# Stollayto Documentation

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# I. Platform

## Introduction

Stollayto combines crypto and gaming to create a fun, rewarding, and unique experience. Stollayto enables users to potentially earn more crypto rewards than normally possible when compared to individually staking their coins into liquidity pools. This is done by Stollayto through becoming a liquidity provider on behalf of all users on the platform and pooling all of the rewards. Stollayto then leverages casino games such as slots to give users the chance to win the combined rewards. In essence, users of the Stollayto platform are willing to risk losing their rewards from being a liquidity provider for a chance to win big. At the same time, Stollayto guarantees the return of all tokens deposited into the platform when becoming a liquidity provider, meaning their initial investment cannot be lost. This speaks to user's risk appetite, where their thrill-seeking nature means they are willing to lose their staked rewards but not their initial investment. However, users can potentially win massive rewards that were not possible before Stollayto existed. Whatever asset pool they choose to invest in, they believe the underlying coins will increase in value – this drives the rationale behind them becoming a liquidity provider. Stollayto's mission is encapsulated in the following statement: "Stake Crypto. Win Rewards."

## Curve Finance

Stollayto is compatible with ERC-20 tokens on the Ethereum Virtual Machine (EVM). Stollayo uses the decentralized exchange, Curve Finance, to invest into liquidity pools on behalf of users. This is because of its cheaper fees compared to its competitors in Uniswap and Sushiswap. Furthermore, Curve Finance focuses on yield-farming stablecoins, and has a highly efficient system for users on the platform to exchange, meaning the exchange has lots of volume traded. This decreases the risk of losing money to Stollayto and its users. It has a fee of 0.04% on all pools and a total value locked (TVL) of over $5.5 billion[1]. This fee generation is then redistributed to token holders that are staking inside the Curve Finance platform. Stollayto projects that TVL is increasing in Curve Finance compared to its competitors because of the low fees, which will allow them to pay out effective APYs and meet their obligations.

**Risk Appetite**

Stollayto guarantees the initial investment of tokens put in by users, meaning users can withdraw that amount at any time they desire. Stollayto is not responsible for any fluctuations in price of the token that is being staked, so the user assumes the price risk for any pool they invest it. Stollayto current has three unique pools that users can invest it which all possess a unique APY depending on the users' risk tolerance and personal opinions on each token. In the event of a bank run, Stollayto bears no risk given they can withdraw all liquidity from Curve and transfer directly to the users. As a liquidity cushion in case of emergencies, Stollayto maintains a reserve pool derived from 5% of all rewards collected that serve to meet Stollayto's cash needs if need be. Furthermore, Stollayto will hold Curve on behalf of users, meaning it will have major voting rights on the platform assuming customers invest large amounts into Stollayto. This mitigates risk of Curve's interests misaligning from Stollayto's interests given that Stollayto holds an abundance of Curve's governance token. In conclusion, risk is transferred away from Stollayto to ensure the platform's long-term viability.

**Casino Games**

Stollayto plans on implementing three distinct casino games that will attract thrill-seekers in the crypto space. These games are as follows:

1. Slots – The slots machine is one of the most popular casino games there is. The premise is simple… the user spins the wheel, which contains three of more reels depending on the slot machine. If the spins lands on all three of the same reel, or hits a "payline", the user wins a designated amount. Slot machines use random number generators to ensure independent, random and uncorrelated spins for the user. For each payline, the operator can set the odds, which usually ranges from 1 in 12 to 1 in 649,000[2]. For the purposes of Stollayto, there are three different reels and the odds will be set to make the expected value of the payout at **85%.**

*These are the three potential paylines with Stollayto's current slots machine.*

2. Blackjack – Blackjack is a casino banking game where players go against the house and try to get the accumulation of cards closest to the amount of 21 as possible without going over. They bet their cards against the casino who deals their own hand as well. The expected payout to Stollayto is **92%,** meaning the house expects to make eight cents for every dollar invested[3].

