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## **Ribbon DAO Collateral & Credit Analysis**

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# 1 About Porter Finance

Porter Finance is a technology platform that enables on-chain entities to issue tokenized debt.

Learn more about us at <https://porter.finance>.

## 2 Introduction

Ribbon DAO is a decentralized autonomous organization that owns and governs the Ribbon Finance Protocol via fully on-chain governance. The Ribbon Finance Protocol helps users access crypto structured products for DeFi. It combines options, futures, and fixed income to improve a portfolio's risk-return profile. The Ribbon Finance Protocol current products include put selling and covered calls for both retail and other DAO treasuries. The Ribbon Finance Protocol is available to users through the Ribbon Finance web application.

Ribbon DAO is issuing 3,103,224 Convertible Bonds through the Porter Finance platform on June 6, 2022 due December 4, 2022 and securing them with RBN, their governance token. This report contains an analysis of the collateral provided (RBN) in addition to the creditworthiness of the Ribbon DAO. In the event that the value of the collateral provided drops below the owed amount at maturity, the creditworthiness of the Ribbon DAO will contribute greatly to how the outstanding debt is handled.

## 3 Summary

We have found Ribbon DAO to be creditworthy. They have no current debts and have never suffered from security vulnerabilities or loss of users funds. Ribbon DAO has a strong team who has delivered impressive results since launching in April 2021. A large treasury and consistent revenues along with a foothold in the current market make us confident in their ability to repay the proposed debt issuance. Due to these factors, we recommend Ribbon DAO offer the debt issued at 0.9667 USD per bond for a 7% APY.

The collateral offered by Ribbon DAO, RBN, is highly volatile and subject to pausing and further inflation (however unlikely). Due to these factors, we recommend a low loan to value ratio of 20%.

## 4 Collateral analysis

### 4.1 Overview

The collateral provided for the Ribbon DAO bond issuance is the RBN token. RBN is an ERC-20 governance token deployed on the Ethereum network that allows holders to engage in governance by voting on proposals. Users can also exchange their RBN for veRBN which gives them a right to protocol revenue.

### 4.2 Market considerations

#### 4.2.1 Liquidity

##### Which markets support RBN?

There are [16 markets](#) where RBN is traded. These markets include Uniswap V3, Uniswap V2, Coinbase Exchange, BTCEX, LATOKEN, BKEK, Gate.io, MEXC Global, CoinEx, Bitget, BingX, XT.COM, AEX, Gemini, and Poloniex.

##### What is the average 24h volume and cumulative volume over the past 30, 60, and 90 days?<sup>1</sup>

- 30 days
  - Average 24h volume: \$2,595,410
  - Cumulative volume: \$77,862,299
- 60 days
  - Average 24h volume: \$2,051,143
  - Cumulative volume: \$123,068,555
- 90 days
  - Average 24h volume: \$2,080,222
  - Cumulative volume: \$189,300,245

##### What is the average market cap over the past 30, 60, and 90 days?<sup>2</sup>

- 30 days
  - Average market cap: \$36,555,791
- 60 days
  - Average market cap: \$48,270,896
- 90 days
  - Average market cap: \$51,157,080

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<sup>1</sup> All values in this report are current as of May 28, 2022.

<sup>2</sup> Market capitalization is determined using the circulating supply [reported by Ribbon Finance](#).

### **What is the current 2% depth of the top three exchanges?**

- Uniswap V3
  - +2% Depth: \$78,077
  - -2% Depth: \$77,842
- Uniswap V2
  - +2% Depth: 28,894
  - -2% Depth: 28,807
- Coinbase Exchange
  - +2% Depth: \$12,384
  - -2% Depth: \$12,189

### **4.2.2 Volatility**

#### **What is the annualized historical volatility of RBN over the past 30, 60, and 90 days?**

- 30 days
  - Annualized historical volatility: 176%
- 60 days
  - Annualized historical volatility: 155%
- 90 days
  - Annualized historical volatility: 152%

### **4.2.3 Ownership distribution**

#### **What is the distribution of RBN ownership?**

The distribution of RBN ownership is laid out in **Table 1** below. Due to its large ownership stake, it's important to note the Ribbon DAO multisig requires 4 of 6 members to sign a transaction in order for it to be executed. These members include Julian Koh (co-founder of Ribbon), Ken Chan (co-founder of Ribbon), Chudnov (engineering & governance at Ribbon), Tom Schmidt (investor at Dragonfly Capital), He Tao (active community member), Snowsledge (active community member).<sup>3</sup>

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<sup>3</sup> Membership is outlined in this governance post:  
<https://gov.ribbon.finance/t/rgp-15-reshuffling-ribbon-dao-multisig/569>.

