CURVE FINANCE

Deep Dive: Protocol, Tokenomics & Investment Thesis

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For Research Purposes Only — Not Financial Advice

1. Protocol Overview

Curve Finance is a decentralized exchange (DEX) built on Ethereum, purpose-designed for efficient swaps between assets that should trade near parity with each other — stablecoins (USDC, USDT, DAI), wrapped Bitcoin variants (WBTC, renBTC), and liquid staking tokens (stETH, cbETH). It launched in January 2020 and introduced its DAO and governance token (CRV) in August 2020.

How It Works: The StableSwap Algorithm

Unlike general-purpose AMMs like Uniswap that use a constant-product (x*y=k) formula, Curve uses a hybrid invariant called StableSwap. This concentrates liquidity around a 1:1 price ratio, enabling trades of $1M+ in stablecoins with slippage measured in basis points rather than percentage points. The practical result: Curve consistently offers the best execution for stablecoin-to-stablecoin swaps on-chain, which is why aggregators like 1inch and Paraswap route enormous volumes through it.

Curve pools typically charge fees between 0.01% and 0.04% per swap — dramatically lower than the 0.30% standard on Uniswap. The low fee works because volume is so high on stablecoin pairs, and concentrated liquidity means capital efficiency is much greater.

Expansion Beyond Stablecoins

Curve V2 (CryptoSwap) extended the protocol to volatile asset pairs by adapting the bonding curve to repeg around the current market price. This allows Curve to compete on pairs like ETH/USDT and CRV/ETH, though stablecoins remain the core business.

More recently, Curve has expanded into lending with crvUSD (its own stablecoin, backed by crypto collateral with a novel soft-liquidation mechanism called LLAMMA) and LlamaLend (a lending product where borrowers pay interest that accrues to the DAO). LlamaLend V2, expected in 2026, will remove the restriction that only crvUSD can be borrowed, opening up standard pairs like ETH/USDC.

Protocol Scale (Current)

Metric	Value (as of Mar 2026)
TVL (Combined)	~$1.9B – $2.5B (varies by source/timing)
2025 Trading Volume	~$126B (up from $119B in 2024)
2025 Total Fees (all sources)	~$27M ($13.6M distributed to veCRV holders)
Pools Created (2025)	2,209 (up 8% YoY)
Pool Interactions (2025)	25.2M txns (up from 11.8M in 2024)
Lending Txns (2025)	421K (up from 234K in 2024)
Daily Active Users (Feb 2026)	~4,900 (all-time high, up from <1K in 2023)
Chains Deployed	Ethereum + L2s (Arbitrum, Optimism, Base, etc.)

Key Context: TVL peaked above $24B in early 2022. The current ~$2B figure represents a >90% decline from peak, driven by the broad DeFi deleveraging, the Terra/Luna collapse, and the Egorov liquidation crisis in 2023. However, user counts and transaction volumes have been recovering.

2. Fee Distribution & veCRV Economics

This is the core of what you asked about, and the part that is genuinely confusing on DefiLlama. Here is exactly how the money flows:

Where Fees Come From

DEX Swap Fees: Each pool charges 0.01–0.04% per trade. These fees are split 50/50: half goes to liquidity providers (LPs) in that pool, half goes to the DAO (the "admin fee"). The admin fee half is what ultimately reaches veCRV holders.

crvUSD Interest: Borrowers who mint crvUSD pay ongoing borrow interest. This interest accrues to the DAO.

LlamaLend Interest: Borrowers on LlamaLend pay interest plus LLAMMA swap fees. Admin fees from these go to the DAO.

Where the Admin Fees Go

All admin fees from every source are collected weekly, converted to crvUSD (previously they were converted to 3CRV, the LP token of the USDC/USDT/DAI pool, but this changed in June 2024), and then distributed to all veCRV holders proportionally based on their veCRV balance.

The weekly cycle works like this:

1. Monday: Fees are collected from pools and crvUSD markets, and conditional sell orders are created.
2. Tuesday: CoWSwap searchers execute the swaps, converting everything into crvUSD.
3. Wednesday: Converted crvUSD is forwarded to the Fee Distributor contract on Ethereum mainnet.
4. Thursday (after 00:00 UTC): Fees become claimable by veCRV holders, split proportionally.

