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Data Insights:
Lending

May 2023

Contents

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All dollar-denoted figures refer to U.S. dollars.

Key Takeaways

Data Insights: Lending is a compilation of charts & insights by Binance Research on the lending industry in the last 365 days.

Overview
Lending TVL ranks 3rd after DEX and Liquid Staking

Despite the various crypto setbacks, builders are not deterred, as seen by a 71.7% increase in lending protocols. However, adoption shrank as measured by a 67.8% decrease in total borrowed.

VCs Interest in Lending
45 lending projects raised funds

... in the last four quarters. CeFi lending raised 60.1% more than non-CeFi lending in funding, even though there are 10x more non-CeFi lending projects.

Top Performing Protocols
Aave leads with $5.9B TVL

Aave, JustLend, and Compound are the top three in TVL. However, high TVL does not necessarily translates to high DAU. Radiant's DAU surpassed Aave a few times this year, but Aave still maintained the leading position most of the time.

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Overview

How Many Lending Protocols Are There?

*For this lending report, we have referenced protocols from DefiLlama and broadly classified the following 3 categories as the **"Lending" industry - Lending, RWA Lending, and Uncollateralized Lending.***

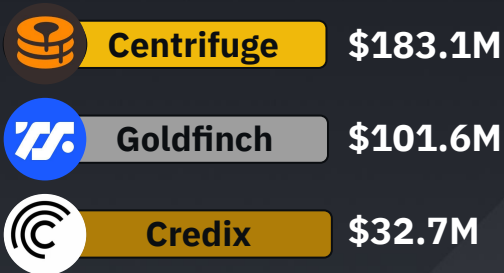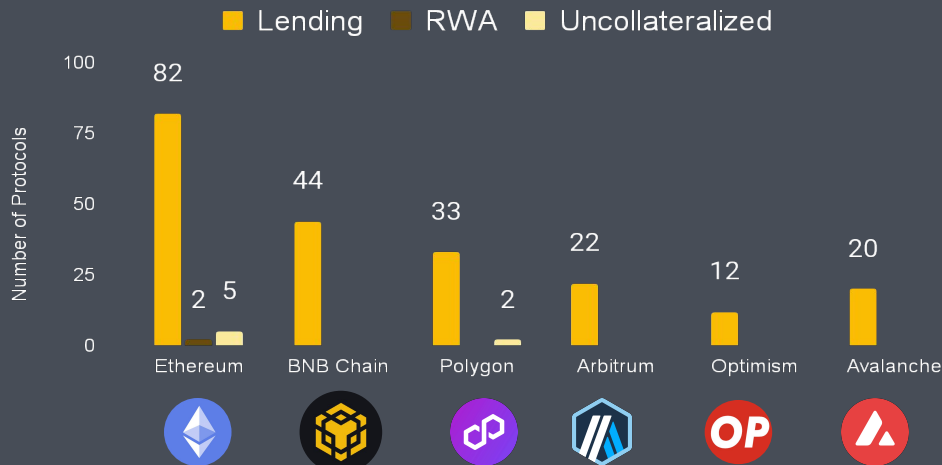| **247**	**238**	**3**	**6**
Total Lending Protocols	Lending	RWA Lending	Uncollateralized Lending

- Together, these lending protocols as a category ranks **3rd** in TVL after DEX and Liquid Staking.

- **3.6%** of lending projects belong to **Real World Assets (RWA) and Uncollateralized lending**, which are mainly built on Ethereum, Polygon & Solana. The top 3 protocols in **total borrowed** under these 2 sub-categories are all from RWA Lending:

Centrifuge	**$183.1M**
Goldfinch	**$101.6M**
Credix	**$32.7M**

26.7% of these protocols are multi-chain, with the majority building on Ethereum

Legend: Lending, RWA, Uncollateralized

Number of Protocols

- Ethereum: 82, 2, 5
- BNB Chain: 44
- Polygon: 33, 2
- Arbitrum: 22
- Optimism: 12
- Avalanche: 20

