Awakening Flywheel Experiment (AFX) v1.0

Experimental Design of a Self-Circulating POL Compounding Engine that Grows via Structure ($NONPC)

No NPC Society aims to design a market structure that does not rely on "popularity" or "hype."

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Origin Statement

The Awakening Flywheel Experiment (AFX) was first introduced and defined by No NPC Society ($NONPC).
First Public Release Date: February 15, 2026 (UTC)
This document serves as the canonical public technical specification of AFX.

Note: This document serves as a technical appendix to the No NPC Society Whitepaper. For the project's core philosophy, roadmap, and tokenomics overview, please refer to the [Official Whitepaper].

This document is a public technical paper that systematically organizes the "Awakening Flywheel Experiment (AFX)," an experimental model designed to self-circulate and expand liquidity and participant bases through on-chain verifiable institutional design, within a crypto asset market where short lifespans, instability, and opacity have become the norm.

AFX is not merely a rulebook; it is a proposal and experiment for an "Autonomous Compounding Growth Model" that utilizes actual transaction fees as its sole energy source to mathematically maximize the capital retention rate.

Why can this structure endure over the long term?

Why have traditional token designs structurally collapsed?

The purpose of this document is to verify these questions from quantitative and structural perspectives and to present a reproducible design.

1. Why Traditional "Liquidity Incentives" Have Systematically Collapsed

Liquidity incentive designs in the crypto asset market have evolved through multiple stages.

However, concurrently, each stage has harbored inherent structural defects, which have repeatedly triggered market collapses.

AFX is designed with the objective of eliminating these failure factors at the specification level, by organizing these "known failure patterns" as prerequisites.

1.1 DeFi 1.0 (2020): The Structural Limits of Liquidity Mining

Liquidity Mining is a model that induces liquidity by distributing newly issued tokens as rewards to LPs (Liquidity Providers).

Representative examples include Compound (COMP), Curve Finance (CRV), and SushiSwap (SUSHI).

The fundamental problem with this model lies in the fact that the protocol itself internalizes constant selling pressure.

Since the acquisition cost for reward tokens is extremely low for recipients, rational behavior converges on the following:

- Receipt of rewards
- Immediate sale
- Migration to protocols with higher yields

As a result, short-term capital, which stays only during the reward period, increases. A phenomenon frequently occurs where TVL (Total Value Locked) plummets simultaneously with the reduction or cessation of rewards.

This structure is widely recognized as the "mercenary capital" problem.

Conclusion: Liquidity procured through inflation vanishes the moment rewards stop. "Rented liquidity" cannot be structurally owned.

1.2 DeFi 2.0 (2021): The Collapse of POL and Expectation-Dependent Models

In DeFi 2.0, the concept of POL (Protocol-Owned Liquidity) was introduced.

This marked a shift toward a design where the protocol owns the liquidity itself, rather than renting it through rewards.

Representative examples include OlympusDAO (OHM), Wonderland (TIME), and KlimaDAO (KLIMA).

Bonding was adopted as the primary method, where participants acquired tokens at a discounted price in exchange for providing assets.

However, this model also contained the following structural issues:

- Maintenance of high APY depended on participant growth rather than actual demand.
- Decline in reward value due to slowing growth expectations.
- Increase in selling pressure.
- Price decline.
- Decrease in participants.

These factors occurred sequentially, and numerous cases falling into a "Death Spiral" were observed.

Conclusion: POL was an advancement, but as long as it relies on expectations (APY) as its primary fuel, it remains extremely vulnerable when supply and demand reverse. "Owning liquidity" is a necessary condition, not a sufficient one.

1.3 Real Yield (2023-2025): Shift to Real Revenue-Linked Models

The next trend to emerge was the Real Yield model.

In this model, returns are distributed based on actual revenue (fees, etc.) generated by the protocol, rather than inflationary rewards.

This approach has been evaluated as more sustainable than models that artificially generate APY through token issuance.

Representative examples include GMX and Gains Network (GNS).

However, in the realm of meme-type and community-type tokens, clear revenue products do not exist as a general rule.

Therefore, it is difficult to transplant the Real Yield model directly.

Thus, AFX shifts to a structure where the fees generated from the trading act itself—accompanying market participation—serve as the circulating resource, acting as a substitute for "revenue products."

1.4 Design Requirements Derived from Historical Failures

From the historical context above, the following design requirements are derived:

- **Exclusion** of inflation **dependence**
- **Avoidance of expectation-dependent models**
- **Securing** resources linked to real **demand**
- **Permanent fixation of liquidity**

- **Structural control of selling pressure**

AFX is designed with these requirements as prerequisites.

2. AFX Design Philosophy: The "Structuralism" of No NPC Society

AFX is not a mechanism that stages growth by injecting funds from the outside.

Nor is it a "perpetual motion machine" that self-propagates unconditionally.