What "Incentives" Means on DefiLlama

This is the key distinction you were confused about. On DefiLlama, "Incentives" refers to CRV token emissions — newly minted CRV tokens distributed to liquidity providers as rewards for depositing into Curve pools. These are NOT cash flows from trading activity. They are inflationary token rewards.

DefiLlama’s "Earnings" metric = Revenue minus Incentives. Because CRV emissions (incentives) have historically exceeded the actual fee revenue, Curve’s "Earnings" on DefiLlama are often negative. This means the protocol is paying out more in token rewards than it is earning in fees — a critical point for any investment thesis.

DefiLlama Term	What It Actually Means	Who Gets It
Fees	Total swap fees charged to traders	50% to LPs, 50% to DAO
Revenue	Admin fee share (50% of fees)	veCRV holders (via weekly distribution)
Holders Revenue	Same as Revenue — fees to veCRV	veCRV holders
Incentives	CRV emissions (newly minted tokens)	Liquidity providers (inflationary)
Earnings	Revenue minus Incentives	Net protocol economics

veCRV: How the Lock Works

CRV itself earns nothing. To participate in fee distribution, you must lock CRV tokens into the Voting Escrow contract for 1 week to 4 years. The longer you lock, the more veCRV you receive:

- 1 CRV locked for 4 years = 1 veCRV
- 1 CRV locked for 1 year = 0.25 veCRV
- veCRV balance decays linearly to zero as the lock expiry approaches
- Locks are irreversible — you cannot withdraw CRV before expiry

veCRV gives you three things: (1) your pro-rata share of weekly trading fees, (2) up to 2.5x boosted CRV emissions if you also provide liquidity, and (3) governance voting power including gauge weight votes that direct where CRV emissions go.

3. CRV Tokenomics

Supply Structure

Parameter	Value
Max Supply	3,030,303,031 CRV (hard cap)
Circulating Supply (Mar 2026)	~1.48B CRV (~49% of max)
Current Price (Mar 2026)	~\$0.21 – \$0.42 (high volatility)
Market Cap	~\$310M – \$600M
FDV	~\$500M – \$1.26B
All-Time High	\$60.50 (Aug 2020, briefly)

Allocation

- Community Emissions (liquidity mining): 56.86% — distributed to LPs over ~300 years
- Core Team: 26.52% — fully vested as of August 2024
- Pre-CRV Liquidity Providers: 5.02%
- Community Reserve: 5.02%
- Investors: 3.58%
- Employees: 3.01%

Emission Schedule

CRV follows a piecewise linear inflation schedule that reduces by approximately 15.9% each year (specifically by a factor of 2^(1/4)). Community emissions started at ~274M tokens/year in 2020 and have been declining since. After August 2024, all core team tokens finished vesting, so the only new CRV entering circulation is community emissions through gauge rewards.

Critical point: The inflation rate dropped from ~20% to ~6% in 2024 when team vesting completed. This was a major structural shift in supply dynamics. Going forward, inflation continues declining ~16% annually, becoming increasingly negligible over time.

Gauge Voting & the Bribe Economy

veCRV holders vote weekly on "gauge weights" — deciding what percentage of CRV emissions each liquidity pool receives. This created an entire meta-economy where protocols bribe veCRV holders (through platforms like Votium and Warden Quest) to direct emissions toward their pools. If your protocol needs deep stablecoin liquidity, you either buy CRV and lock it, or you pay bribes to existing veCRV holders.

4. Ecosystem Integrations & The Curve Wars

Curve is not just a standalone DEX — it is infrastructure that other protocols build on top of. This is both its moat and its vulnerability.

Convex Finance (The Biggest Player)

Convex controls over 53% of all veCRV as of late 2025, making it the single most powerful governance entity in the Curve ecosystem. Convex abstracts away the complexity of veCRV for two groups: LPs deposit their Curve LP tokens on Convex to receive maximum-boosted CRV rewards without needing to lock CRV themselves, and CRV holders stake CRV on Convex to receive cvxCRV (a liquid derivative) and earn enhanced yields. Convex's vote-locked CVX (vlCVX) holders ultimately direct Convex's massive veCRV voting power, meaning protocols bribe vlCVX holders instead of veCRV holders directly.