3. Roulette – Roulette involves users betting on a variety of instances when a ball is rolled in a roulette machine (croupier) and lands on a specific number. Users can bet on numbers, rows, columns, colors, and much more, all which have distinct payouts. The house edge in roulette is typically 5.26%, which suggest an expected payout to users of **94%**[4].

## II. Types of Tokens

### Stokens

Stollayto has developed its own token, named the Stoken, that serves as a medium of exchange between the value of rewards received from being a liquidity provider in Curve to tokens that users insert into the casino games for a chance to win said rewards. These Stokens have no value outside of the Stollayto ecosystem and one stoken will provide you with one play of any casino game provided by Stollayto. Stokens are awarded based on your portion of the reward pool, so users use Stokens for a chance to win big rewards. There are two main types of Stokens – the MStoken and JStoken:

## MStokens

MStokens, or Main Pool Stokens, are the most common type of stokens leveraged by users in the Stollayto ecosystem to play casino games. MStokens are rewarded based on the amount a user has provided in liquidity in a specific asset class (main pool) compared to the entire pool size. Stollayto utilizes a finite amount of MStokens per payout – specifically 1000 MStokens are minted everytime Curve Finance pays out rewards to Stollayto. MStokens are provided to users based on their contribution to the total liquidity provided. MStokens do not expire unless liquidity is drawn out of the pool by the user, in which case the MStokens are burned. MStokens have no value outside of the Stollayto ecosystem.

<div align="center">EV Calculation</div>

*Total Pool = $1000*
*Rewards (APY) = 10%*

*User 1 – 50% of the Pool = $500 Invested*
*User 2 – 30% of the Pool = $300 Invested*
*User 3 – 20% of the Pool = $200 Invested*

*User 1 – 50% * 1000MStokens = 500 MStokens*
*User 2 – 30% * 1000MStokens = 300 MStokens*
*User 3 – 20% * 1000MStokens = 200 MStokens*

*Total Reward Pool = $100*
    *Total Paid out = $85 (Slots EV = 85%)*
    *Jackpot Pool = $5 (See JStoken)*
    *Stollayto Fee = $5*
    *Liquidity Cushion = $5*

## JStokens

JStokens, or Jackpot Stokens, are tokens provided to liquidity providers on Stollayto to provide the chance to win reward from a jackpot pool separate than the main pool. This incentivize users to sign up and keep their liquidity within Stollayto for prolonged periods of time. JStokens act in the same manner of MStokens, providing an opportunity for users to win the value in the Jackpot Pool on two separate occasions: Sign-Up and Random Drop Model (RDM).

To incentivize users to sign up, users receive 1 JStoken the moment they connect their wallet address to Stollayto and deposit a minimum of 100 USDT into any liquidity pool. The address is linked to a phone number to ensure people can only receive 1 JStoken upon signing up.

To incentivize users to keep their money inside Stollayto, the protocol will randomly drop JStokens to give them a chance to win from the Jackpot Pool. After the liquidity pool reaches a certain threshold (>$10K), Stollayto will drop 1 JStoken to every active user on the platform. This encourages users to remain active on the platform and reward them for it.

### Stoll

Stoll is Stollayto's governance token which users can hold to gain voting rights on contentious issues within the platform as well as gain access to a portion of the platform's revenue. One Stoll can be gained by simply providing one CRV to the platform, which accounts for 90% of Stoll available. 10% of the platform's Stoll token are reserved for company management to ensure company vision is aligned with what is best for the company. This is further discussed in the *Governance* Section of this paper.

## III. Customer Lifecycle

### User Experience

### Deposit

Users sign up by connecting a wallet address to their Stollayto account and depositing the equivalent of 100 USDC of crypto assets in one of our three pools. Users also have the option to invest in all three asset types if they desire, getting access to the reward pool of each asset type and maximizing potential rewards. After utilizing MFA to ensure the account is not a bot, the user is awarded one JStoken for a chance to win rewards from the Jackpot Pool. Users can also invest in CRV to gain Stoll and become a governance token holder of Stollayto.

