



**Decentralized Spot and Futures Trading Platform on  
Binance Smart Chain**

**Lite Paper  
V1.0  
March 2021  
[www.porkswap.finance](http://www.porkswap.finance)**

## 1. Introduction

PorkSwap is an on-chain system of smart contracts on the Binance Smart Chain, implementing an automated liquidity protocol based on a “constant product formula”. Each PorkSwap pair stores pooled reserves of two assets, and provides liquidity for those two assets, maintaining the invariant that the product of the reserves cannot decrease. Traders pay a 20-basis-point fee on trades, from which 15-basis-point fees goes to liquidity providers and 5-basis-point fee is used to buy back and burn PSWAP tokens. The contracts are non-upgradeable.

The PorkSwap protocol enables the creation of arbitrary BEP-20/BEP-20 pairs, rather than supporting only pairs between BEP-20 and BNB. It also provides a hardened price oracle that accumulates the relative price of the two assets at the beginning of each block. This allows other contracts on Binance Smart Chain to estimate the time-weighted average price for the two assets over arbitrary intervals. Finally, it enables “flash swaps” where users can receive assets freely and use them elsewhere on the chain, only paying for (or returning) those assets at the end of the transaction.

While the contract is not generally upgradeable, there is a private key that has the ability to update a variable on the factory contract to change trading fee on trades. This fee will initially be 20-basis-points, but could be changed in the future, in-case of changes due to governance.

## 2. Price Oracle

The marginal price offered by PorkSwap (not including fees) at **time t** can be computed by dividing the reserves of asset a by the reserves of asset b.

$$price_t = \frac{reverse_t^a}{reverse_t^b}$$

Since arbitrageurs will trade with PorkSwap if this price is incorrect (by a sufficient amount to make up for the fee), the price offered by PorkSwap tends to track the

relative market price of the assets. This means it can be used as an approximate price oracle.

PorkSwap improves this oracle functionality by measuring and recording the price before the first trade of each block (or equivalently, after the last trade of the previous block). This price is more difficult to manipulate than prices during a block. If the attacker submits a transaction that attempts to manipulate the price at the end of a block, some other arbitrageur may be able to submit another transaction to trade back immediately afterward in the same block. A miner (or an attacker who uses enough gas to fill an entire block) could manipulate the price at the end of a block, but unless they mine the next block as well, they may not have a particular advantage in arbitraging the trade back.

Specifically, PorkSwap accumulates this price, by keeping track of the cumulative sum of prices at the beginning of each block in which someone interacts with the contract. Each price is weighted by the amount of time that has passed since the last block in which it was updated, according to the block timestamp. This means that the accumulator value at any given time (after being updated) should be the sum of the spot price at each second in the history of the contract.

$$\text{accumulator } t = \sum_{i=1}^t \text{price } i$$

To estimate the time-weighted average price from time  $t_1$  to  $t_2$ , an external caller can checkpoint the accumulator's value at  $t_1$  and then again at  $t_2$ , subtract the first value from the second, and divide by the number of seconds elapsed. (Note that the contract itself does not store historical values for this accumulator—the caller has to call the contract at the beginning of the period to read and store this value.)

$$\text{price } t_1, t_2 = \frac{\sum_{i=t_1}^{t_2} \text{price } i}{t_2 - t_1} = \frac{\sum_{i=1}^{t_2} \text{price } i - \sum_{i=1}^{t_1} \text{price } i}{t_2 - t_1} = \frac{\text{accumulator } t_2 - \text{accumulator } t_1}{t_2 - t_1}$$

