TRUF.NETWORK Protocol Tokenomics v1.0

PURPOSE

This document serves as a high-level, yet overall complete description of the economic incentives of **TRUF.NETWORK (TN)** in the context of the tokens of value that are used by network participants for data provision, order book creation, and user participation in the order book protocol.

It is written to explain **what happens on the network**: what participants do, what they pay, how value moves through vaults, and how rewards are distributed by protocol rules.

This document is intended as a **hybrid network economics and tokenomics white paper**. In addition to describing on-chain fee flows and incentive mechanics, it will also present the broader $TRUF token framework required for ecosystem partners, exchanges, and market participants.

Note on Numerical Examples

All numerical examples in this document are illustrative and may not reflect current network parameters.

For authoritative values, refer to the latest TRUF.NETWORK documentation.

1. OVERVIEW

TRUF.NETWORK's economic system is fundamentally analogous to that of other blockchains, where users pay a fee, equivalent to a "miner fee" on Bitcoin, or a gas fee on Ethereum. This fee is paid, by the protocol rules, to the validators, the set of nodes that produce the blocks necessary for network liveness.

In this context, Truflation represents a flagship example of an economic data publisher and consumer within the TRUF.NETWORK ecosystem, while the network remains open to any third-party data provider and market.

TRUF.NETWORK is designed as an infrastructure layer enabling applications such as **Truflation's real-time economic indexes** and prediction markets that settle based on verified economic truth.

TRUF.NETWORK is a uniquely extensible blockchain. Functionality has been extended by adding an **order book protocol** where markets settle based on data attested by validators leveraging the in-built attestation engine. This protocol is ideal for prediction markets and has protocol rules that differ from those for data provision.

This document gives an overview of the protocol rules regarding economic incentives and presents those incentives in the context of the different classes of network participants.

2. SYSTEM MAP: PARTICIPANTS → FEES → VAULTS → REWARDS

At a high level, TRUF.NETWORK has two fee flows:

1. **Protocol fees (paid in the native token, $TRUF)** for key network actions (e.g., publishing data, requesting attestations, initiating order books).
2. **Collateral fees (paid in collateral tokens such as USDC / OMUSD)** generated during prediction market settlement.

These flows are captured and redistributed through two vault mechanisms:

Protocol Vault: receives protocol fees and distributes rewards to validators and data providers.

Collateral Vault: holds collateral during trading and, at settlement, distributes refunds, winnings, and reward splits.

Prediction markets built on TRUF.NETWORK may settle on attested values drawn from economic streams such as Truflation CPI, enabling markets to price real-world inflation and economic outcomes directly.

