Wikimeta DAO

The underlying infrastructure of the Metaverse Network. The vision is to create the next generation of immersive and orderly metaverse civilization Internet, allowing human beings to enjoy the fun of science and technology.

Version 1.0

Contents

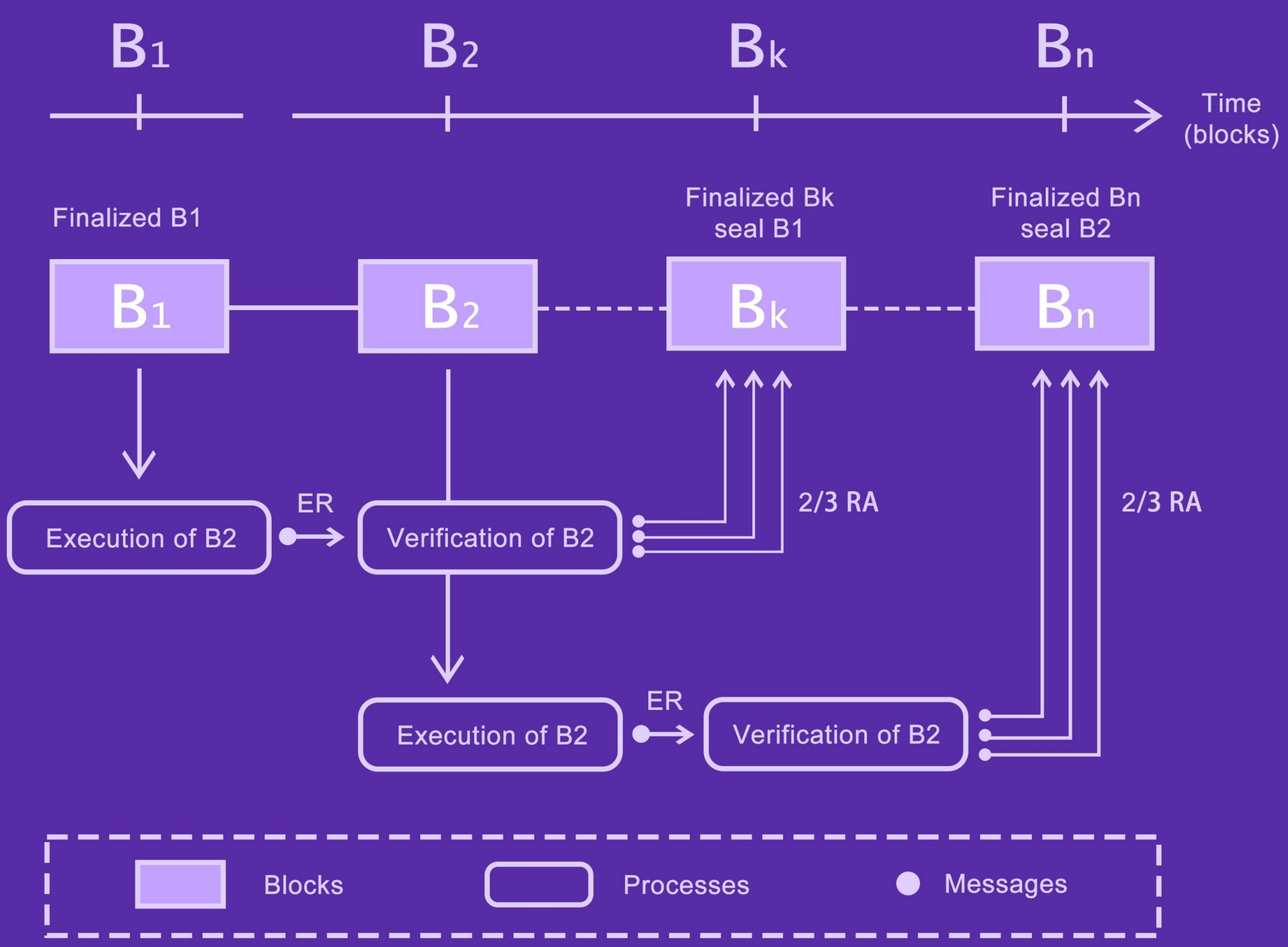
Foreword

The value of money as a medium of exchange is primarily driven by its network effects, and a successful new digital currency requires maximum adoption in order to become useful. We propose a cryptocurrency, Wkg, that is both price stable and growth driven. It achieves stable price stability through an elastic money supply. It also uses the seigniorage created by its minting operations as a transaction stimulus, thereby promoting adoption. In the real world and the blockchain economy, a decentralized, price-stable monetary protocol is needed. If such a protocol is successful, it could have a major impact as the best use case for cryptocurrencies.

1. Introduction

The price volatility of cryptocurrencies is a well-studied issue by both academics and market observers (see, for example, Liu and Zivinsky, 2018, Makarov and Scheer, 2018). The needs of most cryptographers, including Bitcoin, to implement and maintain a stable stream architecture.

In most traditional blockchains, every full node must perform every task associated with running the system. This process is similar to that of a single-cycle microprocessor, executing one instruction at each step. In contrast, modern CPU designs utilize pipelining to achieve higher throughput and scaling.



