CYPR Protocol - Decentralized Spend Incentive Protocol

Cypher Team

July 16, 2025

Abstract

This paper introduces the CYPR protocol, a revolutionary blockchain-based ecosystem built on the Base chain that transforms traditional rewards into a decentralized, incentive-driven structure. Building upon Cypher's established crypto card product with over three years of real-world usage, CYPR introduces a comprehensive tokenomics model featuring merchant voting mechanisms, spend and referral incentives, and innovative bribing systems.

The protocol leverages a novel vote-escrow model (veCYPR) and dual-reward emission system to create transparent, on-chain value from everyday spending activities. With a fixed supply of 1 billion tokens distributed over 20 years, CYPR establishes a self-sustaining flywheel that aligns the interests of users, merchants, and referrers through epoch-based cycles. This innovative approach transforms routine spending into meaningful protocol participation, creating a competitive marketplace where merchants vie for community support while users gain real ownership in the rewards they help generate.

Contents

1 Introduction

1.1 Background: The Cypher Ecosystem

Cypher has been established as a non-custodial crypto card product for over three years, successfully enabling users to spend cryptocurrency for real-world expenses. This proven track record provides a solid foundation for the CYPR protocol, which aims to improve the existing ecosystem by introducing a sophisticated token-based incentive structure on the Base chain.

Traditional reward systems suffer from fundamental limitations including opacity in reward calculations, centralized control by financial institutions, disconnection between spending behavior and community participation, and limited redemption value. The CYPR protocol introduces a transparent, crypto-native alternative that transforms credit card spending into a gateway for governance and rewards with an innovative approach to incentivizing real-world consumer behavior through on-chain governance.

1.2 New Innovation and Cycle

CYPR introduces a transparent and decentralized alternative that creates direct connections between consumer behavior and the mechanics of the protocol. At its core, CYPR rewards users for their daily financial activity and allows them to participate in shaping the protocol outcomes through governance. Users can influence where future rewards flow while merchants compete for user attention through improved services and strategic incentives, creating a dynamic marketplace driven by community preferences.

1.2.1 Flywheeel

The protocol's fundamental innovation lies in its self-reinforcing rewards flywheel.

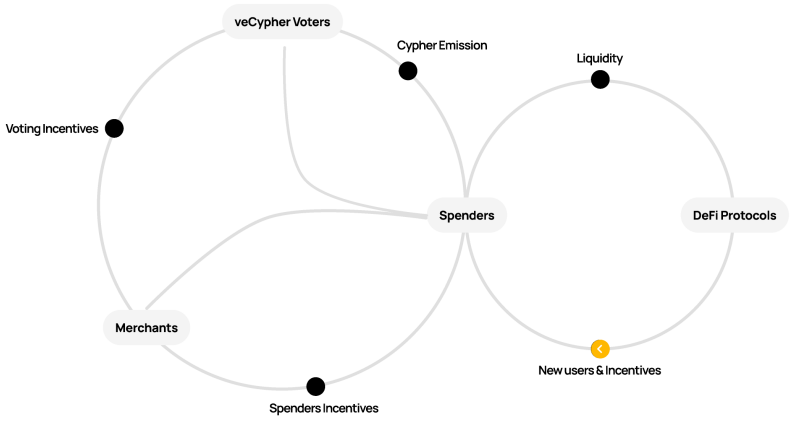

Figure 1: Flywheel economic model illustrating the reinforcing cycles of the protocol.

1. **Spend → Earn CYPR Tokens**:
   Users earn CYPR tokens as rewards for spending through the Cypher ecosystem. These tokens can be further utilized to unlock enhanced incentives.

2. **CYPR Tokens → Lock → Vote → Influence Emissions → Earn Additional Rewards**:
   By locking CYPR tokens, users gain voting power (veCYPR), allowing them to direct emissions toward their preferred merchants. This voting activity not only shapes the reward distribution but also grants voters additional incentives beyond standard spending rewards.

