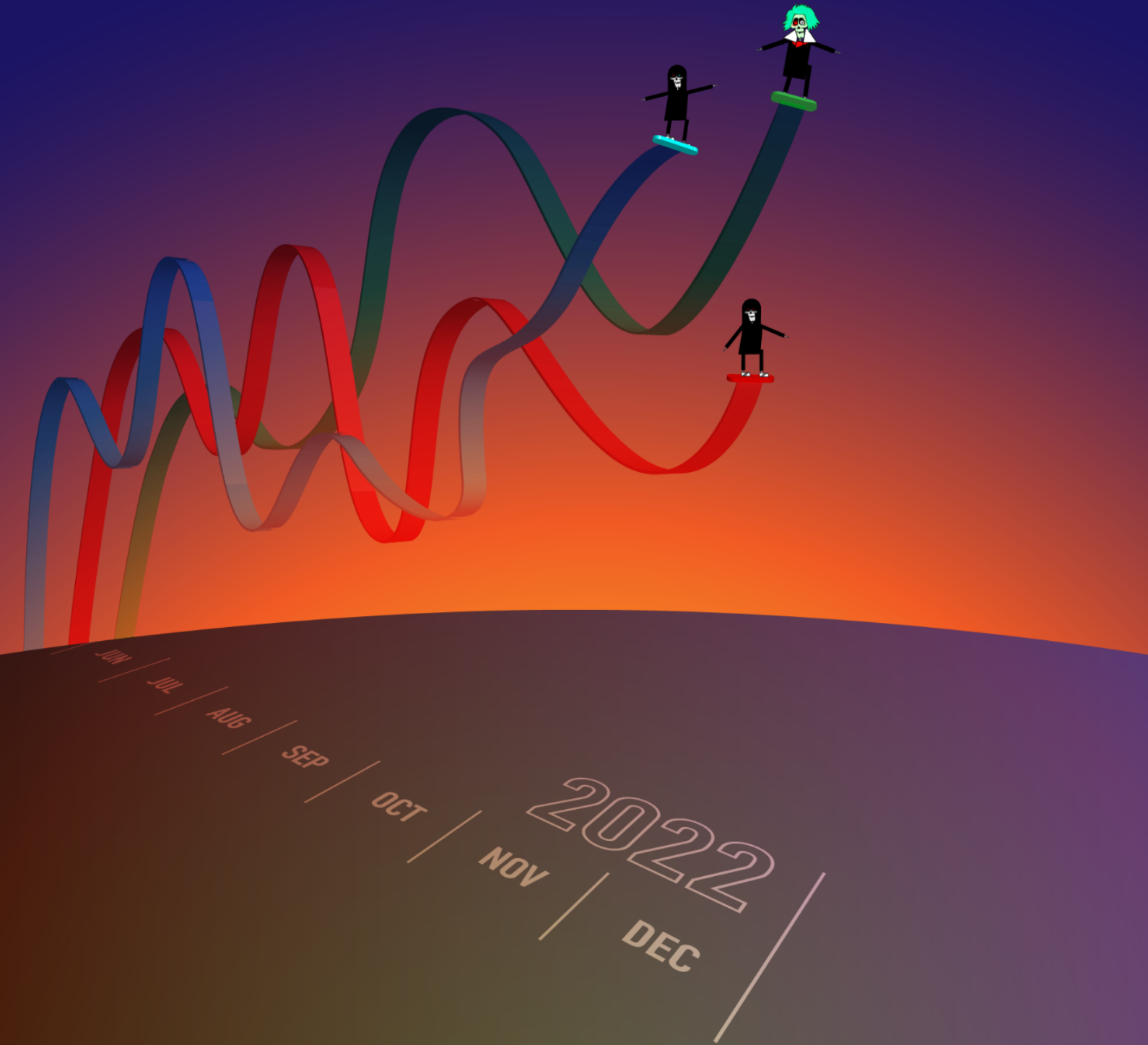


# beethoven ✖

Annual Performance Report  
**DECEMBER 2022**



## About Beethoven X

Beethoven X is a next generation decentralized investment platform built for the future of finance.

Leveraging the most advanced liquidity provisioning technology, we provide innovative, capital-efficient, and sustainable solutions for DeFi users.

Our core infrastructure is designed intelligently and provides a foundation that is not only flexible but extremely efficient. From Weighted and Boosted Pools to LBPs, Beethoven X offers a suite of unique financial primitives that unlock the full potential of DeFi.

## Our Reporting

This report aims to outline the metrics of success for Beethoven X in a simple, and easy-to-understand manner, as well as offer insight and transparency into the protocol's financial performance.

It offers users the ability to keep up to date with the quantitative aspects of the protocol for the period **1 January to 31 December 2022**.

## 2022 Performance

**\$58m**

Closing TVL



**\$7.82bn**

Total Volume



**\$12.2m**

Total Fees



**\$9.8m**

Total Fees to Liquidity Providers



**\$2.8m**

Balance of Treasury



**294**

Active Liquidity Pools



# Inside this Report

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# Important Events

## Beethoven X Gauge

January saw the implementation of the protocol's gauge voting system.

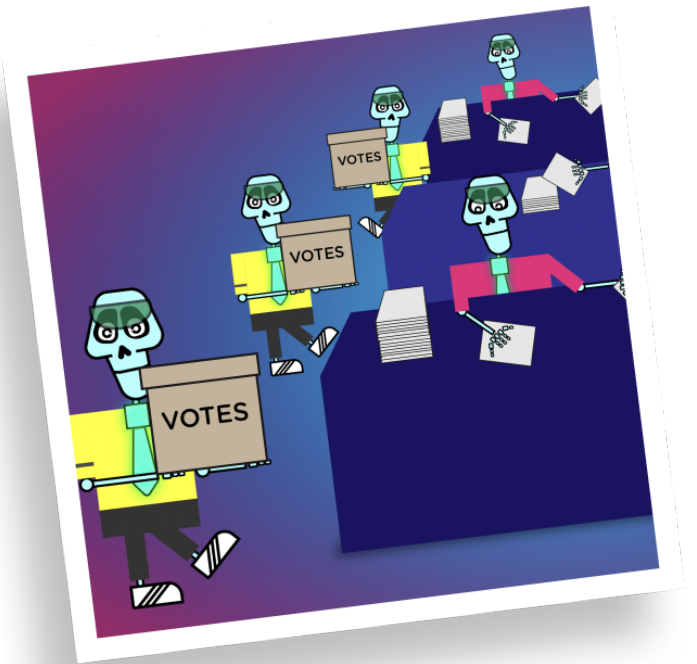
Every two weeks fBEETS holders have a say in directing 30% of BEETS farm emissions, while doing this they have the option of voting for liquidity pools that carry a bounty.

From a network perspective, Beethoven X was the first protocol to implement a gauge voting system and the results were successful.

*Over the course of the year, more than 28 thousand voters participated and collected bounties totalling over \$4m.*

At its peak there were 15 protocols participating in the gauge model.

Across the industry the concept of gauge voting continues to be a popular one. 2023 will see the protocol enhance this process as it continues to build on its success.



## Optimism Deployment

On the 8th of May, a vote in favor of Beethoven X Improvement Proposal (BIP) - 28 resulted in a new venture for the protocol. Beethoven X was to manage the Balancer deployment on Optimism. This decision played a vital part in transitioning the protocol from being seen as just a Balancer friendly fork, to a partner.

On June 2nd, in partnership with Balancer,

*Beethoven X deployed on Optimism and introduced the innovative weighted pools to the ecosystem.*



Post deployment the protocol applied for a grant from the Optimism Governance council; a reward of 500k OP was granted. In order to avoid blank cheque spending, all grant participants had to match their OP spend.

The protocol saw this as an opportunity to develop a sustainable incentive model that assists the network and all protocol participants.

*Through this, the Beethoven X sustainability strategy was born; all OP utilised for incentives via the OP grant would be matched 1:1 with OP bought back directly from protocol fees.*

Every month, Beethoven X utilises protocol fees to buy OP off the open market and pair it with a portion of the grant for liquidity pool incentives.

This strategy has ensured the efficient use of the grant, with a **net total of only 61.2k OP spent** between August (the date received) and December.

Event	Total
Distributed as incentives	(165,028)
Bought back using protocol fees	74,721
Grant	500,000
Partner Protocol	29,092
	<b>438,785</b>

This approach has been a success story for the protocol. While total protocol incentives included more than just the net OP 61.2k spent, this strategy significantly contributed to achieving the current liquidity on the protocol (around \$20m).

## Reliquary

Beethoven X is a protocol that uses the most advanced liquidity provisioning technology, technology that evolves.

