FORWARDS: Revolutionizing DeFi with Asynchronous Trade and Settlement

Written by RefractedLabs

Executive Summary

FORWARDS is revolutionizing the $3 trillion crypto market by eliminating its most restrictive limitation: the requirement for trades to execute and settle simultaneously. By decoupling trade execution from settlement, FORWARDS unlocks transformative possibilities that redefine capital efficiency, liquidity, and security across DeFi.

For the first time, Bitcoin can be traded in a fully decentralized and anonymous manner while remaining securely in cold storage until settlement. This groundbreaking approach eliminates the need to move assets into hot wallets or centralized exchanges, addressing one of the most significant security risks in crypto trading.

FORWARDS enables the trading of previously inaccessible assets, such as staked tokens (with over $64 billion locked on Ethereum alone), vesting rewards, LP positions, and governance-locked tokens, without requiring unstaking or waiting periods. Furthermore, vesting tokens can be traded anonymously without revealing wallet details—preserving user privacy while unlocking liquidity in locked assets. These innovations create entirely new markets and liquidity opportunities for users.

Traders gain access to advanced financial capabilities traditionally reserved for institutional markets. These include trading without 100% upfront collateral, deploying capital across multiple strategies simultaneously, and executing sophisticated instruments such as forward contracts, cross-chain trading without bridges, and shorting with fixed funding costs. These tools empower traders with flexibility and efficiency that current DeFi infrastructure cannot support.

In addition to unlocking liquidity and efficiency, FORWARDS introduces new financial instruments by enabling the monetization of future revenues. Validators can sell staking rewards before issuance, developers can trade future protocol fees, and liquidity providers can realize earnings before vesting periods end. This innovation mirrors traditional finance's settlement models while maintaining DeFi's transparency and decentralization—making it a compelling proposition for institutional investors seeking familiar operational frameworks.

By decoupling execution from settlement while ensuring robust on-chain security, FORWARDS bridges the gap between DeFi and traditional finance. It expands the addressable market by trillions of dollars and positions itself as foundational infrastructure for next-generation DeFi. For investors, this represents a rare opportunity to participate in a paradigm shift that will underpin the future of decentralized markets—offering a solution as essential as exchanges or AMMs but designed to overcome the limitations that have constrained DeFi's growth for years.

The Current DeFi Trading Landscape: Limitations of Atomic Settlement

Why Atomic Settlement Creates a Bottleneck

The current DeFi trading infrastructure relies almost exclusively on atomic settlement—trades execute and settle instantaneously in a single transaction. This model creates significant limitations:

Capital Inefficiency: Users and market makers must provide 100% of the required assets upfront. This requirement ties up capital that could otherwise be deployed elsewhere, creating opportunity costs and artificial liquidity constraints.

Consider this: A trader with $100,000 in capital can only open a single $100,000 position at a time in atomic settlement systems. In traditional finance with T+2 settlement, that same trader could open multiple positions totaling far more than their capital base.

Liquidity Provider Challenges: LPs in AMMs face:

- **Impermanent Loss Risk:** Price changes between paired assets create losses compared to simply holding the assets
- **Inefficient Rebalancing:** LPs effectively act as passive market makers without professional risk management tools
- **Unsustainable Incentives:** Protocols resort to token emissions to attract liquidity, creating "mercenary capital" that chases the highest yields without commitment

Limited Trading Capabilities: The atomic nature restricts:

- Complex order types (limit orders, stop-losses)
- Cross-chain asset exchanges without bridging
- Trading of staked or time-locked assets
- Access to the best prices on DEX or CEX

Real-World Impact: The Unstaking Dilemma

Imagine a delegator with $1 million in tokens earning a 4% APY. If the token price surges, they face cannot sell and if they choose to unstake and the price drops during the waiting period, they risk selling at a lower price than expected by the time the 21 days are over.

