

DivBox: A platform for growing long-term crypto holdings

Abstract. Although holding cryptocurrencies in a private wallet provides the best security, lying them idle doesn't generate any interest, and that's a problem for long-term holders who are trying to maximize their stake. By not earning any interest on their crypto, these holders are missing a golden opportunity to put time in their favor during the accumulation process. In this paper we introduce DivBox, a platform that helps long-term holders increase their coins without giving up the control to centralized third-party entities. In order to do so, the platform leverages the smart contract capabilities of the Ethereum network in combination with a secure and battle-tested decentralized lending protocol.

Earning interest in traditional markets

In traditional markets, one can earn interest on their money by depositing it in a bank. Banks lend out that money to other people and require them to repay the loan with an interest. When borrowers pay back the bank, part of the interest is passed to the original depositor, after all the banking fees and profits are deducted. In this scenario, depositors not only need to trust the bank with their funds, but have no choice other than accepting whatever rate the bank is willing to pay. Cases where depositors get a near to zero or even a zero percent interest on their money are pretty common nowadays, making the banks the only true beneficiaries in the process.

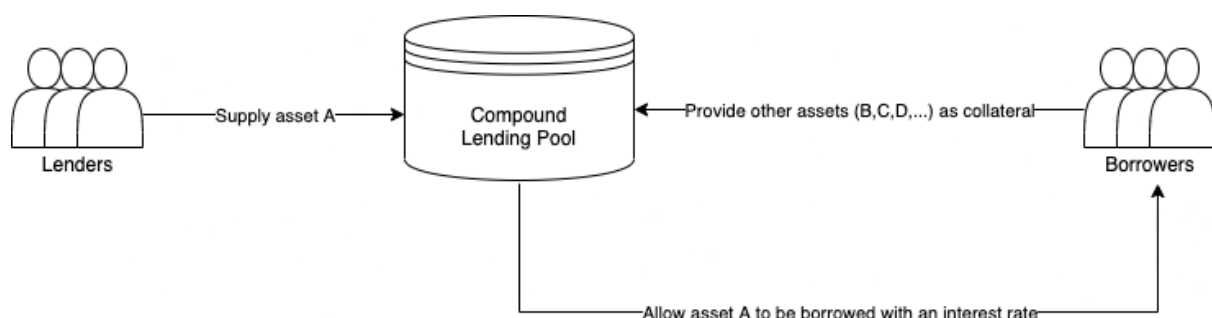
People can also purchase stocks with the expectation to receive more money than what they initially invested in. That might be the case if the price of the stock goes up, but it's particularly true when people receive profits made by the company in the form of dividends while they hold the stocks. In this scenario, investors are exposed to the inherent risks of the company business, which may even result in losses due to the speculative aspect of such investment. Investing in stocks takes time, effort and good risk management to avoid losses and maximize returns.

Earning interest in the crypto world

With the surge of cryptocurrencies and smart contracts, we've been exposed to a new world with endless opportunities to reinvent financial products with the help of transparent, incorruptible and autonomous agents that can be programmed to follow certain rules. In that context, we have the so-called decentralized lending protocols, which are smart contract based platforms that allow borrowers and lenders to interact in an environment where the power to borrow assets and earn interest on these assets is no longer controlled by a few financial institutions, but rather distributed among thousands or even millions of people. Equipped only with their private wallets, these people can actively participate in a global market with opportunities that simply didn't exist before.

Among the lending platforms out there, Compound^[1] stands out as one of the first and more secure ones that runs on the Ethereum^[2] network. Compound currently manages billions of dollars worth of assets, and has gone through several audits that inspected the security, correctness and sustainability of their protocol.

