YFICHAIN

A powerful DEFI platform on Ethereum Chain

WHITEPAPER

V1.0

Contents

1. Introduction to YFIChain

What is YFIChain?

YFIChain is a decentralised one-stop platform on Ethereum Chain - focusing on low transaction costs, high transaction speeds as well as a simplistic and straightforward user experience via a highly intuitive user interface.

By focusing on the best-working features and innovating the most successful financial instruments on Ethereum, the YFIChain team is planning on transitioning these services in order to address the demands of the same nature on other chains.

These services include (but are not limited to) lending, derivatives, payments, or liquidity providing - while allowing new users to experience high transaction speeds with the benefit of paying lower transaction fees.

The transition of services are completed in accordance with YFIChain's core principles:

   - Adjustments based on community responses
   - An intuitive user interface
   - Novice-friendly user experience

All the migrated services are subject to interoperability, aligning with YFIChain's one-stop destination vision. All services are also intended to contribute to the revenue sharing mechanics of the YFIChain platform.

Why YFIChain?

Ever since it's release in 2015, the blockchain programming environment, Ethereum (also known as the Ethereum Virtual Machine) has shown it's great benefits for allowing the creation of fully decentralized "smart contracts". With the help of smart contracts, numerous successful applications have been created on Ethereum with a total value locked in the dollar equivalent of over $14B (at the time of writing).

Due to its unforeseen huge potential and high demand, these smart contracts on the blockchain continuously experience several crucial problems:

   - *High transaction fees* that are incurred on users whenever the network is congested. This eventually leads to *slow transactional speeds*, making the network unusable in some instances.

- *Complicated* user interfaces and poor user experience where newcomers are overwhelmed, limiting certain larger and important audiences from entering the industry.
- High distribution of the varied and unique digital applications/services, which result in *separate and steep learning curves* thus limiting the potential of cross-expansion for the industry.

What products are available and in the works?

The following are some examples of work that are already in progress by the YFIChain team at the time of writing:

AMM/DEX Aggregator

Rather than compete with large existing decentralized auto market makers (AMMs) on Ethereum Chain by just creating similar products, the YFIChain team wants to provide its users access to other features that come with easy access to the best, fairest and fastest transactional opportunities available.

Leveraged Yield Farming Platform

We aim to transition to a successful and robust concept of a leveraged yield farming platform for liquidity mining protocols on ETH (such as Uniswap, Sushiswap) that would allow both landers and farming-borrowers to access an amplified level of APYs.

An existing solution to begin forking such a platform is the Alpha Homora platform on the Ethereum chain.

Gaming

YFIChain's gaming product(s) are currently in the works, please see the page below for more information.

Albeit being a feature that might be a bit distant in the future to be released, the gaming-elements of the project are something that the YFIChain team is excited to be working on to be introduced to users.

The YFIChain team wants to be able to build new connections and opportunities to cater to the ever-growing gaming community all over the world. We believe that the e-sports industry (professional or casual) will continue growing and want to be able to offer opportunities to gamers, not just to grow their skills, but to be able to trade, invest and ultimately have a source of income as well.

NFTs

YFIChain's NFT based product(s) are currently in the works, please see the pages below for more information.

The YFIChain team has had it sights on NFT's from the mid 2020's and has since predicted huge moves in the NFT industry. By early 2021, the interest for NFTs world-wide has already surged. Within the first quarter of the year, the NFT industry has seen immense growth through exposure through the entertainment industry where artists are continually using NFTs as bonuses for their own line of products.

This has solidified the YFIChain teams efforts to make sure that we equip the platform with adequate instruments and features to be able to cater to the incoming demand for NFTs. We are currently in the process of securing not just better products on the platform, but also collaborations and networks from interested parties beyond the blockchain world.

Team's philosophy and experience

Combining talented developers and letting them do what they do best.

The YFIChain team believes that micromanaging devs can lead to a lack of creative work. Hence why we believe in their potential by allowing them to express themselves in their work, which in turn, brings out the talent within them. A goal and vision is set and the

devs are given freedom to build toward that goal with regular checks and milestones to ensure that every aspect of the platform resonates with each other.

Corporate-level project management to back the development talent.