Wkm employs a pipelined architecture, rather than requiring each node to choose the transactions they will include in a block, then calculate the output of that block, agree with other nodes on the output of those transactions, and finally sign the block, which will It is attached to the chain. In Wkm, different tasks are assigned to specific node roles: collection, consensus, execution, verification and observation. This design allows individuals to participate in consensus and verification at a high level on their home internet connection, while utilizing massive data centers to do most of the heavy lifting. Participants involved in consensus and validation are accountable to other nodes through cryptoeconomic incentives, allowing Wkm to achieve massive throughput improvements without breaking network decentralization or security. In a system with only consensus nodes and execution nodes, Wkm achieves a 56x increase in throughput compared to an architecture where consensus nodes also perform block computations.

In any design where participants other than consensus nodes perform tasks, the security guarantees of consensus do not include correct task execution. Therefore, the protocol must contain specialized components to ensure the safe operation of the system, even in the presence of a moderate amount of malicious actors. In our first white paper [1], we formally analyzed the security implications of delegating tasks to other participants than consensus nodes. The central result of our research is that transaction execution can be transferred to a group of nodes (executing nodes) and result validation can be transferred to a separate group (validating nodes). The protocol must include the following to ensure security:

- If a protocol violation is detected, the validator must be able to appeal (formally: submit a challenge) to the consensus node.

- Consensus nodes must have a means of determining whether a challenger or challenged is correct (formally: adjudicated challenges).

When this mechanism is included, a pipelined architecture is as secure as a blockchain, where all tasks are performed by all consensus nodes. In this paper, we improve the architecture so that result validation can be distributed and parallelized across multiple validating nodes. Furthermore, we detail different challenge and adjudication protocols for performing validation.

Above, we note that nodes must be able to call on consensus nodes if they detect a protocol violation. In order for the appeal system to provide security against Byzantine attacks, the appeal system must have the following properties.

- Detectable: A single, honest participant in the network can detect a deterministic error and prove the error to all other honest nodes by requiring them to recreate the part of the process that was wrongly executed.

- Attributable: All deterministic processes in a stream are assigned to nodes using a Verifiable Random Function (VRF). Any detected errors can be attributed to the node responsible for the process. We only focus on proof-of-stake blockchains, where all participants are known and each node is verifiable by its signature.

- Nodes commit to (and participate in) the network for a specific time interval, which we call an Epoch. System-wide era. While nodes can participate in multiple epochs, the end of an epoch is a dedicated point in time when a node leaves or joins the system. The epoch is thought to last about a week. Technical details on the mechanism for determining Epoch length and Epoch switching will be left for later publication. In this paper, we consider the system to operate only in one epoch.

Furthermore, we assume

- There are reliable sources of randomness that can be used to see pseudo-random number generators. We require that the random seed cannot be predicted by any single node until the seed itself is generated and published. Possible solutions include Dfinity’s random beacons or a delay proof-based system.

- Aggregatable non-interactive signature schemes such as BLS signatures.

- Sufficient compensation and pruning mechanisms to incentivize nodes to comply with the protocol.

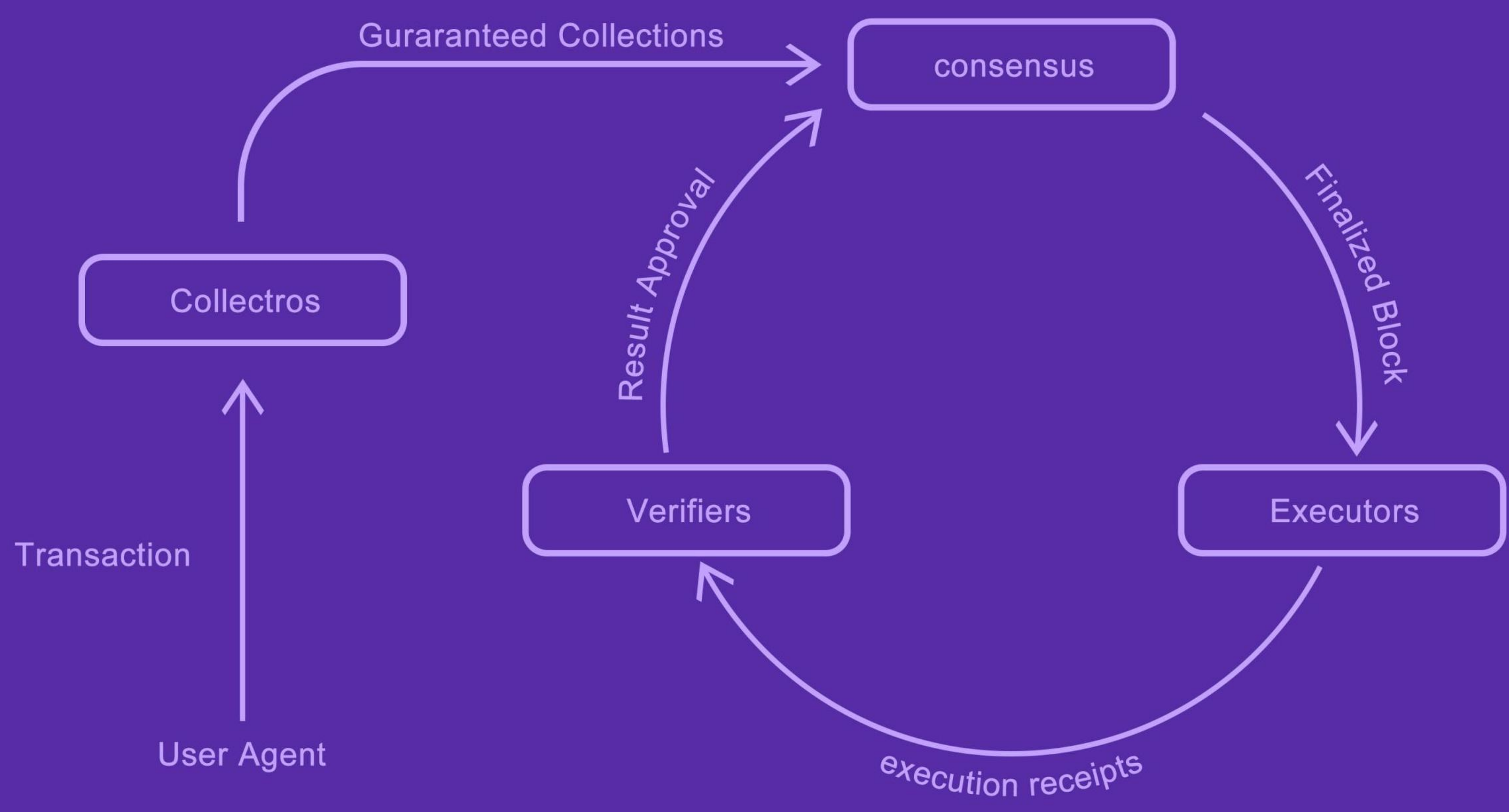
- Partially synchronous network conditions, the information traversal time is bounded by Δt. Furthermore, we assume that the local computation time is negligible compared to the message traversal time.