Other Key Integrations

- Yearn Finance: Operates vaults that auto-compound Curve LP positions and manages a large veCRV position.
- StakeDAO: Another liquid locker/yield optimizer, similar model to Convex but smaller.

- Resupply: Built on LlamaLend, lets users supply crvUSD and mint reUSD for additional capital efficiency.
- Spectra Finance: Built on Curve pools, splits yield-bearing tokens into principal and yield components for trading.
- YieldBasis: Supplies crvUSD to Curve in exchange for governance tokens, supporting ecosystem growth.
- DEX Aggregators (1inch, Paraswap, CoW Swap): Route significant stablecoin volume through Curve pools due to best-execution pricing.

The pattern: Curve functions best as a settlement/liquidity layer that other protocols build on top of. The more protocols that integrate, the deeper the moat — but it also means Curve's token economics are partially captured by intermediaries like Convex rather than going directly to individual CRV holders.

5. Stablecoin Proliferation & Institutional Adoption

This is the core bull thesis for Curve: as more stablecoins get issued, they all need on-chain liquidity infrastructure to trade against each other, and Curve’s StableSwap algorithm is purpose-built for this.

The Stablecoin Market Today

Total stablecoin market cap exceeded $310B as of early 2026. USDT dominates at ~60% share ($186B+), USDC holds ~24% ($74–76B), and the long tail is growing fast. DeFi accounts for an estimated 48% of all stablecoin activity.

New Institutional Entrants

- JPMorgan: JPM Coin (JPMD) expanding onto the Canton Network for institutional settlement. This is a tokenized deposit, not a traditional stablecoin, and operates on permissioned rails.
- PayPal: PYUSD has been integrated into Visa settlement, YouTube creator payments, and expanded to Solana/Stellar. Fiserv and PayPal plan to make FIUSD and PYUSD interoperable.
- Fiserv: Launched FIUSD and developed a stablecoin platform for thousands of client banks.
- Societe Generale: Launched EUR CoinVertible (EURCV) and USD CoinVertible (USDCV) — first major bank stablecoins on public blockchain.
- Wyoming: State-issued FRNT stable token now available on Kraken across 7 blockchains.
- Stripe/Bridge: Won bidding war to issue USDH stablecoin on Hyperliquid’s DeFi platform.
- Coinbase: Launched white-label stablecoin issuance for corporations and banks.

The honest question: Do these new stablecoins actually need Curve? JPM Coin operates on permissioned infrastructure. PYUSD routes through PayPal’s own rails. Many institutional stablecoins may never touch public DeFi. The bull case requires these coins to need on-chain liquidity pairings against each other and against USDC/USDT — and for that liquidity to route through Curve specifically, not through Uniswap v4 or Balancer.

6. Regulatory Landscape: GENIUS Act & CLARITY Act

GENIUS Act (Signed Into Law, Mid-2025)

The Guiding and Establishing National Innovation for U.S. Stablecoins Act was the first federal U.S. stablecoin law. It established reserve requirements, issuer oversight, and consumer protections for payment stablecoins. It passed the Senate 68–30 and the House 308–122 with bipartisan support. This is the law that gave institutional players the regulatory clarity to begin launching stablecoins.

CLARITY Act (Pending in Senate, as of March 2026)

The Digital Asset Market Clarity Act is the broader crypto market structure bill. It passed the House 294–134 in July 2025 but has stalled in the Senate. Key provisions relevant to Curve:

DeFi Exclusion (Section 309): The bill includes an exclusion for decentralized finance activities, which would be positive for protocols like Curve that operate without centralized intermediaries.

Stablecoin Yield Ban: The most contentious provision. A March 2026 compromise between Senators Tillis and Alsobrooks would ban passive yield on stablecoin balances (i.e., earning interest just for holding a stablecoin) but allow activity-based rewards tied to transactions or platform use. This has significant implications — see the investment thesis section.

Current Status: The Senate Banking Committee markup is targeted for the second half of April 2026. Senator Moreno has warned that if the bill doesn't reach the Senate floor by May, it risks being shelved until after midterms. The White House crypto czar position (previously held by David Sacks) is now vacant as of March 26, adding uncertainty.

