Gate Research

Berachain and Its Consensus Mechanism

Who Still Believes in the Public Blockchain Narrative

Abstract

- This report presents an in-depth analysis of emerging Layer 1 blockchain Berachain, centered on its innovative Proof of Liquidity (PoL) consensus mechanism.
- It explores the project’ s architecture, tokenomics, ecosystem protocols, TVL dynamics, and governance model.
- The report also highlights structural risks such as inflation pressure, TVL concentration, and a potential innovation slowdown, while assessing whether Berachain can evolve into a sustainable, liquidity-driven public chain paradigm through continued DeFi and dApp ecosystem development.

Topic Tags:

Gate Research, Blockchain, DeFi, Altcoins

Gate Research: Berachain and Its Consensus Mechanism: Who Still Believes in the Public Blockchain Narrative

1 TL;DR

1. Berachain is a Layer 1 blockchain that introduces an innovative Proof of Liquidity (PoL) consensus mechanism. By incentivizing liquidity providers, it enhances network security and efficiency while addressing key issues of traditional Proof of Stake (PoS), such as liquidity lock-up and stake centralization.
2. The technical architecture is built on the Cosmos SDK and BeaconKit, enabling modular EVM compatibility and seamless integration with Ethereum tools and smart contract development.
3. Its tokenomics involve three native tokens: $BERA (used for gas fees), $BGT (governance token), and $HONEY (stablecoin). The separation of token functions helps reduce stake concentration and encourages more dynamic DeFi activity.
4. After its mainnet launch, Berachain’ s Total Value Locked (TVL) surged rapidly to $3.26 billion, ranking sixth among public blockchains. However, most of the early TVL is concentrated in a handful of protocols, raising concerns over centralization risks.
5. The ecosystem faces potential threats from cartel-like centralization and market volatility. In a bear market, declining staking APRs may trigger liquidity outflows, which could undermine both network security and token value.
6. Challenges such as inflationary imbalance, sluggish growth, and inconsistent data indicate that the long-term sustainability and scalability of the PoL model still need to be proven.

2 Project Overview

2.1 Project Development and History

Berachain is an emerging Layer 1 blockchain project that aims to compete with existing Layer 1s such as Ethereum and Solana through its unique Proof of Liquidity (PoL) consensus mechanism. The project began as an NFT initiative and gradually evolved into a comprehensive blockchain ecosystem, showcasing a combination of community-driven development and technical innovation.

Berachain was founded by four anonymous developers, each adopting bear-themed pseudonyms while maintaining their anonymity. These founders are Smokey the Bera, Papa Bear, Homme Bera, and Dev Bear. Smokey is believed to be an active early crypto investor based in

Minnesota, USA. Dev Bear, the co-founder and CTO, previously worked at Apple and currently resides in Vancouver, Canada.

The project traces its origins back to early 2021 with the launch of the Bong Bears NFT collection, a set of 100 unique NFTs described as “100 completely relaxed bears enjoying life.” The success of this collection led to a series of follow-up “rebasing” NFT projects, including Bond Bears, Boo Bears, Baby Bears, Band Bears, and Bit Bears. The rebasing mechanism allowed original NFT holders to receive new NFTs via airdrops, with the final rebase expected to take place on the Berachain mainnet.

According to the official Berachain blog,[1] the NFTs came before the blockchain itself, and holders of these NFTs have become some of the earliest and most dedicated community members. Many have already begun launching their own dApps and community initiatives within the ecosystem. This development has been key to the project’s growth, showing its true community-driven nature.

From a technical perspective, Berachain implements the PoL consensus mechanism, designed to enhance network security and efficiency by incentivizing liquidity providers. The architecture is built on the Cosmos SDK and leverages BeaconKit to support modular EVM compatibility, enabling seamless development using Ethereum tools and smart contracts. The PoL model introduces an innovative economic framework aimed at aligning incentives among validators, liquidity providers, and users, thereby strengthening security at both the application and blockchain layers.

Berachain’s mainnet officially launched on February 6, 2025, alongside its Token Generation Event (TGE). The native token $BERA was listed on several centralized exchanges, including Gate.io, Binance, Bitget, and MEXC.

Following the mainnet launch, Berachain experienced rapid growth. As of March 27, 2025, its Total Value Locked (TVL) reached $3.49 billion, making it the sixth-largest blockchain network in the DeFi space, according to DefiLlama. This milestone underscores the effectiveness of the PoL mechanism in attracting significant liquidity. For instance, the pre-deposit platform Boyco drew over $3.1 billion in liquidity just one week prior to the mainnet launch.[2]

2.2 PoL Consensus Mechanism and Token Design

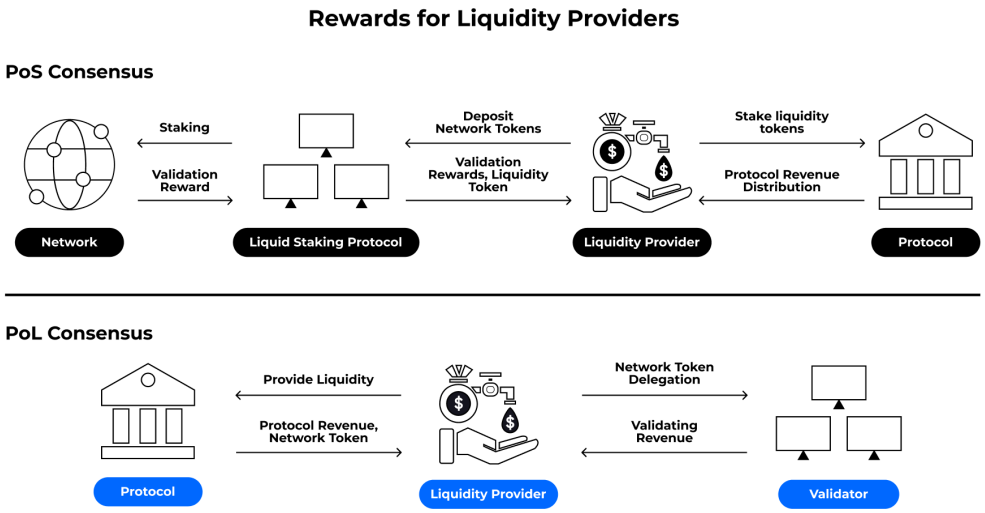
The Proof of Liquidity (PoL) mechanism addresses several major shortcomings of the traditional Proof of Stake (PoS) model. The first is the issue of **liquidity lock-up**. In typical PoS systems—such as Ethereum and Avalanche—over $114 billion in assets are staked and locked, generating only modest yields (annual returns of 3–5%). These assets become largely unusable for other purposes, rendering them idle and limiting the network's overall liquidity. This inefficiency has given rise to the liquid staking sector on Ethereum. Berachain addresses this problem through its PoL mechanism, which allows users to stake assets while keeping them available for use in DeFi protocols. This design increases ecosystem-wide liquidity and encourages users to contribute capital to decentralized applications (dApps), benefiting users, dApp developers, and the broader network alike.

Ethereum's high staking ratio results in reduced ETH circulation, underpricing, and artificially induced scarcity. For smaller Layer 1 chains, a drop in token price can trigger validators to liquidate their collateral to reduce risk, exacerbating volatility. On Berachain, $BERA is not used for staking, which ensures greater token circulation and enables a more transparent and predictable inflation/deflation model.

The second issue is **validator centralization**. On Ethereum, most validators operate as cloud-based staking providers. Running such infrastructure is not convenient or feasible for the average user. Additionally, many early ETH holders possess substantial amounts of the token, enabling them either to open numerous validator nodes or pool resources from retail users, ultimately leading to a concentration of validator power.

The third issue is **staking centralization**. Large holders are incentivized to stake more ETH to earn more rewards, creating a positive feedback loop: the more you stake, the more you earn. In high-value PoS networks like Ethereum, managing large staking pools becomes increasingly complex. As a result, many smaller PoS chains end up with one or two dominant staking pools effectively making key decisions for the network. Even in Ethereum's case, staking centralization has led to the rise of liquid staking derivatives (LSDs) like Lido, which introduce counterparty risk and represent a growing threat to decentralization.

Figure 1: Comparison of PoS and PoL Consensus Mechanisms



Gate Research, Data from: DeSpread

The PoL mechanism borrows certain elements from PoS but resolves common issues found in PoS systems—namely, insufficient liquidity and stake centralization—by introducing liquidity-based incentives. At its core, PoL ties network security directly to liquidity provision, ensuring that assets remain highly liquid within the DeFi ecosystem while also enhancing decentralization and overall network security.

