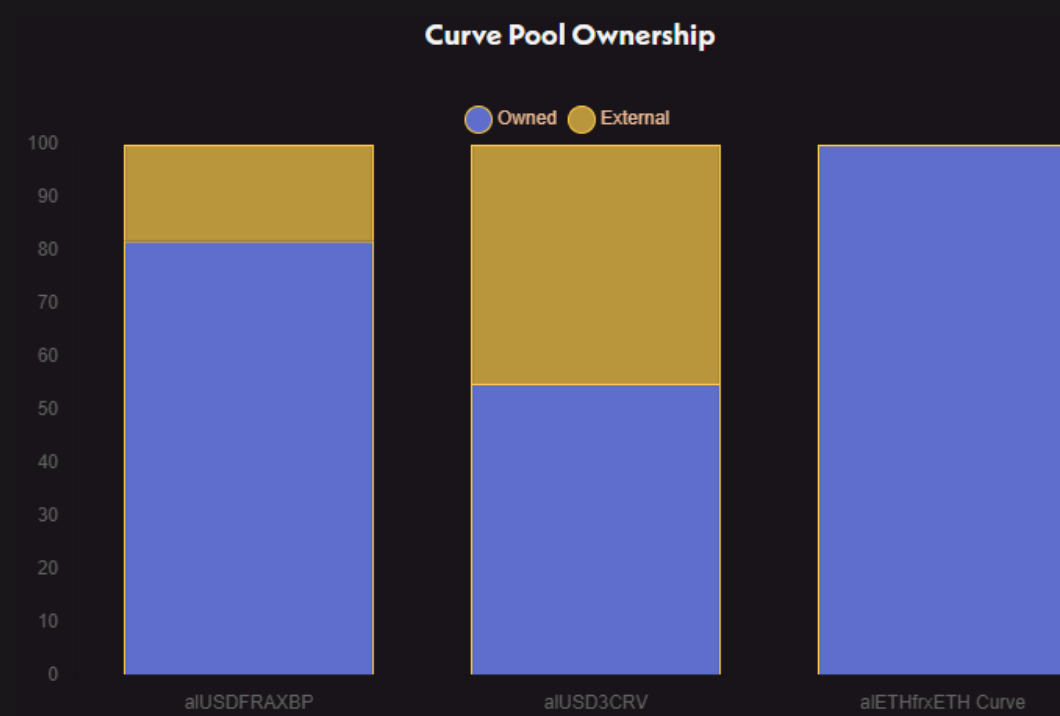
Elixir Contents

This quarter the Elixirs expanded by \$26.11M (+57.03%) as a result of the a1ETH Elixir being restarted.

		Oct 1st	Jan 1st	Change
	a1USD-FRAXBP	\$35.37M	\$35.37M	-
	a1USD-3CRV	\$8.28M	\$8.59M	+\$0.31M (+3.74%)
	RAMSES FRAX	-	\$0.36M	+\$0.36M
	Velo USDC	-	\$1.41M	+\$1.41M
	Curve frxETH	-	\$26.16M	+\$26.16M
	Other	\$2.13M	-	-\$2.13M (-100%)
	Total	\$45.78M	\$71.89M	+\$26.11M (+57.03%)

Elixir Ownership of Main Liquidity Pools

As of January 1st, the protocol owned 82% of the aUSDfRAXBP pool and 55% of the aUSD3CRV pool. The aETH-frxETH pool is in the process of being restarted. This means that out of all the CRV/CVX emissions that go to these pools, which are mainly incentivized by Alchemix itself, the protocol makes back a considerable portion. This also provides power in defining the price of assets in these pools.





Treasury, Revenues and Expenses

Strategic Token Accumulation

The main goal of the Alchemix treasury is to use its value to support and expand the protocol. It acquires assets that it can use to provide a sufficient amount of liquidity for the needs of the protocol, or use for some other strategic purpose.

As a baseline, this is done by investing protocol revenue into these assets.



CVX (Convex Finance)

Using Olympus Pro bonding services in the past, Alchemix accumulated CVX tokens in exchange for ALCX tokens. Alchemix also earns CVX from staked liquidity pool tokens and locked CVX tokens. These CVX tokens are used with Convex Finance to direct Curve Finance emissions. This, in turn, incentivizes liquidity, and earns revenue for the protocol.



ALCX-ETH 80/20 Balancer Pool

Pursuant to [AIP-82A](#), and in preparation for the rollout of veALCX, the protocol migrated its ALCX-ETH Sushi liquidity to an 80/20 ALCX-ETH Balancer pool. The protocol accrues trading fees and BAL+AURA rewards from this pool.



sdCRV (Stake DAO CRV)

CRV (Curve) tokens can be permanently locked as sdCRV tokens in Stake DAO's smart contracts, similar to how CRV is permanently locked in Convex as cvxCRV. Stake DAO then enables holders to vote on Curve gauges through their platform. Stake DAO itself also holds CRV tokens, and they use these assets to boost the voting power of sdCRV holders, if they also hold the protocol's (staked) governance token veSDT.

For this reason, the Alchemix treasury holds veSDT tokens alongside a large stack of sdCRV tokens.



VELO (Velodrome)

Velodrome Finance is the largest AMM by TVL on the Optimism L2 chain. As part of their launch campaign they airdropped NFTs that provide voting power to notable projects, including Alchemix. Alchemix uses this voting power to direct rewards to relevant alAsset pools (such as alUSD-USDC and alETH-WETH) that have been set up in Velodrome.

As per [AIP-59](#), additional VELO was purchased and locked as veVELO.



