Mint Ventures

Riding the Wave of Arbitrum: A Deep Insight of Trader Joe's Fundamentals and Future Outlook

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Mint Ventures

About Mint Ventures

Mint Ventures is a research-driven venture firm that specializes in cryptocurrency and early-stage blockchain start-ups. It is committed to paving the way for blockchain and Web3 revolution by funding promising blockchain companies with positive and sophisticated fundamentals and helping them propel the business forward. Mint Ventures proactively engages in private placements of emerging projects as well as secondary markets.

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1. Key Insights

1.1 Core Investment Logic

At the forefront of DeFi, Trader Joe has established itself through a robust and creative team coupled with unparalleled delivery prowess. This innovative blend of product experience and an innovative Liquidity Book mechanism has sparked a substantial surge in user base. The platform's current growth catalyst is primarily driven by the integration of Arbitrum.

Notwithstanding these strengths, the decentralized exchanges (DEXs) landscape remains fiercely competitive, consequently diluting the bargaining leverage of any particular project for traders and liquidity providers. Most DeFi protocols currently operate within this landscape with minimal profits, and sometimes even losses. Although turning this market scenario around optimistically in the short term seems challenging, the unique volatility of the crypto market and DEXs provides a glimmer of hope, with projects like Trader Joe expected to outperform the broader market.

1.2 Main Risks

The main risks stem from the fiercely competitive nature of the DeFi space, with Avalanche, Trader Joe's main base, facing potential ecosystem contraction as well as stiff competition from Uniswap v3. Arbitrum, currently the prime driver of growth, is still in its nascent stages where lower prices and volume-driven incentives are more prevalent, rendering the growth of trading volumes and fees somewhat erratic. This inconsistency makes Trader Joe more reliant on event-driven projects to stimulate business volume.

1.3 Valuation

Contrarily, Trader Joe enjoys an enviable position when compared to its peers on specific financial metrics. As highlighted in section 4.2 of our Valuation analysis, Trader Joe currently holds higher valuations in terms of Price-to-Fees Ratio (P/F), Price-to-Sales Ratio (P/S), and Price-to-Earnings Ratio (P/E).

2. The Overview of Trader Joe

2.1 Project Scope

Encompassing an extensive array of services, Trader Joe is a fully-fledged DeFi protocol which includes 'Banker Joe', a decentralized exchange (DEX) and lending platform; 'Joepeg', an NFT marketplace, and 'Rocket Joe', a launchpad. It has successfully extended its trading operations across Avalanche, Arbitrum, and the BNB Chain, with spot trading being its primary business segment.

2.1.1 The Decentralized Exchange

At the heart of Trader Joe's operations is its DEX business, which has seen numerous product and mechanism innovations, particularly manifested in its V2 product, the Liquidity Book (LB).

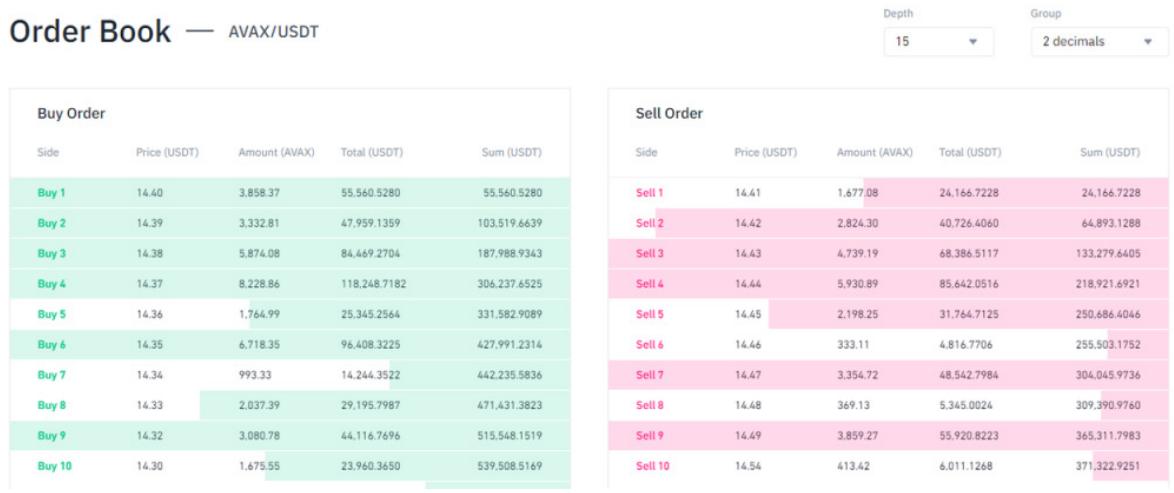
The LB is an advanced evolution of Uniswap V3's "concentrated liquidity" concept, combining the functionalities of an "order book" and a "liquidity pool".

a. Orderbook: A Collection of Bins

Trader Joe has developed 'Bins', each representing a unique price range filled with liquidity, extending on the concentrated liquidity concept.

Pool Distribution and Bins Trading Volume of AVAX-USDC in Trader Joe

In every liquidity pool, each Bin's width is fixed and equal. The gap between adjacent Bins is known as the 'Bin step'. Take for instance, the AVAX-USDC trading pair as depicted above, where the Bin step is 20BP or 0.02%. Liquidity pool creators set the 'Bin step', allowing users to form various pools with different Bin steps for the same trading pair. Trader Joe's Bin is similar to the order book matching model commonly used by CEX, where the Bin step equates to the smallest price unit in the order book.



Order Book — AVAX/USDT

Depth: 15 | Group: 2 decimals

Buy Order

Side	Price (USDT)	Amount (AVAX)	Total (USDT)	Sum (USDT)
Buy 1	14.40	3,858.37	55,560.5280	55,560.5280
Buy 2	14.39	3,332.81	47,959.1359	103,519.6639
Buy 3	14.38	5,874.08	84,469.2704	187,988.9343
Buy 4	14.37	8,228.86	118,248.7182	306,237.6525
Buy 5	14.36	1,764.99	25,345.2564	331,582.9089
Buy 6	14.35	6,718.35	96,408.3225	427,991.2314
Buy 7	14.34	993.33	14,244.3522	442,235.5836
Buy 8	14.33	2,037.39	29,195.7987	471,431.3823
Buy 9	14.32	3,080.78	44,116.7696	515,548.1519
Buy 10	14.30	1,675.55	23,960.3650	539,508.5169

Sell Order

Side	Price (USDT)	Amount (AVAX)	Total (USDT)	Sum (USDT)
Sell 1	14.41	1,677.08	24,166.7228	24,166.7228
Sell 2	14.42	2,824.30	40,726.4060	64,893.1288
Sell 3	14.43	4,739.19	68,386.5117	133,279.6405
Sell 4	14.44	5,930.89	85,642.0516	218,921.6921
Sell 5	14.45	2,198.25	31,764.7125	250,686.4046
Sell 6	14.46	333.11	4,816.7706	255,503.1752
Sell 7	14.47	3,354.72	48,542.7984	304,045.9736
Sell 8	14.48	369.13	5,345.0024	309,390.9760
Sell 9	14.49	3,859.27	55,920.8223	365,311.7983
Sell 10	14.54	413.42	6,011.1268	371,322.9251

The Order Book of Avax-USDT in Binance

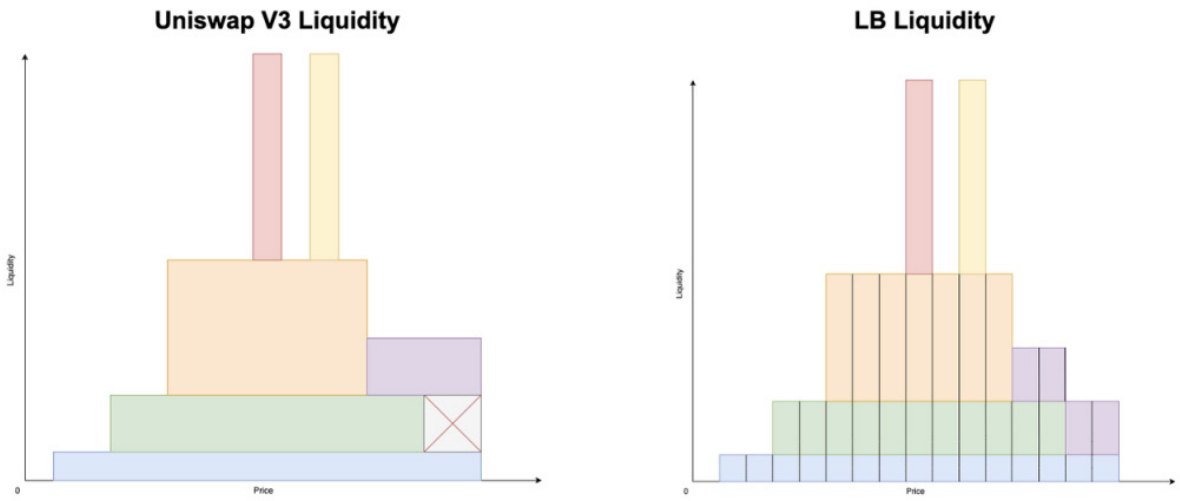
As a result, Trader Joe's DEX can be likened to a custom order book where the Bin width serves as the trading unit for pending orders.

b. Liquidity: Bin's Volume

Uniswap V3's mechanism focuses on concentrated liquidity within specific price ranges over the traditional constant product design (i.e., x*y=k). Trader Joe, however, segments liquidity into distinct bins of equal price range width, with the liquidity in each bin following the equation $P \cdot X+Y=K$ (constant sum), where $P=\Delta Y/\Delta X$. Each bin functions as a liquidity pool and constitutes the smallest unit for liquidity management.

While both platforms leverage the concentrated liquidity concept, Trader Joe's innovation lies in its Liquidity Book model based on bins, where liquidity is vertically accumulated within each bin. In contrast, Uniswap V3 horizontally aggregates liquidity, and LP positions are represented by non-fungible tokens and vertically.

To put it simply, Uniswap v3 enables LP to be an independent entity, consolidated directly based on the price range and the liquidity volume it covers. The LB model, however, stacks liquidity vertically within different price ranges, standardizing the liquidity within the same bin based on the price span.



An illustrative comparison of Uniswap V3's liquidity model and LB's liquidity model—depicting liquidity on the vertical axis, price on the horizontal axis, and different color blocks representing different market participants.

Building upon the concept of vertical liquidity aggregation through Bins, Trader Joe's Liquidity Orderbook (LB) aligns its liquidity token standard closely with ERC-1155. To appreciate LB's liquidity token features, let's first understand the ERC-1155 token standard.

Developed by Enjin, ERC-1155 tackles the issue where a single smart contract for a token could only support either fungible tokens (ERC-20) or non-fungible tokens (ERC-721). An ERC-1155 token contract is capable of supporting both fungible and non-fungible tokens under a single umbrella contract. Each token within an ERC-1155 contract is identified by its unique ID rather than the contract address, which implies that the contract can manage multiple tokens, each represented by different IDs. Under a single ID, there can be numerous fungible tokens and one unique non-fungible token.

The most common application of ERC-1155 is in GameFi, which often incorporates multiple fungible and non-fungible tokens.

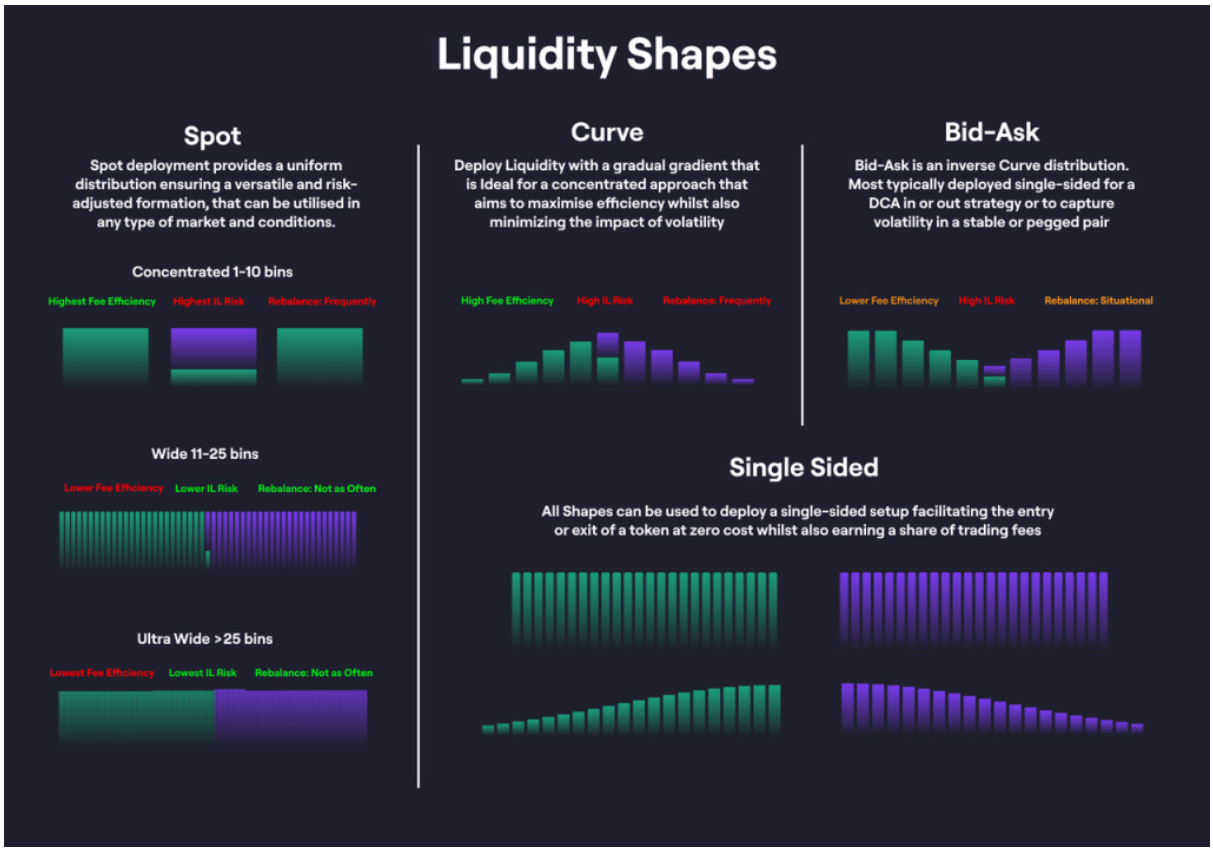
Trader Joe's LB has implemented a similar system to ERC-1155, leveraging its ID system concept:

1. LP tokens within the same bin are fungible, which not only reduces gas fees but also simplifies the calculation of trading fees and the overall complexity of the protocol's accounting system.

