

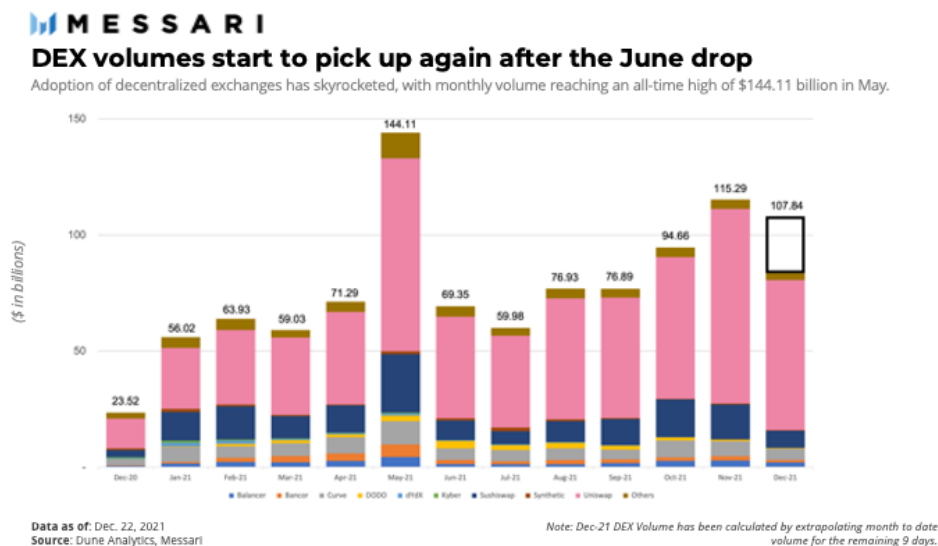
# The Evolution: SushiSwap to sushi.com

Naphat N

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In recent weeks, the global fear of the rising interest rates and new covid variant have generally slowed the price rise of “risk-on” assets, with the majority of well-known DeFi tokens plunging by [more than 50%](#). The media focuses on price the most, but DeFi activities have remained relatively unaffected. DeFi’s total value locked (TVL) has remained stable, hovering at [\\$245 billion](#), or just around 6% below its all-time high.

However, the momentum of the decentralized exchange (DEX) volumes appears to have lagged behind other explosive DeFi activities. Monthly DEX volumes have soared from \$56 billion at the beginning of 2021 to an all-time high of \$144 billion in May, and have remained below its previous all-time-high since June. With the overall DeFi TVL increasing by around 260% since May, why hasn’t DEX volumes proportionally increased?



Given that DEXs takes up a smaller percentage of the DeFi TVL, have the valuations of DEXs, notably the top two market leaders, Uniswap and Sushiswap, changed in any way? At the time of writing, the fully-diluted valuation of Uniswap and Sushiswap are \$15.0 billion and \$1.4 billion respectively, a huge valuation gap of 10.9x. Over the last 365 days, Sushiswap handled \$162 billion in cumulative volume, while Uniswap handled \$646 billion, a 4x larger volume. Based on liquidity provider (LP) fees collected by each platform, Price-to-sales (P/S) ratios of Uniswap and Sushiswap are 10.0 and 2.8, respectively. This indicates that as compared to Sushiswap, investors give Uniswap 3.6x greater value for the same amount of LP fees collected. This might be because investors regard Uniswap as having lower long-term risk in maintaining the market share when compared to Sushiswap’s expansionary strategy

into other product lines. Below, we investigate further whether the current valuations are fair and how much should Sushi's new product line contribute to its valuation.