Last 365 Days Saw a 71.7% Increase in Protocols

Builders weren't deterred by setbacks like Terra & FTX falls

Total number of lending protocols has been on a steady rise
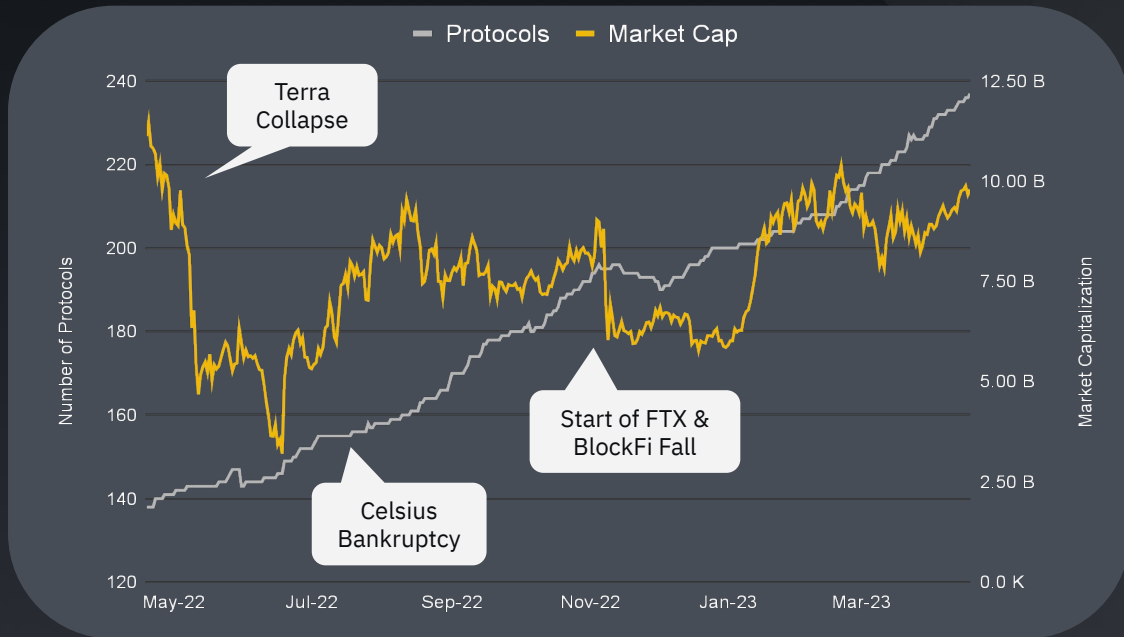
- The shutdown of several CeFi lending players over the past year has perhaps highlighted the importance of alternative solutions such as DeFi lending.

- Despite a volatile market and a **11.9%** decrease in overall lending market capitalization, it did not deter the lending industry from building.

- Instead, we see an overall **71.7%** increase in the number of lending protocols.

67.8% Decline in Total Borrowed and Adoption
Despite an increase in the number of lending protocols

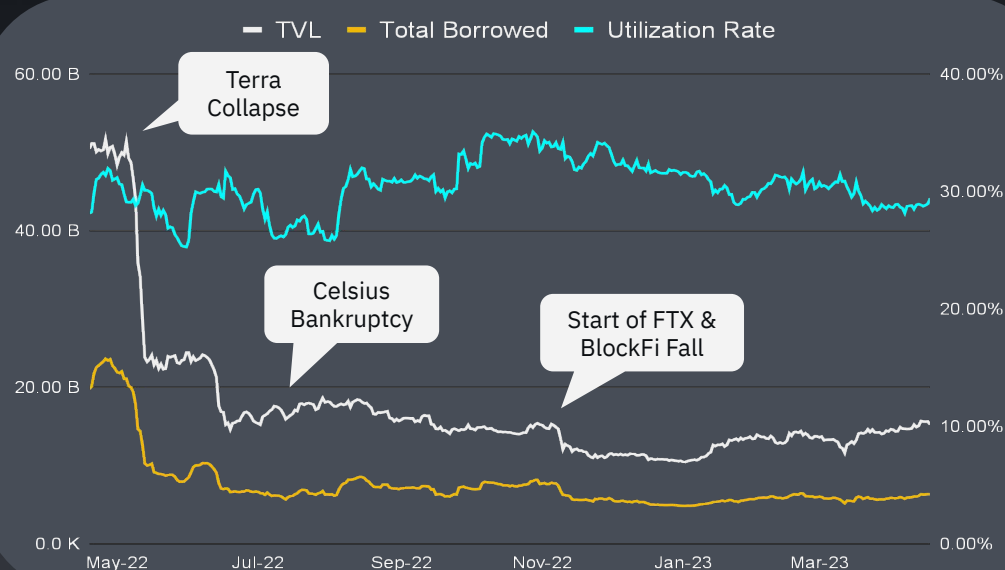| **Lending Stats** *as of 18 Apr 2023*	**US$15.3B** TVL	**US$6.4B** Total Borrowed	**29.5%** Utilization Rate

- The sharp decrease was particularly significant in May 2022, with TVL dropping as much as **98.0%** during the Terra contagion.

- Bad debt stemming from liquidations also piled up during these fast-changing market conditions.

- Notwithstanding the effects of falling crypto prices, TVL declined due to external macro conditions such as a tightening monetary policy. Higher interest rates offered by treasuries offered viable alternatives to DeFi lending products.