– Role of Validators:

  - Validators secure the network by staking $BERA, Berachain’ s native gas token, in a manner similar to the staking process in PoS systems.

  - However, unlike PoS, the rewards earned by validators are distributed in $BGT, a soul-bound governance token, rather than in $BERA.

  - The amount of block rewards (in $BGT) a validator earns is proportional to the amount of $BGT delegated to them. Validators receive protocol incentives and, after deducting fees, pass the remainder to their delegators. This model incentivizes validators to maximize returns for $BGT delegators in order to attract more delegation.

  - Validators also act as allocators, choosing which liquidity pools and applications to direct block emissions toward, thereby creating a value flow from validators to applications, and ultimately to end users.

– Role of Liquidity Providers:

  - Users earn $BGT by providing liquidity to the network—for example, through BeraSwap,

Berachain’ s decentralized exchange, or other integrated DeFi protocols.

- $BGT is non-transferable and can only be earned through “productive activity” within the network, such as interacting with whitelisted incentive-compatible protocols and dApps.

- Once earned, users can delegate $BGT to validators, enabling them to participate in governance votes or earn additional rewards.

– Reward Vaults Mechanism:

- Protocols within the ecosystem can create Reward Vaults, where users stake PoL-eligible assets (e.g., $BERA or other designated tokens) to earn $BGT emissions.

- Validators decide how to allocate $BGT emissions among different vaults, based on the incentive terms offered by protocols, often involving $BGT-to-token exchange rates.

- This competitive incentive structure encourages protocols to offer more attractive liquidity rewards, drawing in more user participation and boosting the ecosystem’ s overall liquidity.

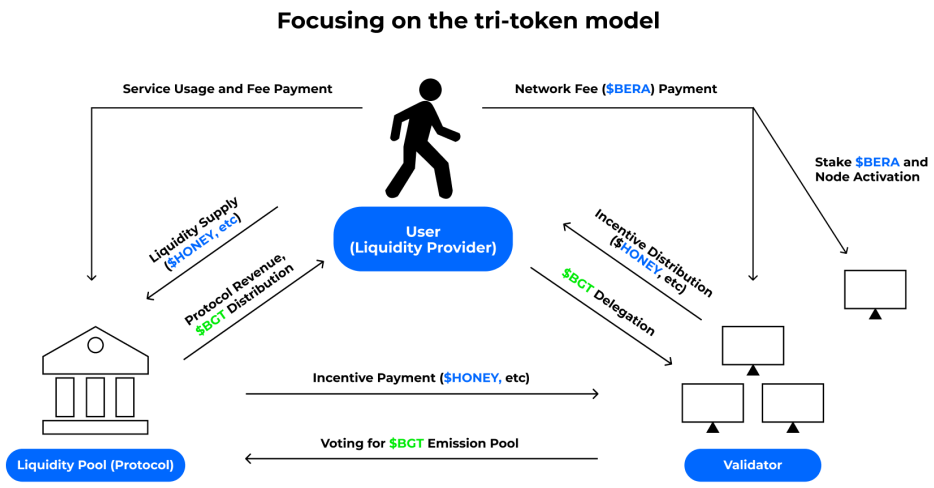
– Unique Properties of $BGT:

- $BGT is a soulbound token, meaning it cannot be transferred or traded on the open market—it can only be earned by providing liquidity.

- Users can redeem $BGT for $BERA at a 1:1 ratio, but this is a one-way process; $BERA cannot be converted back into $BGT.

- As a governance token, $BGT can either be used to vote directly on governance proposals or delegated to validators who vote on behalf of the user.

Figure 2: Diagram of the Berachain Ecosystem Relationships



Gate Research, Data from: DeSpread

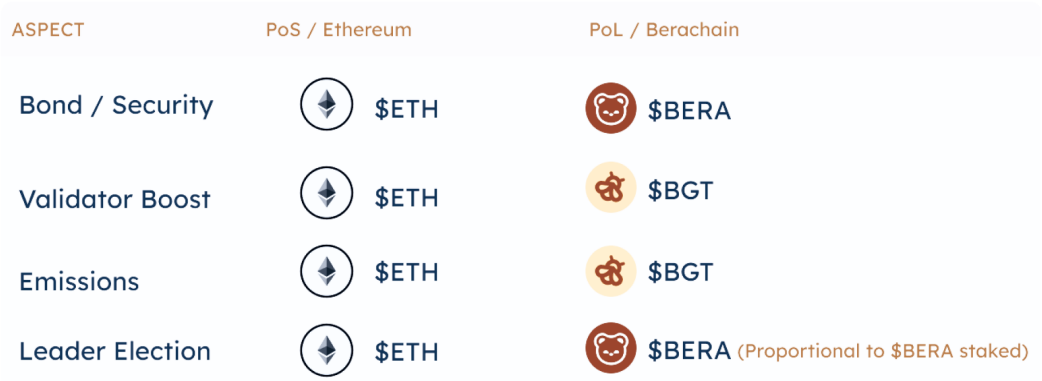
Berachain integrates liquidity and security as complementary rather than opposing forces. Its core mission is to support on-chain applications through Proof of Liquidity, ensuring that those who contribute the most value to the ecosystem are directly rewarded across the network.

Aspet	Proof of Stake (PoS)	Proof of Liquidity (PoL)
Core Incentive	Validators earn rewards by staking tokens	Validators secure the chain by staking $BERA; liquidity providers earn $BGT
Liquidity Impact	Token staking may reduce liquidity	Liquidity is enhanced by rewarding liquidity providers
Stake Distribution	Prone to concentration of stake, allowing a few validators to control the network	$BGT distribution encourages broader participation and reduces centralization
Governance Participation	Typically involves staking tokens to vote	Governance is driven by $BGT delegation and voting, emphasizing liquidity contribution

Gate Research

Gate Research

Figure 3: Comparison Between PoS/Ethereum and PoL/Berachain



Gate Research, Data from: Berachain Docs

Gate Research

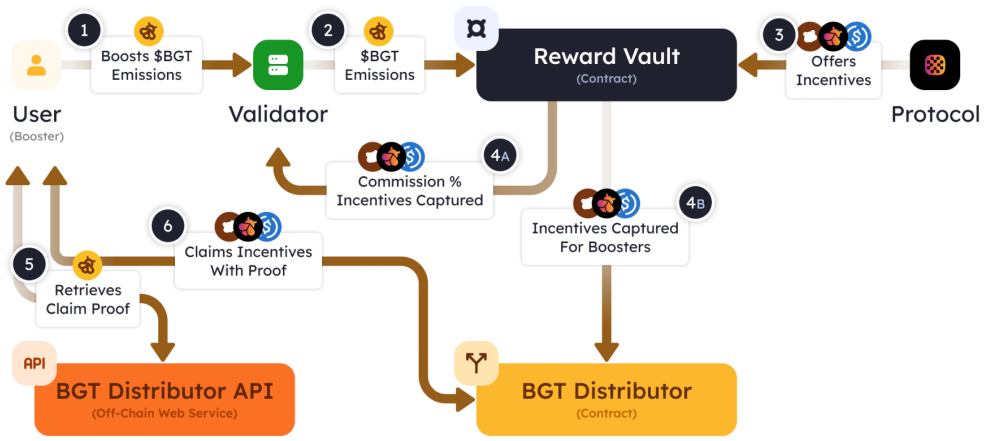
Berachain's economic model is built around a three-token architecture, with each token serving a distinct role within the ecosystem. This design separates governance, gas fees, and stable-coin functionality, which reduces the risk of stake centralization. Additionally, the reward vault system incentivizes active participation in DeFi, ultimately enhancing the network's economic efficiency. Notably, $BGT can only be burned and converted into $BERA in a one-way process, and $BERA cannot be converted back into $BGT. This makes it impossible to "buy votes" and significantly raises the opportunity cost of malicious behavior on-chain.