Remaining obstacles: DeFi oversight language, ethics provisions around senior officials profiting from crypto, and a potential attachment of community bank deregulation to the bill. It still needs: committee markup, Senate floor vote (60 votes), reconciliation with House version, and presidential signature.

7. Competitive Landscape

Protocol	Strength vs Curve	Weakness vs Curve
Uniswap V3/V4	Concentrated liquidity can match Curve on stable pairs; massive brand and volume ($1.7B/day); hooks in V4 enable custom AMM logic	Generalist design means less optimized for stable swaps; higher slippage on very large stablecoin trades

Balancer V2/V3	Flexible pool types; composable with Aura (their Convex equivalent)	Smaller TVL; less ecosystem depth; slower L2 deployment
Maverick Protocol	Novel directional liquidity bins; gaining traction for stablecoin pairs	Much smaller; unproven at scale; limited integrations
Velodrome / Aerodrome	Dominant on Optimism/Base; simpler ve-model without LP boost complexity; built-in bribe marketplace	Chain-specific (not on Ethereum mainnet); different design philosophy
PancakeSwap	Dominant on BNB Chain; expanding multi-chain; $1.7B daily volume	Less specialized in stablecoins; different target market

The real competitive threat: Uniswap V4's hook system theoretically allows anyone to recreate StableSwap-like curves within Uniswap's infrastructure. If this becomes widely adopted, Curve's algorithmic moat erodes. Curve's remaining defenses would be its existing liquidity depth, integrations, and the veCRV governance economy.

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8. Bull Case

5. **Stablecoin supercycle:** Stablecoin market at $310B+ and growing. Estimates of $46T in annualized stablecoin transaction volume. As dozens of new stablecoins launch (PYUSD, FIUSD, RLUSD, bank tokens, state tokens, EU-compliant coins), they all need to trade against each other. Curve is the most capital-efficient venue for this.
6. **Emission cliff passed:** The biggest source of sell pressure (team/investor vesting + high community emissions) is behind us. Inflation dropped from ~20% to ~6% in 2024 and continues declining. The overhang is structurally smaller now.
7. **crvUSD and LlamaLend diversify revenue:** No longer just a DEX. Lending interest and stablecoin fees create new revenue streams that accrue to veCRV. LlamaLend V2 opens up mainstream lending pairs.
8. **Deep integrations create switching costs:** Convex, Yearn, StakeDAO, Spectra, Resupply, YieldBasis — an entire ecosystem of protocols is built on top of Curve. This creates network effects that are hard to replicate.
9. **Regulatory tailwinds:** GENIUS Act legitimized stablecoins. CLARITY Act DeFi exclusion (if passed) would provide legal clarity for protocols like Curve. Treasury Secretary Bessent targeting spring 2026 passage.
10. **User growth reaccelerating:** DAU hit all-time highs in early 2026 (4.9K, up from sub-1K in 2023). Pool interactions more than doubled YoY.
11. **Extreme undervaluation if thesis plays out:** CRV is down >99% from ATH. Market cap around $300–600M for a protocol that processed $126B in volume last year. If stablecoin volumes 5–10x from here, the revenue picture changes dramatically.