Rank	Wallet	Type	Quantity RBN	Percentage	Value
1	0x42c1357aaa3243ea30c713cdfed115d09f10a71d	Vesting contract (vests to Ribbon DAO Multisig until May 23, 2024)	339,313,262	33.93%	\$102.6M
2	0xdaeada3d210d2f45874724beea03c7d4bbd41674	Ribbon DAO Multisig	129,869,228	12.99%	\$39.2M
3	0x3ab38c803c8e26bb4ecc <sub>eeeb5aa601f7076d32fc</sub>	Gnosis Safe	102,364,168	10.24%	\$31.0M
4	0xea26a24cd2a56314ebc87fa7838f08f918a03adb	Gnosis Safe	79,923,077	7.99%	\$24.2M
5	0x275cde983b1bb902a6b1c4727a2b265b1a542a75	Vesting contract (vests to EOA rank 7 until May 23, 2024)	70,280,779	7.03%	\$21.3M
6	0xb48351ad1907410f7e4939fa1686f3acab6a34bb	Vesting contract (vests to EOA rank 9 until May 23, 2024)	56,773,273	5.68%	\$17.2M
7	0xca84f16bf4272522257a <sub>ccb914a1b8efacddb65</sub>	EOA	35,054,131	3.51%	\$10.6M
8	0x19854c9a5ffa8116f48f984bdf946fb9cea9b5f7	<a href="#">veRBN</a>	28,073,572	2.81%	\$8.5M
9	0xdf52d114c65fe4c0c671 <sub>ae99cab63e09fad4680b</sub>	EOA	27,651,726	2.77%	\$8.4M
10	0xad689459a783cb3d3156e886dbe4aac178eb38bd	Vesting contract (vests to 0xE00714751f1c79f7111bE3C72012641b30573698 until May 23, 2024)	19,541,743	1.95%	\$5.9M
11	0x158371c253a70058dee73a201f4c5138688e75a1	<a href="#">Ribbon Research Limited</a>	10,000,000	1.00%	\$3.0M
12	Other wallets		101,155,041	10.1%	\$30.1M

**Table 1:** RBN ownership distribution

#### 4.2.4 Expected inflation

**How will the supply of RBN increase over the lifetime of the bond (until December 4, 2022)?<sup>4</sup>**

**Table 2** shows the RBN that will be distributed to the Ribbon DAO as well as the Ribbon team until December 4, 2022 through vesting contracts. It's important to note that the Ribbon team has the ability to mint more RBN at will, however it would be widely unpopular and highly unlikely given their track record.

Rank	Vesting contracts	Quantity RBN	Percentage of total supply
1	0x42C1357aAA3243EA30c713cdFEd115D09F10a71D	65.33M	6.53%
2	0x275cDe983b1Bb902a6B1C4727a2B265B1A542a75	18.46M	1.85%
3	0xb48351Ad1907410f7E4939Fa1686F3acAb6a34bB	14.78M	1.48%
4	0xAD689459a783Cb3d3156e886dbE4aaC178eB38BD	5.13M	0.51%
5	0x263F15E83ED674a9f1089f1e25dB1AA3b3958180	3.86M	0.39%
6	0x3a3165Cd21814EBA6a31fDB41dF51b0c905AF97B	3.73M	0.37%
7	0x36652F64D444394E1Ca02D65ed47Acf6bf28E7fc	2.75M	0.28%
8	0x17d9895B86B94c089E78b93aF9F4019D0cC34B25	1.93M	0.19%
9	0x7D87d369243e44C21A48A89A8b3dD663f38F7863	1.82M	0.18%
10	0xCEebD6A2c6bA40D07995B1A87d61769B03b1218a	0.83M	0.08%
<b>Total</b>		<b>118.62M</b>	<b>11.86%</b>

**Table 2:** Expected inflation from vesting contracts

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<sup>4</sup> Only the top largest 10 vesting contracts are shown.