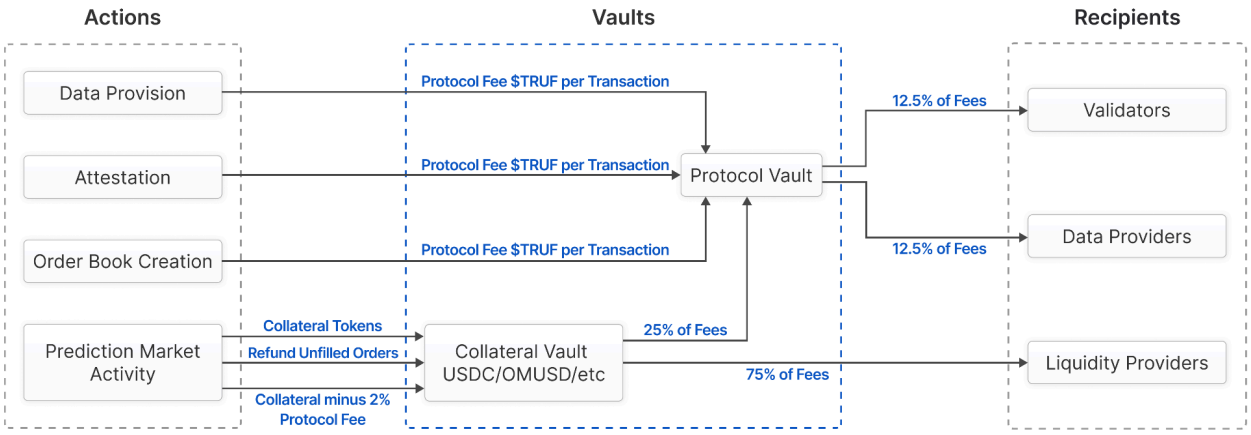


Figure 1. TRUF.NETWORK Economic Flow Architecture *- High-level system map showing participant actions, protocol and collateral fee flows, vault routing, and reward distribution to validators, data providers, and liquidity providers under protocol rules.*

2.1. Token Dependency and Network Usage

TRUF.NETWORK separates user interaction from protocol operation. This distinction is critical to understanding the role of the $TRUF token.

At the application layer, participants such as traders and liquidity providers interact with prediction markets using collateral tokens (e.g., USDC, OMUSD). These users may place trades, provide liquidity, and receive payouts without directly holding or using $TRUF.

However, all core protocol actions that enable these markets require $TRUF.

Specifically, $TRUF is required for:

- publishing data to the network (data providers),
- requesting attestations of data (attestation requesters), and
- creating new order books (market creators).

These actions form the foundation of the network's operation. Without them, no data can be verified, no markets can resolve, and no new markets can be created.

As a result, while end users may interact with applications without directly holding $TRUF, all economic activity on TRUF.NETWORK ultimately depends on $TRUF at the protocol layer.

This creates a model where:

- user activity generates demand for data and market infrastructure, and
- that demand translates into protocol-level usage, which requires $TRUF.

In this way, $TRUF functions as the core coordination asset of the network, linking application-layer activity to protocol-level incentives.

3. REWARDS OVERVIEW

This table summarizes participant roles, what they pay, and what they earn.

Prediction markets built on TRUF.NETWORK may settle on attested values drawn from economic streams such as Truflation CPI, enabling markets to price real-world inflation and economic outcomes directly. Truflation.com will also have its own prediction market focused on economic data.

Basic Fee Structure table:

Participant Type	Role on the Network	Main Actions	What They Pay	What They Earn
Validator	Secures the network and validates all transactions	Produce blocks, sign attestations	-	$TRUF (protocol fees), collateral rewards
Data Provider	Publishes off-chain data to the ledger	Adds data streams, builds composed streams	Protocol fee in $TRUF	$TRUF (from fees), collateral rewards when data is used
Trader	Participates in prediction/order book markets	Places BUY/SELL orders with collateral	Collateral tokens (USDC/OMUSD), 2% fee on winning positions	Winnings from market outcomes
Liquidity Provider	Supplies liquidity to markets to improve trading	Places good-value orders that meet liquidity thresholds	Collateral tokens (USDC/OMUSD)	75% of market collateral fee on settlement

Attestation Requester	Triggers final judgment of prediction markets/data outcomes	Submits attestation queries	Protocol fee in $TRUF	None (utility action)
Order Book Creator	Launches a new market (question) into the system	Publishes prediction markets	Protocol fee in $TRUF	None directly (may benefit from downstream trading)

4. GLOSSARY

Attestation: a query against the ledger whose result has been:

- cryptographically signed for authenticity by the set of validators; and
- added to the ledger.

Collateral fee: a set percentage of collateral token value retained in the collateral vault for every winning position settlement.

- Currently **0.02 tokens for every 1 token of value (2%)**.

Collateral token: the token used to participate in the order book protocol. There can be multiple collateral tokens in use on TN.

- Examples: **USDC / OMUSD / etc**.

Collateral vault: the vault where collateral tokens in use during trading are held between order book creation and settlement. At order book settlement, the collateral tokens corresponding to the order book being settled in the collateral vault are distributed to:

- holders of unsettled open BID/BUY orders (direct 1:1 refund);
- holders (including open ASK/SELL orders) of winning positions (minus collateral fee);
- liquidity providers (**75%** of aggregate collateral fee collected);
- validators (**12.5%** of aggregate collateral fee collected); and
- data providers (**12.5%** of aggregate collateral fee collected).