- Hence, more protocols are launching or pivoting into RWAs, specifically treasury markets like Ondo and Maple Finance.
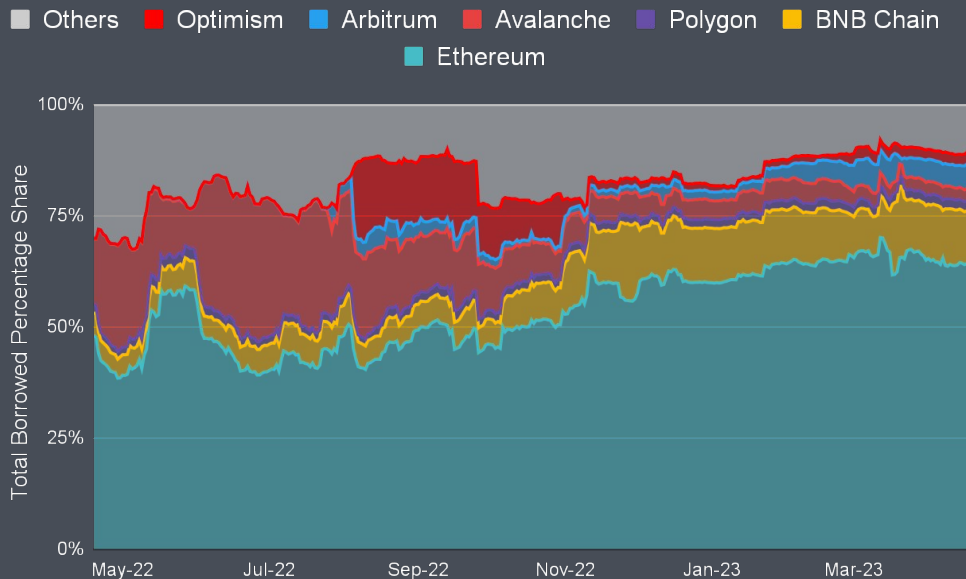
Utilization rate tends to fluctuate between 25% and 35%

Legend: TVL — Total Borrowed — Utilization Rate

Terra Collapse

Celsius Bankruptcy

Start of FTX & BlockFi Fall

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How Does Lending Adoption by Chain Look?
BNB Chain gained 6.8% of total borrowed market share

Ethereum remains as the biggest player

Others · Optimism · Arbitrum · Avalanche · Polygon · BNB Chain · Ethereum

Y-axis: Total Borrowed Percentage Share (0% to 100%)
X-axis: May-22, Jul-22, Sep-22, Nov-22, Jan-23, Mar-23

Source: Defillama, Binance Research, Binance Big Data. Data timeframe: 19 Apr 2022 - 18 Apr 2023

- **BNB Chain's** dominance grew by **6.8%**, with new entrants such as Green Planet and Radiant V2 pushing its overall demand up. However, **Venus** is still in the lead with **62.5%** dominance of total borrowed in the BNB chain lending ecosystem.

- **Avalanche** lost its total borrowed market share from **14.5%** at the start, to a mere **2.8%** in April 2023. Aave V3 largely drove its chain demand.

- **Optimism** gained a huge popularity with a **$1.4B** increase in total borrowed **during the first half of August**, increasing its market share by **15.8%.** This was also mainly driven by Aave V3. However, this growth proved temporary and market share decreased to **2.7%** in April 2023.

- **Arbitrum** lending adoption picked up when Radiant entered the scene in late July 2022. The chain's borrowing demand market share grew by **173.5%** in 2023 alone
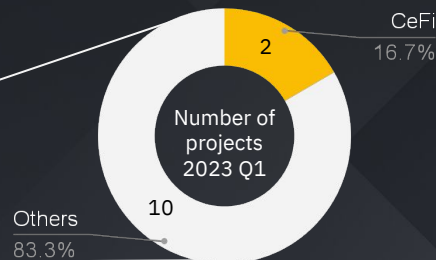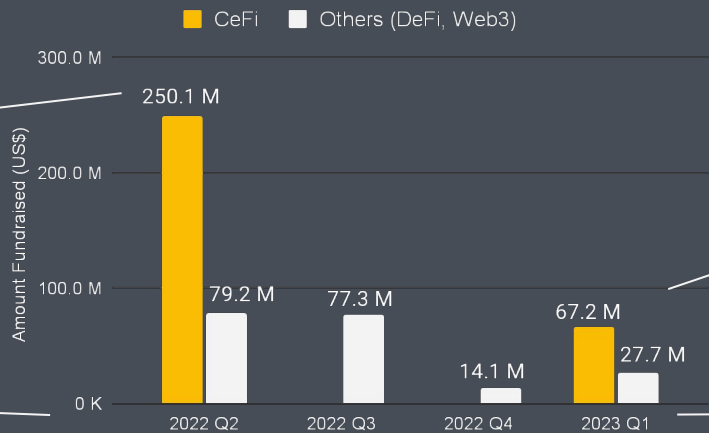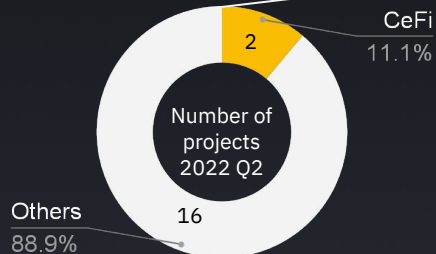
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CeFi Lending Raised $317.3M
While non-CeFi (DeFi & Web3) raised $198.2M

45 lending projects raised capital during the last four quarters.
On average, CeFi lending raised 1,541.3% more than non-CeFi lending. This may be attributable to a variety of reasons, such as greater institutional interest and larger funding needs for operations.

BlockFi (CeFi Lending) raised $250M in credit from FTX in June 2022. This accounted for 78.8% of the total raised for CeFi Lending. Both have since declared bankruptcy in Nov 2022.