### **Is there a possibility for unexpected inflation?**

The ribbon token has three ownership roles, ADMIN\_ROLE, MINTER\_ROLE, and TRANSFER\_ROLE. At the time of writing - the Ribbon Multisig has the MINTER\_ROLE and the ADMIN\_ROLE. This means more tokens can be minted at will.

## **4.3 Security considerations**

### **4.3.1 Auditing**

#### **Has RBN been audited and, if so, by whom?**

Yes, the RBN token was audited by PeckShield on May 20, 2021. The audit report can be found [here](#).

### **4.3.2 Owner privileges**

#### **Is the token upgradable?**

No, the RBN token is not upgradable. This was confirmed by reading the source code [here](#).

#### **What are the owner's minting capabilities?**

The ribbon token has three ownership roles, ADMIN\_ROLE, MINTER\_ROLE, and TRANSFER\_ROLE. At the time of writing - the Ribbon Multisig, which requires 4 of 6 signers to create a transaction, has the MINTER\_ROLE. This allows them to mint more RBN tokens at will.

#### **Can the token be paused?**

At the time of writing - the Ribbon Multisig, which requires 4 of 6 signers to create a transaction, has the ADMIN\_ROLE. This allows them to globally pause transfers of RBN tokens.

#### **Can the owner blacklist contracts?**

No, the owner cannot blacklist contracts from interacting with the RBN token. This was confirmed by reading the source code [here](#).

#### **Is the team behind RBN known and can be they held responsible for abuse?**

Yes, the CEO of Ribbon, Julian Koh, and the CTO, Ken Chan, are widely known and would incur reputational and, potentially, legal harm upon abuse.

### **4.3.3 ERC-20 conformity checks**

#### **Do the Transfer and transferFrom functions return a boolean?<sup>5</sup>**

Yes, both Transfer and transferFrom functions return a boolean. This was confirmed by reading the source code [here](#).

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<sup>5</sup> Several tokens do not return a boolean on these functions. As a result, their calls in the contract might fail.



**Are the name, decimals, and symbol functions used?<sup>6</sup>**

Yes, the name function returns “Ribbon”, the decimals function returns “18”, and the symbol function returns “RBN”. This was confirmed by calling the contract using Etherscan [here](#).

**Does the decimals function return a uint8?**

Yes, the decimals function returns a uint8. This was confirmed by calling the contract using Etherscan [here](#).

**Does the token mitigate the known ERC-20 race condition?<sup>7</sup>**

Yes, the RBN token mitigates the known ERC-20 race condition. This was confirmed by reading the source code [here](#).

## **5 Credit analysis**

### **5.1 Overview**

The purpose of this credit analysis is to inform upon and estimate the likelihood the Ribbon DAO will repay their debt in the case where the collateral provided is worth less than the owed amount at the maturity date of the issued bonds.

### **5.2 Character/credit**

#### **5.2.1 Current debts**

**Does the DAO have existing debt positions?**

No, Ribbon DAO currently holds no debt liabilities.

**What is Ribbon DAO planning on doing with borrowed funds?**

Ribbon DAO intends to use the net proceeds from sales of the bonds for general purposes, including protocol owned liquidity and bootstrapping the stablecoin supply in our covered call Fuse pool. On April 20, 2022, Ribbon DAO announced the launch of a Ribbon Covered Call Fuse Pool – a way for their users to borrow stablecoins against their yield-generating covered call position. Other general purposes may include, among other things, funding for working capital and capital expenditures. Ribbon DAO may temporarily invest funds that are not immediately needed for these purposes in short-term investments, including under-collateralized lending through Maple Finance.

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<sup>6</sup> These functions are optional in the ERC20 standard and might not be present.

<sup>7</sup> The ERC20 standard has a known ERC20 race condition that must be mitigated to prevent attackers from stealing tokens.

### **5.2.2 Credit history**

#### **Has the team followed up on promises made?**

The Ribbon DAO has passed and executed on [over 10 proposals](#), each of which required multi-sig execution. The execution of these proposals has established a history of following up on the promises made to the stakeholders of the DAO.

