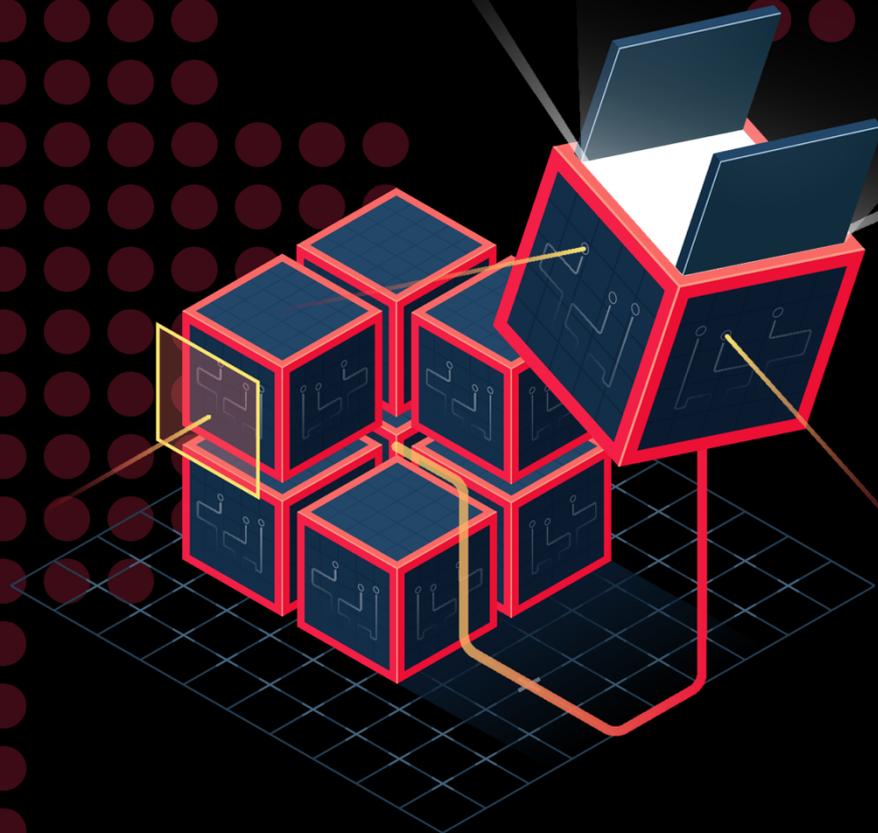




# White PAPER



# DeFiPie Whitepaper

Decentralized Finance (DeFi) is among the most promising markets in blockchain technology. The demand for financial services on a decentralized technology is high. The optimistic expectations for the potential of this technology has been evident in the appreciating valuations of tokens native to DeFi protocols.

Since the start of 2020, the value locked into [DeFi has risen roughly 250%](#). After two years of conservative risk-taking, crypto investors have demonstrated that they're willing to allocate capital to the most exciting use case of blockchain technology. Billions of people and institutions suffer from restricted or nonexistent access to financial services. But blockchain has extended beyond simply "banking the unbanked". Innovators are developing protocols on the Ethereum network that allow users to loan, borrow, and easily transfer and trade value.

But DeFi remains rudimentary at its face value. Although there are almost endless possibilities across different protocols, these protocols are disconnected and navigating them is challenging. Creating a sublime and integrated user experience will pave the way for a new wave of adoption in DeFi. [Analysts have already accepted](#) that the current users of DeFi are mostly limited to crypto speculators. The institutions and wider retail market await. But first, there must be an app which makes tapping into the DeFi market as easy as logging into an exchange and trading an asset. There must be an app which opens up new possibilities for marketplaces. There must be a place where users can go for all their lending, borrowing, and staking needs. Enter DeFiPie.

## Introducing DeFiPie – The SuperApp of DeFi

The decentralized finance (DeFi) space is extremely fragmented and difficult to navigate. Information is dispersed among unconnected products and services. DeFi users and liquidity providers often face challenges finding the right information and the right protocols for their needs.

DeFiPie is the first DeFi super app that integrates data and information from the countless unconnected services and protocols. The DeFi market has been undergoing phenomenal growth at a recent rate of 250% per annum. Those pushing this market forward deserve to tap into this ecosystem through the highest quality applications.