Data provider: participant that pays a protocol fee to add data to the network.

Ledger: the PostgreSQL database that underlies TN and is shared by all nodes.

Liquidity provider: a trader that is entitled to collateral rewards.

Native token: the token used to pay protocol fees required to broadcast transactions. There is only one native token in use on TN.

- **$TRUF**.

Node: a single machine running the TN software and connected to other machines in the network.

Order book: the set of protocol interactions and traders for a given order book query.

Order book query: a question (representing a future attestation) being traded/wagered-on, such as:

- "Will the price of Bitcoin be between $100,000 US and $100,500 at 12:00:00 UTC on January 1st, 2027"; or
- "Will Truflation CPI be between 2.71% and 2.73% at 12:00:00 UTC on January 1st, 2027".

Participant: a user of the network identified by a keypair/address.

Prediction Market: a discrete set of order books created, curated, and/or marketed by a given entity.

Protocol fee: a fee, paid in the native token, to broadcast certain transaction types, including:

- adding a data point (stream data) to the ledger;
- requesting a data attestation; or
- initiating (creating) a new order book.

Protocol vault: the vault to where protocol fees are sent when protocol fees are paid. Distributions from the protocol rewards vault go to:

- validators (**50%**); and
- data providers (**50%** is further distributed pro rata to data providers based on stream taxonomy).

Rewards: programmatic distributions from a vault according to protocol rules.

Sentry node: node that does not participate in block-creation consensus. Sentry nodes do not receive protocol rewards. Sentry nodes can leave and rejoin the network at will without affecting network integrity.

Stream: set of associated data points added to the ledger by a given data provider. Streams can be:

- **primitive**, meaning they have no constituent elements; or
- **composed**, meaning the value is calculated from other constituent composed or primitive streams based on taxonomy.

Taxonomy: the percentage values that define the constituent weights of a composed stream.

TN: TRUF.NETWORK blockchain network, rules, and connected machines running the node software.
Trader: participant that uses collateral token to place orders within an order book.
Validator / validator node: node that participates in block-creation consensus. Validator nodes receive protocol rewards. A minimum number (generally 3) validator nodes are required to be active in order for blocks to be produced and the network to be considered to be in a "healthy" state.
Vault: an address on TN that is unspendable using a private key. Any user can send funds to a vault, but funds may only be spent from out of a vault as a result of protocol actions when following the protocol rules built into the TN node software.

5. TOKEN ECONOMIC LIFECYCLE (DEPOSIT / WITHDRAW)

Both native tokens and collateral tokens must be bridged from other blockchains (at initial launch, this will be Ethereum) in order to have their value present and usable on TRUF.NETWORK. TRUF.NETWORK is fully non-custodial so, at all times, users have complete independent control over their tokens, using their own key pairs and addresses.

Bridging tokens from another blockchain to TN is referred to as **deposit**. Bridging tokens from TRUF.NETWORK to another blockchain is referred to as **withdraw**. The smart contracts on other blockchains that facilitate deposit and withdraw are referred to as **deposit/withdraw (D/W) contracts**.

The lifecycle descriptions below assume deposit and withdraw.

6. PROTOCOL RULES BY ACTIVITY

This section describes what happens on TRUF.NETWORK for each primary activity type.

6.1. Data Provision

1. Data provider includes protocol fee in transaction that adds new stream data.
2. Protocol fee is added to the protocol vault.
3. At a set interval (i.e., creation of the next block) protocol rewards are distributed for each stream data transaction respectively. For a given stream data transaction:
    - 50% of the protocol fee value is distributed to the validators.
    - 50% of the protocol fee is distributed to the data providers for that stream.

6.2. Attestation Request

1. Participant includes protocol fee in transaction that requests attestation.
2. Protocol fee is added to the protocol vault.
3. At a set interval (i.e., creation of the next block) protocol rewards are distributed for each attestation request transaction respectively. For a given attestation request transaction:
    - 50% of the protocol fee value is distributed to the validators.
    - 50% of the protocol fee is distributed to the data providers for the stream related to the attestation query.