Introducing FORWARDS: Decoupling Trade and Settlement

The Asynchronous Settlement Model

FORWARDS introduces a fundamentally different approach to DeFi trading:

1. **Trade Execution:** Parties agree to a trade with terms (assets, prices, amounts), which is recorded on-chain and escrow amounts deposited
2. **Settlement Period:** A predefined time window before the actual exchange of assets occurs
3. **Final Settlement:** At the end of the period, assets are exchanged according to the agreed terms

This model can be likened to putting a deposit down for a car or house: you lock in today's price, agree on terms, and complete the payment at a later date when you receive the asset. Similarly, FORWARDS allows traders to lock in prices and execute trades now while settling them at a predefined future date.

Forward Settlement in Traditional Finance vs. DeFi

In traditional finance, forward contracts are a cornerstone of financial markets, enabling participants to hedge risks and speculate on future prices. This multi-trillion-dollar market unlocks numerous use cases, such as hedging future revenue streams and managing price volatility. However, in DeFi, forward contracts are underutilized, offering a significant opportunity for growth and innovation by replicating these traditional financial instruments in a decentralized manner.

How FORWARDS Works

When a trader places an order on FORWARDS:

1. They specify their trade details **and** a settlement timeframe (e.g., T+1 block, T+100 blocks, or T+10 days)
2. A small escrow amount is provided rather than the full trade value
3. Once matched, the trade is confirmed immediately, but assets aren't transferred until the settlement date
4. During the interim period, both parties can utilize their assets for other purposes

Security and Compliance: FORWARDS implements an escrow system where traders provide partial collateral based on their reputation, settlement timeframe, and trade value. A graduated escrow model ensures that trusted traders with strong track records can operate with minimal collateral requirements.

Unlocking Previously Inaccessible Asset Classes

FORWARDS doesn't just improve existing trading—it enables entirely new markets by unlocking previously inaccessible assets. This innovation opens up fresh opportunities for traders, investors, and market participants across the DeFi ecosystem.

Trading Staked and Locked Assets

Staked Assets

Users with assets locked in staking can now trade them without unstaking. Here's how it works:

- **Immediate Trading with Future Settlement:** A delegator can sell their tokens today and start the unstaking period, knowing they have locked in today's price for future settlement.
- **Configurable Settlement Timing:** Settlement can be aligned with unstaking periods, ensuring that assets are available for trading while maintaining network security.
- **Unlocking Billions in Staked Tokens:** This feature unlocks over billions in currently staked tokens for trading, enhancing market liquidity and efficiency.

Vested Tokens

Team members, investors, and contributors with vesting schedules can monetize future token distributions:

- **Example:** An employee or investor with tokens vesting in six months can sell them today at a discount, with settlement occurring after vesting.
- **Price Discovery and Efficiency:** This capability creates price discovery for locked tokens and improves market efficiency by allowing early monetization of future value.

Locked Tokens

Users with assets deposited into protocols for farming incentives or rewards can agree on a price today to sell the tokens after the incentives campaign. This allows them to plan their asset utilization more effectively.

Cold Storage Tokens

Traders can agree on the terms of their trade without needing to remove assets from cold storage:

- **Example:** A Bitcoin whale wants to take profits at $150,000 but doesn't want to withdraw assets from cold storage. Instead, they leave an order on FORWARDS. When their price limit is reached, they have a settlement period of their choosing to withdraw from cold storage.
- **Enhanced Security and Flexibility:** This approach maintains asset security while providing flexibility in managing trading opportunities.

By enabling the trading of these previously inaccessible assets, FORWARDS expands the DeFi market's depth and breadth, offering new opportunities for growth and innovation.