DeFiPie caters to that very need. DeFiPie users can access a suite of highly demanded features from one interface. Lenders, stakers, and liquidity providers can all benefit from the DeFiPie application. These players will have the ability to:

- Carry out automated lending in a P2P loans marketplace
- Have their loans matched with maximal efficiency due to our sophisticated matching engine
- Stake with a wide range of assets including XTZ, ATOM, DOT, and ADA.
- Create liquidity, lending, and staking pools.

Furthermore, those who provide liquidity will be further rewarded in PIE tokens. This allows users of the DeFiPie app to participate in yield farming while also having access to an integrated DeFi ecosystem.

## Decentralized Finance – The Fastest Growing Blockchain Infrastructure

DeFi has caught the attention of the crypto masses. Over the past year, there have been instances of volatile Ether price action, bugs being exploited in Ethereum protocols, and intense scrutiny over the value proposition of altcoins. Despite all this, DeFi infrastructure has continued to grow at a rapid pace and grow more robust over time.

The DeFi ecosystem has allowed users to carry out many of the activities which would traditionally be completed within the banking industry. Users can create deposits, earn interest, and both lend and borrow. But by transitioning these possibilities to a decentralized network has brought both greater transparency and greater accessibility. Those who may have faced insurmountable hurdles in the traditional financial system have been able to meet their demands in the DeFi ecosystem.

The value proposition of DeFi is evident in its rapid growth. As of mid-July, over \$2.5 billion in value is locked with DeFi protocols. This has expanded from \$700 million at the start of the year for a year-to-date (YTD) growth of 250%.

The DeFi industry is currently highly concentrated in a small number of **lending protocols** – Compound, Maker, Aave, and InstaDapp. Interest rates available for lending on these platforms commonly exceed 5% making them an attractive alternative to the near-zero interest rates of traditional finance.

Protocols where lenders pool their liquidity have also become popular in DeFi. These **liquidity pools** facilitate decentralized trading and those who lock their capital into these pools earn a share of the trading fees. The Uniswap, Balancer, and Curve protocols hold the dominant share of value among this segment. Rates above 5% are also commonly seen amongst liquidity pools.

**Crypto staking** is also becoming a common way to earn a return on capital. Users in some networks and protocols lock their tokens and play a key role in providing consensus to a distributed network. Although somewhat distinct from the DeFi ecosystem, staking is another activity which has been recording phenomenal growth and sparking interest. As it

stands, there is more than \$10 billion in USD value locked via staking in the Tezos, Cosmos, and Polkadot protocols.

## DeFiPie – The First Decentralized Finance SuperApp

Where does DeFiPie come into play? As it stands, the DeFi ecosystem is extremely fragmented. Despite users wanting to find the best rates among all protocols, they need to access every protocol separately. This leads to poor user functionality and missed opportunities.

However, an extremely fragmented ecosystem is to be expected given that DeFi is currently in an early stage of development. However, as industries mature, super apps emerge that consolidate the leading services and provide a new level of user functionality.

For instance, in China, WeChat is an app which has immersed itself into every layer of society. It is used by Chinese citizens to make payments, send messages, hail cabs, use applications, and also to access social media. Super apps in the finance industry such as Revolut have been rapidly increasing in usage and popularity. On top of a sublime design, Revolut allows users to make deposits, invest in stocks, and even gain exposure to crypto.

DeFiPie will be the first super app for the DeFi space. It will combine access to lending, liquidity pools, and staking into one application. The user interface will be designed to maximise navigational efficiency leading

	DeFiPie	Compound	BZX	Aave	Curve	Synthetix	Thorchain	Balancer
List of Assets	Any	Selected	Selected	Selected	Selected	Selected	Selected	Selected
Pool Strategy Lending	✓	✓	✓	✓	✗	✗	✗	✗
Margin Trading	✓	✗	✓	✗	✗	✗	✗	✗
Asset Swapping	✓	✗	✗	✗	✓	✗	✓	✓
Synthetic Asset Trading	✓ (Lending)	✗	✓	✗	✗	✓	✗	✗
Staking	✓	✗	✗	✗	✗	✓	✗	✗

to a seamless user experience. Whatever a user wants to execute in the DeFi space will be only a few clicks away.

DeFiPie will also provide novel features to users which will include a P2P loan marketplace, the ability to create lending pools, and yield farming opportunities. Users will be able to easily transfer their asset exposure from one position to the next.

The following sections detail the DeFiPie modules and pinpoint the current problems which the super app is addressing.