- In many places in this article, we refer to node scores. This is an abbreviated form of a group of nodes that hold a corresponding percentage of stake. Formally, let N(r) be the set of all nodes with roles r and s α nodes α∈N stakes(r). The fraction of at least k nodes (acting as r) represents an arbitrary subset.

1.1. The role of consensus

The central tasks of the consensus node are as follows:

Block formation: Consensus nodes form blocks from sets. Essentially, consensus nodes maintain and extend the core streaming blockchain. In Wkm, a block defines the transaction and other inputs (including random seeds) needed to perform the computation, but does not define the state of the computation after the block is executed.



The agreement to accept a proposed block needs to be reached by multiple nodes, which requires a Byzantine Fault Tolerant (BFT) consensus algorithm. Although the specific design of Wkm's consensus system remains to be actively studied, we limit the design space to the algorithm and guarantee the following:

- The algorithm is BFT-proof, i.e., it maintains consistency among honest participants as long as less than one-third of the consensus nodes are Byzantine.

- Security is guaranteed even when the network is asynchronous. According to the definition of security [13, 14], consensus nodes may claim a finalized block at different points in time, depending on the amount of information they have gathered from other consensus nodes. However, a secure consensus algorithm guarantees that all honest nodes will eventually claim the same block.

- live is guaranteed in partially synchronous network conditions [15]. As stated by the Fischer-Lynch-Paterson (FLP) theorem, a fault-tolerant distributed consensus system cannot guarantee both safety and liveness under asynchronous network conditions. For "flow", we prioritize safety over activity in the event of a network split. In the case of extremely rare and unfavorable large-scale network splits, the consistency of the world state is more important than the positive progress of the network

Collector role: batches transactions into collections

There are several collector clusters, where each cluster maintains one collector at a time. As long as the collection is not empty, the cluster can decide to close its collection. As part of closing the collection, it is signed by the collection nodes of the cluster to indicate that they agree with the validity of its content and commit to storing it until the block is sealed.

A guaranteed set is a list of transactions with more than 2/3 collector signatures in its cluster. By signing the collection, the collector node verifies that:

- All transactions in the collection are well-formed;

- The collection does not contain duplicate transactions;

To store the complete text containing all transactions has the following key properties.

(1) Verifiability. Seeds for randomly selected blocks are generated on lines 4 - 5. Given the ExecutionReceipt, the validator's public key, and the proof p, any other party can confirm that p was generated according to the protocol. Furthermore, given p, anyone can recalculate the validator's expected block allocation. Therefore, the block selection protocol is verifiable, and deviations from the protocol are detectable, attributable, and punishable.

(2) Independent. Each validator samples its blocks locally and independently of all other validators.

(3) Unpredictability. It is computationally infeasible to predict samples without knowing the verifier's secret key sk. Formally, the computation of the seed can be viewed as a verifiable random function [2].

(4) Consistency. The validator uses Fisher-Yates shuffling [27, 28] to self-select the blocks it checks. The pseudorandom number generator of the Fisher-Yates algorithm uses the output of a cryptographic hash function as a seed. The uniformity of the seed and the uniformity of the shuffling algorithm together guarantee the uniformity of the resulting block selection.

Corollary 1

Algorithm 2 draws a subset of dn·Ξe blocks, where Ξ is the number of blocks in the block and n is the fraction of blocks to be checked by each validating node. Uniform independent and identically distributed (i.i.d) selection probabilities for all validators. Without validating the node's secret key, the example is unpredictable.