Token	Purpose	Properties
$BERA	Native gas token, similar to ETH on Ethereum; used for paying transaction fees and staked by validators to secure the network	Transferable; contributes to network security
$BGT	Earned by providing liquidity; used for governance voting and as a reward token	Soulbound; non-transferable; can be redeemed 1:1 for $BERA (one-way only)
$HONEY	Native stablecoin, soft-pegged to the US dollar	Enables stable-value exchanges; operates between a fixed and floating exchange rate mechanism

Gate Research

Gate Research

Figure 4: Relationship Diagram Between Users, Protocols, and Validators



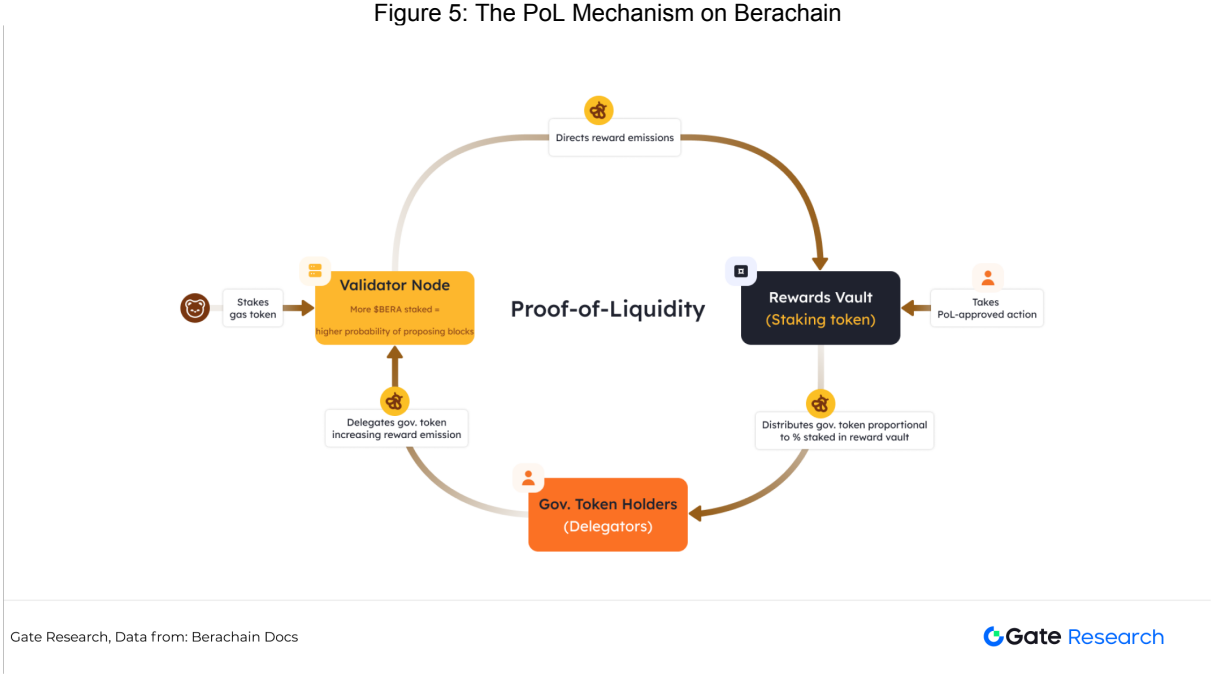
Gate Research, Data from: Berachain Docs

Gate Research

The implementation of the PoL mechanism creates a unique incentive flywheel within the Berachain DeFi ecosystem:

- Users lock assets into Reward Vaults to earn $BGT emissions, which they can then delegate to validators to receive further rewards.
- Protocols offer competitive reward pools to attract greater liquidity, improving the overall health and vibrancy of the ecosystem.
- Validators seek to maximize $BGT delegation to increase their share of $BGT emissions, thereby strengthening network security.

Figure 5: The PoL Mechanism on Berachain



Gate Research, Data from: Berachain Docs

Gate Research

2.3 Native Technology

Berachain is fully compatible with the Ethereum Virtual Machine (EVM), sharing the same execution environment. This allows developers to deploy Ethereum-based dApps on Berachain without modifying their existing code. It uses standard, unmodified Ethereum execution clients—such as Geth, Reth, Erigon, and Nethermind—to execute smart contracts and supports all EVM-native tools. When Ethereum undergoes upgrades, Berachain can immediately adopt the latest versions. In addition, Berachain integrates the BeaconKit framework, which enables modular development of consensus clients, allowing the blockchain to remain highly adaptable to future upgrades and changes.

Polaris EVM

Polaris EVM is Berachain's modular EVM framework that provides the execution environment for smart contracts. It ensures full compatibility with the Ethereum Virtual Machine, allowing developers to use existing Ethereum tooling and smart contracts while offering enhanced capabilities. Polaris EVM extends beyond Ethereum's basic implementation by supporting stateful precompiles and custom modules that improve smart contract performance while preserving Ethereum's reliability. This design enables developers to build higher-performance and more innovative dApps on Berachain. For example, it supports direct interaction with Cosmos modules, which is not possible in standard EVM environments—adding greater flexibility to Berachain's DeFi and dApp ecosystem.

CometBFT

CometBFT is the consensus engine powering Berachain, enabling secure and consistent application replication across multiple machines. It tolerates failures in up to one-third of the network's nodes, maintaining security while synchronizing transaction logs and states across functioning nodes. This replication process is critical for fault tolerance in various use cases, including monetary systems and infrastructure orchestration.

CometBFT implements Byzantine Fault Tolerance (BFT), which allows the network to function even in the presence of faulty or malicious nodes. While BFT theory dates back decades, it has found modern relevance in blockchain systems such as Bitcoin and Ethereum, which leverage peer-to-peer networking and cryptographic authentication to modernize BFT. CometBFT consists of a blockchain consensus engine and an Application Blockchain Interface (ABCI) built on the Tendermint consensus algorithm. This ensures consistent transaction delivery to applications. Unlike other solutions, CometBFT allows developers to build BFT-based replicated state machines in any programming language or development environment.

Precompiled Contracts

Precompiled contracts are special smart contracts natively embedded into the EVM, rather than deployed as bytecode. Each precompiled contract resides at a fixed address with predetermined gas costs. On Berachain, these contracts provide deep, low-level functionality that enables smart contracts to interact directly with various Cosmos modules, something not possible in standard EVM settings. This greatly enhances interoperability and performance between Berachain smart contracts and the Cosmos ecosystem. For example, precompiled contracts can support more efficient cross-chain communication or enable direct integration with Cosmos modules, offering developers more advanced tools when building cross-chain dApps.

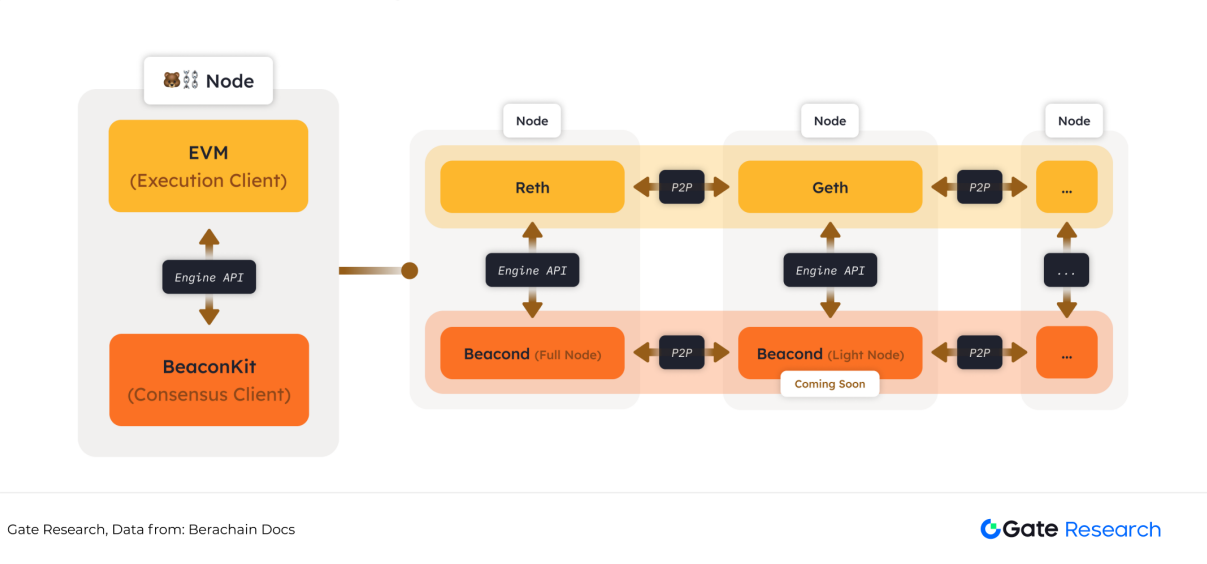
BeaconKit

BeaconKit is a framework developed by Berachain to help developers build EVM-compatible blockchains. It serves as a modular consensus layer, supporting the customization of consensus mechanisms while maintaining full compatibility with Ethereum's mainnet functionality. BeaconKit integrates CometBFT, a BFT consensus engine based on Tendermint, which ensures consistency and security even in faulty or malicious nodes. It supports all major Ethereum execution clients (such as Geth and Erigon) and provides seamless integration through the Ethereum Engine API.

