Scylla: Governance of Monetary Movement

Abstract

Scylla is a currency governed by validators, where monetary issuance is directly coupled to transaction activity rather than time or ownership; it differs by making inflation an explicit, vote-governed social decision instead of a hidden subsidy or fixed schedule, aiming to make monetary outcomes legible and accountable rather than automatic.

1. System Overview: What Scylla Actually Is

Scylla is a currency designed to make monetary policy legible and governable rather than hidden or automatic.

- It is a currency, not a store of value.
- It inflates when used.
- It is governed by validators.
- Validators are not stakers or miners.

2. Monetary Mechanics: How Money Is Created

Every transaction mints new Scylla. Fees do not move money; they expand supply.

Inflation is proportional to:

- Transaction volume.
- The current fee level.

Example:
"If 1 million transactions occur at X bps, Y new Scylla are minted."

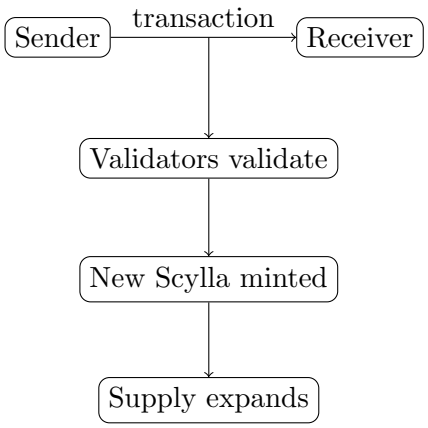

Figure 1: Transactions are validated, then mint new Scylla, expanding supply.

3. Who Gets Paid and Why

- Validators facilitate transactions.
- Newly minted Scylla is distributed to validators.
- Rewards are not competitive per-block (not Bitcoin-style).
- Validators share issuance proportionally to their participation and availability.

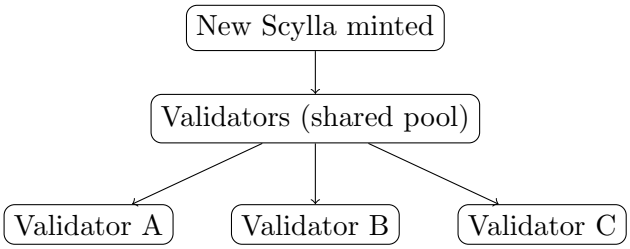

Figure 2: New issuance is shared across validators based on participation.

4. Inflation as a Collective Choice

Money is movement. Inflation is not an error; it is a visible consequence of collective preference. Scylla treats monetary change as a social decision rather than a hidden mechanism or a technical default.

5. Governance Model (High-Level)

- Validators coordinate monetary direction and responsiveness.
- Governance identity is wallet-based.
- Governance is continuous, not episodic.
- There is no staking or capital lock.

6. Directional Voting (UP / DOWN / HOLD / ABSTAIN)

- UP favors higher fees.
- DOWN favors lower fees.
- HOLD favors no change.
- ABSTAIN opts out of influence.

ABSTAIN pauses governance weight accumulation and governance history for that validator.

7. Responsiveness Voting (Quadratic Parameter)

Direction and responsiveness are separated. Direction expresses where fees should move; responsiveness expresses how strongly the system should react.

- Responsiveness governs a quadratic curve that amplifies strong consensus and dampens weak consensus.
- The responsiveness parameter a is chosen through governance.
- This separation prevents directional votes from implicitly forcing agreement on sensitivity.

$$\Delta = a \cdot x \cdot |x|$$

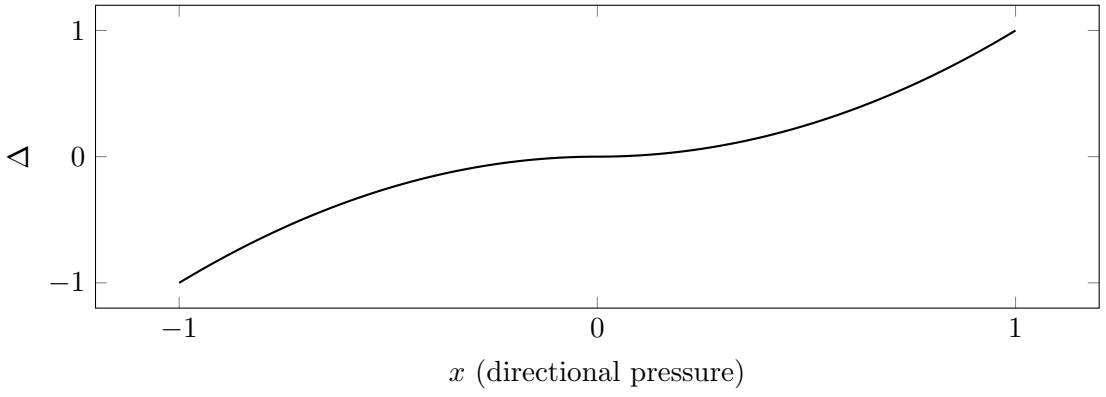

Figure 3: Quadratic responsiveness (normalized shape with $a = 1$).

