

Hello,

I am doing a research project focused on Casper FFG. Specifically, I'm trying to understand how validator rewards and penalties are implemented. Could someone help me answer the following questions:

1. It looks like `deposit_scale_factor` is directly proportional to the total deposit size. Why is this?
2. If `deposit_scale_factor` is always decreasing, what happens when it is less than 10^{-10} (the smallest value supported by the viper decimal type)?
3. Is `base_penalty_factor` positive or negative, and why?
4. Can someone explain, mathematically, how it is that validators who vote while $esf > 2$ do not lose any money?
5. Where can we see the values passed initially passed into `init()`