ENIGMA SECURITIES

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SmartMoney/Enigma Research Note

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ALCHEMIX ($ALCX)

- TYPE: Lending and Borrowing, Synthetic
- CHAIN(S): ETH
- TVL: $663M
- MARKET CAP: $247M
- FDV: $1.04B
- CONTRACT ADDRESS:
- 00xdbdb4d16eda451d0503b854cf79d55697f90c8df

PRODUCT OVERVIEW/SUMMARY

Alchemix Finance ($ALCX) is a lending protocol on Ethereum which allows a user to access future yield in the form of a loan. Alchemix earns yield on user deposits by moving the collateral into interest-bearing vaults on Yearn Finance, which contribute to paying down the line of credit obtained by the user, creating the net effect of "self paying loans".

Alchemix initially launched with just one asset, Dai, which allowed users to access future yield on $DAI collateral With the launch of v2, the protocol has expanded with the addition of $ETH collateral. The debt ceiling on $alETH was hit immediately, suggesting significant demand for this offering. Introduced in February 2021, Alchemix reached a peak of $1.69B in total value locked (TVL) on May 11th.

This DeFi primitive enables a unique new type of lending market, which allows an investor to stay long on an asset while accessing liquidity now. The concept of a "self paying loan" sounds like magic, which can attract new users to DeFi and represents a building block that developers can build on to bring substantial new innovation to financial services.