AURA (Aura Finance)

AURA tokens are used within Aura Finance to direct BAL (Balancer) and AURA emissions. This, in turn, incentivizes liquidity, and earns revenue for the protocol. Protocol-owned ALCX-ETH Balancer Pool Tokens are staked in Aura to recapture a large percentage of AURA and BAL emissions.

As per [AIP-82B](#), the first batch of AURA tokens was purchased and subsequently locked.



YFI (Yearn Finance)

Yearn is a decentralized suite of products helping individuals, DAOs, and other protocols earn yield on their digital assets. The largest Alchemix vaults are the Yearn Dai and Yearn WETH vaults, which provide the yield for the “self-repaying loans”.



RAM (RAMSES)

RAMSES is a decentralized exchange on Arbitrum that is based on the Solidly model. As part of their launch campaign, they airdropped NFTs that provide voting power to notable projects, including Alchemix.

Alchemix uses its voting power to direct rewards to its relevant aAsset pools.

Treasury Contents

A Treasury dashboard that highlights revenues and expenses, as well as assets and liabilities, can be found at <https://alchemy-stats.com>.

The table below does not contain ALCX holdings.

As a result of protocol revenues, the treasury expanded by \$0.83M (+9.47%). Protocol revenues were offset by the reclassification of a large portion of treasury ETH to re-back aETH, but this should be partially recaptured through the CRV on a 1-year vest that the treasury received as reimbursement for the Curve hack. This is not yet covered in the numbers below.

	Oct 1st	Jan 1st	Change QoQ
ETH**	\$2.18M (1,262)	\$1M (415)	-\$1.18M (-54.13%)
CVX**	\$1.22M (389,000)	\$1.07M (350,000)	-\$0.15M (-12.3%)
ALCX-ETH LP*	\$0.51M	\$1.04M	+\$0.53M (+103.9%)
SDT	\$0.38M (1.28M)	\$0.36M (1.28M)	-\$0.02M (-5.26%)
sdCRV	\$2.24M (4.34M)	\$2.7M (4.34M)	+\$0.46M (+20.54%)
VELO	\$0.56M (10.93M)	\$0.75M (12.96M)	+\$0.19M (+33.93%)
AURA	\$0.31M (350,000)	\$0.32M (426,000)	+\$0.01M (+3.23%)
RAM	\$0.02M (1.77M)	\$0.18 (3.22M)	+\$0.16M (+800%)
OP	\$0.38M	\$0.78M	+\$0.4M (+105.26%)
Stablecoins	\$0.51M	\$0.85M	+\$0.34M (+66.67%)
Other	\$0.35M	\$0.54M	+\$0.19M (+54.29%)
Total	\$8.76M	\$9.59M	+\$0.83M (+9.47%)

*ALCX-ETH only includes the ETH portion of the pair

**To be able to fill the backing hole of aETH in the wake of the Curve hack, treasury assets have been transferred to the AMOs, showing up as treasury losses. This is going to be fully or partially offset by the continuous stream of CRV tokens over the course of the year that is issued as recompensation

Protocol Revenue

The following shows protocol revenue for Q4 2023. The revenue is denominated in the USD value of the tokens earned at the time that the tokens were claimed. Included is revenue earned by the protocol's Elixirs, and revenue earned from harvest fees on Mainnet and Optimism, a Velodrome veNFT on Optimism, a RAMSES veNFT on Arbitrum, and a Aerodrome veNFT on Base. This report also does not include tokens whose total revenue was less than \$1,000 for the quarter.

Token	Revenue Earned	Token	Revenue Earned
CRV	\$868,179.88	yvOP	\$15,908.61
FXS	\$218,270.78	3Crv	\$11,322.05
ALCX	\$130,550.43	Dai	\$7,695.81
VELO	\$66,994.58	RAM	\$7,552.60
OP	\$56,848.63	USDC	\$3,893.00
CVX	\$47,793.57	ARB	\$3,802.34
BAL	\$34,431.26	FREN	\$2,324.86
AURA	\$30,505.78	SDT	\$1,685.78
cvxPrisma	\$21,724.98	TAROT	\$1,378.27
xoRAM	\$20,596.05	wUSDR	\$1,179.49
WETH	\$17,222.69	auraBAL	\$1,132.21
TOTAL			\$1,570,993.65

Expenses

The DAO is currently approved for \$450,000 in expenses per quarter to pay contributors, services, audits, bug bounty programs, transaction gas costs, etc. An additional 20% of all emissions go to the core development team, part of which also funds the business development and governance (bizgov) and newsletter/reporting subDAOs, as well as payments for support/moderator contributors. It should be noted that this approval does not cover the expenses incurred in incentivizing market participants, such as bribing on Votium and elsewhere.

Expense Category	Amount Spent	Expense Category	Amount Spent
Protocol Incentives	\$1,023,830.49	Software Subscriptions ²	\$5,989.95
Services fees/expenses ¹	\$418,296.48	Gas fees	\$5,487.24
Payroll	\$163,004.97	Expense reimbursement	\$4,080.68
Donations/Grants	\$9,029.32	Development/testing expenses	\$1,072.93
Total			1,630,792.06

1- This includes non-recurring audit expenses and bug bounties

2- This includes a \$5,400 annually recurring software subscription

Ethereum and Optimism

The following section provides information for protocol and user activity on the Ethereum Mainnet network and the Optimism L2 network.



Yield Harvests

Yield harvests enable Alchemix's self-repaying loans. Harvests are periodic withdrawals of yield generated by funds deposited in the Yearn vaults and other strategies. These harvested yields are then used to proportionally pay down depositors' loans. Yield harvests are not on any set schedule. They generally happen when enough yield has been amassed and transaction fees are low enough for the harvest to make financial sense. 10% of the yield that is harvested is captured by Alchemix as a service fee.