3. **Merchants → Add Bribes → Incentivize Voter Participation**:
   Merchants can offer bribes to encourage users to vote for them during reward emission cycles. This mechanism attracts more user engagement and spending, benefiting merchants through increased traffic, while rewarding voters who actively participate in the governance process. Only users who vote are eligible to receive these bribes.

4. **DeFi Protocols → Provide Liquidity → Enhance CYPR's On-Chain Utility**:
   As demand for CYPR grows, DeFi participants are incentivized to supply liquidity, deepening markets and reducing slippage. This expands CYPR's utility across staking, lending, liquidity provisioning, and yield farming—making it more valuable to both holders and protocols within the ecosystem.

1.2.2 Compounding Cycle

As merchants and DeFi protocols begin acquiring CYPR tokens—whether to influence reward emissions, boost visibility, or incentivize their users—demand for the token grows, increasing its value. This, in turn, amplifies the rewards for both voters and spenders, creating a compounding effect that makes Cypher's ecosystem more attractive than traditional cashback programs. Instead of earning passive points, users gain real upside and ownership in a protocol driven by aligned incentives and community participation. That's how Cypher transforms everyday utility into long-term value—without relying on hype-driven growth.

2 CYPR Token Overview

2.1 Supply and Distribution

The CYPR token features a fixed supply of 1 billion tokens (1,000,000,000 CYPR), ensuring non-inflationary tokenomics with predictable long-term value preservation.

Category	Allocation	Purpose
Protocol Spend/Referral Incentive	35%	Direct user rewards and ecosystem growth
Treasury	25%	Protocol development and operations
Past Investors*	15.41%	Early investor allocation
Team*	10%	Development and core team
Airdrop	8.5%	Genesis distribution to existing users
Community Incentives	5%	Marketing and growth initiatives
Advisors	1.09%	Protocol development and operations

Table 1: CYPR Token Distribution

The Protocol Spend/Referral Incentive allocation (35% of total supply) will be distributed over a 20-year emission schedule, designed to promote long-term sustainability and community participation. The emissions will follow a decaying model—starting with higher emissions to bootstrap growth and gradually tapering to preserve long-term value. Additionally, 8.5% of the supply is reserved for a genesis airdrop to existing Cypher users. Allocations for the Treasury (25%) and Community Incentives (5%) will be strategically deployed to support protocol development, partnerships, and ecosystem expansion. Allocations to Team (10%) and Past Investors (15.41%) are subject to a 12-month lock-up followed by a 3-year linear vesting schedule, ensuring long-term alignment with the success of the protocol.

2.2 Emission Schedule

Emissions are released on a bi-weekly (epoch) basis, with dynamic splits between Spend and Referral categories determined at the start of each epoch based on ecosystem needs.

Period	**Duration**	**Total Tokens**	**Tokens/Week**	**Tokens/Epoch**	**Annual Rate**
0-3 months	13 weeks	5M	384.6K	769.2K	20M
3-6 months	13 weeks	10M	769.2K	1.54M	40M
6-9 months	13 weeks	15M	1.15M	2.31M	60M
9 months-2 years	65 weeks	100M	1.54M	3.08M	80M
2-4 years	104 weeks	80M	769.2K	1.54M	40M
4-6 years	104 weeks	40M	384.6K	769.2K	20M
6-10 years	208 weeks	40M	192.3K	384.6K	10M
10-14 years	208 weeks	30M	144.2K	288.5K	7.5M
14-20 years	312 weeks	30M	96.2K	192.3K	5M
Total	**20 years**	**350M**			

Table 2: CYPR Emission Schedule (35% of Total Supply)

$$\text{Epoch Emission}_t = \begin{cases} 769,230 & \text{if } 0 \le t < 6.5 \text{ (0-3 months)} \\ 1,538,461 & \text{if } 6.5 \le t < 13 \text{ (3-6 months)} \\ 2,307,692 & \text{if } 13 \le t < 19.5 \text{ (6-9 months)} \\ 3,076,923 & \text{if } 19.5 \le t < 52 \text{ (9 months-2 years)} \\ 1,538,461 & \text{if } 52 \le t < 104 \text{ (2-4 years)} \\ 769,230 & \text{if } 104 \le t < 156 \text{ (4-6 years)} \\ 384,615 & \text{if } 156 \le t < 260 \text{ (6-10 years)} \\ 288,461 & \text{if } 260 \le t < 364 \text{ (10-14 years)} \\ 192,307 & \text{if } 364 \le t < 520 \text{ (14-20 years)} \end{cases} \quad (1)$$

where t represents the epoch number (each epoch = 2 weeks)