Independence and unpredictability are critical to the security of the system. Selection protocols without these properties may be abused by malicious execution nodes.

Guaranteed collections are considered immutable. Once a set is guaranteed by the collectors in its cluster, its reference is committed to consensus nodes for inclusion in a block

1.2. Wkm key technology

(1) State channel Lightning Network million-level TPS

(2) Multi-layer perfect sharding technology

(3) Multi-api language interface, the virtual machine is compatible with public chain ecosystems such as Ethereum, Polkadot, etc., and the traffic can be imported unlimitedly

(4) Distributed edge computing

(5) Oracle

(6) Privacy certificate

1.3. Ecological Application of Wkm

NFT trading platform, decentralized exchange, lottery, identity verification, chain game, two-layer network and cross-chain bridge

This section will detail the balance between Wkg's adoption and adoption, with a pre-determined issuance plan for fiat currencies, coupled with strong speculative demand, resulting in wild price swings. Bitcoin's extreme price volatility is a major obstacle to using it as a medium of exchange or store of value. Intuitively, no one wants to pay in a currency that has the potential to double in value in a few days, or if that currency's value drops significantly before the transaction settles. The problem is exacerbated when transactions take more time. For delayed payments such as mortgages or employment contracts, volatility can significantly disadvantage one party to the contract, making it prohibitively expensive to use existing digital currencies in these situations.

The core idea behind the Wkg protocol addressing these issues is that a cryptocurrency with a resilient monetary policy will maintain a stable price, retain all of Bitcoin's censorship resistance, and enable it to be used in everyday transactions. However, price stability is not sufficient for widespread adoption of a currency. Currencies inherently have strong network effects: customers are unlikely to switch to a new currency unless a critical mass of merchants are ready to accept it, but at the same time there is no reason for merchants to invest in resources and educate employees to accept a new currency , unless there is an important customer requirement. As such, Bitcoin's use in payments is limited to small businesses whose owners are personally invested in cryptocurrencies. We believe that while flexible monetary policy is the solution to stability problems, effective fiscal policy can drive its adoption. Additionally, the Wkg protocol provides users with strong incentives to join an efficient fiscal spending system, administered by the Treasury, where multiple stimulus programs compete for financing. That said, proposals from community participants will be reviewed by the rest of the ecosystem, and upon approval, funding will be provided with the aim of increasing adoption and expanding potential use cases. The Wkg Protocol is a meaningful addition to promoting stablecoins as a means of payment and store of value.

The rest of this article is organized as follows. We started by discussing the protocol and how to mine Wkm tokens by calibrating the needs of miners and using local. Then, we'll delve into how stable mining incentives can be employed to moderate economic volatility. Finally, we discuss how Wkg's fiscal policy can be used as an effective stimulus to drive its adoption.

2. Multifat monetary policy

A stable coin mechanism must answer three key questions:

- How is price stability dismantled? Stability is a relative concept; to appeal to the widest possible audience?

- How to measure price stability? Coin prices are on the Wkg blockchain, and an efficient, corruption-resistant price feed is a must for the system to function properly.

- How to achieve price stability? When the coin price deviates from the target, the system needs a way to put pressure on the market to bring the price back to the target. answer to the above question.

2.1.Resist the stability of regional foreign exchange currencies

Stable coins exist to maintain their purchasing power. Given that most goods and services are consumed domestically, it is important to create cryptocurrencies that track the value of local fiat currencies. Although the U.S. dollar dominates international trade and foreign exchange operations, for the average consumer, the U.S. dollar exhibits unacceptable volatility in its unit of account of choice.

Recognizing the strong regionality of the currency space, Wkg aims to be a family of cryptocurrencies pegged to the world's major currencies. Closer to origin, the protocol will issue Wkg currencies pegged to the value of USD, EUR, CNY, JPY, GBP, KRW and IMF. Over time, more coins will be added to the list through user votes. The Wkg value will be the flagship currency of the family as it has the lowest volatility of any fiat currency (Kereiakes, 2018). Wkg value is a currency denominated in transaction fees, miner rewards, and stimulus grants.

However, it is important for the Wkg currency to gain shared liquidity. Therefore, the system supports atomic swaps at market exchange rates between Wkg currencies. A user can instantly convert it to land dollars based on the valid KRW/USD exchange rate. This enables all Wkg currencies to share liquidity and macroeconomic volatility; a drop in demand in one currency can be quickly absorbed by others. Therefore, we can infer the stability of the Wkg currency within a population; for the remainder of this article, we will refer to the Wkg loosely as a single currency. As more currencies are added to the Wkg ecosystem, its atomic swap feature can be an instant solution for cross-border transactions and international trade settlement.

2.2. Measuring stability with miner Shenmen

Since the price of Wkg currency in the secondary market is off-blockchain, the system must rely on a decentralized price oracle to estimate the true exchange rate. We define the mechanism of price oracles as follows:

- For any Wkg sub-currency, C=WkgKRW, land dollar, Wkg value... miners will vote on what they think is the current exchange rate of the target fiat asset.

- The votes for every n blocks are calculated by taking the weighted median as the true ratio.

