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V1.01

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Risk factors of buying Ayya Vaikundar Coin or Ayya Vaikundar Coin tokens along with other disclaimers are included at the end of this White Paper.

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# Introduction

We believe the largest obstacle to the mass adoption of cryptocurrencies is price volatility. Cryptocurrencies, unlike fiat currencies, do not have a central bank to implement monetary policy focused on stabilizing purchasing power. Thus, changes in demand induce massive price fluctuations. The decentralized model to price discovery has made the majority of existing cryptocurrencies nothing more than stocks or commodities, valued on psychology, traded on unregulated stock markets, and susceptible to manipulation. The lack of price stability has prevented credit and debt markets from forming because volatility incurs a premium. While the rest of the industry focuses on transaction throughput and smart contracts, we focus on solving price stability to realize the economic capabilities that the blockchain enables.

In this paper, we introduce Ayya Vaikundar Coin, a cryptocurrency with low-volatility, and predictable returns.

Ayya Vaikundar Coin is a new class of digital currency that does not match with existing coins or stablecoins. It is not a fully free-traded token, and it does not meet the standard definition of a stablecoin, either. Ayya Vaikundar Coin's nominal value is steady but does experience "effective" price fluctuations due to its freely traded ecosystem token, Ayya Vaikundar Coin (AYYA). The nominal value is supported through its predicted price progression as well as the ecosystem of applications that use Ayya Vaikundar Coin as their currency. Through these methods, Ayya Vaikundar Coin addresses the volatility and price fluctuations experienced by first-generation virtual currencies such as Bitcoin and Ethereum, without being dependent on an underlying asset such as the USD or gold. By eliminating the dependency on the stability of other assets, Ayya Vaikundar Coin is markedly different from any other digital asset that has so far been launched.

To provide liquidity on the free market in the early stages, Ayya Vaikundar Coin has issued a freely traded token known as Ayya Vaikundar Coin. Ayya Vaikundar Coin is a low-volatility, zero-sum cryptocurrency, created and destroyed on-demand to facilitate the liquidity of Ayya Vaikundar Coin. Users may obtain Ayya Vaikundar Coin by buying it from licensed brokers, exchanges, or by converting Ayya Vaikundar Coin to Ayya Vaikundar Coin using the decentralized and immutable Ayya Vaikundar Coin convert protocol. Ayya Vaikundar Coin is pegged to 1.00 USD worth of Ayya Vaikundar Coin on the convert protocol but is not backed by any assets, setting it apart from stablecoins.

Ayya Vaikundar Coin is designed for individuals, businesses, and governments who want to use a manipulation proof currency that is not speculative. The design of Ayya Vaikundar Coin is catered to mass adoption, ease of use and limitless application. Partnerships, apps, and utilities will increase value, transaction volume, and utility.

Through application, integration, and partnerships, market demand will increase organically.

## Background/Industry

The cryptocurrency industry claims that it is creating a new form of store of value, yet, the volatility of the market and the intangibility of the assets have shown the dangers of this type of thinking. While it is clear why people want to get away from fiat currencies that can be devalued the current iterations of cryptocurrency have not addressed people's main concern: how to keep their value safe.

Fiat currencies are under threat in many jurisdictions. The move to a cashless society favors control by financial institutions and governments, rather than the people. Because of this, it's no wonder that people are looking for safe alternatives to store their money, but the current cryptocurrency market is not yet showing it can be relied upon.

## Market

Ayya Vaikundar Coin is designed for everyone who wants to use a currency that has a clear future value and is non-speculative. Initial early adopters come from all backgrounds and are looking for alternatives to fiat currency as well as alternatives to speculative and volatile cryptocurrencies. The design of Ayya Vaikundar Coin is for mass adoption, ease of use and multiple applications. The Ayya Vaikundar Coin team is creating partnerships, apps, and utilities that will increase adoption, exchange volume, and utility of the token over time. Through these apps and partnerships, the market will increase organically through the use of the token on multiple services.

Ayya Vaikundar Coin is a cryptocurrency built on an entirely new economic model, designed with two major advantages over other currencies. First, the value is designed to increase hourly. Second, an ecosystem of apps, dApps, and services architected to provide utility and demand.

## Why does price stability matter?

Cryptocurrencies are rarely relied on for everyday transactions. Possibly because they have, so far, been expensive, slow, and cumbersome to manage. Things are changing on this front with protocols like [Dash](#), which claims to be able to confirm transactions in less than one second, and to handle thousands of transactions per second for less than fifteen cents each and going down. Another possible reason for not using cryptocurrency for normal transactions is the lack of reliability or security. This, too, is changing with the many new protocols that have firm backing from [respected investors](#) and strong development teams. Bitcoin itself has proven that the blockchain model is [extremely resilient to faults](#) over its ten-year history. It's also possible that cryptocurrency is not widely used due to the lack of [adoption by merchants](#) – but this theory

fails to hold water as well since there is almost no overhead to merchants in accepting digital currency and it is logical for merchants to support any payment method that customers want to give them. In fact, digital currencies are far more [immune to chargebacks and charge lower transaction fees](#), so merchants would naturally prefer them.