This design is constructed as an "Internal Combustion Engine Protocol" that uses the external economic behavior of market participants—trading activity—as its sole energy source, converting and re-fixing it into the liquidity base with high efficiency.

In other words, the driving force of growth always lies in the economic behavior of market participants, and the protocol plays the role of accumulating and reinvesting it in a transparent and verifiable manner.

If trading activity stops, growth stops. This constraint is intentionally designed and is an institutional requirement to form a development path perfectly linked to market reality.

This structure enables endogenous capital formation based on market activity without relying on inflationary rewards or fund compensation by operations.

What AFX aims for is not a device that generates temporary hype, but an institutional design that creates "gravity" within the market itself.

This philosophy is not an attempt to present "new words," but to design "new constraints."

By institutionally constraining the behavior of participants and operating entities, long-term stability is constructed.

This design is constituted based on the following principles:

2.1 Design Independent of Inflation

Token issuance and high APY rewards aimed at securing short-term liquidity create constant selling pressure and invite market instability.

AFX does not adopt a reward design based on new issuance but uses only the value generated from actual trading activities as resources for reinvestment.

This forms a sustainable growth structure based on real demand, rather than inducing short-term speculation.

2.2 Exclusion of Arbitrary Operational Discretion (Changes Limited to Governance/Prior Disclosure)

Many projects rely on the discretion of the operating entity for fund allocation, reward design, and operational judgment.

This structure contains governance risks and trust erosion risks.

In AFX, fund flows and major operational processes are programmed as much as possible, minimizing room for individual discretionary intervention (changes are limited to governance/prior disclosure), thereby securing predictability as an institution.

2.3 On-Chain Verifiability

Major fund movements in AFX (fee receipt, referral allocation, POL reinvestment, burning) and reward determination rules are implemented in a form that is publicly available and verifiable on-chain.

Even if auxiliary analysis (e.g., monitoring behavioral patterns) is used for fraud detection or risk monitoring, final fund allocation and reward determination are executed based on rules verifiable on-chain.

Transparency is not a substitute for trust, but the foundation for making trust unnecessary.

2.4 Market-Linked Growth Model

The growth speed of AFX is directly linked to trading activity in the market.

If trading volume increases, the compounding engine accelerates; if it decreases, it naturally decelerates or stops.

This design eliminates unnatural growth caused by external fund injection or artificial manipulation, forming a development path aligned with market reality.

2.5 Design Premised on MEV Resistance

In a decentralized trading environment, MEV (Maximal Extractable Value) is structurally unavoidable.

AFX, while acknowledging the existence of MEV, adopts a structure where excessive value extraction through transaction ordering manipulation or price manipulation is economically difficult to establish.

This design combines a 0.5% slippage cap, trading volume limits based on liquidity reserve ratios, split execution, and random delays of 2 to 4 hours to significantly constrain price distortion and execution probability in a single transaction.

This aims to lower the expected revenue from MEV extraction to a level below gas costs, failure risks, and capital lock-up costs.

As a result, under this environment, sandwich attacks and front-running are economically difficult to establish (room for establishment remains depending on market conditions).

Through this structure, structural disadvantages for long-term participants are institutionally suppressed.

Based on the above principles, AFX is built as an institutional protocol that does not rely on "operations, promotion, or hype."

The purpose of this design is not a short-term price increase, but the formation of a market foundation that continues to function over the long term.

3. Overall Structure: Formation of "Market Gravity" via Dual Engines

AFX is designed as a structure integrating two independent engines to avoid reliance on a single growth factor.

The purpose of this design is to form self-sustaining "gravity" within the market, rather than relying on short-term capital inflows or topicality.

This gravity refers to a structural incentive for participants to remain over the long term as a result of rational judgment.

AFX realizes this state by combining the following two engines.

3.1 POL Compounding Engine: Self-Propagating Structure of Liquidity

The first engine is a compounding liquidity expansion mechanism based on Protocol-Owned Liquidity (POL).

This engine functions through the following circulation structure:

- Fees are generated from market trading.
- Fees are collected.
- Re-fixed into LPs via reinvestment.
- The liquidity base is expanded.
- Expanded liquidity induces trading volume.

Through this cycle, liquidity accumulates gradually without relying on external fund injection.

As a result, price stability, execution efficiency, and transaction reliability improve, forming a foundation that induces further participation.

3.2 Referral Graph: Diffusion Structure that Excludes Short-Term Influx

The second engine is the Referral Graph, which manages referral relationships as a graph structure.

Traditional referral systems tend to induce abuse and self-cycling registration aimed at short-term rewards.

While this increases temporary inflows, retention rates tend to be extremely low.

In AFX, by linking referral rewards to actual trading activity and duration of continuation, the following behaviors are economically favored:

- Long-term holding
- Continuous trading
- Substantive participation

This transforms referral activity from a short-term reward acquisition act into a sustainable network formation behavior.