- Those who voted within 1 standard deviation of the election median are rewarded a certain amount. Those who voted outside could be punished by cutting their stake. The proportion of punishment and reward can be calibrated by the system to ensure a sufficiently large proportion of miners to vote.

Several issues have been raised when implementing decentralized oracles, but chief among them is the possibility that voters could profit by coordinating a fake price vote. Restricting voting to a specific subset of users with strong vested interests in the system, namely miners, greatly reduces the likelihood of such coordination. A successful reconciliation event on the price oracle will result in a loss in value of the miner's stake far greater than any potential gain, as the Wkm stake is locked into the system.

Oracles can also play a role in increasing and opposing Earth currency. When the oracle vote meets the commit threshold, the protocol may start supporting the new Wkg currency. Likewise, failure to obtain a sufficient number of oracle votes for a few epochs could trigger the scrapping of the Wkg currency.

2.3. Stability with stable mining rewards

Once the system detects that the price of Earth's currency is deviating from its peg, it must apply pressure to normalize the price. Like other markets, the Wkg currency market follows simple supply and demand rules for pegged currencies. which is:

- Under all conditions, a contraction of the money supply will lead to an increase in the level of relative money prices. That is, when the price level is below the target, a sufficient reduction in the money supply will bring the price level back to normal.

- All things being equal, an expansion of the money supply will lead to a decrease in the level of relative money prices. That is, when the price level is above the target, a sufficient increase in the money supply will bring the price level back to normal.

Of course, shrinking the money supply is not free; like other assets, funds need to be purchased from the market. Central banks and governments absorb the contractionary costs of fixing the fiat currency system through various mechanisms, including intervention, issuance of bonds and short-term instruments, which incur interest charges, and increased money market interest rates and reserve requirement ratios, which in turn lose revenue. Said differently, central banks and governments absorb fluctuations in the pegged currencies they issue.

Similarly, Wkg miners absorb fluctuations in Wkg supply.

- In the short term, miners absorb the shrinking cost of terraces by diluting mining rights. During economic contractions, the system buys back and burns Wkg by mining and auctioning off more mining rights. This contract contracts the supply of Wkg until its price returns to the peg and temporarily causes mining power dilution.

- In the medium to long term, miners will earn more mining rewards. First, the system continues to buy back mining power until a fixed target supply is reached, creating long-term reliability of available mining power. Second, the system increases mining rewards, which will be explained in more detail in later chapters.

All in all, miners bear the cost of Wkg fluctuations in the short term and are compensated in the long term. Compared to ordinary users, miners have long-term vested interests in the stability of the system, invested infrastructure, well-trained staff and a business model with high switching costs. The rest of this section will discuss how the system absorbs short-term volatility and creates stable long-term incentives for Wkg miners.

2.4. Miners absorb short-term Wkg fluctuations

The Wkg protocol runs on a proof-of-stake (PoS) blockchain, and miners need to hold the local cryptocurrency Wkm to mine Wkg transactions. During each block, the protocol selects a block producer from the set of betting miners to delegate the work required to produce the next block by aggregating transactions, achieving consensus among miners, and ensuring that messages are distributed correctly within a short period of time.

The weight of block producer election depends on the size of active miners' Wkm stake. Therefore, Wkm represents the mining rights in the Wkg network. Just as a Bitcoin miner's hash power represents the probability of generating a proportional Bitcoin block, a Wkm stake represents the probability of generating a proportional Wkg block.

Wkm is also the most direct defense against Wkg price fluctuations. The system uses Wkm to set a price for Wkg, agreeing to be an adversary for the target exchange rate for anyone who wants to exchange Wkg. more specifically:

- When the price of Wkg value is < 1 value, users and arbitrators can send 1 Wkg value to the system and get 1 value of Wkm.

● When the price of Wkg value is > 1 value, users and arbitrators can send 1 value Wkm to the system and receive 1 Wkg value.

The system's willingness to respect the target rate regardless of market conditions keeps Wkg's market rate within a narrow band around the target rate. When 1Wkg value = 0.9 value, arbitrageurs can make a risk-free profit by exchanging Wkg value for 1 value of Wkm instead of taking 0.9 value assets from the open market. Similarly, when 1Wkg value = 1.1 value, she can also get 1.1 value Wkg value by trading 1 value moon to the system, again exceeding the open market price.

The system finances the price setting of Wkg through Wkm:

● To buy 1Wkg worth, the protocol mints and sells 1 Wkm worth

● By selling 1Wkg value, the agreement makes Wkm worth 1 value

As Wkm minting matches Wkg's offer, volatility shifts from Wkg price to Wkm supply. If not mitigated, this dilution of Wkm creates a problem for miners; their stake in Wkm is only a fraction of the total available mining power. The system burns off part of the moon acquired during the expansion process until the lunar supply reaches a 1 billion balance release. Therefore, Wkm can have stable demand as a long-term right for Wkg mining. The next section will discuss how the system provides stable mining incentives to keep the mining market and demand for the moon stable long-term through volatile macroeconomic cycles.

2.5. Miners can obtain long-term stable rewards

Miners play a fundamental role in the safety and stability of the terraces. They provide the former by participating in PoS consensus. They provide the latter by absorbing short-term fluctuations in Wkg demand. Stable mining demand is a core requirement for security and stability. To achieve this, the protocol aims to provide stable and predictable returns across all economic conditions, booms and busts. It is best when the network can consistently compensate those who protect it.