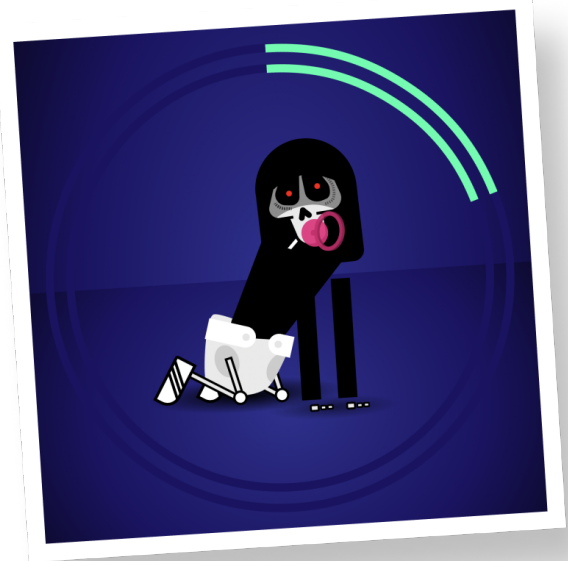
Reliquary is a step in the evolution of the very popular MasterChef contract.

It is an innovative primitive that not only handles emissions but also offers an alternative solution that addresses some of the shortcomings in the vote escrowed model.

On October 3rd, via BIP-33, Beethoven X users voted in favour of a Reliquary integration for the governance token, fBEETS.

Key benefits of Reliquary are that rewards emitted for a position are not only based on the staked fBEETS size but also the age or 'maturity' of the staked fBEETS. Additionally, utilising financial NFTs, the Reliquary offers users the freedom and flexibility to enter a position without locking any capital away.

Reliquary fBEETS will be released in Q1 2023.



## Beethoven DAO

Governance is an important part of the protocol. Constant work is being done not only to enhance the process as a whole, but also to improve the experience of fBEETS holders interacting with the DAO.

*The fourth quarter saw the adoption of both the Beethoven X governance framework and the approval of the creation of a “legal wrapper” for the DAO to operate under.*

This would be in the form of a Non-Profit Limited Liability Company incorporated in the Republic of the Marshall Islands and having MiDAO as the service provider for its creation.

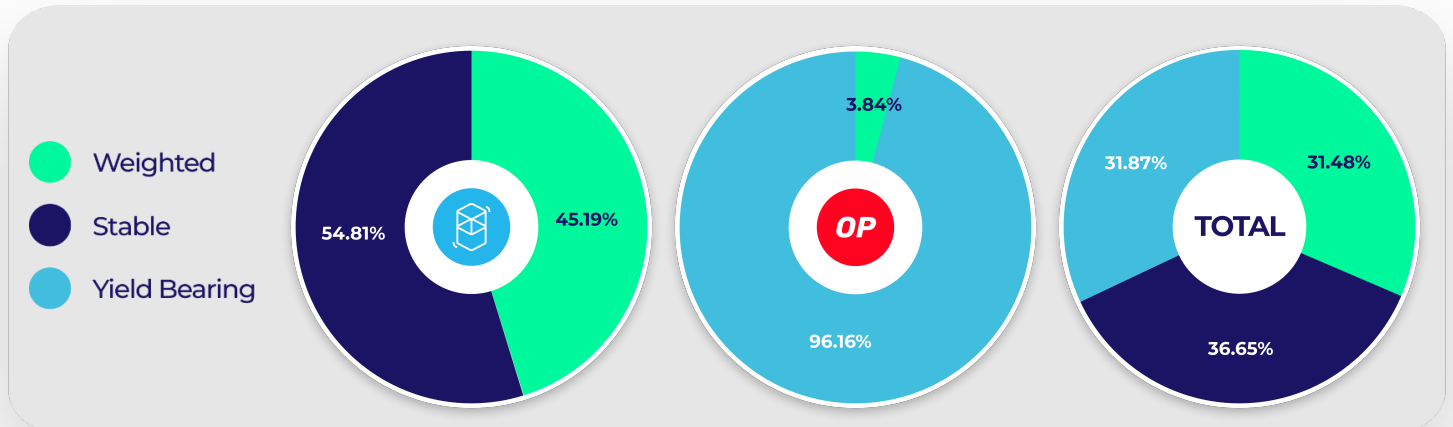


# Protocol Performance

## Total Value Locked (TVL)

Beethoven X is proud to be a protocol built on Balancer technology. A technology that allows users to deposit into a wide variety of unique and innovative liquidity pools.

On 31 December, the allocation of TVL between these pool types was as follows:



**Weighted pools:** Multitoken pools that can take up to 8 tokens of varying weights

**Stable pools:** Liquidity pools that consist of either pegged or highly correlated assets

**Yield Bearing pools:** Liquidity pools that contain tokens that generate both swap and yield fees

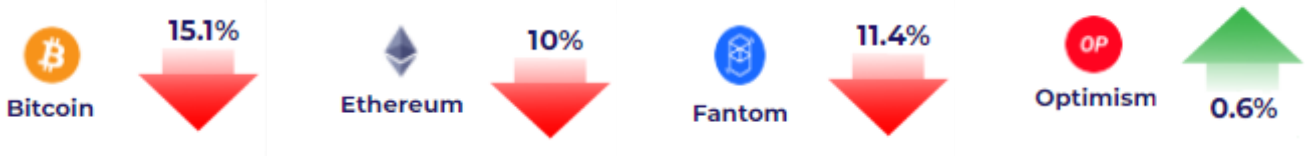
The table below shows the TVL comparison between these pool types from the 30th of September to the 31st of December.

Protocol TVL	31 Dec			30 Sep	Q3 vs Q4
	Fantom	Optimism	Total	Total	
<b>Weighted Pools TVL</b>	<b>17,543,421</b>	<b>733,787</b>	<b>18,277,208</b>	<b>27,220,558</b>	<b>(32.86)%</b>
Deposits from users	16,896,921	733,787	17,630,708	21,629,732	(18.49%)
Protocol owned	646,500	-	646,500	635,504	1.73%
Percentage Owned	3.69%	0.00%	3.54%	2.90%	21.88%
<b>MetaStable Pools TVL</b>	<b>21,275,212</b>	<b>5,332</b>	<b>21,280,544</b>	<b>25,892,527</b>	<b>(17.81)%</b>
Deposits from users	21,065,983	5,332	21,071,315	23,179,670	(9.10%)
Protocol owned	209,229	-	209,229	163,183	28.22%
Percentage Owned	0.98%	0.00%	0.98%	0.90%	9.63%
<b>Yield Bearing Pools TVL</b>	<b>-</b>	<b>18,501,339</b>	<b>18,501,339</b>	<b>5,465,768</b>	<b>238.49%</b>
Deposits from users	-	18,223,178	18,223,178	5,177,435	251.97%
Protocol owned	-	278,161	278,161	288,333	(3.53%)
Percentage Owned	0.00%	1.50%	1.50%	1.77%	(15.06%)
<b>Total TVL</b>	<b>38,818,633</b>	<b>19,240,458</b>	<b>58,059,091</b>	<b>58,578,853</b>	<b>(0.89)%</b>

**Protocol Owned:** Liquidity pool balances owned by the protocol treasury

Overall, TVL stayed fairly constant quarter on quarter. The small changes in the underlying categories in Q4 were mainly due to the launch of boosted pools on Optimism.

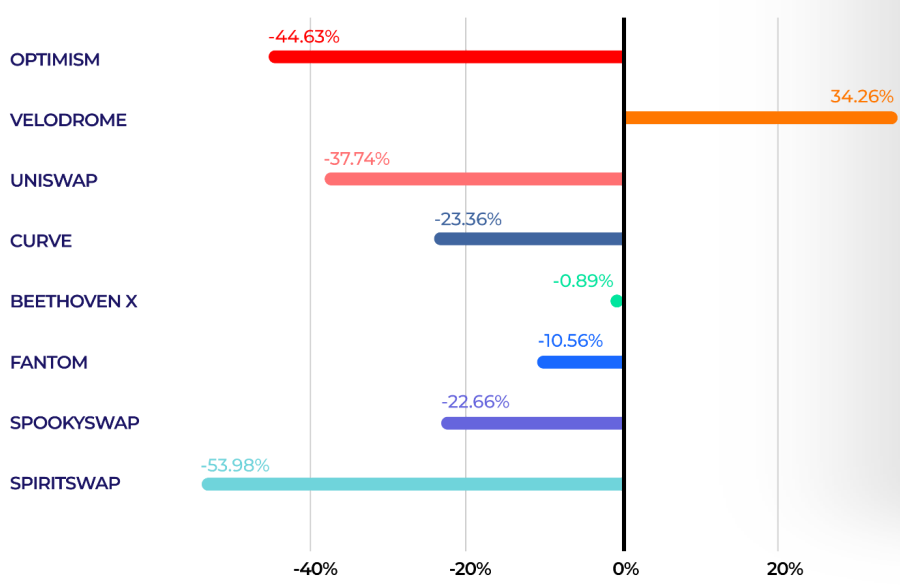
The TVL of a protocol is often determined by the changes in prices of Bitcoin, Ethereum and the host network tokens. This is because they often dictate the prices of the assets in each pool. The table below shows the changes for the quarter:



Taking these changes into account it can be seen that performance of the protocol TVL exceeded that of the declining token prices.

