Asva Finance Lite paper

V2.0

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1.1 Introduction

The current DeFi landscape is complex creating a cumbersome trading experience for platform users. The various aspects of DeFi such as token swaps, lending, borrowing, trading, staking, and yield farming are the fragmented pieces of the DeFi ecosystem that need to be addressed through multiple protocols on different blockchains. There is a pressing need for the money market use cases and effective liquidity optimization to enable DeFi mainstream adoption.

Asva Finance with its suite of applications in the DeFi ecosystem bridges the gap between supply and demand by aggregating existing liquidity pools in various exchanges across different blockchains. This allows optimal value to be utilized in crypto asset management within the crypto ecosystem. Asva's liquidity aggregator solutions provide access to both centralized exchanges and decentralized exchanges, thus providing greater utility for platform users to drive DeFi to mainstream adoption. Asva aims to revolutionize the DeFi landscape through smart and intuitive crypto solutions.

Users of DeFi protocols can be broadly categorized into Institutional Investors and regular day-to-day users. The challenges faced by these user segments are very different. While institutions are considering BTC as a haven for their investment portfolio, there is a lack of a clear regulatory framework for the same. Whereas in terms of public adoption, novice users are facing challenges due to the lack of mainstream adoption of DeFi applications. The technological complexities are discouraging day-to-day users from realizing the benefits of the decentralized financial ecosystem.

1.2 Existing limitations in DeFi

Fragmented Liquidity

Crypto Liquidity for trading and decentralized swaps are currently fragmented across various platforms on different chains. Fragmented liquidity adversely impacts the price discovery of a token/asset and causes multiple transactions to be performed to reach an optimal price point.

Cross-chain trades

On-chain swaps and settlements are enabled to varying degrees of success currently in chains like Ethereum, Binance smart chain, and Tron. However, legacy cryptocurrency and cross-chain are enabled using tokenization. The value of a Bitcoin is unlocked in Ethereum using [wbtc](#) and [renbtc](#), essentially an ERC-20 representation of Bitcoin using centralized custodians.

Cross-chain money market

Money market refers to the trading of instruments in large volume by traders and providing frameworks and regulations for the same. Today, the cryptocurrency money market is in its infancy and is plagued by high transaction fees, a lack of unifying regulation, and a robust framework for traders and processes. Money market features are provided by existing protocols exclusively operating in individual blockchains. Cross-chain, interoperable money market solutions are proposed features by Asva finance.

Limited use cases of NFTs

Though NFT's are introduced earlier along with the ERC-721 standard, the apparent use case of ownership verification on-chain for any digital collectible be it an image, audio, or video is made popular in the last six to eight months. NFT's can be used to record and authenticate on-chain ownership of any tokenized asset, along with metadata, providing endless use cases. Currently, the solutions and frameworks are narrowed to marketplace uses only.

1.3 Asva Proposed Solutions

Asva Protocol proposed a cross-chain liquidity aggregation mechanism that is instrumental in driving the DeFi and NFT use cases into one holistic ecosystem. Asva will be employing its native para chain on Polkadot to facilitate the web3 abstracted cross-chain money market. Leveraging the Polkadot relay network, Asva strives towards evolving the DeFi landscape by facilitating smart holistic money market solutions. The Asva's ecosystem comprises the following proposed solutions to the limitations discussed above:

Fragmented Liquidity

To address the issue of fragmented liquidity, asva enables cross-chain integrations of decentralized exchanges and multiple automated market-making pools across multiple blockchain networks, like Ethereum, Binance Smart Chain, etc.

Native Cross-chain swaps

Asva para chain would enable native cross-chain settlements and would enable crypto assets to be traded in a chain agnostic manner. Existing solutions are specific chain-based. Asva proposes to tap the on-chain liquidity of all Polkadot-supported chains using parachains.

Cross-chain money market

Asva finance will provide abstractions of existing web3 libraries to enable integrating cross-chain liquidity pools from various protocols to enable cross-chain money market features such as token swaps, lending, yield farming, and asset management.