#### **Has the team made users whole in the event of a hack?**

The Ribbon DAO has not suffered from any security vulnerabilities or loss of user funds.

### **5.2.3 Team history**

#### **Is the team anonymous?**

The CEO and CTO of Ribbon, Julian Koh and Ken Chan respectively, are widely known and are public figures.

#### **Does the team have a track record?**

Julian Koh and Ken Chan are both previous employees of Coinbase, the largest cryptocurrency exchange by trading volume based in the United States. Ribbon released their first product, Theta Vaults, in April of 2021. In under 4 months, the team reached over \$100M in deposits and over \$5M in yield generated for their users. In September 2021, Theta Vaults V2 was launched, improving on the previous product. Within one year from their launch in April 2021, Ribbon has generated a cumulative \$34M in revenue for their users and over \$4M in revenue for the DAO.

#### **Does the team have investors or advisors who can help them?**

In March 2022, Paradigm led Ribbon's Series A+ and invested \$8.75M. Paradigm is well known for pushing the industry forward through [their research](#) and has a strong reputation for being value add investors. Paradigm supports their investees with design, engineering, and research resources. Dragonfly Capital and Nascent Ventures are also Ribbon investors who are known for providing support through hiring, auditing, and operations. Other notable investors include Ethereum Ventures, Coinbase Ventures, Robot Ventures, Scalar Capital, and Alliance.

## 5.3 Capital

### 5.3.1 Current savings

**What are the DAO's current assets?**

**Table 3** outlines the DAOs assets which are stored in its multisig (0xdaeada3d210d2f45874724beea03c7d4bbd41674).

Asset	Amount	Value
RBN	209,459,340	\$64,178,341
UNI-V2 RBN/WETH LP	24,727	\$1,375,461
Yearn USDC Vault	705,110	\$707,225
ETH	303.7	\$542,861
rETH-THETA/ETH LP	N/A	\$321,750
wstETH	138.4	\$249,425
WBTC	7.8	\$226,921
USDC	128,903	\$129,289
WETH	66.2	\$118,782
LDO	89,930	\$92,897
<b>Total</b>	-	<b>\$67,942,952</b>

**Table 3:** Ribbon DAO assets

## 5.4 Capacity

### 5.4.1 Historical finances

#### What are the DAO's revenues?

Ribbon DAO's revenues are outlined in **Table 4** below.

Month	Revenue
June 2021	0
July 2021	0
August 2021	0
September 2021	0
October 2021	\$56,300
November 2021	\$546,900
December 2021	\$393,500
January 2022	\$412,000
February 2022	\$527,600
March 2022	\$711,100
April 2022	\$986,600
May 2022	\$557,300
<b>Total</b>	<b>\$4,191,300</b>

**Table 4:** Ribbon DAO historical revenues

**What are the DAO's expenses?**

Ribbon DAO's expenses are outlined in **Table 5** below. All of Ribbon DAO's expenditures have been paid in RBN to date.

<b>Month</b>	<b>Expenses (RBN)</b>	<b>Expenses (USD)</b>
June 2021	4,411,765	No pricing data <sup>8</sup>
July 2021	5,588,235	No pricing data
August 2021	0	\$0
September 2021	0	\$0
October 2021	0	\$0
November 2021	0	\$0
December 2021	0	\$0
January 2022	0	\$0
February 2022	0	\$0
March 2022	750,000	\$959,500
April 2022	500,000	\$510,000
May 2022	1,000,000	\$472,700
<b>Total</b>	<b>12,250,000</b>	<b>\$1,942,200</b>

**Table 5:** Ribbon DAO historical expenses

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<sup>8</sup> RBN was not publicly traded at this time.

**What is the DAO's net income (revenues - expenses)?**

Ribbon DAO's net incomes are outlined in **Table 6** below.