**Over the space of the last quarter our TVL performance was better than both networks and most major DEX competitors on those networks.**

**GROWTH % OVER THE 4TH QUARTER**



**31 DEC TVL**

**\$38.8m**

**\$19.2m**

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**TOTAL**

**\$58m**



## Volume and Fees

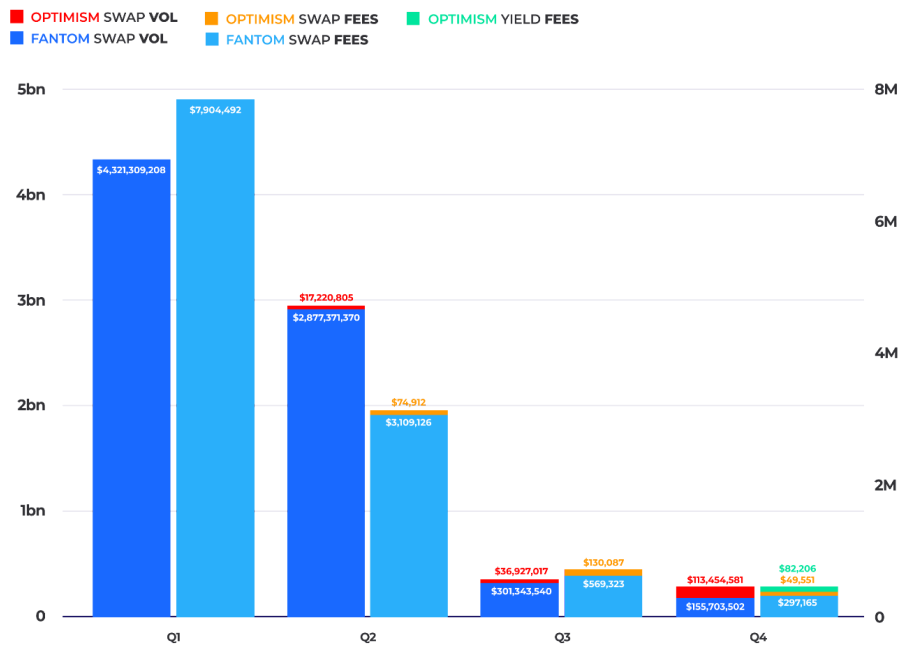
The graphic on the right shows the volume and fees earned over the various quarters.

The protocol achieved a **15% share of Fantom DEX volume** which was constant when comparing Q3 vs Q4.

There was an increase in the share of Optimism DEX volume from **0.63% to 2.85%** over the quarter.

Swap fees on Fantom changed in line with volumes.

SWAP VOLUME / FEES



On Optimism the reduction of fees was driven by the roll out of boosted pools. Most of the pools deployed were relating to correlated assets, as a result they carry a lower swap fee. The reduction in swap fees was offset by the yield fees earned on these pools. Yield fees are not like swap fees which are linked to volumes, but rather impacted by TVL and market yield rates.

### 2022 TOTALS

 **Volume**  
\$7.823bn

 **Swap Fees**  
\$12.1m

 **Yield Fees**  
\$82k

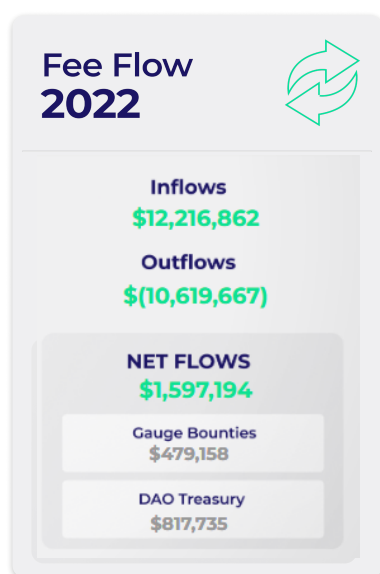
Over the course of the year DEX volume on Fantom was \$63.7bn, As the year progressed, Beethoven X was able to **grow its share from 9% in January to 15% of the network's volume by December.**

The annual Fantom volume of \$7.656bn represents an average 12% of the total network volume.

In the short time the protocol has been present on Optimism, it has generated \$167.6m in trading volume and gradually increasing its share-of-volume on the network. **By the end of December dominance had grown to 5% of the monthly network volume.**

These volumes resulted into the generation of \$12.1m swap fees and \$82k yield fees

## Fee Distribution



During the current period total inflows amounted to \$12.2m. This was primarily driven by **swap fees from Fantom (\$11.9m)**, other inflows also relate to Optimism swap fees (\$254k) and yield fees (\$82k).

Outflow for the year totalled \$10.6m and majority related to fees earned by **Liquidity Providers of the protocol (\$9.8m)**. Other outflows relate to the changes in market value (\$710k) of tokens between when they are earned to when they are realised from the protocol fee collector. There is also a small amount (\$62k) relating to fees held on Optimism as part of that incentive program.

The table below gives a detailed breakdown of how fees flowed through the protocol.

Swap Fee Flow	Dec '22	HY1	Q3	Q4	FY 2022	Q3 VS Q4
<b>Inflows</b>	<b>116,054</b>	<b>11,088,530</b>	<b>699,409</b>	<b>428,923</b>	<b>12,216,862</b>	<b>(39%)</b>
Fantom - Swap Fees earned	64,432	11,013,618	569,323	297,165	11,880,105	<b>(48%)</b>
Optimism - Swap Fees earned	7,864	74,912	130,087	49,552	254,550	<b>(62%)</b>
Optimism - Yield Fees earned	43,758	-	-	82,206	82,206	<b>0%</b>
<b>Outflows</b>	<b>(90,823)</b>	<b>(9,723,771)</b>	<b>(562,660)</b>	<b>(333,236)</b>	<b>(10,619,667)</b>	<b>41%</b>
Fees to Liquidity Providers	(74,135)	(9,068,470)	(519,846)	(258,684)	(9,846,999)	<b>50%</b>
Held for Optimism incentives	(15,326)	(7,630)	(17,719)	(36,994)	(62,343)	<b>(109%)</b>
Loss between fees earned vs realised	(1,362)	(647,672)	(25,095)	(37,558)	(710,325)	<b>(50%)</b>
<b>Net flow to be distributed</b>	<b>25,231</b>	<b>1,364,758</b>	<b>136,749</b>	<b>95,687</b>	<b>1,597,194</b>	<b>(30%)</b>

Swap fees are recorded at the time trades are booked. Therefore there is a difference between the amount recorded and what is distributed on a monthly basis. The changes in value between when fees are earned and realised is recorded in a separate line as either a Gain or Loss. Yield fees are recorded only when they are realised.

Net Fee Allocation	Dec '22	HY1	Q3	Q4	FY 2022	Q3 VS Q4
- to Treasury DAO	17,662	682,379	68,375	66,981	817,735	<b>(2%)</b>
- to Gauge Bounties	7,569	409,428	41,025	28,706	479,158	<b>(30%)</b>
- to DAO Contributors	-	245,657	24,615	-	270,271	<b>(100%)</b>
- to Beethoven X-Fund	-	27,295	2,735	-	30,030	<b>(100%)</b>
<b>Net fees</b>	<b>25,231</b>	<b>1,364,758</b>	<b>136,749</b>	<b>95,687</b>	<b>1,597,194</b>	<b>(30%)</b>

In Q4 there were no longer any allocations made to DAO contributors and the Beethoven X-Fund. This change was driven by the implementation of Beethoven X Improvement Proposal (BIP) - 35 where the fees go to the DAO's Treasury and then is paid to contributors.

## Top Performing Pools

Liquidity pools are the lifeblood of the protocol. The ability to design custom pools offer a unique value proposition to liquidity providers. In addition, the dynamic fee functionality ensures that traders are also getting the best pricing.