6.2.1. Worked Example: Data Provider Revenue Flow

The following examples illustrate how a data provider may earn both native token and collateral rewards when their stream is actively used within the network.

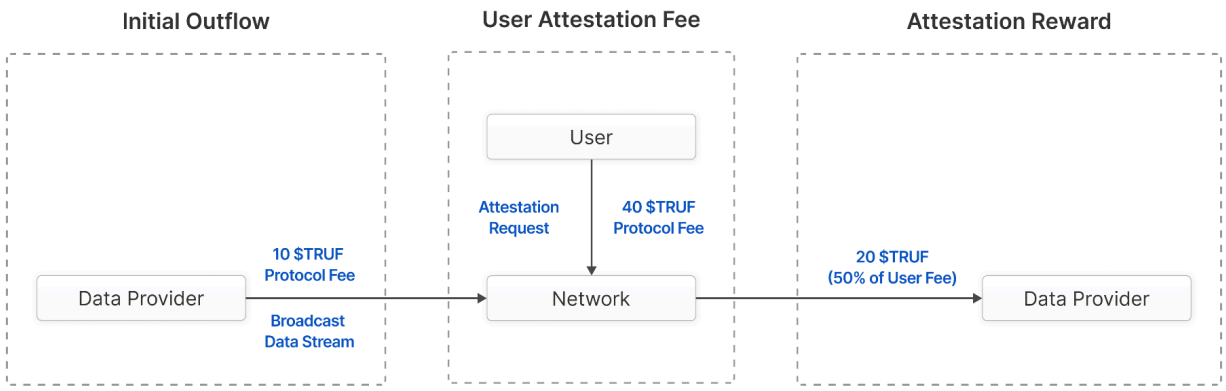


Figure 2.1. Attestation Part 1

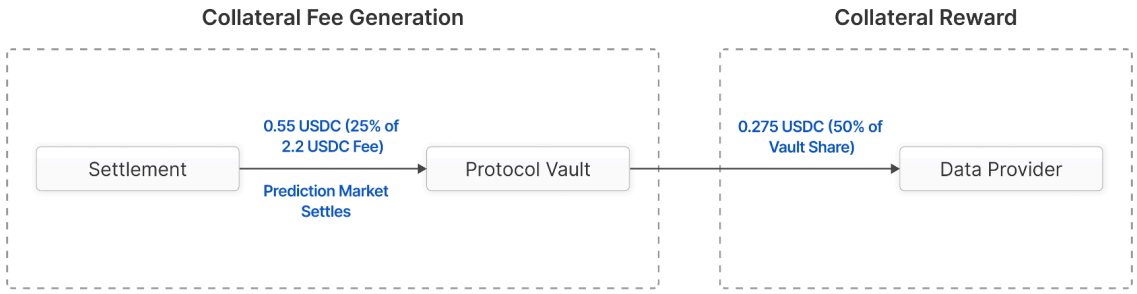


Figure 2.2. Order Book Part 2

Figure 2. Data Provider Revenue Flow Across Protocol and Settlement Layers *- Illustrative example demonstrating how a data provider earns native token rewards from protocol fees and collateral token rewards when prediction markets settle using their attested stream data.*

Illustrative Scenario

1. A data provider submits a stream data transaction including a protocol fee of **10 $TRUF**.
2. A participant submits an attestation request using that stream, including a protocol fee of **40 $TRUF**.

For the attestation request:

- 50% of the 40 $TRUF protocol fee is distributed to validators.
- 50% (20 $TRUF) is distributed pro rata to the data providers for that stream.

Later, a prediction market settles based on that attested value.

- The market generates a **2.2 USDC collateral fee** (2% of settlement winnings).
- 75% of the collateral fee is distributed to liquidity providers.
- 25% (0.55 USDC) is sent to the Protocol Vault.

