Rich Otter Token Whitepaper

World's first-ever tokenized insurance fund

v1.0

OPTION POOL EXCHANGE

October 2021

1 Executive Summary

1.1 A brief introduction to Option Pool Exchange

Option Pool Exchange specializes in cryptocurrency futures and options, built for decentralization of the market power in the financial market by empowering retail users with the means of competing with market-manipulating big-players, so-called 'whales'. Decentralization always has been a major topic in the cryptocurrency world. The idea was to bestow freedom and liberate the users whether it's from unreasonable regulatory oversight or from the powerful intermediaries that costs friction or intervention in the market. Even before Bitcoin, there were many attempts to bring this idea into the real world, but starting with Bitcoin many cryptocurrencies have successfully proved their value and existence to the world.

However, even with the desperate attempt to decentralize the market, the power has always been shifted towards ones that with more monetary resources, which created an unfair market opportunity for an ordinary market participant to compete. Option Pool Exchange is dedicated to providing a solution to that problem by allowing up to 7,000 times leveraged products on our platform and **create a fair market opportunity regardless of the investment commitment size.**

Our hyper-leveraged trading products allow users to compete with whales even with a comparably insignificant amount of capital. With up to 7,000 times leveraged products, your $10,000 investment is amplified to $70 million in position, and that's $140 million of buying and selling power. **Notwithstanding the enormous leverage conferred by our products, these trades surprisingly do not pose any systematic risk.** Since all hyper-leveraged positions has an ephemeral lifetime from 30 to 60 seconds. Even within the lifetime of positions, forced liquidation will be triggered in some conditions to protect yours as well as the other side of positions, even when you are making profits in the market. Moreover, we do not allow more than 30 times leverage on the non-ephemeral lifetime derivatives, compared to 100 times leverage offered on most cryptocurrency derivative exchanges. Since high leverage on the non-ephemeral product is the primary cause of the instability of the market system, they're the main concern for the regulators' perspective and create uneasiness for them.

Furthermore, our abundant liquidity provided by market makers will ensure no sudden market shock to happen even with the size of orders of hundreds of millions of dollars, and the orders that are substantially large enough to be deemed manipulative will be automatically rejected by our matching engine. This perfect balance of leverage trading and systematic risk has been achieved due to our efficient matching engine which orders are placed in a matter of one-thousandth of seconds.

1.2 The world's first-ever collective savings scheme, Rich Otter token

As a crypto derivative exchange, Option Pool offers an insurance fund to cover the position bankruptcy. Since profit and losses on derivatives are calculated based on the nominal size of the positions, not on investors' actual investments, the loss may exceed investment even though it's a rare occasion. It is important for financial derivative exchanges to maintain enough insurance funds to cover potential bankruptcies and keep orderly execution of the market. However, the traditional insurance funds accumulated by exchanges, in most cases, are just savings of some portion of the exchanges' fees or initial cash endowments from the exchange.

We challenge this concept by offering a 'collective savings scheme', which is a decentralization of insurance savings. Market participants in Option Pool Exchange will have to pay insurance fees with Rich Otter tokens which are pooled into the exchange's Rich Otter token holdings. Thereby, the exchange's insurance fund is pooled into Rich Otter token's form.

Not only Option Pool Exchange users, the general investors who buy Rich Otter tokens at the public markets are also participating in this 'savings scheme'. As you purchase Rich Otter tokens, you are pooling your money into the token's market. Thereby, the market capitalization of the insurance reserve pool will increase even if it's an insignificant amount. This is why it's called a decentralization of savings. The exchange's share of Rich Otter token will be controlled around 25%, which we think is the perfect balance between the market stabilizing power and decentralization.

Since there will always be an incessant inflow of money into the Rich Otter token market, the long-term price trend of the token will always have an upward direction. We anticipate this trend will consolidate the market's trust, which will not only provide an excellent hedge against inflation, also be one of the most lucrative investment opportunities in the industry.

2 Rich Otter token

2.1 What it does: paying insurance fee at Option Pool

Rich Otter token is a tokenized insurance fund of Option Pool Exchange. The users on Option Pool Exchange will have to pay portion of the trading fee as an insurance fee in the Rich Otter token's form. In other words, whenever a user makes a trade at Option Pool Exchange, some money will flow into Rich Otter token's market, which is saved into Option Pool Exchange's insurance fund pool. The enormous insurance fund pool created by Rich Otter token will help Option Pool Exchange to further reduce any systematic risk posed by its derivative products.

2.2 The token economics: strictly deflationary

Deflation is a general decline in prices for goods and services, typically associated with a contraction in the supply of money and credit in the economy. During deflation, the purchasing power of currency increases over time. From tokens' perspective, tokens with deflationary economics will have an upward trend in their chronological price graphs since their purchasing power compared to other goods and services grows over time.

