Darli USD Whitepaper

https://darli.xyz , rev.0.2[1]

August 11, 2025

Abstract

Darli USD (USDD) is a decentralized, USD-pegged stablecoin built on the Solana blockchain that enables SOL holders to access instant, interest-free liquidity by locking collateral in open-source lending protocols, starting with Save protocol. The protocol is governed entirely by the Darli DAO, with parameters and upgrades controlled by Darli Governance Token (DRL) holders through the Realms DAO framework. Users can borrow USDD against SOL collateral at a minimum collateral ratio (MCR) of 110%. Darli USD is designed to be censorship-resistant, fully transparent, and free from centralized administrative control.

[1] Note that whenever the term Darli is used it refers to the protocol

Contents

Darli USD Whitepaper

A Decentralized, Interest-Free, USD-Pegged Stablecoin on Solana

1 Introduction

Stablecoins are essential to decentralized finance (DeFi), bridging volatile crypto assets with stable purchasing power. However, many borrowing protocols impose high interest rates, excessive collateral requirements, or centralized governance, limiting accessibility and efficiency. Darli USD addresses these challenges with a novel approach:

- **Interest-Free Borrowing**: Zero interest loan. Pay only a one-time fee, not ongoing interest.
- **Low Collateral Ratio**: Borrow at a 110% MCR for greater capital efficiency.
- **Fully Decentralized Governance**: Controlled by DRL token holders via the Realms DAO.
- **Censorship Resistance**: No central authority can pause or alter the protocol.

Leveraging Solana's high throughput and low fees, Darli USD delivers a fast, secure, and scalable borrowing experience for SOL holders.

2 System Architecture

2.1 Core Components

Collateral Management

- Users deposit SOL into a Save protocol[2] pool integrated with the Darli USD protocol.
- Collateral is held in Save protocol's audited smart contracts and associated with a Program Derived Address (PDA), a unique Solana address controlled by the Darli USD protocol's smart contract logic.
- The Darli DAO may vote to integrate additional lending protocols in the future.

Stablecoin Borrowing

- Users can borrow USDD against their SOL collateral up to the Minimum Collateral Ratio (MCR) of 110%, meaning $110 in SOL collateral is required for every $100 of USDD borrowed.
- Borrowing is permissionless, instant, and executed via smart contracts.
- The MCR is adjustable through DAO governance.

Liquidation Mechanism

- If the value of a user's collateral falls below the 110% MCR, their position (Trove) becomes undercollateralized.
- Any participant can trigger liquidation via Save protocol's mechanisms, ensuring USDD remains fully backed.
- An open-source liquidator bot is available on the Darli GitHub repository to facilitate liquidations.

Borrowing Fee

- A one-time Borrowing Fee is charged when borrowing USDD.
- Fees are distributed to DRL holders through DAO-controlled mechanisms.

[2] Save protocol (Formerly Solend) [https://save.finance]

2.2 Protocol Workflow

Deposit: Users deposit SOL into the Save protocol pool via the Darli USD protocol.
Mint: The DAO may propose and vote to mint new USDD tokens, which are transferred to the Save protocol pool for borrowing.
Borrow: Users borrow USDD against their SOL collateral at the 110% MCR.
Use: USDD can be traded, staked, or integrated into other DeFi applications.
Repay & Withdraw: Users repay USDD to unlock their SOL collateral.
Liquidation: If collateral value falls below the MCR, liquidations are triggered to maintain system stability.

3 Governance

3.1 Darli DAO

The Darli USD protocol is governed by Darli Governance Token (DRL) holders using the Realms DAO platform on Solana. DRL holders have the authority to:

- Adjust the MCR and Borrowing Fee rates.
- Approve integrations with additional lending protocols beyond Save protocol.
- Authorize smart contract upgrades.
- Allocate treasury funds for protocol development and growth.

3.2 Censorship Resistance

The protocol has no centralized administrator or privileged keys. Front-end operations are handled by independent **Frontend Operators**, who can:

- Deploy the open-source launch kit interface
- Build custom user interfaces integrated with other DeFi services
- All critical operations (minting, liquidation, governance) are executed on-chain, ensuring transparency and immutability.

4 Economic Model

4.1 Tokenomics

Darli USD (USDD)

- Pegged 1:1 to USD.
- Minted against SOL collateral deposited in Save protocol.
- Usable for payments, trading, or DeFi integrations.

Darli Governance Token (DRL)

