The economics of staking has been a hot topic lately. @econoar has done a good job putting the incentives in concrete terms for everyone to digest. See his post on Economic Incentives for Validators and @vbuterin's post on Average-case improvements to reduce validator costs for some background. In this thread, I want to encourage people to explore the improbable worst case scenarios that could cause the protocol to fail.

A plausible scenario

We all want to believe that Ethereum 2 will be wildly successful. One certainty that comes with success is mainstream adoption, institutional investors, new financial products, etc. This is great, but with it comes the very real possibility that entities that hold (or have access to) large sums of ETH will want to earn interest off of it. We know that Coinbase, Binance, etc hold large sums of ETH in their dungeons. It is logical that they will decide that they want to dedicate some percent of the ETH that they are holding to staking. In fact, I am sure they are already talking about it.

That virtually guarantees that we will have a healthy amount of ETH to secure the chain. This sounds great, right?

Not so fast.

The problem

Entities controlling large sums of ETH represent a existential threat.

Wait. Why is this an issue?

This demonstrates a plausible scenario that could compromise the security of the network if one entity controls more than 1/3 of the stake.

Is there any hope?

Of course.

The point I am trying to make is that we should talk through these scenarios and simulate different ingress and egress distributions to see how the protocol is affected.

Final Thoughts

There are a lot of brilliant people working on different aspects of these problems, but I am disturbed at people's hesitation to share (even on this forum) until they have had their ideas peer reviewed and formally written up. We need to get over this fear of being wrong and be more willing to receive constructive criticism.

On that note…if anyone has already worked out a solution, (or if I am just flat out wrong), then please let me know. I am curious to hear the explanation.