3.3 Mutual Reinforcement Structure of Dual Engines

The core of this design is that the two engines described above mutually reinforce each other.

Thick liquidity formed by the POL Compounding Engine improves the trading experience and increases participant retention rates.

Meanwhile, the sustainable participant base formed by the Referral Graph promotes the stabilization of trading volume.

As a result, the following positive cycle is established:

- Expansion of liquidity
- Increase in trading volume
- Increase in fee revenue
- Expansion of reinvestment scale
- Strengthening of the market base

The state where this cycle is stably maintained is defined in this document as "Market Gravity."

3.4 Essential Difference from Single Growth Models

Many token designs rely on one of the following:

- High APY rewards
- Marketing measures
- Narrative-driven diffusion

These have short-term effects but lack sustainability.

AFX differs essentially from these models in that it internalizes growth through an institutional circulation structure.

3.5 Design Goals

The ultimate objectives of the dual engine structure presented in this chapter are summarized as follows:

- Growth independent of external stimuli
- Exclusion of short-term capital
- Retention of long-term participants
- Permanence of the market base

AFX aims to realize these through institutional design.

4. Terminology and Technical Definitions (Reading Aid and Verification Basis)

This chapter aims to clarify key concepts and technical terms used in this document from technical and legal perspectives.

These definitions are established to exclude arbitrary interpretations and ensure verifyability by third parties.

Burn & Earn

A mechanism on Raydium where LP tokens are permanently locked, and trading fees generated from said LPs can be continuously accumulated and claimed.

Locked LPs do not recirculate into the market, aiming for the permanent fixation of the liquidity base.

Fee Key NFT

An NFT representing the right to claim fees in the Burn & Earn structure.

The holder of said NFT has the right to claim fees generated from the corresponding LP.

The claim right is transferred along with the transfer of the NFT, and the right is permanently extinguished upon burning or invalidation processing.

Program Derived Address (PDA)

A dedicated address managed by a smart contract on Solana.

It does not possess a private key and has a structure where direct remittance by human manipulation is impossible.

In this design, it is used for the purpose of automating asset management and excluding operational discretion.

Slippage

The difference between the expected price and the actual execution price at the time of trade execution.

In this design, to prevent excessive price impact and unfavorable execution, a permissible upper limit is set, and the transaction is invalidated if it is exceeded.

Protocol-Owned Liquidity (POL)

Liquidity assets owned and managed by the protocol itself.

It serves as a foundation to reduce reliance on short-term liquidity supply from external participants and to secure long-term market stability.

5. POL Compounding Engine

Traditional POL (Protocol-Owned Liquidity) tends to remain a primary growth model of mainly "accumulating assets acquired through trading fees as LPs."

In this structure, although liquidity expands, the expansion speed is linear, and there is a limit to long-term self-propagation.

AFX constructs a compounding liquidity expansion model by incorporating a secondary growth mechanism into this primary growth structure, where trading fees generated by LPs are collected, reinvested, and permanently fixed.

This design assumes current Raydium specifications but is constructed as an abstract design considering portability to alternative DEXs in the future.

Note that "permanent lock" in this document refers to a design intended such that the locked LP position is structurally fixed in a state that is fundamentally non-redeemable and does not recirculate into the market.

However, since external risk factors such as DEX specification changes, smart contract vulnerabilities, and network failures may theoretically persist, this expression is a definition of the design goal, not a guarantee of outcome.

5.1 Compounding Loop Structure

The compounding loop in this design consists of the following steps:

1. Add NONPC/SOL LP and permanently lock it via the Burn & Earn mechanism.
2. LPs accumulate SOL and NONPC-denominated fees internally according to the buy/sell direction for each trade execution.
3. The fee claim right is managed by the Fee NFT, and only the program PDA is allowed to claim.
4. Collected fees are injected back into the LP and immediately permanently fixed.
5. Next-period fees are generated based on the increased LP balance.

Through this circulation, a compounding structure where "fees generate fees" is formed.

In this design, "not requiring external fund injection" means that growth resources are limited to fees generated from market trading.

Growth stops if no trading occurs, but this constraint itself is an institutional requirement that guarantees soundness.

5.2 POL Processing Design (Fee Allocation and Reinvestment: Rebalancing Method)

Trading fees generated from LPs are accumulated as SOL and NONPC depending on the trade direction and pool state. Therefore, the collected fee assets are two assets (SOL, NONPC), and their composition ratio constantly fluctuates depending on the market environment.

In AFX's POL compounding, to allow the collected (SOL, NONPC) to be re-injected into the LP as is, the necessary amount is rebalanced based on the pool's price (reserve ratio) at that time, converted to LP, and permanently locked.