Advanced Trading Strategies

Shorting with Fixed Funding: Unlike CEX perpetual futures with variable funding rates, FORWARDS enables shorting with predictable costs:

- Traders agree to sell an asset now and deliver it at a future date
- They can acquire the asset before settlement, locking in the cost of shorting
- This eliminates the uncertainty of variable funding rates on centralized exchanges

Future Revenue Trading: FORWARDS enables forward-selling of anticipated income:

- A developer can sell future revenue from protocol fees
- A farmer can sell future points revenue today
- A validator or miner can sell future block rewards they will receive
- This creates entirely new financial instruments previously unavailable in DeFi

Cross-Chain and NFT Capabilities

Simplified Bridging Alternative: FORWARDS eliminates the need for traditional bridging:

- Example: A user with tokens on one chain can trade directly with a market maker who handles the cross-chain complexity
- The user receives assets on their preferred chain without ever touching a bridge
- This reduces technical complexity and security risks associated with bridges

Cross-Chain NFT Trading: Users can submit bids for NFTs on any supported chain:

- A user on one chain can bid for an NFT on another chain without leaving their native chain or the NFTs being required to be locked
- Settlement delivers the NFT to their wallet of choice on any supported chain
- This creates unified liquidity across fragmented NFT markets

Enhanced Privacy

Selective Information Disclosure: Unlike atomic settlement which requires revealing full wallet contents:

- Users can agree to trades without exposing their complete holdings
- A VC can forward sell their vesting tokens without needing to novate SAFTs, negotiate with the team or dox their wallet to traders. They simply agree a forward sale and after vesting fund the settlement wallet with the settlement amount.
- Settlement addresses can be specified later, enhancing privacy
- Trading intent is separated from asset ownership

Technical Architecture

FORWARDS consists of four primary components:

1. **Execution Engine:** Confirms trade agreements immediately and records them on-chain
2. **Settlement Layer:** Manages the deferred settlement process according to predefined conditions
3. **Risk Management System:** Implements escrow requirements, penalties, and reputation tracking
4. **Governance Framework:** Enables community control of protocol parameters

Settlement Cycles

FORWARDS offers flexible settlement options:

Settlement Type	Timeframe	Typical Use Case
Short-term	T+1 block (~12 sec)	Regular trading, small amounts
Medium-term	T+100 blocks (~20 min)	Larger trades, cross-chain swaps
Long-term	T+1 day or more	Staked assets, vested tokens

Risk Management

The protocol implements several mechanisms to ensure settlement reliability:

- **Graduated Escrow Requirements:** Escrow amounts are customizable but could be determined based on:
    - User reputation score
    - Settlement timeframe (longer = higher requirements)
    - Trade value (larger = higher requirements)
- **Reputation System:** Users build a settlement history that affects:
    - Escrow requirements
    - Trading limits
    - Fee discounts
- **Penalty Mechanisms:** Failures to settle result in:
    - Forfeiture of escrow
    - Reputation damage
    - Temporary trading restrictions

The ASYNCX Token: Governance and Utility

The ASYNCX token forms the backbone of the protocol's governance and economic model:

Token Utility

Order Management: The token must be staked to leave orders on-chain, with a logarithmic relationship between tokens staked and order allowances:

ASYNCX Staked	Order Allowance
0	0
100	10
1,000	15
10,000	20

This mechanism prevents spam while allowing serious traders to scale their activity.

Governance Rights: Token holders control critical protocol parameters:

- Escrow requirements and calculation methods
- Settlement timeframes and conditions
- Fee structures and distribution
- Protocol upgrades and integrations

Fee Revenue: The protocol generates revenue through:

- Maker and taker fees on trades

- Order creation and cancellation fees
- Unclaimed collateral from settlement failures

These revenues are distributed to token holders through on-chain governance decisions, creating a direct relationship between protocol success and token value.

Real-World Use Cases

Case 1: Trading While Maintaining Staking Yields

Current Problem: A delegator with $1 million in tokens earning a 4% APY sees the token price surge. They face a dilemma: unstake (losing weeks of rewards) or miss the trading opportunity.

FORWARDS Solution: The delegator creates a sell order for their tokens with a 30-day settlement period, aligning with their unstaking schedule. They provide a small escrow amount rather than the full trade value.