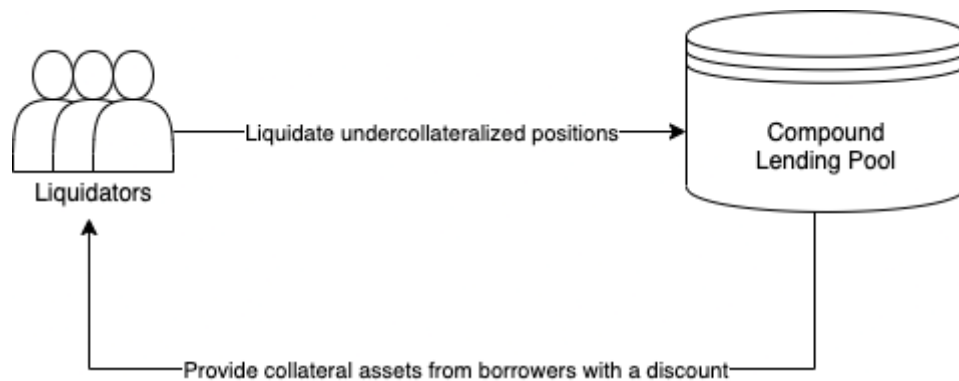
The following figure summarizes how it works:



1. Users deposit Ethereum-based assets into the lending pool to earn interest at a variable rate – mathematically expressed as a function of supply vs demand – on these assets. At any time, depositors may request withdrawal of their assets plus any earned interest.
2. The protocol makes deposited assets available to other people who are willing to borrow them. In order to do so, they must provide collateral — made of other Ethereum-based assets — as an insurance that they can pay back the loan. At any time, borrowers can repay the borrowed amount plus charged interest.

Borrowers are also incentivized to always keep their collateral above a certain threshold, otherwise they can be liquidated in the market. The liquidation process is triggered by any person or even automated bots which are constantly looking for borrowers whose collateral stands below the required threshold. Under such conditions,

liquidators can pay the debt on behalf of the borrower in exchange for a portion of the borrower's collateral at a discounted price. Liquidators play a core role in the platform by incentivizing borrowers to keep a healthy position in the platform, avoiding default risk.

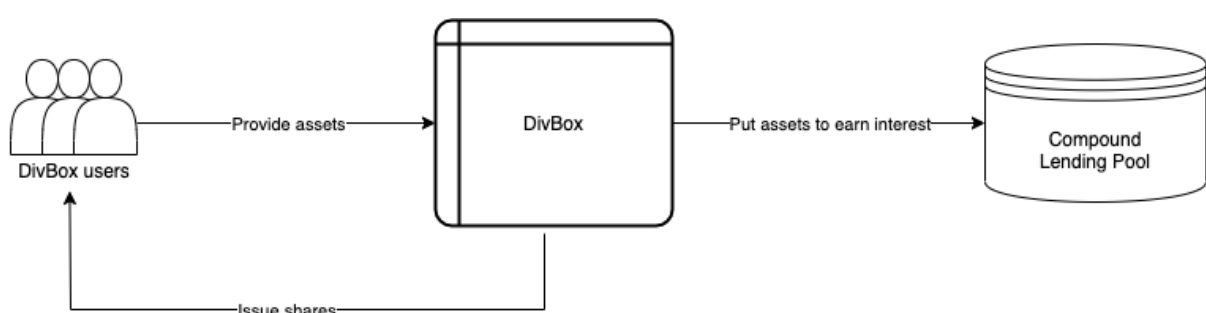


All interactions in the platform are governed by smart contracts with an immutable, transparent and well-defined set of rules. That means that, just by acting with their best interest in mind, lenders, borrowers and liquidators run this autonomous machine that cannot be stopped or tampered with.

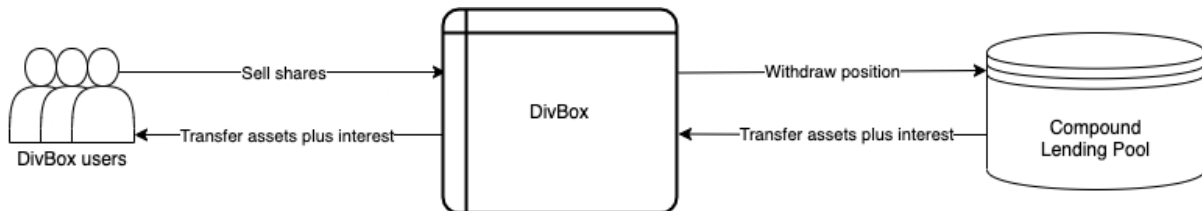
DivBox: earning with shares appreciation and dividends

DivBox is a Ethereum-based smart contract that is built on top of Compound and allows users to grow their ETH holdings in two ways. First, just like in the stock market, people can buy shares in DivBox with the expectation that these shares will go up in value, i.e., will be worth more ETH in the future. However, unlike in the stock market, shares from DivBox aren't exposed to the speculative nature of a company business, rather, the ETH amount used to buy them is automatically put to earn interest through Compound. That means that, as long as people have shares in DivBox, these shares will always go up in value since they'll be automatically collecting interest (in ETH) generated by the Compound protocol.