<b>Month</b>	<b>Net Income</b>
June 2021	0
July 2021	0
August 2021	0
September 2021	0
October 2021	\$56,300
November 2021	\$546,900
December 2021	\$393,500
January 2022	\$412,000
February 2022	\$527,600
March 2022	(\$248,400)
April 2022	\$476,600
May 2022	\$84,600
<b>Total</b>	<b>\$2,249,100</b>

**Table 6:** Ribbon DAO historical net income

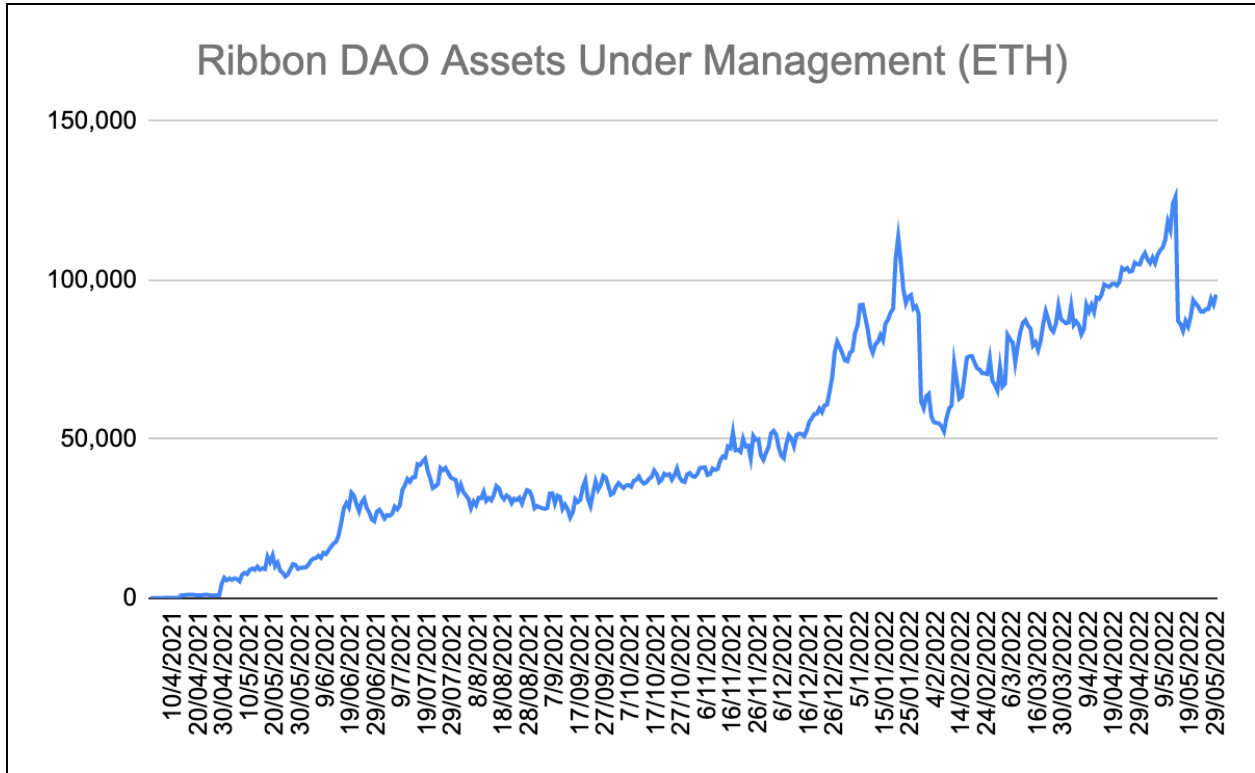
**5.4.2 Revenue sources****Where does Ribbon DAO's revenue come from?**

Ribbon DAO takes a 10% performance fee and 2% management fee on funds under management. Half of these revenues are paid to veRBN holders as of May 2, 2022.

