

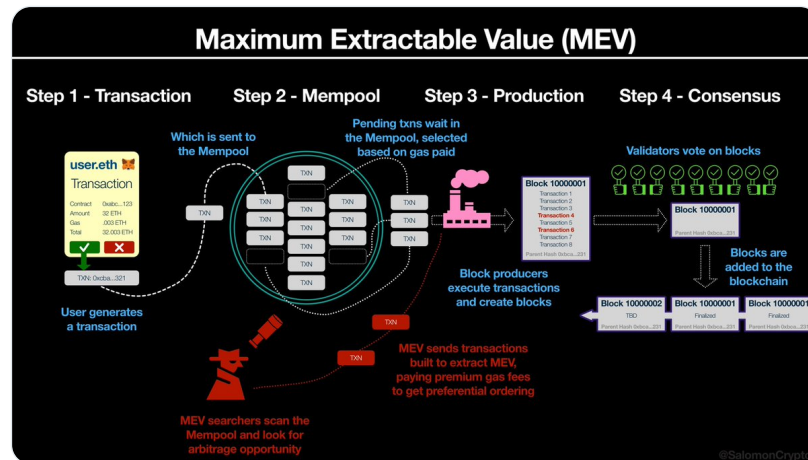


Haym Salomon @SalomonCrypto

Jun 26 · 17 tweets · [SalomonCrypto/status/1540870370437107712](https://twitter.com/SalomonCrypto/status/1540870370437107712)

(1/15) MEV 101

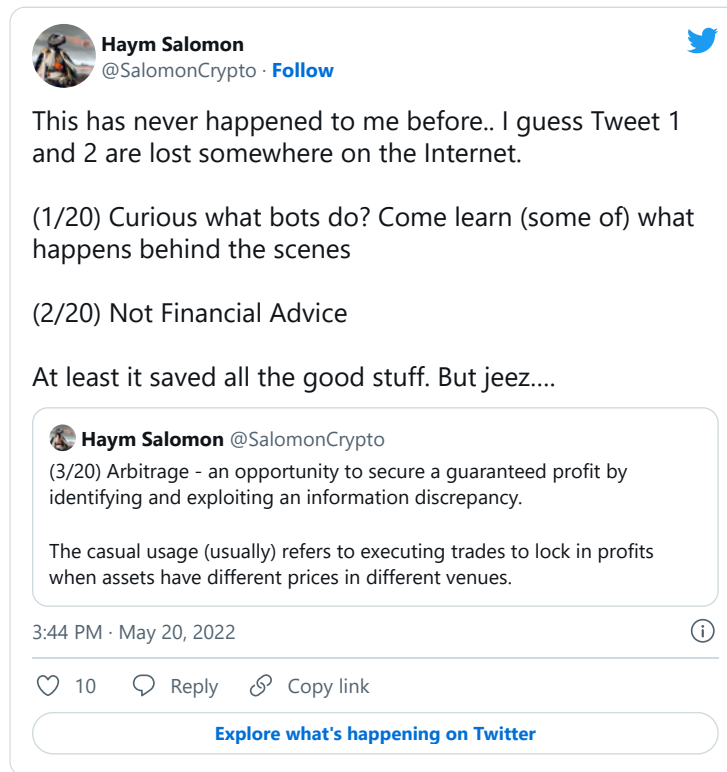
This time with drawings!!!



(2/15) MEV is such a huge topic, it's impossible to cover in one (or 10) threads.

This thread is an extremely simplified, high level explainer of "how."

To understand why, here's a thread for you:

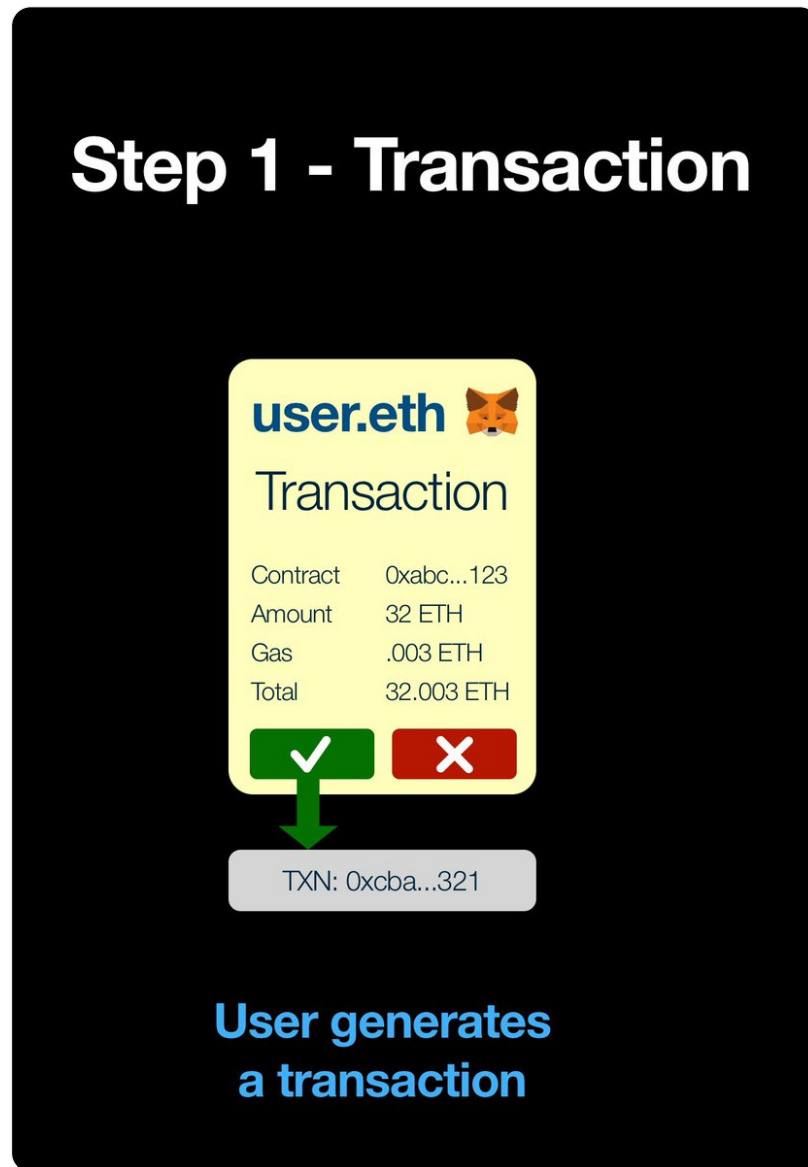


(3/15) MEV is value that can be extracted from a system by a participant with privileged knowledge or access.

The classic and most common example of MEV comes from the execution process of blockchain transactions. Let's walk through.

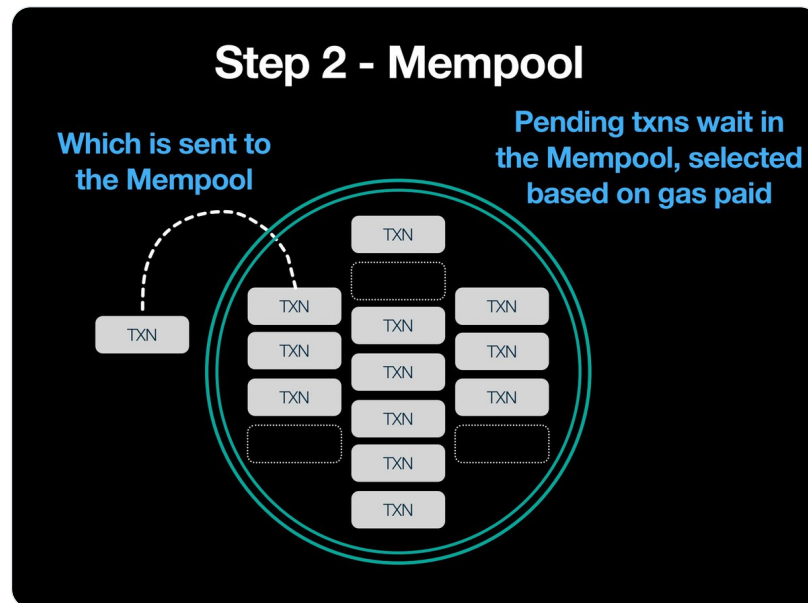
(4/15) First a user generates a transaction (txn). A txn can be anything: a transfer, a trade, a deposit, etc.