Asva bridging of NFTs and DeFi

Asva proposes a framework for tokenizing real-world assets, with on-chain ownership and offers decentralized lending and borrowing against fractional NFTs. Asva.finance NFT platform allows users to achieve decentralized lending and borrowing by way of collateralization of NFTs.

Asva ecosystem comprises an NFT auction-based marketplace. It eases out the entire NFT process right from creation, purchasing sale of NFT assets in a dynamic landscape employing adequate liquidity solutions, fuelling rampant adoption to empowering the users.

The One-stop solution for DeFi and NFTs features: The current landscape of crypto exchanges and decentralized applications are very fragmented and the customers/market segments are siloed. With the advent and popularisation of DeFi protocols and platforms, the fragmentations are even wider and there is a stronger

need for a unifying ecosystem. With the advent of Polkadot parachains, cross-chain aggregation is possible and Asva will leverage the use of parachains to achieve cross-chain token swaps, lending, and NFTs.

2 What is Asva finance?

Asva Finance is a decentralized money market involving a cross-chain liquidity aggregation protocol allowing users to swap, lend, and farm cryptocurrency assets and Non-fungible tokens. Leveraging the powers of the Polkadot network, Asva Finance is building its para chain to contribute to the ever-growing decentralized money market features.

Asva Finance employs interoperable technological solutions to redefine the DeFi landscape. The major components of ASVA's platform constitute cross-chain Liquidity aggregation, lending, Yield farming aggregation, and NFT platform. The comprehensive nature of the platform provides a one-stop solution for all segments of users.

2.1 Why asva is built on Polkadot?

- Limitless Scalability: Whilst housing a common set of validators, Polkadot promotes unprecedented scalability with speedy transactions across multiple blockchains. It allows decentralized applications to execute a high number of transactions without latency or network congestion issues.
- Low Transaction Fees: The transaction executed through Polkadot Network is economical compared to other blockchains. Transaction fees are a significant aspect while considering the macro-dynamics of DeFi adoption. The low transaction costs are attractive for users and developers to build and execute transactions on the Polkadot Network.
- Robust Infrastructure Framework: Polkadot utilizes the Substrate Framework to fuel interoperability across cross chains. It also has forkless and future-proof features that increase the adaptability on a technological front and allows interacting with various chains in a meaningful way, thus providing immense value to the DeFi ecosystem.

2.2 Asva Technical Architecture

Asva employs a technical and robust infrastructure. Asva utilizes parachains. The current Asva framework is striving towards driving interoperable solutions not limited to parachains but also diverse blockchain networks such as Ethereum, Tendermint, Cosmos, Binance Smart Chain, and others. Asva aims to become a comprehensive interoperable cross-chain liquidity aggregator platform to allow swapping, lending, leveraging, and asset management.
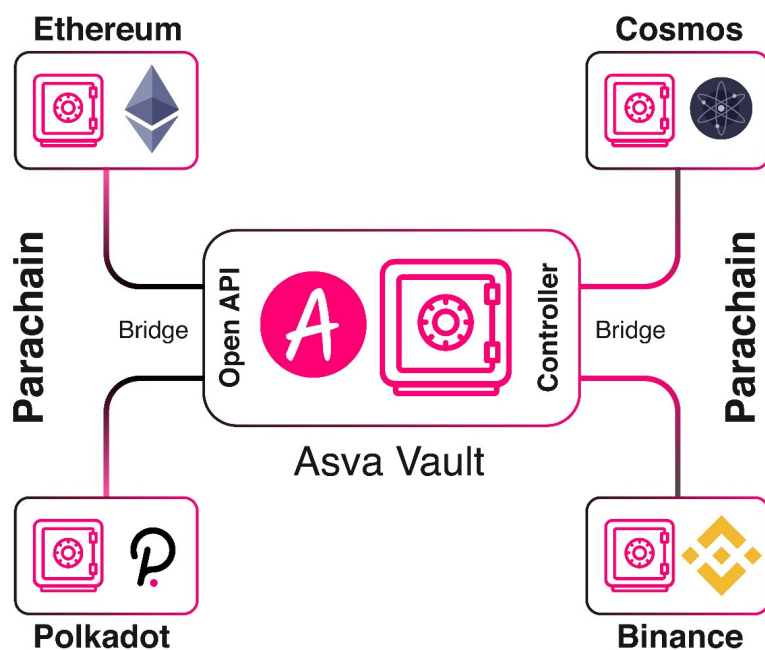
The primary components of Asva Finance comprise the following:

- ASVA Vaults: The Asva's architecture comprises smart contract-based vaults that allow storing of funds safely and securely. It can also be considered as a liquidity pool that is employed across various platforms like Uniswap, Pancakeswap, etc.

- ASVA Open API: To operate with diverse chain vaults and interchange liquidity, Asva Finance will utilize the open API's across various platforms to drive enough liquidity on Asva's product ecosystem.

- ASVA Bridge: Leveraging the Polkadot parachains, Asva Finance will create bridges that will ease communication with various blockchain infrastructures like Ethereum, Polkadot, Cosmos, and others.

- ASVA Controller: Whilst the bridge is developed on the Polkadot Network, the controller will be employed to integrate different mechanisms like yield farming, insurance, leverage, derivative options, and others. Asva Finance will inject the latest DeFi features to efficiently utilize the controller.

3 Asva Ecosystem

Asva Finance and its dynamic ecosystem comprise of the following:

Asva Finance promotes diverse cross-chain money market solutions with the intent of providing smart solutions infused with technological innovation to increase the overall utility of the existing platforms and protocol. Asva finance introduces NFTs natively to DeFi use cases. Asva Finance's ecosystem comprises of the following:
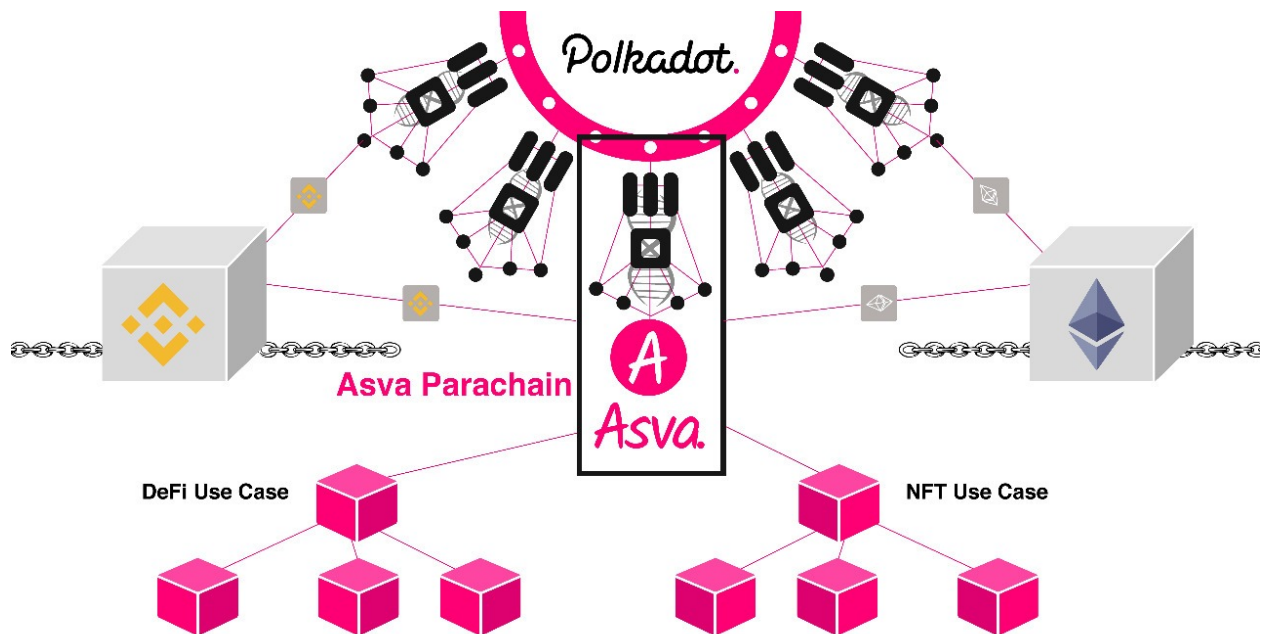
3.1 Cross-Chain Liquidity Aggregator :