8. Governance Weight: What Affects Your Influence

Governance weight is the influence assigned to a validator's signal. It reflects behavior rather than ownership or technical advantage.

Governance weight is influenced by:

- Active participation (per-block signaling).
- Longevity of participation (with plateau behavior).

- Behavioral consistency.
- Compute availability (bounded and non-dominant).
- ABSTAIN pauses weight and governance history.

Governance weight is not influenced by:

- Token balance.
- Early entry.
- Hardware arms race.
- Staking or locked capital.

$$w = w_{\max} \cdot p \cdot L(l) \cdot C(c) \cdot R(r)$$

Where p is active participation, l is longevity, c is behavioral consistency, r is compute availability, and $L(\cdot)$, $C(\cdot)$, $R(\cdot)$ are bounded, monotone functions in $[0, 1]$. ABSTAIN sets $p = 0$, which yields $w = 0$.

Geometric plots (normalized)

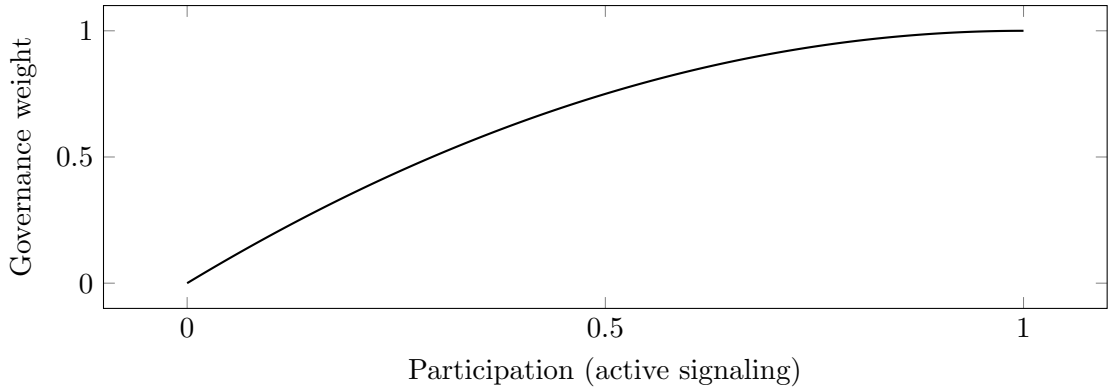

Figure 4: Active participation increases weight.

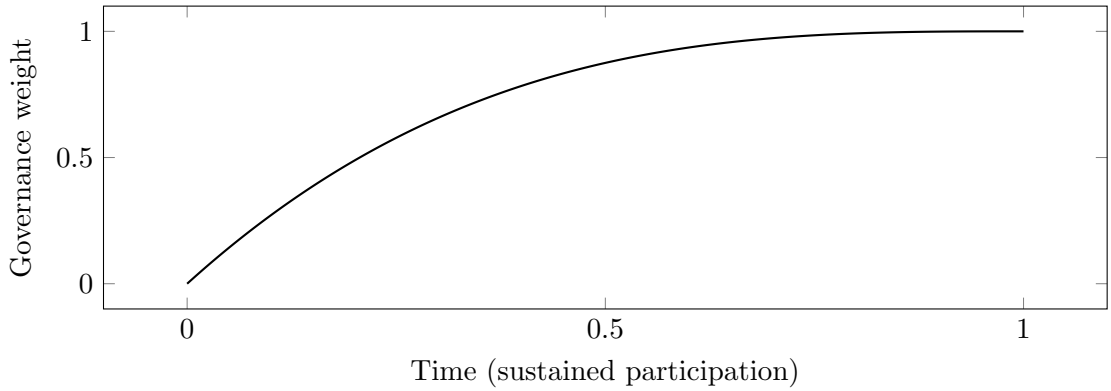

Figure 5: Longevity increases weight, then plateaus.

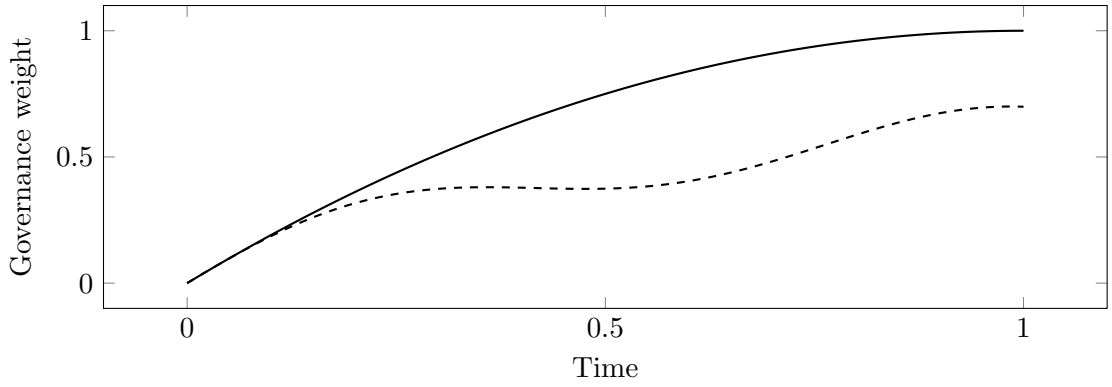

Figure 6: Consistency is rewarded more than volatility (dashed).