*Include a summary of the remaining sections which are addressed in bullet points*

## DeFiPie Lending-as-a-Service – Giving Users Control Over Their Loans

The dominant DeFi lending protocols are fully automated. Users do *not* have discretion over their loan offers. Those who are lending simply loan assets into a general pool while those that are borrowing deposit collateral. From that point, the platform takes over and distributes funds.

DeFiPie provides a far superior experience by allowing lenders and borrowers to choose between several modes – fully automated, semi-automated, and manual.

**In the fully automated mode**, the DeFiPie matching engine automatically allocates funds and secures loans at an algorithmically determined interest rate. This is a fast and easy way for participants to loan or borrow but they won't necessarily access the best possible rates. Furthermore, the assets that are available to be collateralized in this mode will be limited to the most liquid and stable.

Those who wish to seek better rates or conditions have the option to utilize the semi-automated or manual modes. **In the manual mode**, lenders access a true P2P marketplace and OTC lending desk. To execute loans with borrowers in these markets, they specify several parameters. These include the amount to be loaned, the loan duration, the interest rate, the loan-to-collateral-value ratio, assets which can be accepted as collateral, and a liquidation threshold.

These manual settings allow lenders to take on higher risk for a greater potential return. For instance, lenders can choose to accept more volatile and exotic assets as collateral to attract borrowers at higher rates of interest. However, this also brings a greater risk that the asset could sharply drop below the liquidation threshold and be liquidated at a value which does not fully cover the loan.

Borrowers will also have the option to create a custom loan request by specifying the given parameters. Borrowers will also be able to browse the loans available and filter based on APR, collateral, etc. After a loan or borrow offer is accepted, a smart contract is created to handle all of the conditions related to the loan.

**In the semi-manual mode**, users set the parameters and can allow the system to execute the first offer that meets these conditions or can alternatively choose to be notified when an offer arises that meets the parameters. If matching orders already exist, the system will notify the user. If no matching orders exist, the system will continue to scan for orders meeting the specified parameters.

In all modes, if the value of the loan drops below the amount of collateral deposited, the loan will be immediately liquidated.

The borrowing rate will always be slightly higher than the lending rate which creates the margin for the platform. These margins will be immediately incorporated into the loan and

borrow offers when they're executed. For instance, if a lender sets 5% as the interest rate they wish to earn, it would appear higher on the platform due to the incorporated margin.

Users must hold PIE tokens to access the semi-automated and manual modes. Lenders who agree to accept interest payments in PIE tokens will be able to access higher yields.

## **DeFiPie Staking-as-a-Service – Providing DeFi Users an Alternative to Lending**

Lending activities are subject to several risks. When borrowers use volatile assets as collateral, a sharp price drop can result in the lender losing some of the value of the loan after it is liquidated. Furthermore, an oversupply of loans on the marketplace can suppress the interest rates available to lenders. However, users of the DeFiPie app will also be able to earn returns from staking.

Staking is entirely distinct from lending. Users don't transfer their asset to any other entity. The governance rights associated with their asset is delegated to a validator node in the given PoS network. As a result, the validator node receives greater rewards for their activities in providing consensus and a portion of this reward is distributed to stakers.

The market for PoS is over four times the size of the current DeFi market. [Over \\$10 billion in USD value](#) is currently locked for staking in major PoS networks. Many of these staking networks currently pay nominal interest between 5% to 10% each year. These networks typically require an extremely high number of tokens to set up a validator node. The DeFiPie app allows users to tap into this large market without the stringent requirements to run a validator node.

Through the DeFiPie app, users with a specified amount of PIE tokens will be able to create a pool where different users can combine their coins to stake. DeFiPie will initially support the leading PoS networks – Tezos (XTZ), Cosmos (ATOM), Polkadot (DOT), Cardano (ADA), Celo (cGLD), and Kusama (KSM). More PoS networks will be added in the future.

Stakers will be subject to some of the lowest fees for staking services on the market. The fees will be the difference between the nominal yield rate and what the delegators receive. The staking service will be entirely non-custodial meaning that users will have full control over their assets at all times. Furthermore, users can withdraw their stake at any given time with no penalty.

Users who choose to receive their staking rewards in PIE tokens will earn greater returns. These users will benefit from an additional 0.5% on top of the default rate. For comparison, not receiving payouts in PIE tokens takes away 0.5% from the default rate.