The Asva Finance Cross-chain liquidity model aggregates multiple Automated Market Makers through which the platform aggregates liquidity of various cross-chain pools, thus providing users with adequate liquidity to exercise their trades.

Asva Finance will utilize open API solutions to drive liquidity from various cross-chain exchanges and liquidity pools. It will facilitate seamless liquidity aggregation through API integration for users with attributes such as low-transaction costs, instant swaps, and increased ease of use.

	Uniswap	1 inch	CEX (any)	ASVA
CEX liquidity	No	No	Yes	Yes
DEX liquidity	Yes	Yes	No	Yes
Swap	Yes	Yes	No	Yes
Oracle (centralised/ decentralised)	Decentralised	Decentralised	Centralised	Decentralised
Cross chain txn	No	No	Irrelevant	Yes
Scalability	Low	Low	Low	Very high
Risk	No risk hedging	No risk hedging	Risk hedging	Risk hedging via smart contract
Gas fee	Very high	High	High	Very low
Chances of liquidity drain	High	High	High	No

3.2 Smart Lend :

The Asva platform promotes the lending and borrowing of crypto assets. Asva will utilize existing decentralized oracles like Chainlink and Band protocol. Asva Finance will cater to the best lending and borrowing services from Compound, Maker, AAVE, and other lending and borrowing protocols in cross-chain like Polkadot. Asva will leverage the existing open-source API of specific protocols for providing smart lending and borrowing aggregation.

	Compound	Aave	Maker	ASVA
Interest Rate	Variable	Variable	Variable	Aggregator with best interest
Assets	Only ERC 20	Only ERC 20	Only ERC 20	Cross chain assets (ETH, BSC,LTC etc)
Algorithmic adjustment + source of liquidity	No	No	No	Yes
Cross Chain	Not available	Not available	Not available	Available
Gas Fee	High	High	High	Very Low
Scalability	Low	Low	Low	High

3.3 Smart Yield

Asva smart yield aggregator solutions will provide users an opportunity to maximize their yields. Through Asva yield aggregators, users will be able to stake their liquidity provider tokens and earn extra rewards on top of their existing transaction fees. It will allow novice users to seamlessly leverage underlying protocols for efficient yield farming strategies. It will employ its yield aggregator algorithm to extract the maximum yield across various platforms.

Its key attributes would include maintaining a diversified portfolio for yield farming strategies. Automated portfolio rebalancing, gas savings with high transaction speed are some of the few features of the Asva yield aggregator platform.

ASVA Yield Aggregation Engine

The ASVA yield manager creates momentum for the available liquidity on the Asva Finance platform. The smart contract manager accelerates the rebalancing function after considering several criteria. These are as follows:

- If the reserves in the liquidity pools are sitting idle for the new deposits, then the contract manager will allocate the funds to the current strategy portfolio.
- If the notional amount of withdrawals is less than the reserves that are idle in the liquidity pools, the reserves will be locked.
- In case the notional amount of withdrawals exceed the idle reserves of liquidity pools, then the strategy portfolio will unwind to process all withdrawal requests. The reserves are then locked for withdrawals and requests shall pass.
- In case, the notional value of the assets is not at par within the certain threshold of selected allocation ratios, they will be rebalanced for the desired predefined ratios.
- Each strategy's iteration sequence will be executed once the threshold conditions are met.

Type of sequences that ASVA follows:

The life-cycle of each of the strategies revolves under three stages namely Entry, Iteration, and Exit. In the entry, the assets are deployed to perform smart contracts with native Asva tokens. The Iteration is instrumental in the upkeep of the strategy. The exit is when the platform exits a strategy by unwinding it.