- They maintain staking rewards until they start undelegation
- At settlement, they deliver the now-unstaked tokens and receive the agreed payment
- This approach ensures they can trade while maximizing staking rewards and capitalize on today's prices for future delivery

Case 2: Forward-Selling Future Revenue

Current Problem: An investor anticipates future revenue from protocol fees and staking rewards but needs immediate liquidity.

FORWARDS Solution: The developer creates a forward contract to sell future revenue:

- They offer a portion of expected future fees for immediate sale
- An investor purchases the contract, providing partial payment upfront
- Each month, the developer delivers the agreed-upon fees to the investor at settlement
- The developer secures operating capital while the investor obtains future revenue at a discount

Future of DeFi with Asynchronous Settlement

FORWARDS represents a fundamental evolution in DeFi infrastructure, creating opportunities for:

Institutional Adoption: The familiar settlement model bridges the gap between DeFi and traditional finance, potentially accelerating institutional entry.

Retail Accessibility: By reducing capital requirements and simplifying complex operations like bridging, FORWARDS makes sophisticated trading more accessible to retail users.

Capital Efficiency: Research on traditional financial systems indicates that deferred settlement can reduce liquidity requirements by up to 90% compared to real-time gross settlement, suggesting massive potential efficiency gains for DeFi.

Regulatory Alignment: The asynchronous model creates clear audit trails and settlement records, potentially simplifying compliance while maintaining DeFi's permissionless nature.

Cross-Chain Ecosystem: By facilitating seamless trading across blockchains, FORWARDS could become a unifying layer for the currently fragmented blockchain ecosystem.

Conclusion: The Next Evolution of DeFi

Atomic settlement served DeFi well in its early stages, but has now become a limitation on growth, sophistication, and capital efficiency. FORWARDS's asynchronous trade and settlement model represents not just an incremental improvement but a fundamental redesign that:

- Enhances capital efficiency by unlocking currently idle assets
- Enables sophisticated trading strategies previously impossible in DeFi
- Creates markets for previously untradable assets like staked tokens and future revenue
- Simplifies cross-chain operations without traditional bridging risks
- Provides a familiar model for institutions while maintaining DeFi's core values

By separating trade execution from settlement, FORWARDS removes the artificial constraints that have limited DeFi's growth and opens the door to the next phase of ecosystem development - one that can finally compete with and ultimately surpass traditional financial infrastructure.

Appendix: Example Trade Workflow and Protections in FORWARDS

Example Trade Workflow

To illustrate the mechanisms of escrow and reputation in FORWARDS, consider the following scenario:

- Trade Setup: You want to sell 1 BTC for $100,000 with a settlement period of 1 hour.
- Escrow Requirements: You post 5% escrow in USDC ($5,000), reflecting the low volatility risk over this short timeframe.
- Counterparty Selection: You select X as the buyer because they hold a Tier 1 market maker badge with a perfect reputation score (100% fulfillment rate).
- Capital Efficiency: Due to their strong reputation, X is required to post zero or minimal escrow. This reduces their capital costs while still protecting you from default through their track record.

Dynamic Escrow Model

Escrow amounts are adjusted based on:

- Settlement duration: Short-term trades require lower escrow, while longer-dated maturities demand higher amounts due to increased volatility risk.
- Reputation: Trusted participants with high scores enjoy reduced escrow requirements, incentivizing reliability and credibility.

Additional Protections

FORWARDS offers further safeguards and flexibility:

- Trade Novation: Obligations can be sold or transferred to another party before settlement, creating liquidity for open contracts.
- Buy-In Mechanism: If a counterparty defaults and you prefer the original assets (e.g., BTC) over their escrow (e.g., USDC), another participant can step in, purchase the escrow, and deliver the agreed assets to you.

Conclusion

By combining dynamic escrow requirements with a robust reputation system, FORWARDS ensures trust and accountability while enabling efficient trading for reputable participants. Features like novation and buy-ins add flexibility and further protect users from defaults.

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