

PBS is currently best studied on Ethereum where a decentralised validator set (and the coming of [SLE](#)) has led to the assumption and generally observed behaviour that proposers will maximise their revenue for the next block. Before the merge, this meant that miners would build the most valuable possible block and since the merge it has meant accepting the highest bid.

However, if a proposer knows that they will build several blocks in a row (or are in a continuous-time setting), they may be much less myopic. Consider a single sequencer for an L2 who may delay the liquidation of an underwater position for additional profit. There is a competing dynamic in which proposers will want to give some kind of certainty to developers and searchers/builders about the processing of their transactions.

This setting is generally understudied and there are many viable research directions. Some initial ideas/questions:

- What is the optimal (revenue maximising) strategy to commit to for a proposer who is a single sequencer? E.g. “I will include every transaction within 2 blocks of receipt if the transaction is still valid in the second block”. What about a setting with n

proposers or with $\frac{k}{n}$

stake?

- What is the impact of privacy on such a setting?
- [this problem](#) is related