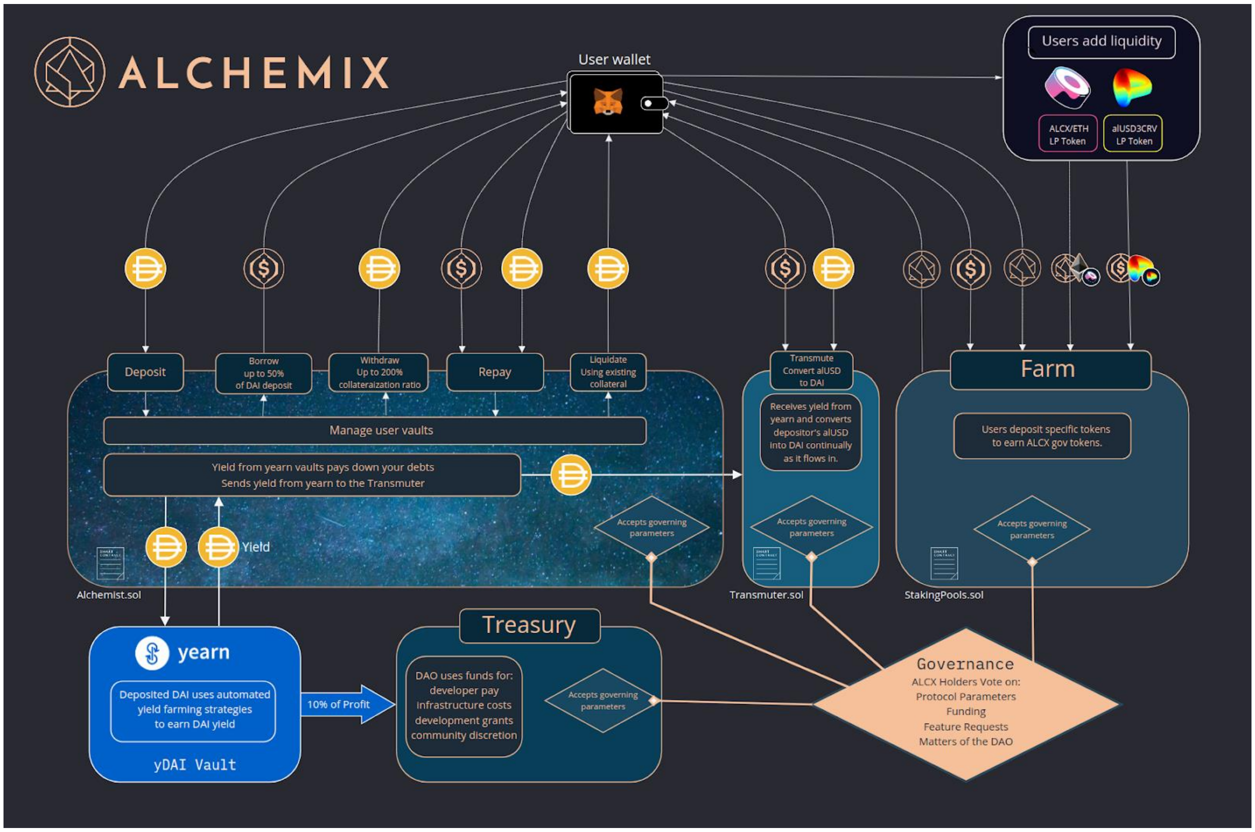
PRODUCT – HOW IT WORKS

Alchemix works by minting its native synthetic asset against deposited collateral. For this example, we'll use Alchemix' initial asset and accepted collateral, $alUSD and $DAI. $alUSD is Alchemix' version of a USD-pegged stablecoin, backed by collateral of the same value ($DAI).

A user deposits an amount of $DAI in Alchemix' smart contracts as collateral, which then allows the user to mint 50% of the value of the deposited collateral in the form of $alUSD.

Once the collateral is deposited in Alchemix contracts, it earns yield by leveraging vaults from Yearn Finance, and that yield goes towards paying off the debt. The pace at which the loans are paid off depends on floating rates available from Yearn, but recent yields were pointing to debt being paid off in 19-24 months. Users also have the option of paying down or paying off the loan early by depositing $DAI or $alUSD with no penalty.

Key to the cryptoeconomic success is Alchemix's "transmuter" contract, which creates a queue for $alUSD to be converted back to $DAI. This combined with the early repayment option creates market incentives to mainteg the $alUSD peg.



Via Alchemix.

Alchemix launched with $alUSD and $DAI, in order to prove out the cryptoeconomic system with a stable asset. However, in June Alchemix launched $alETH for use with $ETH collateral, presenting a new and interesting way to create leverage on Ethereum.

While the mechanism worked as intended, there was a bug which resulted in the loss of $4.6M of $ETH collateral. The bug allowed depositors to withdraw their collateral without repaying their loan, and was quickly patched.

A more detailed explanation of the exploit can be found here. While loss of collateral can never be trivialized, the damage was minimal and the protocol has since recovered.

As security, credibility and community are essential to a well-functioning DeFi protocol, Alchemix needs to prove that they have learned from this exploit and can continue to safely onboard new non-stable assets.

WHY IT'S INTERESTING

DeFi "Magic"

The concept of a "self paying loan" is an early example of the kind of financial primitive that is only possible via the magic of DeFi. In comparison to more abstract DeFi protocols with unclear benefits, the concept of a self-paying loan is more straightforward to both retail and traditional finance alike.

Alchemix can attract new interest from those who are looking for reasons to cross the chasm and try DeFi. While synthetic assets and future yield are not easily palatable, the concept of "free money" and "self paying loans" are much easier to understand.

A New DeFi "Primitive"

By enabling this new form of borrowing, the Alchemix protocol has created a new building block for financial services. The stability of a protocol like this becomes something that any application developer can use to create new types of financial products and services.

For example, a skilled Web app developer could create a bankless-credit card, which uses Alchemix to pay off accrued debt over time. A protocol such as Alchemix has the opportunity to remake and reimagine a variety of forms of consumer credit markets.

Community

After the alETH exploit, Alchemix founders simply *asked* for users to return the misappropriated collateral. In traditional finance, unsecured financial errors are unrecoverable, but the open source and communal nature of DeFi resulted in a substantial percentage of the misappropriated ETH being voluntarily returned to the protocol, in return for an airdrop of the native token and an NFT signifying good community stewardship. This is another example of how DeFi breaks rules and norms in unexpected ways.

TOKENOMICS

Monetary Policy

In its liquidity bootstrapping phase, the $ALCX token was a pure governance token, entitling token holders to pro rata governance rights. In a forthcoming release, the $ALCX token will become a productive asset via a fee sharing arrangement.