The real problem can be found through examining the perspectives of the parties to the transaction in turn. First, let's consider the merchants who do accept digital currency payments now, such as Amazon, Microsoft, and Hotels.com. These integrate [BitPay](#) into their platforms, allowing customers to pay using Bitcoin. But none of these merchants actually keep their money in Bitcoin – instead, they immediately convert all accounts receivable to USD. Why? The answer is obvious: the price of Bitcoin is not stable, and merchants are not traders who want to speculate on whether the asset will go up or down. [Liu and Tsyvinski](#) quantify the risks present in the largest cryptocurrencies, showing how they vary 37-58% from month to month. Most businesses aren't willing to risk a 5% variance on a multimillion overnight payment, much less tolerate holding cryptocurrency in the face of large potential swings. Just as they wouldn't hold their money in barrels of oil, they are not likely to hold digital currency for any length of time, since the value could drop suddenly and drastically, putting them in a difficult cash flow position. Even those who support and promote cryptocurrency are unlikely to keep their cash reserves or quarterly revenues in this asset.

Second, let's imagine trying to make a purchase using a wildly fluctuating asset like Bitcoin – you won't know how much the item costs from minute to minute, and you worry that you're going to spend the asset at a low point when you could have held on and gotten a better bargain. This is a terrible dilemma for the user and adds complexity to the already difficult process of deciding on the right product. Or imagine getting paid 1 Bitcoin per month for your job – one month you have enough for all your bills, and the next you fall short. Finally, imagine borrowing money on a loan that demands a 1 Bitcoin payment every month. If the price swings up drastically, you might not be able to pull together enough to make the payment that month. Fundamentally, the problem is that today's price-volatile digital currencies subject any contract promising or taking future payments to extreme price risk. Therefore, we can see that in order for digital currencies to become a viable medium of exchange or unit of account, we need to achieve price stability.

All currencies have [six fundamental purposes](#):

1. as a medium of exchange
2. as a measure of value
3. as a store of value
4. as a basis of credit
5. as a unit of account
6. as a standard of postponed payment

Ayya Vaikundar Coin is the first cryptocurrency to implement a robust, decentralized, and protocol-enforced solution to price stability. Our goal in this whitepaper is to show that Ayya Vaikundar Coin can, in fact, achieve all six fundamental purposes.

Specifically, we discuss the following topics:

- Use cases for a price-stable cryptocurrency: detailing several use cases where a price-stabilized cryptocurrency would provide significant advantages over today's offerings.
- How Ayya Vaikundar Coin implements price stability: includes specifications of the Ayya Vaikundar Coin protocol, and why it is robust.
- A post-USD world: How an economy denominated in Ayya Vaikundar Coin looks.

## Use Cases for a Price-Stable Cryptocurrency

### Developing Markets

The internet has brought a great deal of wealth to the world, but it hasn't resulted in shared prosperity. In spite of the [billions of people](#) globally who can now access the world's knowledge and information at a reasonable cost, there remain [large swaths of the world's population](#) who are left behind because they remain outside the financial system, with no access to a traditional bank. [Most of the world's population](#) can communicate across the world with a smartphone, but access to financial services is limited or restricted for those who need it most — those impacted by cost, reliability, and the ability to seamlessly send money.

Centralized or fiat-backed stablecoins are [the most popular stablecoin designs](#) in the market since their inception in 2014. These projects are typically run by a private organization and issue tokens in exchange for the deposit of their respective currencies. Legal problems have [drastically stunted stablecoin AYYA](#). The majority of issues have come from the exchange from traditional fiat currency to centralized stablecoin issuers, prompting the need for on-chain solutions.

A good example of a stablecoin that is popular but has encountered legal hurdles, [Tether](#), issued by Tether Limited, is at the forefront of the stablecoin debate. Their path is one clouded by legal concerns around collateralization. After a long and drawn-out process, they recently admitted that their coins only [74% collateralized](#). Tether's competitors, all of whom [claim to be fully audited](#), face a different set of red tape problems. [Circle USD](#), for example, is a regulated entity that does not serve anyone from restricted territories

listed under the [United States Export Administration Regulations](#). While they help to prevent money laundering and terrorism, this essentially means that stablecoins are not going to solve the problem of banking the unbanked. Their structure also prevents the use of the coin as a safe haven against hyperinflation. This presents another problem that decentralized price-stable coins are likely to capitalize on.

Along with political restrictions, existing stablecoins also block a range of financial activities that are vital to a currency used as the backbone of an economy.

Circle, for example, lists the following restrictions on the currency in section 24 of its [terms of service](#):

- debt settlement, refinance, or credit repair services;
- court-ordered payments, structured settlements, tax payments, or tax settlements;
- the sale of money orders or cashier's checks or any money transmitter activity;
- lottery contracts, layaway systems, or annuities;

Perhaps issuers are over-cautious in order to avoid potential legal problems with particular regulators, but these are the kind of restrictions that limit a digital asset to a single function as a digital IOU for exchanges.