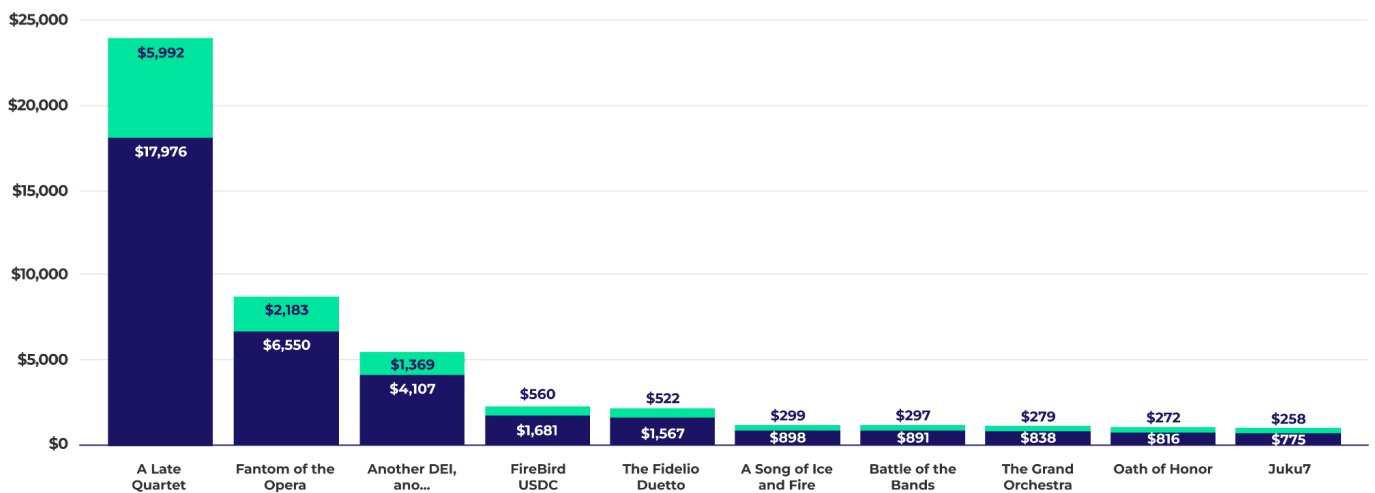
Liquidity Pool performance for December:

### Fantom



#### SWAP FEES

LIQUIDITY PROVIDERS    PROTOCOL



### Performance

These 10 liquidity pools accounted for 74.7% of the fees earned on the network. A Late Quartet and Fantom of the Opera continue to be the best performing pools on the network. These two pools contributed to 50.6% of the fees earned in December.

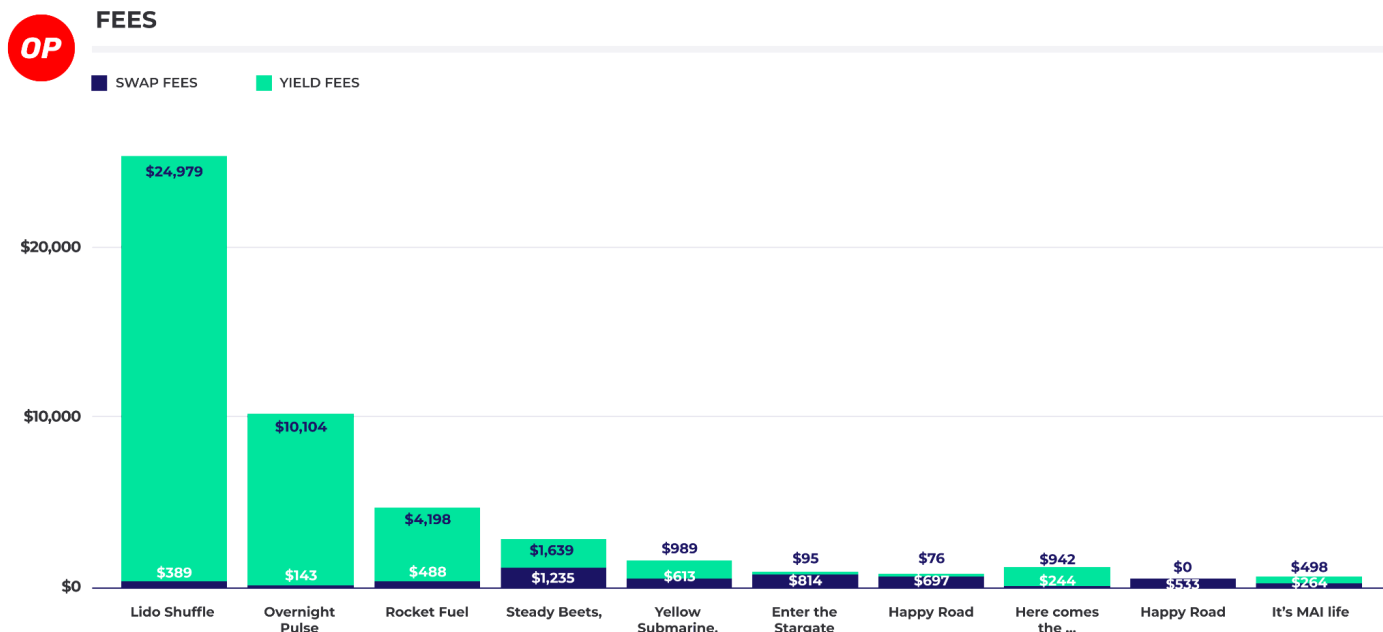
### Top 3 Pool Contents (weights)

A Late Quartet -  
FTM : wBTC : WETH : USDC  
(25% each)

Fantom of the Opera -  
FTM (70) : USDC (30)

Another DEI, another dollar -  
DEI : USDC (Stable pool)

# Optimism



## Performance

In total these 10 pools accounted for 94.8% of the fees earned on the network. Lido Shuffle brought in 49.1% of the fees for December, followed by Overnight Pulse contributing 19.6% and Rocket Fuel accounting for 9% of the fees.

## Top 3 Pool Contents (weights)

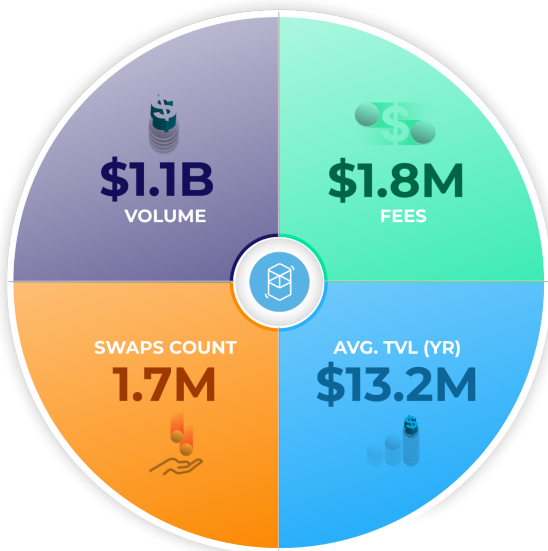
Lido Shuffle -  
wstETH : Reaper boosted  
Aave wETH  
(Composable Stable)

Overnight Pulse -  
Overnight Booted USDC :  
Overnight Boosted DAI  
(Composable Stable)

Rocket Fuel -  
rETH : wETH  
(Meta Stable pool)

## 2022 Liquidity Pool Review

**Pool Composition:**  
FTM - wBTC - wETH - USDC  
(25% each)



### A Late Quartet

A Late Quartet continues to be our most profitable pool. It is the one of the primary sources of liquidity for both wBTC and wETH on the Fantom network. This, together with a competitive swap fee makes it an attractive place for traders and aggregators.

At the time of writing, the 30 day average yield on the pool is 16.71%, making it attractive to liquidity providers and an overall top performing pool.

This resulted in it ranking 1st for most fees and 2nd highest volume on the protocol.

### Fantom of the Opera

Fantom of the Opera was one of the very first pools launched by the protocol. Its unique combination of FTM and USDC result in significantly less impermanent loss for the FTM faithful.

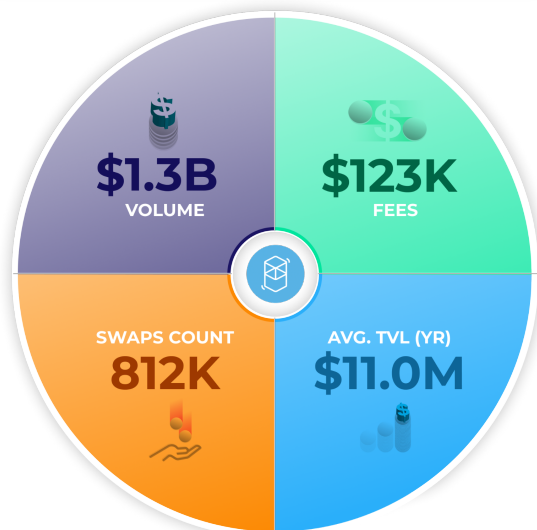
Its competitive pricing resulted in it earning the 2nd most fees and attracting 3rd highest volume on the protocol.

**Pool Composition:**  
FTM - USDC  
(70% - 30%)



## 2022 Liquidity Pool Review (cont.)

**Pool Composition:**  
wstETH : Reaper boosted Aave wETH  
(Composable Stable)



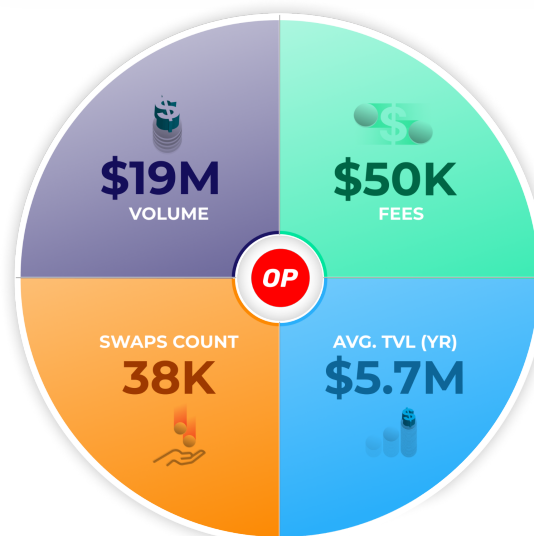
### Steady Beets, Act II

Steady Beets, Act II is one of the primary sources of liquidity for both USDC and DAI. Its competitive fee structure makes it the predominant place to swap between these two stable coins on the network, regularly topping the network volume charts. For 2022 it ranked 1st for the protocol for volumes generated.