2. Each bin is distinguished by different IDs, which help to differentiate fungible liquidity within various bins.

3. The combination of points 1 and 2 allows liquidity providers (LPs) within LB to conveniently adopt complex strategies for their liquidity allocation, thereby achieving a variety of objectives.

As depicted in the graph below, Trader Joe's platform offers a broad spectrum of liquidity shapes to cater to various user demands:



Trader Joe's Liquidity Shapes

Beyond this, Trader Joe's LB incorporates several key features:

- The price remains stable until the reserves in the active bin are insufficient to execute a trade. This best-quote advantage enables bins to capture trade volume efficiently via routers. However, it could exacerbate impermanent loss.

- The implementation of dynamic fees implies that during periods of high volatility, fees can increase to adequately compensate liquidity providers (LPs) for the risks and costs associated with providing liquidity.

- Improved composability is another notable feature. While Uniswap V3 employs ERC-721—a non-fungible token standard—to represent liquidity positions, this proves challenging when integrating with ERC-20 based DeFi protocols. By employing Bin-structured Liquidity Books, LPs use a model similar to the ERC-1155 standard. This theoretically makes its LP receipts more similar to fungible ERC20 tokens, thereby enhancing composability.

c. Liquidity Book Use Case

The combination of Bin-based market making, customizable order strategies, and enhanced composability allows projects and users to explore a multitude of strategies based on the Liquidity Book.

- **Project-driven Practices**

A case in point is Trader Joe's experiment with "White Lotus". Launched on May 9th, it leveraged Trader Joe's Liquidity Book model for token issuance and devised a novel scheme:

1. The total supply of LOTUS tokens was capped at 30,000,000 and was released through a Trader Joe pool. The first tokens were priced at $0.20, with the last tokens marked at $4.2. When users procured LOTUS tokens from the pool, all the locked ETH in the pool served as liquidity. For every 5-bin move in the LOTUS price, as depicted in the "initial distribution" graph below, a liquidity rebalance was automatically triggered.

White Lotus Official Document

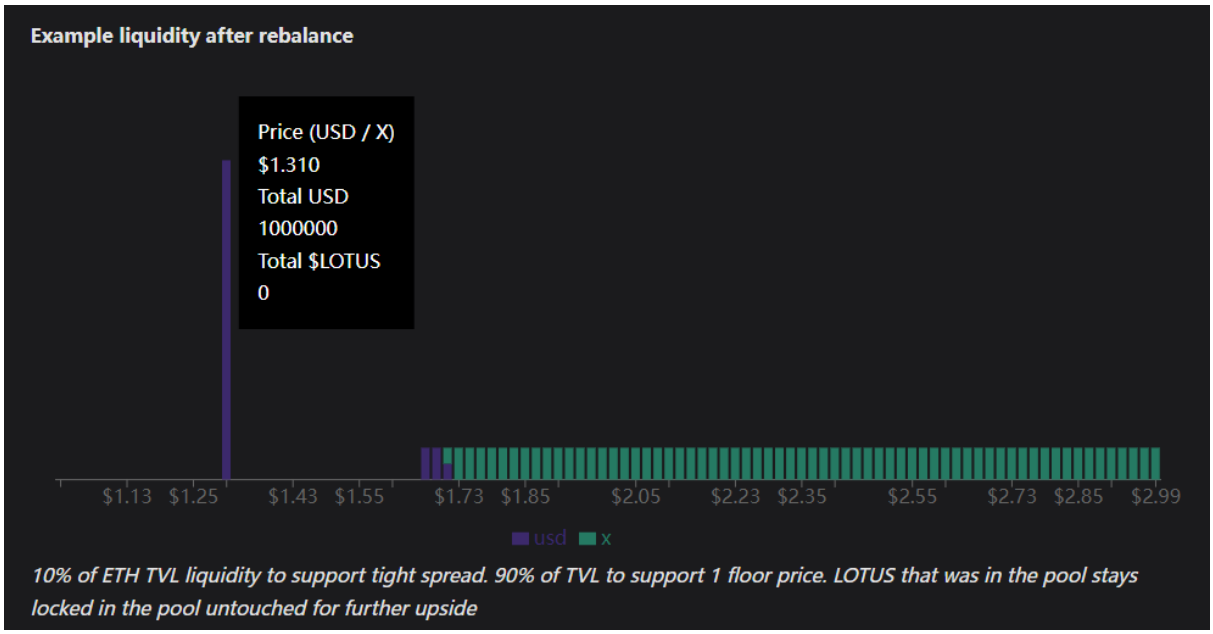
2. Upon selling $LOTUS, a 10% tax was applied, with 8% being permanently burned. The remaining 2% was diverted to a single staking vault as a reward for $LOTUS stakers.

3. LOTUS implemented an automatic liquidity rebalance mechanism. With every 5-bin price movement, liquidity was automatically rebalanced, extracting all the ETH-side liquidity and re-distributing it as follows:

    a. 10% of the total ETH in the pool as trading liquidity in a tight spread of 1 bins away from the current active price.

    b. The remaining 90% of the ETH is all concentrated into one bin (floor price), calculated by dividing the ETH by all tokens in circulation. This strategy devised a robust floor price mechanism that could withstand the selling of all circulating tokens at any given time, assuming there's no demand to hold $LOTUS.

The following is an example liquidity after rebalance.



c. Ideally, given the fixed total supply of LOTUS, the burn rate of tokens, and the increased floor price due to trading activities, LOTUS possesses the potential to bootstrap a flywheel.

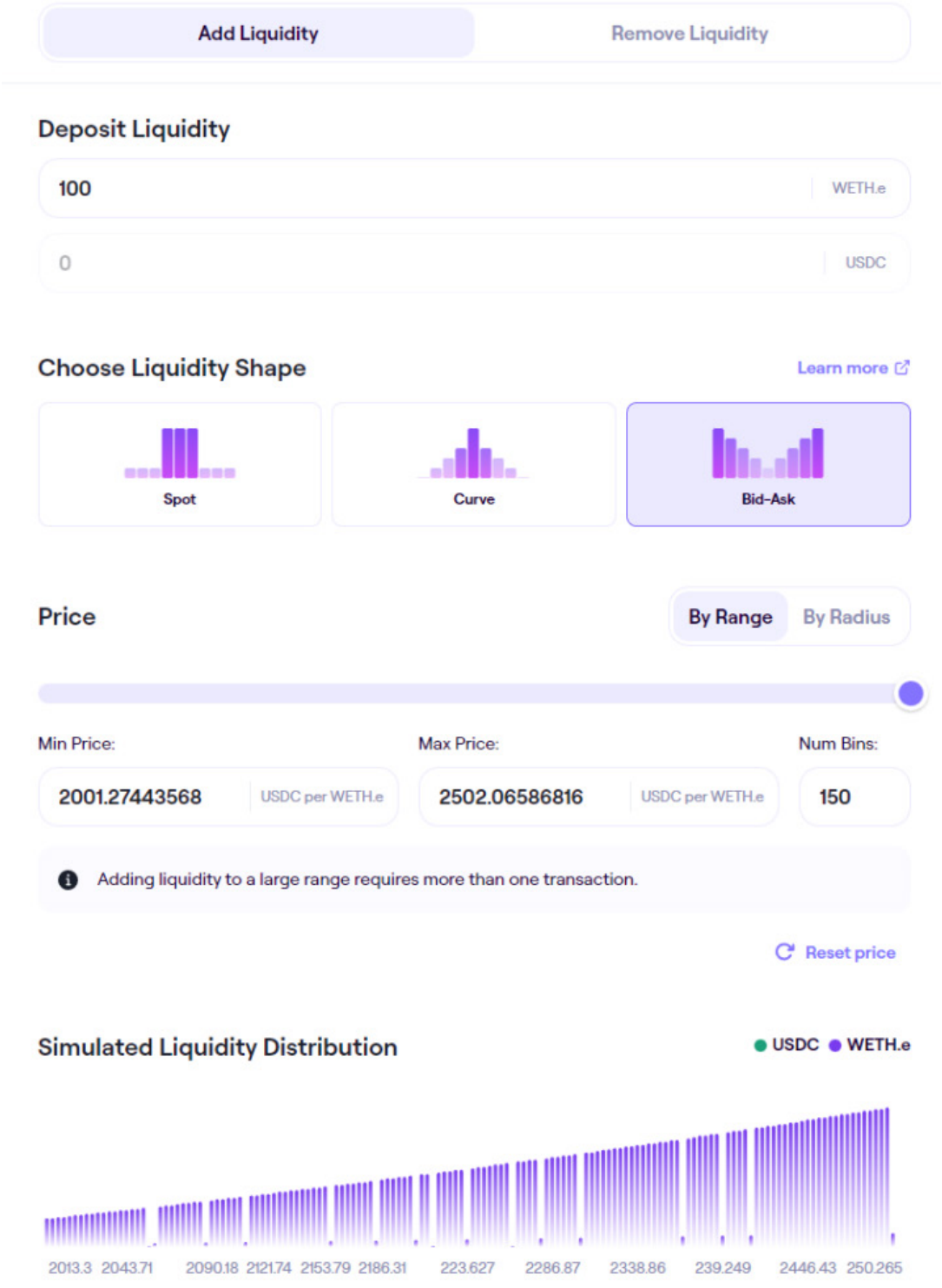
However, White Lotus encountered an untimely downfall post-launch due to multiple factors, such as the absence of fees and burning activities in user-created pools, and a significant gap between concentrated liquidity and the floor price. Despite this setback, subsequent clone projects like Jimbo embraced Trader Joe's Liquidity Book as the fundamental mechanism.

- **User-driven Practices**

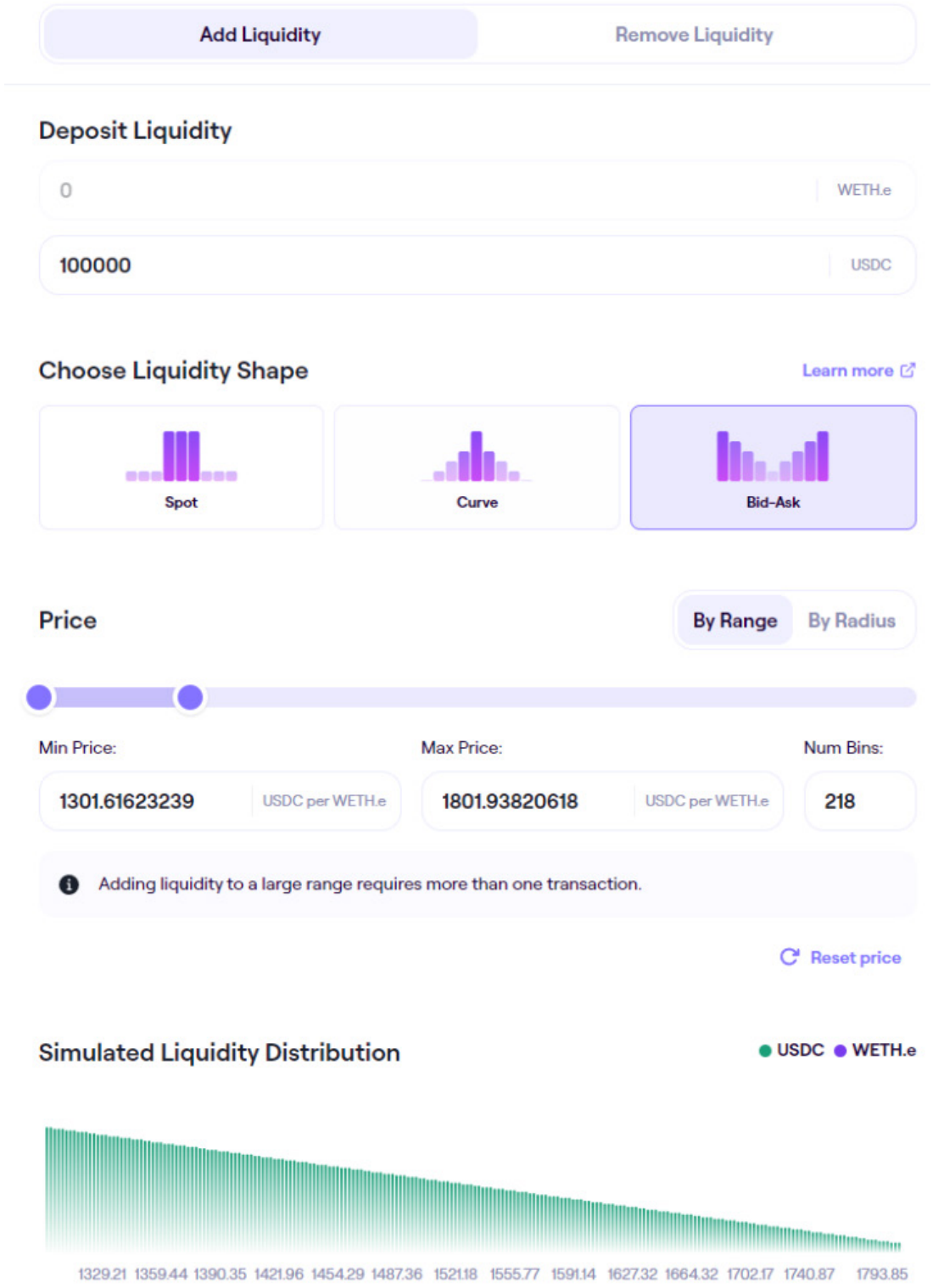
LB's seamless market-making experience has also won high praise from users. After the ARB token airdrop in March, Arbitrum maintained a high on-chain trading volume. While Uniswap V3 seized the majority of liquidity and trading volume on Arbitrum, Trader Joe emerged as the second-largest DEX on the blockchain, claiming 45% of the ETH-ARB trading volume. This was largely thanks to LB's product experience and market-making reward operations.

Furthermore, Trader Joe V2 is well suited to execute a "dollar-cost averaging (DCA)" asset buying and selling strategy via its limit-order function. Suppose a user aims to profitably sell 100 ETH as the price escalates within a $2,000 to $2,500 range, intending to sell more as the price increases and ultimately liquidating the entire

position around $2,500. This is a form of DCA exit strategy, easily achievable through LB V2. We only need to deposit 100 ETH, define the swap price within the $2000-$2500 range, and select the Bid-Ask mode (increasing sell order quantity as the price rises). Refer to the following diagram:



Conversely, to incrementally buy $100,000 worth of ETH as the price drops to a $1300-$1800 range (another variant of DCA strategy), we only need to deposit $100,000 in USDC, set the buying range ($1300-$1800), and select the Bid-Ask mode. As ETH dips into this range, the position will automatically be set up, as illustrated in the figure:



At its core, Trader Joe's Liquidity Book operates on Bin and traditional order book principles, which simplifies the management process for LPs in concentrated liquidity and enables a broader array of trading and market-making strategies.

