Block Builder Profitability | December 2023 - January 2024

This report offers insight into block-building profitability for December 2023 and January 2024.

TL;DR

- We use previously introduced concept of adjusted profit to explain a builder's on-chain net profit.

- New adjustment, based on ultrasound adjusted bids (Fee payer address)

- Total adjusted profit in the months of December and January is 4,113 ETH (811 ETH/month higher than November 2023

- Four builders dominate the market (with 92% of total adjusted profit - Down from 5 in November 2023)

- 15 builders each exceeded adjusted profit of 1 ETH per month (up from 14 builders in November)

- There are a couple of new builders, subsidizing their blocks

- [Penguinbuild.org](#) appears to be the first "new" builder that turned profitable after subsidizing their blocks for few months

- You can now look at hourly updated data on builder profitability on[Eden Data Dashboard](#)

- Impostor builders stopped spoofing Flashbots builder

Most Profitable Builders - Earned at least 1 ETH:

[

chart

723×497 10.5 KB

](https://collective.flashbots.net/uploads/default/original/2X/5/53ac2714affa83c8e36049f64871ec7bf815bb30.png)

Rank

Builder

Adj. Profit

MEV-Boost Value

Blocks

Profitable Blocks

Subsidy Blocks

Zero Profit Blocks

Total Subsidy

1.

[beaverbuild.org](#)

2,560.687

15,703.780

128931

59906

51927

17098

-52.806

2.

rsync-builder

542.435

13,128.628

101,436

35,532

15,315

50589

-43.320

3.

Titan Builder

449.478

10,584.613

91,360

18,859

36,414

36087

-49.229

4.

builder0x69

232.198

1,443.378

11,677

2,837

8,840

0

-3.785

5.

Anon:0x83bee

215.224

832.745

551

551

0

0

0

6.

BuildAI

75.121

301.278

1289

1,007

282

0

-0.236

7.

Anon:0xb3a6d

70.486

225.473

324

324

0

0

0

8.

Gambit Labs

18.335

706.940

7623

1037

6204

382

-16.890

9.

lokibuilder.xyz

13.058

85.344

2258

583

1462

213

-3.950

10.

from f1b

9.375

277.914

2809

728

2081

0

-2.886

11.

@builder0x69

6.612

205.769

1697

367

1330

0

-0.623

12.

[f1b.io](f1b.io)

5.701

223.462

2534

565

1969

0

-3.852

13.

https://eth-builder.com

3.712

243.488

587

412

175

0

-0.223

14.

bobTheBuilder

3.030

35.438

172

35

0

137

0

15.

payload.de

2.504

11.629

108

84

24

0

-0.016

16.

Other

5.809

11.629

22,184

934

43

21,207

-0.109

Notes:

1. Official builder pubkeys were used when available (published on docs or websites of the builder), for other builders extra_data

was used to identify the builder

1. Two anonymous builders (tagged as Anon:0x...

) were tagged as they were significantly profitable, compared to other builders that did not use any extra data

1. The category 'Other' is grouped by all block builders that still made some profit or were balance neutral; all builders with negative profit were excluded

2. Query for generating this results can be found here: BigQuery stored query

Most Profitable Blocks (Adjusted)

Builder

Block Number

Adj. Profit

Builder	Block	MEV-Boost Value	Builder Received		Profit Margin
beaverbuild.org	18926794	204.20716	39.43582	243.71915	83.79 %
builder0x69	18926740	130.5213	73.78782	204.31288	63.88 %
beaverbuild.org	18926741	106.93103	29.15827	136.09314	78.57 %
Anon:0x83bee	18805877	83.96484	141.83183	225.79751	37.19 %
beaverbuild.org	18734327	58.26454	25.48923	83.75448	69.57 %
beaverbuild.org	18926696	43.38697	15.22637		

58.61446

74.02 %

beaverbuild.org

18778112

32.86571

39.54338

72.4102

45.39 %

beaverbuild.org

18926745

30.14074

13.92021

44.06492

68.40 %

beaverbuild.org

19114847

25.15461

3.50939

28.66437

87.76 %

beaverbuild.org

18926746

25.06144

17.82014

42.88593

58.44 %

Notes:

1. Profit Margin is calculated with the following formula: 100 * (profit / (sent_to_builder + miner_rewards))

2. Builders are identified where possible with pubkey tags and extra_data

as a fallback

1. Query for generating this results can be found here: BigQuery stored query

New adjustment

Ultrasound relay introduced adjusted bids (you can read more about them[here](here)), which introduce new concept in block building - Relay-controlled fee payer address.

This is an address, which is funded by builders (sometimes directly from builder coinbase, sometimes via CEX or external address) and is used by relay to create Mev-Boost payments, adjusted according to their new system (Second best bid + 1 wei)

This creates situations where builders accumulates value on their coinbase addresses, but Mev-Boost payments to validators are sent from a different address (the fee payer). Because of this, the previously introduced adjustments Account

Linked to Builder Costs

and Account Linked to Builder Profit

are used together.

Simple explanation:

1. Builder A accumulates block value on Address 0xBUILDER - 0,4 ETH

2. Builder A sends their bid of 0,39 ETH to Ultrasound relay

3. Ultrasound relay adjusts their bid to 0,35 ETH

4. Mev-Boost transaction is sent from 0xFEE_PAYER

Without the adjustment we assume profit of 0,4 ETH, as the builder does not send anything to the validator. This actually accounts for significant differences between the adjusted and unadjusted builder profits (incorrectly reporting up to 7x higher profits in the past two months).

The list of fee payer addresses used in this adjustment was composed based on research and may be incomplete, as they are not publicly reported by builders or relays at this time.

Conclusions

- Four builders continue to dominate the market

- Total adjusted on-chain profit for builders grew by ~25% compared to November 2023

- Second-price auction introduced by ultrasound relay

- Subsidy starting to work for penguinbuilder

Data Sources

Data sources used in this research:

- eden-data-public.ethereum_auxiliary.tags_pubkey

- eden-data-public.mev_boost.payloads

- bigquery-public-data.crypto_ethereum.transactions

- bigquery-public-data.crypto_ethereum.blocks

- bigquery-public-data.crypto_ethereum.traces

Learn more about Eden Public Datasets