The Role of K in Inverse Value Dynamics

1. Core Idea

In the inverse value model, the governing relationship is:

$$V(t) = K / S(t)$$

Where:

- V(t) = Value at time t
- S(t) = Supply at time t
- K = Scaling constant that acts as an elasticity factor

2. What K Represents

• Elasticity of Value: K determines how sensitive the value curve is to changes in supply.

• Amplification Role:

 - If K is larger → a given drop in supply produces a much sharper rise in value.

 - If K is smaller → the same supply decay results in a gentler appreciation of value.

• In effect, K is a demand × scarcity amplifier that encodes how strongly external conditions (market demand, liquidity, policy, or investor confidence) magnify scarcity-driven value shifts.

3. Relation to Economic Elasticity

In economics, elasticity describes how one variable responds to changes in another.

• Example: Price elasticity of demand = % change in demand given a % change in price.

• Here, K translates elasticity into a scarcity–value framework:

 - K absorbs external demand pressure and market liquidity.

 - It can also reflect policy levers (e.g., caps, burns, or subsidies) that alter sensitivity.

• Thus, K becomes a flexible macroeconomic control knob in the inverse value function.

4. Example

Suppose supply halves:

$$S(t) \to 1/2\ S(t)$$

• With constant K, the pure inverse relationship yields:

$$V(t) \rightarrow 2V(t)$$

• But if K is increased at the same time (e.g., due to external demand shock, higher liquidity, or deliberate amplification), then:

$$V(t) \rightarrow \text{more than } 2V(t)$$

This demonstrates elastic amplification, where scarcity-driven value appreciation is multiplied by the magnitude of K.

This makes K not just a mathematical constant, but a policy and demand elasticity parameter that determines how strongly scarcity translates into value over time.