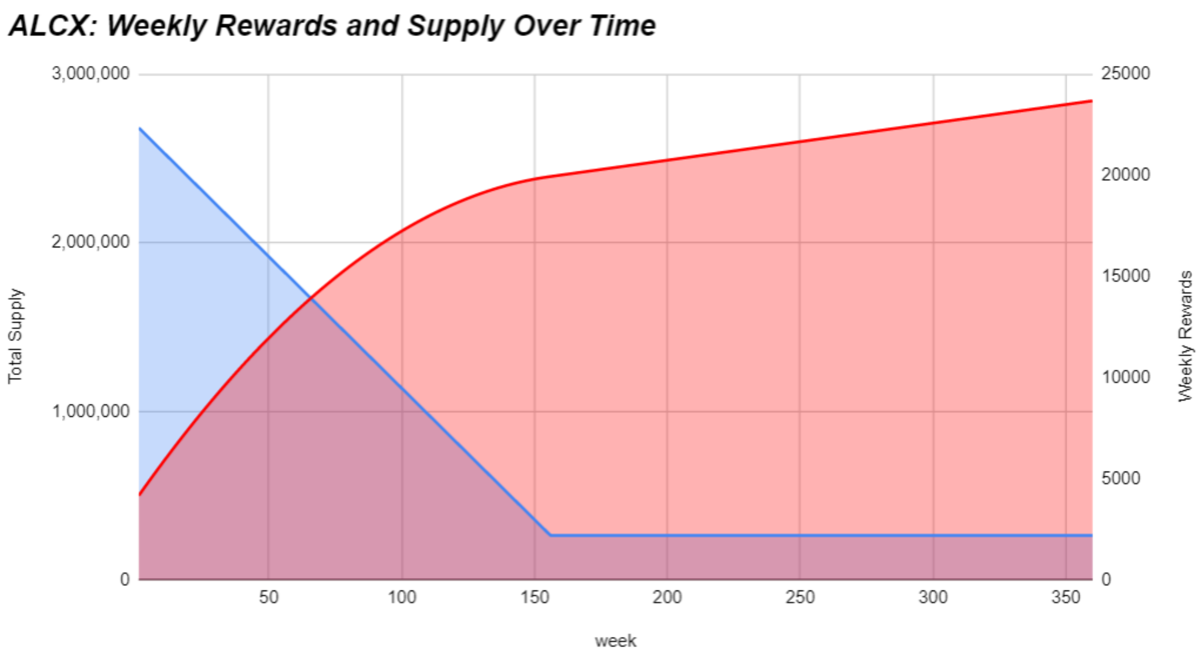
Liquidity Mining and Distribution

The token distribution strategy was well suited to seeding the Alchemix community.

The Alchemix ecosystem of smart contracts required deep liquidity for the $alUSD token to ensure liquidity for their native stablecoin and steady demand for the underlying asset. By heavily incentivizing an $alUSD-3CRV factory pool on Curve, Alchemix was able to create significant early demand to mint $alUSD.

The early $ALCX-$ETH liquidity providers were also similarly well incentivized in the earliest days post-launch, generating demand for farming the native token. Alchemix also prioritized a single sided staking pool, enabling the “farm-to-stake” model, which is now recognized as a much better alignment of interests than “farm-to-dump”.

While more mercenary capital frequently dumps farming rewards, creating downward pricing pressure, the farm-to-stake option incentivized early liquidity providers to compound their farming rewards by staking them.



Via Alchemix.

VALUE ACCRUAL

The $ALCX token has a clear value accrual model. When Alchemix adds the fee sharing in the near future, or all collateral locked in the protocol, 10% of yield will be distributed to stakers.

Alchemix staking currently offers a robust 85% yield in the native token on single sided staking, so the $ALCX token is already productive in returning great yield in the underlying asset for those long the $ALCX asset.

Currently, Alchemix has $655M in total value locked (TVL) in the protocol, although TVL peaked on May 11, 2021 at $1.69B locked, a few weeks prior to the launch of $alETH. The drop in TVL was due to the broad pullback in the market, including a 75% drop in the price of $ALCX, which represents a non-trivial portion of the staked value, as well as the aftermath of the stalled $alETH launch.