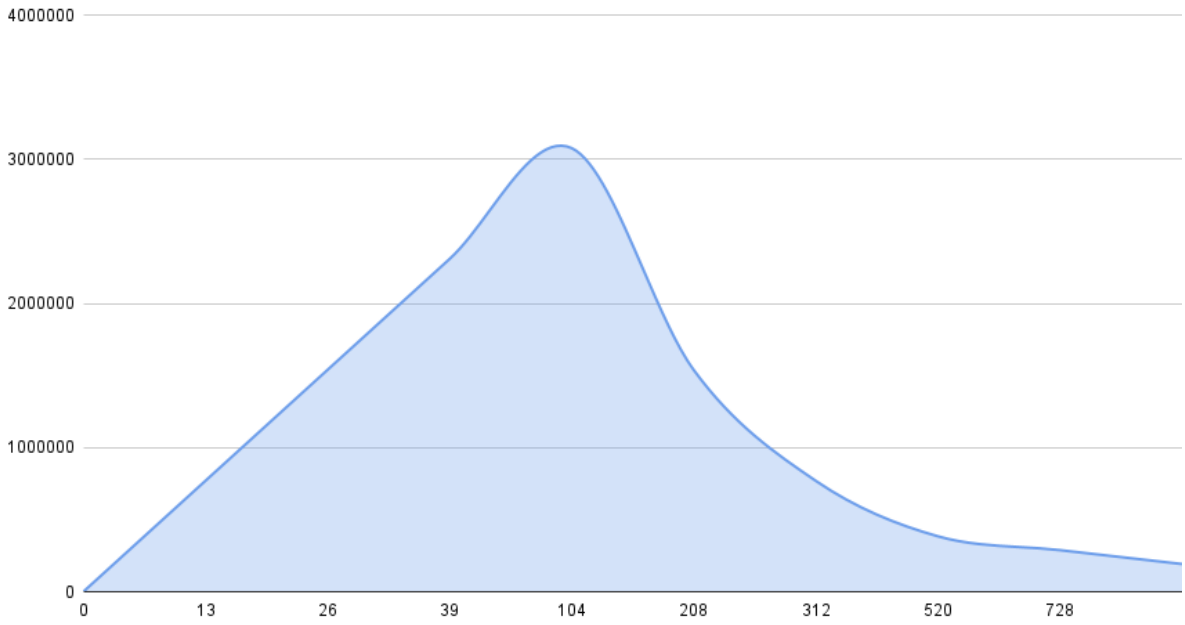

Figure 2: Token emission over the period of 20years

3 Core Mechanisms

3.1 Terminology

Term	Definition
CYPR	Native protocol token used for rewards and voting
veCYPR	Vote-escrowed CYPR representing locked tokens with voting power
Epoch	Two-week reward distribution cycle
Bribes	Additional incentives offered to attract votes to specific merchants
Referrer	User who invites others to join the ecosystem
Referee	New user who joins through a referral
Base Rewards	Standard rewards distributed regardless of voting participation
Boosted Rewards	Enhanced rewards available through voting participation

3.2 Why Vote? A Simple Explanation

Voting in the CYPR protocol gives you a say in which merchants receive the largest share of rewards every two weeks. By locking your CYPR tokens, you gain voting power and become an active participant in directing the protocol's reward emissions. For example, if you and other users vote to support a particular merchant, a greater portion of the rewards is allocated to that merchant, which means that anyone who spends there (including you) earns more CYPR tokens. In addition, merchants can offer bribes (extra incentives) to encourage users to vote for them, making voting not only impactful but also potentially profitable. The more voting power you hold and the more strategically you vote, the greater your potential to earn from both reward allocations and merchant bribes.