Total Harvests in Q4 2023 on Mainnet

	yvUSDC	yvDai	yvUSDT	aUSDC	aDai
Q1 2023	9,623	156,670	0	199	0
Q2 2023	2,223	65,700	0	200	0
Q3 2023	2,500	110,360	647	250	0
Q4 2023	1,500	77,000	105	400	0

	aUSDT	vaUSDC	vaDai	aFRAX	vaFRAX
Q1 2023	0	0	0	-	-
Q2 2023	0	0	0	0	0
Q3 2023	0	8,188	0	0	0
Q4 2023	0	6,600	0	0	1,400

	wstETH	rETH	yvETH	aWETH	vaETH	sfrxETH
Q1 2023	46.4	3.2	54.1	0.5	0	-
Q2 2023	62	10	123	0.5	0	0
Q3 2023	31.2	21.2	89	1	0	5.6
Q4 2023	13.6	5.8	58.4	0.5	0	5



Total Harvests in Q4 2023 on Optimism

	aDai	aUSDC	aUSDT	yvUSDC	yvDai
Q1 2023	0	0	0	-	-
Q2 2023	256	348	695	-	-
Q3 2023	0	800	0	0	0
Q4 2023	0	2,200	200	0	0

	aWETH	wstETH	yvWETH
Q1 2023	0	-	-
Q2 2023	1.4	-	-
Q3 2023	0.3	0	0
Q4 2023	0.5	0	0

In Q3 2023, there were over 122,000 USD equivalents and over 148 ETH harvested.

In Q4 2023, there were over 89,000 USD equivalents and over 83 ETH harvested.



Deposits and User Metrics v1

The Alchemist v1 contracts were officially deprecated on the 13th of October 2022. The funds were moved to a temporary migration contract, and there were still some amount of funds left in this contract at the end of this quarter, namely \$0.62M of Dai and \$0.15M of ETH.

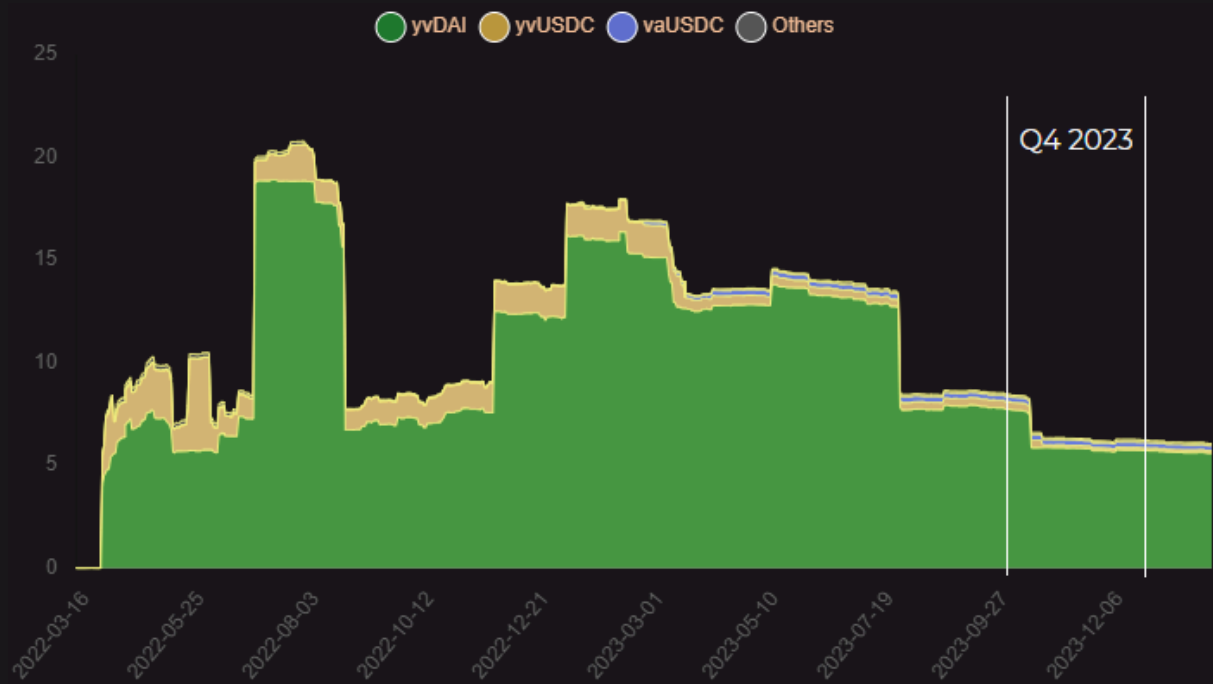


Deposits and User Metrics v2

This section provides numbers for user activity in the protocol's v2 contracts. All data is for Q4 of 2023.