BeaconKit's modular architecture allows developers to extend different layers, including custom block builders, rollup layers, and data availability layers, making it suitable for building both Layer 1 and Layer 2 solutions. Compared to Ethereum's finality time of about 13 minutes,

BeaconKit reduces block time by up to 40% through single-slot finality and optimistic payload construction, while remaining fully compatible with Ethereum Improvement Proposals (EIPs). BeaconKit can also serve as a framework for Layer 2 networks, providing greater flexibility for developers.

Figure 6: Modular Architecture of BeaconKit



Gate Research, Data from: Berachain Docs

Gate Research

2.4 Native dApps

Berachain features several native decentralized applications (dApps), including BEX, Bend, and Berps. These dApps are developed by the core team and serve as foundational infrastructure to support key ecosystem functions. Currently, three types of native dApps are live on the Berachain mainnet.

According to cofounder Smokey, Berachain’ s native dApps are designed to fulfill two primary objectives. First, they are intended to kickstart the $BGT emission flywheel, ensuring the process remains secure and independent of third-party dApps. Second, they aim to initiate a fee-generation flywheel, enabling $BGT holders to accrue value from these applications. In addition, these native dApps help set the quality benchmark for the ecosystem, ensuring liquidity is initially concentrated in high-quality protocols. Users can earn $BGT by providing liquidity and interacting with these native dApps—for example, through liquidity provisioning (LPing) on the DEX or borrowing through the lending protocol. It is expected that most initial $BGT emissions will originate from these mechanisms.

BEX: Decentralized Exchange

– BEX is Berachain’ s native decentralized exchange (DEX), enabling users to trade any crypto asset directly via smart contracts without centralized intermediaries. Users can conduct trades or even create their own liquidity pools in a fully permissionless environment.

– Key Features:
- Liquidity Incentives: Liquidity providers not only earn trading fees but can also receive $BGT rewards by having their liquidity pools upgraded to PoL Reward Vaults through community voting. The following table shows the default allocation structure for liquidity rewards:

Liquidity Pool	Type	Weight	Allocation Share	Fee	Amplification Factor
BERA - HONEY	Weighted	50-50	35.00%	0.30%	n.a.
BERA - WETH	Weighted	50-50	25.00%	0.30%	n.a.
BERA - WBTC	Weighted	50-50	25.00%	0.30%	n.a.
USDC - HONEY	Stable	50-50	7.50%	0.01%	2000
BYUSD (pyUSD) - HONEY	Stable	50-50	7.50%	0.01%	1000
Total			100.00%		

Gate Research, Data from: Berachain Docs

Gate Research

– PoL Integration: $BGT issuance is closely tied to network governance. Through BEX’ s governance mechanism, community members can propose and vote to whitelist new liquidity pools for PoL Reward Vaults, enabling those pools to receive $BGT rewards.

Bend: Lending Protocol

– Bend is Berachain’ s native non-custodial lending protocol, similar to Aave or Compound. It allows users to borrow $HONEY against a variety of collateral assets or to earn interest by supplying $HONEY liquidity.

– Key Features:
- Borrowing and Collateralization: Users can deposit crypto assets as collateral to borrow

$HONEY. $HONEY is the only interest-bearing asset in the Bend protocol; other assets are used solely as collateral.

- Liquidity Incentives: In addition to earning interest, liquidity providers can receive $BGT rewards through the PoL mechanism, further incentivizing participation. Users supply liquidity by depositing tokens—such as $HONEY and $BERA—into BEX pools and receive liquidity certificate tokens (e.g., $HONEY-WBERA). These certificates can be staked in Reward Vaults to earn $BGT based on contribution.

– PoL Integration: Bend leverages the PoL Reward Vault system to link liquidity provisioning with network governance, ensuring contributors are properly rewarded. Borrowing activity on Bend can trigger $BGT emissions, strengthening ecosystem liquidity.

Berps: Perpetual Futures Trading

– **Berps** is Berachain's native perpetual futures trading platform. It enables users to use $HONEY as collateral to open leveraged positions or to supply $HONEY liquidity to fund traders' positions and earn trading fees.

– Key Features:

- Leverage Trading: Berps supports perpetual futures contracts, allowing users to trade with leverage and gain increased capital efficiency and flexibility.

- Liquidity Incentives: Through the PoL mechanism, liquidity providers earn trading fees and receive $BGT rewards.

– PoL Integration: Liquidity providers on Berps earn $BGT via PoL Reward Vaults, directly connecting their contributions to network security and governance. Berps'trading activity is deeply integrated with the PoL mechanism, creating strong incentives for users to supply liquidity.

2.5 Ecosystem Applications

1. **Puffpaw:** A quit-smoking and vape-to-earn DePIN protocol on Berachain. It incentivizes healthier behavior, such as reducing nicotine intake. Backed by a strong team, Puffpaw sold over 76 million e-cigarettes globally in 2023 alone.[3]
2. **Exponents:** A new layer for directional speculation, combining Uniswap's spot arbitrage mechanics with a bribe-based incentive layer for long and short positions.
3. **Gaming Project:** Inspired by games like *Animal Crossing and Stardew Valley*, and including teams like Shogun, which raised funding from Polychain and Binance Labs to build a solver network for cross-chain asset transactions.

4. **Gummi:** An isolated-risk money market enabling loans against any asset with up to 99% LTV. It allows custom collateral and LTV configurations, making it suitable for high-risk collateral (like meme coins) and high-APR lending. The retro Windows XP-style UI infused with 4chan/Gigachad meme culture has boosted user engagement. While the fun UI is well-received, the platform’s core functionality is still under development, and its market strategy (meme-driven or hedging utility) remains to be clarified.

5. **Kodiak:** Offers concentrated liquidity and automated liquidity management strategies, aiming to be the go-to DEX for communities and altcoins.

6. **Over Under:** Uses ML and computer vision to predict outcomes and generate live odds for real-time in-game betting on Twitch streams.

7. **Concrete Finance:** Builds on-chain credit default swaps and liquidation services, targeting more advanced and nuanced stages of DeFi development.

8. **The Honey Jar (THJ):** The main entry point and community hub for Berachain, responsible for user education, project incubation, and protocol integrations. Known for launching the Honey Comb NFT collection, with an active Chinese-speaking community. Its founder, Jani, is considered a thought leader for early-stage ecosystem trends.

9. **Algebra:** A DEX backend provider offering modular trading contract solutions (e.g., V4 supports hooks/plugins). Algebra V4 is deployed on the Berachain testnet with support from cofounder Smokey, aiming to lower the barrier for DEX development.

10. **Redacted Cartel:** A DeFi yield protocol combining bribe markets and LSD (Liquid Staking Derivatives), incubated by New Order. It aligns with Berachain’s native vote-bribing mechanics and could become a central hub for governance-related yield.

11. **Beradrome:** A ve(3,3)-based DEX focused on Restaking. Holders of “Tour de Berance” NFTs will receive $Bero airdrops based on rarity. The mechanism has been validated on the testnet.

12. **Sudoswap:** An NFT liquidity protocol already deployed on Ethereum mainnet. It plans to support cross-chain bridging and incentives for Berachain’s blue-chip NFTs, positioning itself as one of the leading NFT marketplaces within the ecosystem.

13. **Grand Conquest:** An on-chain strategy game inspired by the board game Risk, combining token incentives and governance gameplay. Players purchase “national shares” to recruit troops and fight for territory, earning $GOLD tokens and conquest points. Shareholders split the prize pool upon victory; points unlock deeper strategic gameplay. Testnet highlights include:
    - Participation from over 60 projects and core contributors, including Berachain DeFi lead

Captain Jack, with significant $BERA usage.
- Formation of a “Coalition Against Jack” by the community, coordinating opposition via Twitter Spaces—demonstrating strong viral appeal.
- If economic balance and game incentives are optimized, it could become a benchmark for combining blockchain gaming and governance.

14. **Infrared:** Berachain’s native PoL protocol. Offers one-click staking to earn $BGT and $BERA, and mints a liquidity token $iBGT. Modeled after Lido + Convex, integrating native protocols like BEX and Berps. Supported by the Berachain Foundation and Binance Labs, Infrared simplifies staking for everyday users and could expand across more protocols, becoming a yield hub for both conservative and aggressive capital.

15. **Smilee Finance:**A DeFi protocol that transforms impermanent loss into tradable volatility products. It offers long/short volatility options: go long to bet on market turbulence, or short to bet on stability. Already deployed on Arbitrum and Berachain testnet (bArtio).