Notably, among several DEXs we have reviewed, Trader Joe's user experience is one of the most superior. This includes:

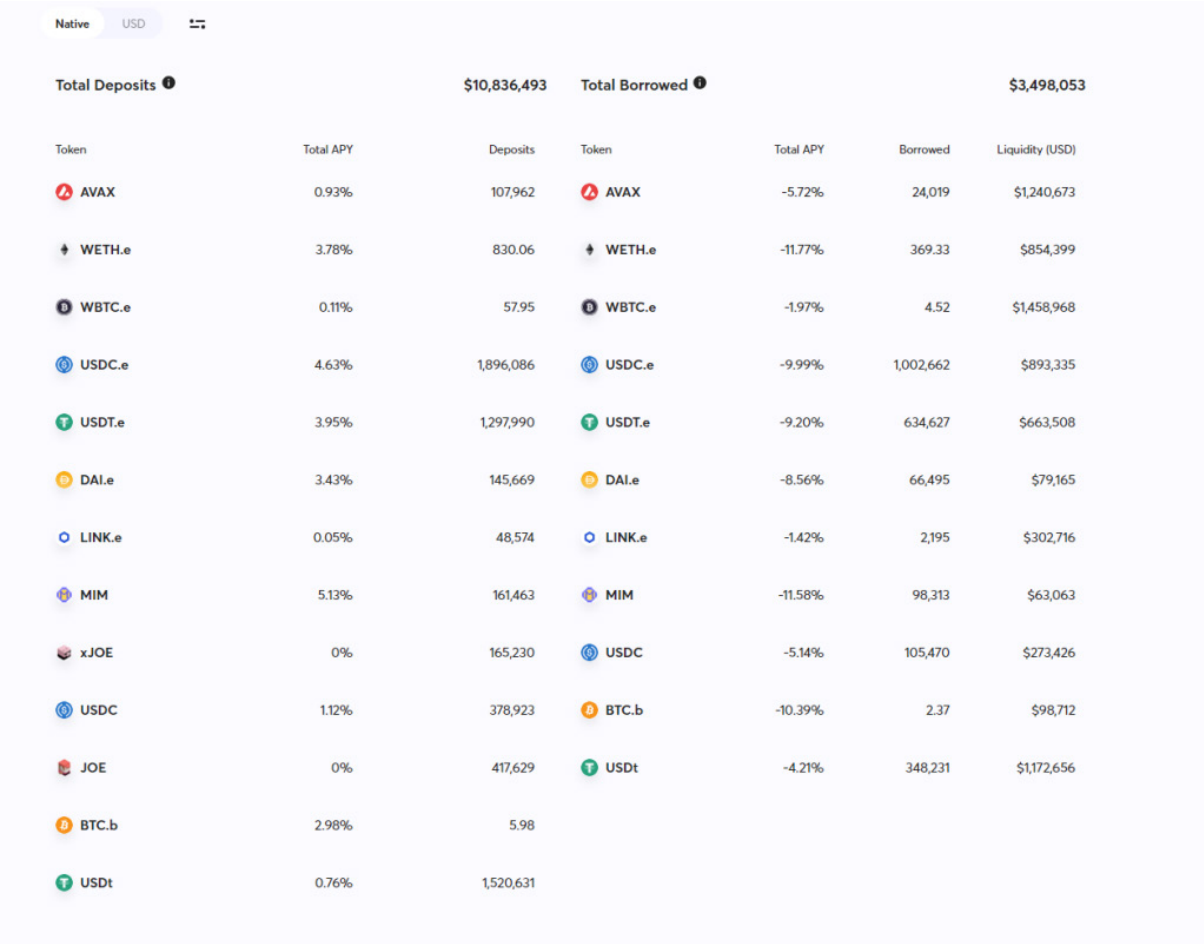
- A sleek and intuitive UI design and page layout, enabling new users to quickly get on board.

- Comprehensive, clear, and accessible data on the order pool and TVL.

In my opinion, this is vital for DeFi protocols. The ability to provide real-time, transparent business data distinguishes DeFi products from traditional finance (TradFi) offerings. Nevertheless, data visualization remains equally significant.

2.1.2 The Lending Protocol - Banker Joe

Banker Joe is a lending protocol that Trader Joe launched in 2021. It's a fork of Compound and Cream. At its peak, it boasted a TVL of as much as $1 billion. However, the total deposits in Banker Joe have since dwindled to approximately $10 million. This amount makes a minor contribution to Trader Joe's operations and profits, and Banker Joe is currently not the primary focus of Trader Joe's development.



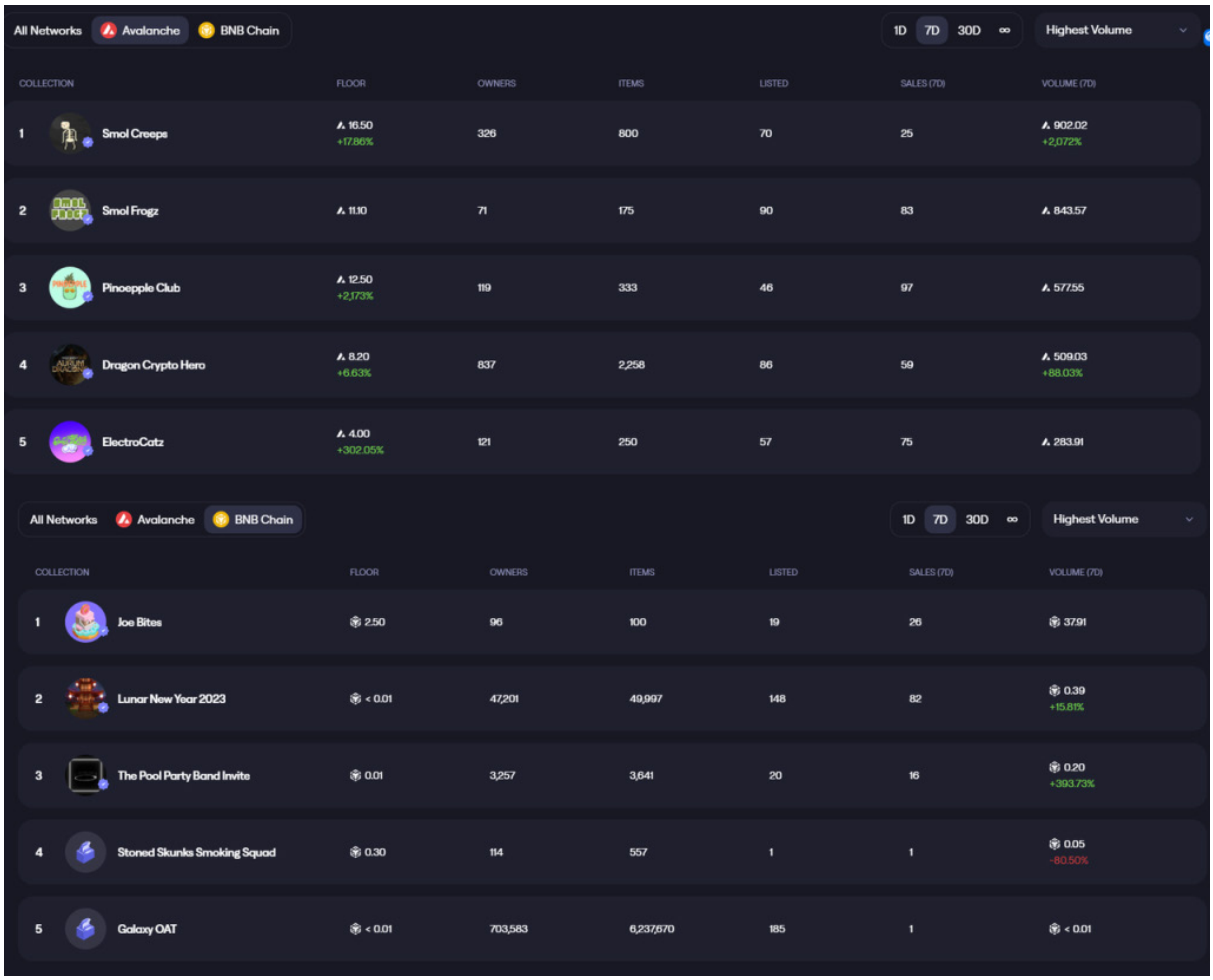
Native USD

Total Deposits		$10,836,493	Total Borrowed			$3,498,053
Token	Total APY	Deposits	Token	Total APY	Borrowed	Liquidity (USD)
AVAX	0.93%	107,962	AVAX	-5.72%	24,019	$1,240,673
WETH.e	3.78%	830.06	WETH.e	-11.77%	369.33	$854,399
WBTC.e	0.11%	57.95	WBTC.e	-1.97%	4.52	$1,458,968
USDC.e	4.63%	1,896,086	USDC.e	-9.99%	1,002,662	$893,335
USDT.e	3.95%	1,297,990	USDT.e	-9.20%	634,627	$663,508
DAI.e	3.43%	145,669	DAI.e	-8.56%	66,495	$79,165
LINK.e	0.05%	48,574	LINK.e	-1.42%	2,195	$302,716
MIM	5.13%	161,463	MIM	-11.58%	98,313	$63,063
xJOE	0%	165,230	USDC	-5.14%	105,470	$273,426
USDC	1.12%	378,923	BTC.b	-10.39%	2.37	$98,712
JOE	0%	417,629	USDt	-4.21%	348,231	$1,172,656
BTC.b	2.98%	5.98				
USDt	0.76%	1,520,631				

Metrics of Banker Joe

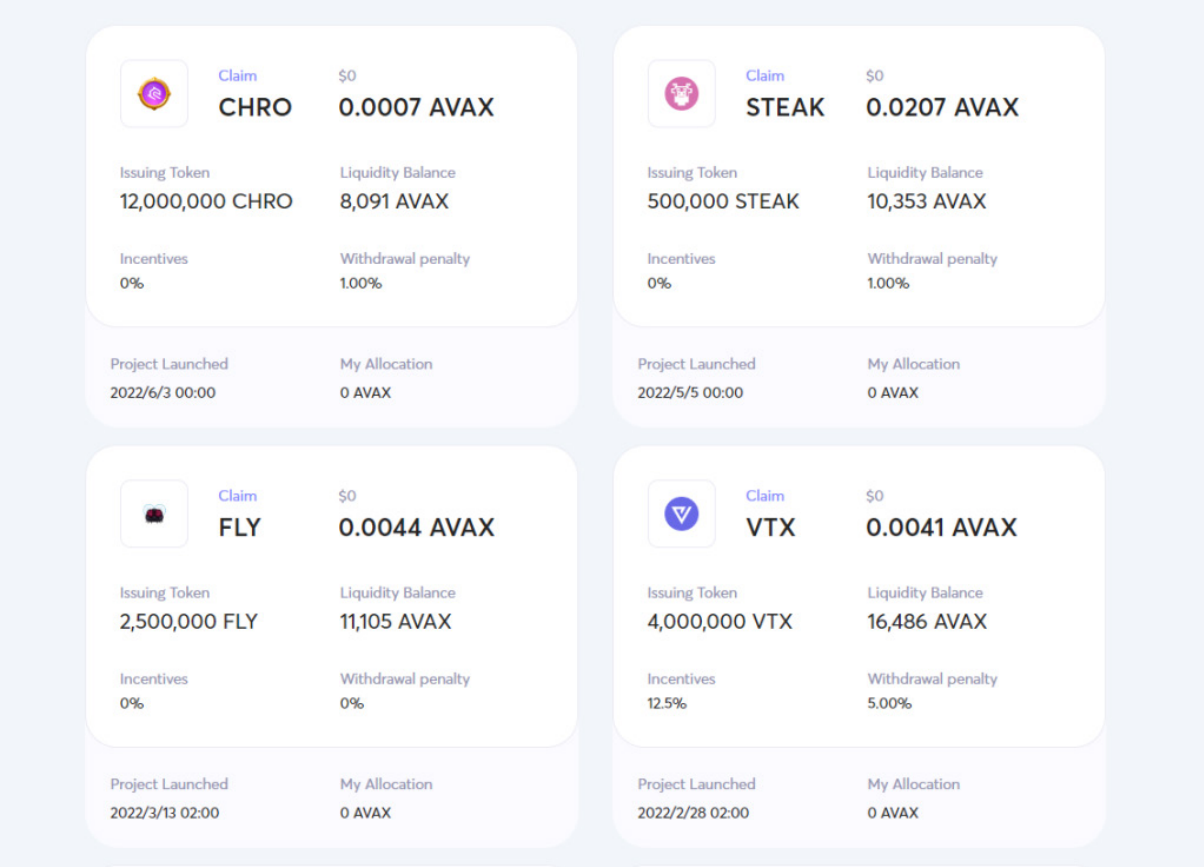
2.1.3 NFT Marketplace - Joepegs

Joepegs was launched in April 2022 and currently supports NFT trading on both Avalanche and BNB Chain. However, the trading volume on both chains is relatively low.



The largest NFT collections in terms of trading volume on Avalanche over the past seven days amounted to 902 AVAX (approximately $12,600 USD). On the BNB Chain, the highest trading volume for NFTs last week was only 37.9 BNB (equivalent to $11,470 USD).

The NFT business also makes a minor contribution to the platform and is viewed as a peripheral business (although the project team continues to actively promote it). Furthermore, Trader Joe also launched the Rocket Joe launchpad at the start of 2022, but this part of the business is largely stagnant now, with the last project, CHRO, launched in June 2022.



2.2 Milestones and Roadmap

Here are some of the significant milestones that Trader Joe has reached since its inception, up until mid-May 2023:

Date	Event
June 2021	On June 1st, the project was announced, and Trader Joe's contract code was made open-source later in the month. The project was officially launched at the end of June.
September 2021	Trader Joe has raised $5 million in a strategic sale led by Defiance Capital, GBV and Mechanism Capital. Other VC and angel investors included the Not3Lau Capital, Three Arrows Capital, Coin98 Ventures, Delphi Digital, Avalanche Foundation and Stani Kulechov, the founder of Aave. The financing valuation was $50 million.
October 2021	Trader Joe's decentralized lending protocol, Banker Joe, was launched. It was forked from Compound and Cream, and powered by Chainlink Price Feeds to support more assets.