The reinvestment procedure is as follows:

1. Collect fees as (SOL, NONPC) and confirm the collected amount.
2. Calculate the target ratio of (SOL, NONPC) required for LP addition based on the pool's reserve ratio.
3. If the collected assets deviate from the target ratio, swap only a portion of the excess side to the deficit side to adjust to the required amount.
   - If NONPC is excessive: Swap only the necessary amount from NONPC -> SOL.
   - If SOL is excessive: Swap only the necessary amount from SOL -> NONPC.
4. Construct NONPC/SOL LP with the adjusted (SOL, NONPC).
5. The constructed LP is immediately subject to permanent lock (Burn & Earn).

Note that the slippage cap, execution frequency, split conditions, and execution limits are fixed in advance. As a result, swaps included in the reinvestment process are always executed "only for the necessary amount and under capped constraints," institutionally suppressing price impact and the probability of MEV targeting.

Although this process may include NONPC -> SOL or SOL -> NONPC swaps depending on market conditions, unlike constant selling pressure caused by newly issued rewards, it has a circulation structure where it is re-fixed to LP using fees originating from real demand as the source.

Furthermore, if the market environment worsens and collected fees decrease, the execution pressure of reinvestment automatically decreases due to the execution lower limit and execution frequency upper limit. This suppresses the structural risk of a self-reinforcing selling spiral occurring in a downtrend.

5.3 Compounding Model and Sensitivity Analysis

This section demonstrates the behavior of the POL reinvestment structure using a simplified model.

The following is a reference model for promoting understanding and does not guarantee future results.

5.3.1 Basic Model (Standard Case)

- Initial LP Scale: Equivalent to 100 SOL
- Weekly Fee: Equivalent to 1 SOL
- When Compounding Applied:
    - $L_{n+1} = L_n \cdot (+\ r)$
    - (r : Weekly fee rate)
- Week 1: 100 -> Approx. 101
- Week 2: 101 -> Approx. 102
- Week 3: 102 -> Approx. 103

Generated fees become the base for the next period, causing gradual expansion.

5.3.2 Low Volume Case (Conservative Assumption)

- Initial LP Scale: 100 SOL
- Weekly Fee: 0.3 SOL
- Week 1: 100 -> 100.3
- Week 2: 100.3 -> 100.6
- Week 3: 100.6 -> 100.9

Growth slows, but structural contraction does not occur.

5.3.3 High Volatility Environment Case

If prices and volumes are unstable, the growth curve becomes non-linear in the short term.

However, since reinvestment resources are limited to real demand fees, excessive expansion and rapid contraction tend to be suppressed.

5.3.4 Growth Stagnation Case (Extreme Assumption)

If trading volume drops significantly, collected fees decrease or vanish, and compounding growth naturally stops.

Since this design does not rely on external compensation or inflationary rewards, life-prolonging acts accompanied by financial deterioration do not occur.

As a result, the LP token quantity may be maintained, but the valuation depends on market price.

5.3.5 Comprehensive Evaluation

From the above, this compounding structure possesses the following characteristics:

- Directly linked to market activity
- Excessive expansion is unlikely to occur
- Automatically decelerates in a downtrend
- Maintains a high internal retention rate
- Does not require external fund injection

This design is an institutional design aimed at the stable formation of a long-term market foundation, not the maximization of short-term yields.

6. Referral Graph (Sustainable Acquisition Structure: NONPC-denominated)

Diffusion is indispensable as a growth factor in decentralized projects.

However, referral systems aimed at short-term rewards tend to degrade the quality of participants and undermine sustainability.

The Referral Graph in AFX is designed as a sustainable Customer Acquisition Cost (CAC) design sourced from actual transaction fees, unlike general inflation-dependent referral reward models.

This system aims to transform diffusion behavior from short-term profit behavior into long-term network formation behavior.

6.1 Referral Reward Calculation Principles

The accrual and confirmation of referral rewards are judged based on the referred person's continued participation period and substantive activity history.

Rewards are calculated as follows based on the participation period at the time of release (unlock):

- Less than 30 days: 0%
- 30 days or more, less than 90 days: 30%
- 90 days or more: 100%

Rewards are not generated for short-term leavers, and the ungenerated portion is automatically returned to the POL.

This structurally eliminates the incentive for short-term speculative participation.

6.2 Integration Structure with POL

This referral system is not a standalone reward system but is designed as a circulation structure integrated with the POL Compounding Engine.

Reward resources that did not originate from short-term participants are re-injected into the expansion of the liquidity base and belong to long-term participants as a whole.

Through this, referral activity is transformed from an individual reward acquisition act into an act of amplifying the entire protocol value.

6.3 Fraud and Multiple Registration Suppression Design

This system has a structure that lowers the economic rationality for acts such as multiple registrations, self-referral loops, and mass production of accounts aiming for rewards.

