Additional insights from web3 reward emission research

We are currently undertaking a large-scale research effort to create better frameworks for token mechanics especially for web3 protocols in the hardware resource provisioning sector.

We have recently published part one, where we have compared emission schedules of various web3 networks, including of course Arweave network. You can find the report here.

We wanted to share some additional data with the Arweave community though, that is not in the report.

First off, we have classified Arweave's token rewards to be in the category of fixed and decaying emissions: The reward emissions are reduced every block (=fixed schedule, which only depends on time/blockheight), such that over a full year they halve.

Within that category there are currently also the following projects we analyzed:

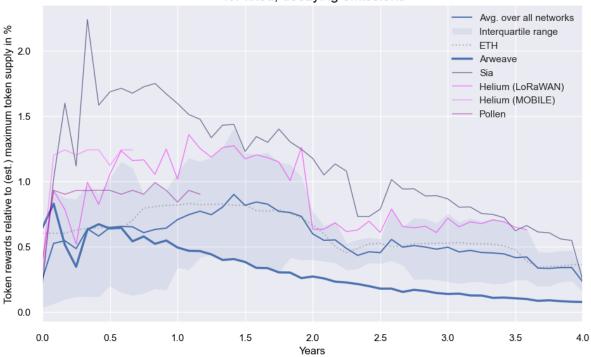
- Sia
- Pollen
- Helium (LoRaWAN)
- Helium (5g)
- Render

Filecoin belongs to this category to some extent. Details why we classified the overall emissions into the KPI-driven, decaying category though, are part of the report as well.

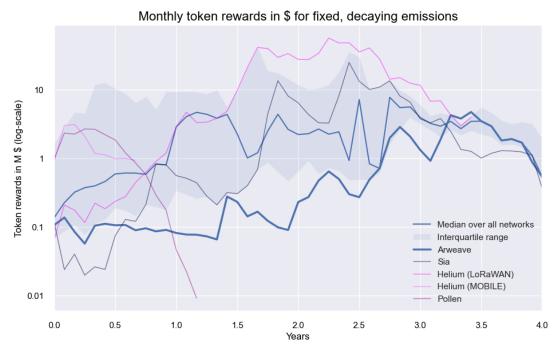
In comparison to the other projects in this category, Arweave had the lowest reward emissions over time: relative to the total AR supply they cumulated to \sim 15.5% within the first four years.

Below chart shows the average (blue line) and the interquartile range (blue shaded) of the monthly token rewards of all Web3 infrastructure networks together with the projects of the fixed and decaying emissions category highlighted:

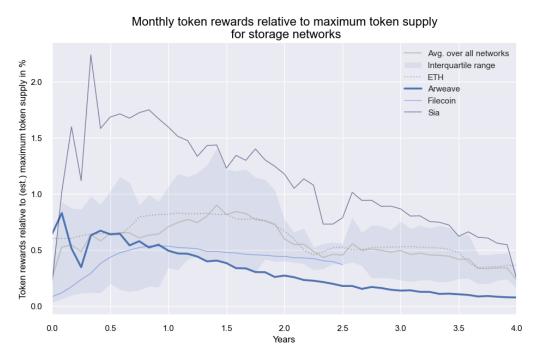
Monthly token rewards relative to maximum token supply for fixed, decaying emissions

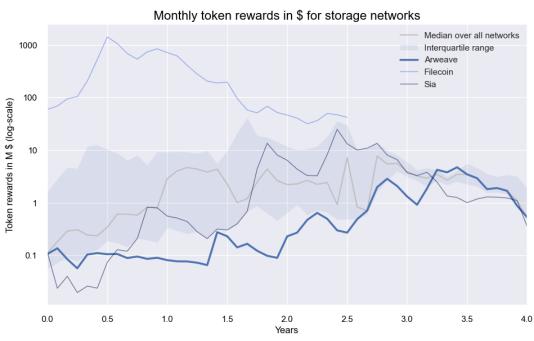


Those token rewards converted into dollar-values are also at the lower end of the category spectrum, but actually increase over time in contrast to the decaying token rewards as the AR price continued to climb (06/2020 when AR started to surge corresponds to 2 years in the chart below). It is interesting to see that this discrepancy of token- vs. dollar-valued rewards is true for most of the networks of the fixed-decaying category:



For Arweave it might actually be more relevant to compare it to the networks providing similar services versus comparing it to projects with similar token emissions. So here we go:





In contrast to rewards on Arweave and Filecoin, Sia's rewards are not paid to storage providers of the Sia network, which limits the comparison. More information around caveats like this and the data are available in this repo that also contains the paper with further details on the published report. We hope this information yields some insightful information for the Arweave community and are open to your feedback. What would be some additional data you would want to see / topics to dive into?