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9. Bear Case

12. **Fee revenue vs. emissions: The math doesn't work yet.** In 2025, Curve generated ~$27M in total fees across all sources (DEX swaps, crvUSD interest, LlamaLend), of which $13.6M was distributed to veCRV holders. Meanwhile, CRV emissions (incentives) run at ~$45M annually — meaning the protocol pays out roughly 3x more in token rewards than it earns in real fees. At a market cap of $300–600M, veCRV holders are getting ~$13.6M/year, implying a P/Revenue multiple of 22–44x. The yield for locking CRV is low single digits at best, before accounting for the opportunity cost of a 4-year illiquid lock.
13. **Institutional stablecoins may not use Curve.** JPM Coin runs on permissioned Canton Network. Bank deposit tokens are designed to operate within walled gardens. Many institutional stablecoin flows will settle through OTC desks (Galaxy, Coinbase Prime, Cumberland), card networks (Visa, Stripe/Bridge), or proprietary rails — not permissionless DeFi AMMs.
14. **Uniswap V4 hooks erode the algorithmic moat.** Anyone can now build StableSwap-equivalent curves inside Uniswap's infrastructure, with Uniswap's existing liquidity and user base. If this gains traction, Curve's core technical advantage disappears.
15. **Governance centralization via Convex.** 53%+ of veCRV is controlled by Convex. This means governance is effectively captured by one protocol. Convex's vlCVX holders make decisions that ripple through the entire Curve ecosystem. Small CRV holders have limited influence.
16. **The Egorov crisis showed systemic fragility.** In 2023, founder Michael Egorov's massive CRV borrowing positions across multiple DeFi protocols nearly cascaded into forced liquidations that could have cratered CRV's price and threatened protocol stability. It was resolved, but it exposed single-point-of-failure risk around the founder.
17. **CLARITY Act stablecoin yield ban could reduce DeFi demand for stablecoins.** If passive stablecoin yield is banned and DeFi protocols face regulatory overhang, stablecoin activity could consolidate into regulated CeFi rails rather than flowing through DeFi. Circle dropped 20% on the draft text. This is a real risk to the entire "stablecoins benefit DeFi" thesis.
18. **Smart contract risk is not hypothetical.** Curve suffered a ~$70M exploit in July 2023 due to a Vyper compiler bug, and a $240K LlamaLend exploit in March 2026. The protocol is complex, written in a less-common language (Vyper), and continues to expand its attack surface with crvUSD and LlamaLend.
19. **TVL is still down >90% from peak.** From $24B+ in 2022 to ~$2B now. While some of this is the broader DeFi contraction, it also reflects capital migrating to competitors and yield opportunities elsewhere. The protocol treasury holds just $1.6M — minimal runway.

10. Valuation Sanity Check

Let's ground this in actual numbers:

Metric	Approximate Value
2025 Total Protocol Fees	~$27M (all sources combined)

Revenue to veCRV (2025 actual)	$13.6M
Market Cap	~$310M – $600M
FDV	~$500M – $1.26B
P/Fees (Market Cap / Fees)	~11x – 22x
P/Revenue (Market Cap / veCRV Revenue)	~22x – 44x
Implied veCRV Yield (Rev / Locked CRV Value)	Low single digits at best

At $27M in annual fees and $13.6M distributed to veCRV holders, the current fee run-rate does not justify the market cap on a pure cash-flow basis. **For CRV to work as an investment, fees need to grow substantially — at least 3–5x from current levels to bring P/Revenue into a reasonable range. That requires stablecoin volume through Curve to meaningfully increase, and/or crvUSD and LlamaLend to become material revenue contributors. Note: DefiLlama's current annualized revenue figure (~$7M) reflects a recent lower run-rate, suggesting fees have decelerated from mid-2025 levels.**

For context: Aave generates ~$55M in annualized fees at $28B TVL. Uniswap does billions in daily volume. Curve's fee capture is structurally lower because of its ultra-low fee design (0.01–0.04%), which means it needs proportionally much higher volume to generate equivalent revenue.

11. Bottom Line

Curve Finance is genuine infrastructure — it solves a real problem (efficient stablecoin swaps) with a technically superior algorithm, and an entire ecosystem has been built on top of it. The stablecoin proliferation thesis is real: the market has tripled in two years and institutional entrants are accelerating.

The question is not whether stablecoins will grow. It's whether that growth flows through Curve specifically, whether Curve can capture enough of the value in fees relative to CRV inflation, and whether competitors (particularly Uniswap V4) erode its positioning before the thesis plays out.

As an investment in CRV/veCRV, you are betting on: (1) stablecoin volume growing 5–10x+, (2) Curve maintaining its share of on-chain stablecoin routing, (3) new revenue from crvUSD and LlamaLend materializing, (4) regulatory clarity favoring DeFi over bank-only rails, and (5) the emission overhang not overwhelming fee growth. If all five hit, CRV at $0.20–$0.40 is arguably cheap. If two or three miss, there's limited downside protection because the yield from fees alone doesn't justify the capital commitment of a 4-year lock.