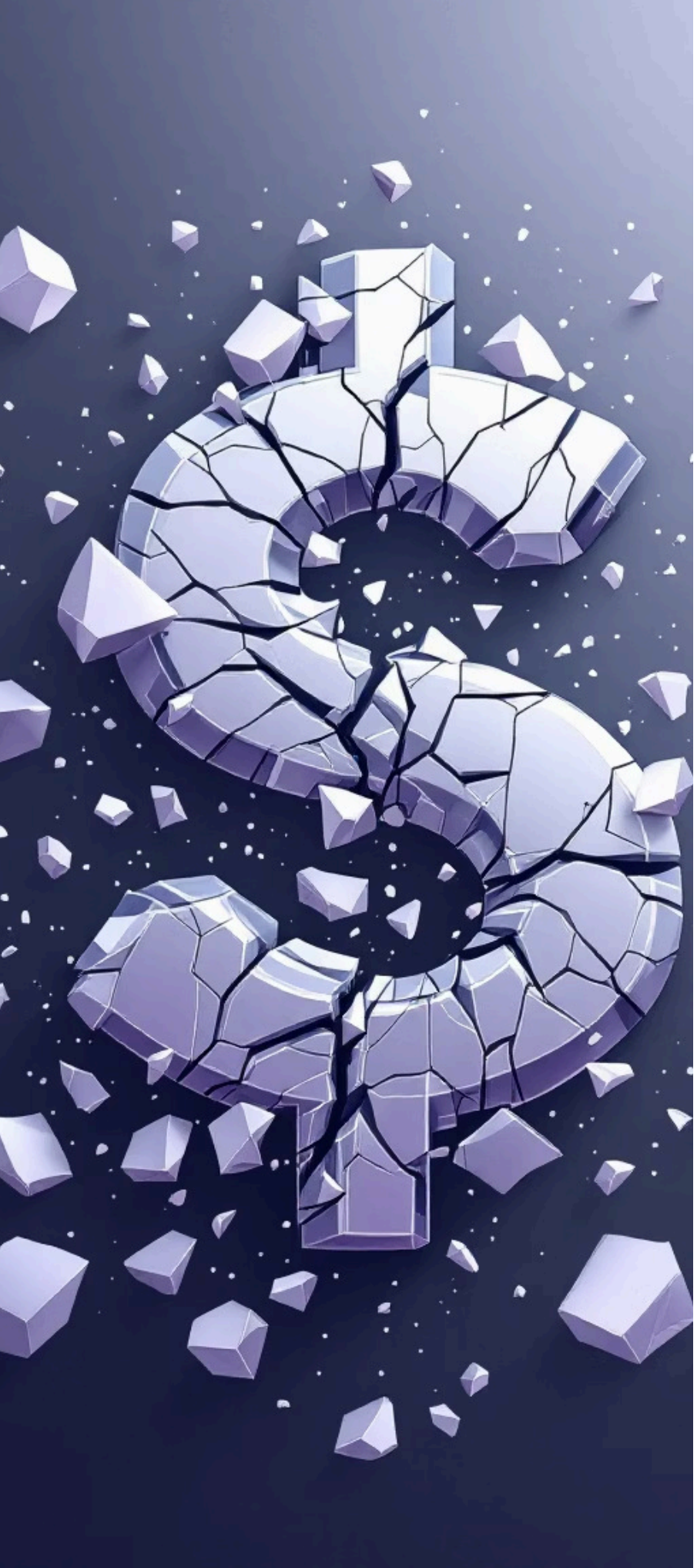
AlgoToken: A Self-Stabilizing Algorithmic Currency

AlgoToken introduces an algorithmic stablecoin system designed for predictable growth and antifragile stability, combining dynamic reserve management, leveraged backing, and bond mechanisms.



The Problem: failures of memecoins

1

Death Spirals

Reflexive selling led to unrecoverable collapses when demand disappeared.

2

Ponzi Dynamics

Required constant new buyers to sustain yields, leading to rapid value destruction.

3

Static Parameters

Fixed parameters couldn't adapt to changing market conditions, causing catastrophic failures.

4

Binary Stability

Systems were either perfectly stable or completely broken, with no recovery.

The AlgoToken Solution: Antifragile Stability

Dual-Pool Architecture

Separates stability from growth for enhanced resilience.

Dynamic Leverage

Adjusts based on market behavior, optimizing growth and protection.