## A Low-Volatility Cryptocurrency for Traders

The first stablecoins were created as a way for day traders to store the value of their deposited funds or accumulated wealth on trading platforms that don't support fiat. Without the stablecoin, these traders, who earn their income from locking in profits through daily or hourly trades, had no way to protect their gains, since the only instruments available to them were wildly volatile digital currencies. Stablecoins can function as a bridge since they are technically a digital currency but have the stable properties of a fiat currency. Some of the most popular crypto trading platforms did not accept bank transfers or any other form of fiat money on their system – and many of them still do not.

A few large international trading platforms like [Bitfinex](#) do give their customers the ability to store fiat money directly. They still support stablecoins, though, since stablecoins give their customers the ability to reduce losses caused by large spreads between bid and ask in an illiquid market.

When trading a large amount of cryptocurrency in a limited liquidity environment, traders who sell run a risk of experiencing negative [slippage](#). By contrast, converting speculative tokens to stablecoins means the trader incurs only the transaction costs for centrally managed stablecoins or stability fees for decentralized



stablecoins. These are all use cases solving real needs in the market that stablecoins were thought to meet. Unfortunately, they have so far failed to live up to the promise, and a new solution is needed.

In the future, the most efficient decentralized price-stable currencies will provide this needed bridge and be proof against loss of value. A price-stable coin provides traders with the means to manage their portfolio effectively, and traders continue to be the early adopters, ambassadors, and fanatics for cryptocurrency.

Because of this, we see the initial demand for Ayya Vaikundar Coin coming from this group.

## Credit and Debt Markets

The volatility of cryptocurrencies makes them unsuitable for basic financial contracts like a mortgage or lease agreement. For example, a 30-year mortgage denominated in BTC and paid in dollars would mean the price of the house could become nearly any amount. Typically, lenders inherit the primary risk of mortgage default.

With Bitcoin as a payment method, the lender is exposed to additional, extreme price risk. If the price of Bitcoin drops 90% once in the next 30 years, they've got a default on their hands and a family could lose their home. Realistically, for a deal to go through, the lender must either speculate on the price of Bitcoin in every loan they offer for the entire duration of the mortgage term or must find a speculator who will. Hedging the price risk also costs a premium to whoever is shielded from the risk. This friction does not exist in a price-stable currency: rather, credit and debt markets see a reduction in costs and an increase in liquidity for all sorts of financial instruments when anchored on a price-stable currency.

## Broader Blockchain Economy

Numerous blockchain thought leaders believe that the ecosystem of blockchain apps is on the horizon. From a decentralized ridesharing app to e-commerce projects, existing centralized services will be replaced by their decentralized counterparts. When these projects arrive, each will come with its own token, creating the need for a universal token to enable interchange between them. It's expected that the universal token will auto-convert in and out of native tokens as transactions take place, in real-time, at market rates. This is similar to using a debit card while travelling in a foreign country. You don't think about it, but each time you swipe your card, a conversion is happening between your native currency and the currency of the country you are in. When these apps arrive, it's important that there is a price-stable currency for them to build around.

Your bus ticket tomorrow can't cost \$1 today and \$35 tomorrow. Volatility has prevented Bitcoin from standing in as a viable store of value. If you believe that blockchain apps will build the next global economy, you may also see that a price-stable currency will be needed to facilitate exchange.

## Price AYYA

The price of the Ayya Vaikundar Coin token increases hourly. The value of the Ayya Vaikundar Coin tokens is set 12 months in advance with a scaled increase in value for each month.

The token price AYYA is controlled in advance by the Ayya Vaikundar Coin team. The value is not a projected value, but the actual value the price will be forced to trade at, controlled at the point of exchange.

## How Ayya Vaikundar Coin Implements Price Stability

Ayya Vaikundar Coin addresses volatility by design, allowing the price to increase over time in a managed way. At the same time, Ayya Vaikundar Coin is subject to immutable protocol mechanisms that are able to react to real-time supply and demand.

In this section, we explore the following topics:

- How the Ayya Vaikundar Coin Protocol balances aggregate demand through a two-token system
- How exchange rates are measured
- How these protocol-enforced actions incentivize speculators to stabilize exchange rates

## Balancing Aggregate Demand via a Two-Token System

The Ayya Vaikundar Coin protocol defines two classes of tokens, Ayya Vaikundar Coin and Ayya Vaikundar Coin. Together, the two tokens balance [aggregate demand](#) through a relationship with autonomous feedback mechanisms. Combined with appropriately incentivized external actors, the dynamics of the two-token system act to maintain the agreed rate of return of Ayya Vaikundar Coin while stabilizing the value of Ayya Vaikundar Coin. We believe that a highly liquid digital asset with low-volatility and predictable returns is essential to realizing high-utility and acceptance as a [functional currency](#). In the next section, we define each token in the protocol explicitly.