Users typically use a wallet, but txns can also be generated programmatically.

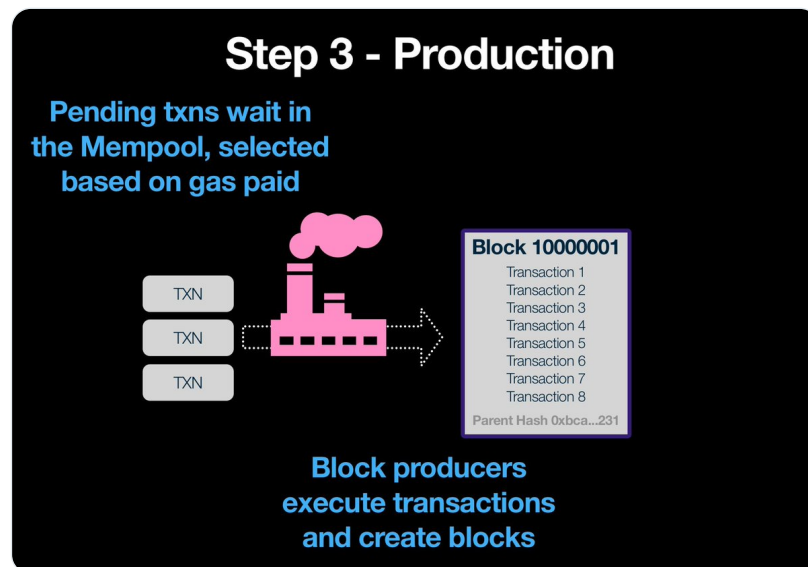


(5/15) A txn are bundled up into packets of data and sent to the Mempool. There it wait with all the pending txns, waiting to selected to be included into the next block.

Txn selection is based on how much gas the user bid when s/he created the txn.

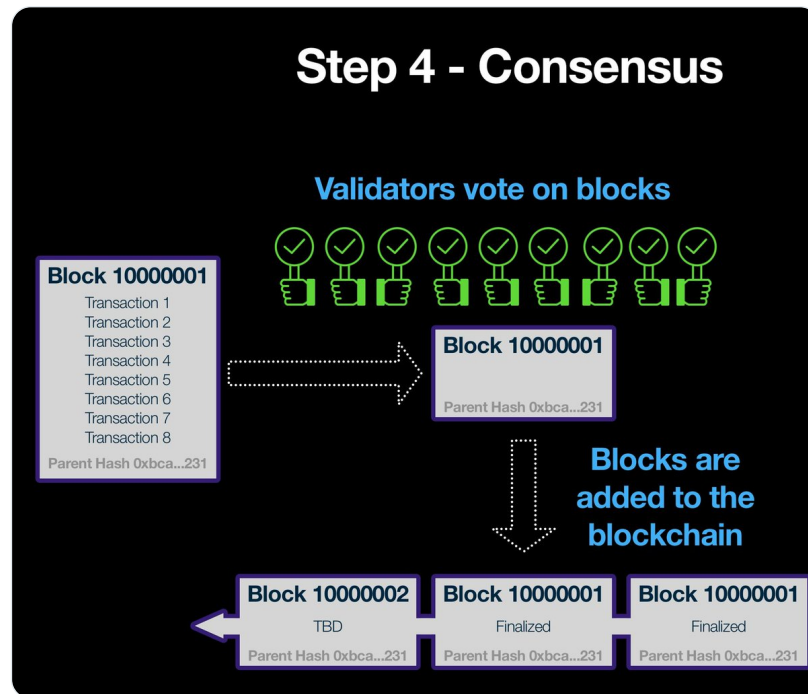


(6/15) As txns are selected, they are bundled into a block. Once the block fills up, it is ready to be sent to the blockchain for approval and inclusion.