Rich Otter token is designed to have strictly deflationary token economics. However, Option Pool Exchange will not create an artificial deflationary environment in Rich Otter using token burns, but rather the deflation will be originated from the fixed amount of total issued tokens and the continuous inflow of capital into the token's market.

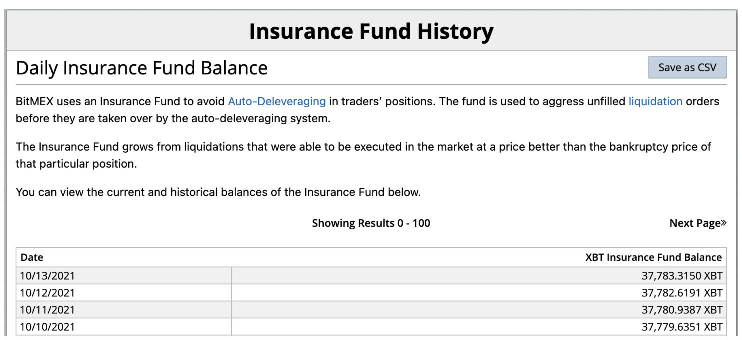
The initial distribution of tokens is 10 billion, and there are no more tokens to be issued. Since this token is designed to be a 'saving', we will not artificially burn our token holdings to pump up the price of the token. The exchange's token holdings will serve the purpose of the insurance fund pool.

2.3 How the savings are accumulated?

Option Pool Exchange's users will have to pay insurance fees in the Rich Otter token form. Like any other exchange insurance system, the insurance fees are some portion of the trading fees on the exchange. The percentage of the insurance fee in the trading fee is subject to change depending on the market situations, but will be transparently announced before any changes happen. In case there are no adequate Rich Otter tokens in the user's balance, an automatic exchange will happen to compensate the difference at the market rate of the Rich Otter token.

2.4 How large the inflow of insurance fund will be?

To estimate the future inflow of insurance funds at Option Pool Exchange, let's take a look at the good examples of already successful crypto derivatives exchanges.


Insurance Fund History

Daily Insurance Fund Balance

Save as CSV

BitMEX uses an Insurance Fund to avoid Auto-Deleveraging in traders' positions. The fund is used to aggress unfilled liquidation orders before they are taken over by the auto-deleveraging system.

The Insurance Fund grows from liquidations that were able to be executed in the market at a price better than the bankruptcy price of that particular position.

You can view the current and historical balances of the Insurance Fund below.

Showing Results 0 - 100

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Date	XBT Insurance Fund Balance
10/13/2021	37,783.3150 XBT
10/12/2021	37,782.6191 XBT
10/11/2021	37,780.9387 XBT
10/10/2021	37,779.6351 XBT

Figure 1: Insurance fund history: Bitmex

For example, Bitmex has been around 7 years in the market and has accumulated 37,783.3150 BTC at the time of writing, which is about $2.1 billion US dollars. If we assume this amount of capital flows into Rich Otter's market, then the market capitalization of Rich Otter will effortlessly exceed tens of billions of dollars. That is because not only insurance funds from Option Pool Exchange is poured into Rich Otter's market, the general public is also contributing their funds into the pool in the expectations of capital gains. **Therefore, the capital inflow into the Rich Otter's market will be much greater than the insurance fund itself.** Hence, we do not have to take artificial measures, such as token burns, to create deflationary economics, like any other so-called meme coins are doing for marketing purposes. Rather, the deflation will be naturally generated from the fixed supply of tokens and the continuous inflow of funds into the token market.

Let's look at another great example, Binance futures.


Binance adds 30 million USDT to Insurance Fund following May 10th drop

Bryce Galbraith 12 May 2020, 15:00 UTC

Binance Tether Insurance Futures

On the 10th of May, over 13 million USDT of the Binance Futures Insurance Fund was used to protect users trading Binance derivative products.

Figure 2: Insurance fund history: Binance futures

Binance Futures is currently the world's largest cryptocurrency derivative exchange in terms of trading volume, and they started accumulating their insurance fund around early 2020. About a year and a half later, it's almost a half-billion US dollars.

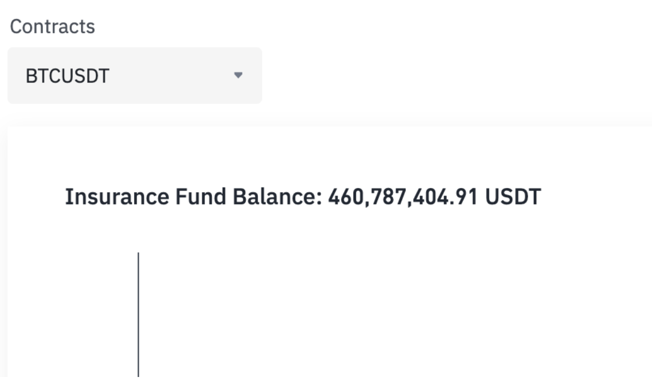

Figure 3: Insurance fund history: Binance futures on Oct. 13. 2021.