## **DeFiPie Liquidity Pool-as-a-Service – Providing Deep Liquidity to DeFi Protocols**

Adequate liquidity is essential to the successful operation of DeFi services. A lack of liquidity causes significant challenges to users. Prices in decentralized trading become extremely volatile. Interest rates available for loans fluctuate sharply. Lenders may be unable to withdraw their assets.

Some DeFi protocols have addressed liquidity by allowing users to pool their liquidity. However, these liquidity pools remain distinct from lending and staking. DeFiPie will be the first to integrate liquidity pools, lending services, and staking services to maximise the liquidity accessible to the user.

Any investor will be able to deposit their idle assets into a liquidity pool and earn a reward on their allocated assets. Rewards will vary based on how the liquidity is utilized. There are several possible means by which the assets can deepen the liquidity of the integrated services:

- Provide **liquidity for loans**. In this case, the asset allocator receives rewards in the form of lending interest.
- Provide **liquidity for decentralized trading**. In this case, the asset allocator receives a share of the trading fees.
- **Facilitating swaps** between assets. If a user deposits Ether but there is an oversupply of this asset while USDT is highly demanded, the Ether can be used to provide liquidity for the demand of USDT. The deposited ETH can be immediately swapped for USDT and loaned out.
- **Facilitate staking**
- **Prevent illiquidity events**. Many lenders seeking to withdraw their assets simultaneously can oftentimes lead to insufficient assets for withdrawal. This has happened several times on the largest DeFi protocol Compound.

When illiquidity events occur, the system should adjust interest rates to increase liquidity. However, this can take time to restore liquidity. With DeFiPie, the assets deposited by users can be used to fill the gaps in liquidity while the system is adjusting. Asset owners receive higher yield if their assets are used for these circumstances. This adds a layer of robustness to the DeFiPie liquidity.

When a user invests in a DeFiPie liquidity pool, the system determines how the assets will be allocated. Figures can expect positive ROI but returns will fluctuate. For predetermined payouts, users can choose to invest in staking. However, the real returns of staking will be impacted by the volatility of the asset which is staked.

Users receive a stand-in token for the assets invested in liquidity pools. The stand-in token is referred to as a p-token and will represent ownership of the capital allocated to a liquidity pool. For instance, those who allocate ETH will receive a p-ETH token while those that allocate USDT will receive a p-USDT token. Rewards will be calculated based on the number

of p-tokens held. When those that allocate assets withdraw from the pool, the p-tokens will be burned.

## DeFiPie Custom Lending Pools – Giving Users Power Over Interest Rates

Current lending platforms such as Compound and Aave have algorithmically determined interest rates based on demand and supply. Users do not have the option to create their own pool with customised terms and rates. Users have no choice but to lend at the rates determined by the algorithm.

DeFiPie allows users to set up lending pools where they regain control over interest rates and collateralization terms. Lending pools are distinct from liquidity pools in the manner that it requires its members to vote on matters such as rates and governance.

Any user with a sufficient amount of PIE tokens can start a lending pool for a specific asset and invite other network members to join the pool. Pools can be created for any of the assets supported by DeFiPie such as ETH, DAI, USDT, BAT, USDC, and SNX.

Pool members will have discretion over the following:

- Lending and borrowing rates
- Range of assets accepted as collateral
- Rate of collateralization
- Minimum number of PIE tokens required to become a pool admin
- Minimum number of PIE tokens required to participate in the voting which determines the interest rate
- Whether a higher interest rate is rewarded to those who decide to receive their rewards in PIE tokens
- Frequency of interest rate reviews
- Minimum membership duration
- Penalty for leaving the pool early

Pool admins can specify the minimum difference between lending and borrowing rates which will represent their margin as pool operators. Similar to liquidity pools, those who allocate capital will receive p-tokens and will receive rewards daily based on the number of p-tokens held.

DeFiPie users will be able to monitor a list of custom pools with their respective lending rates in a dedicated section. It will be possible for users to switch pools at any given time if a better opportunity arises. However, some pools may have penalty fees for early withdrawal.

DeFiPie's goal is to give maximum control to the user. The freedom for users to easily switch between pools and maximise their rate of return is closely aligned with this goal.

## DeFiPie Collateralization Options – Allowing Users to Earn Returns on Their Stand-In Tokens

Several DeFi protocols issue stand-in assets such as p-tokens for the assets a user deposits. However, these assets remain idle and sit on the user's balance sheet as dead weight. With DeFiPie, users will be able to deposit their p-tokens as collateral to loan different assets. The value of the stand-in token will be tied to the underlying assets. Oracles will be used to determine and update the value of such hybrid collateral.

