ROYALQ is a dual cryptocurrency network designed for low-volatility and predictable returns.

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V1.01

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Risk factors of buying ROYALQ tokens along with other disclaimers are included at the end of this White Paper.

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 ROYALQ, a cryptocurrency with low-volatility, and predictable returns.

Each unit of ROYALQ is pegged to trade for a predetermined and increasing value over time, denominated in USD. This model is similar to the monetary policy executed by central banks, except as a protocol-enforced algorithm, with economy experts initially acting as oracles to the blockchain and transparently setting the price a year in advance. For this reason, in the near term, ROYALQ can be understood as implementing a transparent central bank with predictable price growth.

ROYALQ 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. ROYALQ's nominal value is steady but does experience “effective” price fluctuations due to its freely traded ecosystem token, ROYALQ The nominal value is supported through its predicted price progression as well as the ecosystem of applications that use ROYALQ as their currency. Through these methods, ROYALQ 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, ROYALQ 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, ROYALQ has issued a freely traded token known as ROYALQ. ROYALQ is a low-volatility, zero-sum cryptocurrency, created and destroyed on-demand to facilitate the liquidity of ROYALQ. Users may obtain ROYALQ by buying it from licensed brokers, exchanges, or by converting ROYALQ using the decentralized and immutable ROYALQ convert protocol. ROYALQ is pegged to 1.00 USD worth of ROYALQ on the convert protocol but is not backed by any assets, setting it apart from stablecoins. ROYALQ is designed for individuals, businesses, and governments who want to use a

manipulation proof currency that is not speculative. The design of ROYALQ 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

ROYALQ 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 ROYALQ is for mass adoption, ease of use and multiple applications. The ROYALQ 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.

ROYALQ 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 architectured 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

ROYALQ 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 ROYALQ 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 ROYALQ implements price stability: includes specifications of the ROYALQ protocol, and why it is robust.
- A post-USD world: How an economy denominated in ROYALQ 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 worlds population who are left behind because they remain outside the financial system, with no access to a traditional bank. 'Most of the worlds 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 growth. 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 ROYALQ 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 Growth

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

The token price growth is controlled in advance by the ROYALQ 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 ROYALQ Implements Price Stability

ROYALQ addresses volatility by design, allowing the price to increase over time in a managed way. At the same time, ROYALQ 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 ROYALQ 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 ROYALQ protocol defines two classes of tokens, ROYALQ. 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 ROYALQ while stabilizing the value of ROYALQ. 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

ROYALQ is intended to be used as a medium of exchange, providing the ROYALQ protocol with transactional compatibility to the existing blockchain ecosystem.

It has four other key features which set it apart:

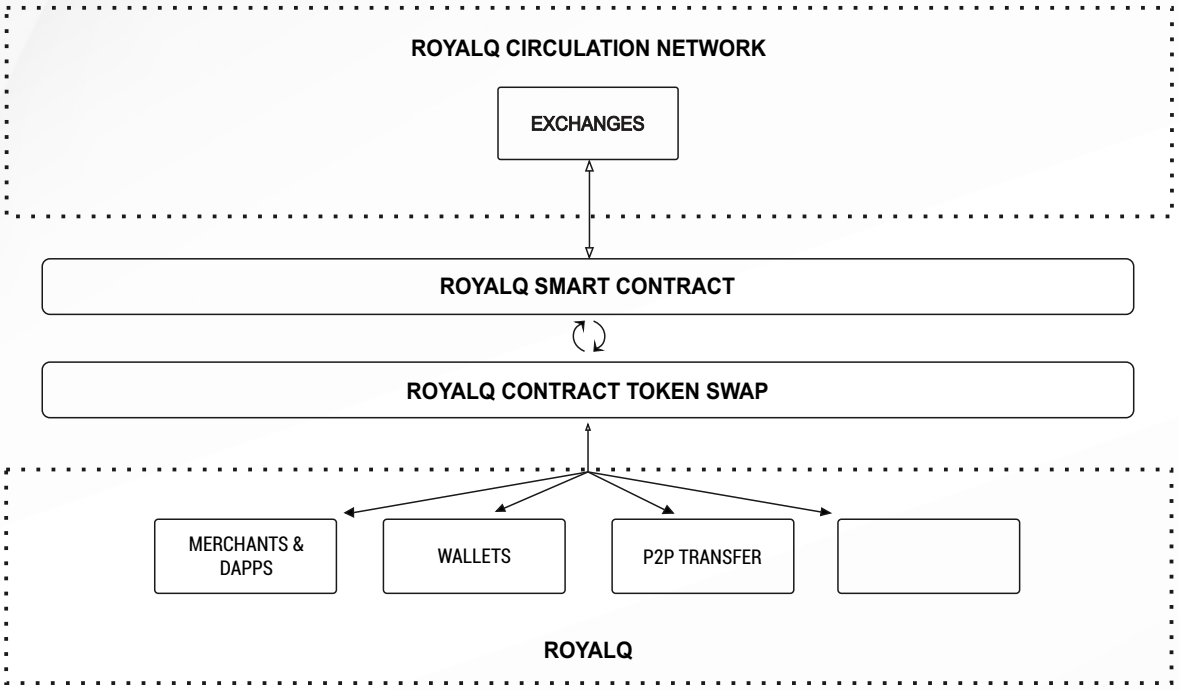
- it is minted in exchange for ROYALQ at a rate of $1.00 per token;
- its supply is determined by demand; only when ROYALQ is deposited to the protocol can ROYALQ K be minted; and
- it enables unlimited liquidity for ROYALQ;
- it may be obtained through 3rd party cryptocurrency exchanges or OTC brokers.

ROYALQ 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 ROYALQ ;
- it may be obtained through peer-to-peer transactions, OTC desks, or by burning ROYALQ;
- 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 BinaryCash network.



Measuring the exchange rate across the network

ROYALQ

It's important to understand that the ROYALQ 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 BinaryCash'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/Growth Phase

During the adoption/growth 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 ROYALQ is fully realized, it will enter the sustainable growth 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 'Friedmans rule in future whitepapers.

ROYALQ

The protocol values and exchanges ROYALQ at a value of 1.00 USD, translating to a 1:1 USD peg. The market capitalization of ROYALQ indicates the aggregate demand for ROYALQ

How ROYALQ Incentivizes Stability

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

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

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

An additional group that can be expected to maintain buy pressure on the market rate of ROYALQ y 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 ROYALQ token closer to the $1 USD peg with each trade.

The market price of ROYALQ indicates the aggregate demand for ROYALQ 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 ROYAL Q Incentivizes Adoption

ROYALQ 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 ROYALQ tokens are burned out of circulation. As the tokens gain utility through the ecosystem, the velocity of use will result in improved liquidity. The ROYALQ 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 ROYALQ 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 ROYALQ community now has over 85,000 members with about 250 new members joining daily.

The full minting of 1 billion ROYALQ 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 ROYALQ ed cryptocurrency, UPDC which has more than 80,000 participants and operated for 2 years previously.

Utility for ROYALQ: dApps, Applications, and Services

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

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

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

ROYALQ Wallet

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

Crypto Donation PARTNER

A nonprofit organization, Crypto Donation allows anyone to donate a range of cryptocurrencies to their charity of choice. Built with a major focus on transparency, the public would be able to inspect contracts and track and trace transactions.

ROYALQ Business

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

ROYALQ Centres

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

ROYALQ Developer Hub

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

The Developer Hub will provide documentation, news, support, and discussion for working with ROYALQ.