Number of projects 2022 Q2
- CeFi 11.1% — 2
- Others 88.9% — 16

Number of projects 2023 Q1
- CeFi 16.7% — 2
- Others 83.3% — 10

CeFi ▮ Others (DeFi, Web3) ▯

Amount Fundraised (US$)

	2022 Q2	2022 Q3	2022 Q4	2023 Q1
CeFi	250.1 M			67.2 M
Others	79.2 M	77.3 M	14.1 M	27.7 M

300.0 M
200.0 M
100.0 M
0 K

Top three non-CeFi fundraisers:

Euler Finance $32M   **Spectral Finance** $23M   **Morpho Labs** $18M
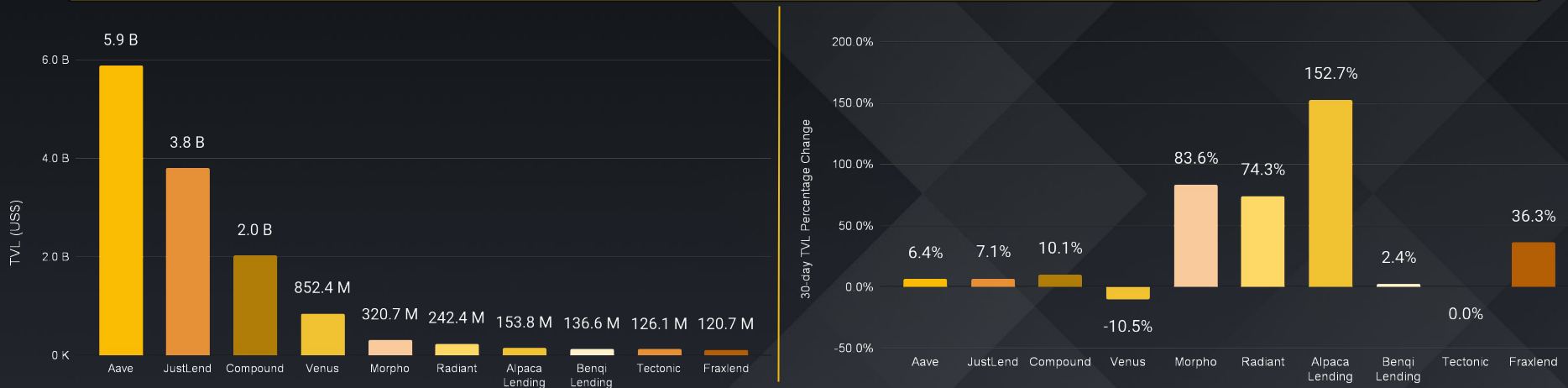
Euler was exploited on March 13, 2023

What Are the Top Performing Protocols?
Aave leads with $5.9B in TVL

Aave, JustLend, and Compound together accounted for 85.7% of the total TVL among the top 10 protocols
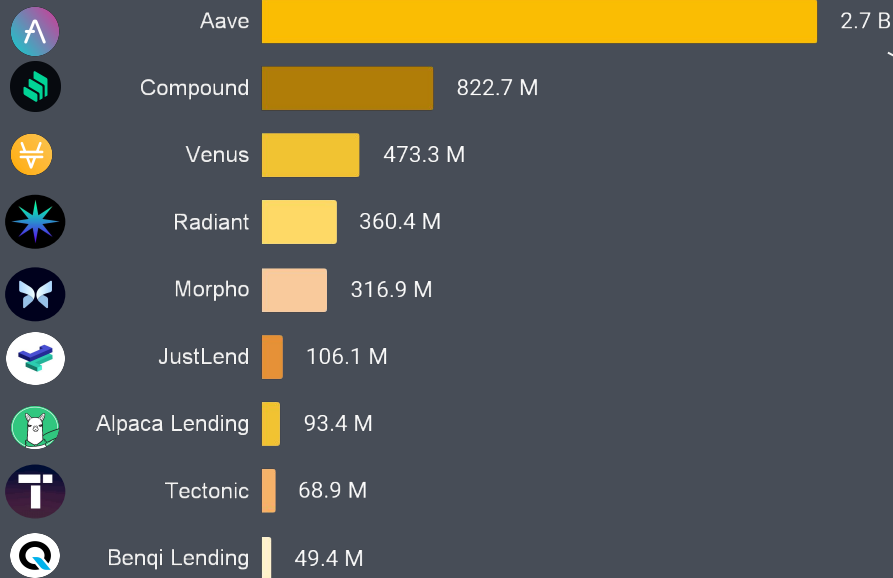

Left chart — TVL (US$):
- Aave: 5.9 B
- JustLend: 3.8 B
- Compound: 2.0 B
- Venus: 852.4 M
- Morpho: 320.7 M
- Radiant: 242.4 M
- Alpaca Lending: 153.8 M
- Benqi Lending: 136.6 M
- Tectonic: 126.1 M
- Fraxlend: 120.7 M

Right chart — 30-day TVL Percentage Change:
- Aave: 6.4%
- JustLend: 7.1%
- Compound: 10.1%
- Venus: -10.5%
- Morpho: 83.6%
- Radiant: 74.3%
- Alpaca Lending: 152.7%
- Benqi Lending: 2.4%
- Tectonic: 0.0%
- Fraxlend: 36.3%

- **Alpaca Lending,** newly launched on 16 Mar 23, saw the **highest growth of 152.7%** in last 30 days.