From that 0.55 USDC:

- 50% (0.275 USDC) is distributed to validators.
- 50% (0.275 USDC) is distributed to the data providers for the stream used in settlement.

Result:
The data provider earns both:

- Native token rewards ($TRUF) from protocol fees; and
- Collateral token rewards (e.g., USDC) when markets settle on their data.

This dual-incentive structure aligns data quality with downstream economic activity.

6.3. Order Book Creation and Market Builders

1. A participant includes a protocol fee in a transaction that adds a new order book to the network.
2. The protocol fee is added to the Protocol Vault.
3. At the next reward distribution interval:
    - 100%of the protocol fee is distributed to validators.

Order book creation is the foundational action required to launch a prediction market on TRUF.NETWORK.

While the protocol governs order book mechanics and settlement, third-party applications may build user interfaces and additional business logic on top of this infrastructure.

6.3.1. Data Provider Revenue Illustration

Data Providers earn rewards from multiple protocol actions.

Example

- A new attestation is requested with a 40 $TRUF protocol fee.
  → Data Provider receives 50% = 20 $TRUF.
- A prediction market settles generating a 2.2 USDC collateral fee.
  → 25% (0.55 USDC) is sent to the Protocol Vault.
  → Data Provider receives 50% of that = 0.275 USDC.

Data Providers therefore earn:

- Native token rewards from protocol fees; and
- Collateral token rewards from settlement activity.

6.3.2. Validator Revenue Illustration

Validators earn rewards from multiple protocol actions.

Example

- A data provider submits a stream data transaction with a 10 $TRUF fee.
  → Validators receive 50% = 5 $TRUF.

- A new order book is created with a 5 $TRUF protocol fee.
  → Validators receive 100%= 5 $TRUF.
- A prediction market settles generating a 2.2 USDC collateral fee.
  → 25% (0.55 USDC) is sent to the Protocol Vault.
  → Validators receive 50% of that = 0.275 USDC.

Validators therefore earn:

- Native token rewards from protocol fees; and
- Collateral token rewards from settlement activity.

6.3.3. Application-Layer Revenue (Off-Protocol)

TRUF.NETWORK governs protocol-level fees only.

A market builder may implement additional business logic using external smart contracts or application-layer infrastructure.

For example:

- A builder may charge a **0.5% application-layer fee** on a 100 USDC trade.
- The builder collects 0.5 USDC directly.
- This fee is separate from protocol-level collateral fees and is not enforced by TN consensus rules.

Builders may also choose to act as liquidity providers in their own markets and earn collateral rewards under standard protocol rules.

Application-layer revenue is independent of protocol rewards.

6.4. Liquidity Provision (Collateral Rewards)

1. Traders place orders that qualify for liquidity rewards within an order book.
2. At settlement, a collateral fee is retained from winning positions.
3. Collateral rewards are distributed as follows:
   - 75% to liquidity providers.
   - 25% to the Protocol Vault.

From the Protocol Vault portion:

- 50% is distributed to validators.
- 50% is distributed to the data providers for the stream used in settlement.