Yield Estimates
The Asva platform's smart feature will allow every strategy to calculate the effective yield outcome for a given input of assets at the current block rate. Therefore this will allow in evaluating and analyzing optimal yield farming strategies in the most ideal way and provide users with multiple options to choose from.

Risk Scores

Asva will employ a risk score framework to assess the risk factors involved in performing a strategy. Every strategy will have a risk score associated with it. The initial score will be applicable when the smart contract is first deployed and will change depending on the performance of the strategy. Therefore, the risk scores will be instrumental in evaluating optimal portfolio allocations for every user.

3.4 Asva Asset management

Asva smart portfolio allows balancing and interacting of smart contracts with a plethora of financial primitives to earn the maximum yield. The strategy will be segregated into the type of assets and the utility of the type of assets. The major classification of assets involves Input assets, Intermediary Assets, and Output assets. The input assets are required while commencing the strategy such as DAI, USDC, DOT, and BNB. The intermediary assets are liquidity tokens held by the smart contracts while the strategy is under application such as ASVA native token. The output assets are generated through performing smart yield farming strategies and are swapped for yields such as COMP, CRV, SUSHI, and CAKE.
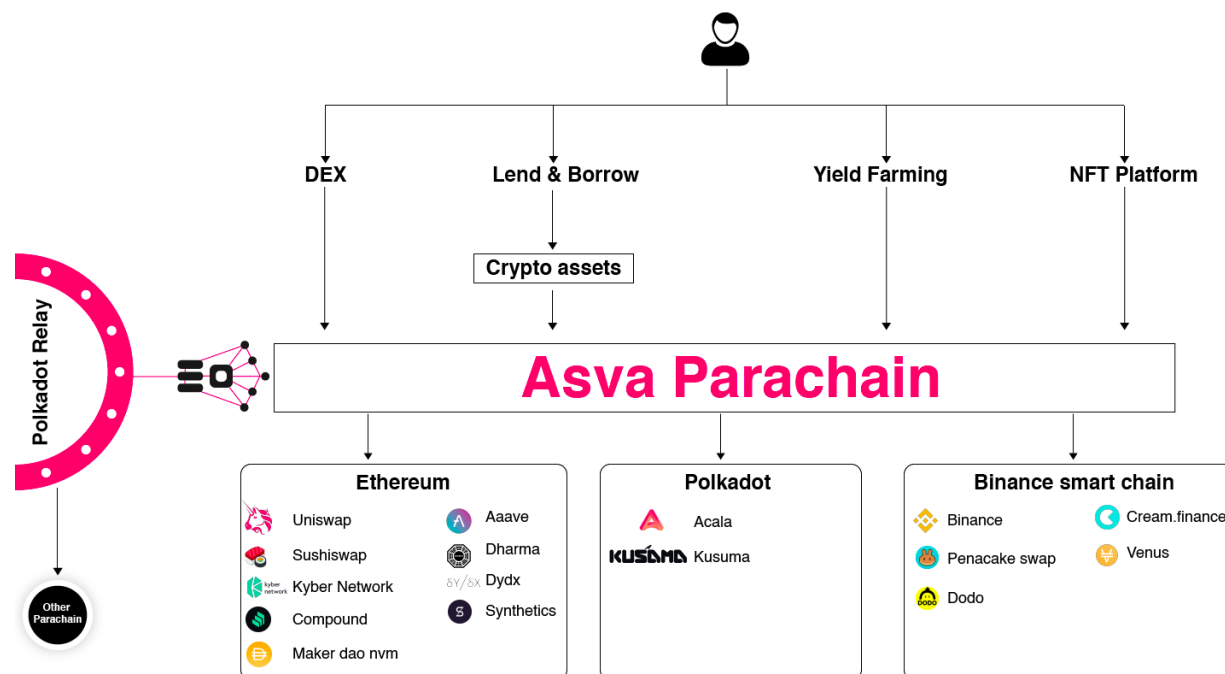
3.5 Asva NFT platform

The NFTs are the next holy grail that users are diving into after the booming decentralized financial space. The demand for NFTs has risen magnificently, attracting creators, collectors, investors, and traders due to the intricate features of non-fungible tokens. The unique characteristics of NFTs have created a fascinating parallel between art and technology.