Bear Market Discovery

Calibrates parameters to adapt to changing market conditions.

Bond Mechanisms

Manages supply and incentivizes long-term holding.

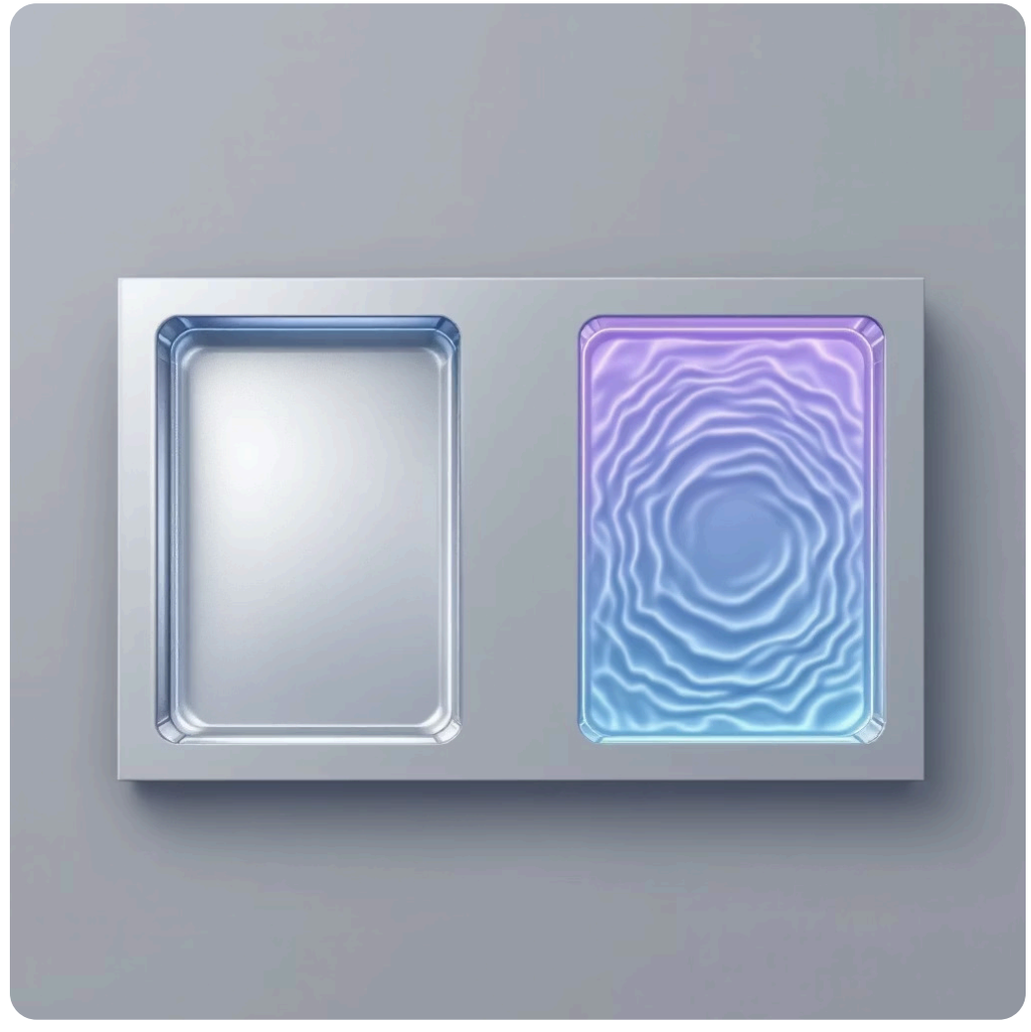
Core Design: Dual-Pool Reserve Architecture

Peg Pool

- Maintains price at ATH with zero slippage.
- Acts as a shock absorber for sell pressure.
- Provides immediate liquidity capacity.

Slip Pool

- Uses Bancor v1 formula for leveraged backing.
- Enables price discovery when peg pool depletes.
- Cannot be fully depleted due to hypothetical supply mechanics.



This dual structure separates immediate liquidity from long-term value, ensuring stability and capital efficiency.

Adaptive Leverage Constant (K) System

K_real

Actual market leverage, decreases as peg drains, then converges toward K.

K

Primary leverage constant, determines backing ratio and price slippage severity.

K_target

Optimal leverage based on bond participation, increases with lockups.