Illustrative Example

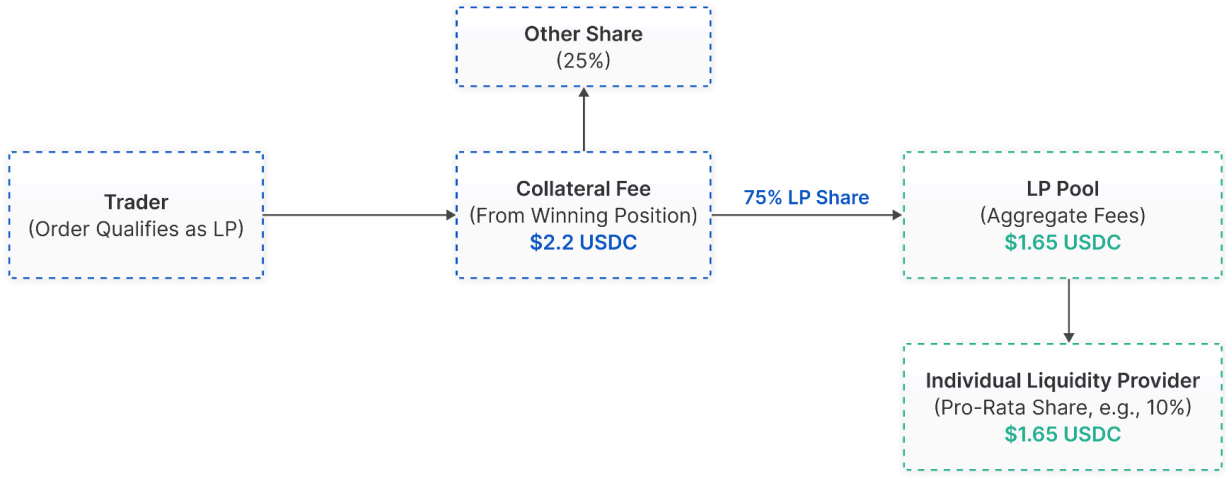
If settlement generates a 2.2 USDC collateral fee:

- 1.65 USDC (75%) is distributed to liquidity providers.
- 0.55 USDC (25%) is routed to the Protocol Vault.

If a liquidity provider qualifies for 10% of the reward pool:

- They receive 0.165 USDC.

Liquidity rewards are determined by protocol-defined rules governing qualifying orders and proportional participation.



Note: Amounts are illustrative based on a single 2.2 USDC collateral fee

Figure 3. Liquidity Provider Collateral Reward Distribution *- Example showing how collateral fees generated at market settlement are split, with 75% distributed proportionally to qualifying liquidity providers and 25% routed to the Protocol Vault for validator and data provider rewards.*

7. PREDICTION MARKET SETTLEMENT

The following example illustrates the collateral fee path and reward distribution at settlement.

Illustrative Example

Market: “Will Bitcoin price be above $100,000 on Jan 1, 2027?”
Total Winnings Before Fees: $100,000
Collateral Token Used: USDC

Step	Action	Amount	Recipient
1	Deduct 2% fee from total winnings (fixed across all markets)	$2,000	Collateral Vault
2	Pay net winnings to traders	$98,000	Winning traders
3	Distribute 75% of fee to LPs	$1,500	Liquidity providers
4	Remaining 25% sent to Protocol Vault	$500	Protocol Vault
5	Split from Protocol Vault	$500	50% ($250) → Validators 50% ($250) → Data providers (for Bitcoin price stream)

7.1. Illustrative Example: Single Trader Settlement

A trader deposits 100 USDC and places an order.

- The position settles at 110 USDC.
- Profit before fees: 10 USDC.
- A 2% collateral fee is applied to the 110 USDC settlement value:
  → 2.2 USDC retained in the Collateral Vault.

The trader receives:

- 107.8 USDC (110 – 2.2).

If the trader’s order does not win:

- 100 USDC collateral is returned 1:1.

8. $TRUF TOKEN UTILITY AND ECOSYSTEM ROLE (HYBRID CONTEXT)

TRUF.NETWORK defines the on-chain fee and incentive mechanics described in this paper. In this context, the **$TRUF token** functions as the required asset for all protocol-level actions, meaning all network activity ultimately depends on $TRUF even when end users interact via collateral tokens, and coordinating economic incentives among network participants, including validators, data providers, liquidity providers, and market creators.

8.1. Truflation's Role in the TRUF.NETWORK Ecosystem

TRUF.NETWORK underpins **Truflation's real-time economic data system** and its forthcoming prediction market applications.

It is important to understand that Truflation operates within TN as both:

- **A consumer of data**, drawing on streams from a broad ecosystem of independent third-party data providers (70+ providers and growing), and
- **A publisher of economic truth**, submitting its own derived economic indexes (including Truflation CPI and related measures) back onto TRUF.NETWORK as verifiable on-chain streams.

In this way, Truflation both benefits from and contributes to TN's decentralized data economy.