## \$UNI vs \$SUSHI: Overall Comparison

UNI and SUSHI market value and performance comparison

(US in millions unless otherwise stated)

	\$UNI	\$SUSHI
Price	\$15.00	\$5.48
Max Supply	1,000	250
Fully Diluted Valuation	15,000	1,370
\$UNI/\$SUSHI ratio	10.9	

(US in millions unless otherwise stated)

	\$UNI	\$SUSHI
Total Value Locked (TVL)	8,800	5,110
Annualized Cumulative Volume	646,000	161,700
Annualized Cumulative Total Revenue	1,500	485
Annualized Cumulative Protocol Revenue	0	81
Price-to-sales ratio	10.0	2.8
Price-to-earning ratio	-	16.9



Data as of: Dec, 21, 2021  
Source: Messari, Defi Llama and TokenTerminal

Note: Total Revenue refers to the trading fees paid by traders  
Protocol revenue refers to the share of trading fees that go to token holders which are 0% and 0.05% for  
Uniswap and Sushiswap respectively.

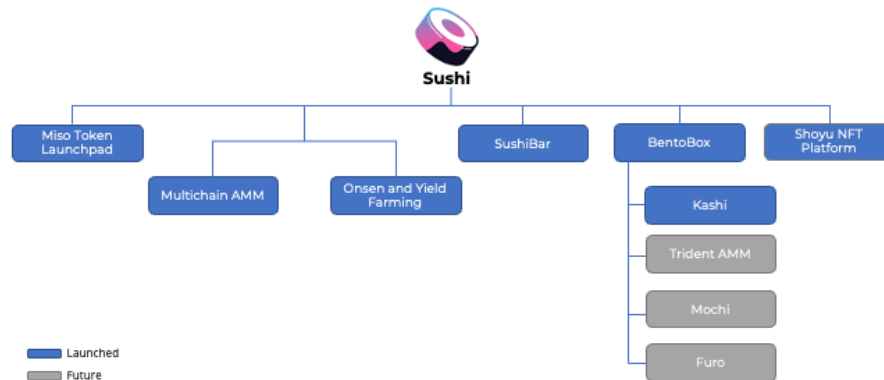
## Sushi.com: Overview

Sushi began as a contentious fork of Uniswap in August 2020, launching a [vampire attack](#) that successfully hijacked \$1 billion of Uniswap liquidity in less than a week. Sushi was running hot, capturing over 9% of total DEX trading volumes in its first month, until the pseudonymous founder Chef Nomi sold the entire development fund for 38,000 ETH (approximately \$14 million at that time). Following pressure from the community, Chef Nomi [returned](#) all the funds back to the community in the following week. Sushi had many setbacks in the beginning, but it has evolved into a community-driven protocol that is now expanding beyond the confines of an AMM-only platform.

As Sushi broadens its product line, the AMM DEX remains the ecosystem's premier product, even as the project grows to various chains, layer-2 solutions, and sidechains. The community is looking forward to the release of new BentoBox-based products such as Trident AMM, Mochi, and Furo. We'll go over the specifics of each product and how they'll fit into the sushi ecosystem below.