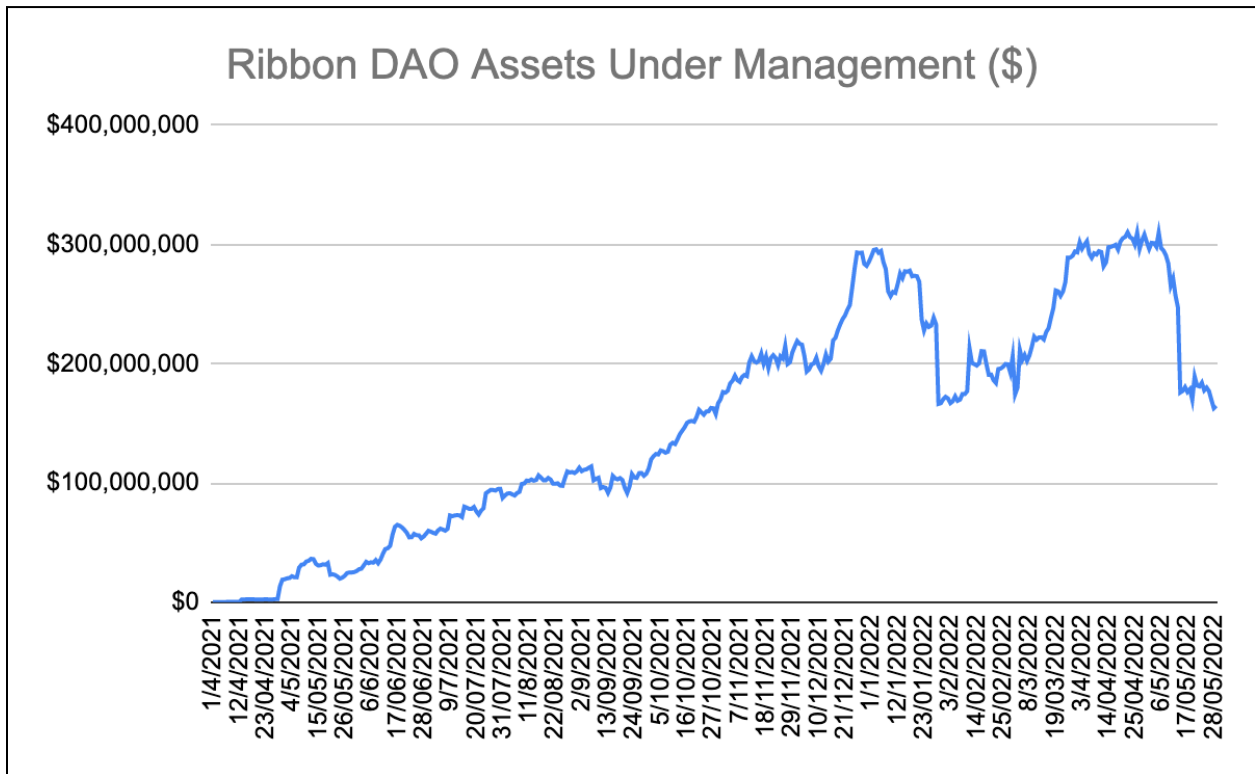
**What does Ribbon DAO's revenue depend on?**

There are two factors that play into their revenues: assets under management and value of those assets.

1. Assets under management will depend on Ribbon's ability to attract and retain new clients. This is dependent on their business operations and current market conditions among other factors.
2. Value of assets under management is dependent on current market conditions.



**Chart 1:** Ribbon DAO assets under management in ETH



**Chart 2:** Ribbon DAO assets under management in USD

### **What is Ribbon DAO's revenue outlook?**

Ribbon DAO revenue is directly correlated to their assets under management. Chart 1 shows Ribbon DAO's strong, continuous growth in their assets under management when measured in ETH. This growth depicts Ribbon DAO's ability to attract new capital and clients. Chart 2 shows Ribbon DAO's assets under management measured in USD. A deterioration of market conditions may have strong negative implications for Ribbon DAO's revenue. This is because both factors playing into their revenue, assets under management and value of those assets, depend on current market conditions. The opposite is true as well. A strengthening market should serve as a great boon to Ribbon DAO's revenue.

### **5.4.3 Expenses sources**

#### **Where do Ribbon DAO's expenses come from?**

Ribbon DAO's expenses come from liquidity mining programs where they give RBN to users to subsidize their returns.

#### **What do Ribbon DAO's expenses depend on?**

Ribbon DAO's expenses depend on the size and frequency of their liquidity mining programs.

#### **What are Ribbon DAO's expenses projections?**

Ribbon DAO is currently running a [liquidity mining program](#) which started in March 2022 and is set to continue until August 2022. The team planned to release 6.5M RBN tokens of which 2.25M have already been released. The additional 4.25M RBN will be released from now until the end of August 2022 which equates to ~\$1.228M total and ~\$409,000 per month.