8.2. Prediction Markets as an Application Layer on TN

Truflation is imminently launching a prediction market platform that will feature economic markets settling on trusted economic outcomes, including Truflation indexes.

These prediction markets rely on TRUF.NETWORK as critical market infrastructure:

- order books are created and traded on TN

- collateral is held and settled through TN vault rules
- market outcomes resolve through validator-attested stream values

8.3. Open Market Infrastructure for Third Parties

TRUF.NETWORK is an open protocol. In addition to Truflation's own markets, third-party builders may launch independent prediction markets and financial applications using:

- Truflation indexes,
- TN-native data streams from other providers, and
- their own proprietary or external indexes submitted through TN.

This ensures that TRUF.NETWORK functions not as a single-application chain, but as a shared infrastructure layer for economic truth and market settlement across the broader ecosystem.

8.4. Economic Incentives by Participant Type

This section summarizes how each participant may derive economic value from interacting with TRUF.NETWORK.

8.4.1. Data Providers

Data providers may earn:

- $TRUF protocol rewards from stream publication and attestations.
- Collateral token rewards when markets settle using their streams.

Additional business models may include:

- Building composed streams with high downstream utility.
- Licensing data externally (outside of protocol mechanics).

8.4.2. Traders

Traders may earn through:

- Correctly predicting order book outcomes.
- Market making via spread capture.

- Arbitrage between TN markets and external markets.

Traders pay collateral token fees only when winning positions settle.

8.4.3. Liquidity Providers

Liquidity providers earn:

- 75% of aggregate collateral fees generated at settlement.

This creates incentive to supply liquidity and improve market depth.

8.4.4. Validators

Validators earn:

- 50% - 100% of protocol fees (in $TRUF).
- 50% of the Protocol Vault's share of collateral fees.

Under future consensus models (PoSA or PoS), third parties may participate by staking $TRUF to receive a proportional share of validator rewards.

8.4.5. Market Builders

Market builders may earn through:

- Application-layer trading fees.
- Acting as liquidity providers.
- Issuing application-level tokens.
- Funding development treasuries from off-protocol revenue.

These mechanisms operate independently from protocol fee routing.

9. VALIDATOR INCENTIVES AND DECENTRALIZATION ROADMAP

The primary recipient(s) of rewards on TN is the participant(s) in control of the validator nodes. TN supports multiple consensus mechanisms. This section describes the current approach and possible evolution.

9.1. Proof of Authority (PoA)

- This is the current consensus mechanism on TRUF.NETWORK.
- A single entity (Laguna) has total and complete control of the operation of validator nodes and the distribution of associated rewards.
- That entity sets whatever business arrangements it desires and can distribute income as it sees fit.
- It has the absolute lowest overhead for block production and is therefore the highest throughput (transactions per second) possible out of all mechanisms.

Note: PoA is used as an initial security/performance mechanism during early network phases. A roadmap toward broader validator participation is described below.

9.2. Proof of Staked Authority (PoSA)

- This is the consensus mechanism used by chains such as Binance Smart Chain.
- It has all of the fundamental elements and advantages of PoA.
- Third parties can “buy-in” to participation as a validator node and/or participation in a percentage of validator rewards by staking native tokens in a smart contract (either on TRUF.NETWORK or on a network TRUF.NETWORK already has visibility to, such as Ethereum).
- Could be implemented on TRUF.NETWORK without massive protocol refactor.

9.3. Proof of Stake (PoS)

- This is the consensus mechanism used by chains such as Ethereum.
- Who is a validator and what percentage of protocol rewards they are entitled to is determined completely within the protocol based on native tokens staked on TRUF.NETWORK.
- Requires programming robust governance rules into the protocol.
- Less throughput than PoA.
- Could be implemented on TRUF.NETWORK only with a massive protocol refactor.

With any consensus mechanism, in addition to the current value of staking rewards, there is an economic incentive for a participant to acquire and stake the native token (thus earning even more native token) if the participant believes, due to TRUF.NETWORK

increasing in value and demand for the native token increasing, that the price of the native token, relative to USD, will increase over time.