## Network Overview

Ayya Vaikundar Coin is intended to be used as a [medium of exchange](#), providing the Ayya Vaikundar Coin protocol with transactional compatibility to the existing blockchain ecosystem.

It has four other key features which set it apart:

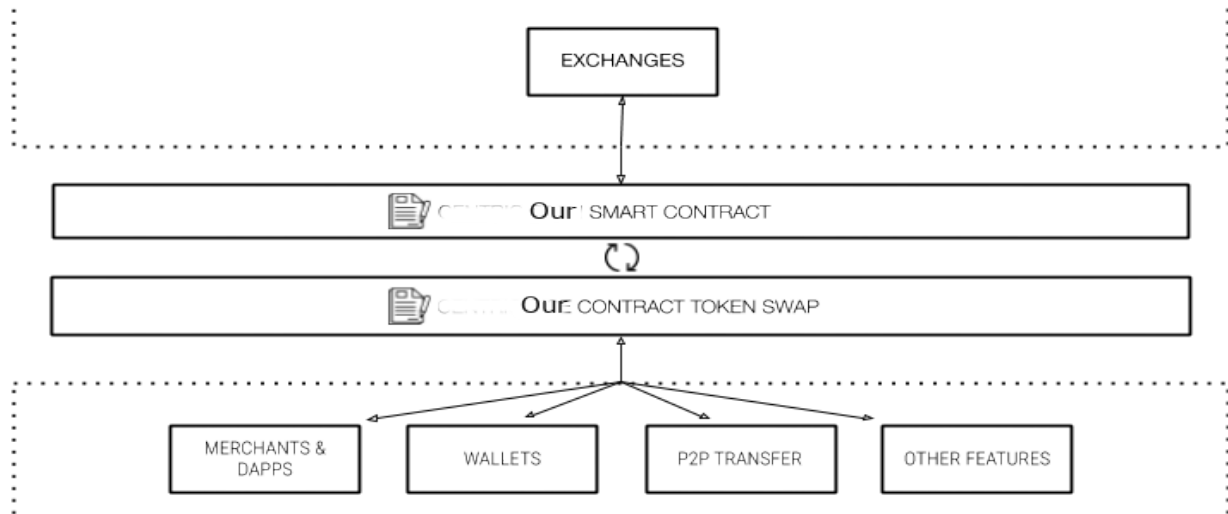
- it is [minted](#) in exchange for Ayya Vaikundar Coin at a rate of \$1.00 per token;
- its supply is determined by demand; only when Ayya Vaikundar Coin is deposited to the protocol can Ayya Vaikundar Coin be minted; and
- it enables unlimited liquidity for Ayya Vaikundar Coin;
- it may be obtained through 3rd party cryptocurrency exchanges or OTC brokers.

Ayya Vaikundar Coin is a [deflationary currency](#) providing predictable returns, and acting as a robust form of value storage.

It has eight other key features which set it apart:

- It has an agreed [nominal rate of return](#) that is set one year in advance and compounds hourly;
- it quantizes its actions into discrete time steps, 'hourly price blocks';
- its price is published to [immutable price blocks](#) one-year in advance, on an hourly rolling basis;
- it has a maximum supply of one billion tokens;
- it has scalable deflationary mechanisms;
- it is liquid through its relationship with Ayya Vaikundar Coin;
- it may be obtained through peer-to-peer transactions, OTC desks, or by burning Ayya Vaikundar Coin;
- it is inherently [fungible](#), transportable, durable, and divisible;
- it is built on a secure, reliable, scalable and permissionless [blockchain](#).

In the diagram below, we illustrate the flow of the tokens in the Ayya Vaikundar Coin network.



## Measuring the exchange rate across the network

### Ayya Vaikundar Coin

It's important to understand that the Ayya Vaikundar Coin protocol acts predictably and in a manner that is not directly correlated to any other asset. The monthly [nominal rate of return](#) is the primary lever for monetary policy across the network and dictates Ayya Vaikundar Coin's hourly price increases. It is calculated differently across two phases of the project. Initially, the monetary policy is predetermined and formally written to the blockchain one year into the future, each hour when a price block is used. Later on, after amassing enough trust and [network value](#) for the currency to self-stabilize, we will [decentralize the oracle](#) and peg the token to its absolute value. The absolute value of the token will be algorithmically determined using a methodology similar to the [Fisher Effect equation](#), but uniquely modified to incorporate the effects of deflationary mechanisms.

These were not needed previously because there were no solutions to verifiably deflating a currency.

## Adoption/AYYA Phase

During the adoption/AYYA phase, economy experts will act as an oracle to the protocol and execute monetary policy. The economy experts have the following mandate:

- attract new investors and grow transaction volume through [expansionary monetary policy](#);
- sustain aggregate demand over time by adjusting the nominal rate of return;
- establish trust and predictability within the network.