October 2021	Trader Joe announced a $20 million liquidity mining incentive program in partnership with the Avalanche Foundation. The incentives would consist of $10 million in JOE tokens and $10 million in AVAX.
January 2022	Trader Joe rolled out Rocket Joe, a Launchpad. JOE stakers would continue to receive rJOE as a requirement to participate in the Launchpad.
February 2022	Trader Joe released a Tokenomics revamp called Staking V2, introducing veJoe. veJoe is generated via staking Joe, and the longer the staking period, the more veJoe is earned. veJoe is used to boost JOE yield for farmers.
April 2022	Trader Joe launched a NFT marketplace named Joepegs.
August 2022	Trader Joe released the V2 whitepaper and introduced the Liquidity Book strategy. This innovation was akin to Uniswap V3's concentrated liquidity, but it used "bins" as price range units and introduced a variable fee ratio mechanism to increase fees for LPs when the market price was volatile.
November 2022	Liquidity Book (V2) was officially launched.
December 2022	Trader Joe went live on Arbitrum.
January 2023	Announced plans to deploy Trader Joe and Joepegs on BNB Chain by the end of March.
January 2023	The announcement of Trader Joe V2.1 features included incentive programs based on the Liquidity Book, automated liquidity pools, native limit orders, and permissionless pools.
January 2023	Trader Joe released a Tokenomics revamp. $JOE would become a multi-chain token, sJOE would be available on Arbitrum and BNB Chain, veJOE stakers could earn boosted rewards from the LB rewards program, and rJOE staking would be deprecated.
February 2023	Trader Joe announced integration with LayerZero, and $JOE became a native, multichain token.
April 2023	Trader Joe V2.1 went live.

2.3 Team

The team behind Trader Joe remains anonymous, with the two co-founders being known as @cryptofishx and @0xmurloc. @cryptofishx is an experienced full-stack engineer with significant contributions in the Web3 space. He has previously worked with projects like @throwsnowballs, @Pandaswapex, and @sherpa_cash on Avalanche and has also held positions at Google and a decentralized derivatives exchange.

- On May 13th, @cryptofishx publicly shared his journey on Twitter, detailing his past experiences during the 2017-2018 bear market. During this time, he was a medical doctor who lost all his profits and two-thirds of his capital in the bear market. However, he utilized his spare time to learn programming and advanced mathematics, subsequently earning two relevant degrees in two and a half years, and secured a role at Google. Thereafter, he founded Trader Joe on a part-time basis and witnessed its success.

- On May 17th, On May 17th, @cryptofishx posted an emotional message on Twitter and pinned it:“ When we started $JOE, I promised myself to stay relevant after 2 years because that’s when most projects fizzle out. Well our 2nd birthday is coming up soon and makes me incredibly happy to say that we’re still out here building with the exact same energy as day 1.”

Indeed, the commitment and passion demonstrated by @cryptofishx underscore his entrepreneurial drive and deep connection with the project.

@0xmurloc, the other co-founder of Trader Joe, is also a full-stack engineer and product manager. Public information about @0xmurloc is limited, but it is known that before becoming fully engaged in Trader Joe in 2021, he worked as a product leader for a recently listed unicorn company and holds an electronic engineering degree from a prestigious university.

The total team size is undisclosed, as Trader Joe community staff indicated that they could not share this information.

Despite the ever-evolving and sometimes overwhelming competition in the crypto world, the diligence and commitment of the Trader Joe team are commendable.

Within just two years, they have managed to develop and roll out multiple product directions (Dex, lending, launchpad, NFT trading platform) and have been proactive in identifying and capitalizing on emerging trends and demands in the market. Perhaps even more impressive is their innovative work on the core Dex mechanism and their active engagement in designing and refining economic models (more on this in the "Tokenomics Analysis" section).

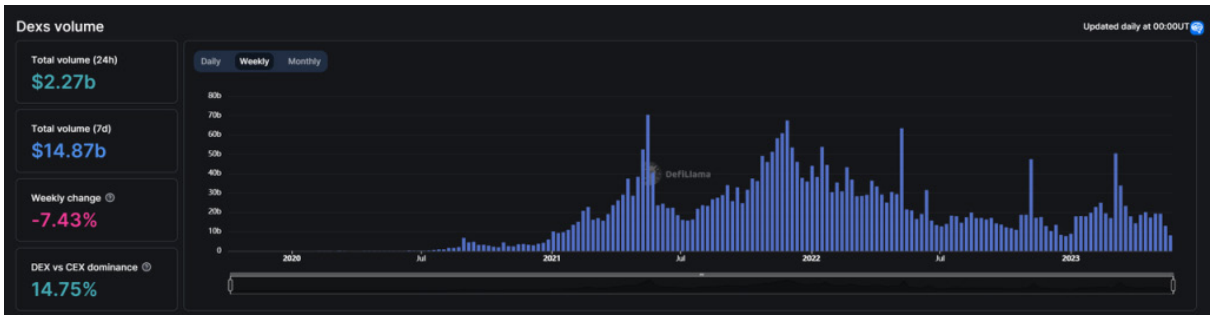
2.4 Financing and Partnerships

Trader Joe, as per the available information, has only undergone one funding round to date. This round was held in September 2021, three months after the official launch of the project. During this round, Trader Joe successfully raised $5 million at a valuation of $50 million. through a strategic sale led by Defiance Capital, GBV, and Mechanism Capital. In addition to these leading investors, there were other venture capitalists and angel investors that took part in the funding round. These include Not3Lau Capital, Three Arrows Capital, Coin98 Ventures, Delphi Digital, and Avalanche Foundation. Interestingly, Stani Kulechov, the founder of Aave, a DeFi protocol, was also one of the angel investors.

3. Business Analysis

3.1 Market Potential

Decentralized exchanges (DEXs) have consistently piqued the interest of Mint Ventures, earning a spot on our continual monitoring list. We've dived into the space in prior studies like our exploration of Curve and the ve(3,3) projects. Spot trading represents the most user-engaged and capital-intensive application within the crypto world. As per data from DeFiLlama, Dexs boasted a 24-hour total trading volume of $2.27 billion, equivalent to 14.75% of the overall cryptocurrency spot trading volume. Although this percentage might not seem significant, it marks nearly a 100% increase from the data reported in our February 2023 research report, *"A Deep Dive into The Leading AMM Platform: Curve Finance"*.



Source: DefiLlama

In addition to spot trading, Dexs also facilitate a liquidity purchase service. Numerous notable projects within this arena leverage the veToken model, originally pioneered by Curve, as demonstrated by Balancer, or implement the more advanced ve(3,3) model, which builds upon the veToken model, as seen with Velodrome. Considering solely the revenue generated from bribes in the liquidity purchase service (which refers to the fees paid by other projects to purchase liquidity on Dexs), it appears this revenue stream surpasses that of spot trading on Dexs. However, if we define the veToken incentives of ve(3,3) Dexs as “liquidity costs” and bribe revenues as “liquidity sale revenues,” it becomes evident that the majority of DEXs currently operating under this business model are incurring losses (this excludes indirect revenue produced through token purchases and staking for governance rights).

Made by Mint Ventures

ve(3,3) Projects V.S. veToken Projects						
Project	Blockchain	Weekly Inflation Ratio	Weekly Fee ($)	Weekly Bribe Revenue ($)	Liquidity Volume/ Per Epoch Emission ($)	Weekly Profit ($)
Velodrome	Optimism	0.94%	40,390	896,449	244.6	-99,005
Thena	BNBchain	2.41%	77,664	186,159	165.1	-427,205
Equalizer	Fantom	1.18%	26,350	100,000	167.8	-24,995
Chronos	Arbiturm	4.83%	23,827	180,000	104.8	-2,782,013
Curve	Multi-Chian	0.49%	151,670	1,567,050	626.1	-5,420,203
Balancer	Multi-Chian	0.21%	61,420	293,255	1627.2	-407,387

Please Note:

1. The data and calculations presented are up-to-date as of May 5, 2023. The numbers marked in yellow denote estimated values sourced from Mint Ventures

research report "*Unpacking ve(3,3) DEX Innovations: An In-depth Analysis of Velodrome Finance, Thena, Equalizer, and Chronos*"

2. These calculations largely rely on official disclosures and data from DeFiLlama.

3. The bribe revenue data for Curve and Balancer are derived from Votium, Hiddenhand, and Votemarket.

* Weekly Profit = Revenue (fees and bribes) - liquidity emission incentives.

Factors propelling the growth of Dexs include not only the overall expansion of the cryptocurrency sector, but also key elements such as:

- Growing user demand for asset autonomy, fueled by disillusionment with centralized institutions.
- Enhanced capital efficiency and freedom offered by the composability of the broader DeFi ecosystem where Dexs operate.
- The trend of native Web3 projects favoring Dexs as their initial trading and liquidity platform.

Conversely, given its simplistic and fundamental business model, the Dexs market has long been subjected to fierce competition, verging on a state of 'red ocean' saturation. Market leader Uniswap V3 consistently offers services free of charge, while a host of up-and-coming competitors, introducing various micro-innovations, are springing up relentlessly. Furthermore, the token subsidies employed by various Dexs show no sign of abating, pushing the industry into a cut-throat competitive landscape that often results in losses when factoring in these subsidies.

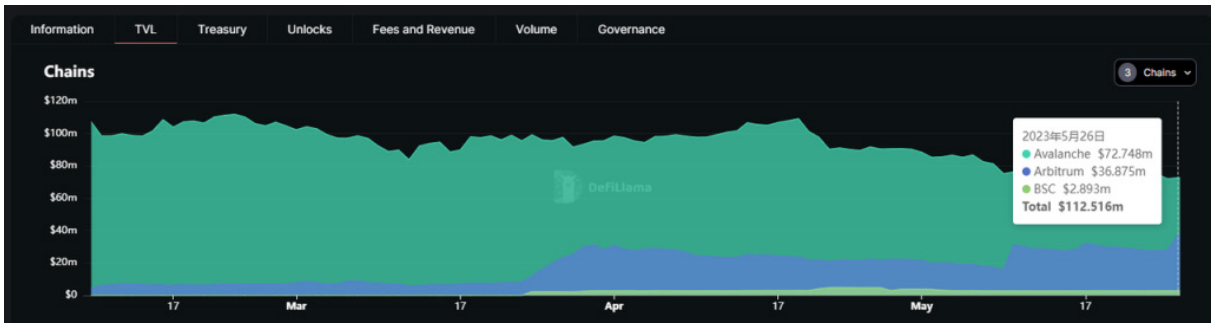
Breaking free from this quandary involves more than simply banking on the expected business growth propelled by the resurgence of the cryptocurrency market. It is becoming increasingly critical for Dexs to build significant competitive moats and start turning a profit.

3.2 Business Performance

This section delves into the business metrics of Trader Joe's Dex, encompassing Total Value Locked (TVL), trading volume, fees/revenue, and the number of active users. Given the low volume of the lending and NFT businesses, these aspects are not extensively explored here as they have minimal impact on the project's fundamentals.

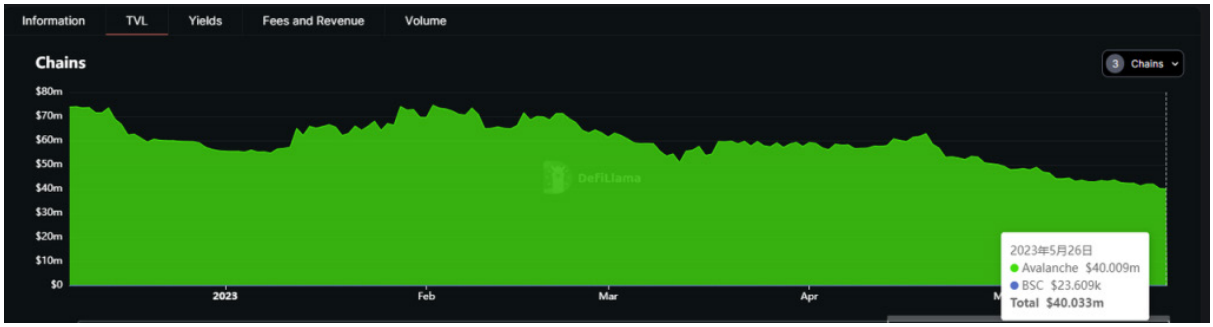
3.2.1TVL

At the peak of the previous bull market, Trader Joe's TVL soared to a staggering $2.6 billion. However, as the market shifted into a bear phase, liquidity decreased sharply, reducing the TVL (including V1, V2, and V2.1) to approximately $110 million.

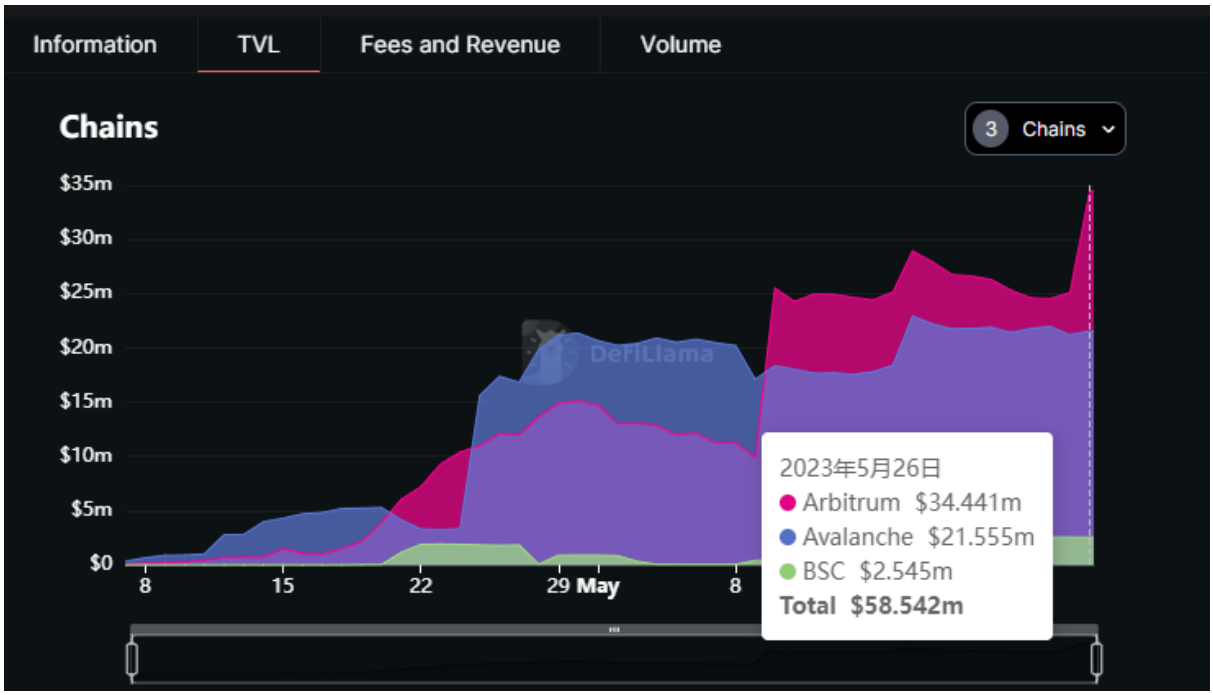


Trader Joe's TVL Composition; Source: DefiLlama

Avalanche forms the majority share of 65%, followed by Arbitrum at 33%, and BNB Chain at a marginal 2%. Additionally, an assessment of the TVL trend reveals an ongoing rise in Trader Joe's liquidity on Arbitrum, while a contrasting decline is observed on Avalanche.