Berachain’s ecosystem is set to grow continuously by supporting developers in building applications using Boyco pre-deposits, validator delegation, Proof of Liquidity, and the evolution of BeaconKit. This will continue to attract new projects across DeFi, gaming, and other sectors—further enriching the utility and diversity of the Berachain network.

3 Business Analysis

3.1 Market Potential and Industry Outlook

With an on-chain TVL of $2.985 billion, Berachain has firmly established itself among the Top 6 public blockchains, surpassing emerging ecosystems such as Avalanche, Base, and Sui—and even outperforming the established Layer 2 network Arbitrum. This demonstrates a powerful capital aggregation effect.

However, in stark contrast to its impressive TVL, Berachain hosts only 45 protocols on-chain, making it the least populated network among the Top 10 public chains. This unique combination of **high TVL concentration and low protocol density** makes Berachain an outlier in the industry—each protocol carries an average of $66.3 million in TVL, far exceeding benchmarks like Solana ($3.5 million/protocol) and BSC ($1.6 million/protocol). *(As of March 20, 2025)*

Figure 7: Berachain hosts only 45 protocols

Name	Protocols	Active Addresses	1d Change	7d Change	1m Change	DeFi TVL
1 Ethereum	1314	351,616	+1.32%	-8.78%	-18.25%	$47.169b
2 Solana	206	3.84m	+2.46%	-2.61%	-20.56%	$7.575b
3 Bitcoin	58	728,748	+0.99%	+0.10%	-13.84%	$5.685b
4 BSC	859	1.22m	+0.85%	+5.70%	-2.57%	$5.329b
5 Tron	35	2.57m	+0.93%	-0.10%	-20.17%	$4.544b
6 Berachain	45		+2.86%	-10.08%	+63.88%	$2.985b
7 Base	472	905,057	+0.85%	+6.40%	-10.87%	$2.895b
8 Arbitrum	782	309,910	+0.19%	-3.03%	-12.98%	$2.498b
9 Sui	55		+0.50%	-2.10%	-24.23%	$1.199b
10 Avalanche	431	44,098	+0.69%	-2.56%	-12.58%	$1.128b

Gate Research, Data from: DefiLlama, 20250320

Gate Research

A closer look at Berachain’s ecosystem reveals that Infrared is currently the protocol with the highest TVL, more than double that of the second-ranking protocol. Native liquidity hub Kodiak ranks second with $995 million in TVL, followed by native DEX BEX, which holds $936 million in TVL. *(As of March 20, 2025)*

TVL is highly concentrated in the top three protocols, with the top ten accounting for over 60% of the total, indicating that Berachain’s ecosystem is still in its early stages of development. However, this also opens up significant growth potential for sectors such as derivatives (e.g., Smilee), leverage protocols (e.g., Gummi), and lending platforms (e.g., Dolomite). If these protocols can replicate the success of Solana’s Jito and Kamino, they could potentially achieve 10–20x TVL growth in their respective verticals.

Figure 8: Berachain Ecosystem Applications Overview

Name	Category	TVL	1d Change	7d Change	1m Change
1 Infrared Finance 1 chain	Liquid Staking	$1.935b	+3.33%	+2.21%	+59.84%
2 Kodiak 1 chain	Dexs	$994.65m	+2.81%	+2.10%	-0.49%
3 BEX 1 chain	Dexs	$936.05m	+5.30%	+7.78%	+106%
4 Dolomite 5 chains	Lending	$652.68m	+1.95%	-16.07%	+22.83%
5 Veda 7 chains	Managed Token Pools	$540.23m	+3.67%	+2.21%	
6 Concrete 4 chains	Managed Token Pools	$410.01m	+1.10%	+0.77%	-49.03%
7 Beraborrow 1 chain	CDP	$376.85m	+1.77%	+1.40%	-12.59%
8 SatLayer 4 chains	Anchor BTC	$243.08m	+1.35%	-0.05%	-12.08%
9 Stride 17 chains	Liquid Staking	$29.4m	+0.10%	-14.14%	+270%
10 Smilee Finance gB... 1 chain	Liquid Staking	$23.72m	+1.16%	+5.23%	

Gate Research, Data from: DefiLlama, 20250320

Gate Research

3.2 Inflation Imbalance, Sluggish Growth, and Data Inconsistencies

On-chain economic data for Berachain’ s governance token $BGT reveals a notable inflation imbalance:

1. **Emission Side**

   - The average daily emission/minting rate of $BGT is steady at 150,000 tokens, maintaining a stable trajectory. Despite the token having been listed for just over a month, total emissions have already surpassed 5 million, reaching 5,252,230 $BGT.

   - This implies a consistent supply-side pressure of 150,000 $BGT per day.

2. **Burning Side**

   - Net inflation is estimated at 130,000 $BGT/day (emissions −burns). At this pace, the net annual inflation would reach 47.45 million $BGT.

   - Burn/emission ratio = average daily burn / average daily emission = 20,000 / 150,000 = 13.33%.

   - Annual burn rate = (20,000 × 365) / (130,000 × 365) = 7.3 million / 47.45 million ≈ 15.38%. **This reveals a structural contradiction of high emissions vs. low burn**.

   - Annualized net inflation rate = annual net supply increase / (current circulating supply + net annual increase). Considering ongoing emissions, the estimated **annual inflation rate is approximately 8.6**%.

3. Industry Comparison

   - Compared to more mature chains—Ethereum has entered deflation post-Merge, and Solana’s annual inflation has dropped to around 5%[4]—Berachain’s model currently resembles early-stage Cosmos, where **high inflation is used to bootstrap ecosystem growth**.

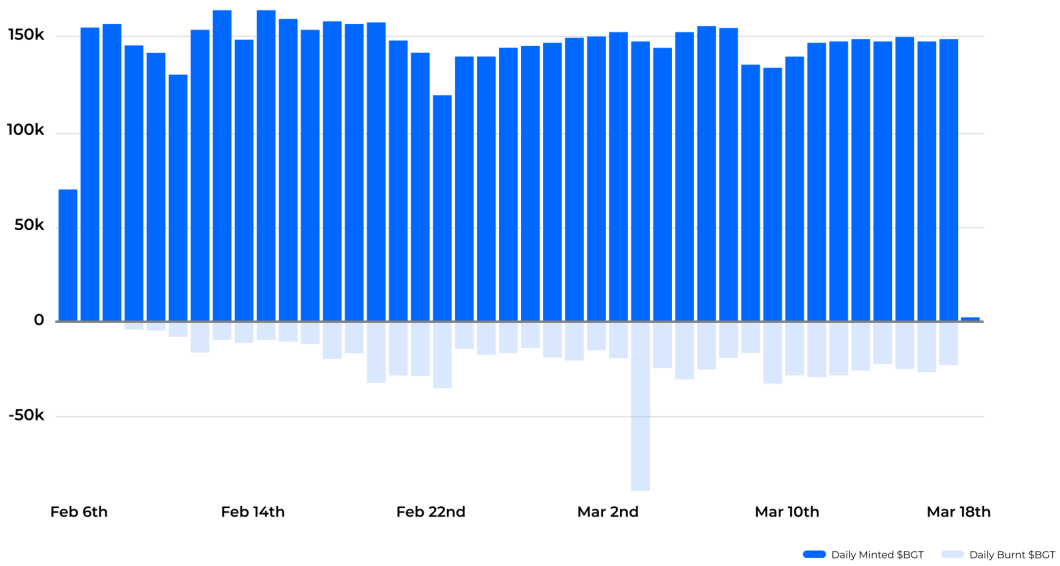
   - However, unlike extreme cases such as Sui, which faced criticism for projected first-year inflation above 250%[5], Berachain’s inflation is aggressive but remains slightly above acceptable thresholds.

Berachain’s inflation model can be described as ”controlled aggression,” but its long-term viability depends on proving that **protocol revenue growth outpaces inflation** within the next 12–18 months. If this fails, the sustainability of its tokenomics may be in doubt. The community should consider mechanism adjustments such as emission decay or accelerated burning.

– **Short-term:** High inflation may put downward pressure on token prices, though whales may choose to stake and hold in a bear market as a hedge.