The YFIChain team plans on utilizing its qualified experiences outside of the blockchain industry to enter previously inaccessible markets. An element that is more often than not, missing from projects in the blockchain. YFIChain believes that networks and abilities both within and outside of the blockchain have to exist in order for a project to succeed.

Attracting team member's investor's networks and reaching out to foundations.

These investors would be those who are personally identified and recommended in the project by the project team. By doing so, YFIChain manages expectation and risk by establishing the foundations and building blocks of the project on individuals that hold sufficient knowledge and understanding of the project.

Wide range of experience and access to advisors of IPO level.

The YFIChain team includes members that have a wide range of experience which is beneficial for management. In many project teams, skill sets of the core team sometimes weigh heavy to the code and technical development. YFIChain's core team consists of people who are not just talented developers, but also consists of individuals with corporate, community, marketing, branding and creative industry experience - with networks and experience to match.

Community as the "final team-mate".

YFIChain also believes that gold can be found within users of the community. The team will honour and adopt a system of strong community interaction and structure where it sees fit, that can benefit and bring strength into the project. Community contributors and non-core members varying on the phase and genre of development will be key to ensuring the project's innovation, relatability and longevity.

2. Leveraged Yield Farming

What is leveraged yield farming?

In short, the leveraged yield farming is nothing more than yield farming combined with the ability to borrow assets and automatically reinvest farmed tokens and trading fees to increase the returns overtime.

How does it work?

To understand how it works one must first learn what the roles of each user is on the platform.

There are **three roles** when it comes to our Leveraged Yield Farming platform, **ETH Lenders, Yield Farmers** and **Liquidity Providers.**

What's the process of leveraged yield farming?

When it comes to leveraged yield farming the user only needs to supply the token of the pair and/or ETH and choose the leverage level.

After supplying the assets to the smart contract, the process is as follows:

> 1. The smart contract borrows the amount of ETH from the bank based on your leverage level.
> 2. The assets are swapped, making sure you have equal value on both sides of the pair.
> 3. The liquidity is provided for the said pair on the protocol chosen.
> 4. LP Tokens are received for the liquidity provided.
> 5. The LP Tokens are then staked in the farm of said protocol.
> 6. Reward tokens are farmed.
> 7. The farmed tokens are sold for more liquidity, increasing the total value of your position.
> 8. Repeat.

What's the process of liquidity providing?

The process of liquidity providing is not different for the user, which only needs to supply the token of the pair and/or ETH and choose the leverage level.

After supplying the assets to the smart contract, the process is as follows:

1. The smart contract borrows the amount of ETH from the bank based on your leverage level.
2. The assets are swapped, making sure you have equal value on both sides of the pair.
3. The liquidity is provided for the said pair on the protocol chosen.
4. Trading fees are being earned on leverage.

What are the risks?

Each user exposes himself to different risks, depending on what he is doing and how much leverage he used.

The risks of yield farming and liquidity providing

`No leverage (1x)`

If the user chooses to use no leverage then the risks are no different than participating in other yield farming or liquidity providing opportunities, which is the impermanent loss risk.

Users that choose to use no leverage are not exposed to the risk of liquidation.

`Leverage (more than 1x)`

If the user chooses to use leverage then he will be exposed to the risk of liquidation.

Liquidation happens when the debt ratio *(debt / position value)* reaches liquidation level due to impermanent loss.

Example:

User X decided to leverage his position by borrowing 150 ETH on top of his initial 100 ETH.

Later that week there is a significant increase in ETH's price, which causes User X's liquidity to suffer from impermanent loss and the value of his position dropped from 250 ETH to 175 ETH, which is over the threshold allowed by the contracts.

In that case User X's position is liquidated, the 150 ETH borrowed is given back to the lender and User X takes back the remaining 25 ETH.

The risks of lending ETH

Unlike Alpha Homora, the YFIChain team decided to automate the process of liquidation, no longer requiring liquidators to do it manually.

Therefore, the risks of lending ETH now resume only to sudden drops in the price of the assets your ETH was used to buy, drops that are faster than the smart contract could react to, in which case the lender might not get all of his ETH back from the borrower.

Risk Parameters
Introduction

To guarantee solvency at all times, YFICHAIN uses excess collateral and a liquidation system for closing positions in danger of becoming undercollateralized. Unlike many DeFi protocols of previous generations, YFICHAIN uses an aggregated liquidation service with one central smart contract entry point rather than resorting to liquidators having to track individual endangered positions.