### Earn

As long as the user is a liquidity provider with Stollayto, they will receive MStokens everytime Curve pays out rewards to Stollayto, most likely on a daily basis. Their rewards are specifically from the asset pool that they are invested in, meaning Stollayto has three distinct rewards pools from the three asset types that users can invest in.

### Play

Users interact with Stollayto's proprietary software to play games with their Stokens and earn substantial rewards. Currently, this is offered on the Stollayto website through Blackjack, Slots, and Roulette. The software prompts users to connect their wallet and choose which asset pool they want to use MStokens from. As long as there are MStokens in the specific asset pool that the individual selected, the user will be able to play casino games and have the chance to win big.

### Withdraw

Users can withdraw their original tokens at any time they wish. Since Stollayto invests these assets on behalf of users, the user can simply prompt Stollayto to divest these assets from Curve and pay it out to users in a single transaction, exhibiting the relatively risk-free nature of withdrawing assets.

## IV. Rewards

**Yield Collection Process**

Stollayto users get MStokens based on their time and quantity of assets invested. Stollayto collects boosted rewards directly from Curve and offers MStokens for users to use in games. Whenever a user wins, their winning amount, minus any gas fees, is directly transferred to their connected wallet address. The tokens they are provided with is dependent on the asset pool that they invested in. The aim for Stollayto in its first casino game, the Slots Machine, is to charge 5% of fees on the yield ultimately return 85% of all yields collected to users through their games.

**Asset Pools**

| Pool | APY | Reward | Curve Link |
|---|---|---|---|
| XAI + FRAX + USDC | 42% | MStoken | https://curve.fi/#/ethereum/pools/factory-v2-223/deposit |
| USDT + WBTC + ETH | 28% | MStoken | https://curve.fi/#/ethereum/pools/tricrypto2/deposit |
| ETH + CRV | 15% | MStoken | https://curve.fi/#/ethereum/pools/crveth/deposit |
| CRV | 3.6% | Stoll | https://curve.fi/#/ethereum/pools/factory-v2-22/deposit |

# V. Governance

Stollayto implements a decentralized model using community governance through the token. As previously discussed, Stoll allows users to collect a portion of the platforms revenue and be a part of future Stollayto decisions. The voting process on issues follows general guidelines - one Stoll token equates to one vote and users have a 3-day timeclock to vote on the proposal.

The governance process is based on Uniswap's governance process for their UNI token. Uniswap is an automated market maker (AMM) that is decentralized like Stollayto, making them a prime candidate to model our governance process off of. The proposal process consists of three steps:

| | |
|---|---|
| **1** | Idea Check<br>*This is to determine if there is sufficient will from Stoll holders to make changes. Only a majority vote will allow the idea to move onto the next phase.* |
| **2** | Consensus Check<br>*The feedback gathered from the Idea Check phase is used towards a formal discussion. The formalized proposal is put for a vote, with only a majority vote will being the development of code shifting the proposal to the next final phase.* |
| **3** | Governance Proposal<br>*Subsequent to formal approval, the code is developed on-chain. The final code, when finished, is put towards majority vote for a final time. Upon approval, the code will be automatically deployed and utilized.* |

# VI. References

[1]https://seekingalpha.com/article/4541289-curve-finance-deep-dive-on-crypto

[2]https://www.gamesense.com/games/how-do-slot-machines-work.html

[3]https://www.reddit.com/r/theydidthemath/comments/61u88g/requestwhat_is_the_expected_value_on_a_1/

[4]https://www.investopedia.com/articles/personal-finance/110415/why-does-house-always-win-look-casino-profitability.asp#:~:text=5.26%25&text=The%20house%20edge%20on%20an,of%20slightly%20more%20than%20%2450%2C000.