

LumosDAO Voting Power Calculation Documentation

Introduction

This document aims to provide a comprehensive guide to understanding how the Voting Power is calculated in the LumosDAO ecosystem. The Voting Power is a significant metric as it influences the weight of a member's vote in any proposal within a DAO. The maximum voting power that a vote can carry is 5. It is calculated based on three primary factors:

- Token Holdings
- DAO Activity
- Wallet Metrics

Voting Power Formula

Factors	Weightage (Weight x Factor)
Token Holdings	0.5 x Token Holdings Score
DAO Activity Sub-score	0.25 x (DAO Activity for Voting + DAO Activity for Comments)
Wallet Metrics Sub-score	0.25 x (Wallet Metrics for Account Age + Wallet Metrics for Account Balance + Wallet Metrics for Number of Trades)
Voting Power (VP)	Token Holdings + DAO Activity Sub-score + Wallet Metrics Sub-score

The Voting Power (VP) for any member is calculated using the following weighted formula:
 $VP = (0.5 * \text{Token Holdings Score}) + (0.25 * \text{DAO Activity Sub-score}) + (0.25 * \text{Wallet Metrics Sub-score})$

Scoring System

Token Holdings Score (1-5)

The score is assigned based on the member's ranking among the DAO's token holders:

- Top 5 holders: Score = 5
- Rank 6-50: Score = 4
- Rank 51-100: Score = 3
- Rank 101-500: Score = 2
- Rank 500+: Score = 1

DAO Activity Score (1-5 for each metric)

Number of Voted Proposals:

- 0 proposals: Score = 1
- 1-5 proposals: Score = 2
- 6-25 proposals: Score = 3
- 26-50 proposals: Score = 4
- 50+ proposals: Score = 5

Number of Comments on Proposals:

- 0 comments: Score = 1
- 1-25 comments: Score = 2
- 26-100 comments: Score = 3
- 101-500 comments: Score = 4
- 500+ comments: Score = 5

Wallet Metrics Score (1-5 for each metric)

Account Age:

- Less than 1 month: Score = 1
- 1-6 months: Score = 2
- 6-12 months: Score = 3
- 1-2 years: Score = 4
- 2+ years: Score = 5

Account Balance (in USD):

- \$0-\$50: Score = 1

- \$51-\$100: Score = 2
- \$101-\$500: Score = 3
- \$501-\$1000: Score = 4
- \$1000+: Score = 5

Number of Trades:

- No trades: Score = 1
- 1-100 trades: Score = 2
- 101-500 trades: Score = 3
- 501-1000 trades: Score = 4
- 1000+ trades: Score = 5

Example Calculations:

Patrick:

Token Holdings Score: Patrick is holder number 30, so his score is 4 (falls in the 6-50 range).

DAO Activity Scores:

- Voted on 2 proposals: Score = 2 (falls in the 1-5 proposals range).
- Made 4 comments on proposals: Score = 2 (falls in the 1-25 comments range).

Wallet Metrics Scores:

- Account age: 2 months old = Score 2 (falls in the 1-6 months range).
- Account balance: \$40 = Score 1 (falls in the \$0-\$50 range).
- Number of trades: 15 trades = Score 2 (falls in the 1-100 trades range).

DAO Activity Sub-score: $(2 \text{ (for voting)} + 2 \text{ (for comments)}) / 2 = 2$

Wallet Metrics Sub-score: $(2 \text{ (for age)} + 1 \text{ (for balance)} + 2 \text{ (for trades)}) / 3 = 5 / 3 \approx 1.67$

Voting Power for Patrick: $0.5 \times 4 \text{ (Token Holding)} + 0.25 \times 2 \text{ (DAO Activity)} + 0.25 \times 1.67 \text{ (Wallet Metrics)}$

Voting Power for Patrick: $2 + 0.5 + 0.4175 = \underline{\underline{2.9175}}$

Sam:

Token Holdings Score: Sam is holder number 2, so his score is 5 (falls in the Top 5 holders range).

DAO Activity Scores:

- Voted on 0 proposals: Score = 1 (falls in the 0 proposals range).
- Made 2 comments on proposals: Score = 2 (falls in the 1-25 comments range).

Wallet Metrics Scores:

- Account age: 3 months old = Score 2 (falls in the 1-6 months range).
- Account balance: \$0 = Score 1 (falls in the \$0-\$50 range).
- Number of trades: 3 trades = Score 2 (falls in the 1-100 trades range).

DAO Activity Sub-score: $(1 \text{ (for voting)} + 2 \text{ (for comments)}) / 2 = 1.5$

Wallet Metrics Sub-score: $(2 \text{ (for age)} + 1 \text{ (for balance)} + 2 \text{ (for trades)}) / 3 = 5 / 3 \approx 1.67$

Voting Power for Sam: $0.5 \times 5 \text{ (Token Holding)} + 0.25 \times 1.5 \text{ (DAO Activity)} + 0.25 \times 1.67 \text{ (Wallet Metrics)}$

Voting Power for Sam: $2.5 + 0.375 + 0.4175 = \underline{\underline{3.2925}}$

Here's the calculation in table format:

Metrics / User	Patrick	Sam
Token Holdings Score		
Holder Ranking	30	2
Score	4	5
DAO Activity Scores		
Voted Proposals	2	0
Score	2	1
Comments	4	2
Score	2	2
DAO Sub-score	2	1.5
Wallet Metrics Scores		
Account Age	2 months	3 months
Score	2	2
Account Balance	\$40	\$0
Score	1	1
Trades	15	3
Score	2	2
Wallet Sub-score	1.67	1.67
Voting Power		
Formula	$0.5 \times 4 \text{ (Token)} + 0.25 \times 2 \text{ (DAO)} + 0.25 \times 1.67 \text{ (Wallet)}$	$0.5 \times 5 \text{ (Token)} + 0.25 \times 1.5 \text{ (DAO)} + 0.25 \times 1.67 \text{ (Wallet)}$
Final Score	2.9175	3.2925