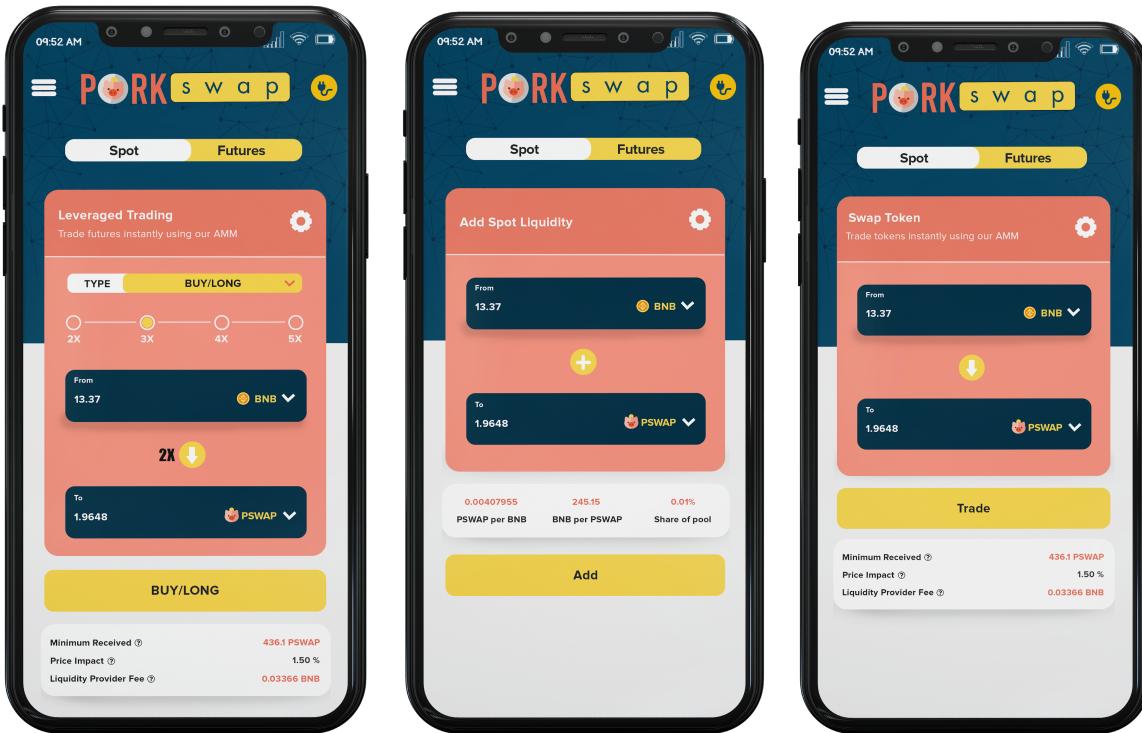
### 3. How Futures Trading Works

Using futures as the first financial product offering (FPO) we encourage the community to provide liquidity to the lending pool just like users hold money in their banks ( while banks screw them up by making a lot of money on their money and rewarding them with almost nothing).

**As a trader:** You'll borrow funds from the lending pool at an interest rate of 2.4% per day to increase leverage on your trades which increases the chances of profits. Of Course the risk to increase more is involved.

**As a lender:** You'll provide liquidity to the lending pool earning you 2.4% interest on your each active lending every day. The problem with other decentralized lending pools is as the pool grows the chances of your funds being used there is lower. This is why our protocol prioritizes using funds from early lenders so they get the most out of the platform.

## 4. Platform Interface



## 5. Platform Governance

With PorkSwap tokens, on our governance platform you'll be able to create polls and vote for protocol changes that include changing the way we operate, changing the way the platform generates revenue, changing the incentives and changing the world for the better.

## 6. What is the Utility of the PSWAP Token?

The \$PSWAP token's main utility is hold of value, which means \$PSWAP can be treated as investment due to its deflationary nature. It also provides the utility of serving as the governance token for the PorkSwap dex.

\$PSWAP has a fixed **supply** of 1,000,000 tokens which will be used for the platform's governance and rewards.

- 500,000 tokens will be locked for community rewards for providing spot and leveraged liquidity which will be unlocked every blocks ( Unlocked amount will be decided by community)
- 200,000 tokens will be distributed over public sale
- 100,000 tokens will be used as liquidity to DEX listings
- 100,000 tokens will be reserved for bug bounty, white hat hacking, airdrops, and marketing campaigns.
- 100,000 tokens will be for the PorkSwap team that will be locked for 18 months.

## **7. Liquidity Incentives**

By utilizing 500,000 as reserve for liquidity incentives, spot liquidity pools tend to get 15% ARR on yearly pool earnings paid in \$PSWAP equivalent to the BNB value of the pool.

The futures pool tends to get 40% ARR on yearly pools earnings paid in PSWAP equivalent to the BNB value of the pool.

## **8. Disclaimer**

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