Rating
72/100⭐

Snapshot	
Ticker	ALCX
Current Price:	~$229.23
Market Cap:	~$222.6 million
Circulating Supply:	969,250
Token Type:	ERC-20
Sector:	DeFi

Executive Summary

Conceptually, Alchemix's core product is quite brilliant and almost seems to be a "cheat code" to borrowing currency. The protocol provides self-repaying, zero interest, no liquidation loans to its users. To give it a more accurate description, it is a protocol that gives users an advance on future yields that are deposited into the Alchemix vaults.

What does this mean? When a user deposits funds into one of the vaults, instead of seeing the yield grow over a period of time, the user receives an advance on these yields immediately. Alchemix does this by taking the deposited funds and placing them into a Yearn Finance (or Saddle Finance) vault so that yield can be generated. The protocol then mints a synthetic stablecoin called alUSD to give to the users in exchange for their deposits. This is the representation of the advance in future yield. The ALCX token itself is used for governing the protocol and grants token holders the right to vote on proposals that direct the future of Alchemix and the use of treasury funds.

How Does Alchemix Work?

Alchemix vaults are the core behind the protocol's operations. Users deposit DAI (a stablecoin pegged to the US dollar) or ETH into one of these vaults. The protocol then deploys the deposit into a Yearn vault to generate yield (you can read our YFI writeup for more information on Yearn). Users can borrow up to 50% alUSD against their DAI deposit (e.g. 1000 DAI deposited allows the user to generate 500 alUSD), and 25% alETH on their ETH deposit. As the yield is harvested from the Yearn vaults, the alUSD debt begins to decrease. The interesting aspect behind this is that the user can pay off the debt at any time, but if they wish to wait long enough, the debt will be paid off completely by the Alchemix protocol. This is where the reference of the "self-repaying loan" comes from.

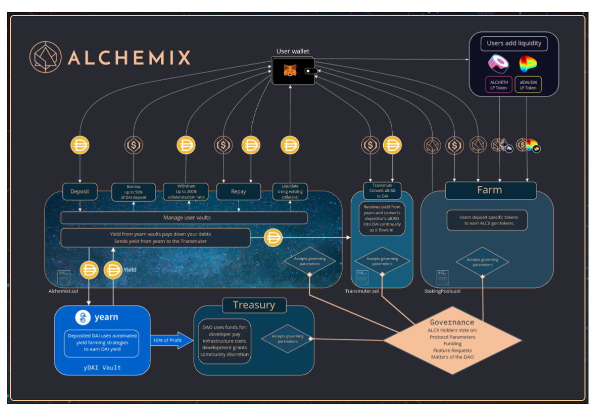

***Figure 1** taken from alchemix.fi*

Use Cases

There are a number of reasons to use the Alchemix protocol for borrowing funds. The first reason is that users can cash out the alUSD into fiat and purchase real world items with the money. For instance, if a user has $100,000 in DAI and they deposit it into the protocol, they will receive $50,000 alUSD (due to the 50% borrow limit) which can then be cashed out to USD. The user can then purchase a $50,000 car with a loan that essentially repays itself over the coming years.

The interesting aspect behind this strategy is that if a loan is taken out, the user can theoretically spend and save at the same time. How is that so? The user is utilizing the full $100,000 of principle to generate yield as opposed to just half. Think about the following scenario. A user that does not elect to participate in the Alchemix protocol has $100,000 in stablecoins and decides to liquidate half in order to purchase a car for $50,000. The user is left with a $50,000 base principle that can be used to generate yield using a DeFi protocol that they please. If the user decides to go through Alchemix, that allows the user to utilize the full principle of $100,000, which effectively doubles the yield as opposed to just $50,000 generating yield. The other $50,000 that the user has can be spent on whatever, while the entire principle is simultaneously making that money back. According to the anonymous Alchemix founder that goes by the pseudonym Scoopy Trooples, the team has researched and completed the economic analysis behind this example and it ends up being between a 15 to 20 percent boost in capital efficiency.[1]

We should also note that you can also change up this process and deposit $100,000 worth of ETH, borrow $25,000 of alETH, swap that to a stablecoin, and get $25,000 of cash. Your ETH earns the yield needed to pay back your loan by itself, and you get cash to spend while not needing to sell any ETH. Of course, there are risks, but this opens up a wide variety of potential use cases.