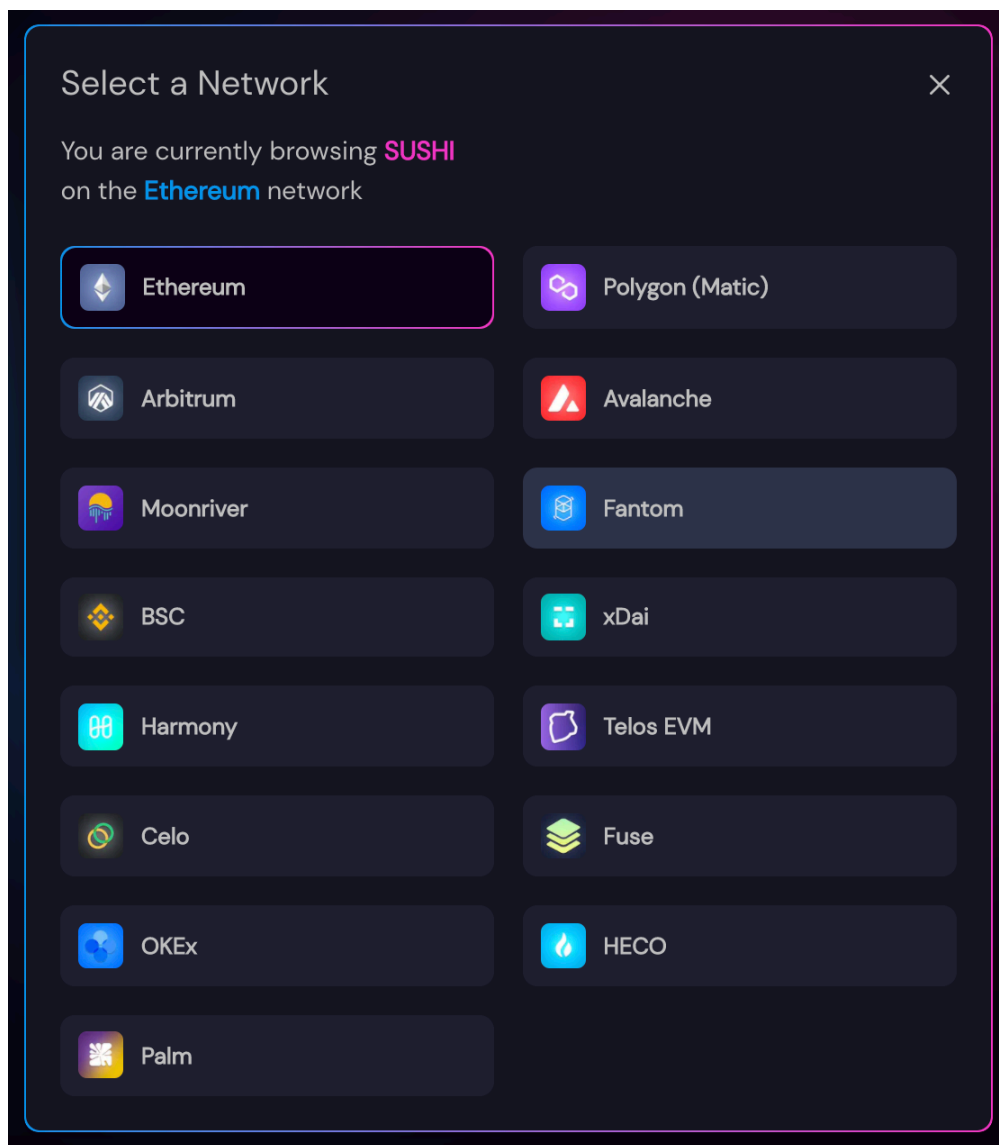
## MESSARI Sushi.com Structure

Sushi has evolved from an AMM-only platform to a suite of defi products



Data as of: Dec. 21, 2021  
Source: Messari

- **Multichain AMM DEX** - Instead of matching individual buy and sell orders like in traditional exchanges, users can pool together two assets that are then traded against. The price is determined algorithmically based on the proportion of the two. Sushi's AMM DEX is unique in that it can be found on numerous chains, as shown below. Sushi has positioned itself to capitalize on opportunities regardless of which blockchain emerges as the leader.



- **SushiBar** - A staking platform provided for SUSHI token holders. Instead of holding SUSHI idly, users can stake and receive a share of the platform fee. Users who stake SUSHI will receive xSUSHI tokens in return. xSUSHI will always appreciate in value relative to SUSHI because it accrues value continuously from platform fees generated (break-down of fees discussed later).
- **Onsen and Yield Farming** - Onsen acts as a liquidity incentive program for new projects by providing additional rewards to yield farmers (liquidity providers of DEX and Kashi) in the form of SUSHI tokens. New projects often struggle to bootstrap liquidity earlier on and initially end up distributing too many tokens. Therefore, they can benefit by joining Onsen, while Sushi benefits from the liquidity and trading volumes that new trading pairs create.
- **Miso** - A token launchpad provided by Sushi which was released back in May 2021. Miso

eases out the process of launching new tokens for project creators in a [customizable way](#). Notable projects that have conducted IDO on Miso include Yield Guild Games (YGG) and BitDAO (BIT).