## **5.5 Conditions**

### **5.5.1 Competition**

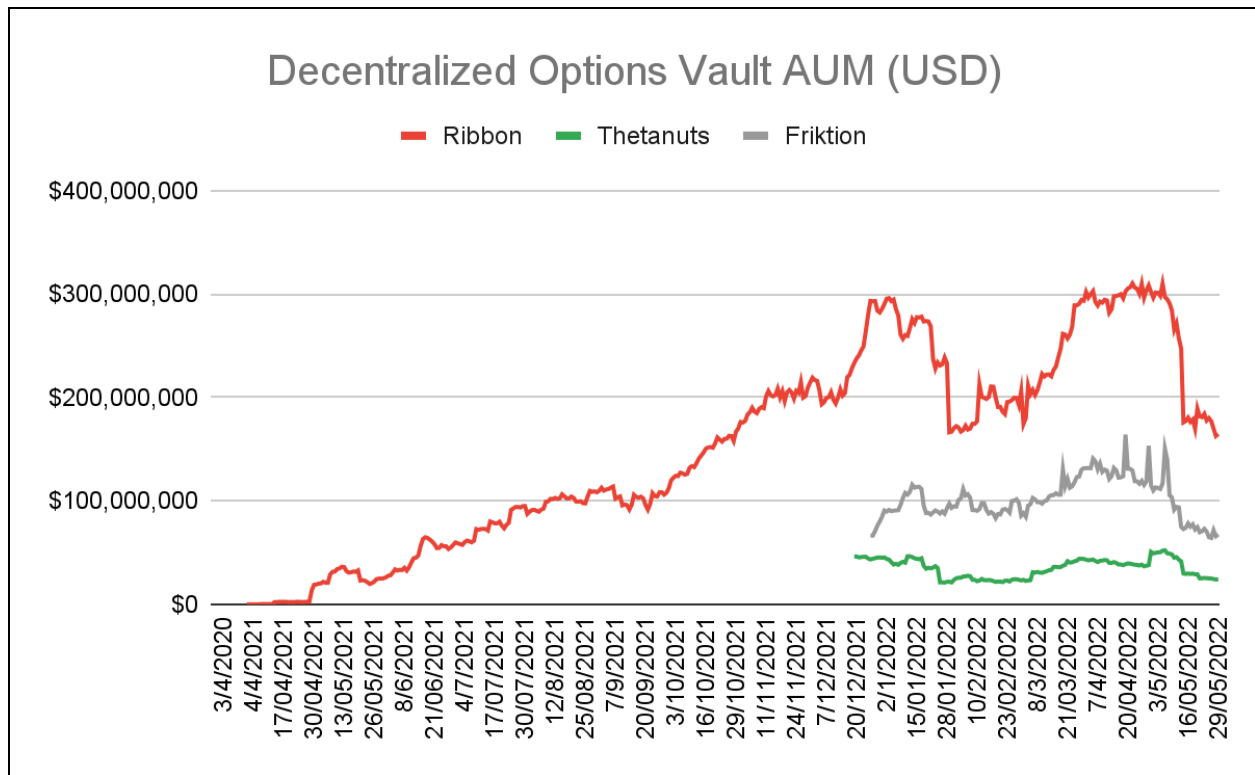
#### **Does Ribbon DAO have any competitors?**

Ribbon DAO is the market leader, however it does have competitors. StakeDAO, Friktion, and Thetanuts are all competitors offering decentralized options vaults.