The second reason for using Alchemix is because the amount received as a loan after depositing DAI can be used to speculate on other investments without putting your initial DAI at risk. This is because the yield earned will eventually repay the debt owed and the user will get their DAI back. If the investment thesis is accurate and the underlying asset increases in value, wonderful - the user can payback the loan immediately if they desire. If the investment does not go as intended, at worst, the user will just have to wait to withdraw the initial capital deposited. Or, they can pay back the loan early using additional capital.

The third, fourth, and fifth reasons for using Alchemix are not for its borrowing system, but rather for the other perks of the protocol. Alchemix has yield farms which consist of liquidity pools that the user can join to earn ALCX as yield. The fourth reason is the opportunity to swap alUSD to another stablecoin or alETH to ETH for different, and perhaps even better, yield possibilities. The last major reason to use the Alchemix protocol is to use the Transmuter. The Transmuter basically takes the alUSD that the user wants to contribute and converts it into DAI. This ensures that all alUSD stays pegged 1:1 to the US dollar by taking yield from the Yearn vaults and allocating it proportionally to its staked alUSD. When a user claims their DAI, an equal amount of alUSD is burned inorder for things to align. To read more on the Transmuter, click on this link. There are other use cases for using Alchemix, but for the sake of keeping this report concise and thorough, we decided to choose our top five reasons.

Catalyst

There is a major catalyst approaching that can provide a strong upward momentum for the protocol. The launch of v2 is expected to launch by the end of January or early February 2022. The v2 smart contract code is frozen and currently undergoing its auditing phase which normally takes 6-8 months to ensure a successful product.[2] Alchemix v2 will allow new collateral types like staked Ether (stETH), wrapped Bitcoin (wBTC), and additional stable coins (i.e. USDC, USDT, and potentially MIM). New yield strategies to provide more options other than Yearn are also confirmed to be a part of the v2 release. In the Bankless podcast, Scoopy Trooples, the founder of Alchemix, stated that users can expect to see Aave, Compound, Pickle Finance and more options for the yield aggregator strategy vaults. This correlates with the new v2 opportunity for users to choose which strategies that they would like to use. A wider scope is presented and v2 puts more power into the hands of its users by picking the time frame and strategies based on their risk tolerance.

At the current moment, ALCX governance voters only have access to non-binding votes off-chain. v2 enables direct on-chain governance by the community which is a massive leap for the protocol. The team is also offering a grant and community contribution program to encourage participation and reward users. Regarding the updates to the ALCX DAO, token holders who stake the ALCX coin will begin **earning a portion of protocol revenue** after the on-chain issuance is implemented. Currently, Alchemix takes a 10% fee on yields generated through deposits.

The v2 architecture is modular and allows a tremendous amount of composability, which essentially means that it will allow for new components to be launched on top of the platform. These new components include:

- Delegating unused collateral to the protocol in return for ALCX token rewards
- Using NFTs as collateral for receiving peer-to-peer delegated credit
- Opportunity to expand into ETH layer 2's, side chains, and other EMV-compatible layer 1s
- Easy integrations into other protocols as a building block, which would boost value put into Alchemix

You can read more about Alchemix v2 using this link!

Competitive Advantage

In the tokenizing future yield sector of the DeFi industry, there are only a handful of established protocols that are credible in the space (at the current moment). APWine, Pendle, and of course Alchemix, are the main participants.

APWine and Pendle both have similar mechanics and concepts while Alchemix is slightly different. The first two protocols mentioned allow the user to essentially split an interest-bearing token into separate principal and yield tokens. By tokenizing future yield generation, users can then sell these tokens to lock in the interest rate received (because of the speculation that the current rates are better than future rates) or purchase these yield tokens to produce a greater yield exposure without committing a substantial amount of capital.

The way that Alchemix separates itself is because it allows the users to receive yield in advance on the assets that are deposited into the protocol, which is then proceeded to be paid down using the yield that is generated from those deposited assets. The protocol uses the future yield to pay back a zero-interest loan which the user can take immediately, which essentially brings that future yield to the present. Alchemix has the first-mover advantage in this space and as the Alchemix v2 targeted launch is approaching, it amplifies that the protocol is in a space of its own.

