Introduction

This is the periodic follow-up analysis of the SparkLend User Metric Report and focuses on the new trends highlighted in the first four months of 2024. The analysis is divided into cohort, segmentation and external dynamics, ranging from 1 November 2023 to 1 May 2024, while the snapshot data are taken on 1 May 2024. This is done in order to provide a deep understanding of how the protocol has developed, and will then be updated with the more interesting dynamics. The D3M wallet has been removed in order to provide more representative growth metrics, which is the reason why supply amounts are lower than in reality.

If you have missed it, you can take a look at the previous report here.

SparkLend User Metrics & Growth Analysis - Report #1

For a deep dive into how these analyses are conducted, refer to their original reports.

SparkLend User Metrics #1 - Cohort Analysis

SparkLend User Metrics #2 - Segmentation Analysis

SparkLend User Metrics #3: External Capital and Cross-Protocol Usage

1. Cohort Analysis

In the following analysis, we classify wallets by their cohort month, which groups those who first interacted with the protocol in the same month. The Cohort tenure metric is defined as the number of months since a wallet's cohort month (1 represents the first month, 2 the second, and so forth). It is important to consider that all the cohorts from May 2023 to November 2023 have been grouped together in the November Cohort.

Conservative growth patterns

After reaching the peak of supplied amounts in February 2024 (~$4.1B), the total supply has been falling since then to reach ~$2.8B in April 2024 (Chart 1). The main reason why the total supply has been dropping is the down market we are currently witnessing, with BTC price falling by ~14% from its peak and ETH falling by ~20% from its peak. The pattern is slightly different from total borrows (Chart 4), that have reached their peak in March 2024 (~$1.65B) and plunged to ~$1.2B in April 2024.

While this metric alone is not enough to provide an overall assessment of the protocol's growth, the remaining ones give a clearer picture of SparkLend's status. Since January 2024, the new cohorts have been supplying less amounts as percentage of total supplies (Chart 2). This is due to two main factors, (i) the positive retention patterns of the May-November cohort and (ii) the decreasing number of new wallets opening positions on SparkLend (Chart 7).

In contrast with the previous analysis, we can see that the number of new wallets is decreasing steadily since January. This may be due to (i) the down market not attracting new users to DeFi protocols or (ii) SparkLend being less attractive compared to other Blue-Chip lending markets. We can see that up to date, supplied and borrowed amounts have been dropping in the range of 40% - 60% for new cohorts (Charts 3 and 6).

With the exception of the February cohort, the Large wallets dominance per cohort tenure has been steady for each individual cohort (Chart 8).

Supplied and borrowed amounts

Regarding total amounts supplied in April 2024, $423M (or 15.2%) came from the February cohort, followed by the March (7.9%) and the January ones (7.4%), with respectively $219M and $206M. Except for the May-November cohort (+26%) all new cohorts' supplied amounts have been dropping, such as January (-63%), February (-46%) and March (-42%).

The largest cohorts by amount supplied are the same cohorts dominating borrowing, with March borrowing $125M (10.3%), February borrowing $109M (9%) and January still borrowing $87M (7.3%). The January and February cohorts are the ones that dropped the most, both down 60% since they started using SparkLend.

Refer to the following charts for a deeper understanding of the cohorts.

Chart 1. Supply amount per cohort

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Chart 2. Supply amount percentage per cohort

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Chart 3. Supply growth percentage per cohort tenure

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Chart 4. Borrow amount per cohort

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Chart 5. Borrow amount percentage per cohort

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Chart 6. Borrow growth percentage per cohort tenure

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Chart 7. Wallet count per cohort

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Chart 8. Whale supply dominance percentage

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2. Segmentation Analysis

The segmentation analysis conducted was primarily focused on assessing what types of positions/strategies SparkLend users are deploying. In order to understand how they were calculated, refer to the previously conducted Segmentation Analysis. To summarize briefly, here are the identified segments:

Identified Segments

- Long/Short Strategies:
- Long ETH LST: If ETH LST supply percentage and stablecoin borrow percentage are both above 80%.
- Short ETH LST: If stablecoin supply percentage and ETH LST borrow percentage are both above 80%.
- Long Type 1: If Type 1 supply percentage and stablecoin borrow percentage are both above 80%.
- Short Type 1: If stablecoin supply percentage and Type 1 borrow percentage are both above 80%.
- Long Type 2: If Type 2 supply percentage and stablecoin borrow percentage are both above 80%.
- Short Type 2: If stablecoin supply percentage and Type 2 borrow percentage are both above 80%.
- Recursive Strategies:
- Recursive Stablecoin: If stablecoin supply percentage and stablecoin borrow percentage are both above 80%.
- Recursive ETH LST: If either ETH supply or borrow percentage, and either ETH LST supply or borrow percentage, are above 80%.
- Supply Only Strategies:
- Supply Only Type 1: If Type 1 supply percentage is above 80% and total borrow is less than 100.
- Supply Only Type 2: If Type 2 supply percentage is above 80% and total borrow is less than 100.
- Supply Only ETH LST: If ETH LST supply percentage is above 80% and total borrow is less than 100.
- Supply Only Stablecoin: If stablecoin supply percentage is above 80% and total borrow is less than 100.
- Supply Only Mixed: If the sum of stablecoin, Type 1, and Type 2 supply percentages is above 80% and total borrow is less than 100.
- Other Strategies:
- Long ETH + ETH LST: If the sum of ETH and ETH LST supply percentages is above 80% and stablecoin borrow percentage is above 80%.
- Diversified Borrower: If the sum of ETH, ETH LST, Type 1, and Type 2 supply percentages exceeds stablecoin supply percentage and stablecoin borrow percentage is above 80%.
- Other: Any situation that does not match the above conditions.

(Still) Bullish sentiment

In the last analysis, we used individual wallet positions to assess the sentiment of SparkLend users towards the crypto market. It is very interesting to note that most wallets are still exhibiting bullish behavior, with the largest positions being Long ETH LST ($1.5B) and Long Type 1 ($510M), together accounting for ~73% of the total supply in April (Charts 9 and 10). The third-largest position is the Recursive ETH LST (~$495M), roughly ~18% of total. It is also worth noting that the wallets in the highest supply bucket (>$100M) all have long positions (Chart 12).

Short positions have dropped consistently in March and April (now totaling ~$8.5M) down significantly from February when they were ~$93M. They are now ~0.3% of total supply, consistently dropping from their December 2023 peak, when they were ~4%.

The wallet count per position strategy (Chart 11) highlights a predominance of ETH and (w)BTC long positions (483) as well as long ETH LST (167). There are only 10 wallets displaying strictly short strategies. On average, wallets in the lower supply amount buckets tend to have long ETH/(w)BTC positions, while those in the higher tend to have larger Long ETH LST positions. The strategies dominated by large wallets (Chart 14) are Short Type 1, Supply Only Stablecoins and recursive ETH LST. This is mainly due to a low number of wallets employing these strategies.

A comparison between the current state of health rates (Chart 16) and the previous analysis shows Recursive ETH LST having lower debt-weighted health rates (down from 1.09 on 1 March to 1.02 on 1 May). On the other hand, Short strategies have a slightly higher health rate (1.52 vs. 1.42) as well as Long ETH LST (2.15 vs. 2.08).

Behavioral analysis

Interesting insights can be drawn from how users are interacting with the protocol. First of all, the need for active

management can be predominantly seen in Short Type 1 and Diversified Borrower segments, as well as the Recursive ETH LST (Chart 17), which by definition would need to continuously adjust to market conditions. We can also see that, on average, a high number of events are performed by wallets with lowest and highest health rate (Chart 18), while average health rates on average perform fewer actions. This can indicate that those in these categories must execute more actions to maintain their strategies. There is also a positive relation between how much users supply to the protocol and the number of actions they perform (Chart 19), meaning that the more someone supplies, the more likely they are to execute more actions.

This distribution highlights a behavioral tendency towards active management in strategies perceived as higher risk, evidenced by the need for more events per month and a lower health rate associated with short positions and recursive ETH LST strategies. Particularly, a wallet in the “Other” category performed the highest amount of actions in a month (39).

Refer to the following charts for a deeper understanding of the segments.