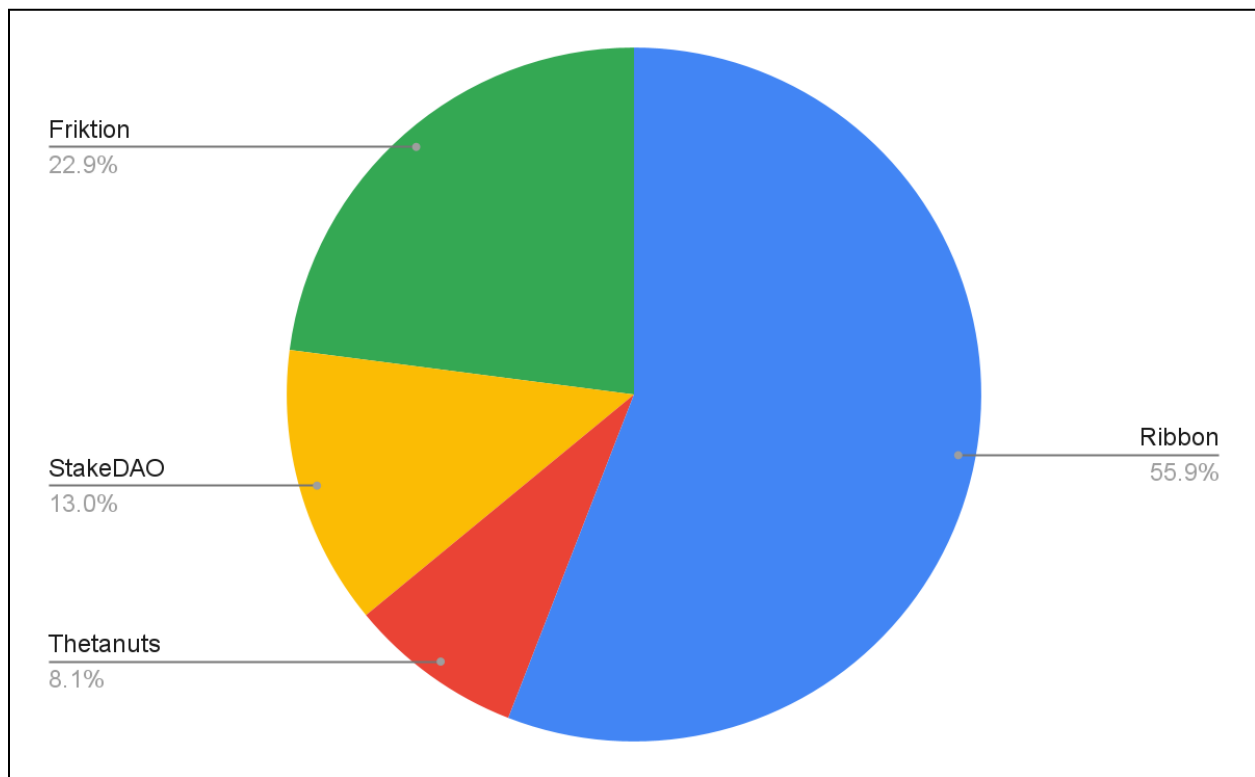
#### **What is Ribbon DAO's market share?**

**Chart 3** shows the historical assets under management of each notable market participant while **Chart 4** shows the current assets under management.





**Chart 3:** Decentralized options vault historical assets under management in USD



**Chart 4:** Decentralized options vault market share by assets under management in USD<sup>9</sup>

<sup>9</sup> Assets under management data from [DefiLlama](https://defillama.com/).

Ribbon DAO has 55.9% market share with Friktion having 22.9%, StakeDAO having 13.0%, and Thetanauts having 8.1%.

### **5.5.2 Economic impacts**

#### **How does the current economic outlook impact Ribbon DAO?**

The United States Federal Reserve is in the process of monetary tightening. According to the most recent FOMC statement, they are in the process of shrinking their balance sheet and recently increased the federal funds rate from  $\frac{3}{4}$  to 1 percent. Monetary tightening is historically bad for risk assets such as cryptocurrencies. A deterioration of market conditions may have strong negative implications for Ribbon DAO's revenue. This is because both factors playing into their revenue, assets under management and value of those assets, depend on current market conditions.

## **5.6 Collateral**

### **5.6.1 Collateral provided**

#### **How much collateral is provided?**

Ribbon DAO is providing \$15M of RBN as collateral.

### **5.6.2 Collateral risks**

#### **What are the risks associated with the collateral?**

This collateral is analyzed in **Section 4**. Notable risks found include:

- High historical volatility
- Ability for Ribbon DAO to globally pause RBN transfers
- Ability for Ribbon DAO to mint additional RBN at will
- 11.82% of supply being unlocked during the duration of the bond term
  - However, 55% of this unlock will be allocated to the DAO multisig and the team has not stated intentions of releasing any of the supply into the market.