Technical Notes

The ROYALQ Protocol defines two classes of tokens, ROYALQ. The first, Abi, is traded across the ROYALQ payment network and steadily increases in price hourly. The second, ROYALQ is pegged to ROYALQ 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 ROYALQ while stabilizing the value of ROYALQ

ROYALQ

ROYALQ is a deflationary currency traded across the ROYALQ payment network. Each unit of ROYALQ is pegged to trade at an agreed price denominated in USD which is enforced by the protocol at the point of exchange. The ROYALQ token is governed by the ROYALQ smart contract.

ROYALQ

ROYALQ) is traded freely on cryptocurrency exchanges at a price dictated by the market. It provides liquidity to the ROYALQ payment network through transactional compatibility to existing currency ecosystems. ROYALQ is minted and burnt on demand in exchange for ROYALQ. The ROYALQ token is governed by the ROYALQ smart contract.

Protocol Overview

The ROYALQ Protocol is governed by the ROYALQ smart contract. The ROYALQ Protocol cannot be updated once deployed.

Tokens

ROYALQ are TRC20 standard tokens implemented on the TRON blockchain.

Symbol	(ROYALQ)
Name	ROYALQ
Supply	25,000,000 (Million)
Decimals	8

Protocol Inception

At deployment of the ROYALQ Protocol:

- The initial price of ROYALQ is set by the ROYALQ team on the ROYALQ
- 1 billion ROYALQ is minted (maximum supply) and circulated to existing network members by the ROYALQ team
- 0 ROYALQ is minted

ROYALQ Price

The price of ROYALQ is provided by the ROYALQ smart contract and dictates the current trading price of ROYALQ across the ROYALQ 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 ROYALQ. 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:

- ROYALQ price denominated in USD
- Monthly price growth rate expressed as a percentage
- ROYALQ 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 ROYALQ team and executed by an immutable formula stored on the ROYALQ smart contract. 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 ROYALQ price set in a new Price Block is increased programmatically using the formula

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

v_n is the ROYALQ price of the new Price Block
v_l is ROYALQprice of the previous Price Block
r is the Future Growth Rate
t is the number of hours in the month the Price Block references

Future Growth Rate

The Future Growth Rate is a network variable expressed as a percentage stored by the protocol, it dictates the future monthly nominal price growth of ROYALQ. The Future Growth Rate is controlled by the ROYALQ team.

Token Conversion

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

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

ROYALQ Quarantine

When ROYALQ is exchanged for ROYALQ, it is held in quarantine on the ROYALQ C smart contract. Conversely, when ROYALQ is exchanged for ROYALQ, ROYALQ is released from quarantine.

Network Capitalization

The immutable protocol dictates:

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

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

$$b = (q * p_{ROYALQ} - c * P_{ROYALQ})/p_{ROYALQ}$$

b is the amount of ROYALQ to burn
q is the amount of quarantined ROYALQ is the currentTRD price
C is the current supply of ROYALQ
P_{ABI} is the ROYALQ peg price ($1)

Protocol Components

Contracts

ContractName	Location	Description
Rise.sol		EnforcesROYALQMoneyprotocoland rules for ROYALQtoken
Cash.sol		Enforcesrules for ROYALQtoken. Is a dependencyof Rise.sol
TRC20.sol		Provides TRC20 standard. Is a dependencyof Rise.sol and Cash.sol
SafeMath.sol		Providesmath operationswith safetychecksfor the ROYALQprotocol.Is a dependencyof Rise.soland Cash.sol
Administrable.sol	/helpers/	Providesoperationsfor administrationof Cash.solby Rise.sol
Claimable.sol	/helpers/	Providesoperationsfor administrationof Cash.solby Rise.sol

Interfaces

InterfaceName	Contract	Description
CashInterface	Rise	Providesinterfacefor Rise.solto executeROYALQoperations

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.