As we can see from the examples, if Option Pool Exchange is able to generate comparable trading volume, then we can safely expect hundreds of millions a year of incoming insurance fund into the token's market, which will bring Rich Otter's market capitalization to at least tens of billions of dollars.

2.5 How will you prevent a bank-run scenario?

2.5.1 Trust is essential in the traditional deposit model

A bank run occurs when a large number of people start making withdrawals from banks because they fear the institutions will run out of money. A bank run is typically the result of panic rather than true insolvency, which is triggered by fear that pushes a bank into actual insolvency represents a classic example of a self-fulfilling prophecy.

Since all the values will be saved into Rich Otter token's pool, the trust in the stability of the token price is essential to maintain the orderly flow of capital into its market. **In other words, a bank run scenario can occur in the Rich Otter token market where everyone wants to withdraw their money from the pool before the pool's value collapses to zero.** In the real-world scenario, a bank run is prevented by governmental and legislative measures, such as FDIC deposit insurance. Many countries implement similar policies to prevent the same problem, which is, relying solely on the centralized entity's promises.

2.5.2 Rich Otter's model

In Rich Otter token's case, Option Pool Exchange will be the biggest market maker and also the largest holder in Rich Otter token's market with approximately 10-30% of token holding shares, where we think is the perfect combination of decentralization of savings and centralized market price protection. This will be completely different from just relying on the centralized entity's promises, rather **this will be a harmonious juxtaposition of a decentralized computer algorithm and centralized fine-tuning of the variables.**

Where the variables for the algorithm are defined as follows.

Name	Description
p	Current price of the token
p_t	Target price of the token, which will be explained in detail
p_b	Token price variation buffer
c	Market constant
q_t	Option Pool Exchange's maximum share of the token (30%)
q_b	Option Pool Exchange's minimum share of the token (10%)
s	Token bank run protection buffer fund

All computer codes on the algorithm will be transparently accessible to anyone at the code-sharing websites like Github/Bitbucket, which will significantly contribute on decentralizing our bank-run protection system. However, there will be some parameters that will be in Option Pool Exchange's influence, such as the market constant c, in order to ensure that our algorithm is working coherently with the market conditions.

The token's price will be controlled with the following algorithm.

Algorithm 1 Bank run protection algorithm

procedure RICH OTTER TOKEN
  while $p > p_t + p_b$ or $p < p_t - p_b$ **do**
    if $p > p_t + p_b$ **then**
      Let $q = c(q_t - q_h)\log(1 + \frac{p-p_t}{p})$
      Sell q amounts of tokens in the market
      Save proceeds from the token sales ($s \leftarrow s + q * p$)
    else
      Let $q = \min\{c(q_h - q_b)\log(1 + \frac{p_t-p}{p}), \frac{s}{p}\}$
      Buy q amounts of tokens in the market
      $s \leftarrow s - q * p$
    end if
  end while
end procedure

Most importantly, the target price of the token is defined as follows.

$$p_t = \alpha \log(\frac{\Delta I}{\Delta s} + c_1) + c_2$$

ΔI is daily insurance fund flow, and Δs is daily token bank run protection fund flow. Since Δs can be a negative value, market constants like α, c_1, c_2 are introduced in order to ensure our algorithm behaves as we expect. (such as, division by zero, negative logarithm will be prevented)

2.6 How will you prevent price manipulation?

Market manipulation is the act of artificially inflating or deflating the price of a security or otherwise influencing the behavior of the market for personal gain. Manipulation is illegal in the most securities market, but it can be difficult for regulators and other authorities to detect and punish such activities in the cryptographic assets market, where corresponding regulations are non-existent or not as strict as the securities market.

In market manipulation, the manipulator tries to influence the market to increase or decrease the price of an asset so that it differs from the true price implied by market fundamentals. Anytime there is a difference between the market price and the true price, (undervalued or overvalued) this represents an opportunity for profit through simple arbitrage or more complicated means.

It is tremendously important that no conflict of interest occurs between the token holders with large stakes and the rest of the holders. In Rich Otter's case, Option Pool Exchange and the general token holders. Since this is going to be the largest capital commitment of the Option Pool Exchange, negative price impact on the token will have immediate consequences on the exchange's capital reserves. **Simply put, Option Pool Exchange's financial interest is directly aligned with the general token holder's financial interest.** Thus, it is imperative for Option Pool Exchange to keep to token's price on an upward trend, but at the same time, Option Pool Exchange has no incentives to artificially inflate the token price to acquire short-term gains, which will inevitably lead to the market crash of the token. As long as this is the largest saving of Option Pool Exchange, conflict of interests, such as a rug-pull, cannot occur in Rich Otter's case.