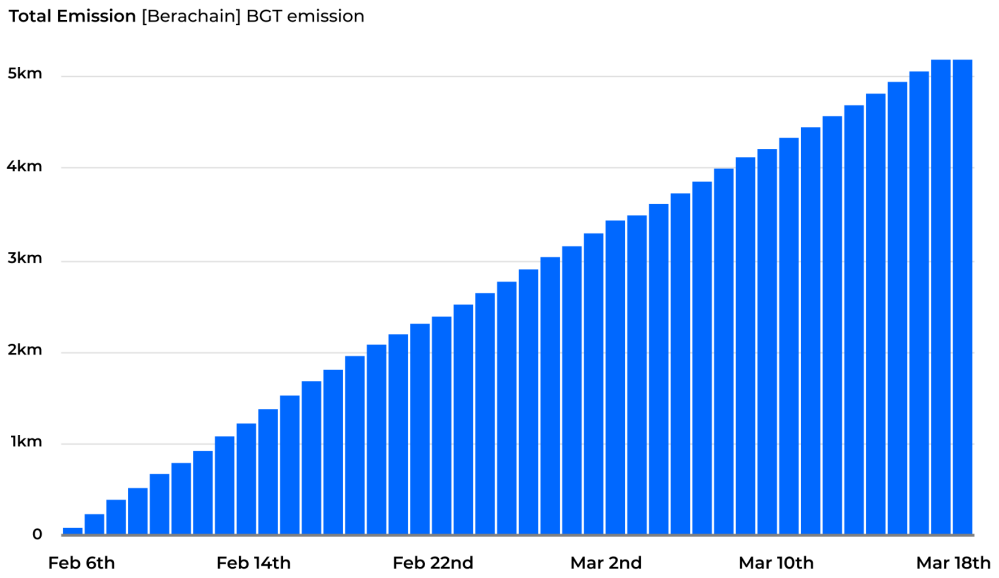
– **Long-term:** If inflation does not decelerate by 2026, the ecosystem may become subsidy-dependent, potentially triggering a sell-off spiral.

Figure 9: On-Chain Economic Data for$BGT 1



Gate Research, Data from: Dune, 20250320

Figure 10: On-Chain Economic Data for $BGT 2



Gate Research, Data from: Dune, 20250320

Gate Research

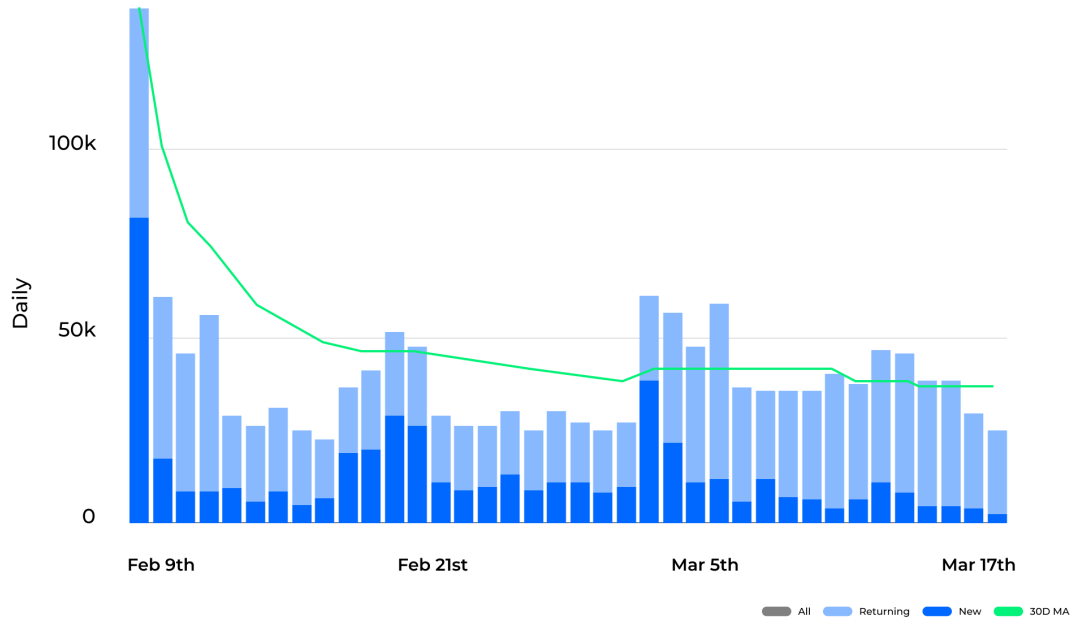
User growth has entered a plateau phase, showing signs of fatigue, transitioning from an "acquisition phase" to a focus on "retention and operations." This is evident from the declining number of active addresses and the slowdown in new address growth. The motivation for new users to join the network appears to be weakening—possibly due to fading market enthusiasm, a lack of short-term incentives within the ecosystem, and the exit of early airdrop participants. Returning user addresses have stabilized: a loyal core user base (such as long-term stakers and governance participants) is gradually consolidating, yet overall activity levels continue to decline.

The divergence between TVL and transaction volume may suggest institutional or whale-led control through low-frequency, high-value operations, while retail participation fades. Daily transaction volume has been gradually decreasing but remains relatively stable, indicating a reduction in on-chain interaction frequency without a continuous downward spiral. This reflects rigid demand from core users for actions like regular staking and governance voting. At the same time, TVL has remained stable with no clear signs of capital outflow, potentially implying that low-frequency, high-net-worth users (e.g., institutions or whales) are dominating on-chain activity. Despite recent token price declines driven by the broader crypto bear market, the stability in TVL suggests that capital has not fled in large amounts—and may even be locked in due to PoL staking mechanics or high-APR staking pools. The resilience of TVL reinforces the idea that capital loyalty is currently stronger than user activity.

The Root of Berachain’s Data Paradox Lies in PoL’s Double-Edged Nature

- **Strengths:** Enables rapid TVL accumulation and filters for loyal capital—creating a potential moat.
- **Weaknesses:** Activity and capital decouple; self-sustaining ecosystem feedback loops remain unproven.
- **Critical Pivot:** Whether Berachain can convert TVL into on-chain productivity (e.g., lending demand, asset management strategies) rather than static staking collateral.If successful, Berachain could redefine the Layer 1 paradigm. If not, the high TVL may reflect only temporary inflated metrics, and the tokenomics model may prove unsustainable.

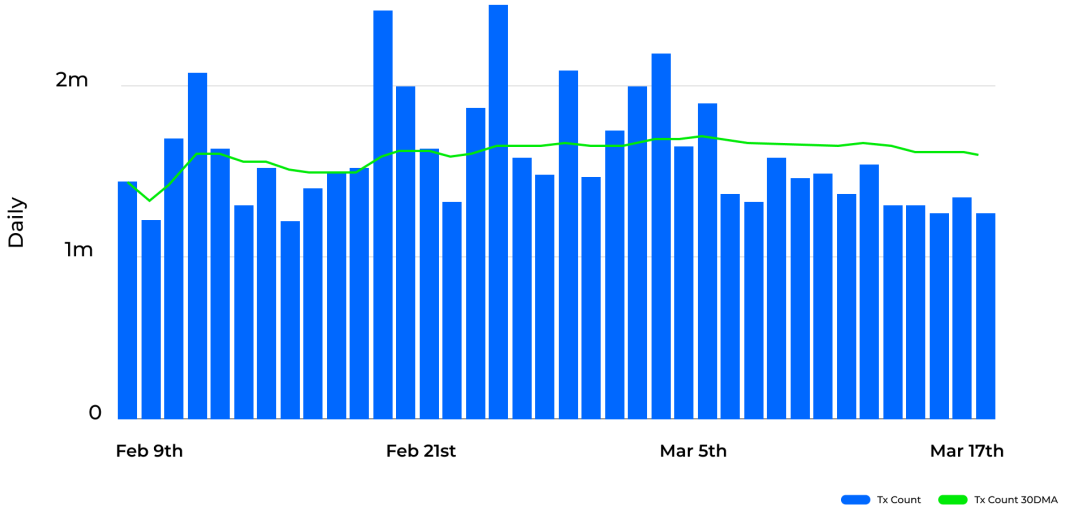
Figure 11: Active Addresses on Berachain



Gate Research, Data from: Dune, 20250320

Gate Research

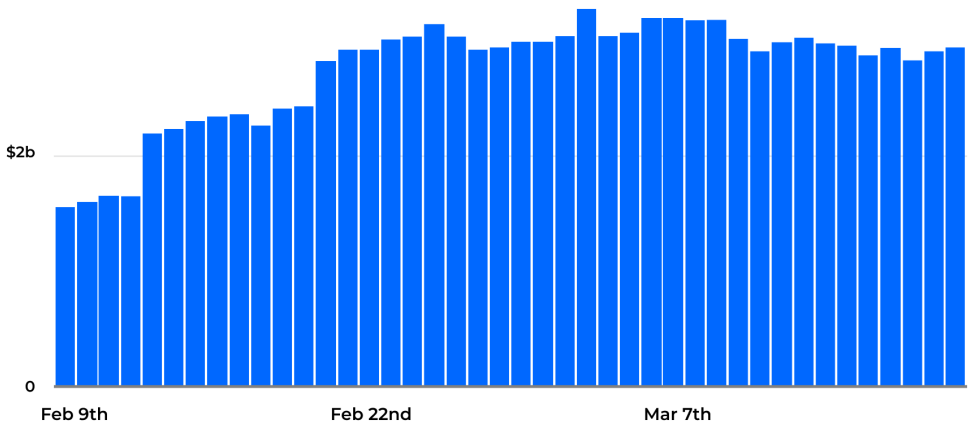
Figure 12: Berachain Transaction Volume



Gate Research, Data from: Dune, 20250320

Gate Research

Figure 13: Berachain TVL



Gate Research, Data from: Dune, 20250320

Gate Research

4 Tokenomics

4.1 Token Circulation and Supply

The initial supply of $BERA is set at 500 million tokens. The protocol incorporates an annual 10% inflation rate, distributed through the governance token $BGT. The genesis supply of tokens is allocated across three main stakeholder groups: **initial core contributors, investors, and the community**.[8]

Initial core contributors will receive **16.8%** of the total supply, amounting to 84 million $BERA. These tokens are allocated to the advisors and members of Big Bera Labs, the core development team behind the Berachain blockchain.

