

xDerivative Protocol:

Decentralized trading tool with real-time custom deflation.

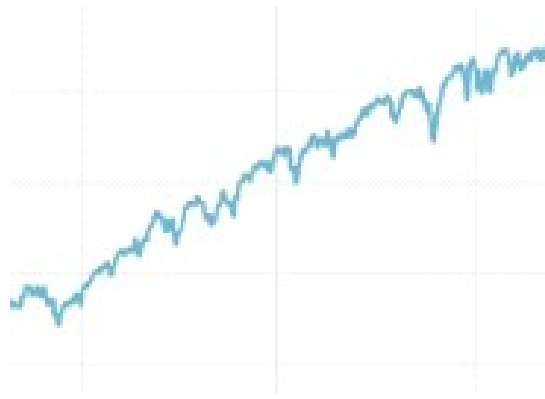
Abstract. xDerivative is the deflationary ERC20^[1] standard token with built-in protection against speculators. The balance of supply and demand is regulated by users. The xDerivaive token **always** rises in price faster than oracle (BTC) due to the value redistribution algorithm. Emission of the token is provided by an (EVM) smart contract.

Introduction. In the current financial system, it has become virtually impossible to multiply or even maintain existing capital without significant effort. The average annual inflation of the dollar 6%, excluding the global economic growth rate. And all the attempts of an ordinary person to save their savings in the dollar cut out in most cases are doomed to failure.

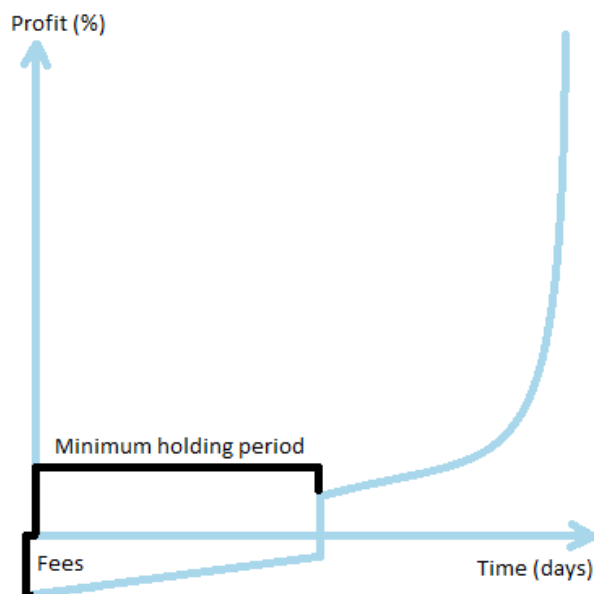
The situation with deflationary assets is no better. The free market cannot independently establish an adequate price for a product due to the presence of speculators on it. Unlike investors, the speculator does not care that other market participants incur expenses for his actions, and his profit is the only thing he focuses on when he buys goods, reducing his supply on the market and artificially inflating the cost. We can only imagine how much the number of Bitcoin^[2] users would increase if there were no risk of a 70% price drop after almost every maximum value. The fewer the participants, the lower the capitalization and, as a consequence, the lower the final (fair) price per unit.

Currently, the Dai Stablecoin System (Maker)^[3] is used to protect the decentralized market from speculators. This protocol, one of the largest applications (dapps) on the Ethereum blockchain, was the first decentralized finance (DeFi) application to earn significant adoption. It does not require trust from third parties and at the same time can guarantee the safety of funds in the conditions of an imbalance of supply and demand. The problem with using such a scheme is that its participants, unlike others, cannot receive dividends created by the growth of the digital economy, as a result of which the conditions for participation in price stabilization become less attractive.

To attract people to the process of stabilizing prices on the market, we need to clearly show them what losses they incur when they do not take measures to protect against speculation. For example, if the price of an asset with built-in protection against speculation to an asset without such protection looks like an inclined (up) line, investors will have a motivation to invest their savings in such an asset.



Protection. To encourage users to use the asset as a means of saving rather than speculation, a fee is charged for minting and reverse conversion. This fee is redistributed between the remaining participants, encouraging them to hold the asset longer than others hold regardless of the market situation. A rule is implemented that allows users to withdraw their tokens without fees after holding them for a certain period of time, incentivizing long-term holding of xDerivatives. At the same time, each new participant who decided to convert his savings into unit of asset should block a larger amount of funds, since after blocking he will own part of the funds remaining during the fees. Thus, the value of an asset that allows you to accumulate commissions at the expense of sellers will constantly grow. Any owner will be able to earn superprofits if he owns the asset longer than the certain period, or if he can independently find a buyer for the asset at one hundred percent nominal value.