The protocol has two ways of rewarding miners for their work:

- Transaction fees: All Wkg transactions pay a small fee to miners. The fee is 0.1% by default and capped at 1%, which means that transacting with Wkg in e-commerce will be much cheaper than transacting with traditional payment methods such as credit cards

- Mint (Wkm burn): When the demand for Wkg increases, this system mints Wkg and earns Wkm in return. This is called seigniorage - the value of the newly minted currency minus the cost of issuance (zero in this case). The system burns a portion of the moon that has been won, which makes mining energy even more scarce. The remainder of the seigniorage goes to the Treasury to fund fiscal stimulus programs.

To understand rewards from a miner's perspective, let's look at the basic calculations we have to go through to determine the viability of long-term committed mining on the Wkg network.

After fixed costs, the profit (or loss) of a single unit of mining operations boils down to the reward minus the cost of work for that unit.

Frequent changes between profit and loss - positive and negative P(t) will create highly volatile mining demand. The goal of this protocol is to make this calculus easier and more predictable. With this in mind, most of the uncertainty in P(t) can be attributed to the first term, the unit mining reward. Therefore, the unit mining reward is a major consideration for making a long-term commitment to the network. Stable unit mining rewards generate steady mining demand, while fluctuating unit mining rewards generate the opposite demand.

By default, both the total reward (from fees) and the supply of Wkm have uncertainty, so both terms contribute to the volatility of the unit reward. First, when the economy grows, the return on fees tends to increase, and when the economy shrinks, the return on fees tends to decrease. Second, when the economy grows, the supply of Wkm tends to decrease (because Wkm is burned by seigniorage), and when the economy shrinks, it tends to increase (because new Wkm is issued to buy back Wkg). This means that there is a strong trend in unit mining rewards, i.e. rising or falling. So this also applies to mining needs.

Therefore, in order to create long-term stable mining demand, the protocol creates predictable returns under all economic conditions. To achieve this, the protocol uses transaction fees and Wkm burn rate as leverage against changes in unit mining rewards. Transaction fees affect the total reward, while the rate at which the moon burns affects the moon supply - two determinants of the unit mining reward. Its basic logic is as follows:

- If the unit mining reward is increasing:

reduce the cost

Reduce value burn

- If the unit mining reward is decreasing:

increase fee

Value burn increased

While working to smooth out miner pay volatility, the protocol also targets steady growth in line with the long-term growth of the Wkg economy. This is a natural reward for their long-term commitment to serving the network.

To formalize these ideas, we discuss the mechanics of smoothing unit mining rewards in more detail. 2. Fees and lunar burn rates—“stability levers”—are adjusted weekly based on changes in unit mining rewards. Our definition of the moon burn rate is as follows: How much (%) of seigniorage does the agreement use to buy back and burn the moon instead of depositing it into the Treasury? Let ft, bt, and Rt be the transaction fee, lunar burn rate, and unit mining reward, respectively.

Update rules should now make it clear what we mean when we say cost (and lunar burn rate) against changing unit mining reward: current value, ft, multiplied by the inverse change of unit mining reward, Rt - 1. For example, if unit mining reward will decrease Half, then the fee will be doubled, and conversely, if the unit mining reward will be doubled, the fee will be halved. The result is based on a smaller growth factor, 1+g, which allows for a gradual increase in unit mining returns commensurate with the economy's long-term growth rate.

How well does this mechanism work in practice? We have run extensive simulations to stress test it and improved it under a wide range of assumptions. In what follows, we share and discuss a representative example that exerts significant pressure on the mechanism and elucidate how it achieves its goals. We consider a simulated 10-year period during which the Wkg economy experiences rapid growth and severe volatility. We demonstrate how the protocol adjusts its stability levers based on economic conditions, and how these adjustments in turn shape unit mining rewards.

The first chart shows simulated weekly volume and its annual moving average. Transaction volume can be thought of as the GDP of the Earth's economy. The economy experienced rapid growth followed by a severe multi-year recession that consumed 93% of GDP in 3 years and took 6 years to fully recover. This situation is a serious test - if it describes Bitcoin's price, it will be the longest bear market in its history and the worst in terms of declines (equivalent to 93% of the

June-November 2011 period fall). While we believe that adoption-driven demand for Wkg will be more stable than speculative-driven demand for Bitcoin, the stabilization mechanism is designed to confidently withstand fluctuations in Bitcoin levels.

The second graph shows transaction fees and Wkm burn rate, two levers the protocol uses to smooth out fluctuations in unit mining rewards. We observe that both are in the opposite direction of the economy (which is also the default direction of unit mining rewards).

The third graph shows the annual moving average of unit mining rewards. The growth target we set in this example is 15% per year. By design, the unit mining reward experiences steady growth with low volatility, unaffected by the WkgGDP cycle.

Adjustments to fees and Wkm burn rate successfully absorb expected fluctuations in unit mining returns and create predictable growth. This is achieved through an average fee of less than 0.5% (with an instantaneous peak of 1%) and an average Wkm burn rate of about 50% (meaning that on average 50% of seigniorage goes to the Treasury).