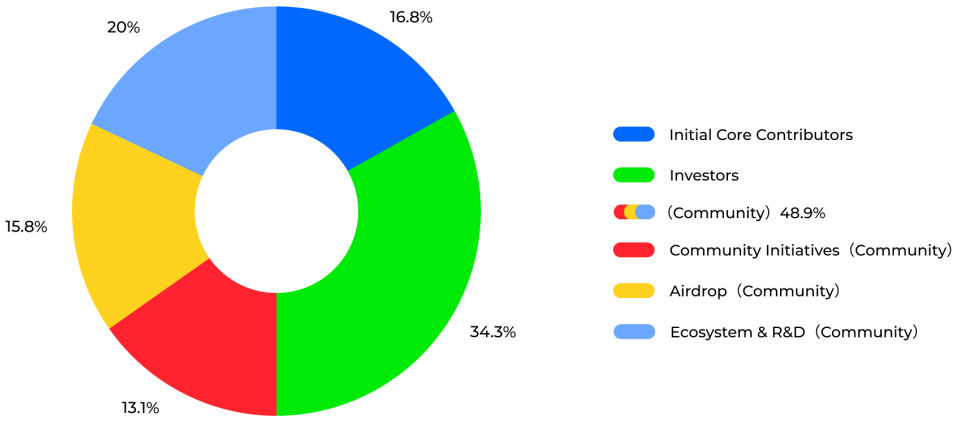
Investors represent the largest allocation outside the community. Across Berachain’ s seed, Series A, and Series B funding rounds, investors will receive **34.3%** of the token supply, equivalent to 171.5 million $BERA.
Community receives the largest share of the token distribution. As Berachain’ s growth has been driven by its unmatched community support and a robust developer ecosystem, both empowered by Proof of Liquidity, the community will be allocated a total of 244.5 million $BERA, accounting for **48.9%** of the total supply. This allocation is further subdivided into three categories:

1. **Airdrops —15.8% (79 million tokens):** 15.8% of the total supply will be distributed via airdrops to recognize ecosystem contributors, including testnet participants, Berachain NFT holders, holders of ecosystem-related NFTs, social supporters, dApps, and community builders.

2. **Future Community Initiatives —13.1% (65.5 million tokens):** 13.1% of the total supply will be reserved for grants, incentive programs, and developer/user support. These initiatives will be guided by community input through Snapshots, RFPs, and other feedback mechanisms.

3. **Ecosystem & R&D —20% (100 million tokens):** 20% of the total supply will be used to support ecosystem development, R&D, growth programs, and Berachain Foundation operations. This category will focus on initiatives targeting developers and builders, validator delegation, the evolution of Proof of Liquidity, and BeaconKit enhancements. Upon token launch, 9.5% of the $BERA supply from this category will be unlocked, specifically for ecosystem growth, developer tools/infrastructure, and liquidity provisioning.

Figure 14: Berachain Tokenomics - Distribution & Allocation



Gate Research, Data from: Berachain

Gate Research

Traditional models typically reserve airdrop allocations for investors or the most active testnet participants. In contrast, Berachain has broadened its airdrop distribution to a broader audience, including testnet users from its ecosystem, liquidity providers, content creators, and NFT holders.

Category	Eligibility Criteria	Allocation ($BERA)
Testnet Users (Artio & bArtio)	Users who interacted with Berachain testnets	8.25M (1.65%)
Brobosal Requesters (RFB)	Projects that applied for or participated in community programs	11.73M (2.35%)
Boyco Depositors	Liquidity providers in the Boyco pre-deposit program	10M (2%)
Social Media Airdrop	Active users on X (Twitter) and Discord	1.25M (0.25%)
Ecosystem NFT Holders	Holders of NFTs tied to the Berachain ecosystem	1.25M (0.25%)
Binance HODLers	BNB holders on Binance	10M (2%)
Strategic Partners	Key listed strategic partners	2M (0.4%)
Bong Bears & Rebase NFT Holders	Holders of Berachain historical NFTs	34.5M (6.9%)

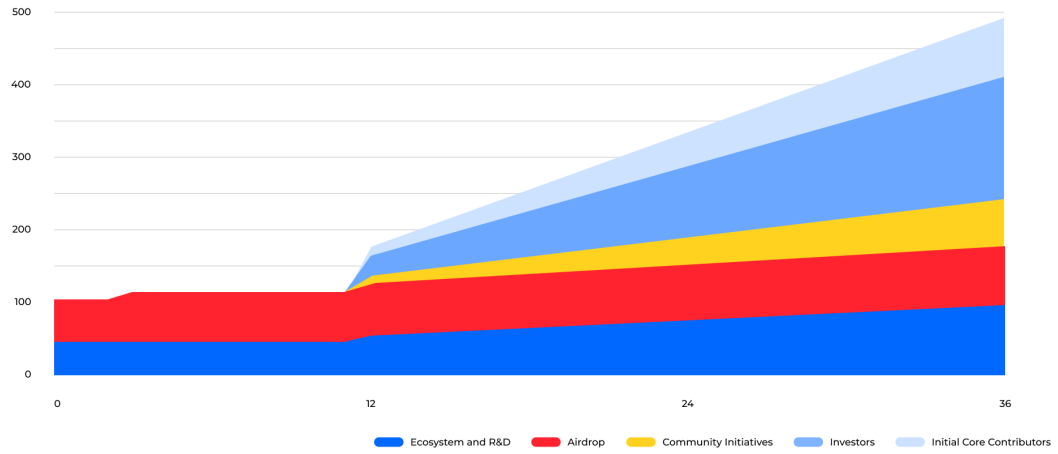
Gate Research, Data from: Berachain Docs

Gate Research

At the time of $BERA’s token launch, 9.5% of the ”Ecosystem & R&D” category tokens will be released, equivalent to 9.5 million tokens, along with 79 million tokens specifically designated for airdrops. Therefore, the circulating supply of $BERA at the token generation event on February 6 will be 88.5 million tokens.

For the remaining token supply, all categories will follow the same vesting schedule. After a one-year lock-up period, 1/6 of the tokens will be unlocked. The remaining 5/6 will be linearly released over the next 24 months.

Figure 15: Berachain Token Supply Allocation



Gate Research, Data from: Berachain Docs

Gate Research

4.2 Fundraising Overview

Berachain’s growth has been significantly catalyzed by its funding journey and strong backing from capital markets. The project has attracted a prestigious lineup of institutional investors, including top crypto VCs, hedge funds, sovereign wealth funds, project founders, and centralized exchanges, making it a textbook example of a VC-backed token. Berachain has completed two funding rounds, raising a total of $142 million, with a fully diluted valuation (FDV) of $1.5 billion.

In March 2023, Berachain closed its Series A round, raising $42 million led by Polychain Capital. Participants included Hack VC, dao5, Tribe Capital, Shima Capital, CitizenX, Robot Ventures, and several undisclosed centralized exchanges. The round valued the project at $420.69 million, laying the foundation for blockchain infrastructure development.