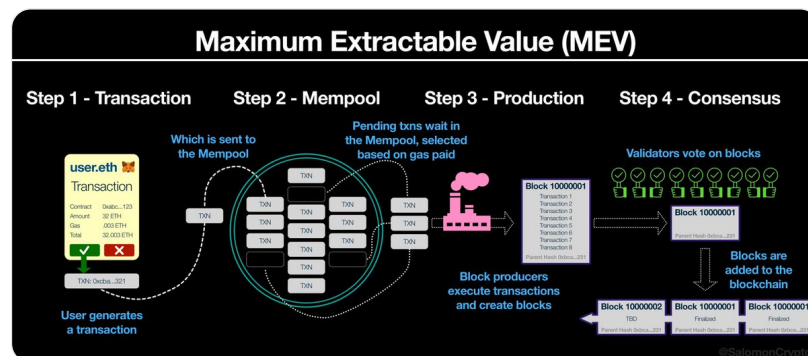


(7/15) Blocks are sent to validators, who hold a current copy of the blockchain. They evaluate every new block; if it is a valid block (uses the correct start & end state and no invalid txns).

If the block is approved by the network, it is added to the blockchain.



(8/15) Here's the whole process... at least conceptually.



(9/15) The issue is the openly accessible mempool. The process we described assumed everyone was a good actor and txns were all mutually independent.

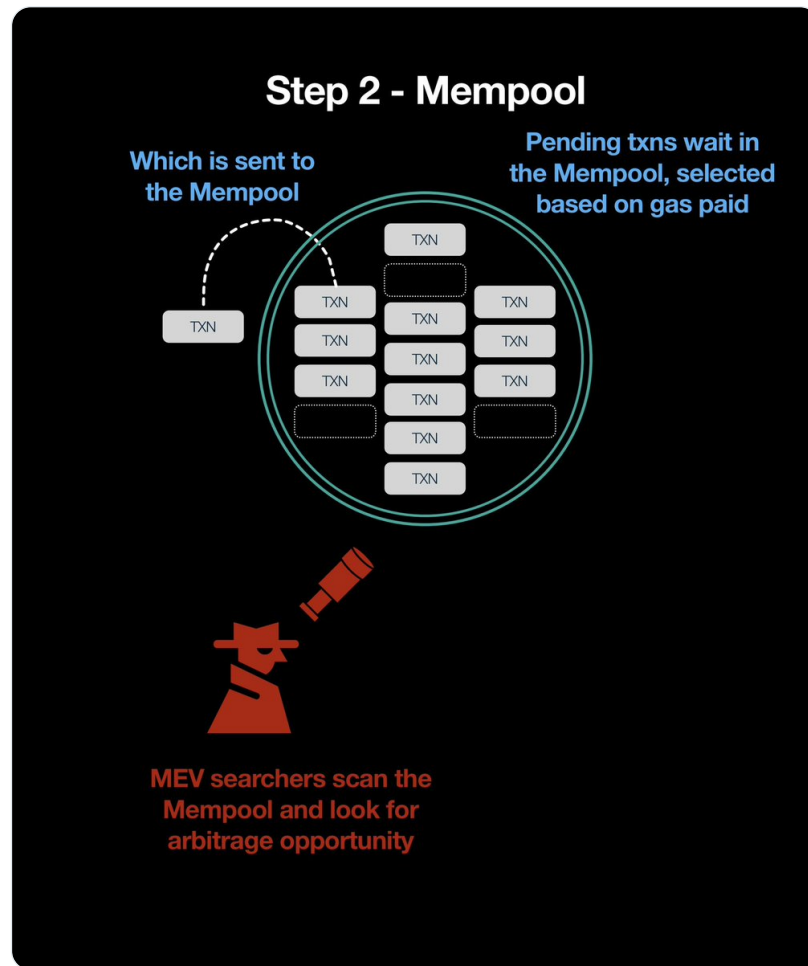
Poor assumption.

(10/15) Think about what's in the mempool. Not only is every specific txn out there in the open, but a smart watcher can figure out what order they'll be executed in.

I mean, all you have to do is rank by gas cost. And suddenly you have a roadmap to extract MEV.