The risk framework uses two groups of settings: system-wide (Global Parameters) and individual (Pool-Specific Parameters).

Global Parameters

There are five parameters that apply to every position in the Leveraged Yield Farming system. They set the rules for borrowing from the bank and repayments or liquidations for debts to the bank. The parameters are shown in the table below:

Name	Value	Function	Description

Minimum Debt Size	0 ETH	`minDebtSize()`	The minimum borrowing amount (if borrowed any) for opening a position.
Borrowing Interest Rate	0%-0%*	`getInterestRate()`	Borrower's interest rate to be paid, accrued per second.
Reserve pool rate	0%	`getReservePoolBps()`	Portion of borrower's interest to be stored in bank's reserve.
Liquidation bonus	0%	`getKillBps()`	Portion of position value the liquidator gets as an incentive to liquidate positions at risk.
Reinvest Reward Bounty	0%	Inside Goblin contract	Incentive reward for bounty hunters calling `reinvest` function.

Pool-specific Parameters

Liquidity borrowed from the Bank can be used in a number of yield farming pools, each with its own liquidity and asset type or asset pair. The risk framework has to account for different volatility levels between assets and pools to guarantee timely liquidation for the loan to stay solvent. This is why debt ratio and liquidation ratio have to be individual, per the tables below:

Name	Value	Function	Description
Max Debt Ratio	Depends on the pool (see below)	`workFactor()`	Maximum debt ratio when opening/adjusting a position must satisfy.
Liquidation Debt Ratio	Depends on the pool (see below)	`killFactor()`	Debt ratio threshold. If exceeded, anyone can liquidate the position.

Pools on Uniswap:

Farm	Info
UNI/ETH	Max Debt Ratio: 0%

Liquidation Debt Ratio: 0%

Max Debt Ratio: 0%

UNI/ETH

Liquidation Debt Ratio: 0%

Max Debt Ratio: 0%

UNI/ETH

Liquidation Debt Ratio: 0%

Max Debt Ratio: 0%

UNI/ETH

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UNI/ETH

Liquidation Debt Ratio: 0%

Max Debt Ratio: 0%

UNI/ETH

Liquidation Debt Ratio: 0%

Max Debt Ratio: 0%

UNI/ETH

Liquidation Debt Ratio: 0%

Borrowing Interest Rate
Introduction

The goal of the bank's incentive structure is to maximize the pool utilization (better capital efficiency) while also leaving sufficient space for the ETH lenders to freely enter and exit the pool. This is achieved by a dynamic interest rate paid by Yield Farmers and Liquidity Providers to the Bank (ETH lenders).

The interest rate is dependent on the utilization rate: As the bigger share of ETH deposited into the bank gets lent out to Yield Farmers and Liquidity Providers, the interest rate also goes up. The triple-slope interest rate curve means that there are two distinct sweet spots for utilization: 50% (where the interest rate is actually fixed) and 95% for highly active market times (with a steep rise to disincentivize 100% utilization).

The table and the curve can be seen below.

Triple-slope Interest Rate Curve

Utilization Rate	Interest Rate
0-50% utilization rate	10% (fixed)
50-95% utilization rate	rate goes up linearly to 25%
95-100% utilization rate	rate goes up linearly to 100%

3. Exchage Aggregator

What is an exchange aggregator?

Simply put, exchange aggregators are financial protocols that allow users to access liquidity available on a large number of decentralized exchanges all from a single platform. Along with that, aggregators also help traders get the best prices for the tokens they want to swap, comparing the prices of the said tokens among multiple decentralized exchanges and choosing the best deal for the trade.

Why an exchange aggregator and not an automated market maker?

Rather than compete with large existing decentralized auto market makers (AMMs) on Ethereum Chain such as Uniswap, the YFIChain team wants to provide its users with easy access to the best, fairest and fastest transactional opportunities available.

How does it work?

Exchange aggregators are fairly simple to process, all they do being:

- Reading the prices and liquidity available on multiple decentralised exchanges
- Picking the best price for user's deal, taking in consideration the amount they want to swap

4. Gaming

The Gaming Industry On The Blockchain

The YFIChain team believes that communities are crucial for the success of any multimedia information system, and the gaming community and industry is no exception. Over 53% of U.S. teenagers play online games with people they know in their offline lives (Pew Research, 2015).