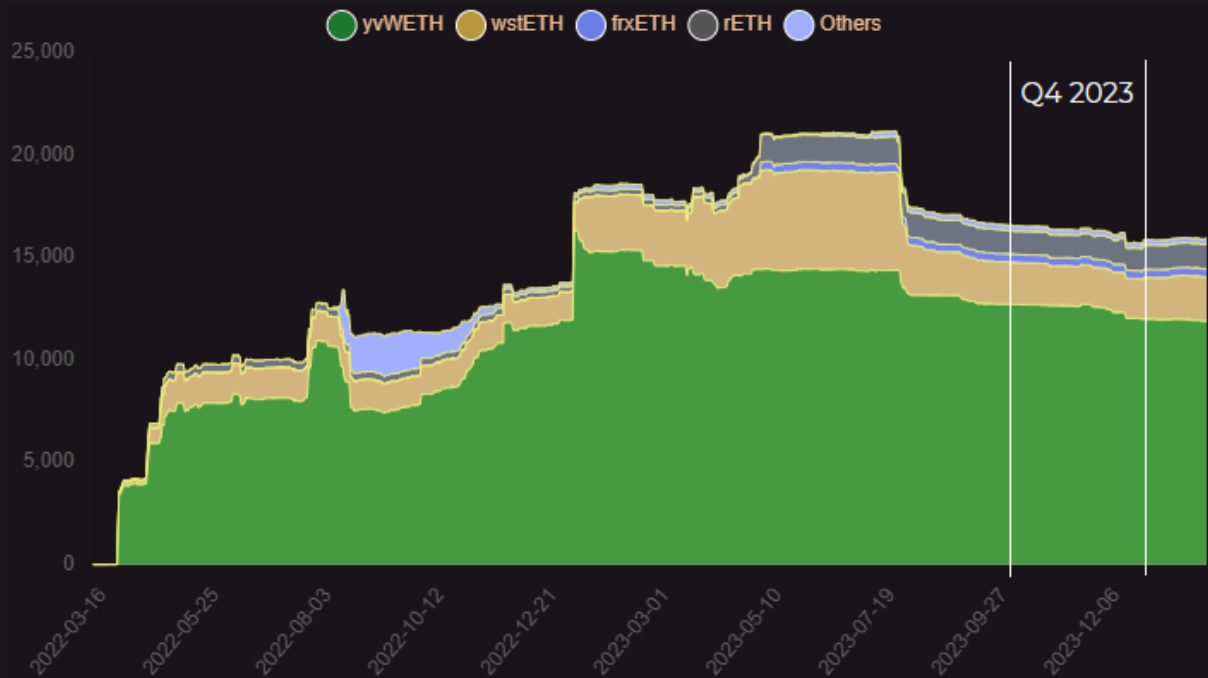


v2 Mainnet Stablecoin Deposits

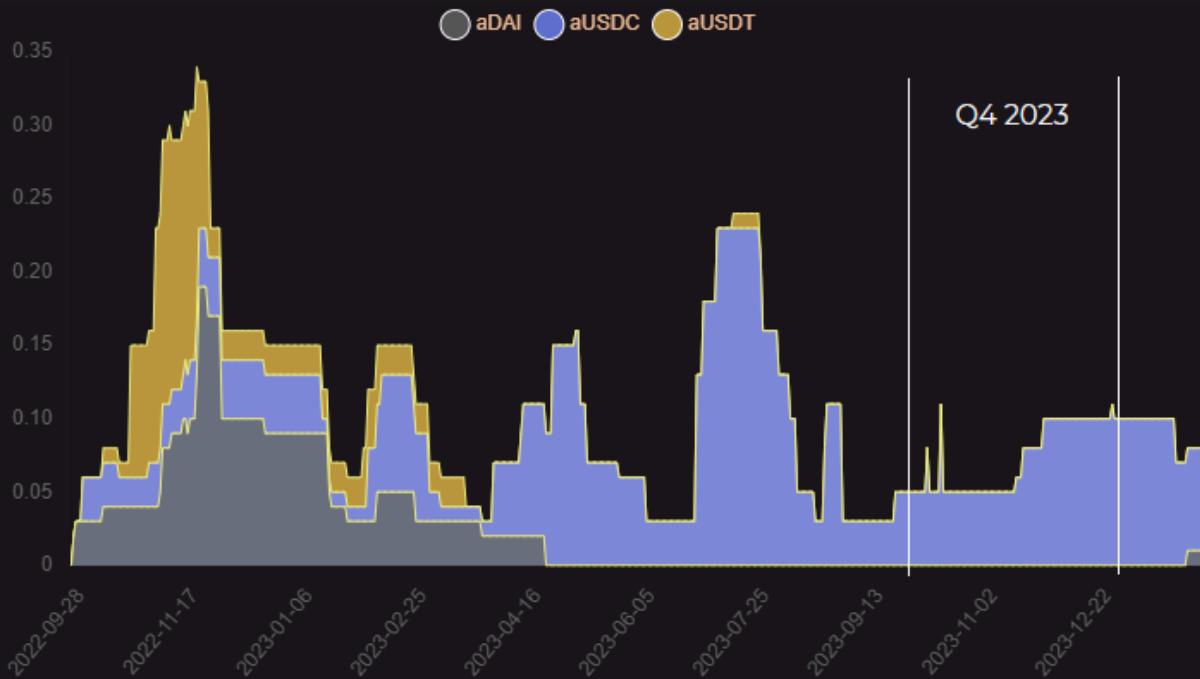




v2 Mainnet ETH Deposits

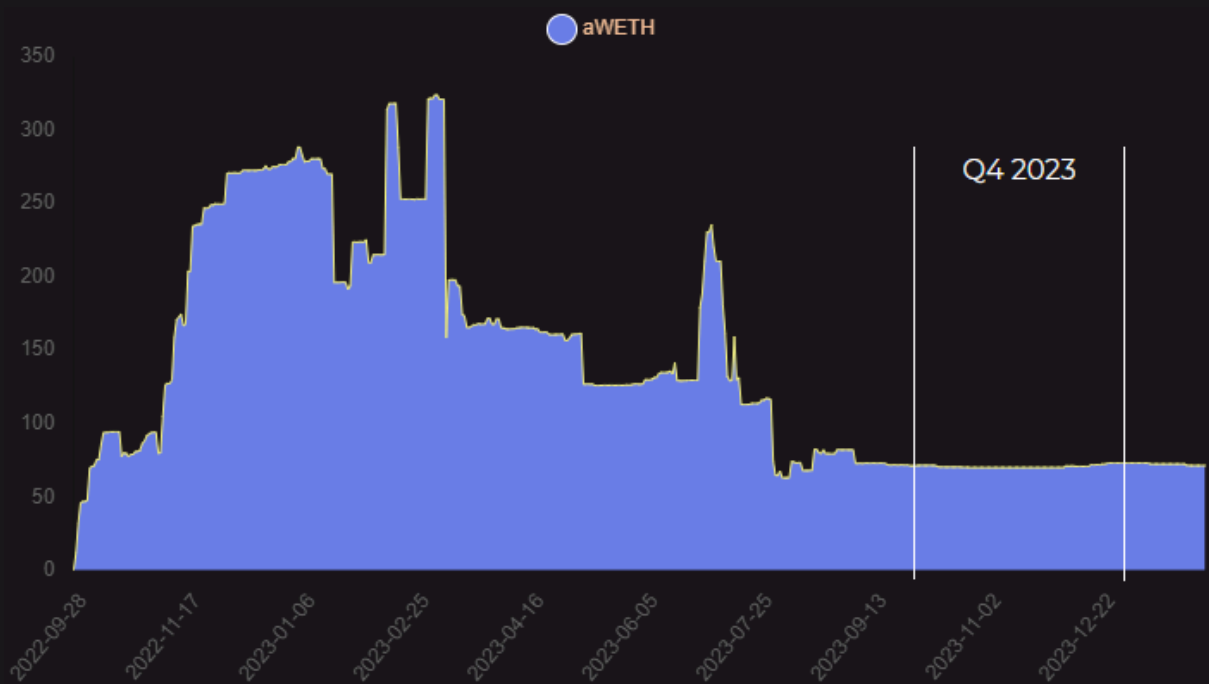


Optimism Stablecoin Deposits





Optimism ETH Deposits



Net Deposits on Mainnet at Quarter End

	Oct 1st	Jan 1st	Change QoQ
Stablecoins	\$8.78M	\$6.2M	-\$2.58M (-29.38%)
ETH	\$29.89M (17612)	\$38.45M (15864)	+\$8.56M (+28.64%)
Total	\$38.67M	\$44.65M	+\$5.98M (+15.46%)



Net Deposits on Optimism at Quarter End

	Oct 1st	Jan 1st	Change QoQ
Stablecoins	\$0.05M	\$0.1M	+\$0.05M (+100%)
ETH	\$0.12M (71)	\$0.18M (73)	+\$0.06M (+50%)
Total	\$0.17M	\$0.28M	+\$0.11M (+64.71%)



Gross Deposits Mainnet

	yvUSDC	yvDai	yvUSDT	aUSDC	aDai
Q1 2023	0.12M	6.0M	841	318	0.5M
Q2 2023	7,200	1.3M	19,600	289	28,700
Q3 2023	14,355	0.5M	30	0	91
Q4 2023	995	0.35M	0	0	0

	aUSDT	vaUSDC	vaDai	aFRAX	vaFRAX
Q1 2023	0	0.18M	0	726	1,568
Q2 2023	0	91,300	0	0	28,300
Q3 2023	0	15,100	0	0	0
Q4 2023	389	6,500	0	37,000	394

	wstETH	rETH	yvWETH	aWETH	vaETH	sfrxETH
Q1 2023	3,060	0	6,651	62.4	52.2	-
Q2 2023	1,935	1,082	1,444	177	0	405
Q3 2023	257	103	256	253	0	93
Q4 2023	164	392	151	0.1	0	0



Gross Deposits Optimism

	aDai	aUSDC	aUSDT	yvUSDC	yvDai
Q1 2023	19,200	410,000	24,500	-	-
Q2 2023	10,600	0.25M	58	-	-
Q3 2023	20,900	0.36M	1,050	860	0
Q4 2023	35	3.3M	93	70,000	21,000

	aWETH	wstETH	yvWETH
Q1 2023	652	-	-
Q2 2023	648	-	-