3.3 Epoch Structure

3.3.1 Epoch Mechanics

Duration 2 weeks per epoch, providing optimal balance between voting engagement and reward distribution frequency

Voting Schedule Bi-weekly voting periods where veCYPR holders cast votes for preferred merchants to influence spend reward allocations

Dynamic Allocation Each epoch's emissions are dynamically split between Spend and Referral categories, with only spend allocations influenced by voting

3.3.2 Epoch Cycle Phases

1. **Epoch Initialization**: System prepares for new 2-week epoch cycle and captures current veCYPR balances for voting eligibility.
2. **Voting Period**: veCYPR holders with valid voting power can vote for multiple merchants, allocating their desired distribution amounts across chosen merchants. Once votes are submitted during the epoch, they cannot be changed or modified. Users may cast their votes at any time within the two-week epoch period, up until the epoch concludes.
3. **Vote Finalization**: At the end of the voting period(epoch), all votes are locked and merchant allocations are calculated based on total voting power received.
4. **Reward Distribution**: Spend and referral rewards are distributed once the epoch ends, to users based on their actual spending activity and the voting-determined merchant allocations, along with any applicable bribe distributions to voters.

3.4 Vote-Escrow Mechanism (veCYPR)

Users can vote-lock CYPR tokens for up to a 2-year period, receiving voting power proportional to the remaining lock period. This mechanism grants voting power to direct spend incentives towards specific merchants. Voting power also determines the user's share of bribe distributions from merchants seeking to attract votes.

Maximum Lock Duration 2 years (104 weeks), providing long-term protocol alignment

Lifetime Lock Option Permanent lock with constant voting power and no decay

Voting Power veCYPR amount determines individual voting influence over merchant spend emissions and bribe distribution shares

Decay Mechanism Voting power decreases linearly over time for time-limited locks

3.4.1 Voting Power Calculation

The initial voting power represents the amount of veCYPR a user receives by locking their CYPR tokens. It is calculated using the following formula:

$$\text{Initial Voting Power} = \frac{\text{Locked Amount}}{\text{Max lock duration}} \times \text{Lock Duration} \tag{2}$$

Where:

- **Max lock duration** = 2×52 weeks = 104 weeks $\approx$ 2 years
- **Lock Duration** = unlockTime - block.timestamp (in weeks)

3.4.2 Slope and Decay Mechanism

The voting power decay follows a linear model based on the slope calculation:

$$\text{decay rate (slope)} = \frac{\text{Locked Amount}}{\text{Max lock duration}} \tag{3}$$

Where:

- **Max lock duration** = 2 × 52 weeks = 104 weeks ≈ 2 years

$$\text{Current Voting Power} = \text{Initial Voting Power} - (\text{Slope} \times \text{Time Elapsed}) \tag{4}$$

This means the longer you lock your tokens (up to 2 years), the higher your initial voting power, but the voting power will decay to zero at the same rate regardless of the initial lock duration. Lifetime locks provide maximum influence with the trade-off of permanent token commitment, though users retain the flexibility to convert to time-limited locks if needed.

3.4.3 Example Calculation

If someone locks **1,000 CYPR tokens** for **1 year (52 weeks)**:

$$\text{Slope} = \frac{1000}{104 \text{ weeks}} = 9.62 \text{ tokens per week} \tag{5}$$

$$\text{Initial Voting Power} = 9.62 \times 52 \text{ weeks} = 500 \text{ veCYPR} \tag{6}$$

3.4.4 Lifetime Lock Mechanism

Lifetime Lock Benefits Tokens locked for lifetime maintain constant voting power without any decay

Constant Voting Power For lifetime locks: Voting Power = Locked Amount (no decay mechanism applied)

Lock Cancellation Users can cancel lifetime locks at any time

Post-Cancellation Behavior Upon cancellation, tokens automatically enter a 2-year time-limited lock with immediate decay initiation

$$\text{Lifetime Lock Voting Power} = \text{Locked Amount} \quad \text{(constant, no decay)} \tag{7}$$

Lifetime Lock Cancellation Process:

1. User initiates cancellation of lifetime lock
2. System automatically creates 2-year lock starting from cancellation timestamp
3. Decay mechanism begins immediately with slope calculation:

$$\text{New Slope} = \frac{\text{Locked Amount}}{104 \text{ weeks}} \tag{8}$$

4. Voting power begins linear decay from current amount to zero over 2 years

3.4.5 Important Characteristics

1. **Time Decay**: The voting power decreases linearly over time until it reaches zero at the unlock time (for time-limited locks).
2. **Vote Period Rounding**: All unlock times are rounded down to the nearest multiple of VOTE_PERIOD (2 weeks)
3. **Maximum Duration**: The maximum time-limited lock duration is 2 years (104 weeks).
4. **Lifetime Locks**: Tokens locked for lifetime maintain constant voting power without decay.
5. **Uniform Decay Rate**: For time-limited locks, voting power decays at the same rate (slope) regardless of lock duration.
6. **Cancellation Flexibility**: Lifetime locks can be cancelled and converted to 2-year decaying locks at any time.

4 Spend-Based Reward System

4.1 Base Spend Rewards

Base Spend Rewards provide foundational incentives for all users regardless of voting participation, ensuring broad ecosystem participation while maintaining fairness.

Eligibility All users who are spending during the epoch.

Distribution Method Proportional to individual spending amounts across all merchants.

User Tiers Standard Users and Premium Users, with Premium users receiving enhanced reward multipliers.

$$R_u = B \cdot \frac{s_u \cdot w_u}{\sum(s_u \cdot w_u)} \tag{9}$$

Where:

- s_u = Amount spent by user u
- w_u = Weight multiplier (varies by user tier, with Premium users receiving higher multipliers than Standard users)
- B = Total Base Spend Rewards pool
- $W = \sum(s_u \cdot w_u)$ = Weighted total spend across all users
- R_u = Reward for user u

4.1.1 Example Calculation

Consider an epoch with a Total Base Spend Rewards pool of $B = 10,000$ CYPR and two users:
User Spending:

- User A (Standard): spent \$100 → weight = 1
- User B (Premium): spent \$100 → weight = 2

Weighted Spend Calculation:

$$\text{User A weighted spend} = \$100 \times 1 = 100 \tag{10}$$

$$\text{User B weighted spend} = \$100 \times 2 = 200 \tag{11}$$

$$\text{Total Weighted Spend} = 100 + 200 = 300 \tag{12}$$

Reward Distribution:

$$\text{User A reward} = \frac{100}{300} \times 10,000 = 3,334 \text{ CYPR} \tag{13}$$

$$\text{User B reward} = \frac{200}{300} \times 10,000 = 6,666 \text{ CYPR} \tag{14}$$

This example demonstrates how Premium users receive enhanced rewards compared to Standard users for equivalent spending amounts, creating clear incentives for users to upgrade their account status while maintaining proportional fairness based on actual spending contribution.

4.2 Boosted Spend Rewards

After each voting epoch, merchants with more votes receive a larger share of bonus rewards. Users who spend on these top-voted merchants earn extra CYPR tokens — the more they spend, the more rewards they receive.

4.2.1 Two-Stage Distribution Process

Stage 1 - Merchant Allocation: Emissions are allocated to merchants based solely on their share of total votes received during the epoch.

$$S_m = S \cdot \frac{V_m}{\sum V} \tag{15}$$

Where:

- V_m = Votes received by merchant m
- V = Total votes cast in the epoch
- S = Total Voter Spend Rewards pool
- S_m = Reward allocated to merchant m

Stage 2 - User Distribution: Allocated merchant rewards are distributed to all users who spent at that merchant (whether they voted for that merchant or not) based on their proportional spending.

$$S_{u,m} = S_m \cdot \frac{s_{u,m}}{\sum s_{*,m}} \tag{16}$$

Where:

- $s_{u,m}$ = Amount spent by user u at merchant m
- S_m = Reward allocated to merchant m
- $S_{u,m}$ = Reward allocated to user u from merchant m
- $\sum s_{*,m}$ = Total spend at merchant m by all users

4.2.2 Example Calculation

Consider a boosted spend rewards scenario:

Overall Pool Distribution:

- Total Boosted Spend Pool $S = 100,000$ CYPR
- Merchant X received 25% of all votes $\rightarrow S_X = 25,000$ CYPR

User Spending at Merchant X:

- User A spent \$100
- User B spent \$400
- User C spent \$500
- Total spending at Merchant X = \$1,000

Reward Distribution:

$$\text{User A reward} = \frac{100}{1000} \times 25,000 = 2,500 \text{ CYPR} \tag{17}$$

$$\text{User B reward} = \frac{400}{1000} \times 25,000 = 10,000 \text{ CYPR} \tag{18}$$

$$\text{User C reward} = \frac{500}{1000} \times 25,000 = 12,500 \text{ CYPR} \tag{19}$$

This example demonstrates how voting determines merchant reward allocation, while actual spending determines individual user rewards within each merchant's allocated pool.

4.2.3 Key Benefits

This mechanism introduces several important advantages that align token emissions with meaningful user behavior. Primarily, it ensures that community voting directly influences the flow of emissions, reinforcing decentralized governance. Unlike systems that reward only participation in governance, this approach also recognizes actual spending behavior, thereby anchoring rewards to real economic activity. By incentivizing users to spend at the merchants they vote for, the system strengthens the link between governance decisions and on-chain utility. Furthermore, it establishes a competitive dynamic among merchants, motivating them to attract both votes and user spending to maximize their share of emissions. This dual incentive structure fosters a more engaged user base and a more active merchant ecosystem.

5 Referral-Based Reward System

Referral rewards operate independently of the voting system, focusing purely on driving new user participation and network growth metrics. These rewards are distributed based on successful referral activities and do not require voting participation.

5.1 Base Referral Rewards

Base Referral Rewards provide immediate incentives for network growth through new user participation, operating independently of merchant voting. To ensure fairness and sustainability, referral rewards are distributed to a capped number of users per epoch, with only the first X eligible participants receiving rewards during each cycle.

5.1.1 Eligibility Criteria

The trigger condition is met when the referee successfully makes their first qualifying spend using the platform. Both actions are required to validate the referee's participation and initiate any downstream reward or incentive mechanisms.

5.1.2 Distribution Mechanics

The referral reward is split between the referrer and the referee, with the exact ratio adjustable per epoch. These rewards are distributed from the referral allocation pool without any influence from voting.

5.2 Enhanced Referral Rewards

Enhanced Referral Rewards create strategic alignment between referrers who vote and their referees who spend at the same merchants. This system rewards referrers for guiding their referees to spend at merchants they voted for.

$$R_m = R \cdot \frac{V_m}{\sum V} \tag{20}$$

$$R_{r,m} = R_m \cdot \frac{v_{r,m}}{\sum v_{*,m}} \tag{21}$$

Where:

- V_m = Total votes merchant m received
- V = Total votes across all merchants
- $v_{r,m}$ = Votes cast by referrer r to merchant m
- R = Boosted Referral Emission Pool for the epoch
- R_m = Allocation to merchant m
- $R_{r,m}$ = Referrer's share

If the referee spends on merchant m, the rewards are unlocked and split as follows:

$$R_r = \alpha \cdot R_{r,m} \tag{22}$$

$$R_{re} = (1 - \alpha) \cdot R_{r,m} \tag{23}$$

$$\tag{24}$$

Where:

- R_r = Referrer's share
- R_{re} = Referee's share
- α = Referrer's share coefficient (start lows and increases with more active referees)

5.2.1 Example Calculation

Consider a scenario where merchant B received 20,000 votes out of 100,000 (20% of the total votes):

Overall Distribution:

- Boosted Pool $B_p = 500,000$ CYPR
- Merchant B received 20% of the pool $\rightarrow R_B = 10,000$ CYPR

Referrer X votes for merchant B:

- Referrer X voted 10,000 veCYPR for merchant B
- Total votes for merchant B is 20,000
- Referrer's X's share $\frac{10,000}{20,000} = 0.5 \rightarrow$ 5,000 CYPR

If referee spends merchant B:

- Let $\alpha = 0.3$
- Referrer get's 1,500 CYPR
- Referee get's 3,500 CYPR

5.3 Strategic Advantages

The independent referral system offers a variety of strategic benefits that enhance the adoption of the platform and the engagement of the users. First, it simplifies new user participation by enabling new participants to earn rewards without having to understand or engage with complex voting mechanisms. This reduces the barrier to entry and facilitates smoother on boarding. In addition, the incentive structure remains predictable, as referral rewards are decoupled from the fluctuations inherent in governance-based systems. This stability appeals to a wider audience, including users who may be disinterested in or unfamiliar with the voting dynamics on the chain. Moreover, the system's broad appeal supports the attraction of users who favor straightforward, performance-based rewards. Finally, by removing dependency on merchant-specific voting outcomes, the referral system fosters organic, viral network effects, thereby promoting scalable growth driven by peer-to-peer engagement rather than centralized merchant influence.

6 Voting Incentives and Bribing Mechanism

6.1 Purpose and Design

The bribing mechanism serves as a critical component of the voting system, allowing merchants and third parties to offer additional incentives to attract votes for spend emission allocations. Bribes are distributed exclusively to voters based on their voting power allocation, creating a direct reward for voting participation.

6.1.1 Core Principles

- **Voter-Exclusive Rewards**: Only users with voting power (veCYPR holders) are eligible for bribe distributions
- **Proportional Distribution**: Bribes are distributed based on the voter's share of total voting power allocated to each merchant

- **Open Market**: Any participant can add bribes to any merchant using various tokens USDC, ETH, and many more.
- **Transparent Process**: All bribes are publicly visible and verifiable before and during voting periods
- **Capital Efficiency**: Merchants can influence voting outcomes without requiring equivalent user spending.

6.2 Bribe Distribution Mechanics

This bribe distribution system creates a dynamic marketplace where voting power becomes valuable not only for directing spend emissions but also for capturing additional rewards, significantly enhancing the value proposition of participating in protocol voting. The process is divided into two phases: Collection and display and voting power allocation.

6.2.1 Bribe Offering and Visibility

Before each voting cycle, merchants or sponsors can offer rewards to attract community support. These rewards can be provided in various approved tokens and are made publicly visible, allowing voters to make informed decisions. When rewards are offered in multiple token types, each is treated distinctly, and voters ultimately receive a fair share of each token based on their support. This ensures transparency, flexibility, and equitable participation for all stakeholders.

6.2.2 Voting Power Allocation

During the active voting period, participants use their voting power to support their preferred merchants. The final distribution of incentives takes into account both the total support each merchant receives and how individual voters choose to allocate their votes. This ensures that rewards are distributed fairly based on actual community preferences.

6.2.3 Distribution Calculation

For each merchant with bribes, the distribution follows this process:

$$\text{Voter Bribe Share}_{i,j} = \text{Bribe Pool}_j \times \frac{\text{Voter Power Allocated}_{i,j}}{\text{Total Voting Power Allocated}_j} \tag{25}$$

Where:

- i = individual voter
- j = specific merchant
- Bribe Pool_j = total bribes offered for merchant j
- $\text{Voter Power Allocated}_{i,j}$ = voting power voter i allocated to merchant j
- $\text{Total Voting Power Allocated}_j$ = sum of all voting power allocated to merchant j

6.3 Strategic Impact and Market Dynamics

The incentive system benefits all participants within the ecosystem—merchants, voters, and the protocol itself. For merchants, it offers a powerful tool to gain visibility, attract support for new locations, and differentiate themselves in competitive categories. By offering tailored rewards, they can run targeted campaigns and accelerate their presence within the ecosystem.

For voters, the system provides clear motivation through direct rewards, often in diverse tokens, which enhance the value of participation. It also encourages more strategic engagement, as voters balance personal preferences with the potential benefits of different reward options.

At the ecosystem level, this model drives higher voter participation, promotes healthy competition among merchants, and strengthens the overall utility of the native token. It also fosters a more dynamic and efficient market where community preferences are reflected through active, incentive-driven participation.