Community support allows the integration of offline-friend circles into online communities. The YFIChain vision is to create a time-killer, easy to play type of gaming platform, A platform which is intuitive and convenient as a multiplayer-based platform to the point where users can simply invite their friends and start a new game within seconds.

Our vision sees a platform with multiple community-based games (ex. Monopoly) where anyone can create their own lobby, send invite codes to friends and start playing without worrying about lengthy registration processes or complicated interfaces.

Along the way, users of the YFIChain platform will also be exposed to the opportunity of generating revenues - be it by winning skill-based games, getting random cosmetic items drops (with real, tangible value) or by winning tournaments.

To cultivate a stronger relationship and sense of ownership to the platform, YFIChain will also introduce a character customization system where you can buy characters and cosmetic items from the platform's shops and/or the open market. All these characters and customization items will be visible in-game.

Another component where traditional gaming projects fall behind is the inclusion of different income-groups of users. Users with lower incomes are often left out and behind compared to those who are able to afford items to remain 'in the game' - as per the usual pay-to-play mechanics in most games.

YFIChain will aim to make the platform available to anyone to avoid the "pay to win" scenarios, regardless of their location or financial system. Cosmetic items will remain purely cosmetic and not have any effect or impact on the games themselves (i.e. games like Defence of the Ancients, Call Of Duty, etc).

On top of that, we want to give opportunities for users to actually earn real, tangible rewards. To do that, every transaction on YFIChain's platform will have a random chance of dropping a random cosmetic item/character. Users will have the freedom to keep, sell or use these rewards as they would like.

YFIChain's competitive advantage model table	YFIChain	Axie Infinity	Sorare	F1 Delta Time
Free to play*	Yes	Yes	Yes	Yes
Free to start playing*	Yes	No	Yes	No
Compatibility	Yes	No	Yes	Yes
Users can generate revenue regardless of their in-game situation	Yes	No	No	No
Community focused	Yes	No	No	No
Focused on UX/UI	Yes	No	Yes	No
Scalability	Yes	No	No	No
Seamless non-blockchain to blockchain transition	Yes	No	No	No
Able to be used by users with no prior blockchain experience	Yes	No	No	No
Focused on bringing players outside of the crypto world	Yes	No	Yes	No
Covers multiple niches	Yes	No	No	No
Offers equal chances of overall in-game success	Yes	No	No	No

Friendly to any user, no matter their financial situation	Yes	No	No	No

Free to play* = Users do not have to purchase a copy of the game in order to start playing.

Free to start playing* = Users do not need to invest money in order to start playing.

YFIChain's competitive advantage model

YFIChain's goal is making cryptocurrency easily adoptable through low fees and ultimate focus on UX/UI, as well as continuing on improving proven trends that are currently succeeding outside of the crypto world.

Without any further delay, let's get into our vision.

Free to play and not pay to win

We are aiming to make our platform available to anyone, therefore we are following the "free to play" model, in which users don't need to purchase any starting kit or a character to start playing.

With a strong focus on scalability we are fully dedicated in making our platform steer away from the "pay to win" model the current blockchain games have, offering our non-paying users ways in which they can keep up with the users that decide to spend money on the game (of course, making it fair for both parties).

Not every game on our platform will have items that make you more powerful, some games won't have any items at all aside from the cosmetic ones (which apply to all games, the main character being visible everywhere in-game).

Compatibility and availability

Our platform will be available on any device, players having the option of playing our games on Windows, Android, iOS and macOS, both in browser as well as a separate, downloadable app.

As for system requirements, our games will easily run on most low-end desktops/phones.

Earning revenue through our platform

We want to preserve the main "traditional" concept of blockchain games, which is that it can make you money.

The ways in which we can do that are endless, some examples being winning tournaments, joining and winning a room with a prize pot, dropping cosmetic/in-game items and then having the option of selling it on the open market, acquiring cosmetic/in-game items through chests, etc.

We do not want anyone to feel left out, so players that are not powerful enough to win tournaments still have a chance to earn revenue from our platform through multiple ways.