Specifically, the following indicators are evaluated comprehensively:

- On-chain transaction history
- Continuous participation period
- Holding/Trading patterns
- Behavioral similarity analysis

By combining these, the expected value of returns from fraudulent acts is structurally lowered.

6.4 Positioning in Economic Design

The Referral Graph is not a marketing measure but a participant optimization device incorporated as an institutional design.

The purpose of this system lies not in maximizing the number of participants, but in maximizing the continuous participation rate and market contribution.

Therefore, the reward design is intentionally set conservatively.

6.5 Design Goals

The ultimate objectives of the Referral Graph presented in this chapter are summarized as follows:

- Exclusion of short-term participants
- Preferential treatment for long-term participants
- Suppression of fraudulent acts
- Strengthening of the POL base
- Accumulation of network value

AFX achieves diffusion and quality control simultaneously through this system.

6.6 Game Theoretic Consideration (Reference Model): Why Long-Term Participation Becomes Rational

This section is a reference model to explain the impact of the Referral Graph on participant decision-making. The following formulas are simplifications for promoting understanding and do not guarantee future results, price trends, or profitability.

The expected payoff $Ui(t)$ of participant i in period t is defined as follows:

$$U_i(t) = -F \cdot X_i(t) + M(t) \cdot R_i(t) - C_{opp}(t) + B(t)$$

Here, each variable is defined as follows:

- F : Unlock fee rate (In v1.0 $F = 0.02$)
- $Xi(t)$: Unlock target amount
- $Ri(t)$: Base reward linked to referral (originating from trading fees)
- $M(t)$: Reward confirmation multiplier according to participation period
- $Copp(t)$: Opportunity loss due to early exit (abandonment of unconfirmed rewards, etc.)
- $B(t)$: Base strengthening effect attributable to long-term participants due to POL return flow, etc. (Internalization of externalities)

6.6.1 Exit Suppression via Non-Linear Reward Structure

Referral rewards are confirmed in stages according to the participation period. This is expressed as the reward confirmation multiplier $M(t)$ in the following step function:

$$M(t) = \begin{cases} 0 & (t < 30) \\ 0.3 & (30 \le t < 90) \\ 1.0 & (t \ge 90) \end{cases}$$

Due to this discontinuous design, the opportunity loss (abandonment of unconfirmed rewards) when exiting near the boundaries ($t = 29, 89$ etc.) is maximized, and the economic rationality of short-term exit is structurally lowered.

Figure 6: Concept diagram of discontinuity given to expected utility $Ui(t)$ by stepwise reward confirmation $M(t)$

This diagram is a concept diagram showing that expected utility $Ui(t)$ can change discontinuously at boundaries when the reward confirmation multiplier $M(t)$ changes stepwise at 30 days and 90 days. Specific values and slopes are illustrations based on assumptions for promoting understanding and do *not guarantee or prove future results, price trends, profitability, or the establishment of equilibrium.*

6.6.2 Structure of Internalizing Externalities

Unconfirmed rewards and fees abandoned by short-term leavers are returned to the POL by the program. This is a structure that internalizes the negative externalities caused by short-term behavior as base strengthening $B(t)$ for long-term participants. In other words, individual selfish behavior is institutionally converted into a direction that strengthens the common foundation.

6.6.3 Redesign of Nash Equilibrium

In traditional inflation-type tokens, since selling by others damages one's own asset value, "selling before others sell" tends to be the Dominant Strategy, and early exit tended to be the equilibrium. On the other hand, AFX introduces the following institutional constraints:

- Fixed unlock fee ($- F \cdot Xi(t)$)
- Stepwise reward confirmation ($M(t)$)
- Loss of future profit (opportunity cost) upon exit ($Copp(t)$)
- Base strengthening via automatic return to POL ($B(t)$)

Due to these constraints, short-term exit becomes structurally disadvantageous, and continuation for a certain period or longer functions as a more stable strategy (Nash Equilibrium).

6.6.4 Consequences for Institutional Design

Under this structure, participants make decisions not in an environment relying on "the good will of others," but in an environment where "one's own base can be strengthened even if others exit." Therefore, long-term continuation is established as a choice based on individual rationality, not merely cooperative behavior. AFX is designed with the purpose of rewriting the payoff structure itself through institutions.

7. Fee Design and "Non-Attribution to Operations" Guarantee

This chapter clarifies the fee structure and fund attribution principles in AFX, and technically guarantees that the operating entity is designed not to obtain direct economic profit from said fees.

This design aims to eliminate the possibility of arbitrary fund diversion and profit inducement at the institutional level.

7.1 Basic Principles

All fees collected in AFX do not become revenue for the operating entity.

Said fees are automatically received by a PDA under program control and are never diverted to uses other than those defined in advance.

Uses of fees are limited to the following:

- Referral rewards
- POL reinvestment resources
- Automatic burn processing

Since Fee Key NFTs have the property that the claim right can be permanently lost due to burning, loss, etc., said NFTs are held by the PDA, completely automating claim right management.