7 Economic Model and Sustainability

The protocol is designed with a robust economic framework that promotes long-term sustainability through a series of reinforcing mechanisms. These mechanisms are structured to align incentives across all stakeholders—users, merchants, and token holders—thereby driving adoption, utility, and value accrual over time.

7.1 Flywheel Economics

At the core of the protocol's design is a primary economic loop that self-reinforces through user behavior and merchant participation. As users spend within the ecosystem, they earn rewards which can be locked to gain governance rights. This locked stake enables participation in voting, where users influence the allocation of incentives to merchants. In turn, this competitive environment encourages merchants to improve services and offerings to attract more votes, thereby increasing overall spending within the system. This continuous cycle—spending, rewarding, locking, voting, and merchant competition—fuels organic growth and engagement.

Beyond the primary loop, several secondary reinforcing loops further amplify the protocol's momentum:

- **Referral Loop**: Users are incentivized to refer others, which increases spending volume and, consequently, reward generation. The ease of earning through referrals, independent of governance participation, broadens new user participation channels, and enhances network effects.
- **Merchant Loop**: As merchants compete for visibility and user support, they are incentivized to enhance service quality and offer compelling incentives. This attracts more users, increases voting activity, and channels more spend-based emissions to high-performing merchants.
- **Voting Loop**: Active voter engagement contributes to the overall improvement of protocol governance. A better-governed protocol attracts more users, which in turn strengthens the voting base and deepens community participation.
- **Bribe Loop**: Voters are further incentivized through bribe rewards offered by merchants or third parties. These bribes encourage users to lock more tokens, thereby increasing their voting power and future bribe share, ultimately reinforcing voter commitment to the system.

7.2 Value Accrual Mechanisms

The protocol's native token (CYPR) benefits from multiple channels of value capture, enhancing its economic resilience:

- Increased transaction volume raises demand for CYPR, especially when rewards or features require holding or locking the token.

- Lock-up mechanisms reduce circulating supply, contributing to supply-side scarcity and reinforcing long-term token value.
- Governance participation adds utility to the token, as holding and locking become essential to influencing emissions and merchant selection.
- Merchant-submitted bribes, particularly in external tokens such as USDC or partner tokens, introduce external capital into the ecosystem and strengthen the incentive structure.

7.3 Long-term Sustainability

The protocol ensures sustainability through three key pillars:

Economic Sustainability: A fixed token supply and a gradually declining emission schedule help preserve long-term token value and limit inflationary effects.

Governance Sustainability: The system is designed for progressive decentralization, enabling the community to take increasing control over emission allocation and policy decisions.

Technical Sustainability: Built on the Base blockchain, the protocol benefits from scalability, low transaction costs, and operational efficiency, all of which support long-term viability.

Through this multi-layered economic architecture, the protocol is positioned to scale effectively, incentivize meaningful participation, and maintain enduring value within a decentralized ecosystem.

8 Conclusion

The CYPR protocol represents a significant evolution in connecting real-world commerce with on-chain incentives, building upon Cypher's proven track record to establish a robust rewards structure. By leveraging innovative tokenomics, governance mechanisms, and incentive models, CYPR transforms traditional reward systems into a transparent, community-driven protocol that aligns the interests of users, merchants, and the broader crypto ecosystem.

The protocol's unique combination of spend-based rewards, referral incentives, and voting-driven emissions creates multiple reinforcing loops that benefit all participants. Users gain real ownership in the rewards they help generate, merchants compete in a transparent marketplace for customer attention, and the broader ecosystem benefits from increased engagement and sustainable value creation.

Through careful design of economic incentives, technical architecture, and voting mechanisms, CYPR establishes a foundation for the future of decentralized finance in everyday commerce. The protocol proves that blockchain technology can enhance rather than replace existing financial infrastructure, creating a more transparent, equitable, and engaging experience for everyone involved in the modern economy.

As the protocol evolves through its planned implementation phases, CYPR will continue to innovate at the intersection of traditional finance and decentralized systems, creating long-term value for the entire ecosystem while maintaining the flexibility to adapt to changing market conditions and user needs.