Community

An online game without a community is just an abandoned city. We want our users to feel like they are part of a community once they enter our game, make new friends, chat with others and be able to easily invite others into their rooms.

Users will have their own profiles on our platform where they'll be able to add a description, profile picture, and customize it however they wish. Along with that we will implement an in-game chat, as well as different Discord rooms for our games. To make it easy for our users to invite outside friends the only thing needed for that is a secret room code and that's about it (the same way "Among Us" is doing it).

Covering multiple niches

Here is what our platform is going to look like.

Every user will have a main character which they can customize using cosmetic items they either drop, win, buy from our shop or from the open market. Their characters will be visible in every game we offer.

We want to have a main multiplayer game which we won't disclose now, along with other mini-games users can relax on, choose an entry fee for their room that becomes the main pot (if they choose to), have a chat with others and have a great time.

The mini-games will consist of games such as; kart racing, Uno type game, Chess, etc.

UX/UI

This is the most important part for us. We want the transition to be seamless, users that have no knowledge about the blockchain technology being able to learn and use it without it feeling any different than any other game out there.

We want our platform to be fun, quick and easy to understand and at the same time educational.

Embedding the data storing power the blockchain has even in the registration process, users being able to register with just one button that'll create a new wallet for them, users only needing to pick an username that's available and start gaming.

The current state of blockchain based games in our eyes

The blockchain powered gaming industry is an extremely new concept, currently being adopted and tested mainly by crypto payoneers, but the current path the blockchain gaming industry is taking is not one that'll eventually lead to mass adoption.

Let's discuss why we think forming a new, secondary path is the way to go.

Money

There are currently two main approaches with subcategories that are dominating the online gaming market:

Free to play. - Skill-based, where items do not give you an in-game advantage. - Long-term based, where items do make you more powerful BUT you can get your hands on great in-game items without spending any money on the game itself, money only being a tool to make you achieve success faster.

Paid games. - The vast majority of paid games, after paying for the game itself, do not require you to spend money on any item in order to achieve maximum success within the game, items mostly being cosmetic and not mandatory.

This is not the case with the current blockchain gaming industry dominators. In order to start playing Axie Infinity currently you have to spend a minimum of $95.00 USD (to purchase 3 Axies from the open market and pay for fees), and F1 Delta Time requires more than that in order to buy yourself a F1 Car from the open market and a driver.

We agree, there is a market for every type of game, and current blockchain games fit that market, but the current problem is that most blockchain games are taking that path, ignoring what the regular, non-crypto market demands and eliminating every chance of outside adoption.

Scalability

Along with starting costs, blockchain games also require you to spend constant money in order to be at the same level as others, and as the user base increases the prices increase and the amount one has to spend in order to reach a level in which you can enjoy the game is getting substantially big, making the vast majority of gamers unwilling/unable to even try the game, eventually leading to a game that will never fully take off or get even close to non-blockchain games such as Clash Royale in terms of popularity.

Making money with blockchain games, true or false?

Making money with blockchain games is what made the games popular at first, which is not a bad thing, it is actually amazing to see that users can get another source of income while also having fun.

How games generate you revenue is a simple concept. Players play the game, fight against others, complete objectives and the most powerful are rewarded.

To generate revenue with Axie Infinity you have to complete the daily quests which include both PvE and PvP fights, and after successfully completing them you'll get rewarded with "Small Love Potion" (SLP) token, which you can either sell or use to breed your Axies. Other games have the same core idea. In Sorare you participate in tournaments with your football team and the teams that finish in first places in the

"League Rookie" and "Special Weekly'' get rewards such as more cards (players) or ETH in some cases.

But the dream of making money with these games is slowly fading away for newcomers, because as the game progresses it is becoming harder and harder to face older players, and the amount of money one has to spend in order to even have a chance is increasing rapidly, as specified in the "scalability" part.

UX/UI and adoption

Crypto is already hard to understand and adopt, and the current state of the blockchain gaming industry isn't helping.

Take F1 Delta Time for example, it does not have a marketplace of its own that's easily accessible. In order to acquire cars, drivers and other items you'll have to go through a 3rd party market that you'll have to find doing your own research. In our opinion this is killing the growth of the gaming platform. Users that see the game for the first time and never interacted with cryptocurrency will have an extremely hard time figuring out what, where, and how to do stuff.