Q3 2023	890	0.02	19.6
Q4	4	0.05	2.93

In Q3 2023, there were over 900,000 in USD equivalents, and more than 1,800 ETH and staked equivalents deposited.

In Q4 2023, there were over 3.7 million in USD equivalents, and more than 714 ETH and staked equivalents deposited.

Number of Unique Depositors Mainnet

	Q1	Q2	Q3	Q4
aUSD Alchemist	154	126	50	31
aETH Alchemist	210	124	47	43

Tokens Minted Mainnet

	Q1	Q2	Q3	Q4
aUSD	1.4M	0.25M	0.27 M	0.19M
aETH	2,736	2,827	513	315

Number of Unique Depositors Optimism

	Q1	Q2	Q3	Q4
alUSD Alchemist	26	19	23	30
alETH Alchemist	43	29	27	19

Tokens Minted Optimism

	Q1	Q2	Q3	Q4
alUSD	0.23M	0.22M	0.21M	1.7M
alETH	291	401	466	3.2

In Q3 2023, 73 unique addresses deposited into the alUSD Alchemists across all networks, and 74 unique addresses deposited into the alETH Alchemists across all networks.

In Q4 2023, 61 unique addresses deposited into the alUSD Alchemists across all networks, and 62 unique addresses deposited into the alETH Alchemists across all networks. Only addresses that made a deposit in each respective quarter are counted here. Addresses that made deposits in previous quarters, but did not make any deposits while still carrying a balance are not counted.

In Q3 2023, 0.48 million alUSD were minted across all networks, and 979 alETH were minted across all networks. In Q4 2023, 1.8 million alUSD and 318 alETH were minted across all networks.