3.5.1 Asva NFT marketplace

ASVA is building the next-generation NFT marketplace that eases purchasing and selling of virtual digital assets such as crypto-collectibles in the form of games, art, music, virtual lands, and other tokenized assets. Leveraging Polkadot, it offers efficient price discovery mechanisms for users to drive NFTs to mainstream adoption.

3.5.2 Tokenized real-world assets

The concept of colored coins was introduced in Ethereum and made popular and mainstream with ERC-20 tokens. However, the ERC-20 tokens have intrinsic limitations when it comes to representing real-world asset classes. Erc-20 tokens are ideal for representing utility and service asset classes rather than representing real-world asset classes. NFTs are conceptualized to represent real-world asset classes.

3.5.3 Bridging NFTs to DeFi

Today, DeFi based solutions are primarily built for ERC-20 tokens in Ethereum and its variants in other chains. ERC-20 revolutionized the concept of colored coins and helped isolate value and enabled platforms and users to have independent token economics. NFTs on the other hand have complimentary use cases to that of ERC-20 tokens. If ERC-20 tokens are used to represent value as a similar entity, NFTs help entities with dissimilarities and real work assets to be tokenized seamlessly. Allowing real-world assets to be tokenized helps unlock the value of NFTs in DeFi.

3.5.4 NFTs lend and borrow

DeFi lending enables decentralized lending pools and collateralized assets-backed loans. Again, the use case of DeFi lending is limited to ERC-20 tokens in Ethereum and its variants in other chains. However, NFTs have the potential to unlock real work assets and tokenize them. Asva NFT platform will allow lending and borrowing based on NFT based collateral.

4 Asva token economics

The ASVA token is a central representation and incentivization structure governing the ASVA platform. Its primary utilities include staking, liquidity mining, and governance. Platform users will be able to vote on various protocol proposals, thus driving the utility of the platform.

The ASVA token economics is segregated into three major parts:

4.1 Protocol Incentive Structure

ASVA is employing its para chain to bring mainstream DeFi adoption. Therefore, it needs to power its collators to execute necessary computations and maintain the consistency of the network which is based on the Proof-of-Stake consensus protocol.

The collator node is required to maintain all necessary information of the ASVA para chain. Simultaneously, the collator node needs to produce new blocks and pass them over to the Relay Chains validators for the verification and inclusion of the same in the Polkadot Network. The incentivization of the Collator node is a significant aspect of the ASVA protocol. The ASVA tokens will be employed for the payment of collator gas fees and performing basic operations such as processing, deploying, and submitting smart contracts and other network activities. The collator fees will also be utilized while interacting with the on-chain infrastructure and portfolio rebalancing.