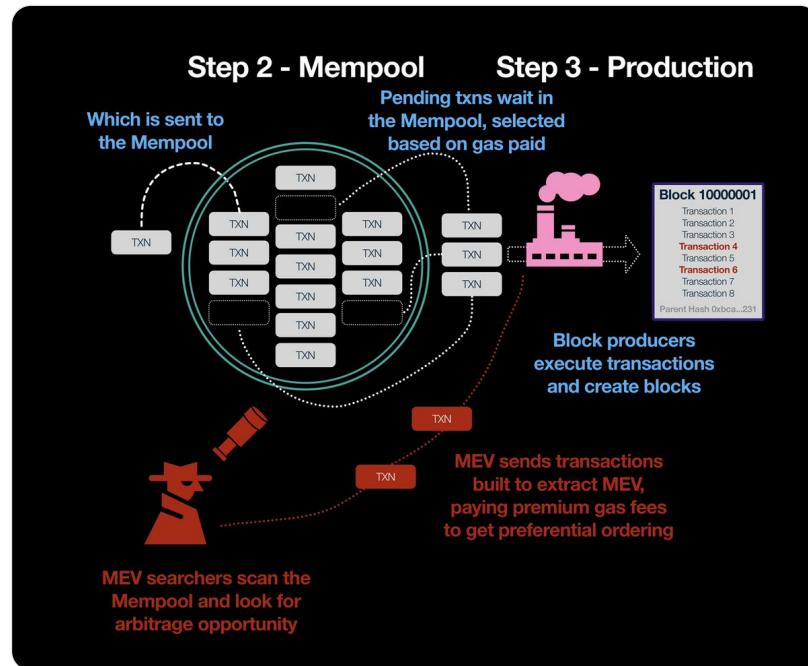
(11/15) MEV is a function of the specific network conditions and the specific txns that happen.

An MEV attacker will watch the mempool, patiently waiting and looking for opportunities.



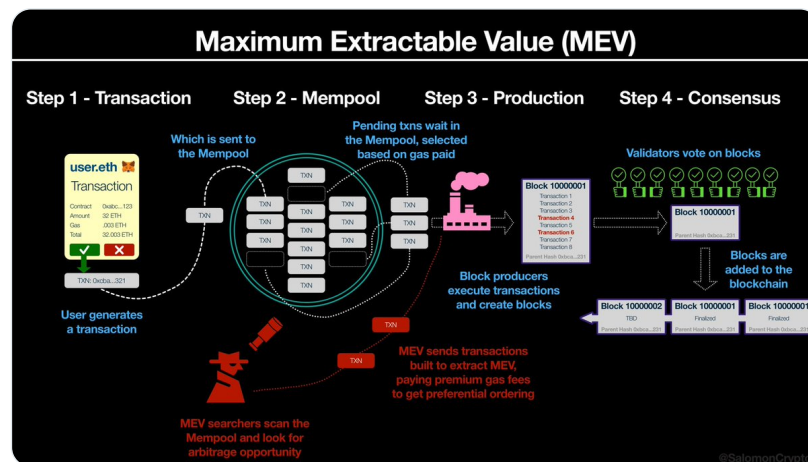
(12/15) When s/he (it's usually a bot) sees an opportunity, s/he quickly constructs the perfect transaction to extract value without taking any risk.

S/he then gets them to the producer ASAP. By carefully crafting gas bids, the transaction executes around the extractable value



(13/15) The txns are valid (although malicious) and so the block passed consensus and is added to the blockchain.

MEV was extracted and whoever generated the txn is none the wiser. Their txns keep executing, the MEV bot keeps extracting, and the world keeps turning.



(14/15) Hopefully by now you have a basic understanding of MEV. From here it's time to start learning about the team doing something about it.

The OGs are Flashbots ⚡ (docs.flashbots.net), but also check out @Rook for a decentralized, on-chain team.

(15/15) But seriously, learn about MEV. I promise you you'd be front running the next big crypto narrative!

Adding this. Listen to this podcast episode.



Like what you read? Help me spread the word by retweeting the thread (linked below).

Follow me for more explainers and as much alpha as I can possibly serve.