Through this, the flow of claim assets is institutionally fixed.

7.2 v1.0 Fee Allocation Composition

Fee allocation in v1.0 is defined as follows:

- Lock Fee: 0%
- Unlock Fee: 2.0% (NONPC-denominated)

The breakdown of the Unlock Fee is as follows:

- Max 0.7%: Tier 1 Referrer (Only upon achievement of continuation conditions)
- Max 0.3%: Tier 2 Referrer (Ditto)
- Fixed 0.1%: Automatic Burn
- Remainder (Minimum 0.9% + Unpaid portion): All returned to POL

If a referrer does not exist, or if conditions are not met, said reward slot is automatically allocated back to the POL.

7.3 Referral Reward Allocation Model

Of the 2.0% Unlock Fee, a maximum of 50% is allocated as referrer rewards.

Allocation is premised on the referee achieving continuation conditions.

A specific example is shown below.

When a referee unlocks 10,000,000 NONPC:

- Unlock Fee (2.0%): 200,000 NONPC
- Referral Reward Max Slot (1.0%): 100,000 NONPC
  - Tier 1: Max 70,000 NONPC
  - Tier 2: Max 30,000 NONPC
- Remainder: Automatically allocated to POL and burn processing

In any case, said fees do not belong to the operating entity.

7.4 Technical Guarantee and Verifiability

This fee structure is forcibly executed by a smart contract and cannot be changed by the sole discretion of operations.

All fund movements are public on-chain and allow for continuous verification by third parties.

Additionally, future parameter changes will be implemented only through governance processes.

7.5 Institutional Significance

With this design, AFX makes a clear break from the traditional "Fees = Operational Profit" model.

Fees are reinvested only in the expansion of the market base and the strengthening of the participant network.

Through this, the profit structures of the operating entity and participants are aligned over the long term.

8. POL Compounding Execution Specifications (Safety, MEV Resistance, Split Control)

If the execution of POL compounding allows for excessive discretion and concentrated execution, it amplifies price impact on the market and MEV extraction risks.

Therefore, in v1.0, execution conditions, upper limits, lower limits, frequency, split control, and retry rules are fixed with the aim of minimizing accident probability and abuse potential.

Execution Bots are designed to transition incrementally to multisig or DAO management.

8.1 Execution Frequency

POL reinvestment is executed with an upper limit of once a week.

Priority is given to long-term stable operation, avoiding overreaction to short-term price fluctuations.

8.2 Execution Lower Limit (Exclusion of Small Amount Processing)

It is executed only when the swap amount subject to POL (50% side of NONPC subject to reinvestment) is equivalent to 0.25 SOL or more on an estimate basis.

If it is less than 0.25 SOL equivalent, the processing for that week is skipped because the failure cost and fee burden become relatively large compared to the compounding effect.

8.3 Execution Upper Limit (On-Chain Control)

The swap amount per instance is limited to 0.5% or less of the SOL reserve of the relevant pool.

This limit is enforced based on the reserve ratio referable on-chain, not off-chain indicators.

This structurally prevents excessive price impact and concentrated execution.

8.4 Slippage Cap

The maximum permissible slippage is set to 0.5%.

If said limit is exceeded, the transaction is not established and is automatically treated as a failure.

By not allowing unfavorable execution, long-term asset deterioration is prevented.

8.5 Split Execution and Retry Control upon Failure

If execution fails due to slippage restrictions, etc., retries are performed up to a maximum of 3 times.

Retries are executed with a random delay of 2 to 4 hours, eliminating predictability due to fixed times.

Also, the following split controls are applied during retries:

- 1st Attempt: 100% of target amount
- 2nd Attempt: 70% of target amount
- 3rd Attempt: 50% of target amount

This aims to improve the establishment probability and suppress wasteful failure costs.

8.6 Accumulation Suppression and Phased Execution Control

To prevent the reinvestment target amount from becoming excessively bloated due to multiple postponements, if a pre-defined threshold is exceeded, the target funds are split over multiple weeks and executed in phases.

This suppresses excessive price impact and MEV targeting risks from a single transaction.

8.7 Fail-Safe Mechanism

If market liquidity drops significantly, or if continuous execution failures are observed, reinvestment processing is paused, and funds are held safely.

Said pause measure is lifted based on governance rules.

Through the above control mechanisms, this design structurally suppresses concentrated execution, predictability, excessive price impact, and MEV extraction risks.

9. Pre-Launch Holder Spot Measure (Snapshot Booster: Limited/Non-Permanent Support Design)

This chapter defines a temporary support system for evaluating the contribution of existing holders on a limited basis at the time of the AFX start.

This measure is not intended for short-term price formation or speculative inducement but is positioned as a supplementary measure aimed at ensuring stability in the initial stage.