Stable mining demand is the core requirement for the safety and stability of terraces. The unit mining reward is a major consideration and the largest source of risk for miners. They are highly periodic by default and therefore have a high degree of uncertainty. Reducing this uncertainty is key to stabilizing mining demand in the face of volatility. We outline a simple mechanism that uses transaction fees and Wkm burn as leverage to achieve this, and demonstrate its effectiveness under the most severe economic conditions.

3. Growth-driven fintech policies

Despite their huge potential, smart contracts have encountered barriers to adoption due to price volatility in their underlying currencies. Price volatility makes smart contracts unusable for most mainstream financial applications, as most users are accustomed to evaluating certain payments on insurance, credit, mortgages, and payroll. Wkg will provide a stable dApp platform

Financial applications that use Wkg as their base currency, allowing smart contracts to mature into useful infrastructure used by mainstream businesses. Wkg Platform DApps will help drive growth and stabilize the Wkg Platform currency family by diversifying their use cases. In this section, we discuss how the protocol can subsidize the growth of more successful applications through its growth-driven fiscal policy.

Governments use expansionary fiscal spending to stimulate economic growth. The hope for fiscal spending is that the economic activity sparked by the original spending leads to a feedback loop where economic growth exceeds the spending of the initial stimulus. This concept is embodied by the spending multiplier - how much economic activity does a dollar of fiscal spending generate? The spending multiplier increases as the marginal propensity to consume increases, which means that the effectiveness of an expansionary stimulus is directly related to the likelihood that an economic agent will increase spending.

In the previous section, we discussed how the terraced seigniorage is directed at both the miner reward and the treasury. At this point, it is worth describing how the Ministry of Finance implements Wkg's fiscal spending policy, whose core mission is to stimulate Wkg's growth while ensuring its stability. In this way, Wkg achieves greater efficiency by returning seigniorage not allocated to stability to its users.

The main focus of the Ministry of Finance is to allocate resources generated by seigniorage to decentralized applications (dApps). To receive seigniorage from the Treasury, a dApp needs to register as an entity operating on the Wkg network. Based on their economic activity and the use of funds, dapps are eligible for funding.

The workflow of a dApp’s funding program is as follows:

- The dApp applies for an account with the Ministry of Finance; the application includes metadata such as a title, a URL to a detailed page about the use of funds, the applicant's wallet address, and audit and governance procedures.

- During regular voting intervals, Wkm validators vote to accept or reject new dApp applications for Treasury accounts. Net votes (yes minus no votes) need to exceed 1/3 of the total available validator power to accept an application.

- Wkm validators can control which dapps can open accounts with the Treasury. Funding itself is determined by validator votes for each funding cycle based on the weight assigned to each dApp. This allows the Treasury to prioritize the dapps that receive the most funding.

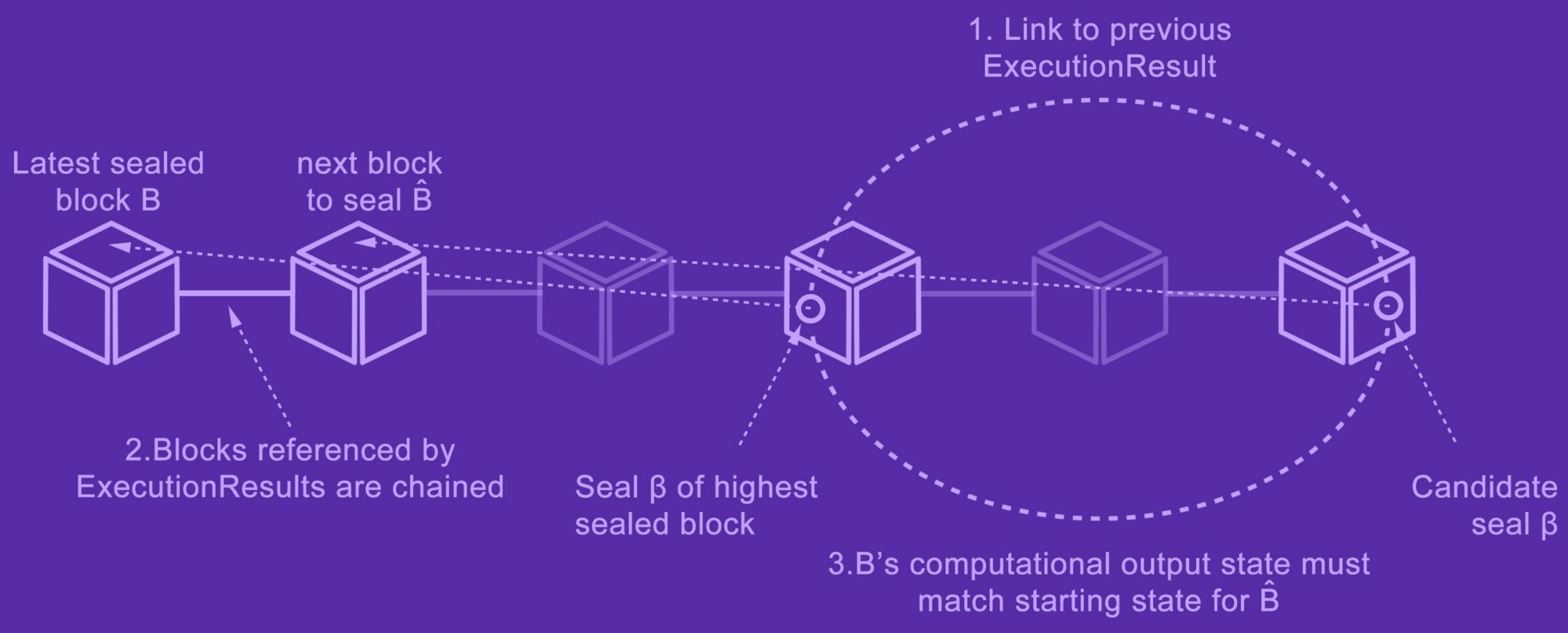
- At each voting meeting, a Wkm validator has the right to request a dApp to be blacklisted, for example, for acting dishonestly or for failing to explain its use of Treasury funds. Likewise, the net votes (yes minus negatives) need to exceed 1/3 of the total available validator power to enforce the blacklist. Blacklisted dApps lose access to their Treasury accounts and are no longer eligible for financing.