For instance, a trader who holds ETH and uses USDT for trading can deposit their ETH into a liquidity or lending pool to earn rewards from trading and loan fees. For this ETH, they will be issued p-ETH. In turn, this p-ETH can be used as collateral to borrow more USDT for trading. In this case, a user benefits both from increased trading capital and from earning fees from their deposited ETH.

When an investor decides to withdraw their deposit, the p-tokens are burned. In this case, any loans which use the p-tokens as collateral will either have to be closed or the collateral will have to be replaced with others.

Using p-tokens as collateral does add extra risk. Positions may be liquidated in the event of extreme volatility or if oracle systems are compromised. However, these risks are lower on DeFiPie than other hybrid services such as Uniswap and Aave.

In the future, it may also be possible to loan p-tokens. However, demand for such loans will be gauged before such features become possible.

## DeFiPie Yield farming – Earn PIE Tokens From Participating

Anyone who participates in the DeFiPie ecosystem will receive a small amount of PIE every day. Users will be rewarded PIE for staking, issuing loans, depositing, collateral, and participating in liquidity pools. Yield farming incentivizes users to both borrow and provide liquidity.

By incentivizing both borrowers and lenders, it facilitates healthy demand and supply dynamics for DeFiPie. This will allow the app to thrive by attracting a strong user base both to borrow and to issue loans.

The PIE tokens which users will be rewarded will depend on their share of the total value and turnover in the platform. This incentivizes users to participate in different investment instruments and to transition more capital to DeFiPie to maximize returns.

The amount of PIE dedicated to yield farming is finite. The rewards will be paid daily until the farming fund is empty. This incentivizes early adoption.

## PIE – The Native Token of DeFiPie

Compound (COMP), Aave (LEND), and Synthetix (SNX) are among the most successful DeFi platforms. Each has provided valuable features to their users and attracted liquidity into their protocols. The native tokens of DeFi protocols have shown tremendous potential for upside price appreciation. LEND has appreciated almost 1500% YTD while SNX has increased by roughly 150%.

The PIE token economics are modelled similarly to these successful DeFi protocols. PIE tokens can be used to access advanced features within DeFiPie while also providing holders with opportunities to generate greater yield. Every user who locks value in the DeFiPie protocol will receive some PIE.

PIE will be required for the following activities:

- Starting and participating in custom lending and liquidity pools
- Participating in P2P lending. PIE is needed to manually create and accept loan offers.
- Starting a staking pool

PIE holders will also benefit from up to 150% in annual yield farming rewards. Holders will be able to participate in network governance. Users who choose to receive rewards in PIE will be able to secure higher interest rates.



## DeFiPie Token Economics / “PIE Governance Token”

The Protocol Governance Token – **PIE** - is distributed to those who lock value in the protocol, providing a significant incentive to liquidity providers. As well **PIE** is needed to setup a liquidity pool.

**Total Token Supply:**  
220,000,000 Token

**Sales:** 55,000,000 Token

25% of total supply for sale, visualizing a fair and widely distributed token holder structure.

- **Seed Round:** 20,000,000 Token
- **Private Round:** 30,000,000 Token
- **ICO:** 5,000,000 Token

**Liquidity:**  
100,000,000 Token

- **Initial Exchange Liquidity:** 10,000,000 Token
- **Reward for Liquidity Contributor:** 90,000,000 Token

**Operational Reserves:**  
15,000,000 Token

- **Staff:** 2,500,000 Token
- **Bootstrapping:** 2,500,000 Token
- **Growth:** 10,000,000 Token



## DeFiPie Token Economics / “PIE Governance Token”

**DeFiPie Vault:**  
15,000,000 Token

- **Liquidity Partnerships:** 10,000,000 Token
- **Token-Bridge:** 5,000,000 Token

**Team & Advisors:**  
25,000,000 Token

- **Team:** 20,000,000 Token
- **Advisor:** 5,000,000 Token

**Community:**  
5,000,000 Token

- **Bug-Finder:** 2,500,000 Token
- **Campaign-Worker:** 2,500,000 Token

**DeFiPie Fund:**  
5,000,000 Token

- **Funding:** 4,000,000 Token
- **Top-Ups:** 1,000,000 Token