This system is not a permanent reward system and will be implemented only once in v1.0.

9.1 System Overview

Snapshot Booster is a system that performs a limited additional allocation based on the holding status immediately before the AFX start.

The system specifications are as follows:

- Snapshot Date: Specific time within 24 hours prior to the AFX start date
- Reward Total Cap: 0.2% of total supply (Fixed cap)
- Allocation Method: Pro-rata allocation based on holding ratio at the time of snapshot
- Reward Currency: NONPC

The source for the Snapshot Booster is not new issuance (minting) but is contributed from within the pre-defined Community Airdrop Allocation. Therefore, this measure is implemented not as an inflationary reward but as a reallocation of existing allocation. Unconfirmed (condition unmet) portions are returned to the POL and used to strengthen the long-term base.

With this upper limit setting, the impact of this measure on the entire token economy is structurally limited.

9.2 Qualification Confirmation Conditions (Short-Term Speculation Suppression Design)

Snapshot Booster rewards are confirmed conditioned on continuous participation after the start, not merely holding history.

The specific qualification conditions are as follows:

- Lock 50% or more of the snapshot balance for 90 days within 14 days from the AFX start date.
- Complete said lock period.

If conditions are not met, reward qualifications automatically expire.

Rewards are distributed in NONPC at the time of the 90-day lock expiration.

9.3 Integration with POL and Long-Term Design

The reward resources for the undistributed portion for which qualifications have expired in this system are automatically returned to the POL.

As a result, unused rewards generated from short-term participants are re-injected into the expansion of the liquidity base.

This design balances initial support and long-term stability.

9.4 Positioning in Institutional Design

Snapshot Booster is designed not as a "reward" for initial participants, but as a "support device for transition to long-term participation."

The purposes of this system are summarized as follows:

- Stabilization of initial liquidity
- Suppression of excessive selling pressure immediately after start
- Promotion of transition to long-term participants
- Guarantee of fairness in initial distribution

This measure is clearly distinguished from short-term price stimulus measures.

9.5 Non-Permanence and Restriction on Re-implementation

This system is implemented limited to the time of the v1.0 start.

Future re-implementation is not assumed in principle, and if implemented, governance approval is mandatory.

This prevents the formation of a permanent bonus-dependent structure.

10. Supply Management and Transparency Design

This chapter defines the token supply management policy in AFX and its verifiability.

This design aims to eliminate arbitrary supply adjustments and opaque discretionary manipulation.

10.1 Automatic Burn Mechanism

In AFX, a portion of the Unlock Fee is automatically allocated to burn processing.

In v1.0, said ratio is fixed at 0.1%.

Said burn processing is automatically executed by a smart contract, and human intervention is impossible.

10.2 Structural Supply Reduction Model

As long as unlock transactions continue, burn processing based on this design also occurs continuously.

As a result, the total supply decreases in stages linked to market activity.

This reduction is not due to the discretion of a specific entity but is an institutional result based on usage behavior.

10.3 Economic Role and Constraints

Automatic burning is not a device to guarantee price increases.

The main purpose of this mechanism lies in suppressing oversupply risks and preventing long-term dilution.

Therefore, the burn ratio is intentionally set conservatively.

High-rate burns aimed at short-term price stimulus are not adopted.

10.4 Verifiability and Transparency

All burn processing is permanently recorded on-chain.

The reduction amount, cumulative burn amount, and remaining supply are verifiable by anyone as a third party.

This design eliminates information asymmetry regarding supply manipulation.

10.5 Positioning in Design

Supply management is positioned as a supplementary stabilization element linked with the POL Compounding Engine and Referral system.

This mechanism aims for the maintenance of long-term market soundness, not speculative inducement.

11. On-Chain Verification and Public Audit Design

This chapter defines the public audit design to make all important asset flows and operational processes in AFX independently verifiable by third parties.

This design aims to ensure transparency through technical verification, not trust in the operating entity.

11.1 Verification Principles

AFX does not rely on "Presumption of Good Faith."

All important processes must be traceable and verifiable on-chain.

Based on this principle, operational information is intentionally designed to be public.

11.2 Public Verification Items

At the time of implementation, the following information is constantly public:

- NONPC/SOL LP Lock Information (Burn & Earn linked address and lock conditions)
- Fee Key NFT holding destination (Program management PDA)
- Fee receipt address and distribution rules by use
- POL reinvestment history and LP re-fixation status
- Burn address and cumulative burn performance

11.3 Standardization of Verification Methods

The above items are made confirmable through major block explorers and public dashboards.

Reference addresses and confirmation procedures necessary for verification are clearly stated on the official repository and official website.

This provides a verification path even for participants without specialized knowledge.

11.4 Continuous Audit and Response to External Verification

This design assumes continuous review by external auditors, analysts, researchers, etc.