One year later, in April 2024, Berachain announced the completion of its Series B round, raising $100 million, co-led by Brevan Howard Digital and Framework Ventures, bringing the project's valuation to $1.5 billion. Other participants included Polychain Capital, Hack VC, Tribe Capital, Nomura, Laser Digital, Hashkey Capital, Samsung Next, Hypersphere, Nomad Capital, Arrington Capital, and angel investors such as Bo Feng (Dragonfly), Yat Siu (Animoca Brands), Antony Lewis (Temasek), and Sandeep Naiwal (Polygon). The Series B round initially targeted $69 million but was later upsized to $100 million, with the company refusing to lower or negotiate on its valuation.[10] The funds raised were designated for economic growth initiatives, expanding the engineering team, and global expansion into Hong Kong, Singapore, Southeast Asia, Latin America, and Africa.

There is no officially confirmed single listing price for $BERA at the time of its TGE (Token Generation Event). However, based on available X (Twitter) posts and centralized exchange data, $BERA launched on February 6, 2025, with an estimated initial price around $10, implying a fully diluted valuation (FDV) of $5 billion—3x the valuation from the most recent funding round. **As a classic VC-backed token, $BERA launched at 3x its last-round valuation, which ensured that even in the depths of a bear market, early investors remained close to breakeven or slightly in profit (excluding token lockup conditions)**.

As of March 18, 2025, the closing price was $5.90, corresponding to an FDV of $2.95 billion. This translates to a Listing ROI of just 0.59x, meaning public market investors are down significantly from the $10 listing price. However, compared to the last funding round valuation, investors in the final private round still **held a 96.67% unrealized gain**, demonstrating that the 3x launch strategy provided meaningful downside protection for early VCs.

$BERA's all-time low price was recorded on February 10, 2025, at $4.79, giving it an FDV of $2.4 billion. Even at this low point, investors from the last funding round maintained approximately 60% unrealized profits compared to the last round's valuation—further demonstrating the effectiveness of this pricing strategy in protecting VC investors.

Despite its weak price performance in the bear market, $BERA's 3x launch valuation strategy ensured early investors could still secure meaningful profits, allowing VC firms to remain green even during adverse market conditions.

Round	Funding Date	Amount Raised	Valuation	Lead Investors	Other Investors
Listing	Feb 6, 2025	/	$5B (estimated from opening price)	/	/
Series B	Apr 12, 2024	$100M	$1.5B	Brevan Howard Digital, Framework Ventures	Polychain Capital, Hack VC, Tribe Capital, SamsungNext, Laser Digital, Hashkey Capital, Nomad Capital, Hypersphere, Arrington Capital, Cypher Capital, Rubik Ventures, The Spartan Group, No limit Holdings, Primitive, Superscrypt, Amber, SNZ, Everest Ventures, Portal Ventures, Baboon VC, Yat Siu (Animoca Brands), Bo Feng (Dragonfly), Antony Lewis (Temasek), Sandeep Nailwal (Polygon), etc.
Series A	Apr 20, 2023	$42M	$420.69M	Polychain Capital	Hack VC, Shima Capital, Robot Ventures, GoldenTree Asset Management, dao5, Tribe Capital, etc.

Gate Research, Data from: Bloomberg, CoinDesk, CoinGecko

Gate Research

5 Risks

1. **Centralized Cartel Risk:** Ecosystem monopoly and suppression of innovation. The PoL mechanism naturally attracts whales and institutional capital. In the early stages, high APRs may lead to the emergence of "liquidity oligarchs" (e.g., Infrared, Kodiak), who accumulate governance voting power and staked assets, forming implicit cartels that dominate the ecosystem.
2. **Reward Vault Incentive Distortion:** Leading protocols accumulate rewards and compound yields to expand their vault dominance, creating a "rich-get-richer" effect. Although PoL is intended to reward liquidity contributions, it may devolve into a "capital size competition," marginalizing smaller, innovative protocols.
3. **Crash Risk in a Prolonged Bear Market:** As token prices fall, staking APRs drop sharply → whales withdraw liquidity to preserve capital → TVL declines → death spiral risk emerges: Network security weakens → user panic → token sell-offs → APR drops further → repeat cycle.
4. **Liquidity Trap:** Berachain has chosen a differentiated path focusing on capital density over user breadth. Its high TVL is driven by staking incentives rather than organic yield. If inflation becomes unsustainable (e.g., burn mechanics fail), it could lead to a liquidity stampede.
5. **Innovation Bottleneck:** Stable transaction volume suggests the ecosystem lacks new protocol stimulation. Key verticals such as derivatives and real-world assets (RWA) remain underdeveloped, limiting upside potential.

6. Comparison with Leading Protocols:

Dimension	Berachain	Solana
Growth Engine	Proof of Liquidity (PoL) → TVL staking competition	High-frequency transaction scenarios → trading, asset issuance, DePIN
User Structure	Whale-dominated; low interaction/volume, high capital concentration	Mix of retail and institutional users; high interaction／volume
Risk Factors	Fragile inflation model	Node centralization and hardware dependency

6 Summary

A public blockchain defines the rules for data transmission and validation, ensuring both the security and decentralization of the network. Much like the TCP/IP protocol of the Internet, its true value lies not only in the technology itself, but in the ecosystem it supports. For instance, Ethereum became the dominant Layer 1 not because it has the highest TPS or TVL, but because it has the largest number of developers, dApps, and active users. As of now, Ethereum's TVL stands at approximately $53 billion, far exceeding that of any other blockchain, underscoring the immense gravitational pull of its ecosystem.

Public blockchains are the infrastructure layer of blockchain technology, analogous to highways in the Internet era—serving as platforms for decentralized applications (dApps) to run. Their value does not lie in the road itself, but in the cities it connects: the prosperity of the ecosystem. As a foundational infrastructure, the investment logic is clear—no matter how advanced the technology, without ecosystem support, a blockchain remains an empty shell. Its long-term value—and return—will ultimately depend on the applications built upon it, the diversity of dApps, and user engagement.

We believe that the public blockchain sector today resembles the early Internet era between 1995–1998—a phase of rapid development. While technological competition is fierce, ecosystem integration will likely be the dominant trend. Despite this, Ethereum's strong network effects continue to secure its leadership position, making it difficult to surpass in the short term.

From an investment standpoint, adopting a long-term perspective is crucial rather than focusing solely on short-term price action. The token economic model is key to sustaining long-term value. Investors should evaluate tokenomics by analyzing the issuance, distribution, and incentive structures, as these directly influence user behavior and ecosystem growth.

The industry is currently experiencing high volatility, and investors should not blindly chase every new paradigm. Instead, they should adopt a diversified strategy, allocate across multiple asset classes, and pursue uncorrelated alpha. The blockchains most likely to win in the long run will strike the right balance between technological innovation, economic design, and ecosystem development.

Author: Colin

7 References

1. https://blog.berachain.com/
2. https://x.com/LorenzoProtocol/status/1886804735531082172
3. https://x.com/puffpaw_xyz/status/1777687345405522296
4. https://www.theblockbeats.info/news/57274
5. https://www.chaincatcher.com/article/2141136
6. https://dune.com/hashed_official/berachain
7. https://dune.com/berachain/berachain
8. https://docs.berachain.com/learn/pol/tokens/tokenomics
9. https://blog.berachain.com/blog/berachain-airdrop-overview
10. https://www.bloomberg.com/news/articles/2024-04-12/crypto-s-berachain-says-funding-round-increases-to-100-million
11. https://www.coindesk.com/business/2023/04/20/defi-focused-layer-1-berachain-raises-42m-series-a-at-42069m-valuation
12. https://iq.wiki/zh/wiki/berachain
13. https://medium.com/@bubbletree/why-berachain-technical-analysis-from-honeypot-finance-founders-view-e647e994f408
14. https://news.fx168news.com/cooperate/2407/7203801.shtml
15. https://www.chaincatcher.com/en/article/2166093
16. https://wublock.substack.com/p/interview-with-berachain-co-founder
17. https://www.techflowpost.com/article/detail_15847.html
18. https://medium.com/berachain-foundation/the-bera-era-has-begun-49a18c6d77c0
19. https://research.chainslab.io/berachain-hottest-dapps#notable-dapps
20. https://decrypt.co/resources/what-is-berachain-proof-of-liquidity-blockchain
21. https://oakresearch.io/en/analyses/innovations/insights-berachain-bera-airdrop-tokenomics
22. https://tokentax.co/blog/berachain

Links

Gate Research Official Website

Previous Research Reports

About Gate Research

Gate Research is a professional institute dedicated to blockchain industry analysis. We are committed to providing deep insights into the development trends of the blockchain sector. We aim to equip professionals and enthusiasts with forward-looking and expert industry insights. With a foundational commitment to democratizing blockchain knowledge, we strive to simplify complex technical concepts into understandable language. We present a comprehensive view of the blockchain industry by analyzing vast amounts of data and observing market trends, helping a wider audience understand and engage with this dynamic field.

research@gate.me