- **BentoBox** - A new base-layer for future financial applications that Sushi intends to offer. Simply described, [BentoBox](#) is a vault that holds all assets deposited by users that can be utilized by applications built on top of it. BentoBox aims to strengthen Sushi to become the primary destination where users can interact with minimal gas and maximal capital efficiency. BentoBox can facilitate multiple transactions without having to execute multiple token approvals. Let's imagine the user approved BentoBox access to the wallet's tokens once and deposited them to the vault. The vault will allow those deposited tokens to be used across any BentoBox applications, without needing to approve the wallet's token access ever again. BentoBox optimizes for capital efficiency by implementing a yield-generating strategy to idle assets held in the vault. The strategy includes activities such as lending, low-risk yield farming, staking, and flash loans.
- **Kashi** - The first launched BentoBox based product. Kashi is a lending product in which each lending pair is isolated from the others. This prevents the platform from experiencing a catastrophe from certain collateral assets losing value rapidly as risk is contained within the corresponding lending market rather than shared between all markets like the ones implemented by major DeFi lending protocols such as Aave and Compound. Apart from lending, users will be able to borrow and margin short on a variety of tokens.
- **Trident AMM** (Estimated Launch Date Q4 2021) - Sushi's next-generation AMM built on BentoBox, to improve capital efficiency. Trident will allow liquidity provision via [four different pool types](#). A wide range of pool types allows users to select pools that best suit their risk profile and provide more flexible portfolio management.
- **Mochi (Future Product)** - Factory system for launching organizational contracts or DAOs on BentoBox. DAOs launched on BentoBox, such as Moloch DAO V2, will benefit from having their treasury assets generate yields without the need for additional actions or proposals. Essentially, a DeFi-based DAO.

## Token

SUSHI token holders have governance rights over the protocol. The supply of SUSHI tokens can be summarized below:

**Circulating Supply:** 238.7 million

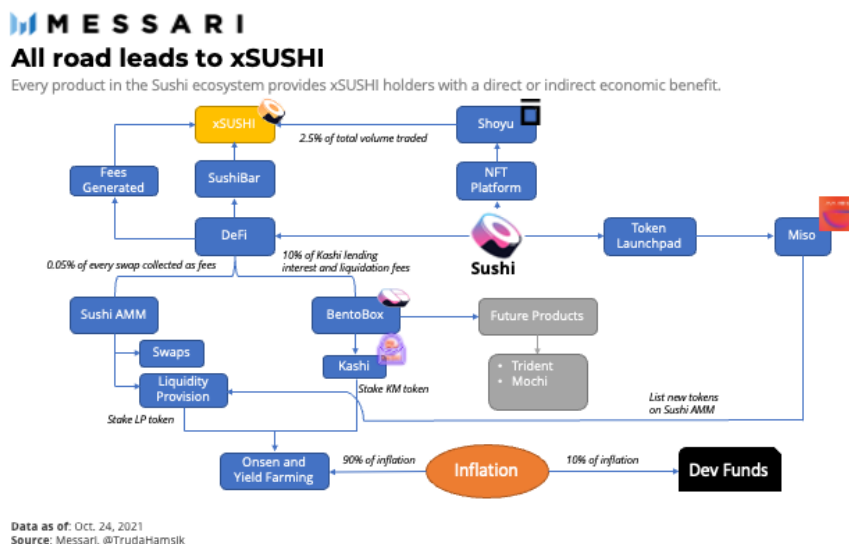
**Max Supply:** 250 million (expected to reach in November 2023)

**Inflation:** 10% of inflation is distributed to development funds and 90% of inflation is distributed to Onsen and Yield Farming markets to attract liquidity to the Sushi ecosystem.