MethodName	Contract	Description
getCurrentPrice()	Rise	Returns the price of ROYALQ for the current hour
getPrice(epochHour)	Rise	Returns the price of ROYALQ at a specified hour
getBlockData(epochHour)	Rise	Returns full PriceBlock data at a specified hour
getCurrentHour()	Rise	Helper method, returns the current Unix epoch hour
totalSupply()	Rise	Returns the total supply of ROYALQ
totalBurnt()	Rise	Returns the total amount of ROYALQ burnt
balanceOf(*address*)	Rise	Returns the ROYALQ balance of a TRON wallet address
totalSupply()	Cash	Returns the total supply of ROYALQ
totalBurnt()	Cash	Returns the total amount of ROYALQ burnt
balanceOf(*address*)	Cash	Returns the ROYALQ balance of a TRON 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

VariableName	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
futureGrowthRate	Rise	Future Growth Rate currently set on the contract
initialPrice	Rise	Initial price of ROYALQ set on the contract
quarantineBalance	Rise	The current amount of ROYALQ 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.

MethodName	Contract	Description
transfer(to,value)	Rise	TransfersROYALQfrom senders address to recipient TRON address
convertToRise(cashAmount)	Rise	Converts senders' ROYALQ. Burns ROYALQand de-quarantines ROYALQ
convertToCash(riseAmount)	Rise	Converts senders' ROYALQ. QuarantinesROYALQand issues ROYALQ
doBalance()	Rise	Enforcesthe networkcapitalizationprotocol
transfer(to,value)	Cash	TransfersROYALQfrom senders address to recipient TRON 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.

MethodName	Contract	Description
doCreateBlock(hoursInMonth, expectedBlockNumber)	Rise	Createsa new PriceBlockin the futurerepresentingROYALQprice datafor an hour in time after the previousPriceBlock
updateFutureGrowthRate()	Rise	Sets the value of the futureGrowthRatevariable
burnLostTokens()	Rise	For good housekeeping.Burns excessROYALQtokens from the Rise contractthat weresent there by mistake
setRiseContract()	Cash	Sets the Rise Contact addresson 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 ROYALQ
mintFromRise()	Cash	Executes the creation of new ROYALQ in exchange
burnFromRise()	Cash	Executes the burn of ROYALQ in exchange

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 DARC to ROYALQ. Returns the amount of ROYALQ burnt from supply
ConvertToRise	Rise	Triggered when a user successfully converts ROYALQ. Returns the user address, ROYALQ amount exchanged and ROYALQ amount received
MintCash	Rise	Triggered when a user converts ROYALQ. Returns the amount of ROYALQ created
ConvertToCash	Rise	Triggered when a user successfully converts ROYALQ. Returns the user address, ROYALQ amount exchanged and ROYALQ amount issued
DoBalance	Rise	Triggered when the network capitalization protocol is enforced. Emits the time the action is run and the amount of ROYALQ burnt from quarantine
QuarantineBalanceBurnt	Rise	Triggered when ROYALQ is burnt from quarantine. Emits the amount of ROYALQ burnt
LostTokensBurnt	Rise	Triggered when the team burns excess ABI. Emits the amount of ROYALQ burnt
FutureGrowthRateUpdated	Rise	Triggered when the Future Growth Rate is updated by the team. Emits to old value and the new value of futureGrowthRate 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 TRON

TRON 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, TRON has enabled the community in creating a decentralized and democratized network.

High throughput

TRON 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

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

TRON'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 TRON 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.

TRON 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 ROYALQ and ROYALQ 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 ROYALQ gains significant traction, acquiring a significant user base, becoming as prevalent as the large payment networks, and achieving more transaction volume than USD? Then, ROYALQ 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?

ROYALQ 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 ROYALQ. If this were to happen, ROYALQ's peg would have to be updated. We will track the value of ROYALQ through a basket of goods, priced in ROYALQ. 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 ROYALQ and ROYALQ, 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 ROYALQ ecosystem and the creation, development, and deployment of the ROYALQ ROYALQ token ROYALQ token and ROYALQ 4 ecosystem.

Before investing you should seek independent financial advice.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