### Lido Shuffle

Lido Shuffle was only launched in Q4 of 2022 but has quickly become one of our most prominent pools on Optimism. In this short time it has already ranked 3rd for volumes and 4th for fees earned from our pools on the network.

**Pool Composition:**  
wstETH : Reaper boosted Aave wETH  
(Composable Stable)



## BEETs performance

This section looks into both the BEETs token price and market cap performance against competitors that are present in the networks we operate on. It is important to highlight that this analysis only considers past performance; it is not an indicator of future performance.

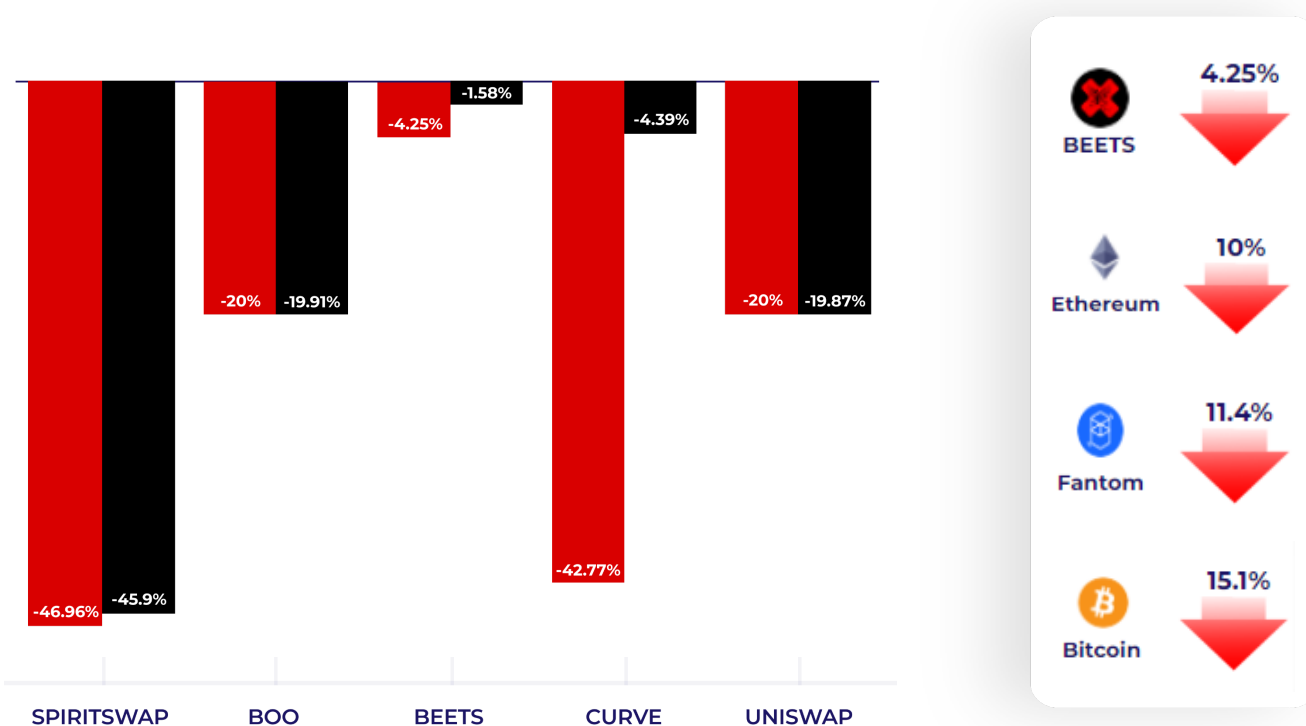
### Quarter 4

The price and market cap of digital assets are often linked to the general performance of Bitcoin and/or the movement of their native network tokens. Over the quarter Bitcoin experienced a decrease in price of 15.1%, Ethereum a decrease of 10% and Fantom a decrease of 11.4%.

BEETs opened the quarter at \$0.0397 and closed at \$0.038.

While the growth for the quarter was negative, **BEETS outperformed** both the FTM and ETH native projects.

### Q4 PERFORMANCE



**Please Note:** The graph above looks at previous token performance and does not speculate future price changes.

With the exception of Curve, all the included protocols saw token price movements be the primary driver behind changes in market cap.

The increase in Curve's market cap is primarily driven by a \$160m increase that took place on October 18. This 33% increase in market cap was driven by a change in circulating supply and not token price.

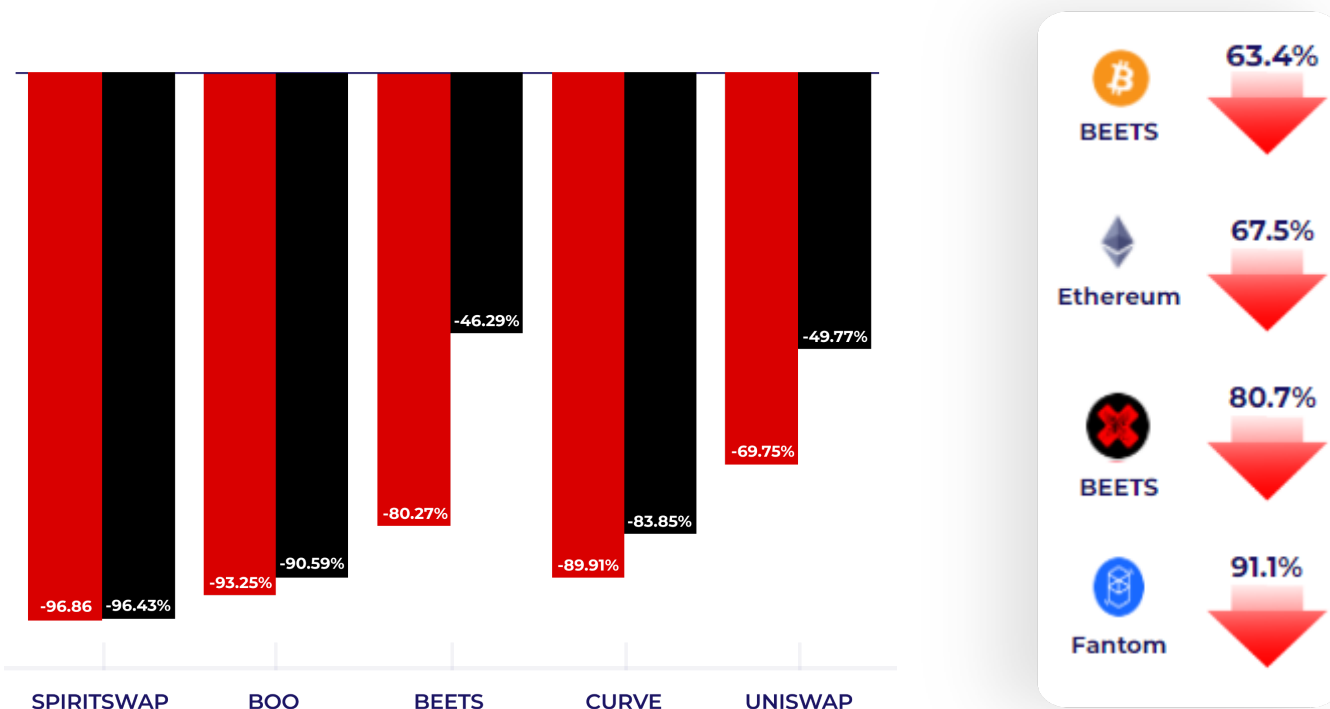
## Financial year 2022

Over the year Bitcoin experienced a decrease in price of 63.4%, Ethereum a decrease of 67.5% and Fantom a decrease of 91.1%.

BEETs opened the year at \$0.193 and closed at \$0.038.

While the year was challenging due to a number of macro events, **BEETs outperformed** most of the FTM and ETH native projects.

### ANNUAL PERFORMANCE



**Please Note:** The graph above looks at previous token performance and does not speculate future price changes.

In September it was identified that the BEETS circulating supply was incorrectly being reported on CoinGecko, this was corrected on September 15 and resulted in a \$1.8m increase in market cap. This 44% increase in market cap was driven by a change in circulating supply and not token price.

For Uniswap, the market cap performance was largely driven by a \$1.4bn increase that took place on September 7. This 41% increase in market cap was driven by a change in circulating supply and not token price.