- **Radiant Capital,** also a new entrant last year, witnessed a **74.3%** growth that may perhaps be spurred by its BNB Chain launch, listings on several CEXs, as well as speculation of potential airdrops of other tokens such as Arbitrum and LayerZero.
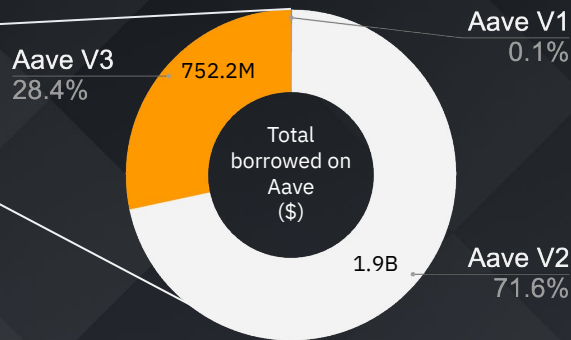
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53.7% of Borrowing Activity Happened on Aave
When comparing **total borrowed** of the top 10 TVL protocols

Aave's total borrowed amount is over 7x more than the newer entrants like Radiant and Morpho
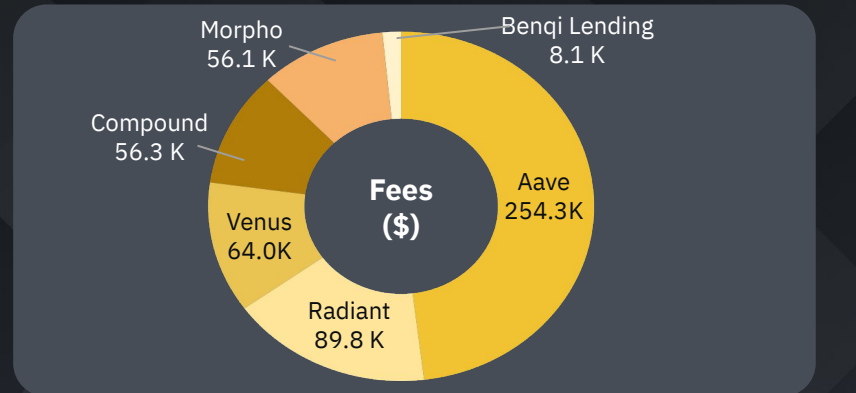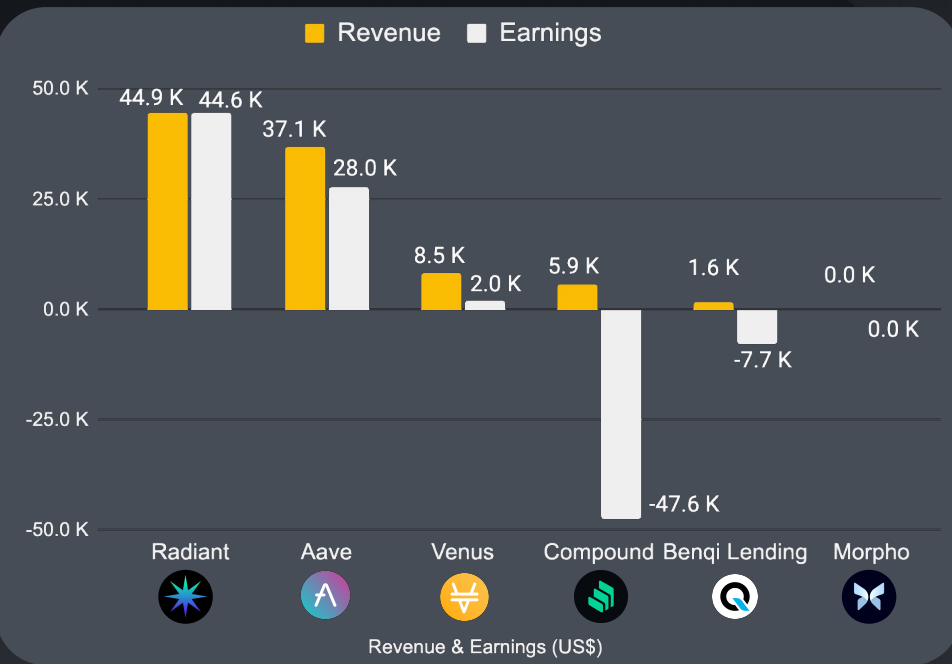
Total Borrowed (US$)

Protocol	Total Borrowed
Aave	2.7 B
Compound	822.7 M
Venus	473.3 M
Radiant	360.4 M
Morpho	316.9 M
JustLend	106.1 M
Alpaca Lending	93.4 M
Tectonic	68.9 M
Benqi Lending	49.4 M

Aave V1 — 0.1%
Aave V3 — 28.4% — 752.2M
Total borrowed on Aave ($)
Aave V2 — 71.6% — 1.9B

- Although Compound is one of the closest competitors after Aave, its total borrowed amount is **~3.2x** less than Aave's.