10. SECURITY AND ECONOMIC ASSUMPTIONS

10.1. Attestation

In general, an escrow contract requires three parties:

- two counterparties
- and an escrow agent.

The escrow agent's role is to hold deposited funds and disburse them based on the fulfillment of the contract's conditions. In decentralized systems, the escrow function is typically performed by a smart contract or protocol rule, which automatically transfers control of funds once predefined conditions are satisfied.

In decentralized systems, this escrow function is typically performed by a smart contract or covenant. A covenant is a procedure executed by a node as the result of a transaction, which causes control of escrowed funds to transfer according to predefined rules encoded in the protocol. When the conditions of the contract are satisfied, the node executes the corresponding transaction and the funds are automatically transferred.

In some cases, escrow settlement can rely entirely on data that already exists within the blockchain network. Because this data is stored on the ledger and replicated across all nodes, it can be verified independently by any participant. In these situations, the protocol itself can determine whether contract conditions have been met without requiring any external information.

However, many contracts depend on real-world data that exists outside the blockchain. In these cases, a system commonly referred to as an *oracle* provides the external data required for settlement, typically accompanied by a cryptographic signature verifying the result.

As in the case of a traditional escrow agent, it is critical that an oracle be impartial. In decentralized environments, however, it is often difficult for counterparties to determine whether the oracle or its underlying data source is truly neutral. A counterparty could potentially collude with the oracle, or the oracle could rely on a data source that is not

publicly verifiable. When the underlying source of truth is not accessible to all participants, counterparties cannot independently confirm whether the oracle's result accurately reflects real-world conditions.

TRUF.NETWORK addresses this problem by ensuring that the underlying source of truth is publicly accessible and independently verifiable. Any participant can run or query a node on the network and confirm that the result of a query corresponds with the data stored on the ledger. Because the same database and procedures are replicated across all nodes, participants can independently verify the outcome used for settlement.

While this form of self-verification may be sufficient for occasional transactions between trusted parties, large-scale decentralized markets require stronger guarantees of data integrity. For this reason, TRUF.NETWORK introduces a transaction type that allows network participants to request validator attestations of specific query results.

An attestation request asks one or more validator nodes to certify the result of a query derived from a defined stored procedure and set of arguments. The response is recorded on the ledger as a standardized data structure containing the stored procedure identifier, the arguments used, the resulting value, and a cryptographic signature from the validator nodes confirming the result. These attestations can then be used as trusted inputs for settlement transactions or as a publicly verifiable source of truth within oracle-based systems.

10.2. Accuracy Via Competition

The economic framework of TRUF.NETWORK is designed to incentivize data providers to publish accurate information. Broadcasting event data to the network carries a cost in the form of transaction fees paid when submitting new data streams. At the same time, data providers may earn rewards when their streams are used in certified attestations or downstream economic activity on the network.

Because every attestation and transaction is recorded on the ledger and visible to all nodes, the relative usage and reliability of different data streams can be measured over time. Participants can evaluate which streams are most frequently used and which data providers consistently produce results that align with observable outcomes.

The permissionless nature of the network allows multiple data providers to publish information about the same events. As a result, providers compete directly on the accuracy and usefulness of the data they broadcast. Streams that demonstrate higher reliability or greater downstream utility are more likely to be used in attestations and applications, enabling their providers to earn a larger share of transaction fees and protocol rewards.

Through this combination of technical transparency and economic incentives, TRUF.NETWORK encourages accurate data publication while allowing market forces to identify and reward the most reliable providers. In this model, the technical architecture of the system ensures data integrity, while the economic structure of the network promotes long-term data accuracy.

11. $TRUF TOKEN SUPPLY, DISTRIBUTION, AND VALUE ACCRUAL

As adoption grows through applications such as Truflation's economic index infrastructure and prediction markets settling on economic truth, protocol demand for $TRUF increases proportionally with network usage.

TRUF.NETWORK itself does not mint new tokens as part of protocol operation, and the protocol does not require knowledge of total supply.

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