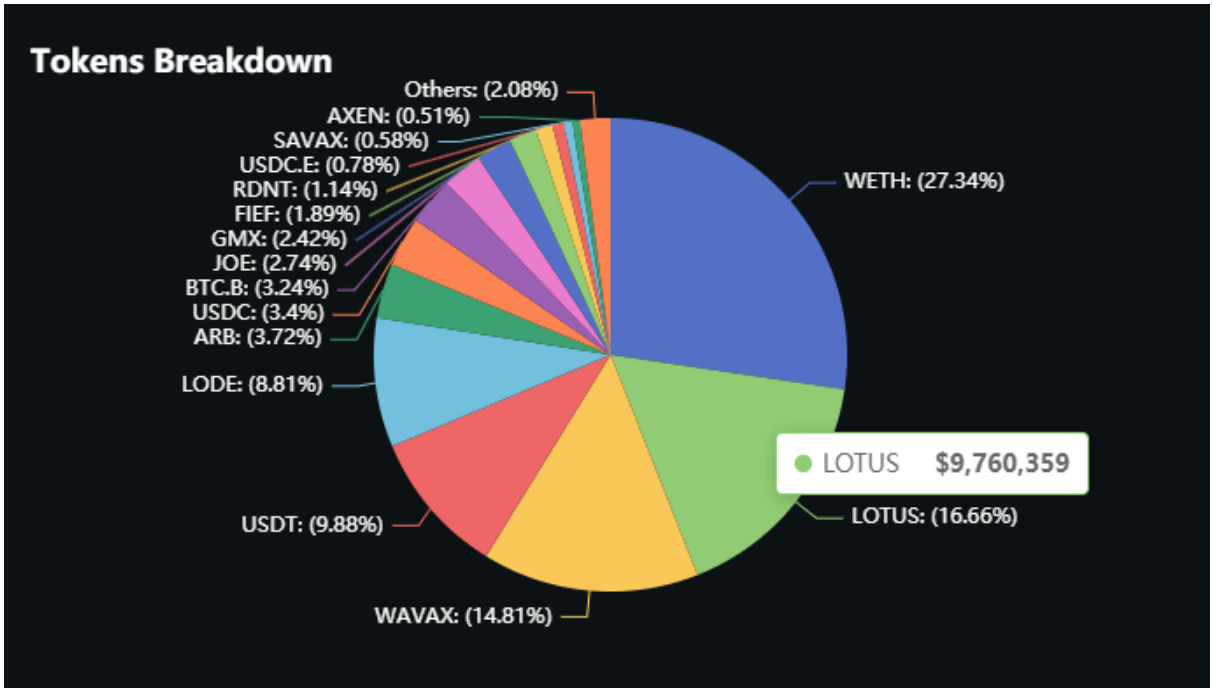


TVL Trend in Trader Joe V1, Source: DefiLlama



TVL Trend in Trader Joe V1, Source: DefiLlama

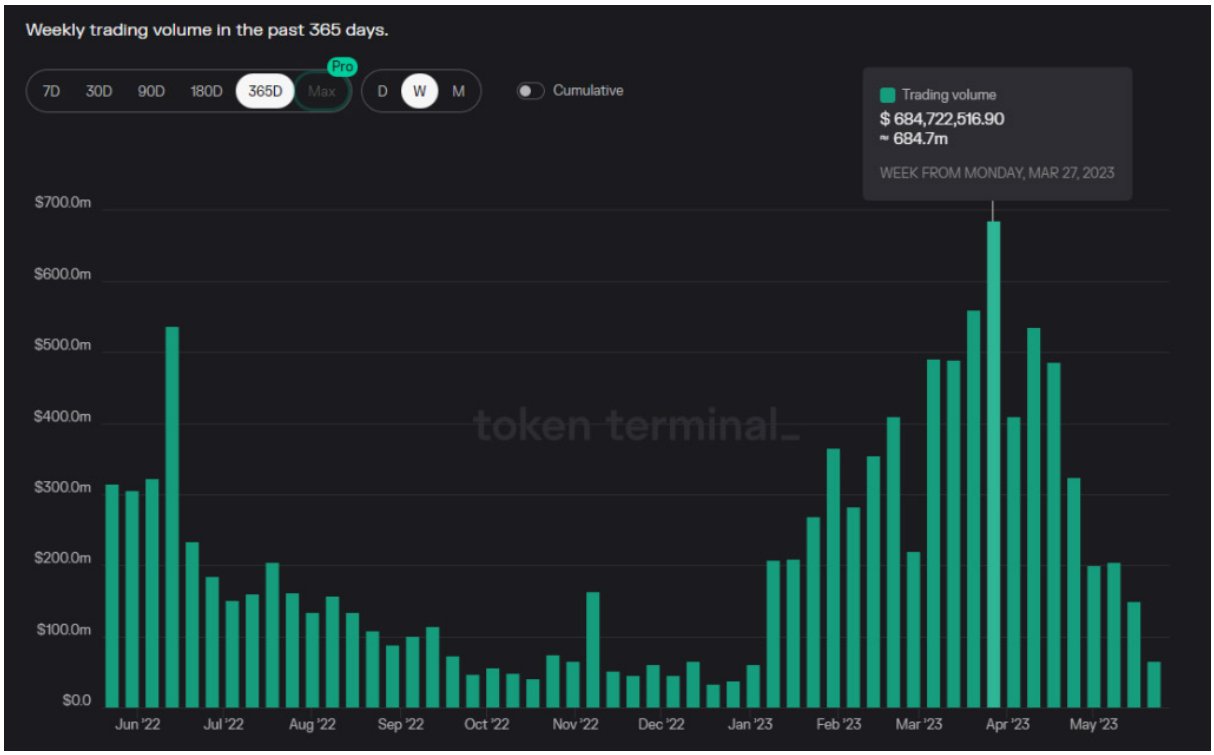
Upon closer examination of Trader Joe's V1 and V2.1 data, a gradual decrease in V1 can be seen since the start of this year. In contrast, V2.1 has been displaying a rapid upswing, largely driven by the growth in Arbitrum.



V2.1 TVL Composition; Source: DefiLlama

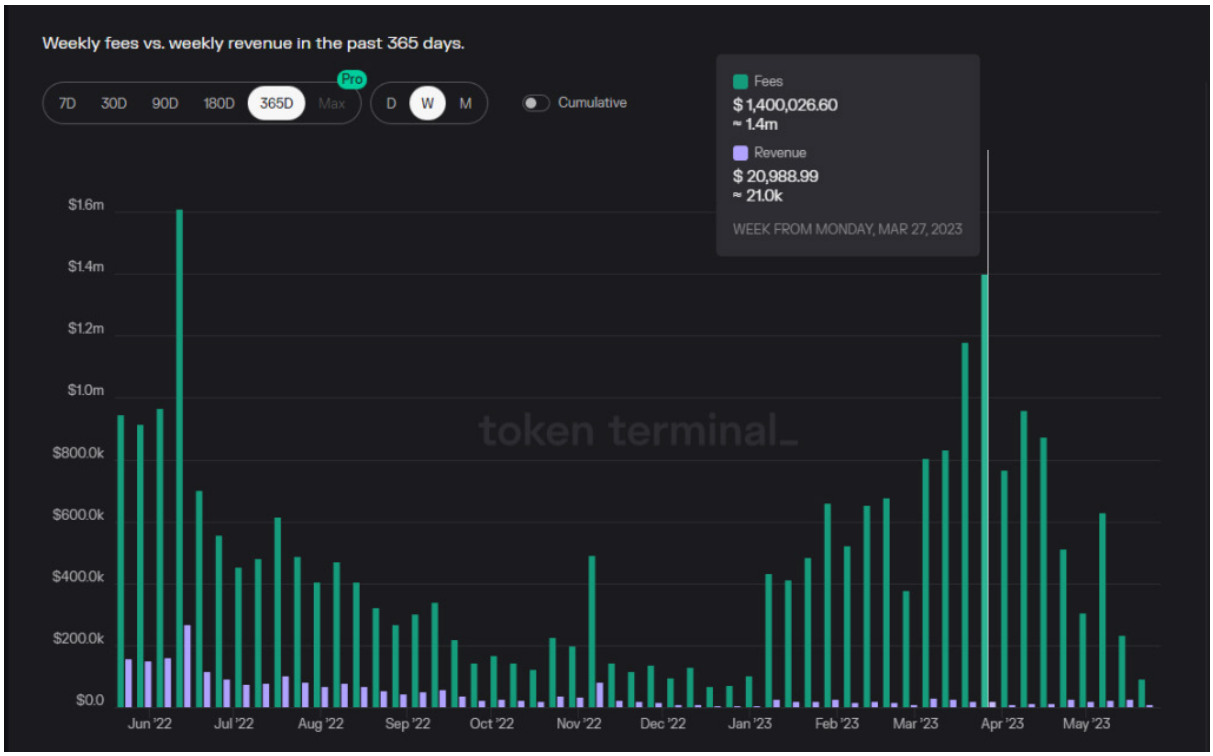
Further analyzing the token compositions of TVL within V2.1, aside from mainstream tokens like ETH, the token from White Lotus - a project that employs Trader Joe's Liquidity Book for its liquidity deployment mechanism - comes in second place, accounting for 16.66% of the total liquidity.

3.2.2 Trading Volume & Fees



Source: Token Terminal

In terms of trading volume, Trader Joe peaked in late March of this year during a particularly active market phase (which also followed the $ARB airdrop), registering a weekly trading volume of $688 million.

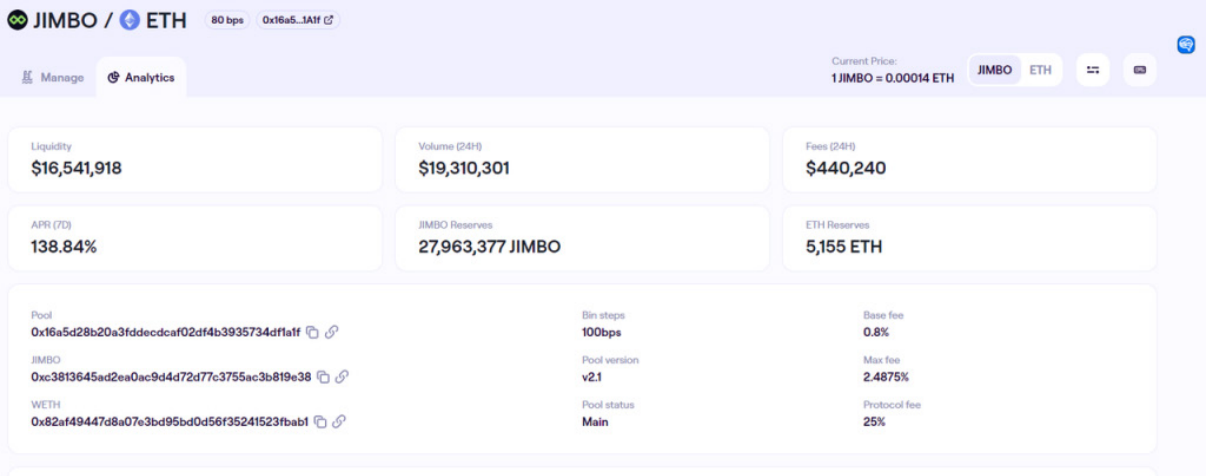


Source: Token Terminal

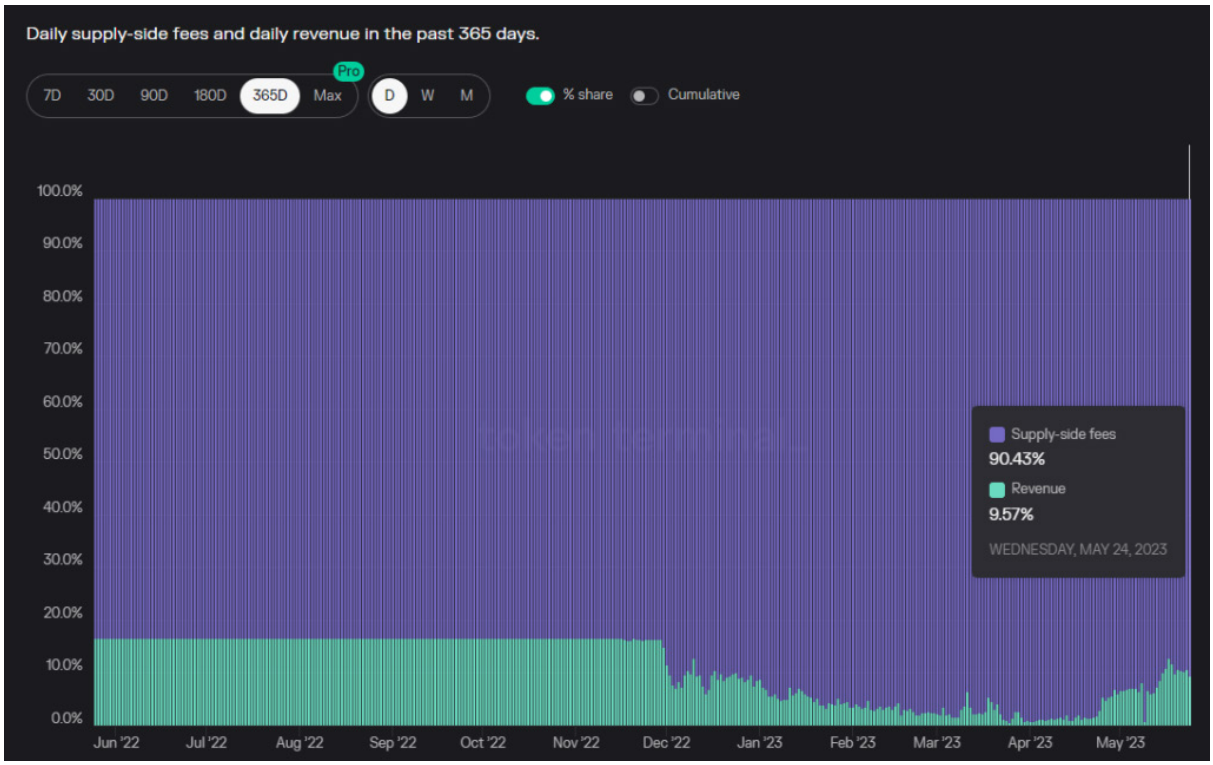
Contrastingly, during this phase of elevated trading volume, Trader Joe's fee revenues considerably lagged behind the fee revenues during last year's peak. The weekly fee revenue at the end of March stood at $21,000, less than one-tenth of the peak weekly fee revenue of $260,000 in June of the previous year.