If inconsistencies, deviations, or abnormal behaviors are detected, objective verification based on on-chain evidence is possible.

11.5 Institutional Significance

Through this public audit design, AFX transitions from "Trust-based Operation" to "Verification-based Operation."

Thereby, information asymmetry and discretionary risks are structurally eliminated.

12. Design Assessment and Evaluation

Here we organize the design standards of AFX, comparing it with existing DeFi protocols and evaluating it from a professional perspective.

AFX is not an "Invention-type Protocol" based on a single new technology.

On the other hand, it is classified as an "Integrated Theory Completion Model" that intentionally integrates and optimizes DeFi design knowledge accumulated over the past 10+ years.

12.1 Components and Reference Lineages

AFX is constructed by integrating the following existing theories and implementation systems.

Element	**Reference Lineage**
POL Design	Olympus Family
Real Yield	GMX Family
Permanent LP	Curve / Raydium Family
Referral Optimization	Web2 CAC Theory
MEV Resistance	MEV Research Field

Note: While individual elements are known, no case where these are designed as a self-contained integrated structure has been confirmed on a public information basis as of February *14, 2026.*

12.2 Structural Comparison of Capital Efficiency

The following comparison matrix shows how AFX resolves the structural defects of past DeFi models and maximizes the capital retention rate.

Evaluation Axis	DeFi 1.0 (Liquidity Mining)	DeFi 2.0 (POL/Bonding)	AFX (Compounding POL)
Value Source	Dilution of newly issued tokens	Discounted issuance of future expected value	Fee revenue accompanying actual trading
Capital Retention Characteristics	External Outflow Type (Mercenary Capital)	Expectation Dependent Type (Conditional Retention)	Irreversible Accumulation Type (Permanent Fixation)
Institutional Constraints	Minimal (Free Entry/Exit)	Medium (Lock-up Period)	Maximum (Correlation between Fee and Duration)

12.3 Evaluation Elements from Advanced DeFi Perspective

Major elements evaluated from a professional perspective are as follows:

- Zero inflation dependence design
- Minimization of UX friction
- Operational discretion exclusion structure
- Safety design premised on MEV
- Self-sufficiency of the compounding loop

These show a design philosophy clearly different from short-term price manipulation or reward-dependent models, and are classified as a "Structural Protocol" premised on sustainability.

12.4 Current Constraints

At the same time, the following constraints exist at this stage:

- Reliance on Raydium for the liquidity base
- Insufficient accumulation of actual operation data
- Reliance on automated Bots
- Unverified TVL scale

These are not design defects but are classified as verification challenges in the implementation and operation phases.

These are challenges specific to the initial stage faced by many DeFi protocols and are subjects to be verified through future operation.

12.5 Greatest Value: Reproducibility

Many successful projects have relied on the following elements:

- Market Environment
- Current Times/Trends
- Human Influence

On the other hand, AFX relies on:

- Design
- Structure
- Reproducibility

In this respect, AFX is a design system that also stands as a subject of research and verification.

12.6 Gap with Market Understanding

Fairly viewed, the greatest risk of AFX lies in the "Market's Cost of Understanding."

Many participants strongly tend to rely on APY, price fluctuations, and narratives; AFX, which prioritizes long-term structure over immediate impact, may be incomprehensible or undervalued in the initial stage.

However, this risk itself can become a factor supporting medium- to long-term stability.

13. Update and Optimization Policy (Governance-Linked Design)

AFX is positioned not as a "sale of a finished product" but as an institutional design experiment premised on verification, improvement, and optimization.

Therefore, these specifications are not fixed but will be updated in stages according to the market environment, technological progress, and operational performance.

However, no changes will be implemented arbitrarily.

All changes will be disclosed in advance or simultaneously with the following information:

- Details of the change content
- Reason for change and expected risk reduction effect
- Scope of impact on existing participants

- Method of reflection on-chain and verification procedures

Important specification changes are designed to be implemented through a governance approval process in the future.

This policy balances transparency and evolvability.

14. Disclaimer and Risk Disclosure (Important)

This document is a technical paper intended for the publication of experimental protocol specifications related to $NONPC and is not intended as investment advice, solicitation, inducement, or a guarantee of future results.

AFX is constructed based on an experimental design aimed at verification and optimization. During the development stage and operation process, it may fail to fully demonstrate expected functions or may become structurally untenable due to design constraints, changes in the market environment, technological factors, etc.

Crypto assets and decentralized finance protocols possess inherent diverse risks, including but not limited to the following:

- Price fluctuation risk
- Liquidity risk
- Smart contract vulnerabilities
- MEV and front-running
- Network failures
- Changes in the regulatory environment

Participants shall involve themselves in this project based on their own responsibility and judgment, having fully understood these risks and the experimental nature of this design.

This design does not guarantee future results, price trends, profitability, or the maintenance or improvement of asset value.

The operating entity