## Sustainable Phase

Once the network utility of Ayya Vaikundar Coin is fully realized, it will enter the sustainable AYYA phase where the base monthly nominal rate of return will be ungoverned and algorithmically determined with a fixed base of 0.333% per month (approximately 4% per annum, compounding monthly). The base rate will then be subject to the built-in deflationary mechanisms of the system. We will delve further into [Friedman's rule](#) in future whitepapers.

## Ayya Vaikundar Coin

The protocol values and exchanges Ayya Vaikundar Coin for Ayya Vaikundar Coin at a value of 1.00 USD, translating to a 1:1 USD peg. The market capitalization of Ayya Vaikundar Coin indicates the [aggregate demand](#) for Ayya Vaikundar Coin.

## How Ayya Vaikundar Coin Incentivizes Stability

One may ask, how can we be assured that exchange rates of Ayya Vaikundar Coin will be stable?

When the market price of Ayya Vaikundar Coin deviates from the target price in the short-run, the mechanisms inherent in the Ayya Vaikundar Coin protocol mitigate the instability.

For example, if the market price of Ayya Vaikundar Coin is above \$1 USD, holders of Ayya Vaikundar Coin receive an incentive for liquidating. As a result, we should see the market price of Ayya Vaikundar Coin pull down towards the \$1 USD target price. Alternatively, if the market price of Ayya Vaikundar Coin is below \$1 USD, users wanting to enter the Ayya Vaikundar Coin Token will get a discount for purchasing Ayya Vaikundar Coin, and Ayya Vaikundar Coin thereafter.

An additional group that can be expected to maintain buy pressure on the market rate of Ayya Vaikundar Coin is that of speculative cryptocurrency traders. As long as traders trust the immutable protocol to honor the hardcoded \$1 USD peg, they become arbitrageurs and steadily drive the price of the Ayya Vaikundar Coin token closer to the \$1 USD peg with each trade.

The market price of Ayya Vaikundar Coin indicates the aggregate demand for Ayya Vaikundar Coin and represents the perceived sustainability of its future value. As long as speculators perceive sustainability, we should expect only small deviations in token price around any peg.

## How Ayya Vaikundar Coin Incentivizes Adoption

Ayya Vaikundar Coin tokens are designed to increase in value over time. The value increase is performed consistently through a mechanism of burning tokens. The more transactions, conversions, and adoption that take place, the faster Ayya Vaikundar Coin tokens are burned out of circulation. As the tokens gain utility through the ecosystem, the velocity of use will result in improved liquidity. The Ayya Vaikundar Coin tokens value is not dictated by the volatile cryptocurrency markets today, or any market for that matter; rather it is built into the token design and carefully calculated the rise in the price based on how the project is forecasted to perform. At present the token increases at 28.5% value per month. Over time this is expected to drop as the project achieves more liquidity and utility.

Anyone holding Ayya Vaikundar Coin tokens has a share in the economic success of the entire ecosystem. The power of numbers can have such a huge impact on the community. The Ayya Vaikundar Coin community now has over 85,000 members with about 250 new members joining daily.

The full minting of 1 billion Ayya Vaikundar Coin tokens took place in the early 2020 and is complete. At the time of minting, approximately 8 million of the tokens were already burned due to activity on the forked cryptocurrency, UPDC which has more than 80,000 participants and operated for 2 years previously.

## Utility for Ayya Vaikundar Coin: dApps, Applications, and Services

To support the community, Ayya Vaikundar Coin is creating several Tier 2 solutions that will immediately create additional utility for the token.

The initial Ayya Vaikundar Coin projects are built through the Ayya Vaikundar Coin network of developers and are designed to add value to the system both in providing the utility of the Ayya Vaikundar Coin token.

The different utilities drive transaction volume necessary to support the full ecosystem.

## Ayya Vaikundar Coin Wallet

The wallet provides a place to store Ayya Vaikundar Coin & Cash allowing members to send, receive and convert. Additional features in the future will include the ability to find businesses that accept Ayya Vaikundar Coin, Tap & GO for in-store purchases, send gift certificates to friends and family. The wallet will be the hub of Ayya Vaikundar Coin.

## Ayya Vaikundar Coin Business

Any business around the world can easily set up a Ayya Vaikundar Coin Business account and start accepting payments.

## Ayya Vaikundar Coin Centres

Customers will have a range of traditional licensed and regulated products and services accessible locally.

## Ayya Vaikundar Coin Developer Hub

The Ayya Vaikundar Coin road map includes the release of the SDK/API and test network for 3rd party app developers to connect to Ayya Vaikundar Coin and create their own apps.

The Developer Hub will provide documentation, news, support, and discussion for working with Ayya Vaikundar Coin.

## Technical Notes

The Ayya Vaikundar Coin Protocol defines two classes of tokens, Ayya Vaikundar Coin and Ayya Vaikundar Coin. The first, Ayya Vaikundar Coin, is traded across the Ayya Vaikundar Coin payment network and steadily increases in price hourly. The second, Ayya Vaikundar Coin is pegged to Ayya Vaikundar Coin and trades freely on cryptocurrency exchanges. Together, the two tokens balance aggregate demand through a symbiotic relationship with autonomous feedback mechanisms. The dynamics of the protocol act to maintain the agreed price of Ayya Vaikundar Coin while stabilizing the value of Ayya Vaikundar Coin.