This discrepancy is attributed to the fact that since Trader Joe launched V2 in November last year until April of this year, all fees generated from V2 were allocated to LPs. It was only recently, with the introduction of V2.1, that Trader Joe resumed fee collection and distribution to $JOE stakers. Moreover, the revenue structure varies across different protocols such as Curve, which imposes 50% of the fees, while Trader Joe's fee revenue ratio incorporates several models, including:

- V1: Charges 0.05% of all transactions as protocol income.
- V2: No protocol fees charged, all protocol fees are disbursed to LP.
- V2.1: different LB pools charge varying rates of protocol fees, ranging from 0-25%.



Post the launch of V2.1, Trader Joe's share of revenues from total supply-side fees began to increase again, after hitting a low in March this year (0.62%). Now, the protocol revenues represent 9.57% of total fees.



Source: Token Terminal

To gain a thorough understanding of the fee design in Trader Joe's V2.1, we conducted statistics and comparisons on the protocol fee rates of several LB Pools on different blockchains with high trading volumes.

Made by Mint Ventures

Blockchain	Trading Pair	Type	Daily Trading Volume	Base Fees - Dynamic Maximum Fee	oStake Finance
Avalanche	AVAX/USDC	Major Coin	2,496,286	0.2–1.18%	10%
Avalanche	BTC.b/USDC	Major Coin	2,290,545	0.1–0.59%	10%
Avalanche	BTC.b/AVAX	Major Coin	1,506,317	0.1–0.59%	10%
Avalanche	JOE/AVAX	Major Coin	1,120,908	0.15–0.98%	10%
Avalanche	USDT/USDC	Stablecoin	925,595	0.02–0.04%	0%
Arbitrum	JIMBO/ETH	Altcoin	19,336,656	0.8–2.49%	25%
Arbitrum	ETH/USDC	Major Coin	4,557,424	0.15–0.98%	0%
Arbitrum	BTC.b/ETH	Major Coin	914,006	0.1–0.59%	10%
Arbitrum	USDT/USDT	Stablecoin	377,425	0.02–0.04%	0%
Arbitrum	ARB/ETH	Major Coin	271,575	0.2–1.18%	0%
Bnbchain	BNB/USDT	Major Coin	92,629	0.15–0.98%	10%
Bnbchain	BUSD/USDT	Major Coin	29,598	0.01–0.03%	5%

Last Updated Time: May 26th, 2023.

From the table, we deduce Trader Joe's current protocol fee pricing strategy as follows:

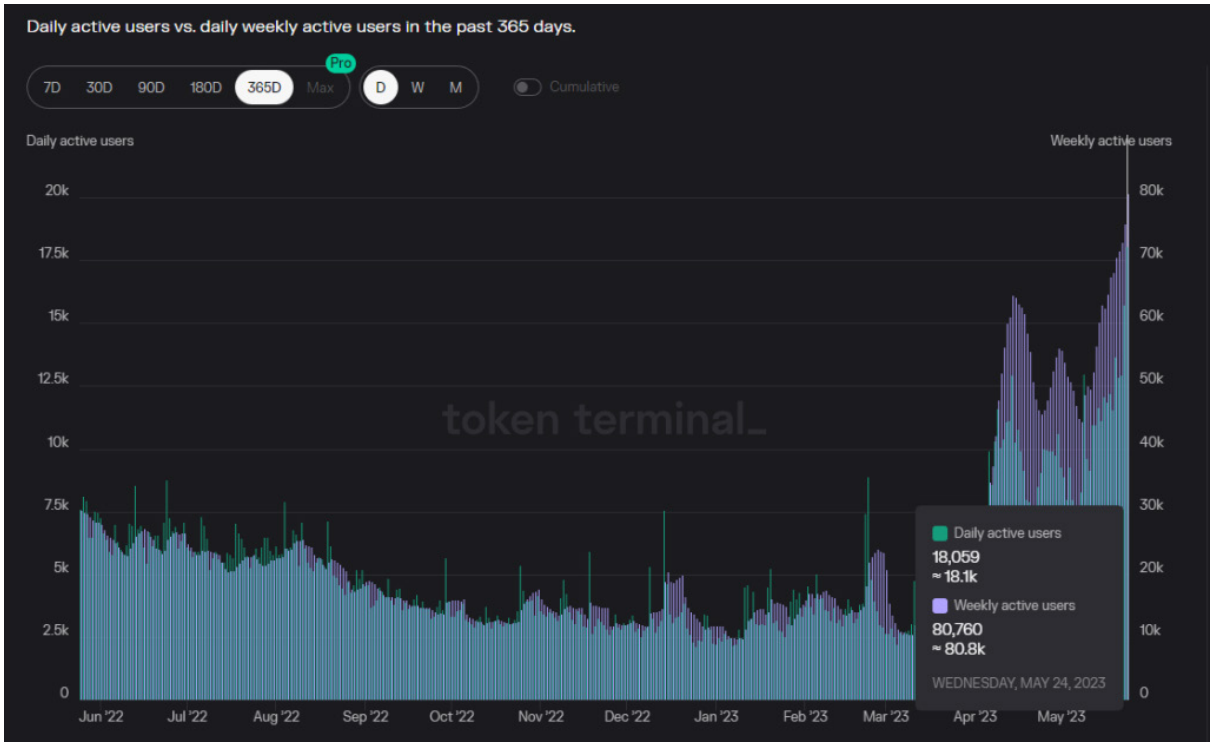
1. Prioritize development of the Arbitrum market with a strategy of low or zero protocol fees.

2. Mainstream stablecoins are primarily exempt from fees, focusing on accumulating business data (trading volume and TVL) without realizing profits.

3. Since the BNB Chain business is relatively insignificant, regular fees are imposed.

4. Higher fees are charged on new projects, particularly those based on the LB mechanism, such as JIMBO and LOTUS.

3.2.3 Active Users



Source: Token Terminal

Ever since the implementation of Trader Joe V2.1, there's been a considerable increase in the number of active users on Trader Joe, recording an all-time high for the protocol. Daily active addresses amount to 18,000, weekly active addresses surpass 80,000 (110,000 according to DeFiLlama data), and monthly active addresses are approaching 200,000. The steady expansion of the user base can be attributed to Trader Joe's user-friendly interface, which has proven to be an attractive feature for its growing community.

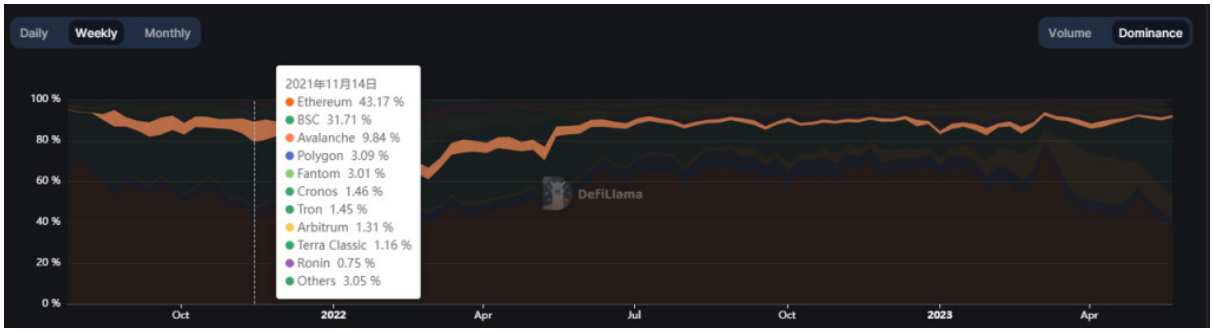
3.3 Competition Landscape

As it stands, Trader Joe's core business is based on Avalanche, and its primary efforts have been channeled into expanding its business on Arbitrum, which is expected to be a significant driver of its future growth. Our analysis will concentrate on Trader Joe's market share in both Avalanche and Arbitrum.

3.3.1 Avalanche

Avalanche was one of the most rapidly expanding Layer1 blockchains during the last bull market, but its market share, in terms of TVL and trading volume, dwindled

during the bear market. The TVL plunged from its peak of 9.8% to a mere 1.51%, while trading volume slipped from 9.84% to 1.19%.



Avalanche's Market Share in Trading Volume, Source: DefiLlama

In the Avalanche ecosystem, Trader Joe was an early entrant and thus benefited from the first-mover advantage, securing prominent positions in both TVL and trading volume.

Made by Mint Ventures

Market Share of Top5 Dex on Avaxlanche by TVL					
Project	TVL ($)	TVL Ratio	7-day Tading Volume ($)	Tading Volume Ratio	VOL/TVL
Trader Joe	72,990,000	49.4%	106,630,000	67.7%	0.24
Platyous	30,290,000	20.5%	15,120,000	9.6%	0.08
Pangolin	21,840,000	14.8%	3,820,000	2.4%	0.04
Curve	16,480,000	11.1%	3,540,000	2.2%	0.06
WooFi	6,210,000	4.2%	28,510,000	18.1%	1.16

Last Updated Time: May 26, 2023.

* The ratio is calculated by using the sum of the Top5 protocols as the denominator.

Interestingly, in March of this year, Avalanche Labs and governance members of Uniswap, the University of Michigan Blockchain Association, proposed a plan to deploy V3 on Avalanche. The proposal was approved on March 19th. As per the estimated timeline in the proposal, the deployment would take roughly 5 weeks. This implies that Uniswap V3 should soon land on Avalanche, bringing direct competitive pressure to Trader Joe.

3.3.2 Arbitrum

Arbitrum has been the fastest-growing Layer-2 ecosystem over the past year, trailing only BNB Chain and Ethereum (Tron excluded) in terms of TVL and trading volume. A more bustling ecosystem also signifies fiercer competition. Numerous DEX projects exist on Arbitrum, including early multi-chain strategy adopters like Uniswap V3, Curve, and Balancer, as well as native DEXs such as Camelot, Chronos, and Ramses.

Made by MintVentures

Market Share of Top8 Dex on Arbitrum by TVL					
Project	TVL ($)	TVL Ratio	7-day Tading Volume ($)	Tading Volume Ratio	VOL/TVL
Uniswap	316,440,000	36.8%	855,331,000	62.1%	0.49
Chronos	120,830,000	14.0%	16,420,000	1.2%	0.02
Curve	94,520,000	11.0%	50,960,000	3.7%	0.06
Camelot	93,880,000	10.9%	150,160,000	10.9%	0.16
Balancer	77,190,000	9.0%	17,780,000	1.3%	0.05
Sushi	75,480,000	8.8%	203,220,000	14.8%	0.23
Wombat	45,040,000	5.2%	11,530,000	0.8%	0.04
Trader Joe	37,090,000	4.3%	69,690,000	5.1%	1.2

Last Updated Time: May 26, 2023.

* The ratio is calculated by using the sum of the Top8 protocols as the denominator.

Even though Trader Joe's TVL currently ranks low on Arbitrum, the following data is of interest:

- Capital efficiency (VOL/TVL) is exceptionally high: it ranks the highest amongst the Top8 DEXs, outpacing even Uniswap V3, which employs concentrated liquidity.

- Excluding Chronos, which launched in early May, Trader Joe is the sole Dex experiencing a substantial month-on-month TVL increase in the past month, a growth trend that has persisted for nearly half a year.

Name	Category	1d Change	7d Change	1m Change	TVL
1 GMX 2 chains	Derivatives	-0.27%	-5.16%	-5.75%	$550.92m
2 Uniswap V3 6 chains	Dexes	+2.24%	-2.30%	+1.99%	$317.17m
3 Radiant 2 chains		+1.11%	-1.56%	-1.93%	$161.15m
4 AAVE V3 8 chains	Lending	-0.45%	-3.10%	+3.57%	$128.62m
5 Chronos 1 chain	Dexes	-1.19%	-22.67%	+3014%	$120.41m
6 Stargate 9 chains	Cross Chain	-0.02%	+3.82%	-5.53%	$119.38m
7 Camelot 1 chain		-2.09%	+1.59%	-3.42%	$94.28m
8 Curve DEX 12 chains	Dexes	-1.31%	+4.44%	-3.26%	$94m
9 Balancer V2 4 chains	Dexes	+5.34%	+3.50%	-0.36%	$78.14m
10 Sushi 25 chains		+1.08%	-2.27%	-18.11%	$75.47m
11 Convex Finance 3 chains	Yield	-1.53%	+6.38%	+7.26%	$56.99m
12 Wombat Exchange 2 chains	Dexes	-10.06%	-18.38%	-7.40%	$44.76m
13 Beefy 20 chains	Yield Aggregator	-0.18%	-2.92%	-12.42%	$43.34m
14 Gains Network 2 chains	Derivatives	-0.18%	-4.05%	+2.58%	$41.3m
15 MUX Protocol 5 chains	Derivatives	-0.49%	+8.95%	+26.87%	$37.42m
16 Trader Joe 3 chains		+32.85%	+24.58%	+59.60%	$37.23m

Source: DefiLlama

The driving force behind Trader Joe's TVL growth on Arbitrum is primarily due to:

1. The introduction of the LB mechanism, which offers a more attractive proposition for LPs. This, along with the incremental increase and mutual enhancement of market-making funds and trading volume, lays the foundation for organic growth.

2. The advent of new assets has reignited user enthusiasm for market-making and trading, as illustrated by the three red circles in the previous figure. The

LB mechanism that Trader Joe utilizes has proven effective in attracting and accommodating these funds and users.

The first point constitutes the fundamental growth, while the second, being event-driven, has precipitated the pulse-like expansion of Trader Joe's LB offerings. The three red circles in the above figure represent three driving event types. Each has spurred a rapid rise in Trader Joe's TVL and trading volume, **albeit with slightly different underlying rationales.**

a. $ARB Airdrop

The $ARB airdrop that occurred on March 24th this year catalyzed a substantial surge in on-chain trading volume. The prospect of such a volume spike led to a host of users engaging in ARB token market-making. Their motivations spanned a broad spectrum, with some hoping to profit from fees through market-making while others sought to utilize a variation of the Dollar Cost Averaging (DCA) strategy to sell high or buy low on ARB (as discussed in section 2.1.1 - Liquidity Book Use Case). Trader Joe, on one hand, offered a more user-friendly experience market-making and order-placing compared to Uniswap V3, attracting more LPs. On the other hand, they increased the bounty amount in their Liquidity Book Rewards Program, enabling more dynamic market-making funds near the $ARB deal price and significantly reducing slippage. At one point, Trader Joe's LB Pool had higher trading volume on ARB-ETH pairs than Uniswap V3, which further increased LPs' market-making APR.