This quarter-over-quarter decline in user alETH activity and issuance is attributable in large part to the Curve exploit. Following the exploit, one of the safety precautions that was taken was disabling deposits and mints in the alETH Alchemist on Mainnet.

First-time depositors on Mainnet

Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
178	394	165	293	248	172	64	51

First-time depositors on Optimism

Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
24	72	44	31	32	36

The above table shows the number of first-time depositors on Mainnet and Optimism v2 Alchemists by quarter. This is measured by addresses making first-time deposits, not individual people, as it is impossible to know what addresses are controlled by whom. It is possible that some individuals have made multiple deposits in Alchemix across multiple addresses.



Withdrawals Mainnet

	yvUSDC	yvDai	yvUSDT	aUSDC	aDai
Q1 2023	1.1M	4.5M	1,387	0	0.5M
Q2 2023	0.14M	0.44M	0	265	29,500
Q3 2023	2,450	5.9M	0	14,000	0
Q4 2023	0.16M	1.6M	11,200	0	0

	aUSDT	vaUSDC	vaDai	aFRAX	vaFRAX
Q1 2023	50	0	0	642	0
Q2 2023	0	0	0	0	0
Q3 2023	0	0	0	0	0
Q4 2023	0	0	0	0	20,000

	wstETH	rETH	yvWETH	aWETH	vaETH	sfrxETH
Q1 2023	676.3	3.3	4,545	105	0	-
Q2 2023	934	29	706	174	50	0.2
Q3 2023	3,350	254	1,812	121	0	71
Q4 2023	160	396	732	1.9	0	0



Withdrawals Optimism

	aDai	aUSDC	aUSDT	yvUSDC	yvDai
Q1 2023	81K	0.44M	40K	-	-
Q2 2023	32K	0.13M	100	-	-
Q3 2023	21K	0.45M	50	0	0
Q4 2023	403	3.4M	4,400	48,000	0

	aWETH	wstETH	yvWETH
Q1 2023	720	-	-
Q2 2023	286	-	-
Q3 2023	960	0	18.4
Q4 2023	1.69	0	0

In Q3 2023, there were more than 6.3 million in USD equivalents, and more than 6,500 in ETH and staked equivalents withdrawn from the Alchemists across all networks.

In Q4 2023, more than 5.2 million in USD equivalents, and more than 1,200 in ETH and staked equivalents were withdrawn from the Alchemists across all networks.



Self-Liquidations Mainnet

	yvUSDC	yvDai	yvUSDT	aUSDC	aDai
Q1 2023	3,674	1.4M	0	0	32K
Q2 2023	31K	0.3M	0	0	108
Q3 2023	17.7K	0.22M	0	0	0
Q4 2023	93K	0.97M	10K	0	0

	aUSDT	vaUSDC	vaDai	aFRAX	vaFRAX
Q1 2023	50	2,499	0	102.85	0
Q2 2023	0	0	0	0	0
Q3 2023	0	0	0	0	0
Q4 2023	0	0	0	0	0

	wstETH	rETH	yvWETH	aWETH	vaETH	sfrxETH
Q1 2023	6.51	0	232.58	25.19	0	-
Q2 2023	8.65	0.6	123.7	0.8	0.8	0
Q3 2023	7.8	0	128.6	0	0	26.6
Q4 2023	56.2	0	133.5	5.5	1.1	0.03



Self-Liquidations Optimism

	aDai	aUSDC	aUSDT	yvUSDC	yvDai
Q1 2023	6,500	0	4,000	-	-
Q2 2023	1	1	0.01	-	-
Q3 2023	407	0	0	96	0
Q4 2023	98	0	0	0	0

	aWETH	wstETH	yvWETH
Q1 2023	46.2	-	-
Q2 2023	327	-	-
Q3 2023	78	0	0
Q4 2023	0.05	0	0.02

In Q3 2023, users self-liquidated more than 280,000 in USD equivalents, and more than 240 ETH and staked equivalents from the Alchemists across all networks.

In Q4 2023, users self-liquidated more than 1 million in USD equivalents and more than 196 ETH and staked equivalents from the Alchemists across all networks.



Repayments Mainnet

	USDC	Dai	USDT	FRAX	aIUSD	ETH	aIEth
Q1 2023	30K	39K	0	0	2.4M	48.11	1,941.39
Q2 2023	23,700	3,500	1,400	0	30,100	27.5	843.5
Q3 2023	52,200	1,000	197	0	2.5M	14	2,865
Q4 2023	703	75,700	8,800	1,300	0.14M	11.56	321



Repayments Optimism

	USDC	Dai	USDT	aIUSD	ETH	aIEth
Q1 2023	0	89	0	0.27M	0.25	278.28
Q2 2023	2	0.1M	1K	60K	0.13	58
Q3 2023	50,555	10,000	0	0.19M	1.71	445
Q4 2023	5,025	11	0	1.7M	0.04	0.91

In Q3 2023, users manually repaid over 2.8 million in USD-equivalent debt, and over 3,300 in ETH-equivalent debt across all networks.

In Q4 2023, users manually repaid over 1.9 million in USD-equivalent debt, and over 333 in ETH-equivalent debt across all networks.



Transmuter Deposits Mainnet

	USDC	Dai	USDT	FRAX	ETH
Q1 2023	91K	2.2M	0.2M	69³	1,191
Q2 2023	0.1M	0.35M	989	0	757
Q3 2023	0.14M	0.41M	40K	219³	1,988
Q4 2023	0.13M	1.18M	348	212	39

3 - Figure has been adjusted from previous reports



Transmuter Deposits Optimism

	USDC	Dai	USDT	ETH
Q1 2023	17K	7K	4K	67
Q2 2023	0	0.1M	2K	45
Q3 2023	60K	10K	25	871
Q4 2023	44K	819	11k	313

In Q3 2023, over 660,000 aUSD, and over 2,800 aETH were deposited into the Transmuters across all networks.