Let us break down how each product contributes to the earning of xSUSHI

- Sushi AMM - 0.05% of total volume traded on Sushi AMM
- Kashi - 10% of lending interest paid and 10% of liquidation volume
- Shoyu ([Future](#)) - 2.5% of total volume traded on Shoyu NFT platform
- Onsen and Yield Farming - Attract liquidity to Sushi via farming incentives. Higher liquidity reduces price slippage and therefore attracts more volume to the Sushi AMM.

- MISO - Encourage new listings on sushi.com. This attracts greater volume to Sushi AMM. In most cases, new token listings attract higher-than-average volumes.
- Trident AMM (Future) - 0.05% of total volume traded on Sushi AMM. Only time will tell if improved UX as a result of increased capital efficiency and decreased gas use will entice more volume to the platform.



## Valuation

We use the Price-to-Sales ratio to arrive at a valuation for the SUSHI token. It is worth noting here that the revenue/sales are primarily reliant on fees collected from AMM swaps. Other future revenue streams can be viewed as added value and will be discussed further in this section.

As adapted from [Mira's and Ryan's research piece](#), several comparables of Sushi have been selected including public-listed centralized exchanges, private centralized exchanges, and decentralized exchanges. These comparables have been selected due to the similarities of business models. Sushi and other comparables act as intermediaries between buyers and sellers. The exchange/protocol matches buy and sell orders and collect fees from each order as their main source of revenue. Sushi's liquidity provider fees can be considered operating expenses, and the portion of fees distributed to xSUSHI holders can be considered earnings, similar to how a company distributes a portion of its earnings as dividends to shareholders.

The analysis will be broken down into bull, base, and bear cases:

- Bull - The average Price-to-Sales ratio of decentralized exchanges, fast-growing and with more room for growth, hence they are given high ratios
- Base - The average Price-to-Sales ratio of centralized exchanges, which are more stable and already have a larger user base.
- Bear - Sushi remains at the same Price-to-Sales ratio, products market-fit do not work out and the only product that users demand is the AMM DEX.

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## Comparable Exchanges

Comparables for Price-to-Sales Ratio

Data marked with \* is an estimated figure  
(US in millions unless otherwise stated)

	Market Cap	TTM Revenue	P/S Ratio
<b><u>Sushi.com</u></b>	<b>1,370</b>	<b>485</b>	<b>2.82</b>
<b><u>Centralized Exchanges</u></b>			
Coinbase (COIN US)	63,250	5,926	10.67
BC Technology Group (0863 HK)	3,810	310	12.29
Bakkt (BKKT US)	523	35	14.94
FTX	25,000	2,481*	10.07*
<b><u>Decentralized Exchanges</u></b>			
Uniswap	15,000	1,500	10.00
PancakeSwap	3,000	658	4.56
Bancor	764	66	11.58
Balancer	1,820	95	19.16
dYdX	7,400	250	29.6
<b>Centralized Exchanges Median</b>			<b>11.48</b>
<b>Centralized Exchanges Average</b>			<b>12.00</b>
<b>Decentralized Exchanges Median</b>			<b>11.58</b>
<b>Decentralized Exchanges Average</b>			<b>14.98</b>

Data as of: Dec. 21, 2021

Source: Messari, Yahoo Finance, Bakkt Investors and TokenTerminal

Now, we use average the Price-to-Sales ratio, combined with the estimated growth of Sushi DEX volume, to calculate the value of the SUSHI token, as shown below.