The motivation behind allocating funding weights to dApps is to maximize the economic impact of stimulus measures by rewarding those dApps that are more likely to have a positive impact on the economy. The Treasury Department uses two criteria to determine spending allocations:

Robust economic activity and efficient use of funds: dApps with a proven track record of adoption are supported for their continued success, while dApps that grow relative to their funds receive more seigniorage because they have the incentive to use resources efficiently. successful record.

These two criteria are combined into a single weight, which determines the relative funding source, the data that dapps receive from the total funding pool. For example, a dApp with a weight of 2 will receive twice as much funding as a dApp with a weight of 1.

We lay out the funding weight equation, followed by a detailed explanation of all parts: over a period of time t, let TVt be the transaction volume of a dApp and Ft be the funds received by the Treasury. Then, the agreement determines the weight wt of the funds.



The symbol * denotes a moving average, so TV t will be the moving average of the volume leading up to time period t, and OTV will be the difference of moving averages of different lengths prior to time period t. For example, one could average the windows quarterly. Finally, scale the funding weight between all dApps to 1.

- The first term is proportional to the TV show t, which is the average transaction volume recently generated by the dApp. This is an indicator of dApp economic activity, or more

It's just the size of its microeconomics.

- • The second term is proportional to OTV t/Ft - 1. The numerator describes the trend in trading volume - it is the difference between the most recent average and the less recent average. When the volume is positive, it means that the volume is trending up and vice versa. The denominator is the average amount of funds received by the dApp in the most recent past, up to and including the previous period. So the second term describes how economic activity has changed relative to past funding. In general, the larger the value of this ratio, the faster the dApp grows per dollar of funding. This is actually the spending multiplier of the funding scheme, which is a major indicator of funding efficiency.

- The parameter l is used to determine the relative importance of economic activity and financing efficiency. . If it is set equal to 1/2, then the contributions of the two terms will be equal. By decreasing the value of l, the protocol can favor applications with greater economic benefits. Conversely, by increasing the value of l, the protocol can favor applications that use funds efficiently, such as growing rapidly, even if they are smaller in size.

An important advantage of distributing funds in a programmatic manner compared to an open voting system is that it is simpler, objective, transparent and streamlined. In fact, it is more predictable than a decentralized voting system because the inputs used to calculate the weight of funds are transparent and move slowly. Furthermore, the system has less trust in Wkm validators, as the only power they are given is to determine if the dApp is honest and if the funds are being used legally.

In general, the goal of Wkg governance is simple: to fund organizations and proposals with the highest net economic impact. This will include solving real problems for users, increasing the adoption of Wkg, and thus increasing the GDP of the Wkg economy.

4. Conclusion

We introduce Wkg, a stable digital currency designed to complement existing fiat currencies and cryptocurrencies as a way to trade and store value. The agreement adjusts the supply of Wkg in response to changes in demand in order to keep its price stable. This is a mining coin made possible by using Wkm, whose stable returns are designed to absorb fluctuations caused by changes in the economic cycle.

Wkg also enables efficient adoption by returning seigniorage that is not invested in stable funds to users. Its transparent and democratic distribution mechanism enables dApps to attract and retain users by leveraging Wkg’s economic growth.

If Bitcoin's contribution to cryptocurrency is immutable, and Ethereum's expressive, then our value-add will be usability. The potential applications of Wkg are huge. We immediately foresee that Wkg will be used as a medium of exchange for online payments, allowing people to freely transact at a fraction of the fees charged by other payment methods. As the world begins to become more fragmented, we see Wkg being used as a dApp platform with a price-stable token economy built on top of Wkg. Wkg is seeking to become the first usable currency and stable platform on the blockchain, unlocking the power of decentralization for mainstream users, merchants and developers.

The total distribution of Wkm is 1 billion:

25% for donation, 6% for Dao incentive, 6% for institutional lock-up for 3 years, 51% for liquidity mining; 12% for linear destruction of application development (as the number of addresses on the chain increases, the number of application scenarios increases, and monthly statistics and Break into a black hole and destroy)

The total amount of Wkg ecological governance coins issued is 100 million, which is used for node network fission governance and community airdrop certificates


Wikimeta
DAO