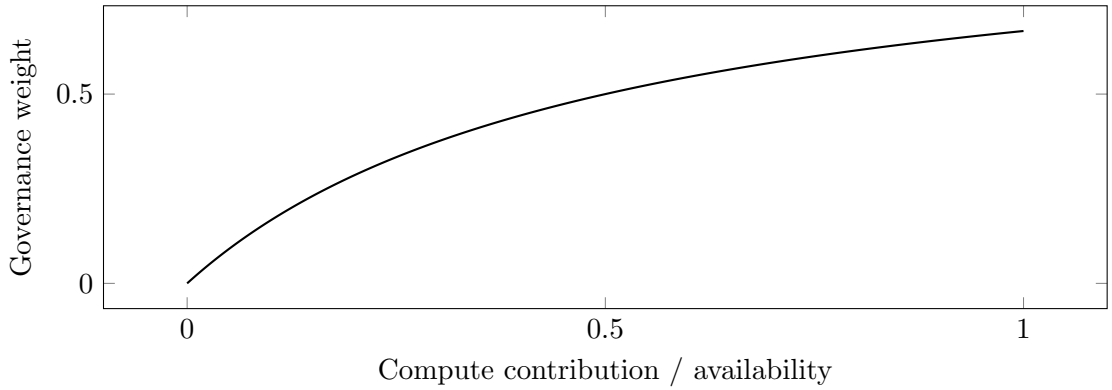

Figure 7: Compute contribution is bounded and non-dominant.

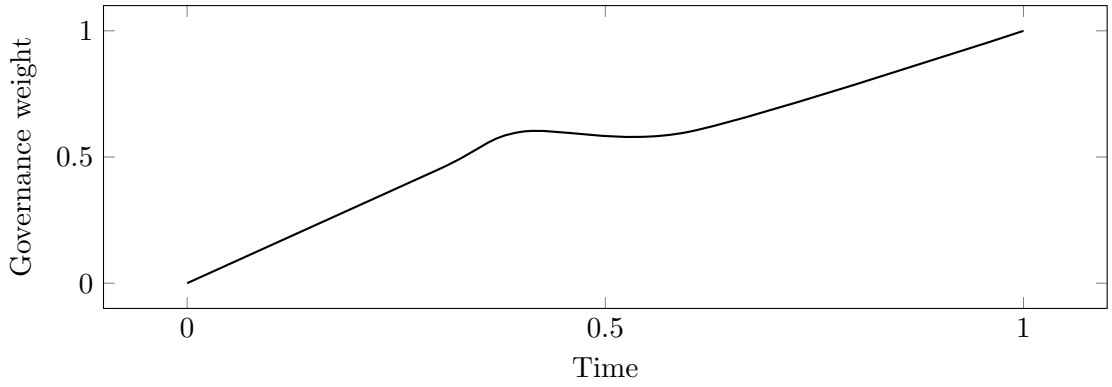

Figure 8: ABSTAIN pauses accumulation; growth resumes when participation returns.

9. Constitutional Layer: What Cannot Be Changed

The constitution has no on-chain change mechanism. No percentage, vote, or threshold can amend it. Changes occur only through explicit forks and social adoption, which is intentional: legitimacy is placed above automation.

10. Attack Surfaces and Failure Modes

Scylla is designed to make governance legible, not invulnerable. The following are known attack surfaces and failure modes:

- **Short-term extraction attacks**: actors attempt to push fees for near-term gain at the expense of long-term health. Scylla mitigates this with behavioral weight, plateaus, and visibility, but it does not prevent it. It is tolerated as a social risk that must be managed through accountability and exit.
- **Sybil identity flooding**: actors create many identities to appear numerous. Scylla cannot prevent identity creation by design, but sustained participation and plateaued weight make flooding less effective. This attack is mitigated but not eliminated.
- **Coordinated responsiveness manipulation**: groups attempt to swing responsiveness to amplify their directional goals. Scylla mitigates this with separate responsiveness voting and slower updates, but coordination cannot be fully prevented.
- **Social capture of narrative**: influence through persuasion, reputation, or media pressure can override protocol mechanics. This cannot be prevented by design; the system is intentionally social and legitimacy-based.

Scylla mitigates some risks through visibility and behavior-based weight, tolerates others as part of open governance, and explicitly cannot prevent social capture or coordinated action.

11. Launch Reality and Risks

Early periods are more volatile, more manipulable, and more dependent on human judgment. This is a feature, not a bug: the system is intentionally governance-first and legitimacy-first, and launch is optional rather than automatic.

12. Conclusion

Scylla is a currency whose monetary changes are explicit, socially governed, and reversible through human choice. It does not promise stability or safety, and it treats responsibility as the core of monetary legitimacy.

Version: v1 (conceptual) complete