The figure below shows how the process works:

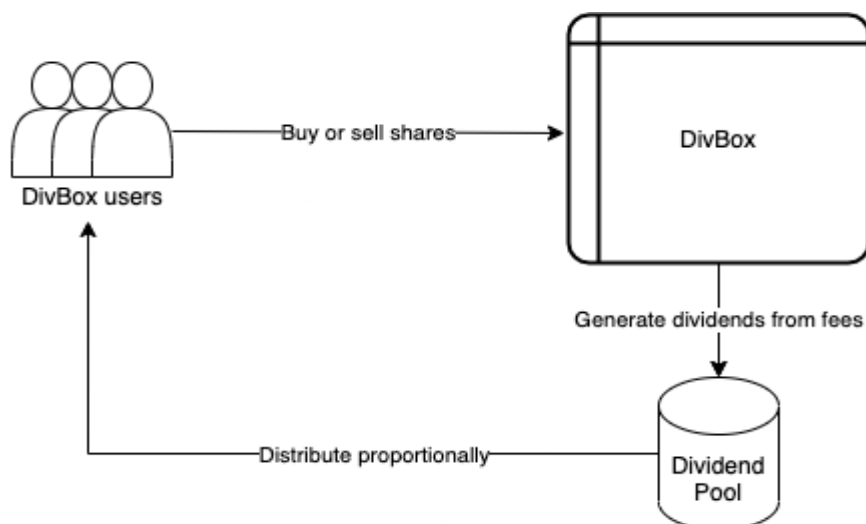


At any time, people can also sell their shares in DivBox: in this case, DivBox will automatically pull the original assets from Compound plus any accrued interest and transfer the total amount directly to the user's wallet, seamlessly:



Besides the valuation of shares, a big advantage of DivBox is the ability to generate dividends for its shareholders. In the traditional markets, dividends may come from profits made by companies; in DivBox, dividends come from a much more predictable source: transaction fees. Whenever someone buys or sells shares in DivBox, a fee is charged and distributed as dividends among all shareholders.

Dividends are distributed in a proportional manner determined by the holding power of the users, i.e., the number of shares that a user holds in respect to the total number of shares in the platform. For example, if someone holds 50% of the total shares in DivBox, and some shares are either purchased or sold, that person gets 50% of the dividends generated by the transaction. This distribution mechanism is entirely managed by a smart contract in a fully automated fashion, as illustrated below:



DivBox has been designed to benefit long-term holders the most:

1. The longer someone holds shares in DivBox, the more valuable these shares will be and more assets they'll be able to get later by selling shares at profit.
2. The higher the number of shares owned, the more dividends that holder can potentially earn compared to other users.

Future work and final thoughts

Currently, DivBox works on the Ethereum network and only supports ETH as an asset, but there's no reason to stop there. There are plenty of other Ethereum-based assets that can be explored, in particular the stablecoins^[3], like the Tether USD^[4], a stablecoin that allows people to transfer U.S dollars in a much more flexible way. In platforms like Compound, stablecoins also offer a huge advantage over the traditional institutions: lenders can get as high as 100 times more interest on their stablecoins in comparison to actual dollars deposited in a bank. That makes stablecoins a much more appealing option for earning interest in FIAT currencies. With DivBox, people can explore that potential even further: they can also earn additional dividends, paid directly in stablecoins, on top of the Compound's interest rates.

The concept of DivBox can be also extended to other decentralized lending pools and even to blockchains other than Ethereum, benefiting long-term users of other cryptocurrencies as well.

Finally, the smart contract used by DivBox is agnostic: it can be used from a webpage, a standalone mobile or desktop app and can be even integrated with other crypto providers like exchanges and wallets, unlocking a wide range of other potential applications.

References

- [1] Compound - <https://compound.finance>
- [2] Ethereum - <https://ethereum.org>
- [3] Stablecoin - <https://www.investopedia.com/terms/s/stablecoin.asp>
- [4] Tether - <https://tether.to>