### Ayya Vaikundar Coin (AYYA)

Ayya Vaikundar Coin (AYYA) is a deflationary currency traded across the Ayya Vaikundar Coin payment network. Each unit of Ayya Vaikundar Coin is pegged to trade at an agreed price denominated in USD which is enforced by the protocol at the point of exchange. The Ayya Vaikundar Coin token is governed by the Binance Smart Chain.

### Ayya Vaikundar Coin (AYYA)

Ayya Vaikundar Coin (AYYA) is traded freely on cryptocurrency exchanges at a price dictated by the market. It provides liquidity to the Ayya Vaikundar Coin payment network through transactional compatibility to existing currency ecosystems. Ayya Vaikundar Coin is minted and burnt on demand in exchange for Ayya Vaikundar Coin. The Ayya Vaikundar Coin token is governed by the Binance Smart Chain.

## Protocol Overview

The Ayya Vaikundar Coin Protocol is governed by the Binance Smart Chain. The Ayya Vaikundar Coin Protocol cannot be updated once deployed.

## Tokens

AYYA is BEP-20 standard tokens implemented on the Binance Smart Chain .

<b>Symbol</b>	AYYA
<b>Name</b>	Ayya Vaikundar Coin
<b>Supply</b>	50,000,000,000
<b>Decimals</b>	7



## Protocol Inception

At deployment of the Ayya Vaikundar Coin Protocol:

- The initial price of AYYA is set by the Ayya Vaikundar Coin team on the Binance Smart Chain,
- 1 billion AYYA is minted (maximum supply) and circulated to existing network members by the Ayya Vaikundar Coin team
- 0 AYYA is minted

## Ayya Vaikundar Coin Price

The price of AYYA is provided by the Binance Smart Chain and dictates the current trading price of AYYA across the Ayya Vaikundar Coin payment network. It is read from immutable 'Price Blocks' stored on chain that are published in advance.

## Price Blocks

Price Blocks store the current, future and past prices of AYYA. Each Price Block is referenced by a Block Number that corresponds to a distinct hour in time denoted in hours since Unix epoch. Price Blocks can be read by any user. Each Price Block contains:

- AYYA price denominated in USD
- Monthly price AYYA rate expressed as a percentage
- AYYA price change from the previous Price Block expressed as a percentage
- Created hour denoted in hours since Unix epoch

The immutable protocol dictates:

- A Price Block cannot be altered or destroyed once created
- Block Numbers are unique i.e. only a single Price Block can exist per hour in time

## Price Block Creation

The creation of a Price Block is triggered by the Ayya Vaikundar Coin team and executed by an immutable formula stored on the Binance Smart Chain. The immutable formula dictates:

- Only a single Price Block can be created at a time

- The creation of a Price Block cannot be skipped, i.e the Block Number of the new Price Block is equal to the Block Number of the previous Price Block plus one
- The AYYA price set in a new Price Block is increased programmatically using the formula

$$v_n = v_i * (1+r)^{(1/t)}$$

*v<sub>n</sub> is the AYYA price of the new Price Block v<sub>i</sub> is AYYA price of the previous Price Block r is the Future AYYA Rate*

*t is the number of hours in the month the Price Block references*

## Future AYYA Rate

The Future AYYA Rate is a network variable expressed as a percentage stored by the protocol, it dictates the future monthly nominal price AYYA of AYYA. The Future AYYA Rate is controlled by the Ayya Vaikundar Coin team.

## Token Conversion

Any token holder can exchange AYYA for AYYA and vice-versa. The immutable protocol dictates:

- AYYA can be minted in exchange for AYYA at a fixed rate of 1 AYYA = AYYA price/AYYA exchange amount.
- AYYA can be burnt in exchange for AYYA at a fixed rate of 1 AYYA = AYYA exchange amount/AYYA price.

## Ayya Vaikundar Coin Quarantine

When AYYA is exchanged for AYYA, it is held in quarantine on the Binance Smart Chain. Conversely, when AYYA is exchanged for AYYA, AYYA is released from quarantine.

## Network Capitalization

The immutable protocol dictates:

- The network capitalization of quarantined AYYA (AYYA price\* AYYA quarantined) must equal the network capitalization of AYYA (\$1\* AYYA supply)

Every hour the price of AYYA increases to its next predetermined price, resulting in the network capitalization of AYYA held in quarantine to increase. This creates a mismatch breaking the rules of the protocol. Subsequently AYYA is burnt from the smart contract equal to the mismatch to balance the network.

$$b = (q * p_{AYYA} - c * d_{AYYA}) / d_{AYYA}$$

*b* is the amount of AYYA to burn

*q* is the amount of quarantined

AYYA  $p_{AYYA}$  is the current AYYA price

*C* is the current supply of AYYA

$p_{AYYA}$  is the AYYA to AYYA peg price (\$1)