In Q4 2023, over 1.3 million aUSD, and over 352 aETH were deposited into the Transmuters across all networks.



Transmuter Withdrawals Mainnet

	USDC	Dai	USDT	FRAX	ETH
Q1 2023	47K	0.5M	0.2M	0	593
Q2 2023	85K	86K	1.5K	0	517
Q3 2023	30K	90K	40K	0	1,978
Q4 2023	20K	60K	348	0	52



Transmuter Withdrawals Optimism

	USDC	Dai	USDT	ETH
Q1 2023	16,500	1	10	20
Q2 2023	0	1K	2	35
Q3 2023	8.5K	10.1K	25	871
Q4 2023	20K	101	10K	328

In Q3 2023, over 178,000 aUSD and over 2,800 aETH were withdrawn from the Transmuters before successful transmutation across all networks.

In Q4 2023, over 110,000 aUSD, and over 380 aUSD were withdrawn from the Transmuters before successful transmutation across all networks.



Transmuter Claims Mainnet

	USDC	Dai	USDT	FRAX	ETH
Q1 2023	34K	1.7M	920	0	408
Q2 2023	34.2K	0.37M	0	0	286
Q3 2023	0.1M	0.37M	451	0	145
Q4 2023	0.1M	1.12M	0	500	6



Transmuter Claims Optimism

	USDC	Dai	USDT	ETH
Q1 2023	0	6,600	4,000	46
Q2 2023	0	0.1M	2K	25
Q3 2023	51K	10K	0	384
Q4 2023	6K	713	177	0.35

In Q3 2023, over 530,000 in USD equivalents, and over 529 WETH were claimed from the Transmuters across all networks.

In Q4 2023, over 1.2 million in USD equivalents, and over 6 WETH were claimed from the Transmuters across all networks.

Other Networks

The following section provides information for activity on other networks



Arbitrum Deployment

Alchemix launched a bridge for the Arbitrum network. Arbitrum is an Ethereum Layer 2 (L2) solution. It is a form of an [optimistic rollup](#). Read more about Arbitrum [here](#). As of this writing, only a bridge has been deployed, but no vaults/strategies have been implemented. Reporting will begin once Alchemist strategies are deployed.

There are currently liquidity pools operational for aUSD and aETH on RAMSES Exchange. In anticipation of Alchemix deploying Alchemists on Arbitrum in the near future, RAMSES granted Alchemix a veNFT on 23 May 2023.

Other Information

This section covers other non-numerical and/or interesting information, such as governance updates.

Governance

The following are Governance proposals that were voted on in Q4 2023:

- **AIP-90: Deploy Alchemix on Arbitrum.** This proposal was to authorize Alchemix to launch aUSD and aETH Alchemists on Arbitrum.
Read the proposal and discussion [here](#).
See the snapshot [here](#).
The proposal passed with 99.7% of the vote. 48,000 ALCX voted for the proposal, and 143 ALCX abstained.
- **AIP-99: Mainnet aETH Rebacking Plan and Initial aETH/ETH LPer Refund Plan.** This proposal outlined a strategy for rebacking aETH and refunding aETH/ETH LPs.
Read the proposal and discussion [here](#).
See the snapshot [here](#).
The proposal passed with 99.99% of the vote. 63,000 ALCX voted for the proposal, and 3.7 ALCX abstained.
- **AIP-100: AMO Harvest Framework update.** This proposal outlined a plan for how to change AMO (Elixir) harvests.
Read the proposal and discussion [here](#).
See the snapshot [here](#).
The proposal passed with 87.52% of the vote. 34,000 ALCX voted for the proposal, 4,700 ALCX voted against, and 66 ALCX abstained.
- **AIP-101: [Updated] aETH Rebacking (Mainnet AND OP) Plan.** This proposal outlined some changes in the plan for re-backing aETH.
Read the proposal and discussion [here](#).
See the snapshot [here](#).
The proposal passed with 99.99% of the vote. 39,000 ALCX voted for the proposal, and 3.8 ALCX abstained.
- **AIP-102: Reduce Deposit Caps.** This proposal sought authorization for Alchemix to reduce deposit caps.
Read the proposal and discussion [here](#).
See the snapshot [here](#).
The proposal passed with 99.99% of the vote. 36,000 ALCX voted for the proposal, and 3.8 ALCX abstained.
- **AIP-103: Deposit to Fyde Protocol.** This proposal sought authorization for Alchemix to make a deposit of 1,500 ALCX into the Fyde protocol.
Read the proposal and discussion [here](#).