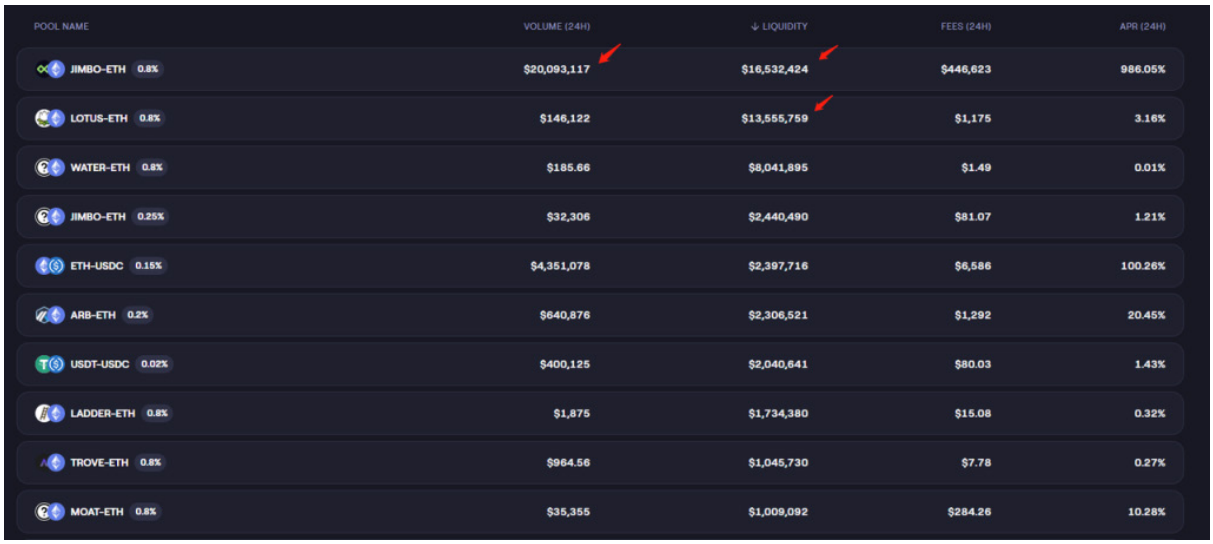
Epoch 3

A week after the $ARB airdrop, during Epoch 3, Trader Joe provided a reward of 175,000 $JOE tokens to ARB's liquidity provider (LP) for the LB.

**** The Liquidity Book Rewards Program is a dynamic reward scheme for LPs offered by Trader Joe, functioning much like a flexible marketing campaign. We will delve into this further in the 'Tokenomics' section.***

b.LOTUS and JIMBO Issuing

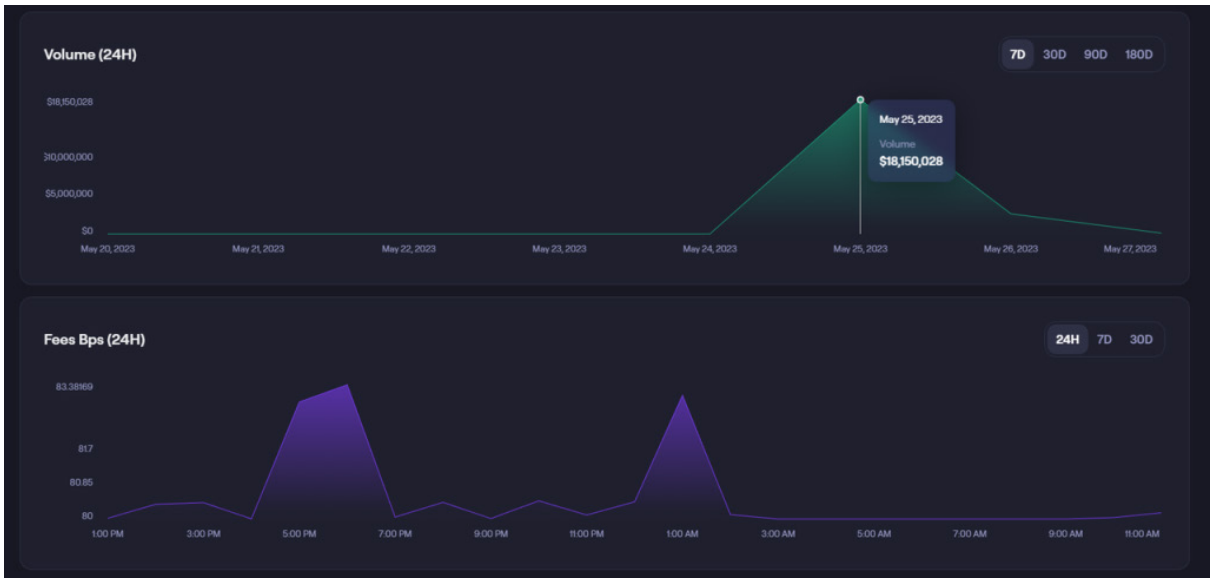
As introduced earlier, LOTUS is a Ponzi-style DeFi project built on Trader Joe for token issuance and price stability, and JIMBO is an improved forked version of LOTUS (with two versions, V2 being the first in trading volume in the figure below). These two products significantly boosted LB's TVL (due to the retained ETH and underlying assets they raised) and generated substantial trading volume and fee revenues due to the huge price fluctuations of their tokens during the early listing period. For instance, JIMBO's 24-hour trading volume reached $20 million on May 25, with liquidity reaching $16 million, while LOTUS still maintains a liquidity of $13 million.



POOL NAME	VOLUME (24H)	↓ LIQUIDITY	FEES (24H)	APR (24H)
JIMBO-ETH 0.8%	$20,093,117	$16,532,424	$446,623	986.05%
LOTUS-ETH 0.8%	$146,122	$13,555,759	$1,175	3.16%
WATER-ETH 0.8%	$185.66	$8,041,895	$1.49	0.01%
JIMBO-ETH 0.25%	$32,306	$2,440,490	$81.07	1.21%
ETH-USDC 0.15%	$4,351,078	$2,397,716	$6,586	100.26%
ARB-ETH 0.2%	$640,876	$2,306,521	$1,292	20.45%
USDT-USDC 0.02%	$400,125	$2,040,641	$80.03	1.43%
LADDER-ETH 0.8%	$1,875	$1,734,380	$15.08	0.32%
TROVE-ETH 0.8%	$964.56	$1,045,730	$7.78	0.27%
MOAT-ETH 0.8%	$35,355	$1,009,092	$284.26	10.28%

Source: Trader Joe

The Ponzi-like nature of LOTUS and JIMBO may limit their lifespan, and the trading volume around such projects often displays a pulse-like pattern, lacking sustainability.



JIMBO V2's LB Pool, for example, had a daily trading volume of $18 million after the project launched, but it quickly dropped to $2.7 million the following day.

Nonetheless, their intriguing attempt and successful fundraising impact, based on Trader Joe's LB mechanism, may inspire more projects to build their liquidity or design more imaginative gameplay based on LB. This could bring more TVL and trading volume to Trader Joe. Still, the sustainability of the incremental trading and liquidity created by these new projects remains to be observed.

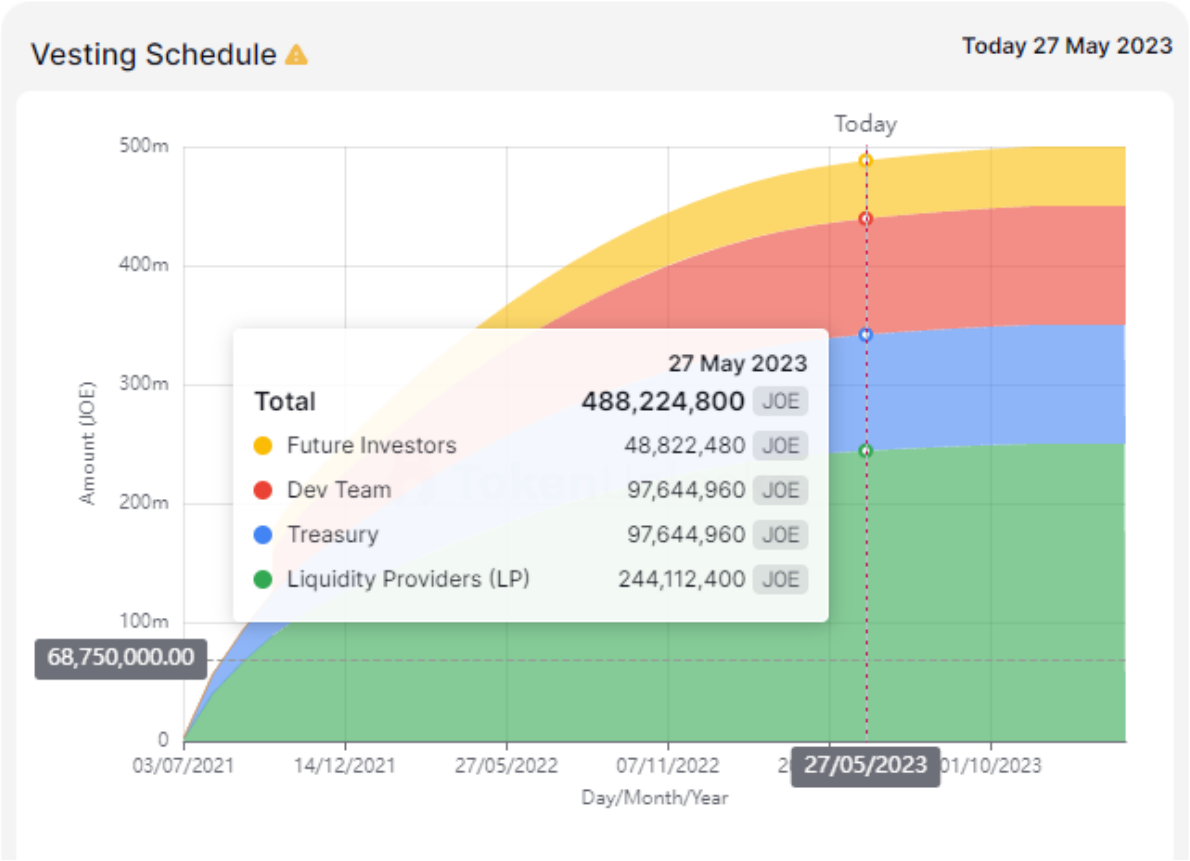
3.4 Tokenomics

3.4.1 Token Supply, Distribution and Vesting Schedule

$JOE is the utility token of the Trader Joe, with a total supply of 500,000,000, which will be released over 30 months. The distribution plan for the token is as follows:

Object	Distribution
Liquidity Providers	50%
Treasury	20%
Dev Team	20%
Strategic Investors	10%

According to the official unlocking conditions, as of May 27th of this year, the circulating supply should be around 488 million.



Source: https://token.unlocks.app/joe

However, according to the official API, the actual circulating supply is around 340 million, and the vested but yet-to-be-circulated $JOE tokens are primarily in a staked state.

Interestingly, unlike many other DEX or DeFi projects that continue to maintain high incentive emissions, Trader Joe's regular liquidity incentive emission is currently quite low, with only about 850 $JOE tokens (worth approximately $300) being released daily. Despite these minimal emission incentives, Trader Joe has successfully achieved positive profits for five consecutive weeks.

Source: Trader Joe's Earnings

This doesn't mean that Trader Joe has stopped incentivizing liquidity. Instead, the team has implemented a phased, short-term, flexible incentive plan centered around the LB (Liquidity Book) mechanism called the "Liquidity Book Rewards Program." This program incentivizes LPs (Liquidity Providers) who provide liquidity in specific LB pools (such as ARB-ETH and ARB-USDC during the $ARB airdrop phase).

Unlike traditional liquidity incentive schemes, this program has the following features:

1. A score-based ranking system: Unlike the conventional models that utilize trading volume or liquidity provision as metrics, this program calculates scores based on the fees collected by the Liquidity Pool during a specific epoch. Therefore, LPs need to not only provide sufficient liquidity but also adjust their liquidity range to ensure it lies within the price range that has a high trading density to earn rewards.

2. No Consolation Rewards: To be qualified, LPs must accrue more than 1% of the total fees paid in the market during the epoch.

3. Short cycle operations: The program runs on a weekly cycle, allowing for flexible adjustments in response to market fluctuations and hotspots. This ongoing adaptation gradually decreases the 'cost-efficiency ratio' of subsidies.

This is a token incentive program that effectively leverages concentrated liquidity, striking a balance between liquidity provision and trading volume.

3.4.2 Token Utility

The Trader Joe team has experimented with various uses for the $JOE token. Here are the major ones:

- **Staking Rewards:** $JOE tokens can be staked to earn a portion of trading fees, which can be unstaked at any time. This share stems from 0.05% of the trading volume on V1 AMM (Automated Market Maker) and the fee distribution of V2.1 LB (Liquidity Book) pools. Originally, staking $JOE awarded xJOE as staking tokens and $JOE as reward tokens, but it was later changed to sJOE and $USDC respectively. Presently, the main application of $JOE tokens revolves around staking for rewards.

- **Staking Booster:** By staking $JOE tokens, users obtain veJOE, which is also withdrawable at any time. veJOE, intended for V1 AMM emission sharing, unlocks enhanced $JOE yield. The veJOE amount hinges on two elements: the volume of staked $JOE and the veJOE staking duration. The longer the period, the higher the veJOE for staking $JOE, resulting in an increased reward acceleration. However, withdrawing veJOE resets it to zero. As V1 AMM usage has waned, liquidity rewards for V1 AMM are nominal, rendering veJOE mostly symbolic.

- **Launchpad Allowlist:** By staking $JOE tokens, users can acquire rJOE, reflecting the investment amount in participating in the launchpad. Nevertheless, the rJOE mechanism was discontinued in January 2023.

- **Governance Participation:** While $JOE is the governance token of the project, the current governance privileges are relatively restrictive, permitting only voting on adding base tokens to LB and pairing base tokens with pricing tokens. The team centrally configures even the fundamental parameters of the LB Pool.

In conclusion, the main use of $JOE tokens at the moment is for staking rewards.

In a broader perspective, $JOE tokenomics are designed with the following ideas:

1. Actively empower $JOE with economic ability to capture the revenues of Trader Joe's core business or function as a prerequisite for key operations.

2. Limited governance rights: the team still controls the product's development roadmap and parameters.

While the team has made several attempts in tokenomics and value capture, they ultimately opted for the straightforward staking-for-reward model, avoiding overly complex designs. This choice may not necessarily be unfavorable.

3.5 Risks

Trader Joe, like other projects in the blockchain industry, faces several common risks, such as potential flaws in smart contracts, regulatory uncertainties, and slower-than-expected development in the cryptocurrency sector. In addition, the competitive landscape of the decentralized exchange (DEX) environment poses significant challenges.