## Protocol Components

### Contracts

Contract Name	Location	Description
Rise.sol	/	Enforces Ayya Vaikundar Coin protocol and rules for AYYA token
Cash.sol	/	Enforces rules for AYYA token. Is a dependency of Rise.sol
BEP-20 .sol	/	Provides BEP-20 standard. Is a dependency of Rise.sol and Cash.sol
SafeMath.sol	/	Provides math operations with safety checks for the Ayya Vaikundar Coin protocol. Is a dependency of Rise.sol and Cash.sol
Administrable.sol	/helpers/	Provides operations for administration of Cash.sol by Rise.sol
Claimable.sol	/helpers/	Provides operations for administration of Cash.sol by Rise.sol

### Interfaces

Interface Name	Contract	Description
CashInterface	Rise	Provides interface for Rise.sol to execute AYYA operations

## Public Read-only Methods

A description of public read-only methods exposed by the protocol. These methods return key information about the state of the network. Public read-only methods can be called by any user at any time.

Method Name	Contract	Description
getCurrentPrice()	Rise	Returns the price of AYYA for the current hour
getPrice(epochHour)	Rise	Returns the price of AYYA at a specified hour
getBlockData(epochHour)	Rise	Returns full Price Block data at a specified hour
getCurrentHour()	Rise	Helper method, returns the current Unix epoch hour
totalSupply()	Rise	Returns the total supply of AYYA
totalBurnt()	Rise	Returns the total amount of AYYA burnt
balanceOf( <i>address</i> )	Rise	Returns the AYYA balance of a Binance Smart Chain wallet address
totalSupply()	Cash	Returns the total supply of AYYA
totalBurnt()	Cash	Returns the total amount of AYYA burnt
balanceOf( <i>address</i> )	Cash	Returns the AYYA balance of a Binance Smart Chain wallet address

## Public Variables

A description of public variables exposed by the protocol. These variables return key information about the state of the network stored on the smart contract. Public variables can be viewed by any user at any time.

Variable Name	Contract	Description
cashContract	Rise	Address of the Cash Contract dependency
lastBlockNumber	Rise	Block Number of the last Price Block
lastCalledHour	Rise	Hours since Unix epoch that doBalance() was last executed
futureAYYARate	Rise	Future AYYA Rate currently set on the contract
initialPrice	Rise	Initial price of AYYA set on the contract
quarantineBalance	Rise	The current amount of AYYA in quarantine

## Public Verified Methods

A description of public methods exposed by the protocol that can be invoked by verified users and results in a state-change to the network.

Method Name	Contract	Description
transfer(to, value)	Rise	Transfers AYYA from senders address to recipient Binance Smart Chain address
convertToRise(cashAmount)	Rise	Converts senders' AYYA to AYYA. Burns AYYA and de-quarantines AYYA
convertToCash(riseAmount)	Rise	Converts senders' AYYA to AYYA. Quarantines AYYA and issues AYYA
doBalance()	Rise	Enforces the network capitalization protocol
transfer(to, value)	Cash	Transfers AYYA from senders address to recipient Binance Smart Chain address

## Admin Methods

A description of admin of methods that can only be invoked by the contract owner and results in a state-change to the network.

Method Name	Contract	Description
doCreateBlock(hoursInMonth, expectedBlockNumber)	Rise	Creates a new Price Block in the future representing AYYA price data for an hour in time after the previous Price Block
updateFutureAYYARate()	Rise	Sets the value of the futureAYYARate variable
burnLostTokens()	Rise	For good housekeeping. Burns excess AYYA tokens from the Rise contract that were sent there by mistake
setRiseContract()	Cash	Sets the Rise Contract address on the Cash contract

## Internal Methods

A description of internal methods called within the protocol that can only be invoked by the protocol itself and results in a state-change to the network.

Method Name	Contract	Description
createBlock()	Rise	Executes the creation of a new Price Block
burnQuarantined()	Rise	Executes the burning of quarantined AYYA
mintFromRise()	Cash	Executes the creation of new AYYA in exchange for AYYA
burnFromRise()	Cash	Executes the burn of AYYA in exchange for AYYA

## Events

A description of events recorded by the protocol. Events are a convenient way to record historical state-changes to the network.

Event Name	Contract	Description
BurnCash	Rise	Triggered when a user converts AYYA to AYYA. Returns the amount of AYYA burnt from supply
ConvertToRise	Rise	Triggered when a user successfully converts AYYA to AYYA. Returns the user address, AYYA amount exchanged and AYYA amount received
MintCash	Rise	Triggered when a user converts AYYA to AYYA. Returns the amount of AYYA created
ConvertToCash	Rise	Triggered when a user successfully converts AYYA to AYYA. Returns the user address, AYYA amount exchanged and AYYA amount issued
DoBalance	Rise	Triggered when the network capitalization protocol is enforced. Emits the time the action is run and the amount of AYYA burnt from quarantine
QuarantineBalanceBurnt	Rise	Triggered when AYYA is burnt from quarantine. Emits the amount of AYYA burnt
LostTokensBurnt	Rise	Triggered when the team burns excess AYYA. Emits the amount of AYYA burnt
FutureAYYARateUpdated	Rise	Triggered when the Future AYYA Rate is updated by the team. Emits to old value and the new value of futureAYYARate variable
BlockCreated	Rise	Triggered when the team creates a new Price Block. Emits the Block Number of the Price Block and the Price Block data.