- Despite having the 2nd largest TVL, the total amount borrowed on **JustLend** is relatively low at $106.1M.

Which Lending Protocol Is the Most Profitable?
Radiant earned the most at $44.6K, Aave at $28.0K
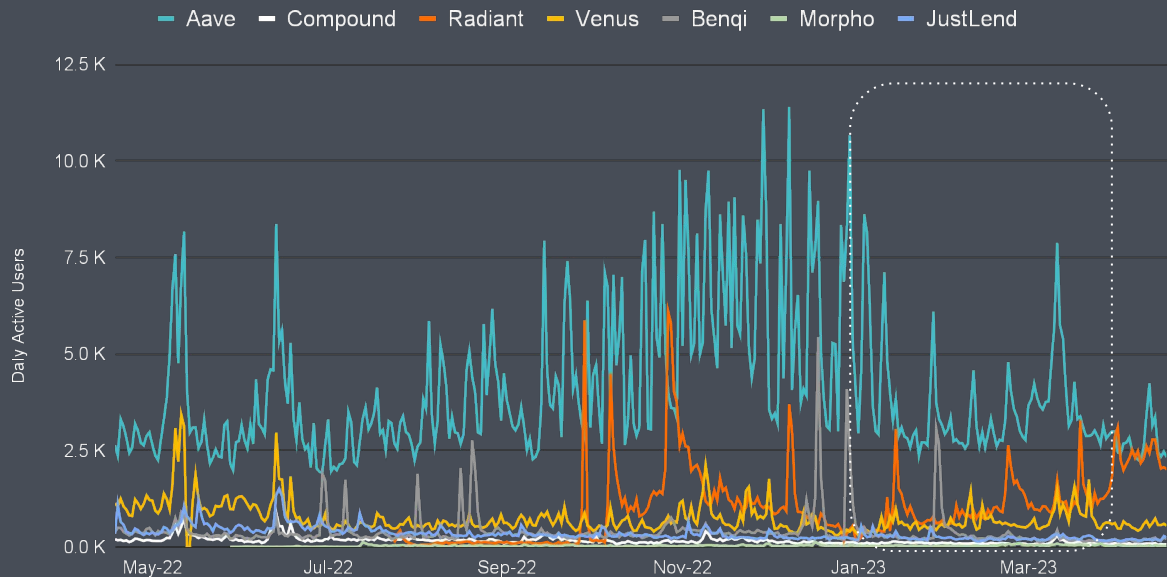
Radiant earned 59.3% more than Aave

Legend: ▮ Revenue ▯ Earnings

Protocol	Revenue	Earnings
Radiant	44.9 K	44.6 K
Aave	37.1 K	28.0 K
Venus	8.5 K	2.0 K
Compound	5.9 K	-47.6 K
Benqi Lending	1.6 K	-7.7 K
Morpho	0.0 K	0.0 K

Revenue & Earnings (US$)

Fees ($)
- Aave: 254.3K
- Radiant: 89.8 K
- Venus: 64.0K
- Compound: 56.3 K
- Morpho: 56.1 K
- Benqi Lending: 8.1 K

- Among the top 10 TVL protocols, Compound and Benqi Lending are in the negative for earnings, with Compound going as low as **-$47.6K**.

- Compound's token incentives are **907.7%** of its revenue, which may not be a sustainable model in the long run.

- Radiant's token incentives is only **0.7%** of its revenue, while Aave's is **24.7%**, making Radiant being more profitable overall.

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What About Daily Active Users (DAU)?
Radiant's DAU surpassed Aave's a few times

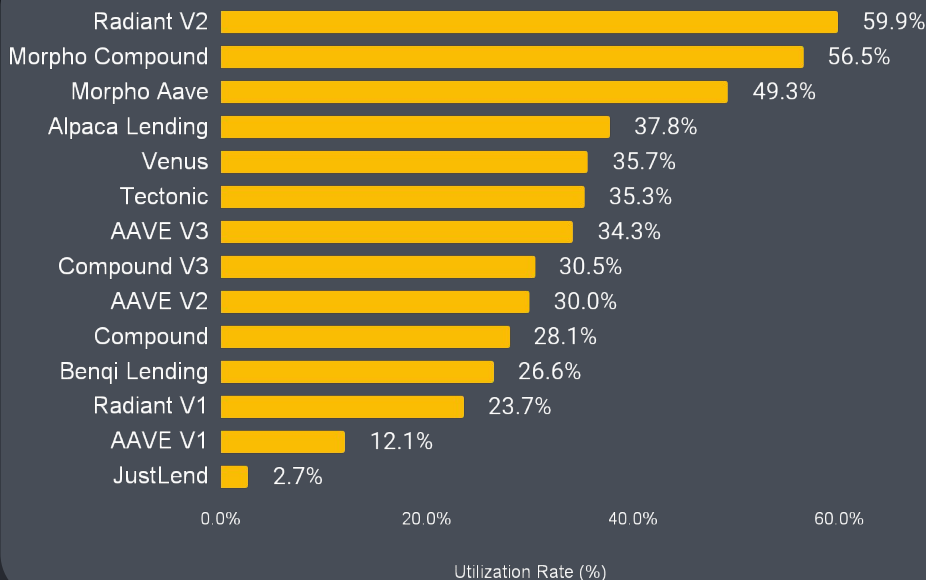**Aave experienced an 11.7% decline in DAU over the last 365 days**