The increase in Curve's market cap is primarily driven by a \$160m increase that took place on October 18. This 33% increase in market cap was driven by a change in circulating supply and not token price.

Both Spookswap and Spiritswap had market cap movements in line with token price changes.



## Treasury

Treasury Assets Held		
Wallet	Beethoven	Other Protocols
\$1,616,371	\$896,912	\$316,940
TOTAL		
\$2,830,223		

The table below shows a detailed breakdown, including the network, where the treasury assets are held.

Assets Held by Treasury	31 Dec				30 Sep	Q3 vs Q4
	Fantom	Optimism	Ethereum	Total	Total	
<b>Assets Held in Wallet</b>	<b>1,191,630</b>	<b>424,741</b>	-	<b>1,616,371</b>	<b>1,703,515</b>	<b>(5.12)%</b>
BEETS	552,763	24,569	-	577,332	530,763	8.77 %
USDC	571,209	-	-	571,209	642,982	(11.16)%
OP	-	400,172	-	400,172	451,109	(11.29)%
BOO	31,433	-	-	31,433	38,731	(18.84)%
FTM	35,854	-	-	35,854	38,445	(6.74)%
Other	371	-	-	371	1,485	(75.02)%
<b>Assets Held on Beethoven</b>	<b>618,752</b>	<b>278,161</b>	-	<b>896,912</b>	<b>885,960</b>	<b>1.24 %</b>
<b>Assets Held on Other Protocols</b>	<b>242,688</b>	-	<b>74,252</b>	<b>316,940</b>	<b>313,280</b>	<b>1.17 %</b>
Assets on Liquid Driver	193,769	-	-	193,769	207,593	(6.66)%
Assets on Aura	-	-	46,598	46,598	45,527	2.35 %
Assets on Tarot	43,261	-	-	43,261	30,186	43.31 %
Assets on Balancer	-	-	27,654	27,654	24,314	13.74 %
Assets on Yearn	5,658	-	-	5,658	5,660	(0.04)%
<b>Total Treasury Assets</b>	<b>2,053,070</b>	<b>702,902</b>	<b>74,252</b>	<b>2,830,223</b>	<b>2,902,755</b>	<b>(2.50)%</b>

The quarter on quarter total balance of the treasury stayed relatively constant; below are the key changes in the individual balances (**Greater than both a \$20k and 10%**):

### USDC

Decreased by \$71.8k and 11.2%

Driven by: payments to DAO contributors (\$50k), infrastructure costs (\$14.9k) and DAO incorporation costs (\$4.5k)

### OP

Decreased by \$50.9k and 11.3%

Driven by: payment as liquidity incentives of \$140k offset through the increase of \$OP tokens \$85k, and the increase in \$OP valuation \$4k

Since its launch continuous work has been done in order to diversify the protocol’s treasury.

As the treasury receives 13% of all BEETS minted through the MasterChef, focus has been on diversifying balances.

At year end only 22% of the treasury was directly in BEETS.






**30% of the treasury is either in stable only liquidity pools or as stable coins held in wallet**

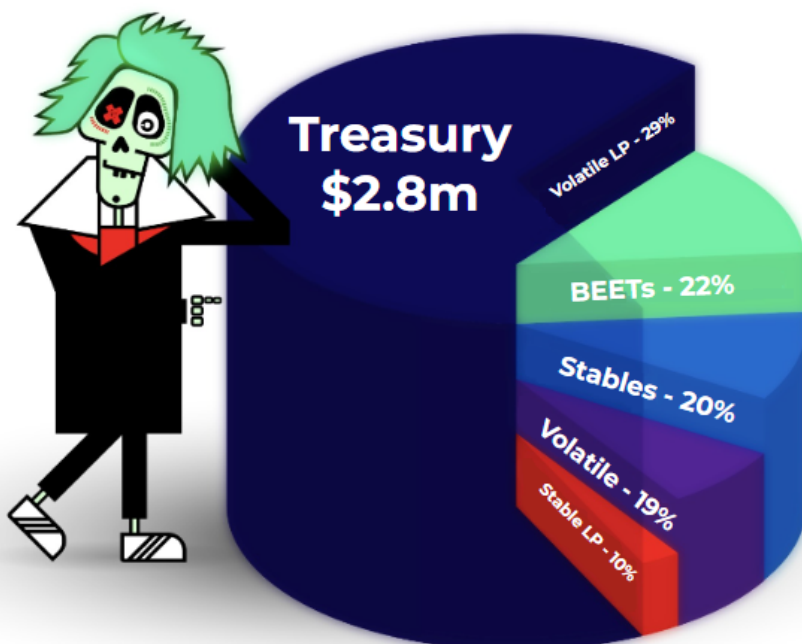
The largest single exposure to volatile assets is the deposit into our “A Late Quartet” liquidity pool.

The even split between FTM,USDC, ETH and BTC gives it a more balanced risk profile. Currently 16% of the treasury has been deposited into that liquidity pool.

The graphic below shows the risk spread of treasury balances.

## Top Holdings

	<b>#1. BEETS</b> <b>\$620,593</b>	<b>22%</b>
	<b>#2. USDC</b> <b>\$571,209</b>	<b>20%</b>
	<b>#3. A Late Quartet</b> <b>\$446,685</b>	<b>16%</b>
	<b>#4. OP</b> <b>\$400,172</b>	<b>14%</b>
	<b>#5. Rocket Fuel</b> <b>\$210,830</b>	<b>7%</b>



**Volatile LP:** Represents deposits into Beethoven X liquidity pools that have exposure to volatile assets

**BEETS:** Represents BEETS held in wallet or deposited into third party protocols.

**Stables:** Represents stable coins held in wallet or deposited into third party protocols.

**Volatile:** Represents volatile tokens coins held in wallet or deposited into third party protocols.

**Stable LP:** Represents deposits into Beethoven X liquidity pools that only consists of stable coins.

A full breakdown can be found in the **Treasury Holdings Schedule**.

## Holdings Schedule

The following schedule is for the Beethoven X Treasury DAO as at 31 December 2022.

Token Name	Category	Fantom	Optimism	Ethereum	Total	% of Total
BEETS	BEETs	596,024	24,569	-	620,593	21.93%
USDC	Stable	571,209	-	-	571,209	20.18%
A Late Quartet	Beethoven volatile	446,685	-	-	446,685	15.78%
OP	Volatile	-	400,172	-	400,172	14.14%
Rocket Fuel	Beethoven volatile	-	210,830	-	210,830	7.45%
Beets Yearn Boosted StablePool (USD)	Beethoven stable	138,261	-	-	138,261	4.89%
Steady Beets, Act II	Beethoven stable	70,968	-	-	70,968	2.51%
Fantom of the Opera	Beethoven volatile	66,086	-	-	66,086	2.34%
Steady Beets, Boosted	Beethoven stable	-	61,926	-	61,926	2.19%
FTM	Volatile	35,854	-	-	35,854	1.27%
Steady Fresh Beets	Beethoven volatile	31,980	-	-	31,980	1.13%
BOO	Volatile	31,433	-	-	31,433	1.11%
veBAL	Volatile	-	-	27,654	27,654	0.98%
vIAura	Volatile	-	-	25,730	25,730	0.91%
Fantom of the Opera, Boosted	Beethoven volatile	25,608	-	-	25,608	0.90%
The Fidelio Duetto	Beethoven volatile	24,966	-	-	24,966	0.88%
auraBAL	Volatile	-	-	20,868	20,868	0.74%
Other	Combination	13,996	5,405	-	19,400	0.69%
<b>Total Treasury Assets</b>		<b>2,053,070</b>	<b>702,902</b>	<b>74,252</b>	<b>2,830,223</b>	<b>100%</b>

# Non-Financial

## Social Science Lab

Beethoven X champions a more than “just tech” philosophy. Thus, it is not surprising that the protocol is the first in DeFi to employ a social scientist.

The community, i.e., the individuals behind the pfp lies at the heart of everything Beethoven X does. Communities are the driving force of a crypto protocol; a social unit with a shared interest in DeFi. Therefore, to Beethoven X, DeFi is first and foremost a matter of human behavior and experiences.

The protocol recognizes that for a broader user adoption and DeFi to thrive long-term, an in-depth understanding of the users will be vital. In other words: to unlock the potential of new tech, one needs to understand people first \_ their passions and worries, needs and values, their contexts and ways of life.

Beethoven X is convinced that human-centered values including relatedness, belonging, and social identity will continue to drive the digital age. This also applies to DeFi.