While Alchemix usage and TVL should grow with the organic growth of DeFi, TVL growth could be non-linear as Alchemix introduces vaults for additional assets. And growth in TVL will have a direct correlation to the dividends earned by stakers once Alchemix begins fee sharing. Assuming a 5% yield on $655M in TVL, dividends to token holders would already be $3.2M annually, and that's for a 6-month old protocol with only two fully supported assets.

That Alchemix' main use case involves locking collateral for a long period of time, suggests that both capital, and resulting yield, should be consistently sticky. This bodes well for the reliability of future dividends.

COMPETITIVE LANDSCAPE

At this highest classification, Alchemix competes with other yield aggregators. DeFi's signature composability has enabled all sorts of experiments around yield optimization, to the ultimate benefit of retail and institutional investors alike.

	Name	Chain	1d Change	7d Change	TVL ↓	Mcap/TVL
1	Convex Finance ...		+5.63%	+9.37%	$4.91b	0.01434
2	Yearn Finance (...		+4.07%	+7.32%	$4b	0.30457
3	Alpaca Finance ...		+3.34%	+0.04%	$1.54b	0.06649
4	Autofarm (AUTO)		-1.04%	+3.67%	$819.88m	0.04001
5	Bunny (BUNNY)		+1.14%	+7.72%	$806.61m	0.00854
6	Belt Finance (B...		+5.04%	+3.82%	$775.06m	0.053
7	Badger DAO (BAD...		+11.94%	+20.36%	$694.45m	0.36832
8	Alchemix (ALCX)		+3.04%	+12.02%	$637.31m	0.39103
9	Beefy Finance (...		+2.13%	+8.87%	$579.25m	0.14447
10	Alpha Finance (...		+8.23%	-	$561.37m	0.60083

Via DeFiLlama.com.

A number of protocols are innovating on fixed rate offerings while others aim to separate the principal and yield components into distinct tokens. All of these approaches aim to increase capital efficiency in a variety of ways.

Alchemix has taken the early market lead in their particular segment of future yield, incorporating access to the liquidity of future yield of an asset up front.

For this specific use case, Wasabix Protocol launched in April offering a similar ability to access future yield, while offering a wider selection of assets to borrow against. While Alchemix launched with $DAI and only recently added $ETH, Wasabix launched with $DAI, $BTC, $LUSD and $ETH. Further, Wasabix has expanded to BSC and Polygon, launching with $BUSD and $PUSD on those chains respectively.

Despite the fact that Wasabix offers a wider range of useful assets and blockchains and, at current, better yields in their farms, Wasabix has a total of $26M total value locked (TVL) across all strategies and chains, which is far less than Alchemix' current $655M TVL. These results are somewhat counterintuitive, and exactly how to interpret them remains an open question.

Pendle Finance also offers access to future yields, albeit with a twist. Pendle separates the principal and yield into separate tokens, and offers a custom automated market maker (AMM) that will allow traders to buy and sell that yield, effectively accessing that yield up front.

The discrepancy between Alchemix and Wasabix suggests that this is a space that can accrue moats via liquidity and community. Alchemix looks poised to become the leading community and building block for tokenization of future yield via the borrowing use case.

Although whether or not these moats will be relevant also remains in question. Once Alchemix moves to become a productive asset via revenue sharing, the market will have a much better idea for how sustainable this model will be going forward.

RECOMMENDATIONS

Alchemix is well positioned to grow and expand its lead in the market for the future yield use case. Their focus on building deep liquidity for the biggest assets on Ethereum continues to prove successful, although how sustainable that is remains in question.

Via Token Terminal.

With $ALCX trading near its all time lows on a fully-diluted basis, the token price has taken a big hit in line with the broader crypto market pullback. If Alchemix reaches scale for this use case, and the revenue share model is successful, the $ALCX token would accrue 10% of a large amount of yield. With a floating market cap of $250M, $ALCX has upside if it continues to lead the future yield market.

DISCLAIMER