Tokenomics

There are two coins that will be described in this section.

ALCX Token

The tokenomics surrounding the ALCX coin are quite interesting. The token itself provides governance rights which allows the holders to vote on proposals and a direction on where the DAO should go in certain situations. ALCX does not have a set maximum supply or hard cap, due to the unique and strategic emission schedule over the three years since launch. There was an initial pre-mine of 478,612 ALCX tokens which was configured with a 20% total allocation to the DAO treasury and bug bounty program. 2,393,060 ALCX tokens were originally estimated to be in circulation after three years, which is where the other 80% of coins were allocated.

Approximately 22,344 ALCX tokens were distributed from staking pools in the first week of staking and, since then, there has been a 130 ALCX token decrease per week that will continue up until the end of the three year mark. After the three year period has been reached, there will be a flat 2,200 ALCX token weekly emission schedule, which will increase the total token supply by 114,400 ALCX annually.

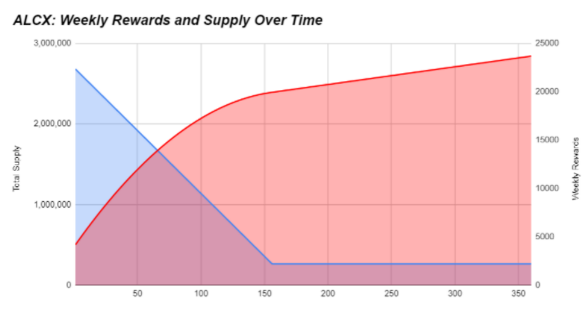

Figure 2 *taken from [here]*

alUSD Token

The alUSD (and the other al[token] coins) is a synthetic stablecoin with a peg to the US dollar. When users deposit DAI into the Alchemic platform, they receive the alUSD coin in return. Interesting enough, the alUSD coin is tradable on certain decentralized exchanges (i.e. SushiSwap and Curve Finance).

Team Analysis

The Alchemix team is all anonymous which has its pros and its cons. In the crypto industry, the community prefers to know who exactly runs and develops the protocols, just as any normal community should. Although the core team is not publicly doxxed, the main founder, Scoopy Trooples, has participated in multiple interviews and podcasts that have been shared to the Internet. Although we do not know who Scoopy is, he sounds incredibly intelligent when it comes to DeFi and the crypto world as a whole. Something that we admire about the team is how focused they are on security. In a podcast with Bankless, Scoopy stressed that Alchemix v2's has a strong focus on the protection of user funds. There was an accidental Ethereum vault exploit in 2021 which caused around 2300 ETH to be lost. About 50% of that ETH was recovered, and the fact that the core team donated personal funds to help the protocol stabilize shows that they actually care about Alchemix, as well as wanting the protocol to succeed and be a legitimate DeFi operation. You can read more about this unique "reverse rug" situation here.

Even though we do not necessarily consider investors as team members, we feel as if we should bring light to the amazing organizations that are associated with Alchemix. eGirl Capital, Spartan Group, Delphi Digital, CMS Holdings, Alameda Research, and others all have connections and stakes with Alchemix. This is an Avengers-type group of investors and with their help, it has the potential to create a very valuable protocol.