Dynamic K adjustment optimizes growth and downside protection, creating smooth transitions.

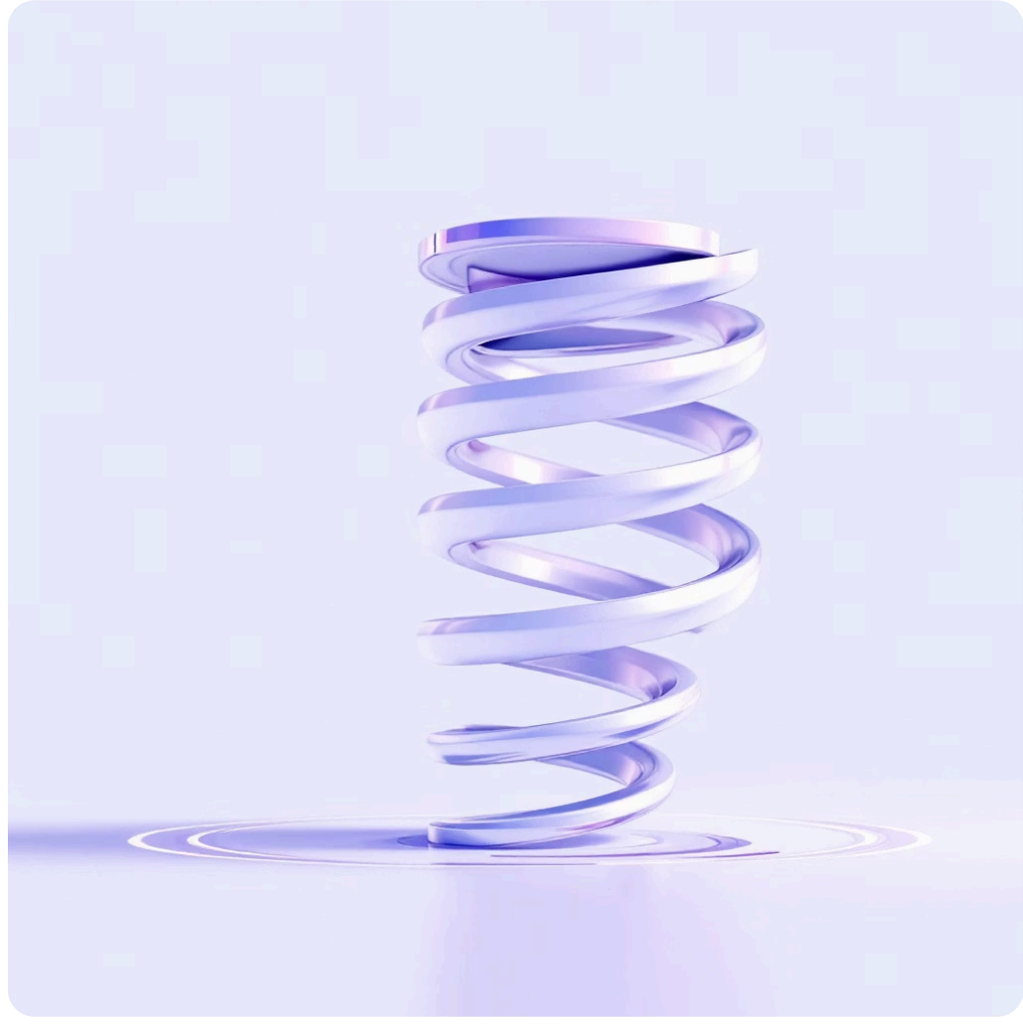
Algorithmic Price Appreciation

Drainage-Driven Growth

As USD drains from peg to slip, K_real decreases, creating a "coiled spring" effect for future growth.

Convergence-Driven Growth

K_real algorithmically converges toward K, accelerating market cap expansion.



This dual mechanism ensures continuous growth even when price is below ATH, rewarding holding over trading.