Legend: Aave — Compound — Radiant — Venus — Benqi — Morpho — JustLend

Y-axis: Daily Active Users (12.5 K, 10.0 K, 7.5 K, 5.0 K, 2.5 K, 0.0 K)
X-axis: May-22, Jul-22, Sep-22, Nov-22, Jan-23, Mar-23

Source: Token Terminal, Dappradar, Binance Research. Data timeframe: 19 Apr 2022 - 18 Apr 2023
DAU of the remaining three top 10 TVL protocols -Alpaca Lending, Tectonic and Fraxlend, are not readily available
Note that Dappradar and Token Terminal may have different approaches to calculating DAU

- Radiant's popularity started picking up on 28 September 22, **hitting 5.9K DAU and exceeding Aave's DAU for the first time.**

- Although Radiant's DAU may have surpassed Aave's a few times, **Aave still maintained the leading position majority of the time.**

- Aave had **7.4x** more total borrowed than Radiant, yet the DAU gap between both appears to be closing recently - indicating the possibility of larger whales on Aave than Radiant.

- Zooming into 2023 Q1 and looking only at the latest top three, both **Radiant** and **Venus's** DAU grew by **1,587.1%** and **106.0%,** respectively, while **Aave's** DAU increased by **1.8%**.

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Utilization Rate Among the Top 10 TVL Projects
Broken down by their respective versions

Radiant V2 leads in utilization rate at 59.9%

Project	Utilization Rate
Radiant V2	59.9%
Morpho Compound	56.5%
Morpho Aave	49.3%
Alpaca Lending	37.8%
Venus	35.7%
Tectonic	35.3%
AAVE V3	34.3%
Compound V3	30.5%
AAVE V2	30.0%
Compound	28.1%
Benqi Lending	26.6%
Radiant V1	23.7%
AAVE V1	12.1%
JustLend	2.7%

Utilization Rate (%)

- Alpaca Lending and Radiant V2 topped the charts, and although both have relatively high capital efficiency, note that both were newly launched in 2023.

- **Morpho,** a peer-to-peer lending protocol, may have a higher utilization rate of **> 40%** due to the nature of the project.

- The top three projects by TVL - Aave, JustLend, and Compound, fall behind in utilization rate at **below 35%.**

- Note that too high of a utilization rate (eg, >90%) may not necessarily be good. The lack of readily available credit may constrain the lending protocol's growth.

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How About the Social Hype of These Top 10?

Aave is at the forefront with 532.2K Twitter followers

Radiant has the highest 30-day Twitter followers percentage change at 68.6%. Increased popularity may be partly attributed to the Arbitrum airdrop and listing on several CEXs.