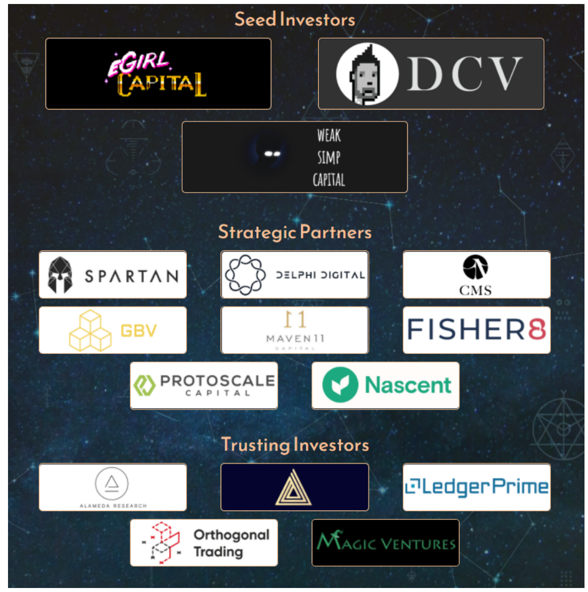

Figure 3 *taken from alchemix.fi*

Risks

There are risks to investing in every crypto protocol, and the biggest one is smart contract risk. Alchemix has already been exploited once due to an error with their deployment code, even if the users of the protocol were the ones who benefitted. The chance that there is an error in the smart contract is always present, even after multiple audits. Alchemix is undergoing their v2 smart contract audit at the time of writing, and even after the long waiting period, it is still not completed. This should be viewed as a positive though because it shows that the team hired a very credible audit group with Runtime Verification to examine the v2 code. The protocol has already been audited by Runtime Verification as well as Certik before, which are two well known names within the industry. Even though there are audits, there is still a chance a bug went undetected in the process.

The second risk is the risk of synthetic tokens like alUSD and alETH losing their peg. DAI and alUSD must remain at a relatively 1:1 ratio to the US dollar or the borrowing system will be in some trouble due to the tokens being misvalued. Supply and demand drivers would also be affected by the depegging event.

The third risk revolves around yield rates generated on deposits. If the yield decreases over time, then the actual time for the loan to be repaid will also increase because there is less yield coming in. Yield rates fluctuate, yes, but this is something that should not be too concerning or a deal breaker for entering the protocol.

Rating Summary

Using our new CCATTAR (Catalyst, Competitive Analysis, Tokenomics, Team Analysis, Risks) analysis, we will dive in and rate the protocol as one unit. Overall, Alchemix looks to be a brilliant and innovative way for borrowing within the DeFi space. The protocol at its current stage is already very useful, but with the upcoming launch of v2, it has high potential to get better. The two initial deposit types, DAI and ETH, are unfortunately among two of the lowest yield bearing assets within the Yearn vaults, which obviously can deter many users from using the protocol. Alchemix v2 will have legitimate upgrades and allow users the option to use a wider range of assets as collateral, which will inevitably bring in more exposure to the protocol.

Alchemix has a competitive advantage in the space due to being one of the few protocols that tokenize future yield and uses that yield to automatically pay off loans over time. The product of a zero-interest, no liquidation loan, that pays itself off over time is intriguing to many people within the DeFi space and rightfully so. The tokenomics of the ALCX token are quite unique and, with the relatively over-aggressive emission schedule early on, it caused the majority of early investors to rethink their investment. Many of them sold, but ALCX has been working with various solutions (i.e. OlympusDAO, Tokemak, Votium Protocol) to efficiently manage its emissions and liquidity.

When looking at the team, there is always uncertainty when the anonymity of the founders is relevant. For that reason, the team analysis will not be given a perfect score, but, nonetheless, the team has proven to show integrity and intelligence in their action and even in podcasts where they talk about the issues, highlights, etc. of Alchemix with other crypto influencers.

Risks are prevalent in all investments, and the risk of Alchemix's synthetic tokens depegging is not one to take lightly. Although this risk seems major, the protocol has created a plan to adjust to that with the use of the Alchemix Transmuter.

Overall, the protocol has a bright idea about receiving future yield in the present and, with the upcoming launch of v2, it seems as if it can only get better. That is all in contingency of the protocol working correctly and stabilizing the new upgrades to its full ability. Here are our ratings:

Catalysts: 18/20
Competitive Analysis: 16/20
Tokenomics: 10/20

Team Analysis: 14/20
Risks: 14/20
Total for ALCX: 72/100

Citations

1. https://stockhead.com.au/cryptocurrency/crypto-loans-that-repay-themselves-heres-alchemix-founder-scoopy-trouples-on-how-that-works/
2. https://alchemixfi.substack.com/p/the-calm-before-the-storm

Links

Website: https://alchemix.fi/
Whitepaper: https://alchemix.fi/c76d1d663f6c8247b86a8fca83d5bd1b.pdf
Documents: https://alchemix-finance.gitbook.io/alchemix-finance/
CoinGecko Listing: https://www.coingecko.com/en/coins/alchemix

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