If someone wants to use subsequent levels according to the standard, ERC20 can independently upload the intermediary (interface) code in the blockchain of Ethereum.

Maximum depth equals: $(2^{256} - 1) =$

115792089237316195423570985008687907853269984665640564039457584007913129639935

To convert oracle asset into tokens, user needs to lock collateral in smart contract at the current price (Collateralized Debt Position). Upon reverse conversion (tokens into oracle), the smart contract check the holding period and gets fees if the tokens were on the balance less than a certain period. Price is the ratio of collateral on the balance of the contract to the total volume of tokens for root (0) level and the ratio of tokens supply of the previous level to the tokens supply next level for next levels.

Referral program. Users can create their own xDerivatives that are backed by the root xDerivative or another user's xDerivative. This allows for more flexibility and customization in the creation and management of xDerivatives. Users can set their own rules and parameters for the new xDerivative, such as withdrawal rules or fees.

Fees. Currently, in most cryptocurrencies, the commission is calculated based on the size of the transaction but not its amount. This rule leads to the fact that the commission for microtransactions often exceeds the commission for transfers of large amounts.

xDerivative allows changing the situation due to the natural progressive scale of fees.

Every time the user converts tokens into fewer depth tokens or on the collateral, he pays the remaining holders 1%. A user who converted 1000 tokens, as a result, will receive less than 10 users who have converted 100 tokens because, after each conversion, the price of remaining tokens on the oracle will increase. Also, if the user wants to split one transaction into several parts, he will have to pay a large commission to the miners. Thus, a user who converts a large amount will always pay higher fees in a percentage ratio. In other words, xDerivative is always taxed on a progressive scale.

Volatility. Unlike most cryptocurrencies, the growth in price of the xDerivative relative to the ether occurs when the total capitalization of the token decreases. With an increase in capitalization, the price of the token relative to the ether will remain unchanged. That is, the price of the token will increase faster with increasing volatility of the oracle, regardless of whether the oracle is getting cheaper or more expensive. This will allow ordinary investors to make money on the forecast of the volatility of the oracle, requiring a minimum number of actions.

In the future, this property of the token will lead to the fact that xDerivative will absorb most of the ether used as a means of saving while reducing their supply on the market and thereby increasing the total value. Although outwardly it will look like a financial bubble, this will not be true, because with any attempt to reduce the capitalization of the token, its price will rise and, as a result, the motivation of people to withdraw assets will decrease. In the end, only ether directly used to pay commissions to miners or convert to gas will remain on the market.

Risks. Paradoxically, the main disadvantage of this token maybe its advantage when used improperly. The ability to choose target deflation may lead to the fact that the bulk of users will own money with reduced purchasing power. In this situation, even with a better alternative, abandoning xDerivative will be extremely difficult because, with a decrease in capitalization, its price will increase. Also, expensive money policies adversely affect economic growth.

In addition, an incorrectly matched collateral asset can become a huge problem when the total capitalization of tokens based on it grows, since in case of problems with the price of this asset, it will automatically spread to all levels.

Also, if desired, regulators can, through superficial scrutiny, see it as an attempt at fraud/manipulation in the likeness of a Ponzi scheme. Of course, the aggressive behavior of the regulator in relation to the cryptocurrency market should be taken into account when deciding on the availability and size of such a commission, but the advantages that this approach provides, according to the author, outweigh the disadvantages. First, if this approach is not considered in isolation, but, for example, used in conjunction with the classic AMM⁴¹, it gives the asset an additional property that allows you to redirect part of the profit for the supply of liquidity to common collateral during arbitrage between it, the underlying asset and a third-party asset, which will increase the overall attractiveness of the instrument for an ordinary user who does not have the skills to place liquidity in such protocols. In addition, if the minimum holding period is not long enough, the difference in return on holding capital in the form of a derivative and in the form of an underlying asset may not be significant at the initial stage in order to make long-term investment a more profitable strategy than speculation. Perhaps in this situation it would make sense to create an additional asset for a skeptical group of users, in which all other stabilization mechanisms will be preserved, but this approach will not be applied.

Therefore, developers should already think about creating similar tokens on alternative platforms. The more options there will be for similar systems at the initial stage, the lower costs will be required to select the best of them in the end.

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