**MESSARI**  
**SUSHI Valuation**  
 Bull, Base and Bear Case Projection

(US in millions unless otherwise stated)

	2020	2021	2022	2023	2024
<b>Total Annualized Trading Volume</b>	3,100	156,640	473,935	834,969	1,111,980
<b>Total Annualized Revenue</b>	9	470	1,422	2,505	3,336
Monthly Growth	-	38.66%	-	-	-
Annual Growth	-	5052.90%	-	-	-
Estimated Monthly Growth	-	-	9.67%	4.83%	2.42%
<b>Estimated Annual Growth</b>	-	-	302.56%	176.18%	133.18%
		<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
<b>P/S Target</b>					
Bull Case	<b>14.98</b>	28.95	\$85.19	\$150.09	\$199.89
Base Case	<b>12</b>	23.19	\$68.25	\$120.24	\$160.13
Bear Case	<b>2.82</b>	<b>\$5.45</b>	\$16.04	\$28.26	\$37.63
Average			\$56.49	\$99.53	\$132.55

Data as of: Dec. 21, 2021  
 Source: Messari

The above analysis assumes that after 2021, Sushi DEX will experience slower growth due to the cooling down of the cryptomarket. To account for this slow down for 2022, the estimated monthly growth of volume has been divided up by four and halved for every year thereafter. The target prices have been calculated by multiplying the total annual revenue for each period by their corresponding Price-to-Sales ratio.

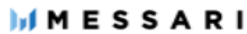
## Beyond the DEX

At this point, you must be wondering how have the other products benefited the Sushi ecosystem, and can we even derive any value from them?

Well, new products have provided a new surface for users to interact with the protocol, resulting in increased revenue and user retention. Rachel Chu has [tweeted](#) that 20 projects who launched their tokens on MISO generated an additional weekly volume of more than \$82.4 million for the DEX. Apart from the increased volume, it is probable that Sushi will continue to gain a new user base that they would not have been able to capture otherwise.

Based on the weekly volume stated by Rachel, we calculate the annualized trading volume that Miso would have delivered to DEX in 2021. From there, we assume that Miso will continue to add more trading volume to the DEX at 20% annual rate. Since revenue collected is 0.30% of total trading volume, the revenue contributed by Miso can be calculated. Based on the predictions above, Miso will be able to generate over \$5.1 billion in trade volume and \$15 million in yearly revenue, or 1.08%, in 2022.





## Miso Projection

Miso continues to add more trading volume to the DEX and therefore drive more revenue to the platform.

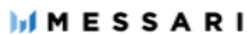
Data marked with \* is an estimated figure  
(US in millions unless otherwise stated)

Inputs				
Total Weekly Trading Volume	82.40			
Total Annual Trading Volume	4,284.80			
Annualized Revenue 2021 (0.30% of trading volume)	12.85			
Estimated Annual Growth of Trading Volume	20.00%			
	2021	2022	2023	2024
Total Annual Trading Volume	4,284.80	5,141.76	6,170.11	7,404.13
Estimated Annual Growth of Trading Volume	20.00%	20.00%	20.00%	20.00%
Miso Annual Revenue Added (0.30% of trading volume)	12.85	15.43	18.51	22.21
Sushi Annual Revenue	470	1,422	2,505	3,336
Sushi Annual Revenue including Miso	482.85	1,437.23	2,523.42	3,358.94
Revenue Increase	2.73%	1.08%	0.74%	0.67%

Data as of: Dec. 21, 2021  
Source: Messari, Twitter @0xChu

Note: The projection assumes that Miso will continue to add more trading volume to the DEX at a 20% annual growth.

To date, three sectors have found their product-market fit: DeFi, NFTs, and Gaming. The future integration of Shoyu will allow Sushi to cross-sell products to the users. With the rise of NFT and NFT-based gaming, there is a reason to believe that Shoyu will be able to bring in a considerable amount of cash flows to xSUSHI. As adapted from this [model](#), if Shoyu grows to just 5% of the market share in 2022, Shoyu would drive more than \$186 million to xSUSHI holders, contributing to a 13.10% increase in revenue.



## Shoyu Projection

If Shoyu can capture 5% of the total NFT market in the first year and continue to develop gradually, it will significantly contribute to SUSHI revenue growth.