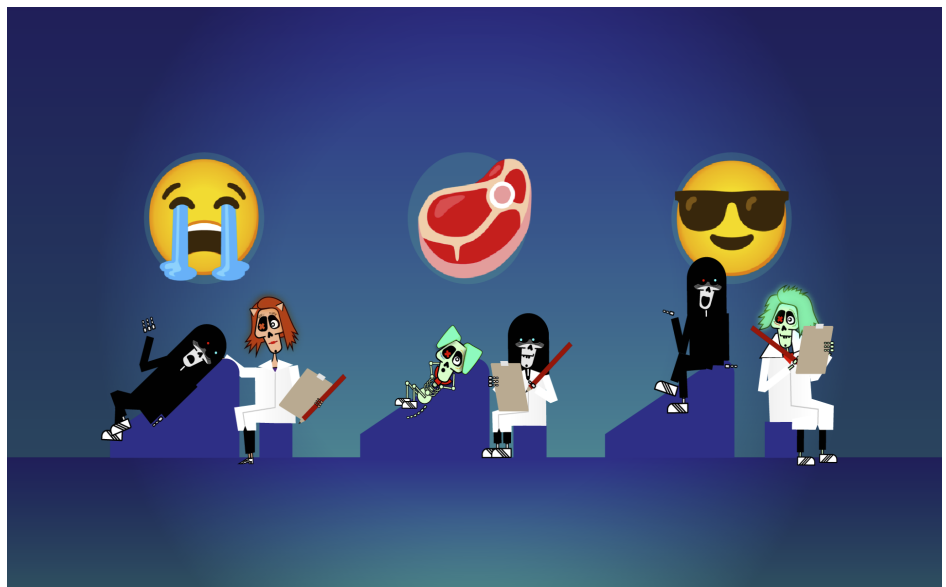
**In short, people before tech: tech that serves people, not the other way around.**

Following the ethos of a human-centered philosophy, Beethoven X launched its own social science lab in April 2022, led by Josey, to study and serve the community; the people behind those pfps.

Targeted at closing existing knowledge gaps in DeFi and as a response to current market events, the work of the social science lab focused mainly on the following topics in 2022: ‘sense-making’ of a historical crisis in crypto, trust, and identity fusion in DeFi.

In the following pages , a brief summary of the studies is provided:

- ‘Sense-Making’ of a Historical Crisis in Crypto
- Identity Fusion in DeFi



## ‘Sense-Making’ of a Historical Crisis in Crypto

The historical crash in crypto in May 2022 was a moment of breakdown. And, moments of breakdown are moments of truth. Most conflicts or struggles people experience during such breakdowns root more deeply. Guided by this premise, Josey has been diving deep into the crypto sphere in 2022. She initiated a social science study called ‘sense-making’ to explore the dynamics of the space and users’ experiences related to the crash — particularly the UST de-peg and Luna collapse — in-depth over several months.

The goal of the ‘sense-making’ study was to:

1. provide users with a confidential space to share and process their traumatic experiences related to the crash, and
2. uncover the so-called ‘cognitive gaps’ of users with regard to the crash specifically and the space generally. Cognitive gaps reflect users’ struggles, inner conflicts, confusions, and fears related to the phenomenon under investigation.

In total, 29 in-depth interviews were conducted and more than 25 hours of interview material generated:

### No. of interviews:

20 users 9 DAO contributors

### Interview duration / person: Ø

54 mins

### Analysis:

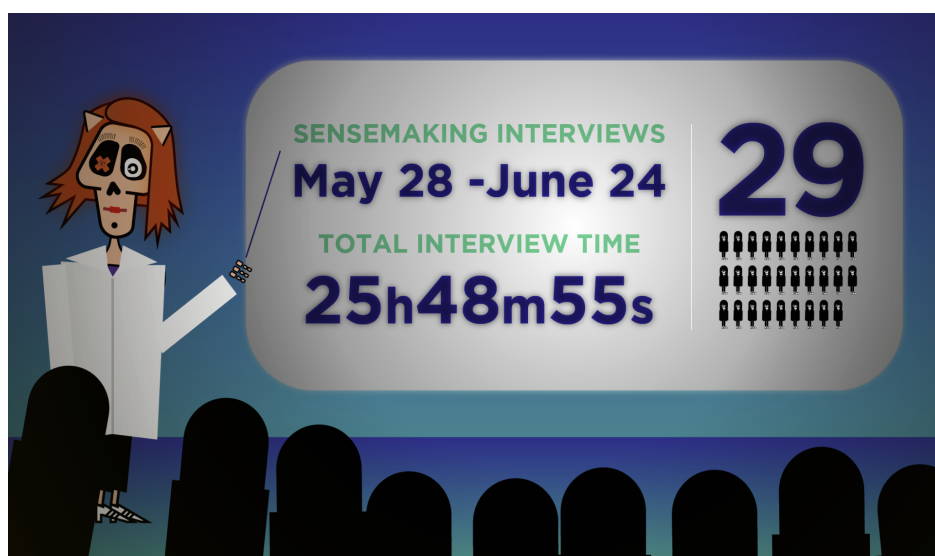
Deductive-inductive coding

### No. of codes:

195

### Coded segments:

1'725



The study revealed that the crypto crash 2022 brought to light DeFi’s most significant ‘gaps’. Interestingly, most of these gaps are of human nature, including:

- Underlying conflicting drivers & beliefs
- A lack of self-determination
- Crypto culture as a hindrance

## Underlying conflicting motivational drivers & beliefs – coupled with feelings of powerlessness, fear, and uncertainty

- A crisis is usually a crisis of culture. A clash of different worldviews. Also in DeFi. Users report a personal conflict between ‘self-interest driven, short-term gains’ and their ‘long-term belief’ in DeFi. Accordingly, understanding users’ underlying values & core motivations for participating in DeFi and using a particular protocol is key. These variables help predict user behavior in the long run.
- To make things worse, users’ experienced conflicts come coupled with ‘feelings of powerlessness’, ‘fear and uncertainty’ related to the space generally and the crash specifically.

## A need for greater self-determination and emotional control

- Users’ primary coping strategies are aimed at re-establishing a sense of meaning & control. ‘Connecting with like-minded’ people and changes in ‘personal decision-making’ are typical examples.
- Generally, users’ primary coping strategies are targeted at increasing their personal self-determination.

## Crypto culture as a hindrance in moments of uncertainty

- Memes are an easy way to signal something quickly. They describe meaning around technicality & use humor as a coping mechanism. In serious situations, however, memes can undermine the message and dilute the seriousness of the message. As a consequence, the communication becomes meaningless.
- In such moments, users perceive the communication through memes and the typical language in crypto as a way of ‘deferring responsibility’ and misleading people through the ‘illusion of community’.

The full report of the study can be found on [Medium](#) and a breakdown of the results on [Twitter](#). Moreover, the study will be published in a peer-reviewed, scientific journal.

Overall, the ‘sense-making’ study demonstrated that ‘trust’ is a serious issue in DeFi. This has motivated the Social Science Lab to examine ‘trust’ and the ethos of DeFi as a so-called ‘trustless’ space more in-depth. A follow-up study will be launched later in 2023. Reflections on trust as a social phenomenon in DeFi can be found on Josey’s [Twitter](#).

## Identity Fusion in DeFi

'Identity fusion' is another social science study that was introduced in 2022.

The battle for attention and market dominance is high in DeFi. With new projects being launched almost daily, networks and protocols are facing the challenge of how to retain users long-term. Thus, the following question is particularly pressing for any network or protocol in DeFi:

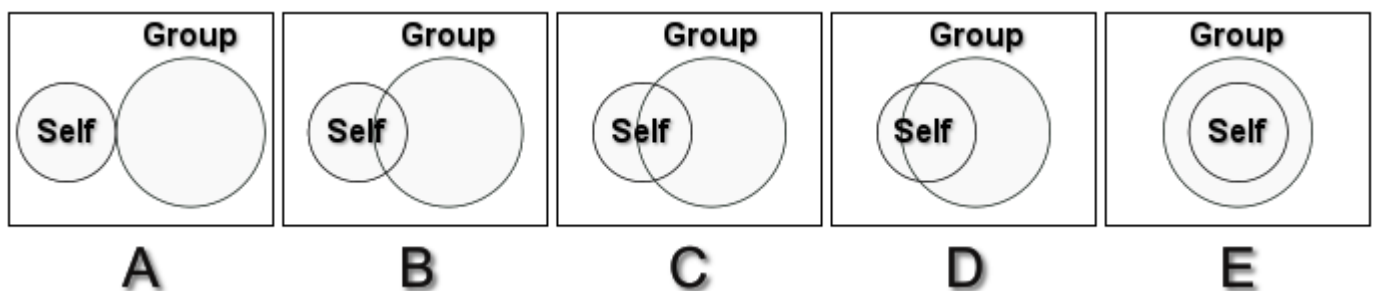
### “What makes people stick to a network and/or protocol long-term?”

Josey and her research collaborators Blackfaun and Erudraeth suspect that there is a role of social belonging that explains stickiness, if users like the community associated with a protocol. In other words: people may come for the money, but stay for the community.

In scientific terms, a sense of belonging can be achieved by what is called 'identity fusion'. Identity fusion describes the deep feeling of 'oneness' with a group (see graph 1).