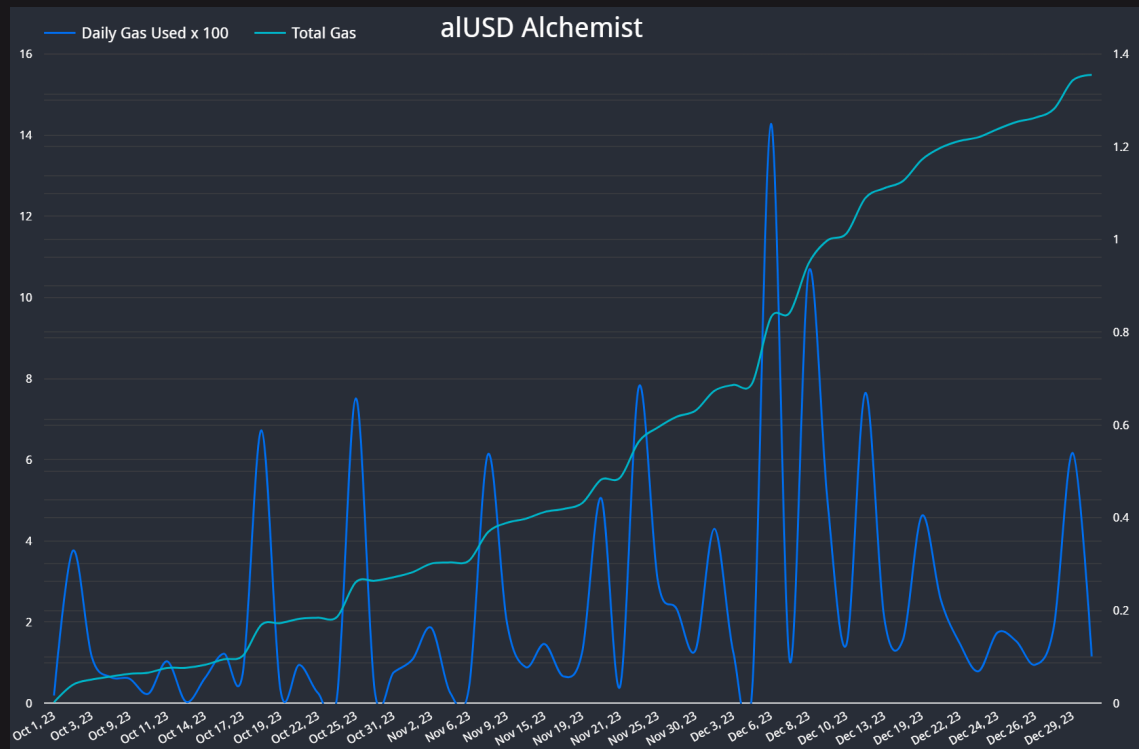
See the snapshot [here](#).

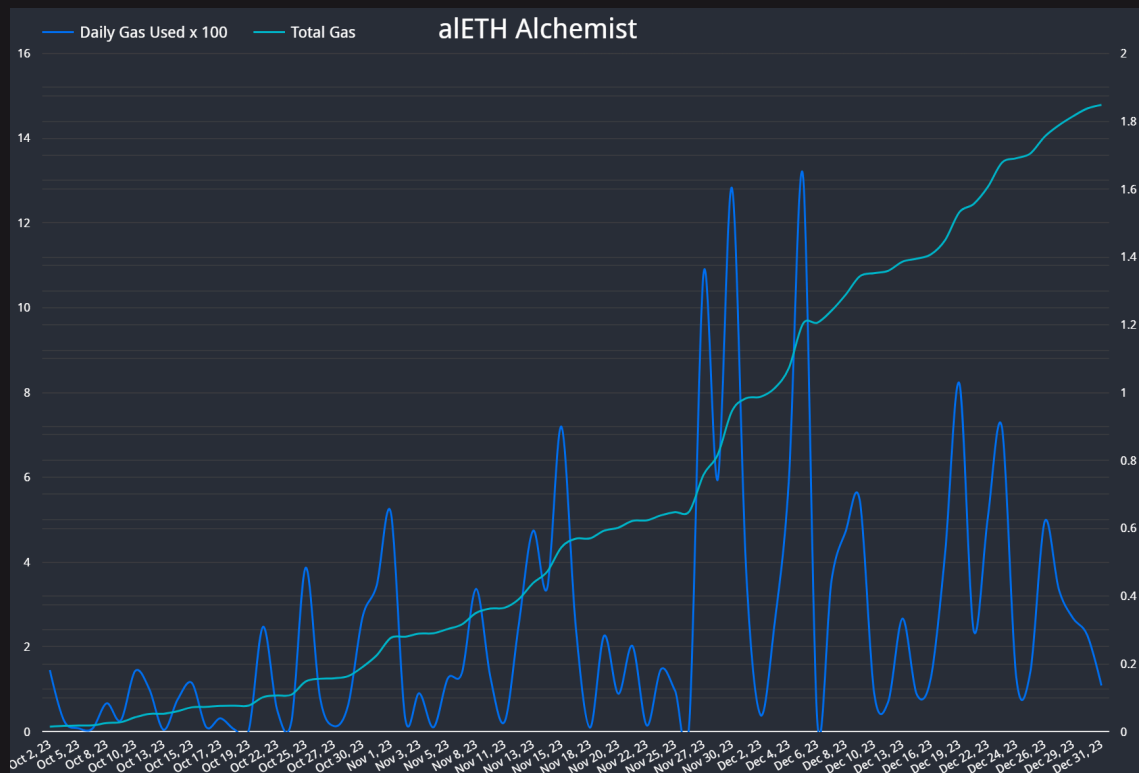
The proposal passed with 99.92% of the vote. 38,000 ALCX voted for the proposal, and 32 ALCX abstained.

Other Stats

The following are some miscellaneous statistics:

- Gas: Between 1 October 2023 and 31 December 2023, on Mainnet, 1.35 ETH was spent on gas by users transacting with the aUSD Alchemist contract, and 1.859 ETH was spent on gas by users interacting with the aETH Alchemist contract.





- The numbers for some of this report's metrics are available for review [here](#) and [here](#).
- See Google Trends for Q4 2023 for Alchemix [here](#).

Links

- [Alchemix website](#)
- [Alchemix Newsletter](#)
- [Alchemix statistics](#)
- [Alchemix GitHub](#) (includes contract addresses)
- [Alchemix Development GitBook](#)
- [Alchemix User Docs and quarterly Financial Reports](#)