Chart 9: Supply Amount Per Position Strategy

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Chart 10: Percentage Supply Amount Per Position Strategy

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Chart 11: Wallet Count Per Position Strategy

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Chart 12: Percentage Supply Amount Per Supply Amount Bucket

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Chart 13: Wallet Count Per Supply Amount Bucket

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Chart 14: Top 10 Large Wallet Supply Percentage Per Position Strategy

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Chart 15: Borrow Per Health Rate

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Chart 16: Debt-Weighted Health Rate Per Position Strategy

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Chart 17: Events Per Month Per Position Strategy

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Chart 18: Events Per Month Per Health Rate

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Chart 19: Events Per Month vs Supply Amount

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3. External Capital Analysis

The aim of this analysis is assessing how SparkLend users are behaving outside SparkLend, through an assessment on the external capital held and their cross-protocol usage. We define as external capital as the assets held outside the protocol that could be used to protect individual positions. External capital can either be passive (idle in the wallet) or active (used in other protocols). The data refers to a snapshot taken on 1 May.

In total, SparkLend users are holding approximately $5.8B in other protocols (Chart 20), $1.35B of which is in Maker (~24% of total). Looking at other lending protocols, $135M is supplied on Compound v3 and 354M on Aave v3, (30% up from 1 March). Other important protocols used by SparkLend wallets are Lido, Stakefish, and Morpho Aave. Together, Morpho AAVE (v1 and v3) has a supply from SparkLend users of ~$635M across 33 wallets.

By looking at the passive external capital per asset (Chart 21), we can see that users hold WBTC ($147M), GNO ($143M), WETH ($94M), and MKR ($84M) with sDAI raising its popularity from the previous analysis ($60M from $51M). There are 1063 wallets that hold ETH idle, as well as USDC (303 wallets), and DAI (330 wallets). The other stablecoins are falling behind DAI and USDC, with USDT ($16M, 168 wallets), USDe ($11M, 71 wallets) and sUSDe ($8M, 12 wallets). Next, we assess the passive external capital relative to debt (Chart 22) and we can see that 55.8% of users have enough passive external capital to cover 25% of their debt, while 10.1% have a buffer of more than 500%. In general, 27.5% of wallets have enough external capital to cover the total debt exposure.

What would require more attention is the current passive external capital as percentage of debt (Chart 23), since 83.6% of total debt (up from 78.6% on 1 March) is covered by only 25% of capital held in wallets, which was previously 66.2% in December and 78.6% in March. In case of price drops or changing market conditions, this might have negative effects over the protocol’s health. On the other hand, 9.8% of total debt is fully collateralized by capital held in wallets (down from 18.8% on 1 March). Looking at the 50 largest wallets (Chart 24), we can see that on average they have less passive external capital compared to their debt positions, with only 12% of them having enough to cover their debt.

Refer to the following charts for a deeper understanding of the external dynamics.

Chart 20: Wallets' Active External Capital Per Protocol

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Chart 21: Wallets' Passive External Capital Per Asset

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Chart 22: Wallets' Passive External Capital Over SparkLend Borrow (Percentage of Wallets)

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Chart 23: Wallets' Passive External Capital Over SparkLend Borrow (Percentage of Debt)

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Chart 24: Large Wallets' Passive External Capital vs Protocol Borrow

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Conclusion

The current analysis highlights a more conservative growth pattern for SparkLend during the observed period. While the protocol continues to attract user interaction, the decrease in total supplied and borrowed amounts across the cohorts suggests a cautious approach by users in response to market downturns and/or the protocol’s attractiveness. This shift is marked by a significant reduction in the engagement of new cohorts and a stronger retention within earlier cohorts, indicating a reliance on established users through less favorable market conditions.

The segmentation analysis reveals that despite a broader market downturn, a significant portion of SparkLend users maintain bullish sentiment, particularly in long positions with substantial investments in ETH LST and Type 1 assets. At the same time, the significant drop in short positions reflects a withdrawal from riskier strategies, aligning with the overall conservative trend observed in the cohort analysis. This behavior suggests that while SparkLend users continue to use the protocol, there is a tangible shift towards safety in response to market volatility.

In terms of external dynamics, the analysis highlights a robust interaction with other protocols, although there’s an increase in passive external capital relative to debt, which could pose a risk in adverse market shifts. This condition requires a more detailed monitoring of capital buffers to prevent potential liquidations, especially in a volatile market.

Future Work

BA Labs plans to keep monitoring user metrics to ensure the protocol’s stability, by further providing quarterly analyses on the most important dynamics and suggestions on how to tackle potential issues. At the same time, we plan to automate this kind of analyses in order to get live data on user behavior to promptly respond to changing market conditions.