Source: Binance Research. Data snapshot as of 18 Apr 2023
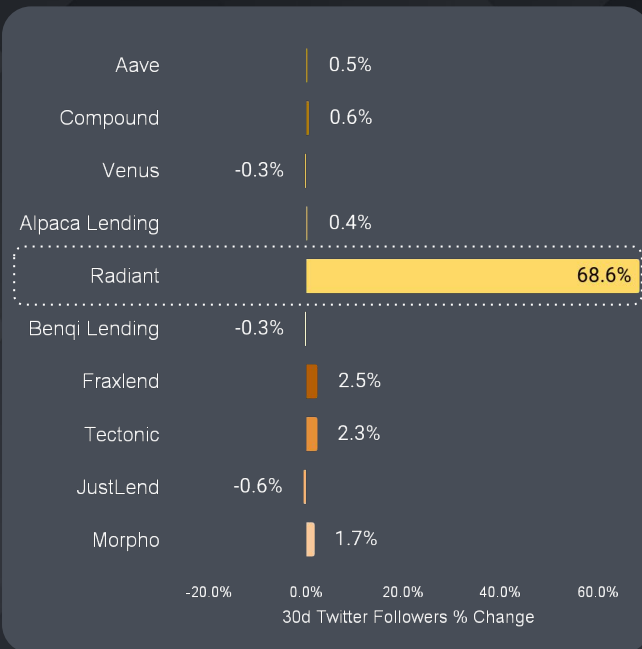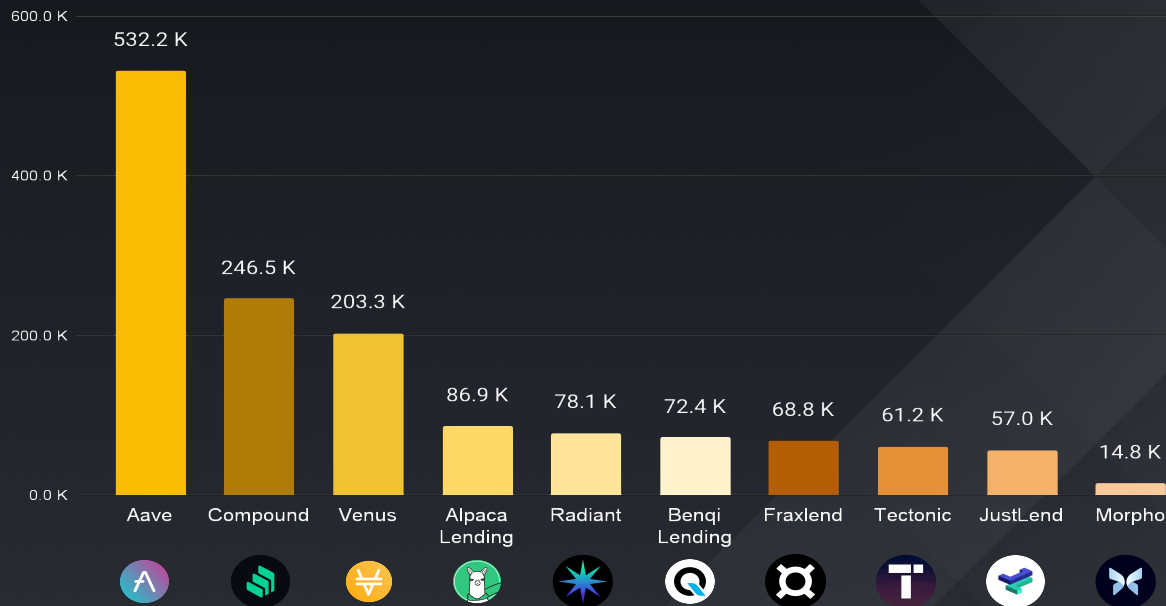
Social Hype & TVL Usage Has a High Correlation
With an exception of Alpaca Lending

In decreasing 30-day TVL % Growth (from top 10 TVL protocols)
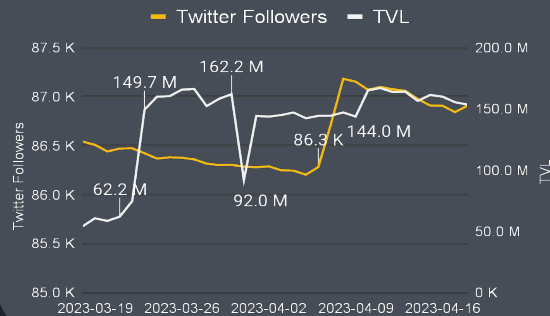
r = 0.23
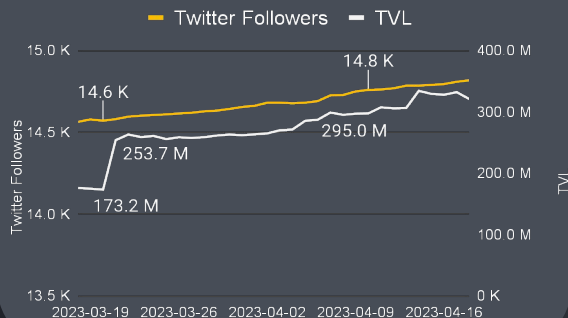
r = 0.88
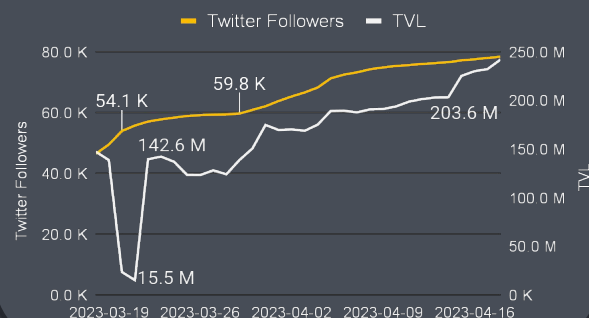
r = 0.80, *Dip in TVL is due to migration from V1 to V2

- Looking at the top three protocols with the highest 30-day TVL growth percentage change, both Morpho and Radiant displayed similar trends and have a **high correlation of > 0.80**.
  - This may be because both are pure lending protocols, unlike Alpaca Finance.
  - Additionally, note from the trendlines that spikes in TVL did not significantly result in more Twitter hype, and vice versa.

About Binance Research

Binance Research is the research arm of Binance, the world's leading cryptocurrency exchange. The team is committed to delivering objective, independent, and comprehensive analysis and aims to be the thought leader in the crypto space. Our analysts publish insightful thought pieces regularly on topics related to, but not limited to,, the crypto ecosystem, blockchain technologies, and the latest market themes.

About the author

Keng Ying Sim

Keng Ying ("Sky") currently works as a Research Data Analyst at Binance. Before joining Binance, she has prior experience as a Research Analyst at Bybit and also worked at Citi with a focus on offshore wealth management analytics.

Sky is an on-chain data enthusiast and enjoys going down the rabbit hole in her free time.

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