Avalanche ecosystem: Trader Joe's growth is intricately linked to the success of the Avalanche ecosystem. However, this ecosystem has recently seen stagnation and shrinkage, which directly limits Trader Joe's potential for trading volume growth. Furthermore, the upcoming deployment of Uniswap V3 on Avalanche may pose additional competition, potentially diverting transaction volumes away from Trader Joe.

Arbitrum ecosystem: Trader Joe has seen rapid growth in terms of liquidity and user acquisition on the Arbitrum network. However, several hidden challenges exist:

- **Fee structure:** Many mainstream token Liquidity Books (LBs) on Trader Joe adopt low or zero fees. The intense competition might limit Trader Joe's ability to charge higher fees in the future, impacting its revenue potential.

- **Short-term growth catalysts:** The current growth in liquidity and trading volume is driven by short-term events or strong Ponzi mechanisms of projects. It remains uncertain whether Trader Joe can maintain this growth and business retention in

the long term. For instance, the spikes in trading volume driven by events such as the $ARB airdrop and the $LOTUS and $JIMBO issuing were quickly followed by a sharp decline in trading volume and market share.

BNB chain: Trader Joe's progress on the BNB chain has been challenging, and the sluggish growth of the BNB Chain itself further exacerbates these difficulties.

4. Preliminary Value Assessment

4.1 Five Core Issues

What's the Development Stage of the Project?

Within the bustling arena of Decentralized Exchanges (DEXs), Trader Joe has carved out its own niche. Given the rapid pace of development in this space, it can be argued that DEXs have now entered a phase of maturity. Similarly, Trader Joe's business model and product offerings have reached a level of sophistication and stability that hints at a more mature stage in its lifecycle.

Does the Project Possess a Significant Competitive Advantage? If So, Upon What Factors or Elements is This Competitive Edge Founded?

When considering competitive advantage, it's clear that the DEX field is fiercely contested and no single exchange, Trader Joe included, can claim an unambiguous edge. Despite this, Trader Joe exhibits a number of significant strengths. Chief among these is a resilient team with robust capabilities in delivery, innovation, and operations. Additionally, the platform provides an excellent user experience which contributes to its competitive posture.

In the Web3 ecosystem, both investors and project developers are keen to find and participate in domains with robust barriers to entry and potential for strong monopolistic positions. However, such sectors are not common in the current Web3 environment. In industries with less formidable barriers, the key to survival lies in relentless enhancement of operational efficiency. This is a sprinter's race that never ends and involves an amalgamation of actions ranging from big-picture strategy design and core product innovation, to meticulous community management and

speedy execution of development work. Trader Joe has manifested remarkable endurance and operational efficiency amidst the DEX market's fierce rivalry, auguring well for its continued competitiveness and growth potential.

Is the Long-term Investment Rationale of the Project Well-defined, and Does It Align with the Overall Direction and Trends Within the Industry?

DEX remains a critical piece of infrastructure in the evolving Web3 landscape, acting as a hub for substantial amounts of capital and a large user base. As the industry cycle progresses, there's an expectation that this track will experience a bounce back from its current trough, providing a long-term valuation uptick.

What Constitutes the Major Factors Affecting the Project's Operation, and Can These Factors be Accurately Quantified and Assessed?

The intensity of competition among DEXs is a significant operational consideration. On a quantitative basis, it's possible to track and analyze key metrics like liquidity, trading volume, and revenue to assess fluctuations in market share. Qualitatively, the extent to which new projects opt to issue tokens and allocate liquidity based on Trader Joe's Liquidity Book (LB) will be a key business consideration.

How is the Project's Management and Governance Structured, and What is the Nature of Its DAO?

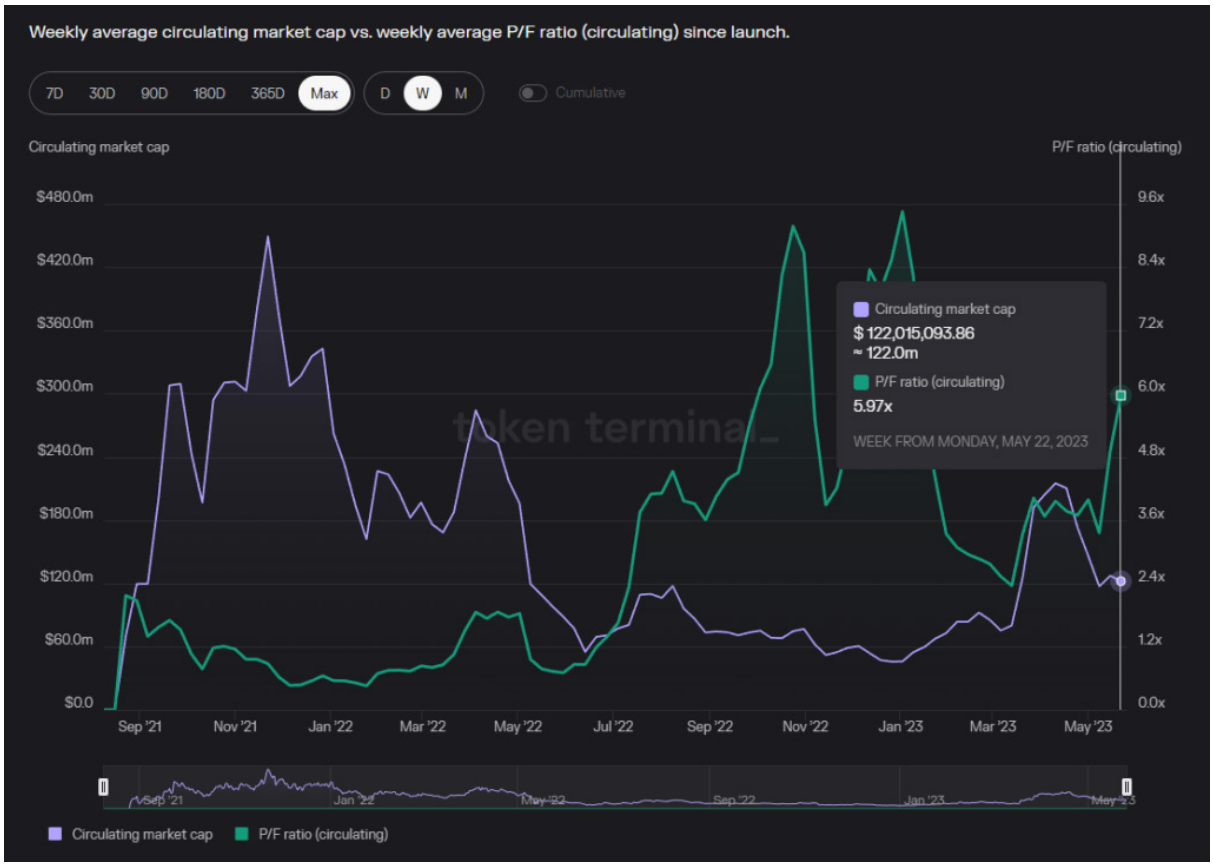
Currently, Trader Joe’s governance permissions are relatively constrained, and it remains a long way from evolving into a fully community-governed platform.

4.2 Valuation

To estimate the present valuation of Trader Joe, we utilize both vertical and horizontal comparative valuation methods, focusing on the Price-to-Fees Ratio (where fee refers to the total fee generated by transactions) and the Price-to-Sales Ratio (refer to protocol revenue). Given the highly cyclical nature of DEXs, the vertical valuation serves primarily as a point of reference, while the horizontal comparative valuation proves to be more insightful.

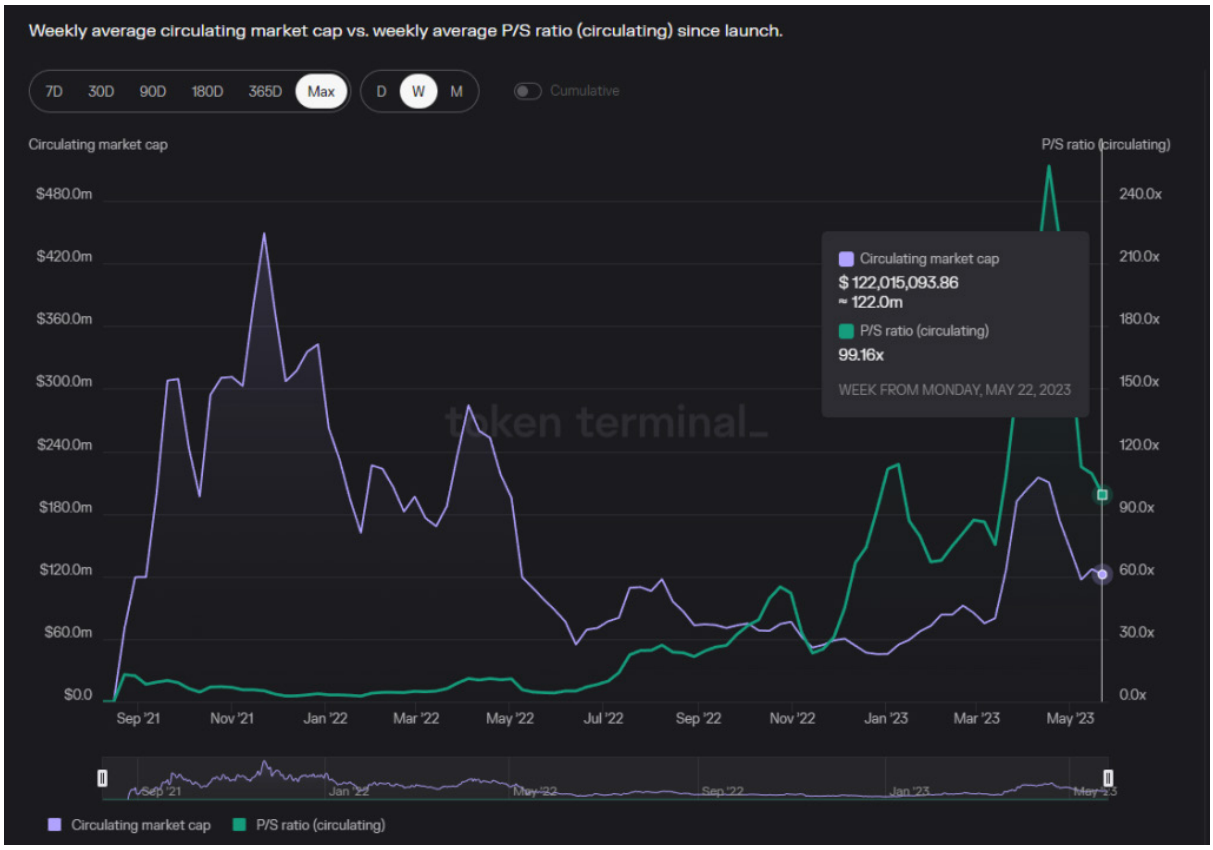
Vertical valuation

The graph below represents the trend in Trader Joe's circulating market cap and the Price-to-Fees Ratio (PF). It becomes evident that, much like traditional financial brokerage firms, DEXs display a strong cyclicality in both their market cap and valuation levels.



Price-to-Fees Ratio, from August 2021 to May 2023, Source: Token Terminal

More specifically, during a bull market cycle, heightened trading activity leads to a rapid increase in trading fees. While the market cap also witnesses growth during this period, the rate of increase in trading volume substantially outpaces that of the market cap, resulting in a decline in PF and PS.



Price-to-Sales Ratio, from August 2021 to May 2023, Source: Token Terminal

Conversely, in a bear market, trading volume and protocol revenue quickly contract. Even though the market cap also decreases concurrently, the rate of decline is slower than that of revenue. This ultimately causes a swift rise in PF and PS.

Horizontal Valuation

Among the plethora of DEXs, we've decided to exclude projects like Curve, Balancer, and Velodrome, which operate liquidity purchasing operations that deviate from the traditional trading business. Instead, we've chosen to compare Trader Joe with Uniswap, Pancakeswap, Sushiswap, and Quickswap, as these platforms share a more similar business model.

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Project	Supply Market Cap ($)	Monthly Trading Fee ($)	Monthly Protocol Revenue ($)	Monthly Token Incentives ($)	Monthly Profits ($)	PE	PS	PE
Uniswap	3,826,685,228	55,505,829	0	0	0	5.7	/	/
Sushiswap	212,210,685	4,532,016	755,336	228,991	526,345	3.9	23.4	403.2
Pancakeswap	602,135,597	7,229,378	2,425,324	4,582,300	-2,156,976	6.9	20.7	/
Quickswap	46,671,284	532,684	65,439	74,202	-8,763	7.3	59.4	/
Trader Joe	173,899,736	1,342,656	86,662	20,750	65,912	10.8	167.2	2638.4

Source: Coingecko & Tokenterminal; Last Updated Time: May 28, 2023

Note: the supply market cap refers to the total market cap of unlocked and vested tokens. This includes tokens that have been unlocked but have not yet entered circulation, tokens that are currently staked, and tokens that are freely circulating.

Upon comparing the data above, it's clear that the market is currently attributing a relatively high valuation to Trader Joe, regardless of whether one is looking at the Price-to-Fees Ratio, Price-to-Sales Ratio, or Price-to-Earnings Ratio. This relative valuation premium in comparison to its market peers may stem from the market's optimism about Trader Joe's core team's resilience and innovative capabilities, or expectations regarding the future development of the LB mechanism. However, this ultimately boils down to one's perspective.

4.3 Summary

Trader Joe has established itself through a robust and creative team coupled with unparalleled delivery prowess. This innovative blend of product experience and an innovative Liquidity Book mechanism has sparked a substantial surge in user base. The platform's current growth catalyst is primarily driven by the integration of Arbitrum.

Notwithstanding these strengths, the decentralized exchanges (DEXs) landscape remains fiercely competitive, consequently diluting the bargaining leverage of any particular project for traders and liquidity providers. A majority of DeFi protocols

currently navigate this landscape with negligible profits, or at times, incurring losses. Optimistically turning around this market scenario in the near-term appears challenging. However, with the unique ebb and flow of the crypto market and DEXs offers them a ray of hope, and the expectations are for projects like Trader Joe to outperform the broader market.

5. Reference

Midaswap: *Joe V2 - A Potential Early Glimpse into the Anticipated Uniswap V4*

Trader Joe Docs: *https://support.traderjoexyz.com/en/*

Liquidity Book: *https://docs.traderjoexyz.com/*

Market Cap Data: *https://www.coingecko.com/*

Liquidity and Volume Data: *https://www.coingecko.com/*

Liquidity and Volume Data: *https://defillama.com/home*

Unlocked Token Data: *https://token.unlocks.app/*