# Why Binance Smart Chain

Binance Smart Chain is a scalable blockchain solution that has implemented innovative methods for tackling challenges faced by legacy blockchain networks. Having reached over 2M transactions per day, with over 700K TRX accounts, and surpassing 2000 TPS, Binance Smart Chain has enabled the community in creating a decentralized and democratized network.

## High throughput

Binance Smart Chain can support a very high amount of on-chain TPS (transactions per second), making it possible to run entire products on-chain. It has already surpassed Bitcoin and Ethereum in terms of day-to-day transaction volume.

## High scalability and availability

Binance Smart Chain provides a highly versatile smart contract solution, providing applications with multiple deployment options. The Binance Smart Chain solution supports an enormous number of users, allowing applications to be developed and deployed rapidly. Binance Smart Chain offers a highly reliable network structure that uses very little energy and is extremely fast.

Binance Smart Chain's consensus mechanism is based on the Delegated Proof of Stake (DPoS) as opposed to Proof of Work (PoW). As well as improved TPS, DPoS overcomes a key problem of PoW where miners became centralized and focused their computing resources on hoarding tokens as assets, rather than for network participation purposes. This decentralized structure provides improved security as well as better reward distribution.

## High trust

Within the Binance Smart Chain network, on-chain governance is provided through a mechanism that determines each user's voting power according to the number of tokens they hold. People who have more tokens can influence the network more than people who have very few tokens. Furthermore, the network provides fall back mechanisms to eliminate bad actors, using an ongoing voting mechanism. If a user is acting against the interests of the network, the other members can eliminate the influence of that user.

As the community grows, it gets harder and harder to influence the network due to increased competition. This system works because it can distinguish and neutralize bad actors and promote new valuable members.

Binance Smart Chain uses Transaction as Proof of Stake (TaPoS) to ensure the transactions all confirm the main blockchain while making it difficult to forge counterfeit chains. In TaPoS, the networks require each transaction to include part of the hash of a recent block header. This consensus mechanism protects the network against Denial of Service, 51%, selfish mining, and double-spend attacks.

## A Post-USD World

Central banks are tasked with [three primary goals](#): stabilize the nation's currency, keep unemployment low, and control inflation. Typically, the United States' Federal Reserve has done an [adequate job in stabilizing the value of the USD](#). By pegging Ayya Vaikundar Coin and Ayya Vaikundar Coin to the USD, the currencies inherit the efforts of the Federal Reserve in stabilizing USD. Because both tokens are both denominated in USD through the same oracle, they benefit from perfect symmetry in the exchange rate. But what if Ayya Vaikundar Coin gains significant traction, acquiring a significant user base, becoming as prevalent as the large payment networks, and achieving more transaction volume than USD? Then, Ayya Vaikundar Coin would present the world with a transparent and stable monetary policy, unlike anything that's ever been possible via central banks.

What would this mean for the future?

Ayya Vaikundar Coin would have to participate in a large percentage of the money transfers that occur globally before we can assume that goods will be denominated in Ayya Vaikundar Coin. If this were to happen, Ayya Vaikundar Coin's peg would have to be updated. We will track the value of Ayya Vaikundar Coin through a basket of goods, priced in Ayya Vaikundar Coin. The Fed does something similar, stabilizing the rate of the USD against the consumer price index (CPI).

## Conclusion

Imagine that Bitcoin starts competing with the USD in network utility. You would get paid in Bitcoin but pay your mortgage in USD, or perhaps vice versa. This just doesn't make sense given Bitcoin's inherent volatility.

In this paper, we introduced Ayya Vaikundar Coin and Ayya Vaikundar Coin, a price-stable financial framework. We believe that if we can make a digital currency whose purchasing power doesn't fluctuate, people will shift from a mindset in which they hold as little cryptocurrency as possible, to a mindset in which they are comfortable holding their savings or revenue in cryptocurrency. We believe this contribution will trigger a new adoption cycle for



cryptocurrencies, helping them transition into functional currencies.

# Disclaimer

This Document is not a prospectus and does not constitute nor implies a prospectus of any sort. No wording contained within this document should be construed as a solicitation for investment. Accordingly, this whitepaper does not pertain in any way to an offering of securities in any jurisdiction worldwide whatsoever.

Rather, this whitepaper constitutes a technical description of the functionality of the Ayya Vaikundar Coin ecosystem and the creation, development, and deployment of the Ayya Vaikundar Coin token, Ayya Vaikundar Coin token and Ayya Vaikundar Coin ecosystem.

Before investing you should seek independent financial advice.