Whenever there is a huge inflow of funds from concentrated sources, Option Pool Exchange will fine-tune the market constants in order to prevent any malicious attempt to manipulate the token price.

2.7 Expected token price trend

Rich Otter's private sale started with the price of $0.001 a token and successfully raised more than 1 million US dollars worth of assets from +200 individual investors during the campaign. At the time of writing, the token is traded at $0.015 per token.

Considering our previous trading data and other exchange tokens' cases, we expect Rich Otter token to reach $1 level within 24 months from the time of writing. This projection assumes 5-10 billion US dollars of daily trading volume at Option Pool Exchange. This projection is also realistically a reachable goal since we have experienced $4.9 billion a day of trading volume during the peak trading time in 2020, thanks to our hyper-leveraged products and our loyal customer base in Asian countries.

2.8 Token distribution

Percentage	**Description**
10%	Private sales
60%	Public sales
5%	Referral bonus
25%	Initial insurance fund pool commitment

Since this token is a 'collective savings', no partner, employee or advisor was given Rich Otter token for free. Even the CEO Jake Yoon has pledged a significant amount of personal fund to purchase his initial share.

3 Management Team

Jake Yoon – Founder / CEO

Jake is a visionary in the crypto derivatives market and a deep enthusiast of mathematics and computer programming. Since 2010, he has been a highly successful quant, business operator, and senior software engineer. Jake holds a B.S. in physics from Yonsei University (South Korea), and he's enrolled in M.S. in scientific computing (applied mathematics) course at New York University

Andy Lee - COO / CMO

Andy is a highly driven, intrinsically motivated finance professional. He has been heavily involved in commodity trading since 2012. Also, he has an extensive experience in financial analysis, and profitability analysis. His broad knowledge in implementing appropriate risk management, risk modeling, and managing degree of uncertainty will lead to building a professional relationship with diverse clients for Option Pool Exchange.

4 Road map

- 2021.08 Private sales end
- 2021.08 Rich Otter token to be listed on Uniswap & Public sales start
- 2021.10 Rich Otter token fully operational on Option Pool Exchange
- 2021.12 Rich Otter token target price $0.05 per token & listed on multiple exchanges
- 2022.06 Option Pool Exchange's daily trading volume to reach $5 billion and Rich Otter token price becomes $0.1 per token
- Late 2023 Rich Otter token target Price $1.00 per token ($10 billion market cap)

5 Legal

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Rich Otter Token is strictly designed as a UTILITY TOKEN on the exchange’s platform. We expect anyone buying Rich Otter Token, whether directly from the exchange or at the secondary market, as the mean of paying insurance fees on the exchange, not as a sole speculative investment. THUS, THE EXCHANGE WILL NOT SELL OR TRADE RICH OTTER TOKEN TO CITIZENS OR RESIDENTS IN THE RESTRICTED COUNTRIES WHERE TRADING ON THE EXCHANGE’S PLATFORM IS PROHIBITED. Details on the ‘restricted countries’ will be set forth in the token purchase terms and conditions and may be subject to change at any time corresponding to the ever-changing regulatory environment. Citizens or residents in the restricted countries must acknowledge that they will not be protected by their law enforcement agency or governmental authorities should they choose to obtain Rich Otter token on the international secondary market, and it is advised that not to do so.

Furthermore, Rich Otter Token owners neither have ownership of the exchange’s reserve fund nor have control of the exchange. Rich Otter Token is not a security since it carries no rights against the exchange, and its market value is a mere expectation of future inflow of insurance funds to its market, not a guarantee of any financial profit.

The exchange reserves right to trade Rich Otter Tokens in the public market at the market price, however, will not be obliged to repurchase Rich Otter Token from any particular Rich Otter Token holder. Rich Otter Token owners do not reserve rights to demand their Tokens to be repurchased by the exchange and the only way to realize their capital gain is to sell their Tokens in public marketplaces.

The token Recipient (‘the recipient’) understands that Recipient has no right against the exchange or any of its representatives except in the event of the exchange’s intentional fraud.

THE EXCHANGE’S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS OFFERING, WHETHER ARISING OUT OF OR RELATED TO BREACH OF THE CONTRACT, TORT OR OTHERWISE, SHALL NOT EXCEED THE TOTAL OF THE AMOUNTS PAID TO THE EXCHANGE PURSUANT TO THIS OFFERING. NEITHER THE EXCHANGE NOR ITS REPRESENTATIVES SHALL BE LIABLE FOR CONSEQUENTIAL, INDI-

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