(US in millions unless otherwise stated)

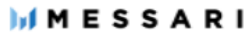
Inputs				
NFT Annualized Trading Volume 2021	17,924.00			
NFT Monthly Volume Growth 2021	77.22%			
NFT Annual Volume Growth 2021	96004.00%			
Estimated NFT Monthly Volume Growth 2022	19.31%	NFT monthly volume growth is assumed to decline by 75% in 2022 and to be cut in half every year after that.		
Estimated NFT Annual Volume Growth 2022	831.58%			
	2021	2022	2023	2024
NFT Annual Volume	17,924	149,052	545,308	1,995,009
NFT Annual Volume Growth	96004.00%	831.58%	365.85%	182.93%
Shoyu Market Share	0.00%	5.00%	6.00%	6.62%
Shoyu Annual Volume	0	7,453	32,718	132,070
Shoyu Annual Revenue	0	186	818	3,302
Sushi Annual Revenue	470	1,422	2,505	3,336
Sushi Annual Revenue including Shoyu	470	1,608	3,323	6,638
Revenue Increase	0.00%	13.10%	32.65%	98.97%

Data as of: Dec. 21, 2021  
Source: Messari, Dune Analytics

Note: NFT Annual Volume 2021 has been calculated by extrapolating volume for the remaining days

The revenue contributed by the DEX, Shoyu, and Miso Launchpad have been combined to compute the \$SUSHI price in each scenario. The model assumes that Sushi's DEX will manage to facilitate over \$474 billion, \$834 billion and \$1.11 trillion as it grows along with the DEX sector as a whole. Furthermore, the model anticipates that Shoyu will be able to compete with other NFT marketplaces and capture 5% of the NFT trading volume. Lastly, Miso will continue to produce new revenue streams at an annual growth rate of 20%. The forecasts presented here are extremely optimistic, yet they are attainable given the industry's current adoption

rate.



## SUSHI Valuation based on DEX, Shoyu and Miso Projections

Bull, Base and Bear Case Projection

(US in millions unless otherwise stated)

	2021	2022	2023	2024
Annual Trading Volume	156,640	473,935	834,969	1,111,980
DEX Annual Revenue	470	1,422	2,505	3,336
Shoyu Annual Revenue	0	186	818	3,302
Miso Annual Revenue	13	15	19	22
<b>Total Sushi Revenue</b>	<b>483</b>	<b>1,624</b>	<b>3,341</b>	<b>6,660</b>
<b>P/S Target</b>				
Bull Case	<b>14.98</b>	28.95	\$97.28	\$200.22
Base Case	<b>12</b>	23.19	\$77.93	\$160.39
Bear Case	<b>2.82</b>	<b>\$5.45</b>	\$18.31	\$37.69
Average			\$64.51	\$132.76

Data as of: Dec. 21, 2021  
Source: Messari

## Conclusion

AMM is a highly competitive industry. Sushi must ensure that it retains or improves its share of DEX volumes with the launch of Trident AMM. This is essential for Sushi's survival since Uniswap V3 has so far been effective in developing higher capital-efficiency, increasing the ratio of daily trading volume to total value locked by about 400 percent from its V2. Furthermore, it is prudent to be careful of sector risk. Although AMMs have clearly been the dominating model for DEX, it remains to be seen whether this trend will continue in the long term. Recently, there was an outcry of conflict between the Sushi team members, resulting in the [departure](#) of engineers and the CTO, Joseph Delong. After a period of chaos, the discussion forum heated up and [several proposals](#), such as ones made by Alex Woodard (Arca Funds) and Daniel Sesta (Frog Nation), have been published to potentially drive back synergies and establish more organisational clarity to Sushi.

Sushi has demonstrated that community-driven movement without VC backing can also achieve no less. With diverse inputs from the entire community, Sushi continues to evolve not only across different sectors but also across different chains, underlining its key strength - optionality. Sushi's ability to close the valuation gap will be determined by its future DEX performance relative to the industry, as well as whether new products will generate significant income streams as anticipated.