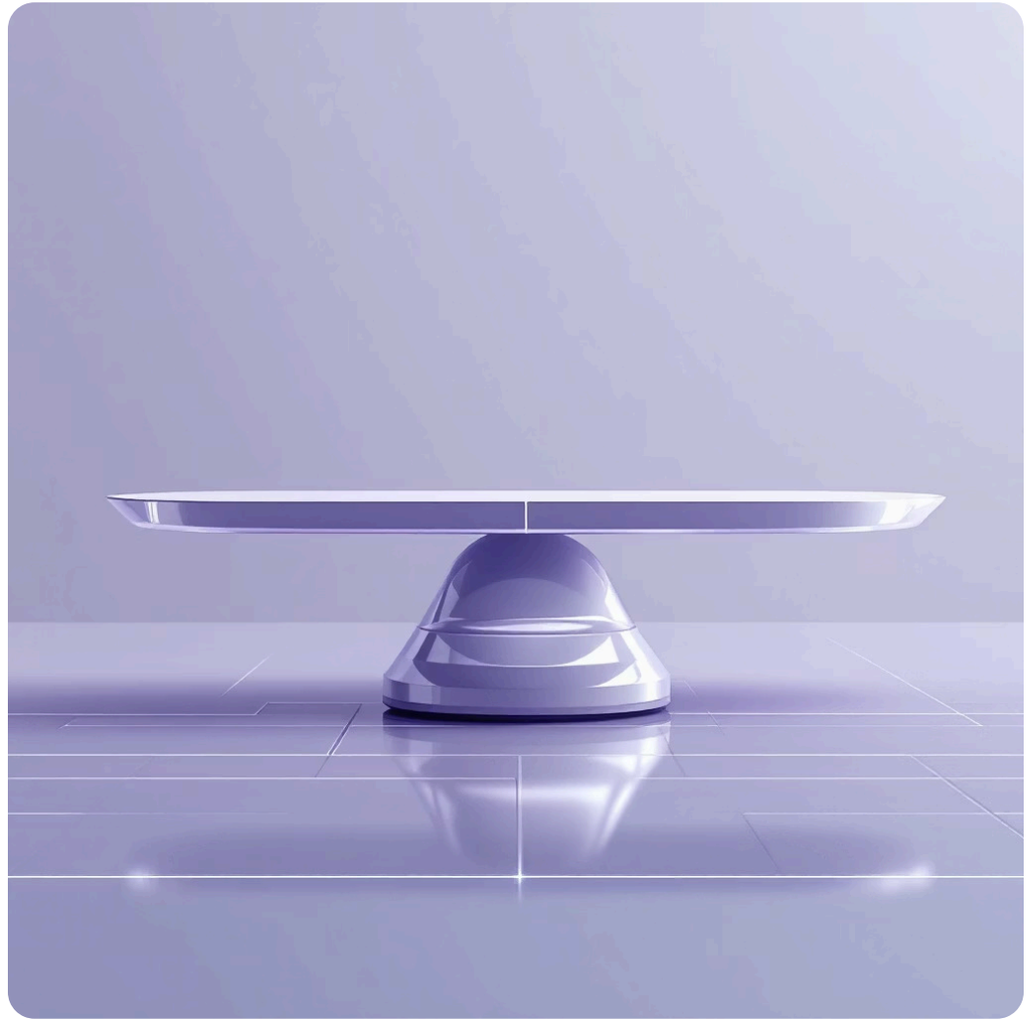
Economic Model: Price Peg vs. Price Floor

No Hard Price Floor

The system doesn't maintain a hard price floor, but mathematical impossibility of complete depletion prevents collapse.

Price Peg at ATH

Maintained through the peg pool, increasing slippage in the slip pool, and continuous algorithmic growth.



This distinction creates strong recovery dynamics without impossible guarantees, offering a clear price target.

Game Theory: Anti-Trading and Anti-Bubble

Anti-Trading System

Every mechanism discourages short-term trading, making holding inevitably profitable.

Anti-Bubble Machine

Mechanical constraints prevent speculative bubbles, ensuring steady appreciation.

The Nash equilibrium aligns with system stability: buying and holding, especially during dips, is the optimal strategy.

Conclusion: The Antifragile System

1

Innovation

Dual-pool architecture, K_real compression, hypothetical supply gap, algorithmic appreciation, dynamic adaptation, bond mechanisms, and anti-bubble design.

2

Antifragility

Strengthens through adversity; selloffs, bear markets, and growth phases all contribute to robustness.

3

Mathematical Guarantees

Reserves cannot be fully depleted, price appreciation continues below ATH, drainage creates value, and supply shocks are prevented.

AlgoToken solves fundamental problems of algorithmic stablecoins by creating a system that thrives on stress, offering predictable appreciation and intelligent adaptation.