4.2 Staking and Governance

While leveraging Polkadot's Proof of Stake consensus mechanism and its base consensus algorithm, the workflow will follow a DAO structure. The primary utilities of the ASVA tokens will constitute staking to represent voting power and distribution of staking fees on the ASVA para chain.
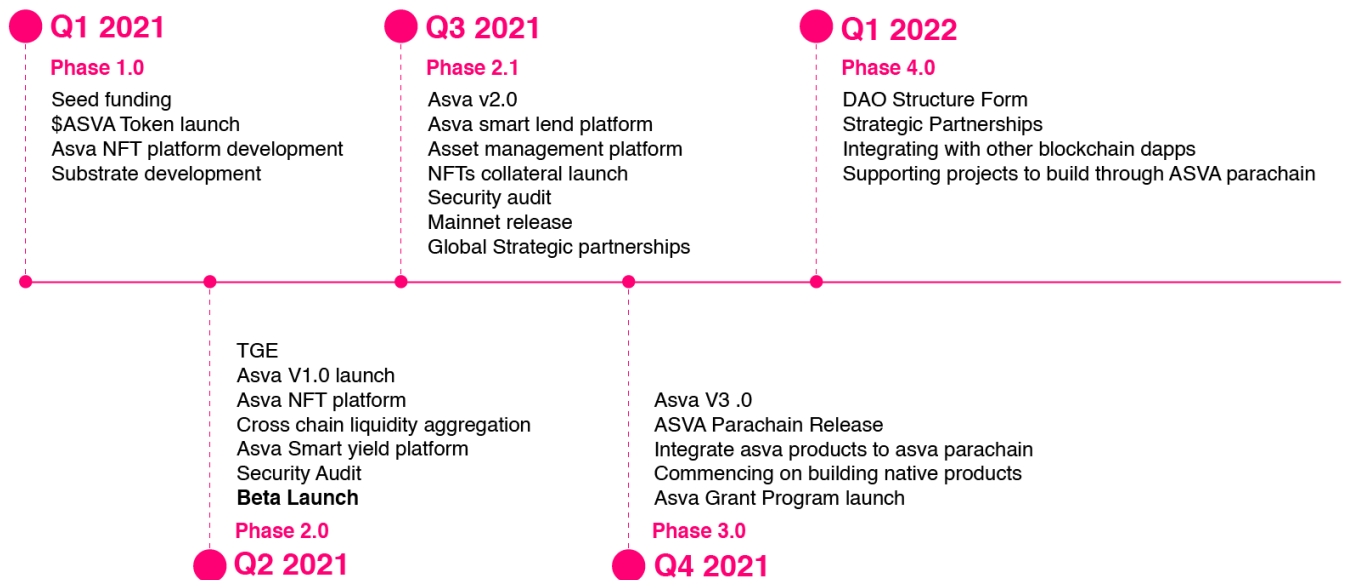
Voting procedure: Each ASVA user can vote on various protocol parameters by staking their ASVA tokens. The user's vote is directly proportional to the number of tokens staked on the platform. It employs a weighted average mechanism for all votes, considering a linear pattern of 24 hours. Non-voting Token holders are allowed to delegate their votes to ASVA stakeholders

4.3 Yield Economics

The Yield rewards will be distributed between the platform and protocol users. The platform users will be able to choose between the yield ratio of major cryptocurrencies such as DOT and ASVA. To earn yield rewards, ASVA holders must engage in yield farming processes.

Acquiring and holding a high amount of ASVA tokens will result in a higher yield total from the ASVA platform. ASVA tokens can be further provisioned in various pools with the intent of earning transaction fees with high APY. The yield distributed to the protocol smart contract will be employed for paying rewards to stakeholders. It will be utilized for token buybacks and increasing the value proposition of the ASVA token. It will be instrumental in covering various costs of operating the platform in terms of cash flow and revenue.

8   Roadmap

Q1 2021

Phase 1.0

Seed funding
$ASVA Token launch
Asva NFT platform development
Substrate development

Q3 2021

Phase 2.1

Asva v2.0
Asva smart lend platform
Asset management platform
NFTs collateral launch
Security audit
Mainnet release
Global Strategic partnerships

Q1 2022

Phase 4.0

DAO Structure Form
Strategic Partnerships
Integrating with other blockchain dapps
Supporting projects to build through ASVA parachain

TGE
Asva V1.0 launch
Asva NFT platform
Cross chain liquidity aggregation
Asva Smart yield platform
Security Audit
Beta Launch

Phase 2.0

Q2 2021

Asva V3 .0
ASVA Parachain Release
Integrate asva products to asva parachain
Commencing on building native products
Asva Grant Program launch

Phase 3.0

Q4 2021

Conclusion

Asva aims to offer cross-chain money market applications powered by DeFi and NFTs solutions built on polkadot . It is cross-chain liquidity aggregation to integrate with multiple exchanges across blockchain networks offering lend, yield, asset management per crypto assets, and non-fungible tokens. Asva finance, by developing smart applications using cross-chain enablement envisions to achieve mainstream adoption of Defi and NFTs.