The higher the extent of identity fusion between the self and the group, the higher the individual's commitment and loyalty to the group, as well as pro-group behavior.

Identity fusion is of huge importance to most DeFi protocols that have issues retaining users. However, there's very little systematic research on this. So Josey & her collaborators are going to do just that, and are currently connecting with other DeFi protocols on Optimism that may wish to be partners.



Graph 1: Extent of identity fusion between the self and the group.

The full study proposal can be accessed here: [Study proposal](#)

# Governance

Since the protocol launched it has functioned as a Decentralised Autonomous Organisation (DAO). A total of 35 proposals were voted on this year with 34 getting the required votes to pass.

As the year progressed, continuous work was done in order to enhance the entire governance process with the following **two key milestones** accomplished:

## 1. Beethoven X DAO framework

The approval of the framework not only brought a structure for fBEETS holders to engage with governance, it additionally saw the formalisation of two sub-committees; Guide Tones tasked to streamline governance and Music Directors to focus on protocol progression. It also approved of the process on how fBEETS holders can become delegates.

## 2. Beethoven X DAO LLC

The approval of the formation of a “legal wrapper” was a significant step forward in the life of the DAO. The introduction of a non-profit Limited Liability Company (LLC) brings with it the following benefits:

- Limited liability to fBEETS holders,
- Corporate Personhood, and
- Tax entity

The LLC will be incorporated in the Republic of the Marshall Islands (RMI) and retain MiDAO as the service provider for its creation.

MiDAO is a licensed Registered Agent in the RMI and has worked closely with the RMI government to establish and maintain a worldwide, unique NP DAO LLC entity type.

This creation aims to further the purposes of the BeethovenX DAO and serve as a springboard into the next stages of development, growth, and governance for the protocol.

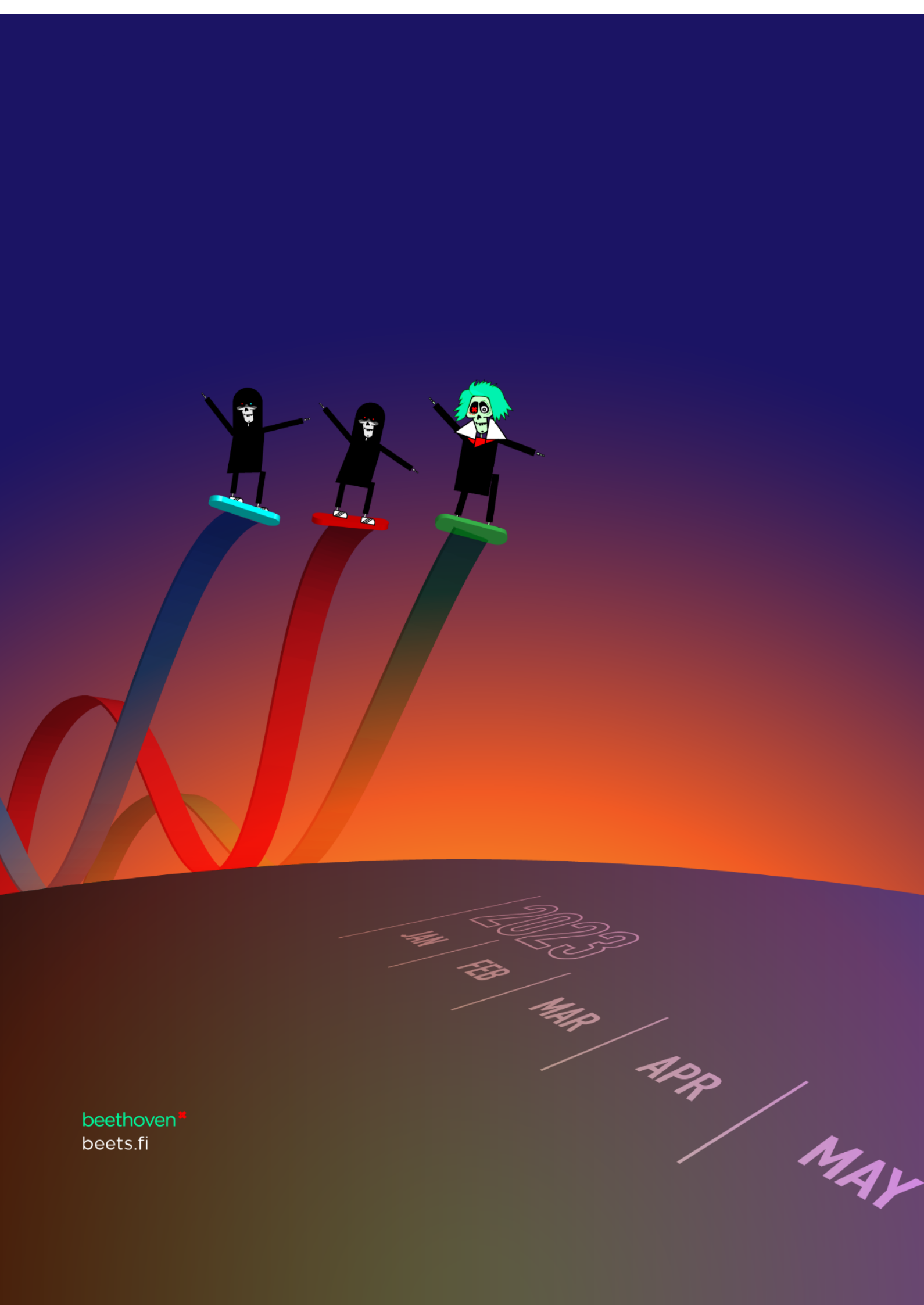
Q1 of 2023 will see the protocol continue to work towards the principles of decentralisation rooted in transparency, consensus-building, independence, and censorship resistance. Key governance related items on the upcoming roadmap will be the Beethoven X DAO’s Operating Agreement and Terms of Service.

For a full list of the 2022 proposals voted on please see the table on the next page.



## 2022 Governance Proposals

Beehoven X Improvement Proposal	BIP #	Approved	Beehoven X Improvement Proposal	BIP #	Approved
<a href="#">Farm LQDR using treasury assets</a>	4	Yes	<a href="#">Using Treasury Assets for Optimism Incentives</a>	20	Yes
<a href="#">Voting mechanism for treasury fee</a>	5	Yes	<a href="#">Approval proposal to Optimism Collective</a>	21	Yes
<a href="#">Joining the Balancer bug bounty program</a>	6	Yes	<a href="#">Increase Protocol fee on FTM</a>	22	Yes
<a href="#">Seeding Tarot BEETS vaults by treasury</a>	7	Yes	<a href="#">Infrastructure Costs</a>	23	Yes
<a href="#">Treasury BEETS-USDC liquidity options</a>	8	Yes	<a href="#">Adjust Protocol Fee Distributions</a>	24	Yes
<a href="#">Continuing Olympus Pro bonding program</a>	9	Yes	<a href="#">Restructure of Treasury Assets</a>	25	Yes
<a href="#">Treasury farming on Solidly</a>	10	Yes	<a href="#">Bug Bounty v2</a>	26	Yes
<a href="#">Treasury providing voting incentives to xTarot holders</a>	11	Yes	<a href="#">Increase Tarot Lend Position To 750k BEETS</a>	27	Yes
<a href="#">Increase Treasury Investment on Tarot</a>	12	Yes	<a href="#">Acquisition of veBAL, auraBAL, and vIAURA</a>	28	Yes
<a href="#">Joining 0xDAO partnership</a>	13	No	<a href="#">Framework for Governance</a>	29	Yes
<a href="#">Treasury token exchange with Spookyswap</a>	14	Yes	<a href="#">Guide Tones</a>	30	Yes
<a href="#">OTC selling of veNFT</a>	15	Yes	<a href="#">Delegate Program</a>	31	Yes
<a href="#">Implementing vote locking for fBEETS</a>	16	Yes	<a href="#">Music Directors</a>	32	Yes
<a href="#">Extend Olympus Pro bonding program for three months</a>	17	Yes	<a href="#">fBEETS x Reliquary</a>	33	Yes
<a href="#">Treasury Revenue - Part 1</a>	18	Yes	<a href="#">cLQDR bid proposal</a>	34	Yes
<a href="#">Treasury Revenue - Part 2</a>	18	Yes	<a href="#">Team Funding</a>	35	Yes
<a href="#">Treasury Revenue - Part 3</a>	18	Yes	<a href="#">Infrastructure continuation</a>	36	Yes
<a href="#">Deployment and Managing Balancer on Optimism</a>	19	Yes	<a href="#">BeethovenX DAO</a>	37	Yes
<a href="#">Using Treasury Assets for Optimism Incentives</a>	20	Yes	<a href="#">Funding of Reliquary implementation</a>	38	Yes



beethoven\*  
beets.fi

2023  
JAN | FEB | MAR | APR | MAY