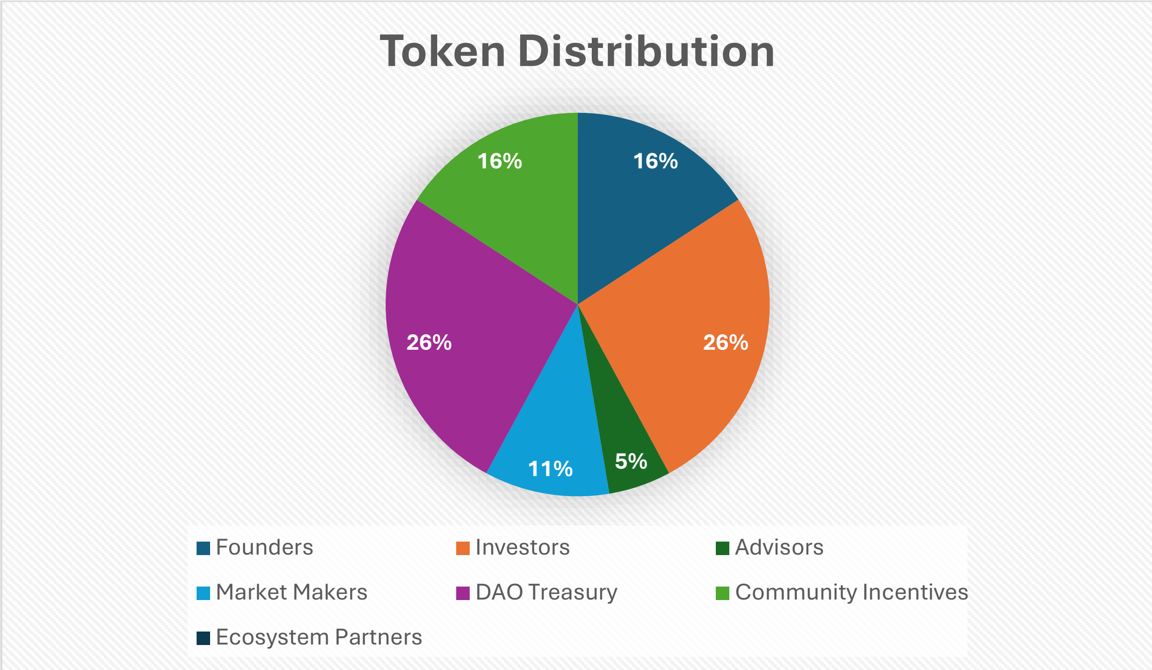
- Grants governance rights within the Darli DAO.

- Receives distributions from Borrowing Fees.
- Controls protocol parameters and strategic integrations.

4.2 DRL Token Distribution

Darli governance tokens DRL balanced model with totaling 100% and fixed supply of 100,000,000 DRL is on the following table. Percentages can be adjusted via DAO proposals post-launch for flexibility.

Category	Allocation (%)	Amount (DRL)	Rationale and Distribution Mechanism	Vesting/Lockup Schedule
Founders/Team	15%	15,000,000	Rewards core developers and founders for building the protocol.	4-year vesting with 1-year cliff (e.g., 25% after year 1, then monthly).
Investors	25%	25,000,000	For early backers funding development, audits, and marketing. Allocate across seed/private rounds.	3-year linear vesting with 6-month cliff to prevent early sells and ensure commitment.
Advisors	5%	5,000,000	For strategic experts (e.g., Solana/DeFi advisors).	2-year vesting with 6-month cliff.
Market Makers/Liquidity Providers	10%	10,000,000	Incentivizes liquidity for USDD and DRL pairs on Solana DEXes to reduce slippage and support peg stability.	No vesting for active providers
DAO Treasury	25%	25,000,000	Controlled by DRL holders for grants, integrations (e.g., new lending protocols), audits, and growth initiatives. Promotes ongoing decentralization.	No vesting; released gradually via DAO votes to fund proposals.
Community Incentives	15%	15,000,000	For airdrops to early SOL depositors/borrowers, liquidity mining, and user rewards to bootstrap adoption.	Released over 2 years via programs
Ecosystem Partners	5%	5,000,000	For collaborations (e.g., Save protocol integrations, DeFi protocols using USDD).	1-year lockup, distributed via partnerships.
Total	100%	100,000,000		



4.3 Stability Mechanisms

- **Collateralized Debt Positions (Trove System)**: Each USDD is backed by SOL (or other DAO-approved collateral) at a minimum of 110% MCR, ensuring overcollateralization.
- **Liquidations**: Undercollateralized Troves are closed via Save protocol's liquidation process, maintaining the USDD peg to USD.
- **Peg Maintenance**: Liquidations and collateral requirements ensure USDD remains fully backed and stable.

5 Key Benefits

- **Interest-Free Liquidity**: No recurring interest; only a one-time Borrowing Fee.
- **Low Collateral Ratio**: 110% MCR maximizes capital efficiency.
- **Censorship Resistance** – No admin control; DAO governance only.
- **Open Integration** – Any frontend can integrate Darli USD's smart contracts.

6 Roadmap

Phase 1 – MVP (Q3 2025)

- Establish governance via Realms DAO.
- Launch USDD with Save protocol integration for SOL collateral.
- Deploy minting and liquidation logic.

Phase 2 – Expansion (Q1 2026)

- Support additional lending protocols via DAO proposals.
- Introduce new collateral assets (e.g., other Solana-based tokens).
- Enhance liquidation incentives for participants.

Phase 3 – Ecosystem Growth (Q3 2026)

- Partner with DeFi protocols to expand USDD adoption.

7 Security

Darli USD operates as a protocol, not a platform, with no central operator or admin keys. Security is ensured through:

- Save protocol's audited collateral management smart contracts.
- Solana's high-security runtime environment.
- Open-source Darli USD smart contracts, audited by third-party firms.
- Transparent governance via the Realms DAO framework.

8 Disclaimer

Darli USD is an experimental DeFi protocol. Participation carries financial risks, including potential losses from collateral volatility or liquidations. The Darli DAO does not guarantee the value of USDD or the performance of collateral assets. Users should conduct their own research before participating.

9 Conclusion

Darli USD leverages Solana's performance and the Realms DAO framework to deliver a decentralized, interest-free, and capital-efficient stablecoin protocol. By combining a low 110% MCR, censorship-resistant design, and open integration, Darli USD empowers SOL holders with unparalleled liquidity and flexibility in DeFi.